

CITY OF GLENDALE

NOTE MEETING PLACE:

**The Plan Commission will meet in the
David Hobbs Honda For the People Community Room
Richard E. Maslowski Community Park
2200 West Bender Road
Glendale, Wisconsin 53209**

AGENDA -- PLAN COMMISSION

**Tuesday, February 5, 2019
6:00 P.M.**

1. Roll Call and Pledge of Allegiance.
2. Adoption of Minutes of Meeting of January 8, 2019.
3. a. PUBLIC HEARING: Petition to Rezone 2510 West Good Hope Road (Certified Survey Map 8771, Lots 1, 2, 3, and 4, and Lands Previously Intended to be Dedicated for Public Street Purposes but Never Formally Accepted by the City for Public Street Purposes, Tax Key Parcels 1009984002, 1009984003, 1009984004, 1009985005 and the Dedication Lands) from R-3 Residence District to PD-Planned Unit Development District-Multi-Family Residential, to include a 48-Unit Apartment Building located proximate and parallel to West Good Hope Road and, to the north of the Apartment Building, 41 Townhome Garden Apartments (Note: 7340 North Braeburn Lane, Tax Key Parcel 1009977001, is not included in this Project Plan and will remain as unplatted lands zoned R-3 Residence District. New Land Enterprises to present the project to the Plan Commission and Glendale Citizens, Citizen comments and input, and Plan Commission to evaluate and recommend to Common Council. Following Plan Commission recommendation to the Common Council the project will, at a future meeting, be presented to the Common Council and the Common Council will hold a Public Hearing.
- b. 2040 Vision Plan. Referral for review and future reference the 2040 Vision Plan as completed by the City of Glendale Vision Committee and recommended to the Common Council (Adopted by the Common Council November 12, 2018).
- c. Comprehensive Plan Ten-Year Update. Review Request for Qualifications/Proposals (RFP) to complete the Comprehensive Plan Ten-Year Update.

NOTICE: This is NOT a meeting of the Glendale Common Council. Although a majority of Council Members may be present, Council action will not take place.
-Upon reasonable notice, efforts will be made to accommodate the needs of disabled individuals.-

Meeting is 6:00 PM Tuesday

**David Hobbs Honda For the People Community Room
Richard E. Maslowski Community Park
2200 West Bender Road
Glendale, Wisconsin**

City of Glendale Plan Commission

6:00 P.M., Tuesday, February 5, 2019

- Plan Commission Report -



- 3a. **PUBLIC HEARING: Petition to Rezone 2510 West Good Hope Road (Certified Survey Map 8771, Lots 1, 2, 3, and 4, and Lands Previously Intended to be Dedicated for Public Street Purposes but Never Formally Accepted by the City for Public Street Purposes, Tax Key Parcels 1009984002, 1009984003, 1009984004, 1009985005 and the Dedication Lands) from R-3 Residence District to PD-Planned Unit Development District-Multi-Family Residential, to include a 48-Unit Apartment Building located proximate and parallel to West Good Hope Road and, to the north of the Apartment Building, 41 Townhome Garden Apartments (Note: 7340 North Braeburn Lane, Tax Key Parcel 1009977001, is not included in this Project Plan and will remain as unplatted lands zoned R-3 Residence District.** New Land Enterprises to present the project to the Plan Commission and Glendale Citizens, Citizen comments and input, and Plan Commission to evaluate and recommend to Common Council. Following Plan Commission recommendation to the Common Council the project will, at a future meeting, be presented to the Common Council and the Common Council will hold a Public Hearing.

PLAN COMMISSIONERS: Bring along Plan Commission materials from the December 4, 2019. Plan Commission meeting for reference.

New Land Enterprises, LLP, seeks to rezone the 2510 West Good Hope Road from R-3 Residence District to PD Planned Unit Development District for a project that will include a 48-unit apartment building and 41 Townhome Garden Apartments configured as eight (8) buildings to include one four-unit building, five five-unit buildings, and two six-unit buildings. The proposed four-story apartment building is located proximate and parallel to West Good Hope Road, with the Townhome Garden Apartment buildings being located within the remaining lands to the north between the apartment building and the north property line. The 7340 North Braeburn Lane parcel (vacant) located at the south end of North Braeburn Lane is not included in the proposed project and will remain single-family residential use land zoned R-3 Residence District.

New Land Enterprises will present the project to the Citizens and Plan Commission and public comment will be taken prior to discussion and inquiries by the Plan Commission, and possible recommendation to the Common Council.

Staff Report to the Plan Commission

Meeting of Tuesday, February 5, 2019

Necessary Action

Recommend to Common Council with the below requirements. New Land Enterprises will, at a future meeting, present the project to the Common Council and Common Council will hold a Public Hearing. Following approval by the Common Council the project Specific Implementation Plan is submitted for review by the Plan Commission and a Development Agreement will be entered into between the City of Glendale and New Land Enterprises.

- 1) All modifications within the right-of-ways, disconnections or connections to City infrastructure systems (driveways, sanitary sewer, watermain, storm sewers, etc.), require prior review and approval by the City engineer and Director of Public Works, as well as permits from the City of Glendale Department of Public Works;
- 2) All costs associated with modifications within right-of-ways, disconnections and connections to City infrastructure systems are the sole responsibility of the applicant;
- 3) Obtain a stormwater management permit per Glendale Code of Ordinances 6-5, and Milwaukee Metropolitan Sewerage District approval, if required;
- 4) Signage requires a Sign Permit per the Glendale Sign Code;
- 5) All landscaping and lighting features being maintained and replaced and/or replenished whenever necessary;
- 6) Dumpster enclosure in compliance with 13.1.144 of the Zoning Code;
- 7) City of Glendale building and fire codes per the Building Inspector, the North Shore Fire Department, and the North Shore Health Consortium;
- 8) Compliance with State of Wisconsin ADA parking requirements.

Staff Report to the Plan Commission
Meeting of Tuesday, February 5, 2019

Aerial Photograph of the Site



Staff Report to the Plan Commission

Meeting of Tuesday, February 5, 2019

- 3b. 2040 Vision Plan.** Referral for review and future reference the 2040 Vision Plan as completed by the City of Glendale Vision Committee and recommended to the Common Council (Adopted by the Common Council November 12, 2018).

The Common Council has adopted the 2040 Vision Plan, replacing the previous Vision Plan 2021. Plan Commissioners are encouraged to carefully review the 2040 Vision Plan as a guide in its continuing planning related activities and decision making, as well as in formulating the update to the Comprehensive Plan (Refer to Item 3c.).

Necessary Plan Commission Action

There is not any formal action required for this item.

- 3c. Comprehensive Plan Ten-Year Update.** Review Request for Qualifications/Proposals (RFP) to complete the Comprehensive Plan Ten-Year Update.

The City of Glendale needs to move forward with the Wisconsin Statutes required update to the Comprehensive Plan. The Plan Commission will be involved in the process.

Necessary Plan Commission Action

The requested action is for the Plan Commission to approve the Request for Qualifications/Proposals (RFP) for the update to the Comprehensive Plan.

CITY OF GLENDALE -- PLAN COMMISSION

Tuesday, January 8, 2019

The City Plan Commission convened in the David Hobbs Honda For the People Community Room, Richard E. Maslowski Community Park, 2200 West Bender, Glendale, Wisconsin (Glendale City Hall is being reconstructed), for its regular monthly meeting.

Mayor Kennedy called the meeting to order at 6:00 p.m.

Roll Call: Present: Mayor Bryan Kennedy, Commissioners Tomika Vukovic, Bruce Cole, Karn Cronwell, Philip Bailey, Josh Wadzinski, and JoAnn Shaw. Absent: None.

Other Officials Present: Todd M. Stuebe, Director of Community Development and City Clerk Miranda Etzel.

In accordance with the Open Meeting Law, the North Shore NOW, the City's official newspaper, was advised Thursday, January 3, 2019, of the date and time of this meeting, the agenda was posted to the official bulletin board in City Hall, copies of the agenda were made available to the general public in the Municipal Building and the Police Department, and those persons who have requested were sent copies of the agenda.

PLEDGE OF ALLEGIANCE.

The Members of the Plan Commission, City staff and all those present pledged allegiance to the flag of the United States of America.

ADOPTION OF THE MINUTES.

Motion was made by Comm. Cronwell, seconded by Comm. Cole, to approve the minutes of the meeting held Tuesday, December 4, 2018. Roll Call: Ayes: Mayor Bryan Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: None. Motion carried unanimously.

MATTERS TO BE CONSIDERED.

- I. Plan Commission Use and Occupancy Review, Whitefish Bay Jr. Dukes Baseball Club, Incorporated, 6633 North Sidney Place (6619-6637 Multi-Tenant Warehouse Facility). Review and approve youth baseball organization proposed baseball practice facility recreation use and occupancy.

Tuesday, January 8, 2019

Mr. Stuebe stated that the Plan Commission Report was distributed to the Plan Commissioners and Applicant and is incorporated herein as follows:

Whitefish Bay Jr. Dukes Baseball Club, Incorporated, seeks Plan Commission approval to have an indoor youth baseball practice use and occupancy located in a tenant space within the 6617-6637 multi-tenant facility. The parcel is zoned M-1 Warehouse, Light Manufacturing, Office, and Service District, and the proposed recreation use and occupancy is permitted with review and approval of the Plan Commission.

An aerial view of the 6619-6637 North Sidney Place premises is found below. The submittal materials indicate that the 6633 tenant space measures 30 feet by 120 feet, giving a total of 3,600 square feet, and that the 6637 tenant space is located toward the west side of the building.

The proposed use and occupancy is limited to youth baseball skills development of the Whitefish Bay Jr. Dukes Baseball Club organization teams. The idea is to provide a facility that will allow for baseball skills development all year-round, with the indoor facility proposed for use in the cold weather months. The baseball club has 12 youth baseball teams with ages ranging from 9 to 14 years of age. The plan is to have at least one or more adult coach/volunteer present to supervise and instruct when youth are practicing there, and that there will be only a single team of not more than 12 youth practicing in the facility at a time, giving 13 to 17 persons as the maximum number of persons present (12 youth and one to five adults), although the submittal suggests that there may also be occasional baseball clinics with as many as 20 youth present. Depending upon the schedule of practice times it would seem possible that there may be members from two teams present.

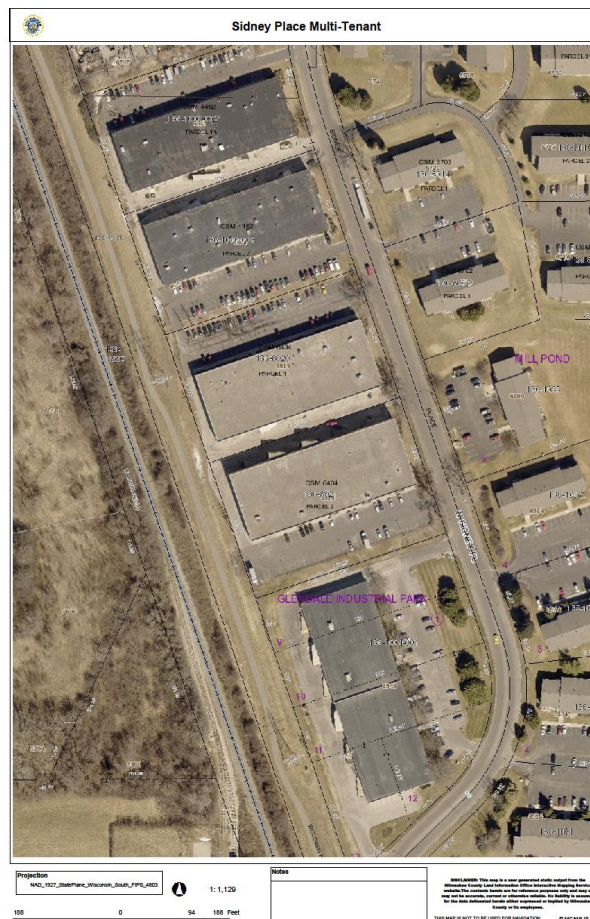
Minimal changes would be made to the interior of the facility such as sport turf and netting for both batting and pitching practice. LED lighting would be installed and electrical outlets would be installed. There would not be any changes to the exterior of the building and there would not be any

Tuesday, January 8, 2019

signage. The submittal says that they have a permanent light in the front of the tenant space.

The submittal does not identify existing fire protection systems other than fire extinguisher. Security cameras are planned for the protection of the participants.

Aerial View of the 6619-6637 North Sidney Place Environs



Site and Neighborhood Area.

The Exhibit Map shows the multi-tenant building and grounds, as well as the surrounding neighborhood environs, which includes the Glen Hills Apartment buildings and grounds located to the east of the facility, the neighboring multi-tenant buildings to the north and south, and the Kenco Label and Tag facility further to the south.

Tuesday, January 8, 2019

Proposed Facility Hours

The Whitefish bay Jr. Dukes Baseball Club proposes to operate the facility cold weather months Monday through Friday from 5:00 p.m. to 9:00 p.m., and Saturday and Sunday from 8:00 a.m. to 9:00 p.m., with possible sporadic use during the warmer months of the year.

Parking, Neighborhood Traffic, and Noise Concerns.

The submittal indicates that there are 12 to 15 parking spaces available to use. The neighborhood exhibit map indicates that the two primary ways to access the facility are via West Mill Road and North Sidney Place, and West Green Tree Road and North Sidney Place. The neighboring Glen Hills Apartments would be the immediate residential area most vulnerable to any traffic and/or noise.

Food Service

Food service is not proposed.

Staff Recommendation: Staff recommends that the Plan Commission grant use and occupancy approval for the Whitefish Bay Jr. Dukes Baseball Club, Incorporated, a youth baseball organization, as a youth baseball skills development training facility, in the 3,600 square-foot tenant space located at 6633 North Sidney Place, with the following requirements:

- 1) Closing time 9:00 p.m.;
- 2) All parking related to the facility to be accommodated within the 6619-6637 North Sidney Place premises;
- 3) Employee and delivery truck routes to utilize non-residential streets via a connected route from West Mill Road to North Sydney Place;
- 4) Signs require a Sign Permit per the City of Glendale Sign Code;
- 5) Any dumpster enclosure(s) per Section 13.1.144(d) of the Zoning Code;
- 6) All building and fire codes being carried out to the satisfaction of the Building Inspector, the North Shore Fire Department, and the North Shore Health Consortium.

Tuesday, January 8, 2019

Community Development Director Todd Stuebe stated that Staff recommends that the Plan Commission grant use and occupancy approval for the Whitefish Bay Jr. Dukes Baseball Club, Incorporated, a youth baseball organization, as a youth baseball skills development training facility, in the 3,600 square-foot tenant space located at 6633 North Sidney Place, with the following requirements: 1) Closing time 9:00 p.m.; 2) All parking related to the facility to be accommodated within the 6619-6637 North Sidney Place premises; 3) Employee and delivery truck routes to utilize non-residential streets via a connected route from West Mill Road to North Sydney Place; 4) Signs require a Sign Permit per the City of Glendale Sign Code; 5) Any dumpster enclosure(s) per Section 13.1.144(d) of the Zoning Code; and 6) All building and fire codes being carried out to the satisfaction of the Building Inspector, the North Shore Fire Department, and the North Shore Health Consortium.

Keith Bruett introduced himself as president of the Club, continuing stating that it is a travel Club, Little League and travel, and that in the past they have leased space. Mr. Bruett stated that inside the tenant space they will put in LED lighting, netting, and that it is a 30-foot by 120-foot warehouse space, and that they will have netting around the entire inside, five cages, and that there are exits at the back and front. Mr. Bruett also said that there are twelve teams ages 9 to 11 years, and that there would be one team there at a time, except at changeover. Mr. Bruett said that they have had temporary occupancy for about three weeks, that most of there traffic is drop-off, and that there would be a minimum of one adult present

Comm Cole asked if occupancy would be limited to baseball or could there be a soccer team there.

Keith Bruett said that their Lease is limited to baseball, and added that occasionally they may use the space in the summer, although not much.

Comm. Cronwell asked for confirmation that they do not have a sign.

Mr. Bruett said that they do not have a large sign, only a door decal, there would be a team decal on the door, and that they do not want a sign.

Mayor Kennedy asked what the source of the proposed hours is.

Director of Community Development Stuebe said that the source is what is requested in the submittal materials.

Mr. Bruett asked if the City would consider 10:00 p.m.

There was not any further discussion.

Motion by Comm. Cole, seconded by Comm. Shaw, that the Plan Commission grant use and occupancy approval for the Whitefish Bay Jr. Dukes Baseball Club, Incorporated, a youth baseball organization, as a youth baseball skills development training facility, in the 3,600 square-foot tenant space located at 6633 North Sidney Place, per the six requirements. Roll Call: Ayes: Mayor

Tuesday, January 8, 2019

Bryan Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: Comm. Shaw. Motion carried unanimously.

II. Plan Commission Review, BMW of Milwaukee North, 5990 North Green Bay Avenue. Review and approve proposed changes to building and grounds, as well as signage.

Mr. Stuebe stated that the Plan Commission Report was distributed to the Plan Commissioners and Applicant and is incorporated herein as follows:

BMW of Milwaukee North seeks Plan Commission review and approval to make changes to the 5990 North Green Bay Avenue building and grounds. The proposed project is principally an interior renovation, which is not subject to review by the Plan Commission, and changes to the exterior signage and a modest landscape pavement element at the east (rear) entrance. The property is zoned PD Planned Unit Development and the minor exterior changes require review and approval of the Plan Commission.

Necessary Plan Commission Action

The necessary action is for the Plan Commission to consider approval of the proposed changes to the signage and site plan. Staff recommends that the pylon sign not be approved if in fact it is proposed to be changed from 10 feet to 25 feet in height (conflicting notations between two exhibits).

Community Development Director Todd Stuebe stated that BMW is going to renovate the entire interior of the BMW facility, which is not subject to Plan Commission review, and proposed to make several changes to the exterior signage, as well as make a modest change to the material of the entrance at the rear of the building, both of which require Plan Commission review and approval. Mr. Stuebe stated that the proposed change to the signage includes the addition of a logo sign to the west façade, addition of a second wall sign along West Florist Avenue (north façade), and general update to all of the existing signage and, also, the change of pavement material at the east entrance is a modest change, and that Staff do not object to the proposed changes except that the pylon sign be limited in height.

Bob Murphy, Umansky Motorcars Director of Facility Operations, introduced himself, briefly described the changes that Umansky proposes to the

Tuesday, January 8, 2019

BMW dealership, and agreed that the appropriate exhibit for the pylon sign is for a ten-foot height sign (refer to the submitted drawings for the proposed signage).

Motion by Comm. Bailey, seconded by Comm. Cronwell, that the Plan Commission grant approval of the proposed signage and landscape changes. Roll Call: Ayes: Mayor Bryan Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: Comm. Shaw. Motion carried unanimously.

III. Planned Sign Program (PSP), Worth Multi-Tenant Office Building, 7929 North Port Washington Road. Review and approve proposed Planned Sign Program (PSP).

Mr. Stuebe stated that the Plan Commission Report was distributed to the Plan Commissioners and Applicant and is incorporated herein as follows:

Robert Worth (R.W. Realty, DBA Worth Realty) seeks Plan Commission review and approval of a Planned Sign Program (PSP) that was conceptually supported by the Plan Commission December 4, 2018.

Necessary Plan Commission Action

The necessary action is for the Plan Commission to approve the proposed Planned Sign Program (PSP) to include the two wall signs with the remittal of the required \$150 fee for a Planned Sign Program and Sign Permit fees for each sign.

Mayor Kennedy asked if Bob and Terry Worth or a representative were present.

Community Development Director Todd Stuebe stated that the Worth's have informed City Staff that they would not be able to be present this evening, and suggested that given that this item is the same as was conceptually acknowledged at the December 4, 2018, Plan Commission meeting, that City Staff would not object to Plan Commission approval of the proposed Planned Sign Program should the Plan Commission find the proposal acceptable.

Motion by Comm. Wadzinski, seconded by Comm. Cole, that the Plan Commission grants approval of the Planned Sign Program to include the two wall signs with two tenants each. Roll Call: Ayes: Mayor Bryan Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: None. Motion carried unanimously.

Tuesday, January 8, 2019

Mr. Stuebe stated that the Plan Commission Report was distributed to the Plan Commissioners and Applicant and is incorporated herein as follows:

Odyssey Outlot, LLC, seeks Plan Commission review and approval to construct a Hampton Inn by Hilton at Lot 2 and Part of Lot 3 (See Item 3e. below) as it continues toward completing the Planned Unit Development project at the former Midway Motor Lodge site.

CITY OF GLENDALE: 7065 N Port Washington Rd

Projection: NAD_1983_Albertus_5000m_StatePlane_AZS1
Scale: 1:1,120

Map details: The map shows an aerial view of a commercial area in Glendale, Arizona. A large, multi-story building complex is the central feature, surrounded by extensive parking lots. To the left, a major highway (likely I-10) runs vertically. To the right, a residential area with smaller houses is visible. The map includes property lines, lot numbers, and street names. A grid is overlaid on the map, and various labels are present, including 'CITY OF GLENDALE' and '7065 N PORT WASHINGTON RD'.

Map data: The map data is provided by Esri, with imagery from DigitalGlobe, GeoEye, IGN, GeoEye, and others. The map is a vector graphic, and the data is stored in a database.

Map scale: The map scale is 1:1,120, meaning 1 unit on the map represents 1,120 units in real life.

Map projection: The map projection is NAD_1983_Albertus_5000m_StatePlane_AZS1, which is a standard projection for maps of Arizona.

Map legend: The map legend is located in the bottom left corner and includes the following information:

- Projection: NAD_1983_Albertus_5000m_StatePlane_AZS1
- Scale: 1:1,120

Map notes: The map notes are located in the bottom right corner and include the following information:

- Map data: © Esri, DigitalGlobe, GeoEye, IGN, GeoEye, and others.
- Map scale: 1:1,120
- Map projection: NAD_1983_Albertus_5000m_StatePlane_AZS1

Tuesday, January 8, 2019

Staff Recommendation: Staff recommends that the Plan Commission grant approval for ANR Outlot, LLC, to construct the Hampton Inn by Hilton per the architectural, site, landscaping, lighting, grading and drainage plans, with the following requirements:

- 1) All City of Glendale building, fire, and health codes applicable to the premises being carried out to the satisfaction of the Building Inspector, the North Shore Fire Department, and the North Shore Health Consortium;
- 2) Private water supply per the requirements of the State of Wisconsin and the Building Code;
- 3) Certified Survey Map being recorded at the Milwaukee County Register of Deeds office.

Community Development Director Todd Stuebe stated that Staff recommends that the Plan Commission grant approval for ANR Outlot, LLC, to construct the Hampton Inn by Hilton per the architectural, site, landscaping, lighting, grading and drainage plans, with the following requirements: 1) All City of Glendale building, fire, and health codes applicable to the premises being carried out to the satisfaction of the Building Inspector, the North Shore Fire Department, and the North Shore Health Consortium; 2) Private water supply per the requirements of the State of Wisconsin and the Building Code; 3) Certified Survey Map being recorded at the Milwaukee County Register of Deeds office, and also there be a fourth requirement that there will an onsite design professional present at the site throughout the construction of the project as required by the State of Wisconsin and, further, given that the two projects are proximate to each other along North Port Washington Road, that each of the requirements for the 7155 North Port Washington Road project (Item 3f below) also be applicable to this project, which includes the following requirements: 5) All modifications within the right-of-ways, disconnections or connections to City infrastructure (driveways, sanitary sewer, watermains, storm sewers, etc.) require prior review and approval and permits from the City of Glendale Department of Public Works; 6) All costs associated with modifications and connections within the right-of-way are the sole responsibility of the applicant; 7) Obtain a stormwater management permit per Glendale Code of Ordinances 6-5, and Milwaukee Metropolitan Sewerage District approval, if required; 8) Signage requires a Sign Permit per the Glendale Sign Code; 8) All landscaping and lighting features being maintained and replaced and/or replenished whenever necessary, and 9) Dumpster enclosure in compliance with 13.1.144 of the Zoning Code, and 10) that there will be a sidewalk.

Tuesday, January 8, 2019

Jason Day presented the project, it will have 90 guest rooms, four story, will include a porta cochere, talked about a ground sign, signage on the east, west and south facades, as well as a monument sign, that the signage would have to be brought to the Plan Commission for review and approval.

Rachit Dhingra asked about the requirement of a design professional.

The Plan Commission said that it is a requirement of the State.

Mr. Day stated that they are working with the stormwater management reviewer.

Mayor Kennedy asked about the future use of the remaining lot.

Rachit Dhingra said that for the remaining parcel they have had discussion with Starbucks and that also a fast-food restaurant was a possibility.

Motion by Comm. Bailey, seconded by Comm. Vukovic, that the Plan Commission grant approval for ANR Outlot, LLC, to construct the Hampton Inn by Hilton per the architectural, site, landscaping, lighting, grading and drainage plans, per the requirements stated by Staff and that signage be brought to Plan Commission for review and approval. Roll Call: Ayes: Mayor Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: None. Abstain: None. Motion carried unanimously.

- V. Certified Survey Map (CSM), Hampton Inn, 7065 North Port Washington Road. Review and approve proposed CSM to modify CSM 8771, Lot2 and Part of Lot 3, for Hampton Inn project.

Mr. Stuebe stated that the Plan Commission Report was distributed to the Plan Commissioners and Applicant and is incorporated herein as follows:

The necessary action by the Plan Commission is to recommend to the Common Council, to approve the Certified Survey Map subject to payment of the \$175 (\$175.00) administrative fee, making the required technical corrections to the document, and payment of City Engineer CSM technical review fees, if any.

Motion by Comm. Cronwell, seconded by Comm. Shaw, that the Plan Commission recommends the Common Council approve the Certified Survey Map per the given requirements. Roll Call: Ayes: Mayor Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: None. Abstain: None. Motion carried unanimously.

Tuesday, January 8, 2019

- VI. Plan Commission Review, Lakeshore Family Dentistry, 7155 North Port Washington Road. Review and approve proposed changes to architecture, site, landscaping, signage, lighting, and drainage/stormwater management, as well as use and occupancy.

Mr. Stuebe stated that the Plan Commission Report was distributed to the Plan Commissioners and Applicant and is incorporated herein as follows:

Plan Commission Report:

Lakeshore Family Dentistry proposes to add to and renovate the existing Lakeshore Family Dentistry office located at 7155 North Port Washington Road. The site is zoned B-1, G2 and Plan Commission review and approval is required.

Architecture and Site Plan

The architecture and site plan are included in the Plan Commission materials. The submittal materials indicate that the existing premises is about 0.57 acres (24,611 square feet) and describes the project as a 1,500 square-foot addition to include matching exterior improvements to the existing building that includes stone veneer and siding accents. The parking lot will be modified to accommodate future parking requirements and traffic movements within the site without any change to the existing North Port Washington Road egress-ingress. The site plan includes 25 parking stalls, three more than existing, with a single ADA accessible space.

Proposed site lighting includes pole-mounted lights with cut-off fixtures. The landscaping plan is included with the submittal documents.

Staff Recommendation: Staff recommends that the Plan Commission grant approval for Lakeshore Family Dentistry to construct the proposed professional dental office improvements at 7155 North Port Washington Road site, all in conformance with the architectural, site, landscape, lighting, and signage plans, as well as granting approval of the use and occupancy, per the following requirements:

Tuesday, January 8, 2019

- 1) All modifications within the right-of-ways, disconnections or connections to City infrastructure (driveways, sanitary sewer, watermains, storm sewers, etc.) require prior review and approval and permits from the City of Glendale Department of Public Works;
- 2) All costs associated with modifications and connections within the right-of-way are the sole responsibility of the applicant;
- 3) Obtain a stormwater management permit per Glendale Code of Ordinances 6-5, and Milwaukee Metropolitan Sewerage District approval, if required;
- 4) Signage requires a Sign Permit per the Glendale Sign Code;
- 5) All landscaping and lighting features being maintained and replaced and/or replenished whenever necessary;
- 6) Dumpster enclosure in compliance with 13.1.144 of the Zoning Code;
- 7) City of Glendale building and fire codes per the Building Inspector, the North Shore Fire Department, and the North Shore Health Consortium;
- 8) Compliance with State of Wisconsin ADA parking requirements.

Community Development Director Todd Stuebe stated that Staff recommends that the Plan Commission grant approval for Lakeshore Family Dentistry to construct the proposed professional dental office improvements at 7155 North Port Washington Road site, all in conformance with the architectural, site, landscape, lighting, and signage plans, as well as granting approval of the use and occupancy, per the following requirements: 1) All modifications within the right-of-ways, disconnections or connections to City infrastructure (driveways, sanitary sewer, watermains, storm sewers, etc.) require prior review and approval and permits from the City of Glendale Department of Public Works; 2) All costs associated with modifications and connections within the right-of-way are the sole responsibility of the applicant; 3) Obtain a stormwater management permit per Glendale Code of Ordinances 6-5, and Milwaukee Metropolitan Sewerage District approval, if required; 4) Signage requires a Sign Permit per the Glendale Sign Code; 5) All landscaping and lighting features being maintained and replaced and/or replenished whenever necessary; 6) Dumpster enclosure in compliance with 13.1.144 of the Zoning Code; 7) City of Glendale building and fire codes per the Building Inspector, the North Shore Fire Department, and the North Shore Health

Tuesday, January 8, 2019

Consortium, and 8) Compliance with State of Wisconsin ADA parking requirements.

Jordon O'Connor introduced himself as architect and presented the project.

Motion by Comm. Cole, seconded by Comm. Bailey, that the Plan Commission grant approval for Lakeshore Family Dentistry to construct the proposed professional dental office improvements at 7155 North Port Washington Road site, all in conformance with the architectural, site, landscape, lighting, and signage plans, as well as granting approval of the use and occupancy, per the eight requirements. Roll Call: Ayes: Mayor Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: None. Abstain: None. Motion carried unanimously.

- VII. Petition to Rezone 2510 West Good Hope Road (Certified Survey Map 8771, Lots 1, 2, 3, and 4, and Lands Previously Intended to be Dedicated for Public Street Purposes, Tax Key Parcels 1009984002, 1009984002, 1009984004, and 1009984005 and the Dedication Lands) from R-3 Residence District to PD-Planned Unit Development District-Multi-Family Residential, to Include a 48-Unit Apartment Building located proximate and parallel to West Good Hope Road and, to the north of the Apartment Building, 41 Townhome Garden Apartments (Note: 7340 North Braeburn Lane, Tax Key Parcel 1009977001, is not included in this Project Plan and will remain as unplatted lands zoned R-3 Residence District. Reschedule Public Hearing for 6:00 p.m. Tuesday, February 5, 2019

Mr. Stuebe stated that the Plan Commission Report was distributed to the Plan Commissioners and Applicant and is incorporated herein as follows:

Plan Commission Report:

New Land Enterprises, LLP, informed the City that they will require some time to respond to Plan Commission comments made at the meeting of December 4, 2018, and also Tim Gokhman will be out of the country January 8, 2019. As such New Land asked that the Plan Commission Public Hearing date be changed to Tuesday, February 5, 2019.

CITY OF GLENDALE -- PLAN COMMISSION

Tuesday, January 8, 2019

Necessary Action

Schedule Public Hearing for 6:00 p.m. Tuesday, February 5, 2019, in the David Hobbs Honda For the People Community Room at Richard E. Maslowski Park, 2200 West Bender Road, Glendale, Wisconsin, in order to take and consider public comment about the proposed Project Plan.

Motion by Comm. Cronwell, seconded by Comm. Shaw, that the Plan Commission grant approval of the New Land Enterprise request to change the Rezone Public Hearing date and time to 6:00 p.m., Tuesday, February 5, 2019. Roll Call: Ayes: Mayor Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: None. Abstain: None. Motion carried unanimously.

ADJOURNMENT.

Motion by Comm. Bailey, seconded by Comm. Cronwell, to adjourn the Plan Commission until the next regular meeting to be held at 6:00 p.m., Tuesday, February 5, 2019, in the David Hobbs Honda For the People Community Room at Richard E. Maslowski Community Park, 2200 West Bender Road, Glendale, Wisconsin. Roll Call: Ayes: Mayor Bryan Kennedy, Commissioners Vukovic, Cole, Cronwell, Bailey, Wadzinski, and Shaw. Noes: None. Motion carried unanimously.

Todd M. Stuebe, Director of Community Development

Respectfully Submitted: January 31, 2019.



CITY OF GLENDALE
COMMUNITY DEVELOPMENT DEPARTMENT
5909 NORTH MILWAUKEE RIVER PARKWAY
GLENDALE, WISCONSIN 53209-3815
PHONE: (414) 228-1704 or (414) 228-1742
FAX: (414) 228-1725
WWW.GLENDALE-WI.ORG

APPLICATION FOR CHANGE OF ZONING
Application Fee: \$250 (\$500 for Planned Development)

APPLICANT INFORMATION

Name of Applicant: Jason Korb representing New Land Enterprises

Name of Business Owner: Tim Gokhman

Business Name: New Land Enterprises, LLP

Address of Applicant: 648 N Plankinton Ave

City, State, Zip: Milwaukee, WI 53204

Office Phone Number: 414-273-8230

Applicant E-Mail: jkorb@kaa-arch.com

Applicant Signature: 

Date: 11/5/18

PROPERTY INFORMATION

(Please use additional application forms if re-zoning more than one parcel)

Current Zoning of Property: R3

Proposed Zoning of Property: PUD

Current Use of Property: Vacant Proposed Use of Property: Apartments

Property Address (or addresses): 2510 West Good Hope Rd, Glendale, WI

Property Owner (s) (if different from applicant):

Property Owner Address:

City, State, Zip:

Property Owner Phone: Cell: _____ Fax: _____

Tax Key Number:

Lot Size: Depth: 585.37' Width: 370.72 Area: 5.3993

PROPOSAL INFORMATION

Type of Business: Apartments

Reason for Seeking a Change in Zoning:

To redevelop land from a vacant lot, to a new apartment development for 89 units

Who is the Primary Contact for This Project: Jason Korb, AIA

Contact Phone Number: 414-988-7430 Cell: 414-217-0501 Fax: 414-273-8231

Contact E-Mail: jkorb@kaa-arch.com

Please See Reverse Side of Application for Additional Submittal Requirements

CITY OF GLENDALE USE ONLY

Total Fee: _____ Application Date: _____ Hearing Date: _____ Time: _____



5 November, 2018

Mr. Todd Steube
Director of Community Development & Zoning
City of Glendale

Mr. Steube,

Korb + Associates Architects, on behalf Newland Enterprise Investments, is requesting the implementation of a Planned Unit Development (PUD) for the property located at 2510 West Good Hope Rd. The proposed redevelopment of this property would redevelop a large parcel of the city of Glendale and create a peaceful, stable, diverse and safe townhouse style apartment community. We believe this proposal maintains the integrity and quality of the existing neighborhood and insures that the new development is compatible with the surrounding uses.

Due to contamination from the previous land use the property will need remediation before the construction process. The developer proposes to remediate the existing contaminated soil where needed. The development as proposed includes townhomes organized within 8 uniquely designed structures and one apartment building. Additionally, a maintenance shed will be constructed on the north east quadrant of the development to contain vehicles for snow removal, trash removal and landscaping equipment. The 9 structures will house a total of 89 units breaking down as follows:

Unit Mix

Townhomes (3 bedroom) 41 Units

Apartments

3 Bedroom	3 Units	} 48 Apartment Units
2 Bedroom	18 Units	
1 Bedroom	27 Units	

Total 89 Units

The proposed plan has 180 parking spaces (including townhome garage parking), providing a ratio of 2 stalls per dwelling unit with additional parallel parking on the front side of the townhome garages. Parking will be achieved by utilizing 47 indoor stalls within the first floor of the apartment building with an additional 51 surface stalls serving visitors and residents of the apartment building. In addition, each townhome will have a two-car garage with additional parallel parking for visitors. The proposed development will feature such amenities as a party room, a fitness center, on site management offices, outdoor ¼ mile path with common space, and 4 communal terraces for residents to take comfort. Please refer to the site utilization as follows:

Site Utilization

Building Utilization –	65,282 sf	28% of site	} 42% Green space/ Open space
Vehicular Circulation (impervious pavement) –	62,000 sf	26% of site	
Hardscape (walking paths, sidewalks) –	9,754 sf	4% of site	
Preserved Woodland –	27,200 sf	11.5% of site	
Communal Terrace (including patio) –	22,434 sf	9.5% of site	
Green Space -	48,523 sf	21% of site	
Total Site Size	235,193 sf (5.3993 Acres)		

The development team proposes a single monument sign at the main entry off of Good Hope Road. The name of the project is yet to be determined. A freestanding mailbox kiosk will also be located near the main entry for easy post office access. The current planned Unnamed Public Street will serve as the eastern entry to the property and a new curb cut will be added to the east at the request of the developer.



The developer will maintain an onsite leasing office with full time maintenance staff for building maintenance, landscaping & snow removal. Trash & recycling will be contracted through Waste Management

The developer estimates the construction cost of this project to be approximately \$9.5 million, with a total project cost of \$12million.

Construction would tentatively begin in summer 2019 and last 16 months.

Please feel free to contact me with any questions or comments you may have on this application.

Best regards,

A handwritten signature in black ink, appearing to read 'Jason Korb', written in a cursive, flowing style.

Jason Korb, AIA
Korb + Associates Architects.

PRELIMINARY

CERTIFIED SURVEY MAP NO. _____

A REDIVISION OF CERTIFIED SURVEY MAP NO. 8871 RECORDED IN THE MILWAUKEE COUNTY REGISTER OF DEEDS AS DOCUMENT NO. 10540324 AND THAT PORTION OF A VACATED STREET, BEING PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 18, TOWN 8 NORTH, RANGE 22 EAST, IN THE CITY OF GLENDALE, MILWAUKEE COUNTY, WISCONSIN

ALL BEARINGS ARE REFER TO THE WEST LINE OF THE SOUTHWEST 1/4 OF SECTION 18, WHICH HAS A WISCONSIN STATE PLANE COORDINATE SYSTEM (SOUTH ZONE)(NAD27) BEARING OF N00°12'29"W. (SEPT. 2017 REVISION)

ALL MEASUREMENTS HAVE BEEN MADE TO THE NEAREST ONE-HUNDREDTH OF A FOOT.

ALL ANGULAR MEASUREMENTS HAVE BEEN MADE TO THE NEAREST ONE SECOND.

UNNAMED PUBLIC STREET IS UNIMPROVED

SEE SHEET 2 & 3 FOR OUTLOT AND EASEMENT DETAILS

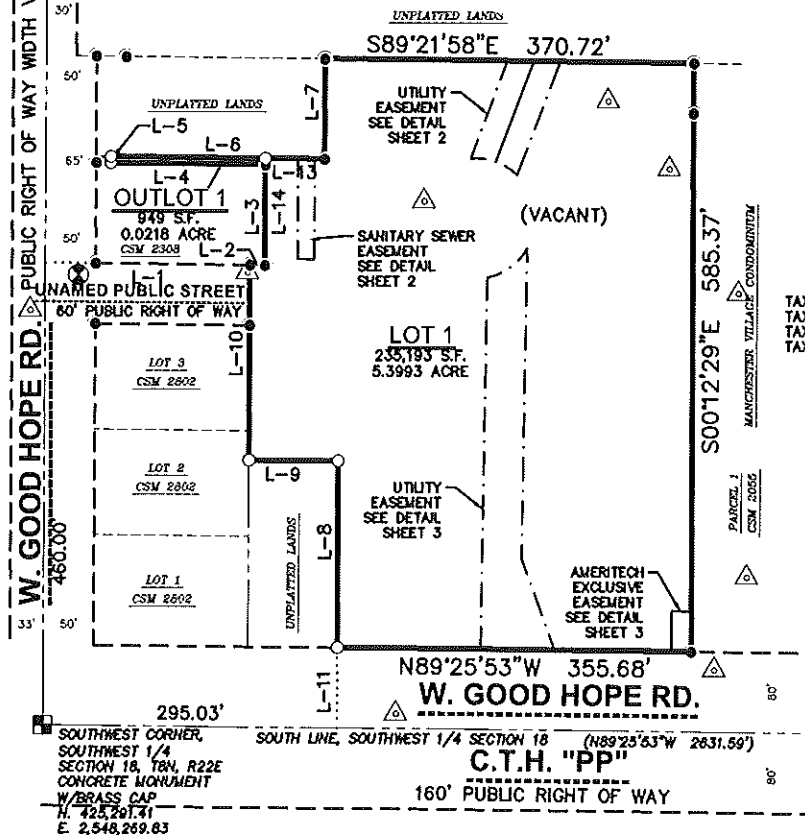
LINE TABLE		
LINE	BEARING	DISTANCE
L-1	S89°25'53"E	205.00'
L-2	S89°25'53"E	15.11'
L-3	N0°12'29"W	100.06'
L-4	N89°25'53"W	155.10'
L-5	N0°12'29"W	6.12'
L-6	S89°25'53"E	214.99'
L-7	N0°12'29"W	99.62'
L-8	N0°12'29"W	185.81'
L-9	N89°25'53"W	90.03'
L-10	N0°12'29"W	194.20'
L-11	N0°12'29"W	80.01'
L-12	S89°25'53"E	155.10'
L-13	S89°25'53"E	59.89'
L-14	S0°12'29"E	106.18'
L-15	N0°12'29"W	6.12'

NORTHWEST CORNER,
SOUTHWEST 1/4
SECTION 18, T8N, R22E
CONCRETE MONUMENT
W/BRASS CAP
N. 427,954.96
E. 2,548,280.18

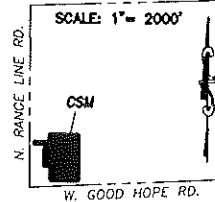


OCTOBER 23, 2018

File: R:\2018\18-8716-2510 Good Hope Rd (Glendale WI)\Dwg\188716 CSM.dwg Layout: CSM 1 of 5 User: daponjar Plotdate: Oct 23, 2018 - 3:38pm



VICINITY MAP
SOUTHWEST 1/4
SECTION 18, T8N, R22E



TAX KEY NO. 1009984002 ZONING: R-3
TAX KEY NO. 1009984005 ZONING: R-3
TAX KEY NO. 1009984004 ZONING: R-3
TAX KEY NO. 1008894003 ZONING: R-3

<u>LEGEND</u>	
	FOUND PLS MONUMENT

SOUTHEAST CORNER,
SOUTHWEST 1/4
SECTION 18, T8N, R22E
CONCRETE MONUMENT
W/CAST IRON PLUG

THIS INSTRUMENT WAS DRAFTED BY ANDREW W. WILKOWSKI, S-3121.

SURVEYED BY:

JSD Professional Services, Inc.
Jeffrey S. Dapont
2230 WISCONSIN BUSSE ROAD
SUITE 100
WALKESSHA, WISCONSIN 53188
PHONE: (262)513-0666

SUBOWNER/OWNER:

NEW LAND ENTERPRISES, LLC
1818 N. FARWELL AVE.
MILWAUKEE, WI 53202

PROJECT NO:

18-8716

FILE NO:

B-*

FIELDBOOK/PG:

-

SHEET NO:

1 OF 5

SURVEYED BY:

JA

DRAWN BY:

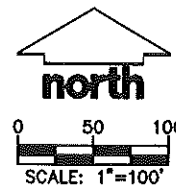
DHS

CHECKED BY:

AKW

APPROVED BY:

JJJ

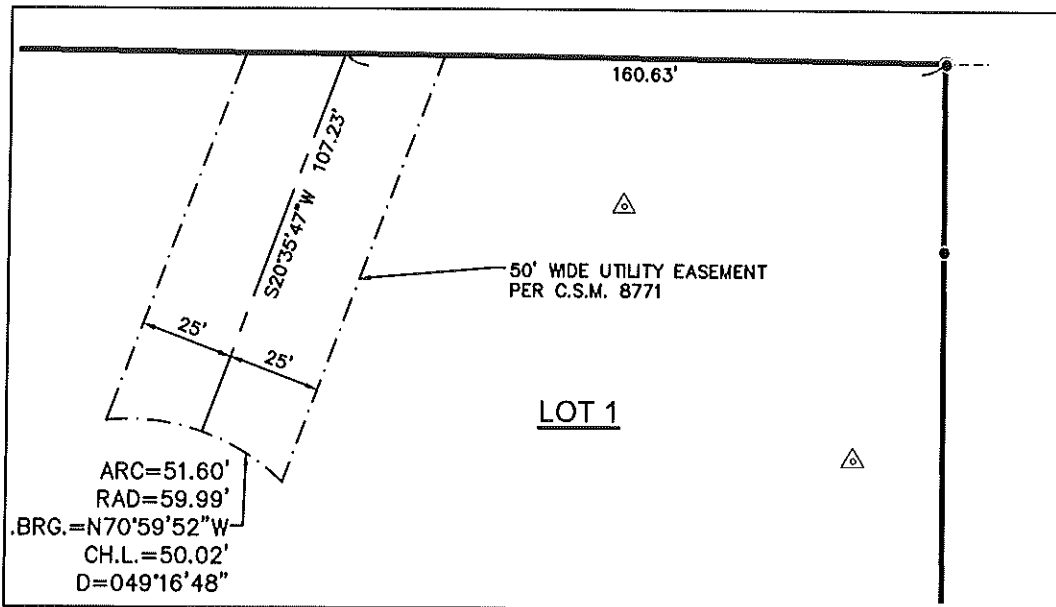
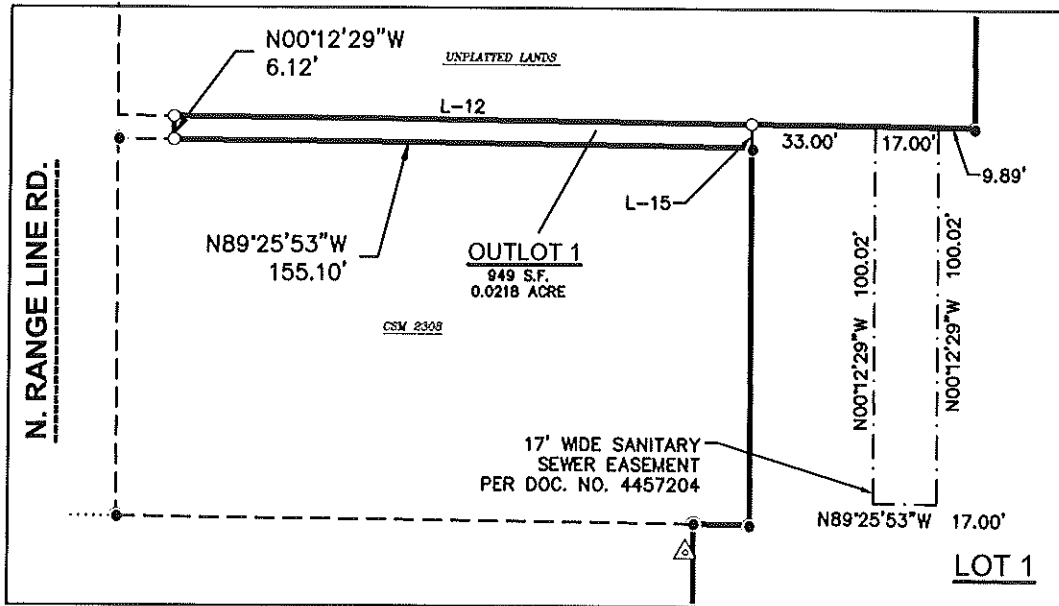


PRELIMINARY

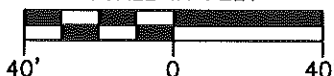
CERTIFIED SURVEY MAP NO. _____

A REDIVISION OF CERTIFIED SURVEY MAP NO. 8871 RECORDED IN THE MILWAUKEE COUNTY REGISTER OF DEEDS AS DOCUMENT NO. 10540324 AND THAT PORTION OF A VACATED STREET, BEING PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 18, TOWN 8 NORTH, RANGE 22 EAST, IN THE CITY OF GLENDALE, MILWAUKEE COUNTY, WISCONSIN

OUTLOT AND EASEMENT DETAILS



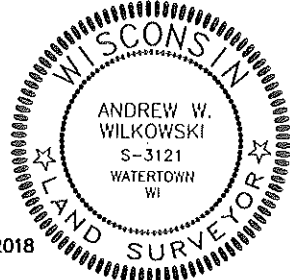
SCALE IN FEET



PREPARED BY:

JSD Professional Services, Inc.
Explains • Explains • Explains
N238 W1610 BUSSE ROAD
SUITE 100
WALKESHA, WISCONSIN 53188
PHONE: (262)513-0666

OCTOBER 23, 2018



THIS INSTRUMENT WAS DRAFTED BY ANDREW W WILKOWSKI, S-3121.

SHEET 2 OF 5

File: R:\2018\18-8716 2510 Good Hope Rd (Glendale W)\Dwg\188716 CSM.dwg Layout: CSM 2 of 5 User: dsponjaer Plotted: Oct 23, 2018 - 3:39pm

PRELIMINARY

CERTIFIED SURVEY MAP NO. _____

A REDIVISION OF CERTIFIED SURVEY MAP NO. 8871 RECORDED IN THE MILWAUKEE COUNTY REGISTER OF DEEDS AS DOCUMENT NO. 10540324 AND THAT PORTION OF A VACATED STREET, BEING PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 18, TOWN 8 NORTH, RANGE 22 EAST, IN THE CITY OF GLENDALE, MILWAUKEE COUNTY, WISCONSIN

EASEMENT DETAILS

ARC=51.24'
RAD=59.99'
CH.BRG.=N54°10'22"E
CH.L.=49.69'
D=048°56'16"

LOT 1
235,193 S.F.
5.3993 ACRE

40'
N00°34'07"E 369.25'
N00°34'07"E 308.04'

40' WIDE UTILITY EASEMENT
PER CSM 8771

AMERITECH EXCLUSIVE
EASEMENT PER DOC. NO.'S
8085332 & 8085333

N20°20'14"W 87.09'

74.64'

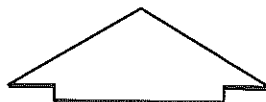
117.34'

20.00'

40.00'

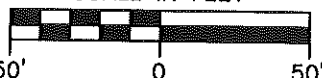
20.00'

W. GOOD HOPE RD.



north

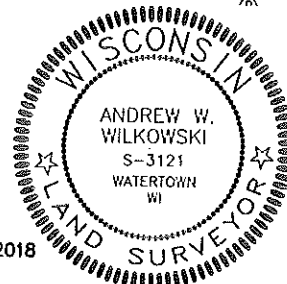
SCALE IN FEET



PREPARED BY:

JSD Professional Services, Inc.
• Surveying • Mapping • Planning
N2330 W1810 BUSSE ROAD
SUITE 100
WALKESSHA, WISCONSIN 53188
PHONE: (262)513-0666

OCTOBER 23, 2018



THIS INSTRUMENT WAS DRAFTED BY ANDREW W WILKOWSKI, S-3121.

SHEET 3 OF 5

File: R:\2018\18-8776 2510 Good Hope Rd (Glendale WI)\Dwg\188716 CSM.dwg Layout: CSM 3 of 5 User: dapanjar Plotted: Oct 23, 2018 - 3:39pm

PRELIMINARY

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STATE OF WISCONSIN}
:SS
MILWAUKEE COUNTY}

I, ANDREW W. WILKOWSKI, PROFESSIONAL LAND SURVEYOR, CERTIFY:

THAT I HAVE SURVEYED, DIVIDED AND MAPPED A REDIVISION OF CERTIFIED SURVEY MAP NO. 8871 RECORDED IN THE MILWAUKEE COUNTY REGISTER OF DEEDS AS DOCUMENT NO. 10540324 AND THAT PORTION OF A VACATED STREET, BEING PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 18, TOWN 8 NORTH, RANGE 22 EAST, IN THE CITY OF GLENDALE, MILWAUKEE COUNTY, WISCONSIN, WHICH IS BOUNDED AND DESCRIBED AS FOLLOWS:

LOTS 1, 2 3 AND 4 OF CERTIFIED SURVEY MAP NUMBER 8871 AND THAT VACATED PORTION OF A PUBLIC STREET, BEING PART OF THE SOUTHWEST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 18, TOWN 8 NORTH, RANGE 22 EAST, IN THE CITY OF GLENDALE, MILWAUKEE COUNTY, WISCONSIN.

LANDS CONTAINS 236,142 SQUARE FEET OR 5.4211 ACRES.

THAT I HAVE MADE THE SURVEY, LAND DIVISION, AND MAP BY THE DIRECTION OF NEW LAND ENTERPRISES, LLC.

THAT THE MAP IS A CORRECT REPRESENTATION OF ALL EXTERIOR BOUNDARIES OF THE LAND SURVEYED AND THE LAND DIVISION THEREOF MADE.

THAT I HAVE FULLY COMPLIED WITH CHAPTER 236.34 OF THE WISCONSIN STATUTES AND CHAPTER 119 OF THE MILWAUKEE CODE OF ORDINANCES IN SURVEYING, DIVIDING AND MAPPING THE SAME.

ANDREW W. WILKOWSKI
PROFESSIONAL WISCONSIN LAND SURVEYOR S-3121

OCTOBER 23, 2018



PREPARED BY:

JSD Professional Services, Inc.
Sullivan • Egan • Patten
4233 W1610 BUSSE ROAD
SUITE 100
WALKESHA, WISCONSIN 53188
PHONE: (262)513-0660

THIS INSTRUMENT WAS DRAFTED BY ANDREW W WILKOWSKI, S-3121.

SHEET 4 OF 5

File: R:\2018\18-8716 2510 Good Hope Rd (Glendale WI)\Dwg\188716 CSM.dwg Layout: CSM 4 of 5 User: dspanier Plotted: Oct 23, 2018 - 3:39pm

PRELIMINARY

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CORPORATE OWNER'S CERTIFICATE

NEW LAND ENTERPRISES, LLC, A CORPORATION DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF WISCONSIN, AS OWNER, DOES HEREBY CERTIFY THAT SAID CORPORATION HAS CAUSED THE LAND DESCRIBED ON THIS CERTIFIED SURVEY MAP TO BE SURVEYED, DIVIDED AND MAPPED AS REPRESENTED HEREON. SAID CORPORATION FURTHER CERTIFIES THAT THIS CERTIFIED SURVEY MAP IS REQUIRED BY S.236.34, WISCONSIN STATUTES TO BE SUBMITTED TO THE CITY OF GLENDALE FOR APPROVAL.

IN WITNESS WHEREOF, THE SAID NEW LAND ENTERPRISES, LLC HAS CAUSED THESE PRESENTS TO BE SIGNED BY ITS REPRESENTATIVES THIS _____ DAY OF _____, 2018.

NEW LAND ENTERPRISES, LLC

BY: _____

STATE OF WISCONSIN) SS
MILWAUKEE COUNTY) SS

_____, PERSONALLY CAME BEFORE ME THIS _____ DAY OF _____, 2018, THE ABOVE NAMED _____ OF THE ABOVE NAMED NEW LAND ENTERPRISES, LLC, TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

NOTARY PUBLIC, MILWAUKEE COUNTY, WISCONSIN

MY COMMISSION EXPIRES _____

COMMON COUNCIL CERTIFICATE OF APPROVAL

THIS CERTIFIED SURVEY MAP APPROVED BY THE COMMON COUNCIL OF THE CITY OF GLENDALE ON THIS _____ DAY OF _____, 2018.

RACHEL A. REISS, CITY ADMINISTRATOR



OCTOBER 23, 2018

PREPARED BY:

JSD Professional Services, Inc.
1235 W1810 BUSSE ROAD
SUITE 100
WILKESHA, WISCONSIN 53188
PHONE: (262)513-0666

THIS INSTRUMENT WAS DRAFTED BY ANDREW W WILKOWSKI, S-3121.

SHEET 5 OF 5

File: R:\2018\18-8716 2510 Good Hope Rd (Glendale WI)\Dwg\188716 CSML.dwg Layout: CSML 5 of 5 User: djpoujar Plotted: Oct 23, 2018 - 3:39pm

OWNER INFORMATION:
NEW LAND ENTERPRISES
1818 N. FARWELL AVE
MILWAUKEE WI, 53202
P 414.349.2248

ARCHITECT:
KORB + ASSOCIATES
648 N. PLANKINTON AVE.
SUITE 240
MILWAUKEE, WI 53203
P 414.273.8230

STRUCTURAL ENGINEER:
XXXXXXXXXX

CIVIL AND LANDSCAPING:
JSD PROFESSIONAL
SERVICES, INC.
N22 W22931 NANCY'S
COURT, SUITE 3
WAUKESHA, WI 53186
P 262.513.0666

ELECTRICAL/LIGHTING ENGINEER
MUERMANN ENGINEERING
 W227 N16867 TILLIE LAKE
 COURT
 SUITE 202
 JACKSON, WI 53037
 P 920.894.7800

CONSTRUCTION MANAGEMENT:
XXXXXXXXXX

REV. NO:	DATE:
----------	-------

REVIEW SET ONLY
FOR CONSTRUCTION

PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018

SITE PLAN

A100

SHADE TREE

ORNAMENTAL TREE

EVERGREEN TREE

FOUNDATION / PARKING SHRUBS

LARGE EVERGREEN / CONIFEROUS SCREENING SHRUBS

PERENNIAL PLANTING AREA

EXISTING VEGETATION

OWNER INFORMATION:
NEW LAND ENTERPRISES
1818 N. FARWELL AVE
MILWAUKEE WI, 53202
P 414.349.2248

ARCHITECT:
KORB + ASSOCIATES
648 N. PLANKINTON AVE.
SUITE 240
MILWAUKEE, WI 53203
P 414.273.8230

STRUCTURAL ENGINEER:
XXXXXXXXXX

CIVIL AND LANDSCAPING:
JSD PROFESSIONAL
SERVICES, INC.
N22 W22931 NANCY'S
COURT, SUITE 3
WAUKESHA, WI 53186
P 262.513.0666

ELECTRICAL/LIGHTING ENGINEER
MUERMANN ENGINEERING
 W227 N16867 TILLIE LAKE
 COURT
 SUITE 202
 JACKSON, WI 53037
 P 920.894.7800

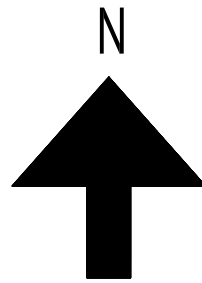
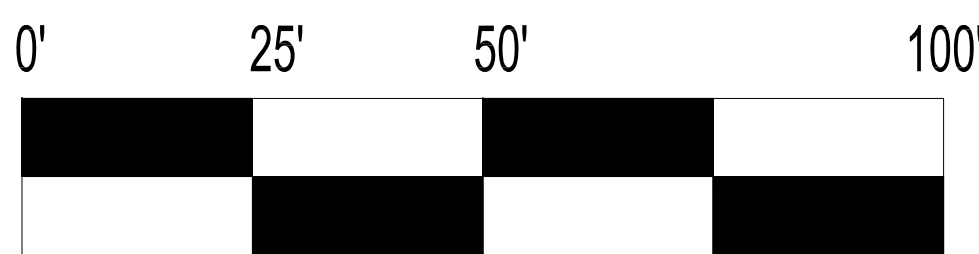
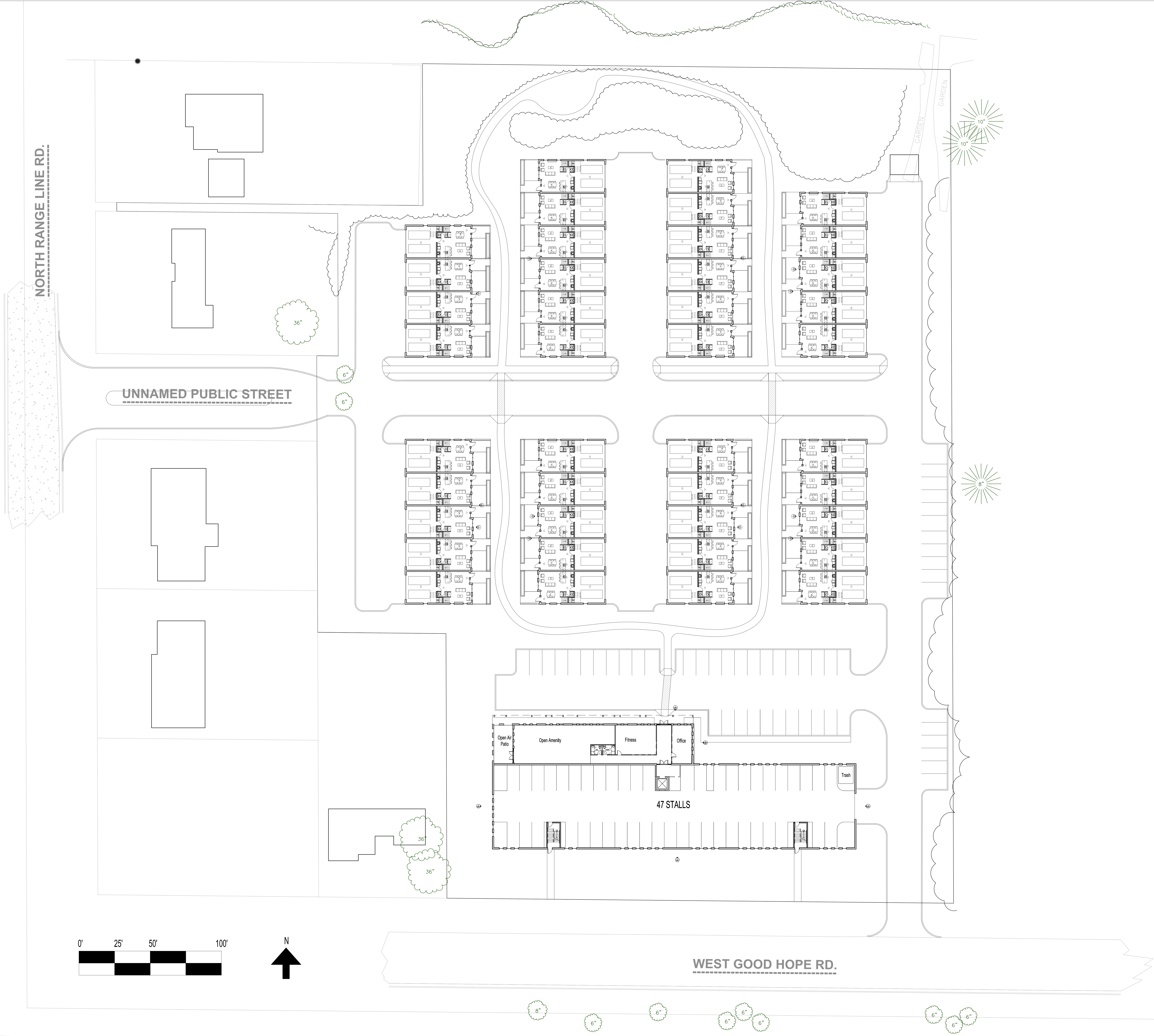
CONSTRUCTION MANAGEMENT:
XXXXXXXXXX

[illegible]

PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018

LANDSCAPE PLAN

L100



REVIEW SET ONLY
NOT FOR CONSTRUCTION



CONSTRUCTION MANAGEMENT:
XXXXXXXXXX

REV. NO:	DATE:

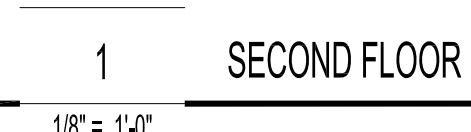
**REVIEW SET ONLY
FOR CONSTRUCTION**

PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018



FIRST FLOOR - TOWNHOUSE

A101.2



A102



A102.1

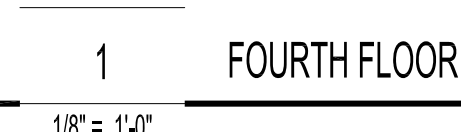


CONSTRUCTION MANAGEMENT:
XXXXXXXXXX

REV. NO:	DATE:
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REVIEW SET ONLY
FOR CONSTRUCTION

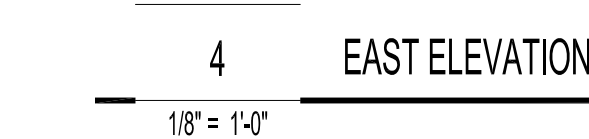
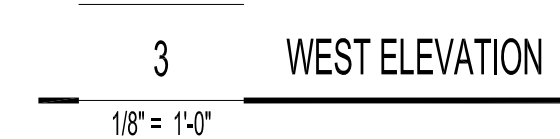
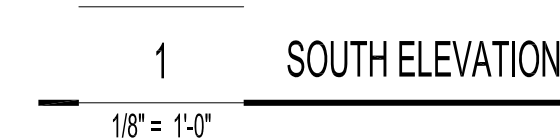
PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018



CONSTRUCTION MANAGEMENT:
XXXXXXXXXX

[illegible]

PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018



REV. NO:	DATE:
----------	-------

**REVIEW SET ONLY
FOR CONSTRUCTION**

PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018

BUILDING ELEVATIONS

A201



A202



CONSTRUCTION MANAGEMENT
XXXXXXXXXX

PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018

A500



OWNER INFORMATION:
NEW LAND ENTERPRISES
1818 N. FARWELL AVE
MILWAUKEE WI, 53202
P 414 349 2248

ARCHITECT:
KORB + ASSOCIATES
648 N. PLANKINTON AV.
SUITE 240
MILWAUKEE, WI 53203
P 414.273.8230

STRUCTURAL ENGINEER:
XXXXXXXXXX

CIVIL AND LANDSCAPING:
JSD PROFESSIONAL
SERVICES, INC.
N22 W22931 NANCY'S
COURT, SUITE 3
WAUKESHA, WI 53186
P 262 513 0866

ELECTRICAL/LIGHTING ENGINEER
MUERMANN ENGINEERING
W227 N16867 TILLIE LA
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SUITE 202
JACKSON, WI 53037
P 920.894.7800

CONSTRUCTION MANAGEMENT
XXXXXXXXXX

REV. NO:	DATE:
REVIEW SET ONLY FOR CONSTRUCTION	

PROJ. NO:	18010-04
SCALE:	AS NOTED
PHASE:	PUD SUBMITTAL
DATE:	11-05-2018

EXTERIOR RENDERINGS

A500.1



K

A

KORB + ASSOCIATES ARCHITECTS

N

L

NEW LAND

ENTERPRISES

PROJECT NAME:
GOOD HOPE
TOWN HOMES
AND
APARTMETNS
2510 W GOOD HOPE RD
GLENDALE, WISCONSIN
53209OWNER INFORMATION:
NEW LAND ENTERPRISES
1818 N. FARWELL AVE.
MILWAUKEE, WI 53202
P 414.349.2248ARCHITECT:
KORB + ASSOCIATES
648 N. PLANKINTON AVE.
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XXXXXXXXXX

REV. NO. DATE:

PROJ. NO. B101044

SCALE: AS NOTED

PHASE: I/PD SUBMITTAL

DATE: 11-05-2019

EXTERIOR RENDERINGS

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K

A

KORB + ASSOCIATES ARCHITECTS

N

L

NEW LAND

ENTERPRISES

PROJECT NAME:
GOOD HOPE
TOWN HOMES
AND
APARTMETNS
2510 W GOOD HOPE RD
GLENDALE, WISCONSIN
53209OWNER INFORMATION:
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Good Hope Town Homes & Apartments Traffic Impact Analysis

**City of Glendale
Milwaukee County, Wisconsin**

January 28, 2019

TRAFFIC IMPACT ANALYSIS FOR:

**Good Hope Town Homes and Apartments
Good Hope Road at Range Line Road**

CITY OF GLENDALE, MILWAUKEE COUNTY, WISCONSIN

DATE SUBMITTED: January 28, 2019

PREPARED FOR:

Korb & Associates Architects
648 N. Plankinton Avenue, Suite 240
Milwaukee, WI 53203
Phone: (414) 988-7430
Contact Person: Jason Korb, AIA, NCARB LEED, AP

PREPARED BY:

Traffic Analysis & Design, Inc.
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Cedarburg, WI 53012
Phone: (800) 605-3091
Contact Persons: Don Lee, P.E. (WisDOT TIA Certification # SE05-804-046)
John Bieberitz, P.E., PTOE (WisDOT TIA Certification # SE05-804-044)

“I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering.”

Donald J. Lee, P.E.
Wisconsin Registration #35214-006
Traffic Analysis & Design, Inc.

Good Hope Town Homes and Apartments
Traffic Impact Analysis
Table of Contents

LIST OF EXHIBITS.....	ii
LIST OF APPENDICES.....	iii
CHAPTER I – INTRODUCTION & EXECUTIVE SUMMARY.....	1
Part A – Purpose of Report and Study Objectives.....	1
Part B – Executive Summary	1
CHAPTER II – PROPOSED DEVELOPMENT.....	4
Part A –Development Description.....	4
Part B – Study Area	4
Part C – Site Accessibility	4
CHAPTER III – ANALYSIS OF EXISTING CONDITIONS.....	6
Part A – Physical Characteristics.....	6
Part B – Traffic Volumes.....	6
Part C – Capacity Level of Service.....	6
Part D – Crash Analysis.....	7
Part E – Sources of Data	8
CHAPTER IV – DEVELOPMENT TRAFFIC	9
Part A – Proposed Site Traffic Forecasting	9
Part B – Build (With development) Traffic	9
Part C – Capacity Level of Service.....	9
Part D – Queueing Analysis.....	12
CHAPTER V – RECOMMENDATIONS AND CONCLUSION	13
Part A – Recommendations	13
Part B – Conclusion	14

LIST OF EXHIBITS

Exhibit 1-1	Project Location Map
Exhibit 1-2	Proposed Conceptual Site Plan
Exhibit 1-3	Year 2019 Full Build Traffic Recommended Modifications
Exhibit 2-1	Project Location Map
Exhibit 2-2	Proposed Conceptual Site Plan
Exhibit 3-1	Existing Transportation Detail
Exhibit 3-2	Year 2019 Existing Traffic Volumes
Exhibit 3-3	Year 2019 Existing Traffic Operations
Exhibit 3-4	Crash Plot Diagram
Exhibit 3-5	Crash Statistics
Exhibit 4-1	Proposed Development Trip Generation and Distribution
Exhibit 4-2	Proposed Development New Trips
Exhibit 4-3	Year 2019 Full Build Traffic Volumes
Exhibit 4-4	Year 2019 Full Build Traffic Operations – With Modifications

LIST OF APPENDICES

Appendix A...Traffic

Existing Turning Movement Counts

Existing Traffic Signal Timings

Appendix B...Peak Hour Analysis Outputs

Year 2019 Existing Traffic

Year 2019 full build (with development) Traffic

Appendix C...Warrant Analysis

All-Way Stop Warrant Analysis - Green Bay Avenue at Range Line Road

Traffic Signal Warrant Analysis - Green Bay Avenue at Range Line Road

Traffic Signal Warrant Analysis/Sensitivity Analysis - Green Bay Avenue at Range Line Road

CHAPTER I – INTRODUCTION & EXECUTIVE SUMMARY

PART A – PURPOSE OF REPORT AND STUDY OBJECTIVES

The City of Glendale has requested a Traffic Impact Analysis (TIA) to analyze the impacts of the planned residential development located along the north side of Good Hope Road immediately east of Range Line Road in the City of Glendale, Milwaukee County, Wisconsin. Traffic Analysis & Design, Inc. has been retained to identify the existing traffic operating conditions, the Year 2019 full build (with development) traffic operating conditions and modifications necessary to provide safe and efficient traffic operations under full build conditions.

This report documents the procedures, findings and conclusions of the traffic impact analysis. The analysis investigates modifications based on existing intersection geometrics, background traffic volumes and additional traffic expected to be generated by the proposed development within the limits of the study area.

PART B – EXECUTIVE SUMMARY

The executive summary includes a description of the study area, description of the proposed development plans and conclusions based on the findings of this TIA.

B1. Location of Study Site with Respect to Area Roadway Network

The proposed residential development is located along the north side of Good Hope Road immediately east of Range Line Road in the City of Glendale as shown in [Exhibit 1-1](#). [Exhibit 1-2](#) shows the proposed site plan for the residential development. Access to the proposed development site is proposed as a new residential road located on the east side of Range Line Road approximately 440-feet north of Good Hope Road and an additional access proposed as a driveway on the north side of Good Hope Road approximately 575-feet east of Range Line Road. The access along Range Line Road is proposed as a full access public roadway and the access along Good Hope Road is proposed as a right-in/right-out access driveway. Based on discussions with the City of Glendale and as shown in [Exhibit 1-1](#), the study area for the proposed residential development includes the following intersections:

- Good Hope Road with Range Line Road (existing traffic signal control);
- Good Hope Road with Green Bay Avenue (existing traffic signal control);
- Range Line Road with Green Bay Avenue (existing two-way stop control);
- Range Line Road with northern residential access roadway (proposed one-way stop control); and
- Good Hope Road with eastern residential access driveway (proposed one-way stop control).

B2. Development Description and Timing

The residential development site is proposed to include a combination of apartments and town houses made up of 45 one- and two-bedroom apartments and 41 town houses. Full build out of the site is expected to be completed in 2019. The site plan for the proposed residential development is shown in [Exhibit 1-2](#).

The residential development is expected to generate 35 new trips (10 entering/25 exiting) during a typical weekday morning peak hour and another 45 new trips (25 entering/20 exiting) during a typical weekday evening peak hour. On a typical weekday, the proposed residential development is expected to generate approximately 510 new trips (255 entering/255 exiting) under full build conditions.

B3. Existing Traffic – Recommended Modifications

The study area intersections were analyzed based on the procedures set forth in the 2010 *Highway Capacity Manual* (HCM). Intersection operation is defined by “level of service”. Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS ‘A’, to very poor, represented by LOS ‘F’. For the purpose of this study, LOS D or better was used to define desirable peak hour operating conditions.

An analysis of the existing conditions was done as a basis for comparison and to determine if any modifications would be necessary under the existing conditions. The analysis was conducted using existing intersection geometrics and traffic control. Based on the analysis completed as part of this study, all study area intersections are currently operating acceptably at LOS D or better operations under current conditions. Therefore, no modifications are recommended to accommodate the Year 2019 existing traffic volumes.

However, due to a crash history at the Green Bay Avenue intersection with Range Line Road, a traffic signal warrant analyses was performed at this intersection under existing traffic volume conditions. Based on the analysis completed as part of this study, traffic signals are not warranted at this intersection under the existing traffic conditions. It is noted that a sensitivity analysis was also completed to determine the expected increase in traffic volumes necessary for traffic signals to meet the warrant volume thresholds. Based on the sensitivity analysis completed, traffic turning movements to/from Range Line Road would need to increase by approximately 60-percent in order for traffic signals to be considered. Traffic signals or a single lane roundabout should be considered once volume thresholds have reached a level where delays at the intersection are unacceptable.

As stated, all movements at the study area intersections are expected to operate at acceptable levels under the Year 2019 existing traffic conditions.

B4. Year 2019 Full Build (With development) Traffic – Recommended Modifications

Year 2019 full build (with development) traffic volumes include the full build out of the proposed residential developments. Based on the analysis completed as part of this study, the following modifications, as shown on [Exhibit 1-3](#), are recommended to accommodate the Year 2019 full build (with development) traffic volumes.

Range Line Road at Proposed Northern Access Road

- Construct residential street with one entrance lane and one exit lane;
- Provide stop sign control on east approach of residential street.

Good Hope Road at Proposed Eastern Driveway Access

- Construct right-in/right-out access driveway with one entrance lane and one exit lane.

A traffic signal warrant analyses was performed at the Green Bay Avenue intersection with Range Line Road under Year 2019 full build (with development) traffic volume conditions. It is noted that very little new traffic expected to be generated by the proposed development is expected to utilize this intersection; therefore, even under full build traffic conditions, traffic signals are not expected to be warranted at this intersection. Traffic signals or a single lane roundabout should be considered once volume thresholds have reached a level where delays at the intersection are unacceptable. It is noted that even if 50-percent of the development traffic would utilize the Range Line Road intersection with Green Bay Avenue, traffic signals would not be expected to be met. Similar to the existing traffic volume conditions, even with 50-

percent of the development traffic assigned to this intersection, traffic turning movements to/from Range Line Road would need still to increase by approximately 60-percent in order for traffic signals to be considered.

At the proposed north access road intersection with Range Line Road, the volume of southbound to eastbound left-turn vehicles during the peak hour periods under the full build condition is expected to be minimal (2 vehicles per hour or less). With the expected turning movements at this intersection, all movements on the east approach (out of the development) are expected to operate at LOS A or better with minimal queueing (1 vehicle or less) and all vehicles on Range Line Road are expected to operate at LOS A with no queueing expected. Therefore, additional turn lanes are not expected to be necessary to allow the intersections to operate safely and efficiently. Even if 50-percent of the development traffic was assigned to/from the north on Range Line Road, the proposed north access road intersection with Range Line Road would be expected to operate at LOS A or better with no additional turn lanes.

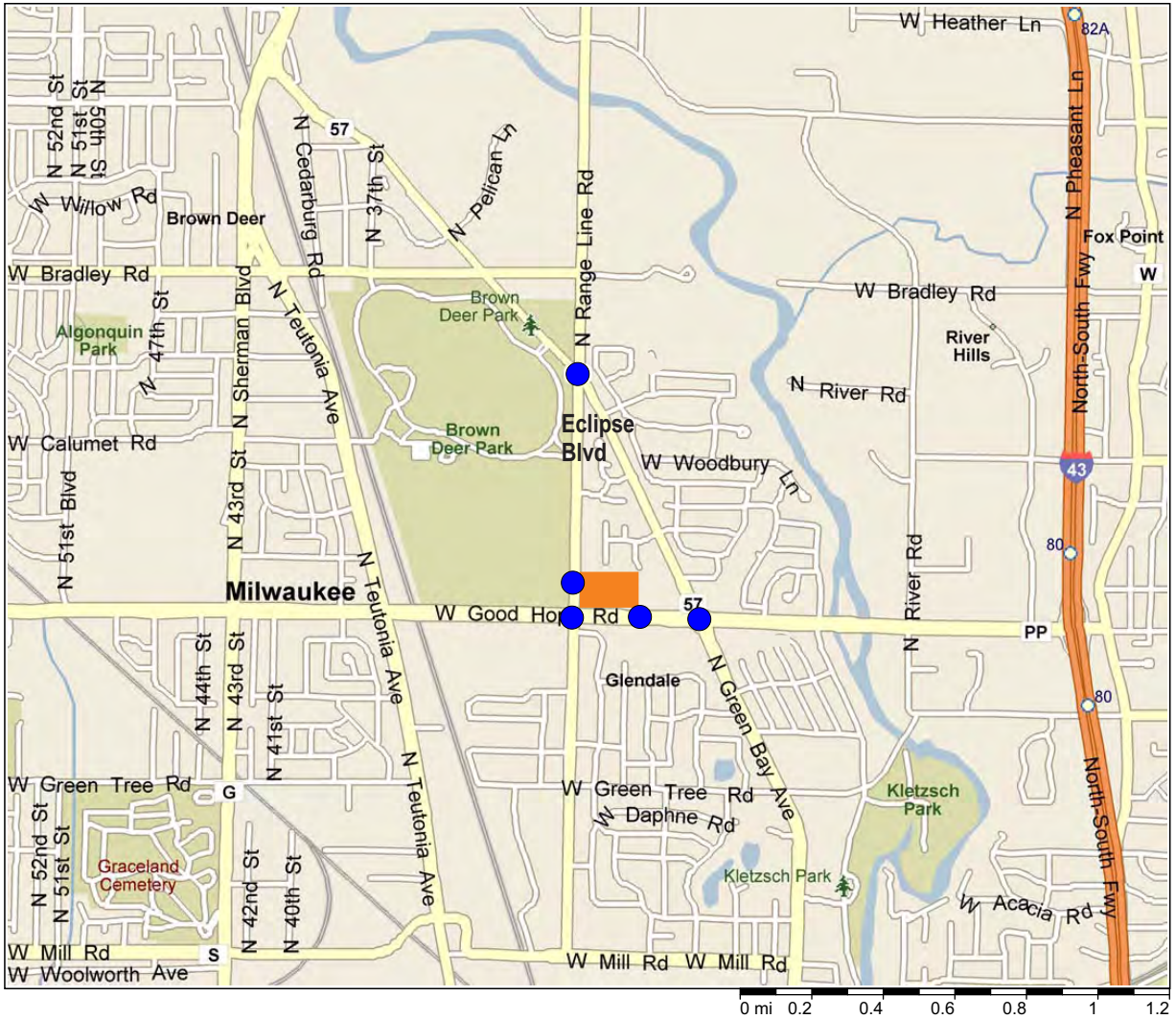
At the proposed east access driveway intersection with Good Hope Road, the volume of westbound to northbound right-turn vehicles during the peak hour periods under the full build condition is expected to be minimal (15 vehicles per hour or less). With the expected exiting movements at this intersection (5 vehicles per hour or less), all movements on the north approach (out of the development) are expected to operate at LOS C or better with minimal queueing (1 vehicle or less) and all vehicles on Good Hope Road are expected to operate at LOS A with no queueing expected. Therefore, additional turn lanes are not expected to be necessary to allow the intersections to operate safely and efficiently.

With the recommended modifications, all movements at the study area intersections are expected to operate at acceptable levels under the Year 2019 full build (with development) traffic conditions.

B5. Conclusion

All movements at the study area intersections are expected to operate safely and efficiently through the construction year 2019 with the recommended modifications.

Glendale, Wisconsin



LEGEND

-  Study Area Intersection
 Proposed Development

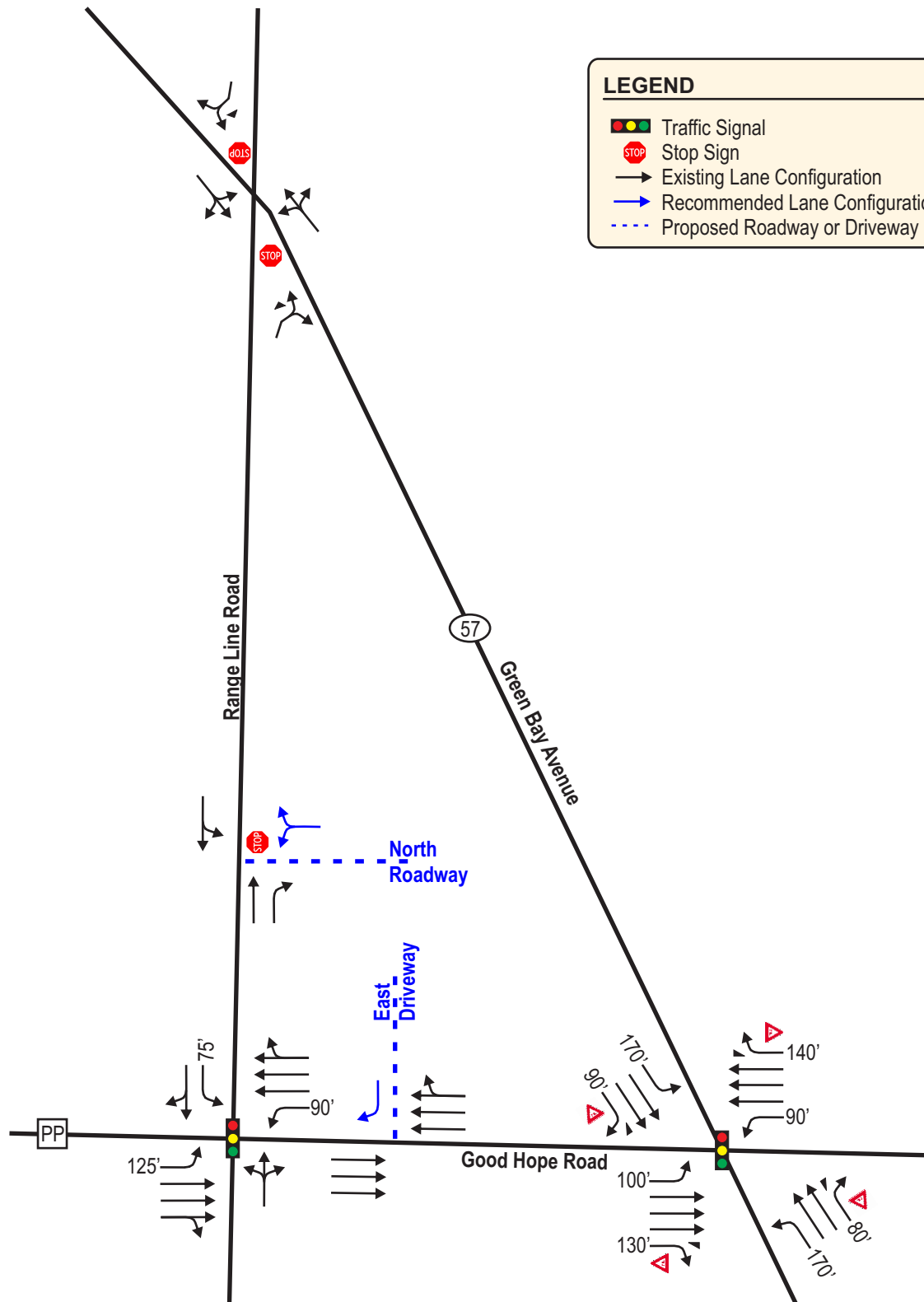
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EXHIBIT 1-1 PROJECT LOCATION MAP

GOOD HOPE TOWN HOMES AND APARTMENTS
GLENDAL, WISCONSIN





CHAPTER II – PROPOSED DEVELOPMENT

PART A –DEVELOPMENT DESCRIPTION

A1. Location of Study Site with Respect to Area Roadway Network

The proposed residential development is located along the north side of Good Hope Road immediately east of Range Line Road in the City of Glendale as shown in [Exhibit 2-1](#). The planned development includes the construction of a combination of apartments and town houses. Access to the proposed development site is proposed as a new residential road located on the east side of Range Line Road approximately 440-feet north of Good Hope Road and an additional access proposed as a driveway on the north side of Good Hope Road approximately 575-feet east of Range Line Road. The access along Range Line Road is proposed as a full access public roadway and the access along Good Hope Road is proposed as a right-in/right-out access driveway. [Exhibit 2-2](#) shows the proposed site plan for the residential development.

A2. Development Description and Timing

The residential development site is proposed to include a combination of apartments and town houses made up of 45 one- and two-bedroom apartments and 41 town houses. Full build out of the site is expected to be completed in 2019.

PART B – STUDY AREA

Based on discussions with the City of Glendale and as shown in [Exhibit 2-1](#), the study area for the proposed residential development includes the following intersections:

- Good Hope Road with Range Line Road (existing traffic signal control);
- Good Hope Road with Green Bay Avenue (existing traffic signal control);
- Range Line Road with Green Bay Avenue (existing two-way stop control);
- Range Line Road with northern residential access roadway (proposed one-way stop control); and
- Good Hope Road with eastern residential access driveway (proposed one-way stop control).

PART C – SITE ACCESSIBILITY

The study area roadways are discussed below:

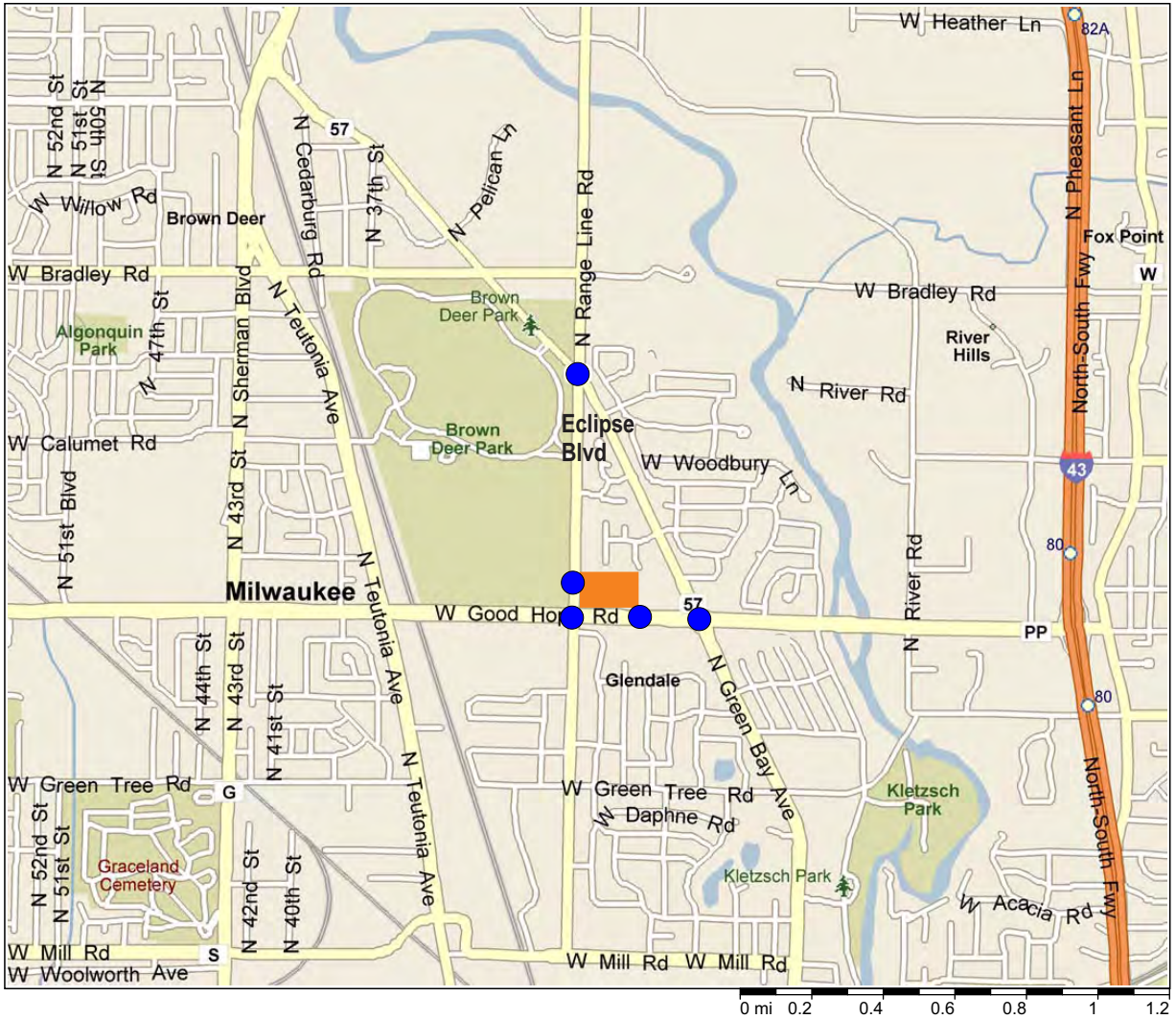
Good Hope Road is an east-west six-lane divided major arterial highway with a posted speed limit of 40-mph within the limits of the study area. The WisDOT Year 2016 AADT volumes on Good Hope Road were 26,100-vpd west of Range Line Road and 29,600-vpd to the east of Green Bay Avenue. No sidewalks currently exist along Good Hope Road within the limits of the study area.

Green Bay Avenue is a north/south four-lane divided arterial highway from the south and within the limits of the Good Hope Road intersection. North of Good Hope Road, the highway transitions into a two-lane undivided highway. The posted speed limit on Green Bay Avenue is 40-mph within the limits of the study area. The WisDOT Year 2016 AADT volumes on Green Bay Avenue were 10,200-vpd northwest of Range Line Road; 11,900-vpd north of Good Hope Road and 12,600-vpd to the south. No sidewalks currently exist along Green Bay Avenue within the limits of the study area.

Range Line Road is a north/south two-lane undivided minor arterial roadway with a posted speed limit of 30-mph within the limits of the study area. The WisDOT Year 2013 AADT volumes on Range Line Road were 1,600-vpd north of Green Bay Avenue; 1,500-vpd north of Good Hope

Road and 3,200-vpd (2016 count) to the south. No sidewalks currently exist along Range Line Road within the limits of the study area.

Glendale, Wisconsin



LEGEND

-  Study Area Intersection
 Proposed Development

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EXHIBIT 2-1 PROJECT LOCATION MAP

GOOD HOPE TOWN HOMES AND APARTMENTS
GLENDAL, WISCONSIN



CHAPTER III – ANALYSIS OF EXISTING CONDITIONS

PART A – PHYSICAL CHARACTERISTICS

[Exhibit 3-1](#) shows the existing transportation detail for the study area intersections. More specifically, the exhibit illustrates intersection lane configurations, intersection traffic controls, posted speed limits, and approximate intersection spacing.

PART B – TRAFFIC VOLUMES

B1. Existing Traffic Volumes

A weekday thirteen hour (6:00 am to 7:00 pm) turning movement count, completed for another study, was conducted in mid-October of 2018 at the Good Hope Road intersection with Green Bay Avenue. This count was supplemented with a weekday morning peak period (6:00 to 9:00 am) and weekday evening peak period (3:00 to 6:00 pm) turning movement count taken in mid-January of 2019 at the Good Hope Road intersection with the Range Line Road. In addition, a weekday thirteen hour (6:00 am to 7:00 pm) turning movement count was conducted in mid-January of 2019 at the Range Line Road intersection with Green Bay Avenue. Based on the turning movement counts conducted, the weekday morning and weekday evening peak hours were identified as being 7:15 to 8:15 am and 4:30 to 5:30 pm; respectively.

The 2019 existing traffic volumes are included in [Exhibit 3-2](#). The traffic counts used to determine peak hour factors and truck percentages have been included in the [Appendix](#) of this study.

PART C – CAPACITY LEVEL OF SERVICE

C1. Level of Service Definitions

The study area intersections were analyzed based on the procedures set forth in the *2010 Highway Capacity Manual* (HCM). Intersection operation is defined by “level of service”. Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS ‘A’, to very poor, represented by LOS ‘F’. For the purpose of this study, LOS D or better was used to define desirable peak hour operating conditions. Descriptions of the various levels of service are as follows:

LOS A is the highest level of service that can be achieved. Under this condition, intersection approaches appear quite open, turning movements are easily made, and nearly all drivers find freedom of operation. At signalized and unsignalized intersections, average delays are less than 10 seconds.

LOS B represents stable operation. At signalized intersections, average vehicle delays are 10 to 20 seconds. At unsignalized intersections, average delays are 10 to 15 seconds.

LOS C still represents stable operation, but periodic backups of a few vehicles may develop behind turning vehicles. Most drivers begin to feel restricted, but not objectionably so. At signalized intersections, average vehicle delays are 20 to 35 seconds. At unsignalized intersections, average delays are 15 to 25 seconds.

LOS D represents increasing traffic restrictions as the intersection approaches instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but periodic clearance of long lines occurs, thus preventing excessive backups. At signalized intersections, average vehicle delays are 35 to 55 seconds. At unsignalized intersections, average delays are 25 to 35 seconds.

LOS E represents the capacity of the intersection. At signalized intersections, average vehicle delays are 55 to 80 seconds. At unsignalized intersections, average delays are 35 to 50 seconds.

LOS F represents jammed conditions where the intersection is over capacity and acceptable gaps for unsignalized intersections in the mainline traffic flow are minimal. At signalized intersections, average vehicle delays exceed 80 seconds. At unsignalized intersections, average delays exceed 50 seconds.

C2. Year 2019 Existing Traffic Operations – No Modifications

Exhibit 3-3 shows the Year 2019 existing traffic (no development) peak hour operating conditions at the study area intersections. The existing traffic analysis was conducted using the existing lane configurations shown in Exhibit 3-1 and the existing traffic volumes shown in Exhibit 3-2.

As shown in Exhibit 3-3, all study area intersections are currently operating acceptably at LOS D or better operations under current conditions.

PART D – CRASH ANALYSIS

D1. Crash Frequency/Severity

A review of the crash records indicated that twelve (12) non-deer crashes occurred at the Green Bay Avenue intersection with Range Line Road over the past five years (2014 through 2018). This total includes all crashes involving vehicles traveling within the functional areas of the intersection. An intersection collision diagram for the intersection is shown in Exhibit 3-4 and detailed crash statistics are shown in Exhibit 3-5.

Crash statistics were summarized by a variety of factors, including speed-related crashes, crash type, time of day, day of week, driver age, vehicle damage level, alcohol involvement, and light and road conditions. Crash frequencies, rates, and severities are also shown on the crash statistic summaries. For each crash, the maximum injury observed and reported by the officer defines its overall severity level. The definitions for the various crash severity levels, per the Law Enforcement Officer's Instructional Manual for Completing the Wisconsin Motor Vehicle Accident Report Form (MV4000), are shown below.

- **K (Fatal Injury):** Any injury received in a traffic accident which results in death within 30 days of the accident.
- **Type A (Incapacitating Injury):** An injury other than a fatal injury which prevents the injured person from walking, driving, or from performing other activities which he/she performed before the accident.
- **Type B (Non-incapacitating Injury):** Any injury, other than fatal or incapacitating, which is evident at the scene. Evidence of injury may include known symptoms of an injury which are not directly observable.
- **Type C (Possible Injury):** Any injury which is not observable or evident at the scene but is claimed by the individual or suspected by the law enforcement officer.
- **N (No Apparent Injury):** No apparent injury to the operator. Commonly referred to as Property Damage Only (PDO).

D2. Crash Patterns Observed

Since 2014, there were eight right angle crashes, one rear-end crash, two sideswipe crashes and one head-on crash. None of the twelve crashes resulted in a fatality or an incapacitating injury, three resulted in a non-incapacitating or possible injury and nine other crashes resulted in an

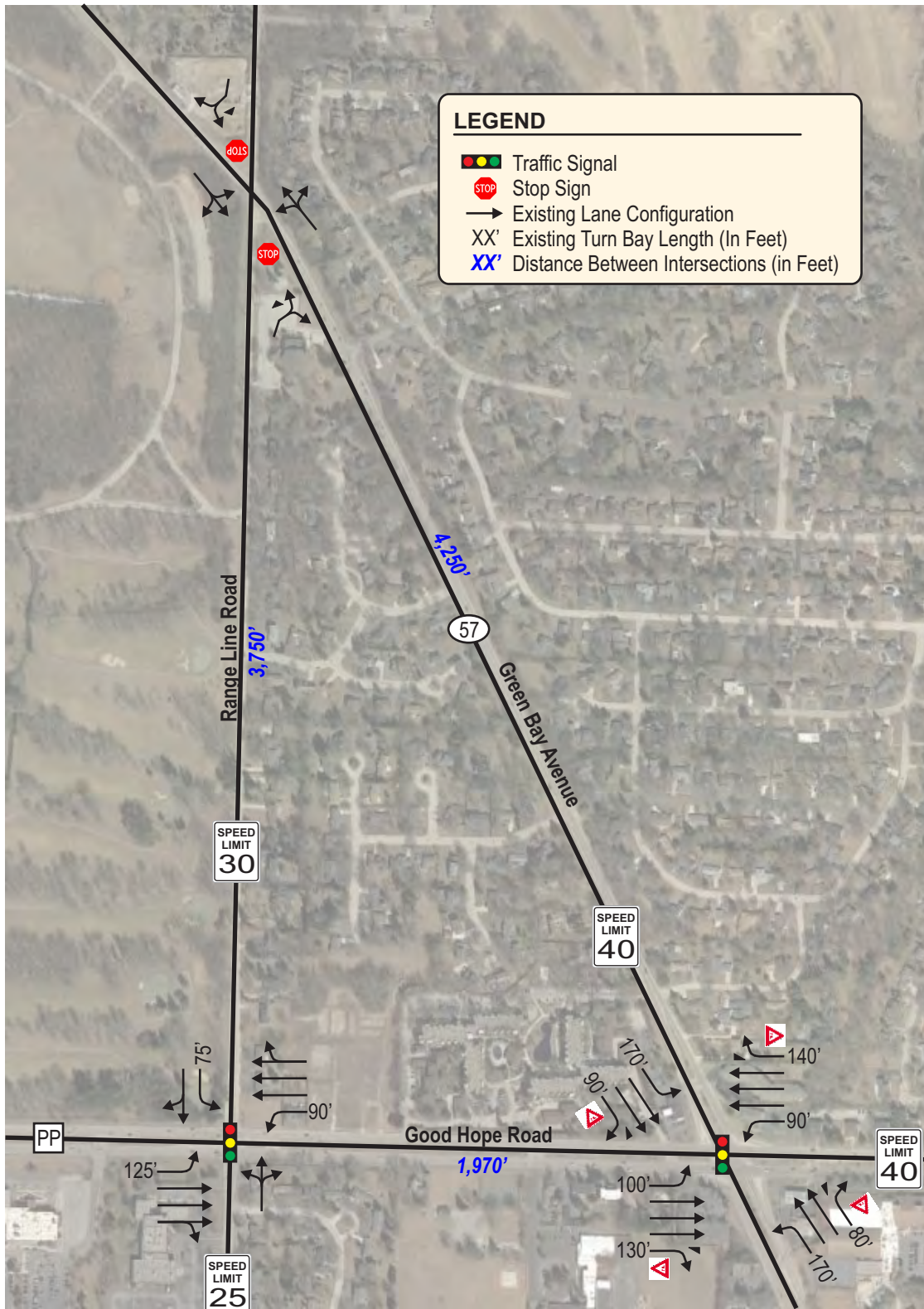
apparent injury. Even though there are a few similar crashes at the intersection, no crash patterns have emerged over the analysis period (five crashes of the same type are considered a pattern) and overall, there doesn't appear to be a significant crash history at this intersection based on frequency, crash patterns and crash rate.

Only two of the crashes occurred at night and five crashes occurred on wet pavement (3 from rain, 2 from snow). Neither of these patterns indicates night-specific nor pavement-friction related safety issues. Restricting northbound and southbound through movements was previously implemented (September 2017) to reduce the frequency of angle crash types; however, since implementing, three angle crashes have occurred at the intersection including between northbound or southbound vehicles and opposing eastbound or westbound vehicles. The crash reports indicated that one vehicle ran a stop sign, one thought the westbound vehicle was turning and the last one didn't see the eastbound vehicle. A review of the vision triangles at the intersection didn't provide any issues with sight lines so it appears human factors attributed to these three crashes. It also appears to be too early to tell if the improvements implemented in 2017 have made an impact. However, if a crash pattern does emerge over the next few years, consideration could be given to looking at reconstructing the intersection to force drivers on Range Line Road to make the turning movements, through concrete curb channelization, that were implemented utilizing pavement marking in 2017.

PART E – SOURCES OF DATA

The following sources of data were obtained for use in conducting this traffic study:

- Turning movement traffic counts –TADI;
- Crash data – Traffic Operations and Safety Laboratory;
- Proposed Site Plan – Korb & Associates Architects;
- Existing traffic signal timings – City of Glendale;
- Existing transportation details – TADI and Google™ Earth.



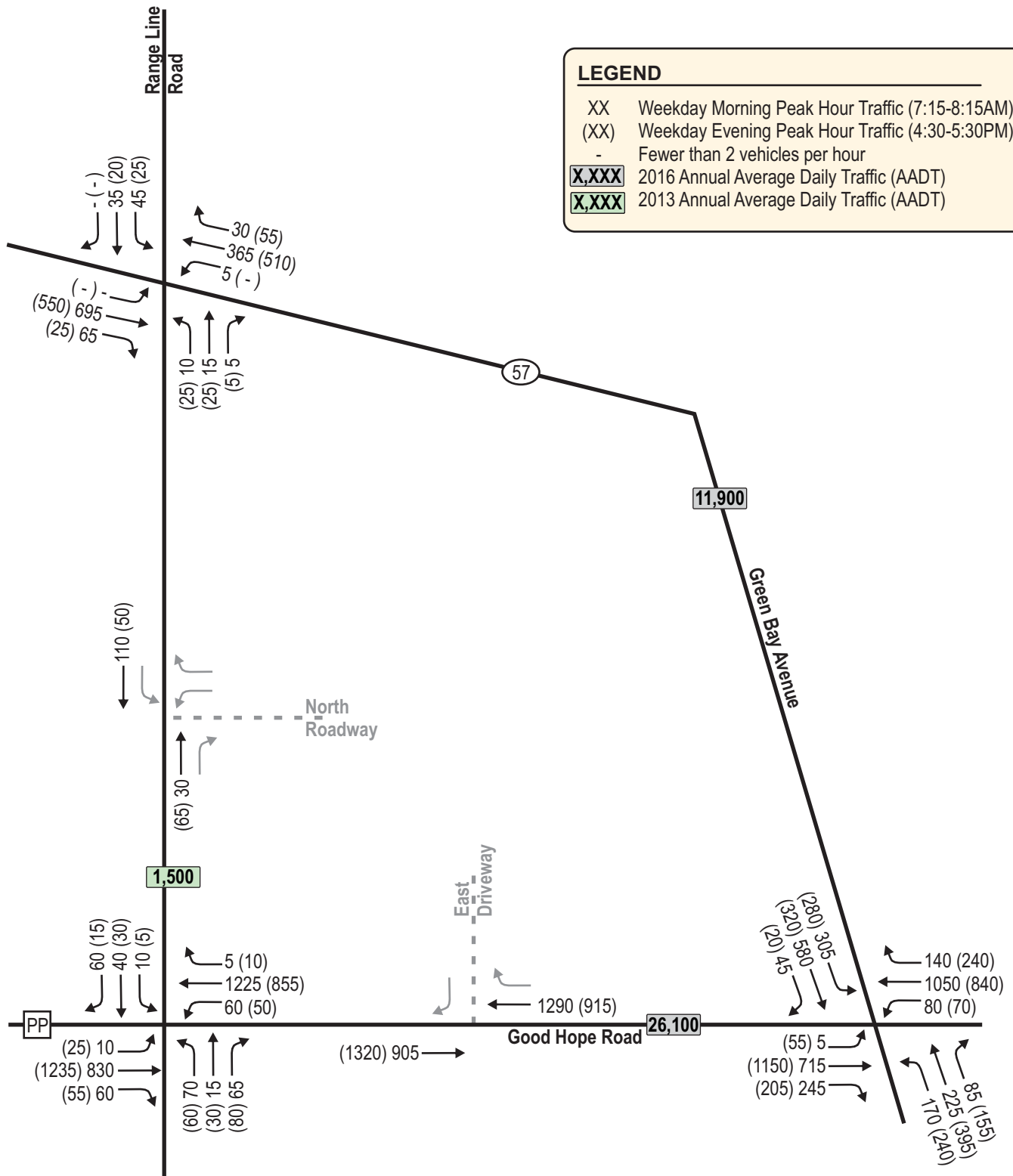
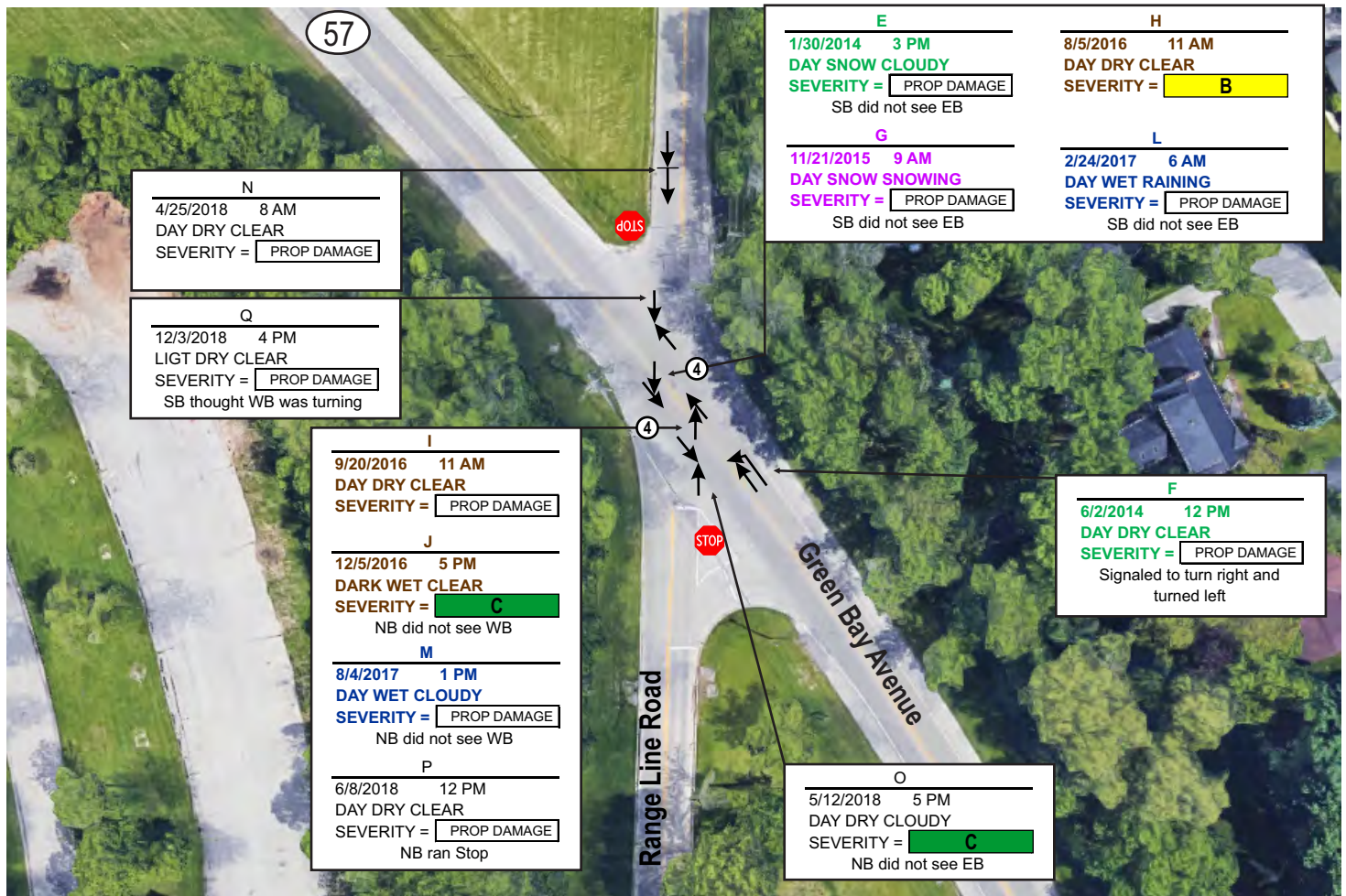


Exhibit 3-3
Year 2019 Existing Traffic Peak Hour Operating Conditions
Existing Geometrics and Traffic Control

Intersection	Peak Hour		Level of Service per Movement by Approach												Intersection Level of Service
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
#100 - Good Hope Road (CTH PP) & Range Line Road Traffic Signal	AM	LOS	B	A	B	A	B	B	B	B	B	B	B	A	
		Delay	11	8	10	8	12	11	11	11	11	11			
		Queue	25	75	30	110	45	25	30	25	25	25			
	PM	LOS	A	A	B	A	B	B	B	B	B	B	B	A	
		Delay	9	8	12	7	12	12	11	11	11	11			
		Queue	25	115	30	70	50	25	25	25	25	25			
#200 - Good Hope Road (CTH PP) & Green Bay Avenue (STH 57) Traffic Signal	AM	LOS	D	C	C	C	C	B	C	C	C	B	C	C	C
		Delay	43	25	24	34	22	18	22	27	26	19	27	21	
		Queue	25	225	55	110	315	25	130	115	25	230	280	25	
	PM	LOS	D	C	C	D	C	C	C	D	C	C	C	C	C
		Delay	42	27	22	42	24	22	26	36	33	28	33	29	
		Queue	90	380	40	105	255	55	205	215	25	245	175	25	
#300 - Range Line Road & Green Bay Avenue (STH 57) Two-Way Stop Control	AM	LOS	A			A			D			D			A
		Delay	8			10			25			32			
		Queue	0			0			25			40			
	PM	LOS	A			A			D			D			A
		Delay	9			9			26			27			
		Queue	0			0			25			25			

Queue is maximum of the 50th & 95th percentile queue, measured in feet.



INTERSECTION CRASH RATE

0.52 Crashes

Per Million

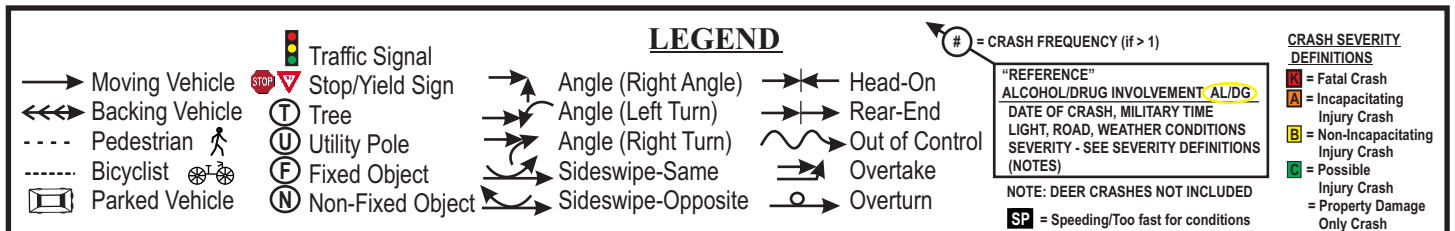
Entering Vehicles

Entering Vehicles: 12,600/day

CRASH FREQUENCY/SEVERITY

12
Crashes

0 Fatal Crash (K)
0 Incapacitating (Type A)
1 Non-Incapacitating (Type B)
2 Possible (Type C)
9 Property Damage Only



CRASH STATISTICS

SPOT LOCATION



LOCATION: STH 57-Green Bay Ave & Range Line Rd
 MUNICIPALITY: Glendale
 COUNTY: Milwaukee STATE: WI
 TRAFFIC CONTROL: TRAFFIC SIGNAL
 ROADWAY CLASSIFICATION: Urban Street

DATES
 FROM: 1/1/2014
 TO: 12/31/2018
 AADT: 12,600
 AREA TYPE: URBAN
 DURATION
 5 YEARS
 0 MONTHS

CRASH FREQUENCY & SEVERITY

YEAR	PD	TYPE C	TYPE B	TYPE A	FATAL	TOTAL
2014	2	0	0	0	0	2
2015	1	0	0	0	0	1
2016	1	1	1	0	0	3
2017	2	0	0	0	0	2
2018	3	1	0	0	0	4
2019						
2020						
TOTAL	9	2	1	0	0	12
PERCENT	75.0%	16.7%	8.3%	0.0%	0.0%	100.0%

SPOT LOCATION CRASH RATE:

0.52 Crashes per Million Entering Vehicles

ROAD CONDITIONS	PERCENT
DRY	7 58.3%
WET	3 25.0%
SNOW	2 16.7%
ICE	0 0.0%
MUD	0 0.0%
OTHER/UNK	0 0.0%
TOTAL	12 100.0%

CRASH RATES	per MEV
TOTAL	0.52
FATAL	0.00
INJURY	0.13
TYPE A	0.00
TYPE B	0.04
TYPE C	0.09

CRASH TYPE	PERCENT
ANGLE	8 66.7%
REAR-END	1 8.3%
HEAD-ON	1 8.3%
SS-SAME	1 8.3%
SS-OPPOSITE	1 8.3%
PEDESTRIAN	0 0.0%
BICYCLE	0 0.0%
FIXED	0 0.0%
NOT FIXED	0 0.0%
DEER	0 0.0%
OVERTURN	0 0.0%
OTHER/UNK	0 0.0%
TOTAL	12 100.0%

LIGHT CONDITIONS	PERCENT
DAY	10 83.3%
DARK	2 16.7%
TOTAL	12 100.0%

Note: Dawn, dusk, or street light conditions included in dark data

VEHICLE TYPES	PERCENT
CAR	21 87.5%
TRUCK	3 12.5%
OTHER/UNK	0 0.0%
TOTAL	24 100.0%

Note: Statistics based on first and second vehicles in crashes

DAY AND TIME

DAY	PERCENT	EARLY	AM PEAK	MIDDAY	PM PEAK	EVENING	LATE	Unknown	Total	
		2 AM to 5 AM	5 AM to 10 AM	10 AM to 2 PM	2 PM to 5 PM	5 PM to 10 PM	10 PM to 2 AM			
MONDAY	25.0%	0	0	1	2	0	0	0	3	Weekday
TUESDAY	8.3%	0	0	1	0	0	0	0	1	
WEDNESDAY	8.3%	0	1	0	0	0	0	0	1	
THURSDAY	8.3%	0	0	0	1	0	0	0	1	
FRIDAY	33.3%	0	1	3	0	0	0	0	4	
SATURDAY	16.7%	0	1	0	1	0	0	0	2	Weekend
SUNDAY	0.0%	0	0	0	0	0	0	0	0	
TOTAL		0	3	5	4	0	0	0	12	
PERCENT		0.0%	25.0%	41.7%	33.3%	0.0%	0.0%	0.0%		

DRIVER AGES	PERCENT
<25	4 16.7%
25-34	5 20.8%
35-44	5 20.8%
45-54	6 25.0%
55-64	0 0.0%
65-74	1 4.2%
75-84	2 8.3%
85+	1 4.2%
UNKNOWN	0 0.0%
TOTAL	24 100.0%

Note: Statistics based on first and second vehicles in crashes

VEHICLE DAMAGE	PERCENT
OTHER/UNK	0 0.0%
NONE	1 4.2%
VERY MINOR	1 4.2%
MINOR	5 20.8%
MODERATE	13 54.2%
SEVERE	4 16.7%
VERY SEVERE	0 0.0%
TOTAL	24 100.0%

Note: Statistics based on first and second vehicles in crashes

VEHICLES INVOLVED	PERCENT
SINGLE VEHICLE	0.0%
TWO VEHICLES	100.0%
3 OR MORE VEHICLES	0.0%

BY SEASON	PERCENT
SPRING	2 16.7%
SUMMER	4 33.3%
FALL	2 16.7%
WINTER	4 33.3%
TOTAL	12 100.0%

Note: March-Dec-Feb, April-May, June-Aug, Sept-Nov

PERCENT OF CRASHES	PERCENT
ON HORIZONTAL CURVE	8.3%
ON VERTICAL CURVE	0.0%
AT INTERSECTION	100.0%
ALCOHOL RELATED	0.0%
SPEED RELATED	0.0%



CHAPTER IV – DEVELOPMENT TRAFFIC

PART A – PROPOSED SITE TRAFFIC FORECASTING

To address any proposed future traffic impacts along the study area roadways and at the intersections adjacent to the development, it is necessary to identify the hourly and daily volume of traffic generated by the proposed developments within the study area. The traffic volumes expected to be generated by the proposed development are based on the size and type of the proposed uses, and on trip rates as published in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual, 10th Edition, 2017*. A combination of trip rates and fitted curve equations were utilized to determine the expected new trips based on current ITE practices.

A1. Trip Generation

The expected trip generation for the proposed residential development is shown in [Exhibits 4-1](#). As shown, the residential development is expected to generate 35 new trips (10 entering/25 exiting) during a typical weekday morning peak hour and another 45 new trips (25 entering/20 exiting) during a typical weekday evening peak hour. On a typical weekday, the proposed residential development is expected to generate approximately 510 new trips (255 entering/255 exiting) under full build conditions.

A2. Trip Distribution

The trip distribution for the proposed residential development was determined based on existing traffic patterns within the study area, the type of proposed land uses, and anticipated growth areas located outside the study area. The expected trip distribution for the proposed residential development is shown in table format in [Exhibit 4-1](#) and summarized as follows:

- 35-percent to/from the west on Good Hope Road
- 35-percent to/from the east on Good Hope Road
- 5-percent to/from the south on Range Line Road
- 10-percent to/from the north on Range Line Road to Green Bay Avenue
- 15-percent to/from the south on Green Bay Avenue

A3. Trip Assignment

The peak hour trips expected to be generated by the full build-out of the proposed residential development were assigned to the study area roadways based on the above trip distribution and are shown on [Exhibit 4-2](#).

PART B – BUILD (WITH DEVELOPMENT) TRAFFIC

The Year 2019 full build (with development) traffic was determined by adding the 2019 existing traffic volumes ([Exhibit 3-2](#)) to the proposed development new trips ([Exhibit 4-2](#)). The Year 2019 full build (with development) traffic volumes are shown in [Exhibit 4-3](#).

PART C – CAPACITY LEVEL OF SERVICE

C1. Year 2019 Full Build Traffic Operating Conditions – With Modifications

[Exhibit 4-4](#) shows the Year 2019 full build traffic (with development) peak hour operating conditions at the study area intersections with modifications. As shown, all movements are expected to continue to operate at LOS D or better conditions during the typical weekday morning and weekday evening peak hours with the following modifications implemented.

Range Line Road at Proposed Northern Access Road

- Construct residential street with one entrance lane and one exit lane;
- Provide stop sign control on east approach of residential street.

Good Hope Road at Proposed Eastern Driveway Access

- Construct right-in/right-out access driveway with one entrance lane and one exit lane.

With the recommended modifications, all movements at the study area intersections are expected to operate at acceptable levels under the Year 2019 full build (with development) traffic conditions.

C2. Multi-Way Stop Control Warrant Analysis

Due to crash history at the intersection, the need for traffic signals at the Green Bay Avenue intersection with Range Line Road was investigated by Traffic Analysis & Design, Inc. under the Year 2019 existing and Year 2019 full build traffic volume conditions. Chapter 2B of the 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) outlines the standards for determining the need for multi-way stop control at a particular location. For multi-way stop control to be installed, the following conditions must be satisfied:

***Crash Warrant** states if a crash problem, as indicated by five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation (i.e. right- and left-turn collisions as well as right-angle collisions); or*

***Volume Warrant** states that a multi-way stop installation may be considered if the vehicles per hour given on the major street (total of both approaches) meet or exceed 300 and the vehicles per hour on the minor street (total of both approaches) meet or exceed 200 for at least eight hours of an average day. The volume warrant also requires that the average delay to the minor street be at least 30 seconds per vehicle during the peak hour.*

Therefore, as shown on [Exhibit 3-5](#) and in the [appendix](#) of this report, neither the crash warrant nor the volume thresholds are expected to be met for multi-way stop control; therefore, a multi-way stop control is not warranted at the Green Bay Avenue intersection with Range Line Road under the Year 2019 full build traffic volume conditions.

C3. Traffic Signal Warrant Analysis

Due to crash history at the intersection, the need for traffic signals at the Green Bay Avenue intersection with Range Line Road was investigated by Traffic Analysis & Design, Inc. under the Year 2019 existing and Year 2019 full build traffic volume conditions. For the study, the warrant analysis assumes Green Bay Avenue as a highway with one approach lane and the minor street movements as a one-lane minor street approach. Based on the WisDOT Traffic Signal Design Manual (TSDM), since the minor street has a single shared lane, the minor street right-turn volume should be included in the warrant analysis. Therefore, the right turn volume at this intersection was included in the analysis.

Chapter 4C of the 2009 *Manual on Uniform Traffic Control Devices* (MUTCD) outlines the standards for determining the need for traffic signals at a particular location. For a traffic signal to be installed, at least one of the following warrants must be satisfied. The nine signal warrants are listed below:

- Warrant 1, Eight-Hour Vehicular Volume;
- Warrant 2, Four-Hour Vehicular Volume;
- Warrant 3, Peak Hour;

- Warrant 4, Pedestrian Hour;
- Warrant 5, School Crossing;
- Warrant 6, Coordinated Signal Systems;
- Warrant 7, Crash Experience;
- Warrant 8, Roadway Network;
- Warrant 9, Intersection near a Grade Crossing.

The posted speed limit along Green Bay Avenue is 40-mph within the limits of the study area intersection. The MUTCD has different criteria based on urban speeds (less than or equal to 40-mph) and rural speeds (greater than 40-mph). In addition, the MUTCD has different criteria for communities with populations less than 10,000. Per the MUTCD, the urban traffic signal warrant analysis volume thresholds (100%) were used in this analysis. Warrants 1, 2 and 7 were evaluated as a part of this study under urban thresholds and are described below.

Warrant 1, Eight Hour Vehicular Volume states that a traffic signal may be considered if one of the following conditions exists for at least eight hours of an average day:

- A. The vehicles per hour given on the major street (Green Bay Avenue) meet or exceed 500 and the vehicles per hour on the higher volume minor street approach (Range Line Road) meet or exceed 150; or
- B. The vehicles per hour given on the major street (Green Bay Avenue) meet or exceed 750 and the vehicles per hour on the higher volume minor street (Range Line Road) approach exceed 75. Table 4C-1, MUTCD p. 4C-3.

Or if the following two conditions exist for eight hours of an average day after adequate trial of other alternatives that could cause less day and inconvenience has failed to solve traffic problems:

- A. The vehicles per hour on the major street (Green Bay Avenue) and the higher volume minor street approach (Range Line Road) meet or exceed 80% of the values stated in A (400 major, 120 minor); and
- B. The vehicles per hour on the major street (Green Bay Avenue) and the higher volume minor street approach (Range Line Road) meet or exceed 80% of the values stated in B (600 major, 60 minor).

Warrant 2, Four Hour Volume is satisfied if during any four hours of an average day the major street (Green Bay Avenue) and higher volume minor street approach (Range Line Road) volumes fall above the 100% four-hour curve shown in the [Appendix](#).

Warrant 7, Crash Experience states that a traffic signal may be considered if one of the following conditions exists:

- A. Five (5) or more reported crashes in a 12-month period involving personal injury or property damage and susceptible to correction by traffic signal installation; and
- B. For at least eight hours of an average day, the vehicles per hour given on the major street meet or exceed 280 and the vehicles per hour on the minor street meet or exceed 84; or
- C. The vehicles per hour given on the major street meet or exceed 420 and the vehicles per hour on the minor street meet or exceed 42.

Based on the warrant analysis, Warrant 1, Eight Hour Warrant, is not expected to be met. Specifically, only one of the 12 hours evaluated meet the requirements outlined in Warrant 1 (note that the thresholds need to be satisfied for 8 hours for the Warrant to be met).

Based on the warrant analysis, Warrant 2, Four Hour Warrant, is not expected to be met. Specifically, none of the required four hours are met based on the graph as shown in the [Appendix](#) of this report.

Based on the warrant analysis, Warrant 7, Crash Experience Warrant, is not expected to be met. Specifically, there have not been five or more crashes within a 12-month period that fit this criterion.

All data pertaining to this signal warrant analysis are included in the Appendix of this report.

Based on the analysis completed as part of this study, traffic signals are not expected to be warranted at the Green Bay Avenue intersection with Range Line Road under either the Year 2019 existing traffic or Year 2019 full build traffic conditions. Therefore, this intersection should be monitored and traffic signals should be considered when volume thresholds have reached a level where traffic signals would be warranted as delays increase to unacceptable levels.

It is noted that a sensitivity analysis was also completed to determine the expected increase in traffic volumes necessary for traffic signals to meet the warrant volume thresholds. Based on the sensitivity analysis completed, traffic turning movements to/from Range Line Road would need to increase by approximately 60-percent in order for traffic signals to be considered. Traffic signals or a single lane roundabout should be considered once volume thresholds have reached a level where delays at the intersection are unacceptable. All backup data pertaining to the traffic signal warrant analysis has been included in the [Appendix](#).

PART D – QUEUEING ANALYSIS

To estimate storage length requirements for turn bays at the study area intersections with modifications, a queuing analysis has been conducted. Note that the 95th percentile probable queue lengths were used for the design of turn bay storage at traffic signal and stop sign controlled intersections. The following is a list of where the results of the queuing analysis can be found.

- Year 2019 Existing Traffic, Expected Maximum Queues – [Exhibit 3-3](#);
- Year 2019 Full Build (with development) Traffic, Expected Maximum Queues – [Exhibit 4-4](#).

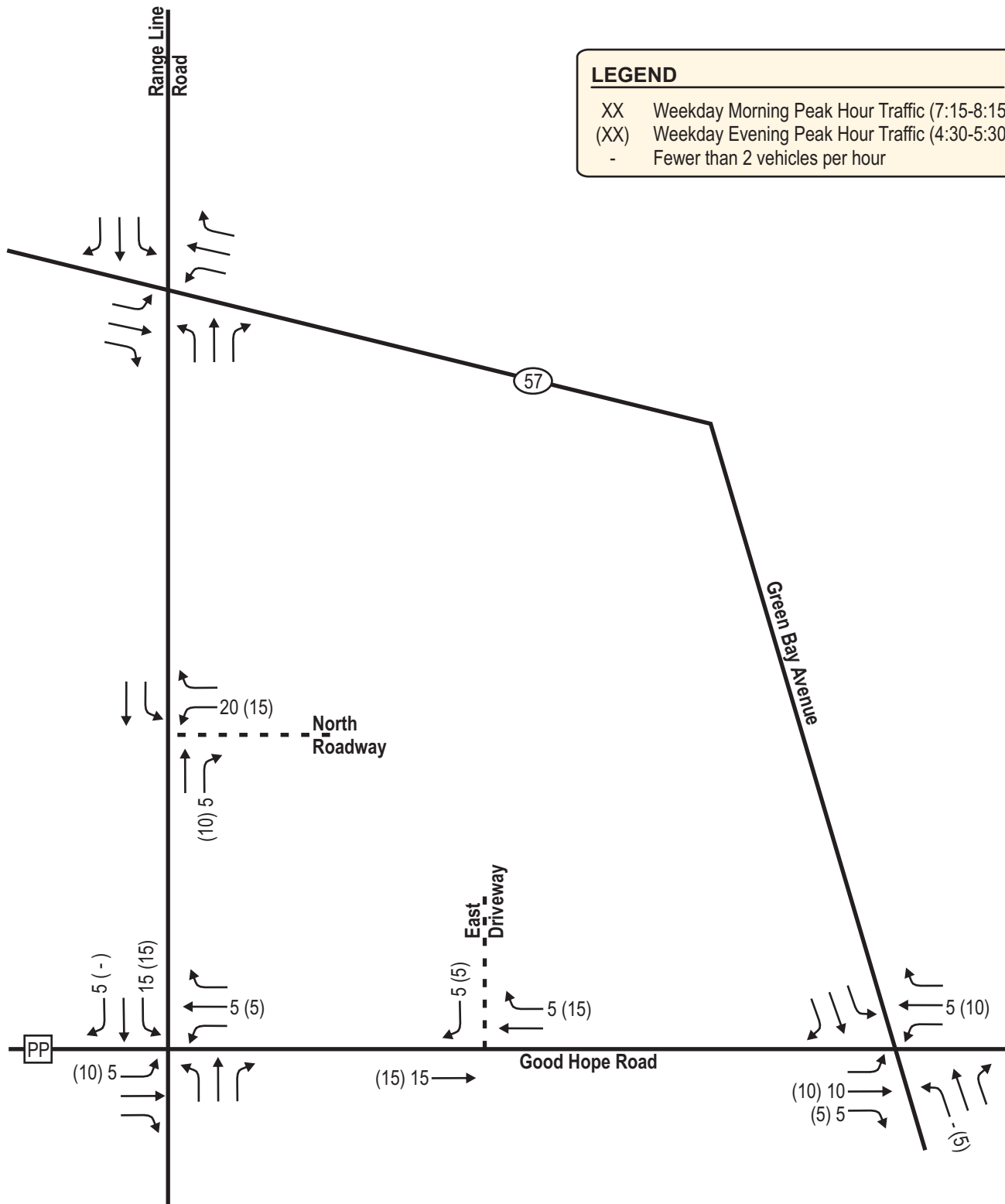
**Exhibit 4-1
On-Site Trip Generation Table**

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak			PM Peak		
				In	Out	Total	In	Out	Total
Townhouse (Low-Rise)	220	41 Units	270 FTE	5 (23%)	15 (77%)	20 FTE	15 (63%)	10 (37%)	25 FTE
Apartments (Mid-Rise)	221	45 Units	240 FTE	5 (26%)	10 (74%)	15 FTE	10 (61%)	10 (39%)	20 FTE
Total New Trips			510	10	25	35	25	20	45

TRIP DISTRIBUTION

West on Good Hope Road	35%	175	5	10	15	10	5	15
East on Good Hope Road	35%	175	5	10	15	10	10	20
North on Range Line Road	0%	0	0	0	0	0	0	0
South on Range Line Road	5%	30	0	0	0	0	0	0
North on Green Bay Avenue*	10%	50	0	0	0	0	0	0
South on Green Bay Avenue	15%	80	0	5	5	5	5	10
	100%	510	10	25	35	25	20	45

* via Range Line Road



LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15AM)
- (XX) Weekday Evening Peak Hour Traffic (4:30-5:30PM)
- Fewer than 2 vehicles per hour

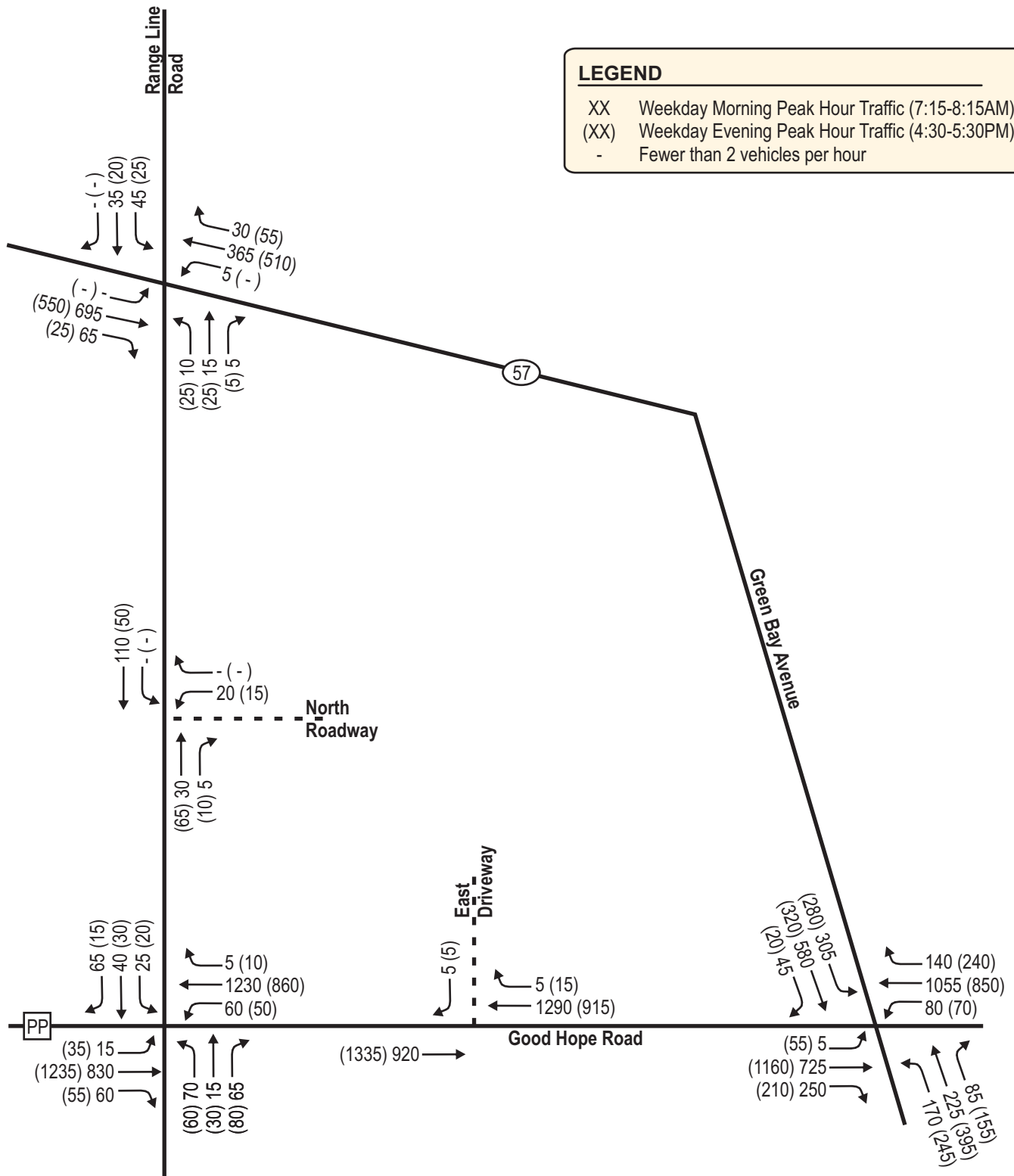


Exhibit 4-4
Year 2019 Full Build Traffic Peak Hour Operating Conditions
Existing Geometrics and Traffic Control

Intersection	Peak Hour		Level of Service per Movement by Approach												Intersection Level of Service
			Eastbound			Westbound			Northbound			Southbound			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
#100 - Good Hope Road (CTH PP) & Range Line Road Traffic Signal	AM	LOS	B	A	B	A	B	B	B	B	B	B	B	A	
		Delay	11	8	10	9	12	11	11	11	11	11			
		Queue	25	75	30	110	45	25	35	25	25	25			
	PM	LOS	A	A	B	A	B	B	B	B	B	B	B	A	
		Delay	9	8	12	7	12	12	11	11	11	11			
		Queue	25	115	30	70	50	25	30	25	25	25			
#200 - Good Hope Road (CTH PP) & Green Bay Avenue (STH 57) Traffic Signal	AM	LOS	D	C	C	C	C	B	C	C	C	B	C	C	C
		Delay	43	25	24	34	22	18	22	27	26	19	27	21	
		Queue	25	225	60	110	315	25	130	115	25	230	285	25	
	PM	LOS	D	C	C	D	C	C	C	D	C	C	C	C	C
		Delay	42	27	22	42	24	22	26	36	33	28	33	29	
		Queue	90	385	40	105	260	55	210	215	25	245	175	25	
#300 - Range Line Road & Green Bay Avenue (STH 57) Two-Way Stop Control	AM	LOS	A			A			D			D			A
		Delay	8			10			25			32			
		Queue	0			0			25			40			
	PM	LOS	A			A			D			D			A
		Delay	9			9			26			27			
		Queue	0			0			25			25			
#400 - Range Line Road & Proposed North Driveway One-Way Stop Control	AM	LOS	-			A			-	*	-	A	-	A	
		Delay	-			9			-	*	-	7	-		
		Queue	-			25			-	*	-	0	-		
	PM	LOS	-			A			-	*	-	A	-	A	
		Delay	-			9			-	*	-	7	-		
		Queue	-			25			-	*	-	0	-		
#500 - Good Hope Road (CTH PP) & Proposed East Driveway One-Way Stop Control	AM	LOS	-	*	-	-	*	-	-			-	-	C	A
		Delay	-	*	-	-	*	-	-			-	-	16	
		Queue	-	*	-	-	*	-	-			-	-	25	
	PM	LOS	-	*	-	-	*	-	-			-	-	B	A
		Delay	-	*	-	-	*	-	-			-	-	13	
		Queue	-	*	-	-	*	-	-			-	-	25	

Queue is maximum of the 50th & 95th percentile queue, measured in feet.

CHAPTER V – RECOMMENDATIONS AND CONCLUSION

PART A – RECOMMENDATIONS

The study area intersections were analyzed based on the procedures set forth in the *2010 Highway Capacity Manual* (HCM). Intersection operation is defined by “level of service”. Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS ‘A’, to very poor, represented by LOS ‘F’. For the purpose of this study, LOS D or better was used to define desirable peak hour operating conditions.

A1. Existing Traffic – Recommended Modifications

An analysis of the existing conditions was done as a basis for comparison and to determine if any modifications would be necessary under the existing conditions. The analysis was conducted using existing intersection geometrics and traffic control. Based on the analysis completed as part of this study, all study area intersections are currently operating acceptably at LOS D or better operations under current conditions. Therefore, no modifications are recommended to accommodate the Year 2019 existing traffic volumes.

However, due to a crash history at the Green Bay Avenue intersection with Range Line Road, a traffic signal warrant analyses was performed at this intersection under existing traffic volume conditions. Based on the analysis completed as part of this study, traffic signals are not warranted at this intersection under the existing traffic conditions. It is noted that a sensitivity analysis was also completed to determine the expected increase in traffic volumes necessary for traffic signals to meet the warrant volume thresholds. Based on the sensitivity analysis completed, traffic turning movements to/from Range Line Road would need to increase by approximately 60-percent in order for traffic signals to be considered. Traffic signals or a single lane roundabout should be considered once volume thresholds have reached a level where delays at the intersection are unacceptable.

As stated, all movements at the study area intersections are expected to operate at acceptable levels under the Year 2019 existing traffic conditions.

A2. Year 2019 Full Build (With development) Traffic – Recommended Modifications

Year 2019 full build (with development) traffic volumes include the full build out of the proposed residential developments. Based on the analysis completed as part of this study, the following modifications, as shown on [Exhibit 1-3](#), are recommended to accommodate the Year 2019 full build (with development) traffic volumes.

Range Line Road at Proposed Northern Access Road

- Construct residential street with one entrance lane and one exit lane;
- Provide stop sign control on east approach of residential street.

Good Hope Road at Proposed Eastern Driveway Access

- Construct right-in/right-out access driveway with one entrance lane and one exit lane.

A traffic signal warrant analyses was performed at the Green Bay Avenue intersection with Range Line Road under Year 2019 full build (with development) traffic volume conditions. It is noted that very little new traffic expected to be generated by the proposed development is expected to utilize this intersection; therefore, even under full build traffic conditions, traffic signals are not expected to be warranted at this intersection. Traffic signals or a single lane roundabout should be considered once volume thresholds have reached a level where delays at

the intersection are unacceptable. It is noted that even if 50-percent of the development traffic would utilize the Range Line Road intersection with Green Bay Avenue, traffic signals would not be expected to be met. Similar to the existing traffic volume conditions, even with 50-percent of the development traffic assigned to this intersection, traffic turning movements to/from Range Line Road would need still to increase by approximately 60-percent in order for traffic signals to be considered.

At the proposed north access road intersection with Range Line Road, the volume of southbound to eastbound left-turn vehicles during the peak hour periods under the full build condition is expected to be minimal (2 vehicles per hour or less). With the expected turning movements at this intersection, all movements on the east approach (out of the development) are expected to operate at LOS A or better with minimal queueing (1 vehicle or less) and all vehicles on Range Line Road are expected to operate at LOS A with no queueing expected. Therefore, additional turn lanes are not expected to be necessary to allow the intersections to operate safely and efficiently. Even if 50-percent of the development traffic was assigned to/from the north on Range Line Road, the proposed north access road intersection with Range Line Road would be expected to operate at LOS A or better with no additional turn lanes.

At the proposed east access driveway intersection with Good Hope Road, the volume of westbound to northbound right-turn vehicles during the peak hour periods under the full build condition is expected to be minimal (15 vehicles per hour or less). With the expected exiting movements at this intersection (5 vehicles per hour or less), all movements on the north approach (out of the development) are expected to operate at LOS C or better with minimal queueing (1 vehicle or less) and all vehicles on Good Hope Road are expected to operate at LOS A with no queueing expected. Therefore, additional turn lanes are not expected to be necessary to allow the intersections to operate safely and efficiently.

With the recommended modifications, all movements at the study area intersections are expected to operate at acceptable levels under the Year 2019 full build (with development) traffic conditions.

PART B – CONCLUSION

All movements at the study area intersections are expected to operate safely and efficiently through the construction year 2019 with the recommended modifications.

Appendix A

Traffic

Existing Turning Movement Counts
Existing Traffic Signal Timings

Intersection Traffic Volume Report

Count Basics		Version 2013.14.1	Page 1 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events

Base Information, Observed (7) Hour and Estimated (24) Hour Volume Summaries

Intersection of: **Range Line Road and Good Hope Road**



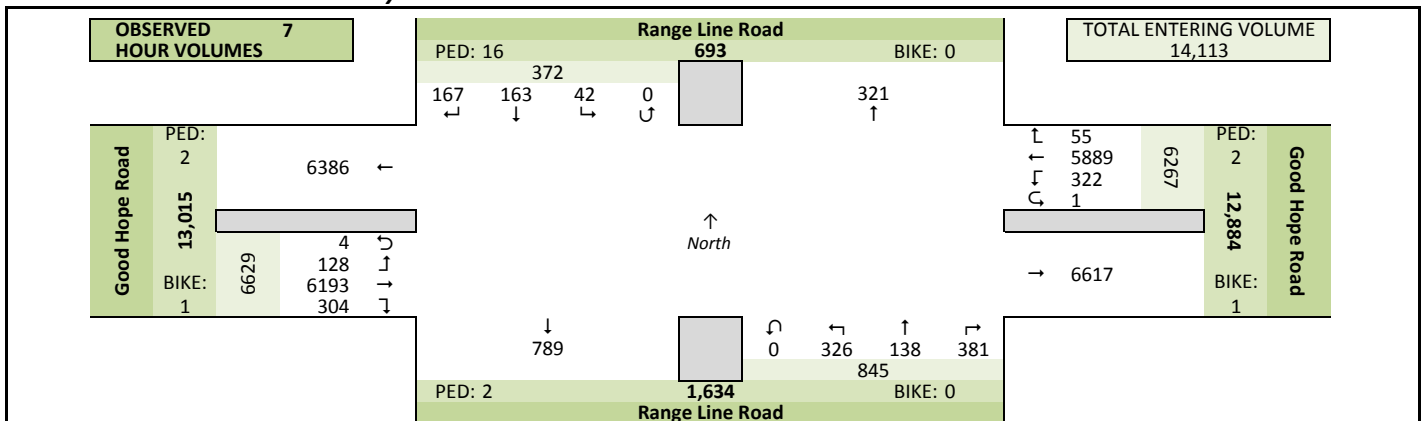
Site Information

Municipality	City of Glendale		
County	Milwaukee	WisDOT Region	SE
Traffic Control	Traffic Signal		
Roadway Names		North Direction	↑
North Leg	Range Line Road		
East Leg	Good Hope Road		
South Leg	Range Line Road		
West Leg	Good Hope Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
	Pre-school children	None	
	Elementry school age children	None	
	Visually impaired (white cane/helper dog)	None	
	Elderly/disabled (except wheelchairs)	None	
	Wheelchairs/electric scooters	None	
	Other (describe)	None	

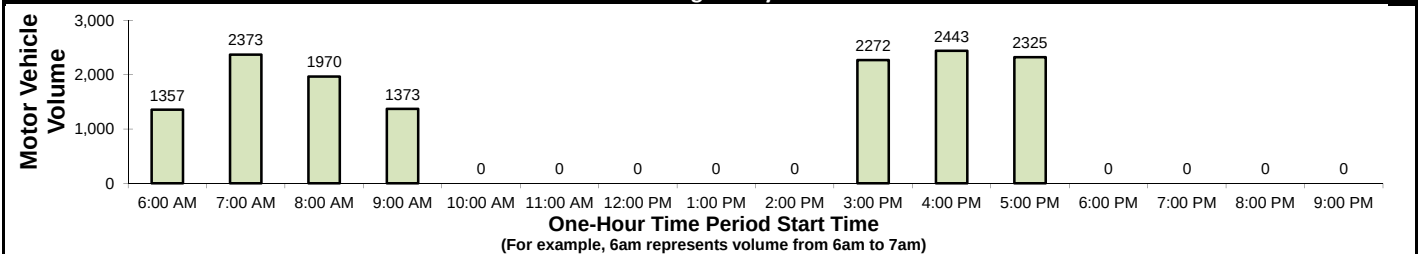
Count Information

Hrs Counted: 6:00 AM-10:00 AM and 3:00 PM-6:00 PM			
1st Day of Count		Friday, January 11, 2019	Weather
AM Peak Period		Friday, January 11, 2019	Clear & Dry
Midday Peak Period		Monday, January 14, 2019	Clear & Dry
PM Peak Period		Monday, January 14, 2019	Clear & Dry
Calculated Peak Hours			
AM	7:15-8:15am	MD	PM 4:15-5:15pm
Peak Hours Selected for Analysis			
AM	7:15-8:15am	MD	PM 4:30-5:30pm
Daily/Seasonal Adjustment Group		(2) Urban Arterials & Collectors	
Count Expansion Group		(2) Urban Arterials & Collectors	
Daily/Seasonal Adjustment Factor		1	Count Expansion Factor 2.150
Company Name TADI, Inc.			Manual Adj. 1.000
Observers	AM Peak Period		Amy Scheuerlein
	Midday Peak Period		None
	PM Peak Period		JK Bieberitz
Comments	2017 DOT Seasonal Factors		

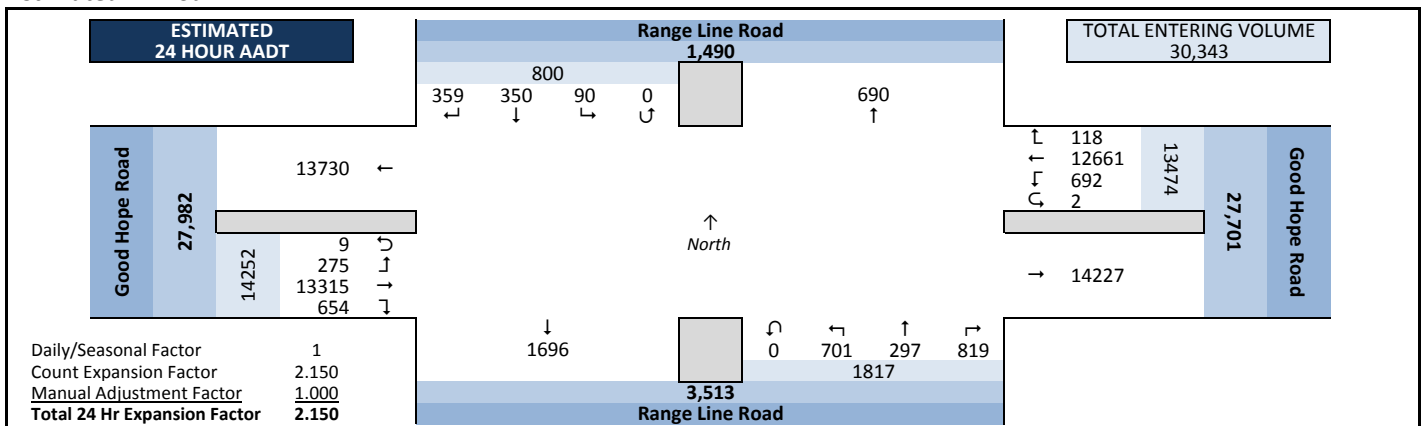
Observed 7 Hour Volume Summary



Total Entering Hourly Volume



Estimated 24 Hour AADT



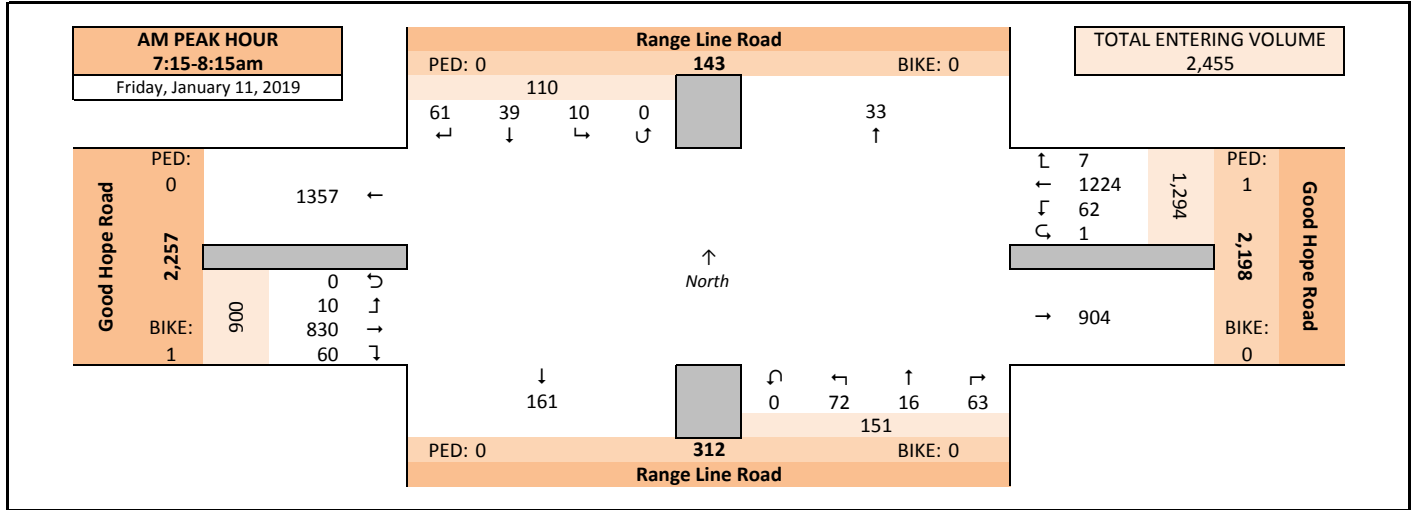
Intersection Traffic Volume Report

Peak Hour Volume Graphical Summary

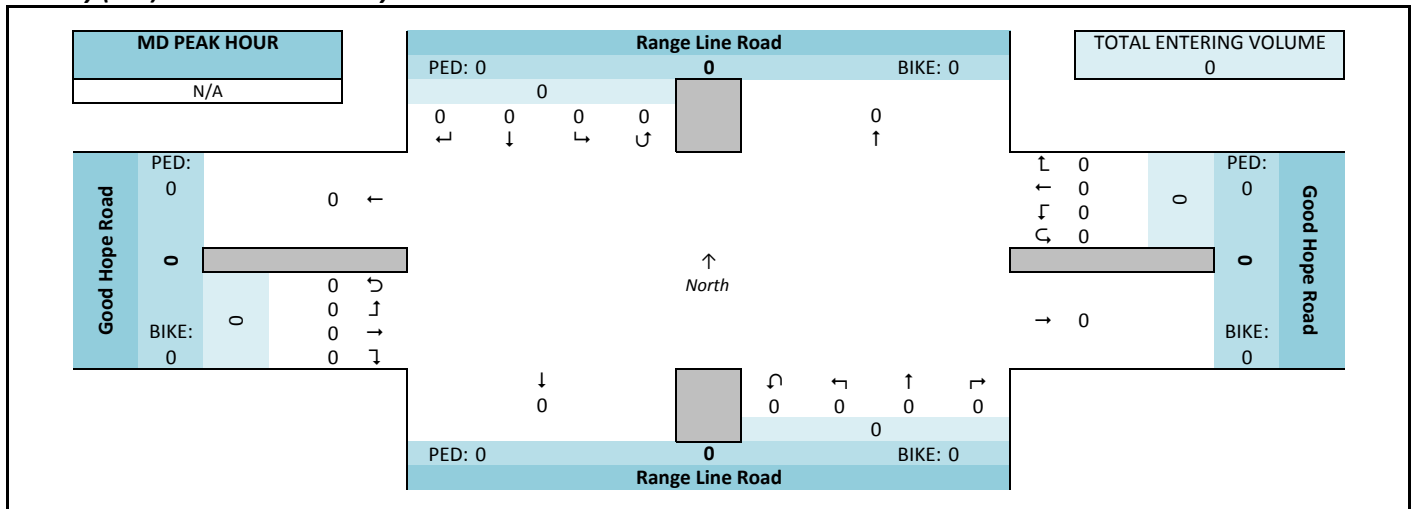
Range Line Road and Good Hope Road

AM Peak Hour Summary

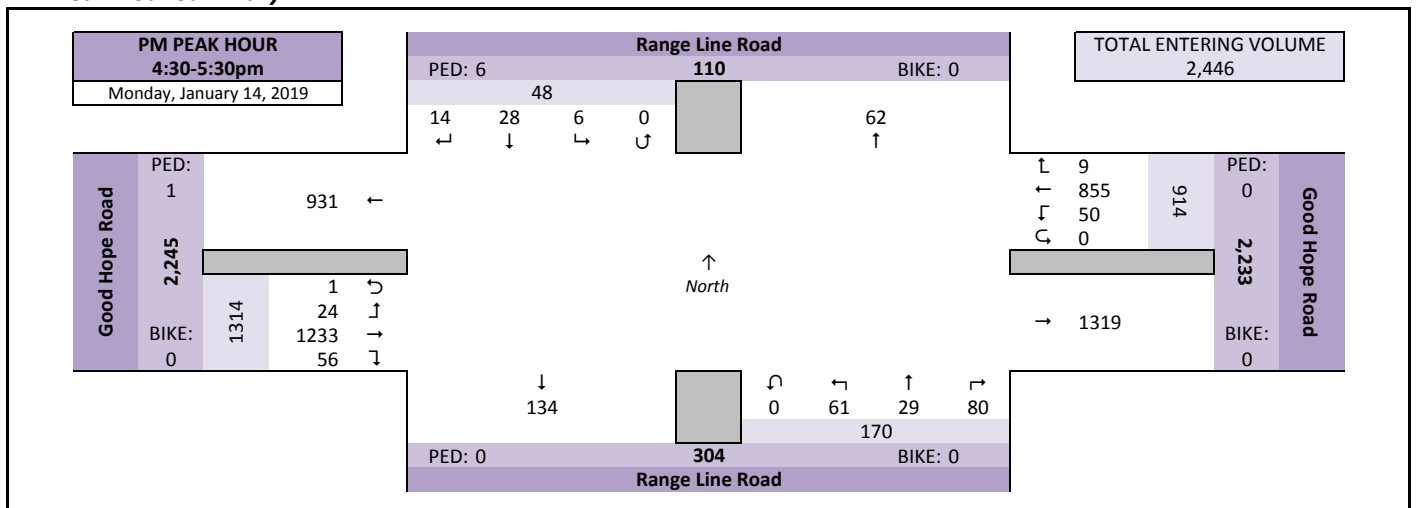
Count Basics			Page 2 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted: 7		Non-Holiday	No Special Events



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events

Peak Hour Volume Summary

Range Line Road and Good Hope Road

Peak Hour Volumes, Truck Percentages, and PHFs

Friday, January 11, 2019		↓					←					↑					→					
AM Peak Hour	AM Peak Hour	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	7:15 AM	12	9	4	0	25	0	302	16	0	318	15	3	14	0	32	15	208	3	0	226	601
	7:30 AM	14	12	2	0	28	3	309	23	1	336	17	5	23	0	45	14	200	2	0	216	625
	7:45 AM	18	9	2	0	29	1	347	14	0	362	17	5	18	0	40	16	209	3	0	228	659
	8:00 AM	17	9	2	0	28	3	266	9	0	278	14	3	17	0	34	15	213	2	0	230	570
	Peak Hour Volume	61	39	10	0	110	7	1224	62	1	1294	63	16	72	0	151	60	830	10	0	900	2455
	Rounded Hourly Volume	60	40	10	0	110	5	1225	60	0	1290	65	15	70	0	150	60	830	10	0	900	2450
	% Single Unit Trucks	3.3	2.6	0.0	0.0	2.7	0.0	2.0	0.0	0.0	1.9	0.0	6.2	0.0	0.0	0.7	3.3	4.0	10.0	0.0	4.0	2.6
	% Heavy Trucks	1.6	0.0	0.0	0.0	0.9	0.0	1.1	0.0	0.0	1.0	0.0	0.0	1.4	0.0	0.7	0.0	2.0	0.0	0.0	1.9	1.3
	% Trucks (Total)	4.9	2.6	0.0	0.0	3.6	0.0	3.1	0.0	0.0	2.9	0.0	6.2	1.4	0.0	1.3	3.3	6.0	10.0	0.0	5.9	4.0
	Peak Hour Factor (PHF)	0.85	0.81	0.62	0.00	0.95	0.58	0.88	0.67	0.25	0.89	0.93	0.80	0.78	0.00	0.84	0.94	0.97	0.83	0.00	0.98	0.93

N/A		↓					←					↑					→					
		From North					From East					From South					From West					
Midday (MD) Peak Hour	MD Peak Hour	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Peak Hour Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rounded Hourly Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	% Single Unit Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
% Trucks (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	
Peak Hour Factor (PHF)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

Monday, January 14, 2019		↓					←					↑					→					
		From North					From East					From South					From West					
PM Peak Hour	PM Peak Hour	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	4:30 PM	6	7	1	0	14	2	193	10	0	205	14	7	9	0	30	14	327	6	1	348	597
	4:45 PM	2	8	1	0	11	4	192	15	0	211	18	5	17	0	40	10	292	6	0	308	570
	5:00 PM	0	5	2	0	7	1	231	16	0	248	30	10	18	0	58	14	326	5	0	345	658
	5:15 PM	6	8	2	0	16	2	239	9	0	250	18	7	17	0	42	18	288	7	0	313	621
	Peak Hour Volume	14	28	6	0	48	9	855	50	0	914	80	29	61	0	170	56	1233	24	1	1314	2446
	Rounded Hourly Volume	15	30	5	0	50	10	855	50	0	915	80	30	60	0	170	55	1235	25	0	1315	2450
	% Single Unit Trucks	7.1	0.0	0.0	0.0	2.1	0.0	1.4	0.0	0.0	1.3	0.0	0.0	1.6	0.0	0.6	0.0	0.2	0.0	0.0	0.2	0.7
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.5	0.6
% Trucks (Total)	7.1	0.0	0.0	0.0	2.1	0.0	2.2	0.0	0.0	2.1	0.0	0.0	1.6	0.0	0.6	0.0	0.8	0.0	0.0	0.8	1.3	
Peak Hour Factor (PHF)	0.58	0.87	0.75	0.00	0.75	0.56	0.89	0.78	0.00	0.91	0.67	0.72	0.85	0.00	0.73	0.78	0.94	0.86	0.25	0.94	0.93	

Peak Hour Pedestrian and Bicyclist Volumes

Pedestrians and Bicyclists		Crossing 			Crossing 			Crossing 			Crossing 			Total Ped & Bike
 		North Approach			East Approach			South Approach			West Approach			Volume
15-Minute Start Time		Range Line Road			Good Hope Road			Range Line Road			Good Hope Road			
		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	
AM	7:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	1
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	1	0	1	0	0	0	0	1	1	2
MD	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0
PM	4:30 PM	6	0	6	0	0	0	0	0	0	0	0	0	6
	4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	6	0	6	0	0	0	0	0	0	1	0	1	7

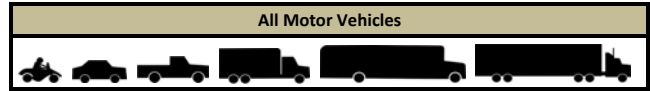
Intersection Traffic Volume Report

Hourly Volume Summary - Motor Vehicle Data

Range Line Road and Good Hope Road

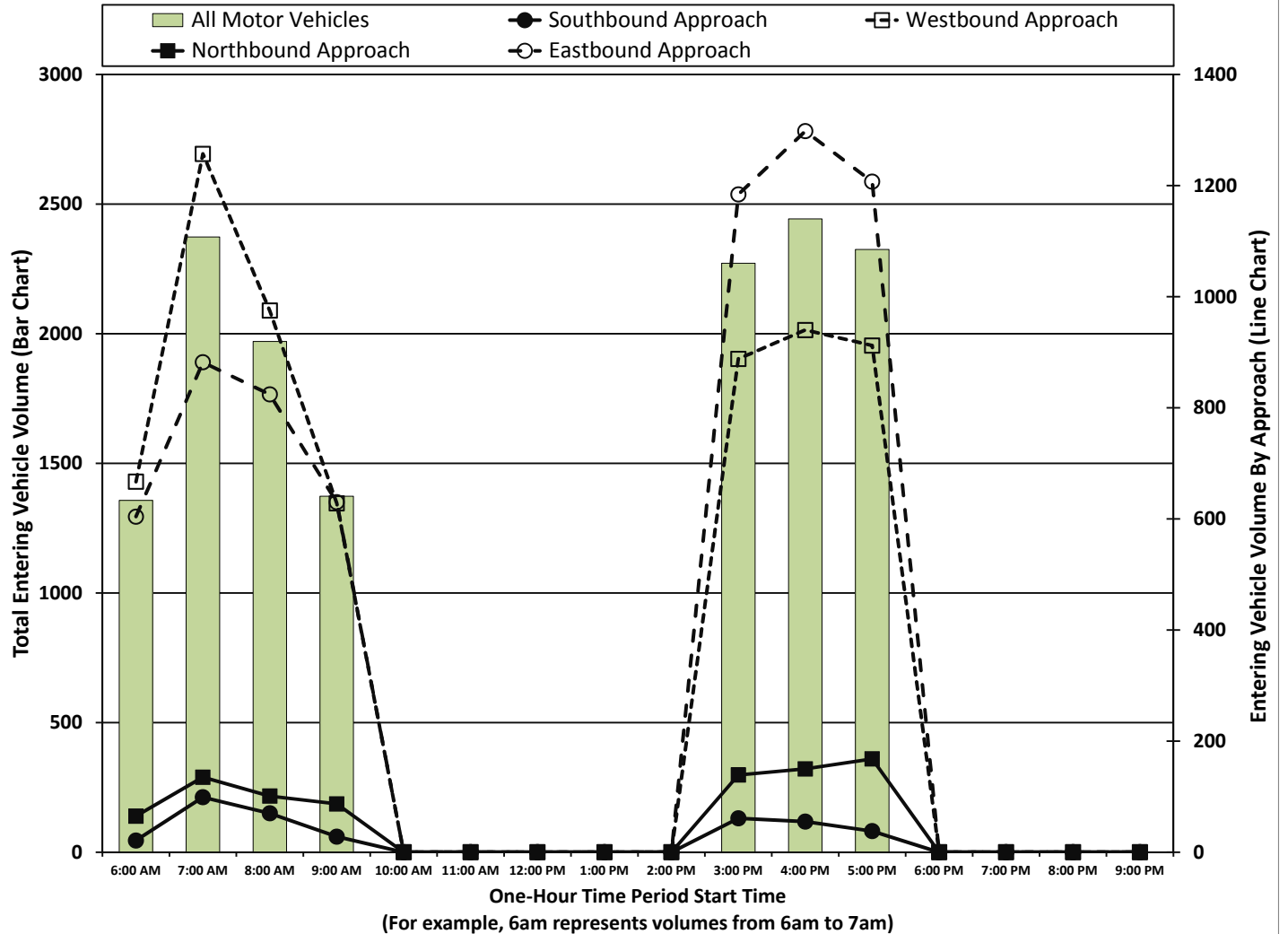
One-Hour Motor Vehicle Data

Count Basics			Page 4 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events



One-Hour Time Period	From North						From East						From South						From West						Total Vehicle Volume	Directional Volume Totals	
	Range Line Road						Good Hope Road						Range Line Road						Good Hope Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total							
AM	6:00 AM	12	9	0	0	21	6	628	33	0	667	32	3	30	0	65	27	559	18	0	604	1357	1271	86			
	7:00 AM	51	38	10	0	99	5	1182	69	1	1257	57	13	65	0	135	54	819	9	0	882	2373	2139	234			
	8:00 AM	35	24	11	0	70	8	921	46	0	975	53	15	33	0	101	41	768	13	2	824	1970	1799	171			
	9:00 AM	12	14	2	0	28	4	591	33	0	628	27	12	48	0	87	41	581	8	0	630	1373	1258	115			
MD	10:00 AM	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 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PM	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	3:00 PM	31	24	6	0	61	10	840	38	0	888	65	26	48	0	139	43	1116	25	0	1184	2272	2072	200			
	4:00 PM	18	29	8	0	55	11	884	45	0	940	66	34	50	0	150	47	1223	27	1	1298	2443	2238	205			
	5:00 PM	8	25	5	0	38	11	843	58	0	912	81	35	52	0	168	51	1127	28	1	1207	2325	2119	206			
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		167	163	42	0	372	55	5889	322	1	6267	381	138	326	0	845	304	6193	128	4	6629	14113	12896	1217			

Graphical Summary of Hourly Volumes



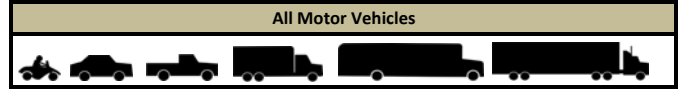
Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Range Line Road and Good Hope Road

15-Minute Motor Vehicle Data

Count Basics			Page 5 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events



15-Minute Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					15-Min Totals	Hourly Sum	PHF	
	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	2	0	0	0	2	1	106	4	0	111	5	0	6	0	11	1	97	1	0	99	223	1357	0.76
	6:15 AM	5	1	0	0	6	1	155	4	0	160	9	1	6	0	16	6	128	1	0	135	317	1622	0.83
	6:30 AM	3	1	0	0	4	1	160	8	0	169	10	2	13	0	25	9	158	6	0	173	371	1906	0.79
	6:45 AM	2	7	0	0	9	3	207	17	0	227	8	0	5	0	13	11	176	10	0	197	446	2160	0.86
	7:00 AM	7	8	2	0	17	1	224	16	0	241	8	0	10	0	18	9	202	1	0	212	488	2373	0.90
	7:15 AM	12	9	4	0	25	0	302	16	0	318	15	3	14	0	32	15	208	3	0	226	601	2455	0.93
	7:30 AM	14	12	2	0	28	3	309	23	1	336	17	5	23	0	45	14	200	2	0	216	625	2345	0.89
	7:45 AM	18	9	2	0	29	1	347	14	0	362	17	5	18	0	40	16	209	3	0	228	659	2184	0.83
	8:00 AM	17	9	2	0	28	3	266	9	0	278	14	3	17	0	34	15	213	2	0	230	570	1970	0.86
	8:15 AM	6	6	3	0	15	1	243	16	0	260	14	4	3	0	21	8	184	2	1	195	491	1736	0.88
	8:30 AM	5	2	4	0	11	1	216	10	0	227	12	4	8	0	24	8	188	6	0	202	464	1587	0.86
	8:45 AM	7	7	2	0	16	3	196	11	0	210	13	4	5	0	22	10	183	3	1	197	445	1473	0.83
	9:00 AM	1	3	0	0	4	0	153	7	0	160	3	2	17	0	22	7	142	1	0	150	336	1373	0.98
	9:15 AM	4	4	1	0	9	2	139	10	0	151	10	0	8	0	18	17	145	2	0	164	342		
	9:30 AM	4	5	1	0	10	0	149	11	0	160	3	4	12	0	19	10	151	0	0	161	350		
	9:45 AM	3	2	0	0	5	2	150	5	0	157	11	6	11	0	28	7	143	5	0	155	345		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	3:00 PM	18	7	0	0	25	1	179	14	0	194	26	13	16	0	55	6	277	7	0	290	564	2272	0.97
	3:15 PM	4	3	2	0	9	2	229	11	0	242	14	3	15	0	32	16	283	6	0	305	588	2328	0.94
	3:30 PM	4	10	3	0	17	4	206	8	0	218	13	6	12	0	31	8	286	10	0	304	570	2396	0.91
	3:45 PM	5	4	1	0	10	3	226	5	0	234	12	4	5	0	21	13	270	2	0	285	550	2423	0.92
	4:00 PM	6	6	2	0	14	4	245	9	0	258	18	13	10	0	41	11	288	8	0	307	620	2443	0.93
	4:15 PM	4	8	4	0	16	1	254	11	0	266	16	9	14	0	39	12	316	7	0	335	656	2481	0.94
	4:30 PM	6	7	1	0	14	2	193	10	0	205	14	7	9	0	30	14	327	6	1	348	597	2446	0.93
	4:45 PM	2	8	1	0	11	4	192	15	0	211	18	5	17	0	40	10	292	6	0	308	570	2399	0.91
	5:00 PM	0	5	2	0	7	1	231	16	0	248	30	10	18	0	58	14	326	5	0	345	658	2325	0.88
	5:15 PM	6	8	2	0	16	2	239	9	0	250	18	7	17	0	42	18	288	7	0	313	621		
	5:30 PM	2	7	0	0	9	3	199	7	0	209	16	9	9	0	34	7	283	7	1	298	550		
	5:45 PM	0	5	1	0	6	5	174	26	0	205	17	9	8	0	34	12	230	9	0	251	496		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
Totals		167	163	42	0	372	55	5889	322	1	6267	381	138	326	0	845	304	6193	128	4	6629	14113		

Peak Hour All Vehicle Volume Summary

Hourly Time Period	Start Time	From North					From East					From South	
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Intersection Traffic Volume Report

15-Minute Automobile Data

Count Basics			Page 6 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events

Automobiles (Cars, Light Trucks, & Motorcycles)



Range Line Road and Good Hope Road

15-Minute Automobile Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum	
	Range Line Road						Good Hope Road					Range Line Road					Good Hope Road							
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	2	0	0	0	2	1	102	4	0	107	5	0	6	0	11	1	87	1	0	89	209	1300	
	6:15 AM	5	1	0	0	6	0	149	4	0	153	8	1	6	0	15	5	121	1	0	127	301	1565	
	6:30 AM	3	1	0	0	4	1	159	8	0	168	10	2	13	0	25	9	150	6	0	165	362	1841	
	6:45 AM	2	7	0	0	9	2	204	16	0	222	8	0	5	0	13	11	164	9	0	184	428	2089	
	7:00 AM	6	8	2	0	16	1	222	16	0	239	8	0	10	0	18	9	191	1	0	201	474	2296	
	7:15 AM	10	9	4	0	23	0	288	16	0	304	15	3	14	0	32	15	200	3	0	218	577	2358	
	7:30 AM	14	12	2	0	28	3	302	23	1	329	17	5	22	0	44	14	193	2	0	209	610	2246	
	7:45 AM	18	9	2	0	29	1	339	14	0	354	17	4	18	0	39	16	194	3	0	213	635	2076	
	8:00 AM	16	8	2	0	26	3	257	9	0	269	14	3	17	0	34	13	193	1	0	207	536	1854	
	8:15 AM	5	6	3	0	14	0	232	16	0	248	13	4	3	0	20	7	173	2	1	183	465	1629	
	8:30 AM	5	2	4	0	11	1	202	9	0	212	11	4	8	0	23	8	180	6	0	194	440	1485	
	8:45 AM	6	6	2	0	14	2	178	10	0	190	13	4	5	0	22	10	173	3	1	187	413	1358	
9:00 AM	1	2	0	0	3	0	141	6	0	147	3	2	17	0	22	7	131	1	0	139	311	1258		
9:15 AM	4	4	1	0	9	2	130	10	0	142	9	0	8	0	17	17	134	2	0	153	321			
9:30 AM	4	5	1	0	10	0	135	11	0	146	3	3	12	0	18	8	131	0	0	139	313			
9:45 AM	3	2	0	0	5	1	141	5	0	147	9	6	11	0	26	6	125	4	0	135	313			
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	18	7	0	0	25	1	169	13	0	183	22	12	16	0	50	6	272	7	0	285	543	2191	
	3:15 PM	3	2	2	0	7	2	216	11	0	229	13	3	15	0	31	16	274	6	0	296	563	2245	
	3:30 PM	4	10	3	0	17	4	197	8	0	209	13	6	12	0	31	8	275	10	0	293	550	2315	
	3:45 PM	4	4	1	0	9	2	220	5	0	227	12	4	5	0	21	13	263	2	0	278	535	2350	
	4:00 PM	4	6	2	0	12	4	230	8	0	242	18	12	9	0	39	11	285	8	0	304	597	2377	
	4:15 PM	4	8	4	0	16	1	238	10	0	249	16	9	14	0	39	12	310	7	0	329	633	2430	
	4:30 PM	5	7	1	0	13	2	186	10	0	198	14	7	9	0	30	14	323	6	1	344	585	2415	
	4:45 PM	2	8	1	0	11	4	188	15	0	207	18	5	16	0	39	10	289	6	0	305	562	2376	
	5:00 PM	0	5	2	0	7	1	226	16	0	243	30	10	18	0	58	14	323	5	0	342	650	2302	
	5:15 PM	6	8	2	0	16	2	236	9	0	247	18	7	17	0	42	18	288	7	0	313	618		
	5:30 PM	2	7	0	0	9	3	198	7	0	208	16	9	9	0	34	7	280	7	1	295	546		
	5:45 PM	0	5	1	0	6	5	170	26	0	201	16	9	8	0	33	12	227	9	0	248	488		
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		156	159	42	0	357	49	5655	315	1	6020	369	134	323	0	826	297	5949	125	4	6375	13578		

Peak Hour Automobile Volume Summary

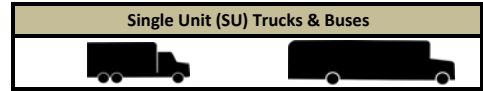
Hourly Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume
	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	58	38	10	0	106	7	1186	62	1	1256	63	15	71	0	149	58	780	9	0	847	2358
MD 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 4:30 PM	13	28	6	0	47	9	836	50	0	895	80	29	60	0	169	56	1223	24	1	1304	2415

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Range Line Road and Good Hope Road

Count Basics			Page 7 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events



15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum
	Range Line Road						Good Hope Road					Range Line Road					Good Hope Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	8	0	0	8	10	38
	6:15 AM	0	0	0	0	0	1	3	0	0	4	1	0	0	0	1	1	5	0	0	6	11	41
	6:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	6	0	0	6	7	48
	6:45 AM	0	0	0	0	0	1	1	1	0	3	0	0	0	0	0	0	6	1	0	7	10	47
	7:00 AM	1	0	0	0	1	0	2	0	0	2	0	0	0	0	0	0	10	0	0	10	13	55
	7:15 AM	1	0	0	0	1	0	11	0	0	11	0	0	0	0	0	0	6	0	0	6	18	65
	7:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	6	65
	7:45 AM	0	0	0	0	0	0	5	0	0	5	0	1	0	0	1	0	12	0	0	12	18	74
	8:00 AM	1	1	0	0	2	0	5	0	0	5	0	0	0	0	0	2	13	1	0	16	23	78
	8:15 AM	1	0	0	0	1	1	9	0	0	10	1	0	0	0	1	1	5	0	0	6	18	71
	8:30 AM	0	0	0	0	0	0	12	1	0	13	1	0	0	0	1	0	1	0	0	1	15	67
	8:45 AM	1	1	0	0	2	1	12	1	0	14	0	0	0	0	0	0	6	0	0	6	22	75
9:00 AM	0	1	0	0	1	0	7	1	0	8	0	0	0	0	0	0	7	0	0	7	16	76	
9:15 AM	0	0	0	0	0	0	6	0	0	6	1	0	0	0	1	0	7	0	0	7	14		
9:30 AM	0	0	0	0	0	0	10	0	0	10	0	1	0	0	1	2	10	0	0	12	23		
9:45 AM	0	0	0	0	0	1	7	0	0	8	2	0	0	0	2	1	11	1	0	13	23		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	7	1	0	8	4	1	0	0	5	0	3	0	0	3	16	54
	3:15 PM	1	1	0	0	2	0	10	0	0	10	1	0	0	0	1	0	5	0	0	5	18	58
	3:30 PM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	8	0	0	8	13	57	
	3:45 PM	1	0	0	0	1	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	7	51
	4:00 PM	1	0	0	0	1	0	14	1	0	15	0	1	1	0	2	0	2	0	0	2	20	50
	4:15 PM	0	0	0	0	0	0	13	1	0	14	0	0	0	0	0	0	3	0	0	3	17	33
	4:30 PM	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	7	17
	4:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	2	0	0	2	6	13
	5:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	13
	5:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
	5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	
	5:45 PM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	2	0	0	2	6	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		9	4	0	0	13	6	165	7	0	178	12	4	2	0	18	7	145	3	0	155	364	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

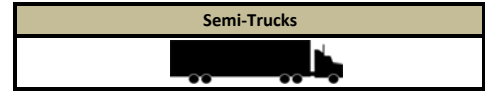
Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume
	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	2	1	0	0	3	0	25	0	0	25	0	1	0	0	1	2	33	1	0	36	65
MD 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 4:30 PM	1	0	0	0	1	0	12	0	0	12	0	0	1	0	1	0	3	0	0	3	17

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

Range Line Road and Good Hope Road

Count Basics			Page 8 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events



15-Minute Semi-Truck Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum			
	Range Line Road						Good Hope Road					Range Line Road					Good Hope Road									
	Right	Thru	Left	U-Tn	Total		Right	Thru	Left	U-Tn	Total		Right	Thru	Left	U-Tn	Total		Right	Thru	Left			U-Tn	Total	
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	0	0	2	4	19
	6:15 AM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	5	16
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	17
	6:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	6	0	0	6	8	24
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	22
	7:15 AM	1	0	0	0	1	0	0	3	0	0	3	0	0	0	0	0	0	0	0	2	0	0	2	6	32
	7:30 AM	0	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	5	0	0	0	5	9	34	
	7:45 AM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	0	3	6	34	
	8:00 AM	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	7	0	0	0	7	11	38	
	8:15 AM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	6	0	0	0	6	8	36	
	8:30 AM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	7	0	0	0	7	9	35	
	8:45 AM	0	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	4	0	0	0	4	10	40	
	9:00 AM	0	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	4	0	0	0	4	9	39	
	9:15 AM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	0	4	7		
	9:30 AM	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	10	0	0	0	10	14		
	9:45 AM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	7	0	0	0	7	9		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	10:45 AM	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 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	3:00 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5	27		
	3:15 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	7	25		
	3:30 PM	0	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	3	0	0	3	7	24		
	3:45 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8	22		
	4:00 PM	1	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3	16		
	4:15 PM	0	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	3	0	0	3	6	18		
	4:30 PM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	14		
	4:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	10		
	5:00 PM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	10		
	5:15 PM	0	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2		
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1			
	5:45 PM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2			
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		2	0	0	0	2	0	69	0	0	69	0	0	1	0	1	0	99	0	0	99	171				

Peak Hour Semi-Truck Volume Summary

Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume	
	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM 7:15 AM	0	0	0	0	0	0	12	0	0	12	0	0	1	0	1	0	21	0	0	0	21	34
MD 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 4:30 PM	1	0	0	0	1	0	9	0	0	9	0	0	0	0	0	0	12	0	0	0	12	22

15-Minute Heavy Vehicle Data

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)

Range Line Road and Good Hope Road

Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume
	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	3	1	0	0	4	0	38	0	0	38	0	1	1	0	2	2	50	1	0	53	97
MD 12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PM 4:30 PM	1	0	0	0	1	0	19	0	0	19	0	0	1	0	1	0	10	0	0	10	31

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

Range Line Road and Good Hope Road

15-Minute Heavy Vehicle Percentages

Count Basics		Page 10 of 13
Start Date: #REF!	#REF!	Schools in Session
Total Number of Hours Counted: 7	Non-Holiday	No Special Events

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)	
%	

15-Minute Time Period Start Time		↙					←					↗					→					Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent
		From North					From East					From South					From West						
		Range Line Road					Good Hope Road					Range Line Road					Good Hope Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.6	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	10.1	6.3	4.2
	6:15 AM	0.0	0.0	0.0	0.0	0.0	100.0	3.9	0.0	0.0	4.4	11.1	0.0	0.0	0.0	6.2	16.7	5.5	0.0	0.0	5.9	5.0	3.5
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.0	0.0	4.6	2.4	3.4
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	33.3	1.4	5.9	0.0	2.2	0.0	0.0	0.0	0.0	0.0	6.8	10.0	0.0	6.6	4.0	3.3
	7:00 AM	14.3	0.0	0.0	0.0	5.9	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	5.4	0.0	0.0	5.2	2.9	3.2
	7:15 AM	16.7	0.0	0.0	0.0	8.0	0.0	4.6	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.5	4.0	4.0
	7:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	2.1	0.0	0.0	4.3	0.0	2.2	0.0	3.5	0.0	0.0	3.2	2.4	4.2
	7:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	2.2	0.0	20.0	0.0	0.0	2.5	0.0	7.2	0.0	0.0	6.6	3.6	4.9
	8:00 AM	5.9	11.1	0.0	0.0	7.1	0.0	3.4	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	13.3	9.4	50.0	0.0	10.0	6.0	5.9
	8:15 AM	16.7	0.0	0.0	0.0	6.7	100.0	4.5	0.0	0.0	4.6	7.1	0.0	0.0	0.0	4.8	12.5	6.0	0.0	0.0	6.2	5.3	6.2
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	6.5	10.0	0.0	6.6	8.3	0.0	0.0	0.0	4.2	0.0	4.3	0.0	0.0	4.0	5.2	6.4
	8:45 AM	14.3	14.3	0.0	0.0	12.5	33.3	9.2	9.1	0.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	5.1	7.2	7.8
	9:00 AM	0.0	33.3	0.0	0.0	25.0	0.0	7.8	14.3	0.0	8.1	0.0	0.0	0.0	0.0	0.0	0.0	7.7	0.0	0.0	7.3	7.4	8.4
9:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5	0.0	6.0	10.0	0.0	0.0	0.0	5.6	0.0	7.6	0.0	0.0	6.7	6.1		
9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	0.0	8.7	0.0	25.0	0.0	0.0	5.3	20.0	13.2	0.0	0.0	13.7	10.6		
9:45 AM	0.0	0.0	0.0	0.0	0.0	50.0	6.0	0.0	0.0	6.4	18.2	0.0	0.0	0.0	7.1	14.3	12.6	20.0	0.0	12.9	9.3		
Midday Peak Period	10:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	11:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	12:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	1:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
PM Peak Period	2:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	2:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	3:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	5.6	7.1	0.0	5.7	15.4	7.7	0.0	0.0	9.1	0.0	1.8	0.0	0.0	1.7	3.7	3.6
	3:15 PM	25.0	33.3	0.0	0.0	22.2	0.0	5.7	0.0	0.0	5.4	7.1	0.0	0.0	0.0	3.1	0.0	3.2	0.0	0.0	3.0	4.3	3.6
	3:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	4.1	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	3.6	3.5	3.4
	3:45 PM	20.0	0.0	0.0	0.0	10.0	33.3	2.7	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.5	2.7	3.0
	4:00 PM	33.3	0.0	0.0	0.0	14.3	0.0	6.1	11.1	0.0	6.2	0.0	7.7	10.0	0.0	4.9	0.0	1.0	0.0	0.0	1.0	3.7	2.7
	4:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	6.3	9.1	0.0	6.4	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	1.8	3.5	2.1
	4:30 PM	16.7	0.0	0.0	0.0	7.1	0.0	3.6	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.1	2.0	1.3
	4:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.9	0.0	0.0	5.9	0.0	2.5	0.0	1.0	0.0	0.0	1.0	1.4	1.0
	5:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	1.2	1.0
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	
	5:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.0	0.7	
	5:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	2.0	5.9	0.0	0.0	0.0	2.9	0.0	1.3	0.0	0.0	1.2	1.6	
	6:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
9:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.							

Peak Hour Heavy Vehicle Percentages Summary

Hourly Time Period Start Time	From North					From East					From South					From West					Hourly Heavy Vehicle Percent
	Range Line Road					Good Hope Road					Range Line Road					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	4.9	2.6	0.0	0.0	3.6	0.0	3.1	0.0	0.0	2.9	0.0	6.2	1.4	0.0	1.3	3.3	6.0	10.0	0.0	5.9	4.0
MD 12:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PM 4:30 PM	7.1	0.0	0.0	0.0	2.1	0.0	2.2	0.0	0.0	2.1	0.0	0.0	1.6	0.0	0.6	0.0	0.8	0.0	0.0	0.8	1.3

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

Count Basics			Page 11 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events

Range Line Road and Good Hope Road



15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min Totals	Hourly Sum
Start Time		Range Line Road			Good Hope Road			Range Line Road			Good Hope Road				
		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	7:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	1	2
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	7:45 AM	0	0	0	0	0	0	0	0	0	0	1	1	1	1
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	9:00 AM	0	0	0	1	0	1	0	0	0	0	0	0	1	1
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	3:45 PM	6	0	6	0	0	0	2	0	2	0	0	0	8	18
	4:00 PM	2	0	2	0	0	0	0	0	0	0	0	0	2	11
	4:15 PM	2	0	2	0	0	0	0	0	0	0	0	0	2	9
	4:30 PM	6	0	6	0	0	0	0	0	0	0	0	0	6	7
	4:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	5:45 PM	0	0	0	0	1	1	0	0	0	0	0	0	1	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		16	0	16	2	1	3	2	0	2	2	1	3	24	

Special Pedestrians

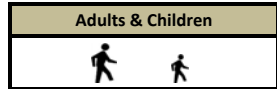
Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementary School Age Children	x					
Visually Impaired (white cane/helper dog)	x					
Elderly/Disabled (except wheelchairs)	x					
Wheelchairs/Electric Scooters	x					
Other (None)	x					

Intersection Traffic Volume Report

Count Basics			Page 12 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	7	Non-Holiday	No Special Events

15-Minute Adult & Children Count (Manual Entry)

Range Line Road and Good Hope Road



15-Minute Adult & Children Pedestrian Data

15-Minute Time Period		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min Totals	Hourly Sum
Start Time		Range Line Road		Total	Good Hope Road		Total	Range Line Road		Total	Good Hope Road				
		Adults	Children		Adults	Children		Adults	Children		Adults	Children			
AM Peak Period	6:00 AM	0		0	0		0	0		0	0		0	0	1
	6:15 AM	0		0	0		0	0		0	1		1	1	1
	6:30 AM	0		0	0		0	0		0	0		0	0	1
	6:45 AM	0		0	0		0	0		0	0		0	0	1
	7:00 AM	0		0	0		0	0		0	0		0	0	1
	7:15 AM	0		0	1		1	0		0	0		0	1	1
	7:30 AM	0		0	0		0	0		0	0		0	0	0
	7:45 AM	0		0	0		0	0		0	0		0	0	0
	8:00 AM	0		0	0		0	0		0	0		0	0	0
	8:15 AM	0		0	0		0	0		0	0		0	0	1
	8:30 AM	0		0	0		0	0		0	0		0	0	1
	8:45 AM	0		0	0		0	0		0	0		0	0	1
	9:00 AM	0		0	1		1	0		0	0		0	1	1
	9:15 AM	0		0	0		0	0		0	0		0	0	0
	9:30 AM	0		0	0		0	0		0	0		0	0	0
	9:45 AM	0		0	0		0	0		0	0		0	0	0
Midday Peak Period	10:00 AM	0		0	0		0	0		0	0		0	0	0
	10:15 AM	0		0	0		0	0		0	0		0	0	0
	10:30 AM	0		0	0		0	0		0	0		0	0	0
	10:45 AM	0		0	0		0	0		0	0		0	0	0
	11:00 AM	0		0	0		0	0		0	0		0	0	0
	11:15 AM	0		0	0		0	0		0	0		0	0	0
	11:30 AM	0		0	0		0	0		0	0		0	0	0
	11:45 AM	0		0	0		0	0		0	0		0	0	0
	12:00 PM	0		0	0		0	0		0	0		0	0	0
	12:15 PM	0		0	0		0	0		0	0		0	0	0
	12:30 PM	0		0	0		0	0		0	0		0	0	0
	12:45 PM	0		0	0		0	0		0	0		0	0	0
	1:00 PM	0		0	0		0	0		0	0		0	0	0
	1:15 PM	0		0	0		0	0		0	0		0	0	0
	1:30 PM	0		0	0		0	0		0	0		0	0	0
	1:45 PM	0		0	0		0	0		0	0		0	0	0
PM Peak Period	2:00 PM	0		0	0		0	0		0	0		0	0	0
	2:15 PM	0		0	0		0	0		0	0		0	0	0
	2:30 PM	0		0	0		0	0		0	0		0	0	0
	2:45 PM	0		0	0		0	0		0	0		0	0	0
	3:00 PM	0		0	0		0	0		0	0		0	0	8
	3:15 PM	0		0	0		0	0		0	0		0	0	10
	3:30 PM	0		0	0		0	0		0	0		0	0	12
	3:45 PM	6		6	0		0	2		2	0		0	8	18
	4:00 PM	2		2	0		0	0		0	0		0	2	11
	4:15 PM	2		2	0		0	0		0	0		0	2	9
	4:30 PM	6		6	0		0	0		0	0		0	6	7
	4:45 PM	0		0	0		0	0		0	1		1	1	1
	5:00 PM	0		0	0		0	0		0	0		0	0	0
	5:15 PM	0		0	0		0	0		0	0		0	0	0
	5:30 PM	0		0	0		0	0		0	0		0	0	0
	5:45 PM	0		0	0		0	0		0	0		0	0	0
	6:00 PM	0		0	0		0	0		0	0		0	0	0
	6:15 PM	0		0	0		0	0		0	0		0	0	0
	6:30 PM	0		0	0		0	0		0	0		0	0	0
	6:45 PM	0		0	0		0	0		0	0		0	0	0
	7:00 PM	0		0	0		0	0		0	0		0	0	0
	7:15 PM	0		0	0		0	0		0	0		0	0	0
	7:30 PM	0		0	0		0	0		0	0		0	0	0
	7:45 PM	0		0	0		0	0		0	0		0	0	0
8:00 PM	0		0	0		0	0		0	0		0	0	0	
8:15 PM	0		0	0		0	0		0	0		0	0	0	
8:30 PM	0		0	0		0	0		0	0		0	0	0	
8:45 PM	0		0	0		0	0		0	0		0	0	0	
9:00 PM	0		0	0		0	0		0	0		0	0	0	
9:15 PM	0		0	0		0	0		0	0		0	0	0	
9:30 PM	0		0	0		0	0		0	0		0	0	0	
9:45 PM	0		0	0		0	0		0	0		0	0	0	
Totals		16	0	16	2	0	2	2	0	2	2	0	2	22	

Count Basics		Page 13 of 13
Start Date: #REF!	#REF!	Schools in Session
Total Number of Hours Counted: 7	Non-Holiday	No Special Events

Bicyclists

15-Minute Bicycle Data

Peak Hour Bicycle Turning Movement Volume Summary

[illegible]

Intersection Traffic Volume Report

Count Basics		Version 2013.14.1	Page 1 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

Base Information, Observed (13) Hour and Estimated (24) Hour Volume Summaries

Intersection of: **STH 57 - Green Bay Avenue and Good Hope Road**



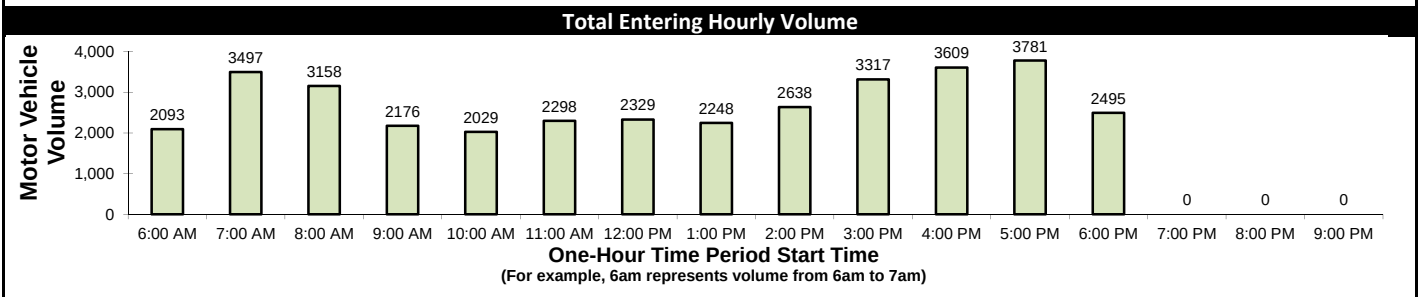
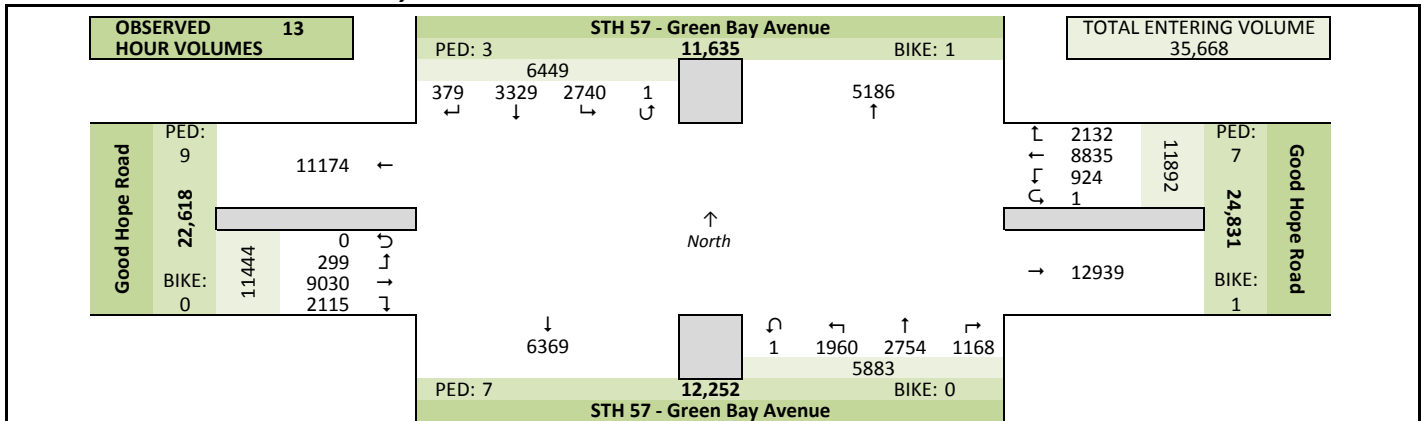
Site Information

Municipality	City of Glendale		
County	Milwaukee	WisDOT Region	SE
Traffic Control	Traffic Signal		
Roadway Names		North Direction	↑
North Leg	STH 57 - Green Bay Avenue		
East Leg	Good Hope Road		
South Leg	STH 57 - Green Bay Avenue		
West Leg	Good Hope Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
	Pre-school children	None	
	Elementry school age children	None	
	Visually impaired (white cane/helper dog)	None	
	Elderly/disabled (except wheelchairs)	None	
	Wheelchairs/electric scooters	None	
	Other (describe)	None	None

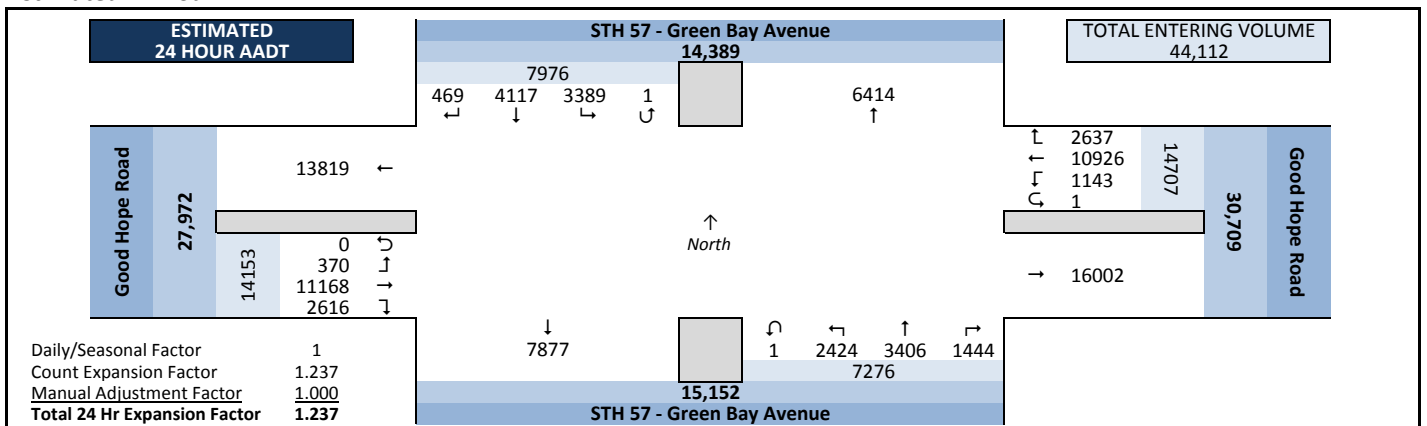
Count Information

Hrs Counted: 6:00 AM-7:00 PM			
1st Day of Count		Tuesday, October 23, 2018	Weather
AM Peak Period		Tuesday, October 23, 2018	Clear & Dry
Midday Peak Period		Tuesday, October 23, 2018	Clear & Dry
PM Peak Period		Monday, October 29, 2018	Clear & Dry
Calculated Peak Hours			
	AM 7:15-8:15am	MD 11:45-12:45pm	PM 4:30-5:30pm
Peak Hours Selected for Analysis			
	AM 7:15-8:15am	MD 11:45-12:45pm	PM 4:30-5:30pm
Daily/Seasonal Adjustment Group		(2) Urban Arterials & Collectors	
Count Expansion Group		(2) Urban Arterials & Collectors	
Daily/Seasonal Adjustment Factor		1	Count Expansion Factor 1.237
Company Name		TADI, Inc.	Manual Adj. 1.000
Observers	AM Peak Period	Amy Scheuerlein, Lee Oestreich	
	Midday Peak Period	Wendy Picard, Larry Numerich	
	PM Peak Period	JK Bieberitz	
Comments	2017 DOT Seasonal Factors		

Observed 13 Hour Volume Summary



Estimated 24 Hour AADT



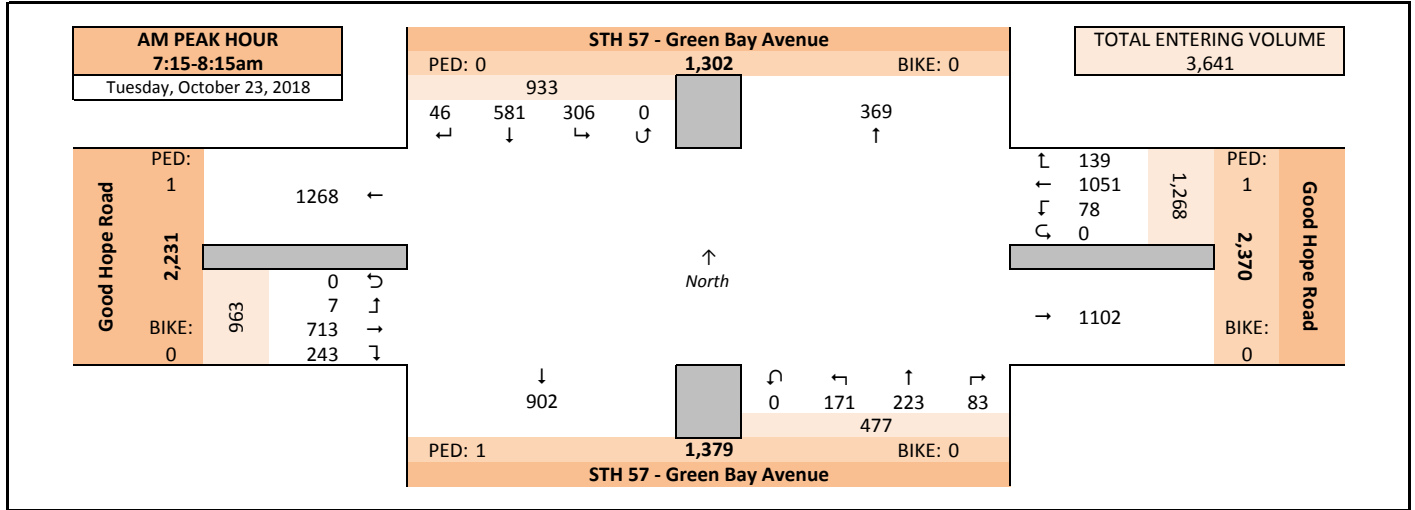
Intersection Traffic Volume Report

Peak Hour Volume Graphical Summary

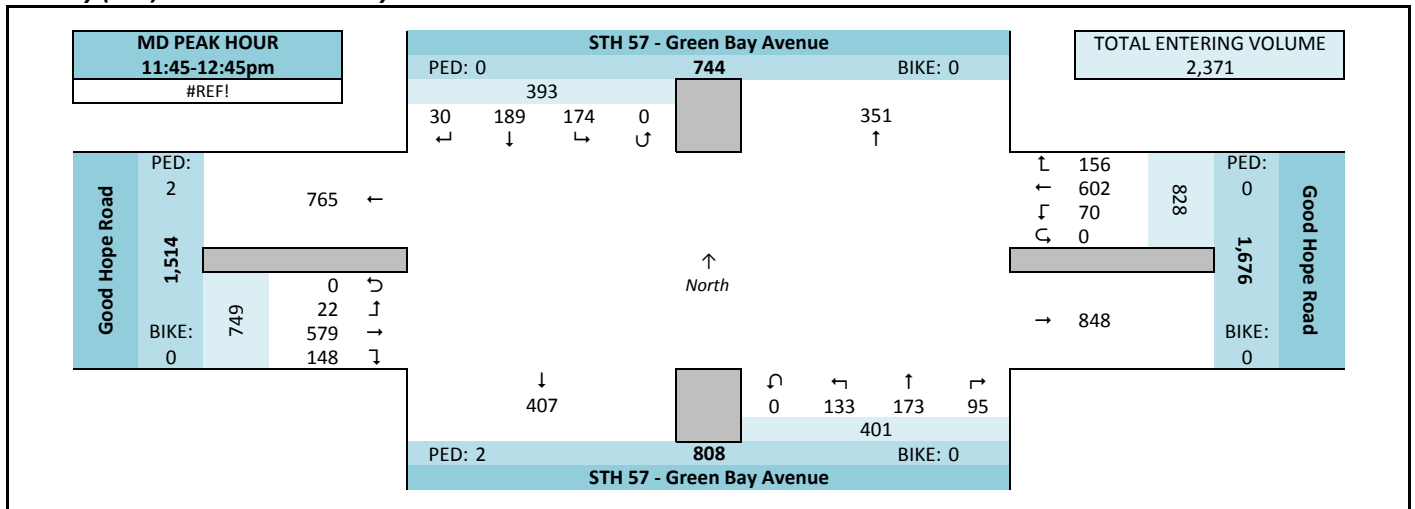
STH 57 - Green Bay Avenue and Good Hope Road

AM Peak Hour Summary

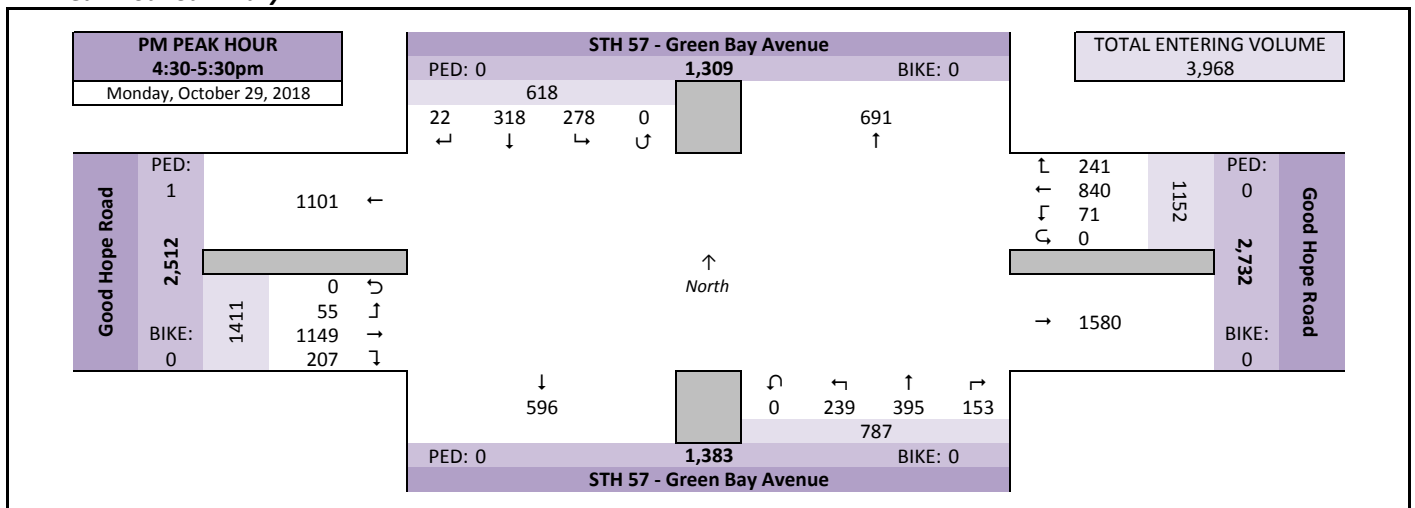
Count Basics			Page 2 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Intersection Traffic Volume Report

Count Basics			Page 3 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

Peak Hour Volume Summary

STH 57 - Green Bay Avenue and Good Hope Road

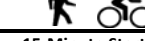
Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, October 23, 2018		From North					From East					From South					From West					
AM Peak Hour	AM Peak Hour	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	7:15 AM	5	144	88	0	237	37	240	13	0	290	19	53	44	0	116	56	172	3	0	231	874
	7:30 AM	12	170	94	0	276	31	247	19	0	297	19	57	45	0	121	62	187	1	0	250	944
	7:45 AM	18	119	63	0	200	46	295	20	0	361	26	70	46	0	142	57	156	0	0	213	916
	8:00 AM	11	148	61	0	220	25	269	26	0	320	19	43	36	0	98	68	198	3	0	269	907
	Peak Hour Volume	46	581	306	0	933	139	1051	78	0	1268	83	223	171	0	477	243	713	7	0	963	3641
	Rounded Hourly Volume	45	580	305	0	930	140	1050	80	0	1270	85	225	170	0	480	245	715	5	0	965	3645
	% Single Unit Trucks	6.5	1.2	2.9	0.0	2.0	5.8	2.5	6.4	0.0	3.1	13.3	5.4	4.7	0.0	6.5	5.8	6.7	14.3	0.0	6.5	4.2
	% Heavy Trucks	0.0	0.3	0.0	0.0	0.2	0.0	1.6	2.6	0.0	1.5	1.2	0.0	0.6	0.0	0.4	0.4	2.0	0.0	0.0	1.6	1.0
% Trucks (Total)	6.5	1.5	2.9	0.0	2.3	5.8	4.1	9.0	0.0	4.6	14.5	5.4	5.3	0.0	6.9	6.2	8.7	14.3	0.0	8.1	5.2	
Peak Hour Factor (PHF)	0.64	0.85	0.81	0.00	0.85	0.76	0.89	0.75	0.00	0.88	0.80	0.80	0.93	0.00	0.84	0.89	0.90	0.58	0.00	0.89	0.96	

#REF!		From North					From East					From South					From West					
Midday (MD) Peak Hour	MD Peak Hour	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					Totals
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
	11:45 AM	8	56	41	0	105	40	158	20	0	218	28	40	38	0	106	33	167	5	0	205	634
	12:00 PM	7	43	42	0	92	48	138	17	0	203	28	39	27	0	94	33	128	10	0	171	560
	12:15 PM	6	54	49	0	109	35	150	18	0	203	22	52	27	0	101	45	129	3	0	177	590
	12:30 PM	9	36	42	0	87	33	156	15	0	204	17	42	41	0	100	37	155	4	0	196	587
	Peak Hour Volume	30	189	174	0	393	156	602	70	0	828	95	173	133	0	401	148	579	22	0	749	2371
	Rounded Hourly Volume	30	190	175	0	395	155	600	70	0	825	95	175	135	0	405	150	580	20	0	750	2375
	% Single Unit Trucks	16.7	2.6	4.6	0.0	4.6	3.8	5.0	1.4	0.0	4.5	3.2	4.6	5.3	0.0	4.5	5.4	4.8	22.7	0.0	5.5	4.8
	% Heavy Trucks	3.3	0.5	0.0	0.0	0.5	0.6	2.2	1.4	0.0	1.8	0.0	1.2	0.0	0.0	0.5	0.7	5.0	9.1	0.0	4.3	2.2
	% Trucks (Total)	20.0	3.2	4.6	0.0	5.1	4.5	7.1	2.9	0.0	6.3	3.2	5.8	5.3	0.0	5.0	6.1	9.8	31.8	0.0	9.7	7.0
	Peak Hour Factor (PHF)	0.83	0.84	0.89	0.00	0.90	0.81	0.95	0.87	0.00	0.95	0.85	0.83	0.81	0.00	0.95	0.82	0.87	0.55	0.00	0.91	0.93

Monday, October 29, 2018		From North					From East					From South					From West					
PM Peak Hour	PM Peak Hour	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Totals
	4:30 PM	9	82	60	0	151	67	183	20	0	270	37	77	78	0	192	43	252	10	0	305	918
	4:45 PM	2	75	47	0	124	55	209	12	0	276	30	102	45	0	177	53	282	17	0	352	929
	5:00 PM	4	70	95	0	169	77	216	23	0	316	55	94	61	0	210	63	286	14	0	363	1058
	5:15 PM	7	91	76	0	174	42	232	16	0	290	31	122	55	0	208	48	329	14	0	391	1063
	Peak Hour Volume	22	318	278	0	618	241	840	71	0	1152	153	395	239	0	787	207	1149	55	0	1411	3968
	Rounded Hourly Volume	20	320	280	0	620	240	840	70	0	1150	155	395	240	0	790	205	1150	55	0	1410	3970
	% Single Unit Trucks	0.0	4.1	0.4	0.0	2.3	1.2	3.1	2.8	0.0	2.7	2.0	0.5	1.7	0.0	1.1	2.9	1.6	1.8	0.0	1.8	2.0
	% Heavy Trucks	0.0	0.3	0.0	0.0	0.2	0.0	0.8	1.4	0.0	0.7	0.0	0.0	0.4	0.0	0.1	0.0	0.8	0.0	0.0	0.6	0.5
% Trucks (Total)	0.0	4.4	0.4	0.0	2.4	1.2	3.9	4.2	0.0	3.4	2.0	0.5	2.1	0.0	1.3	2.9	2.3	1.8	0.0	2.4	2.5	
Peak Hour Factor (PHF)	0.61	0.87	0.73	0.00	0.89	0.78	0.91	0.77	0.00	0.91	0.70	0.81	0.77	0.00	0.94	0.82	0.87	0.81	0.00	0.90	0.93	

Peak Hour Pedestrian and Bicyclist Volumes

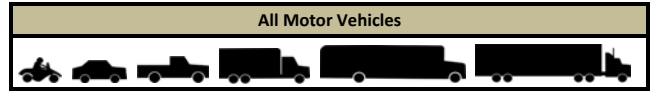
Pedestrians and Bicyclists		Crossing 			Crossing 			Crossing 			Crossing 			Total Ped & Bike Volume
		North Approach			East Approach			South Approach			West Approach			
15-Minute Start Time		STH 57 - Green Bay Avenue			Good Hope Road			STH 57 - Green Bay Avenue			Good Hope Road			
	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total		
AM	7:15 AM	0	0	0	1	0	1	1	0	1	1	0	1	3
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	1	0	1	1	0	1	1	0	1	3
MD	11:45 AM	0	0	0	0	0	0	2	0	2	2	0	2	4
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	2	0	2	2	0	2	4
PM	4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	1	0	1	1

Intersection Traffic Volume Report

Hourly Volume Summary - Motor Vehicle Data

STH 57 - Green Bay Avenue and Good Hope Road

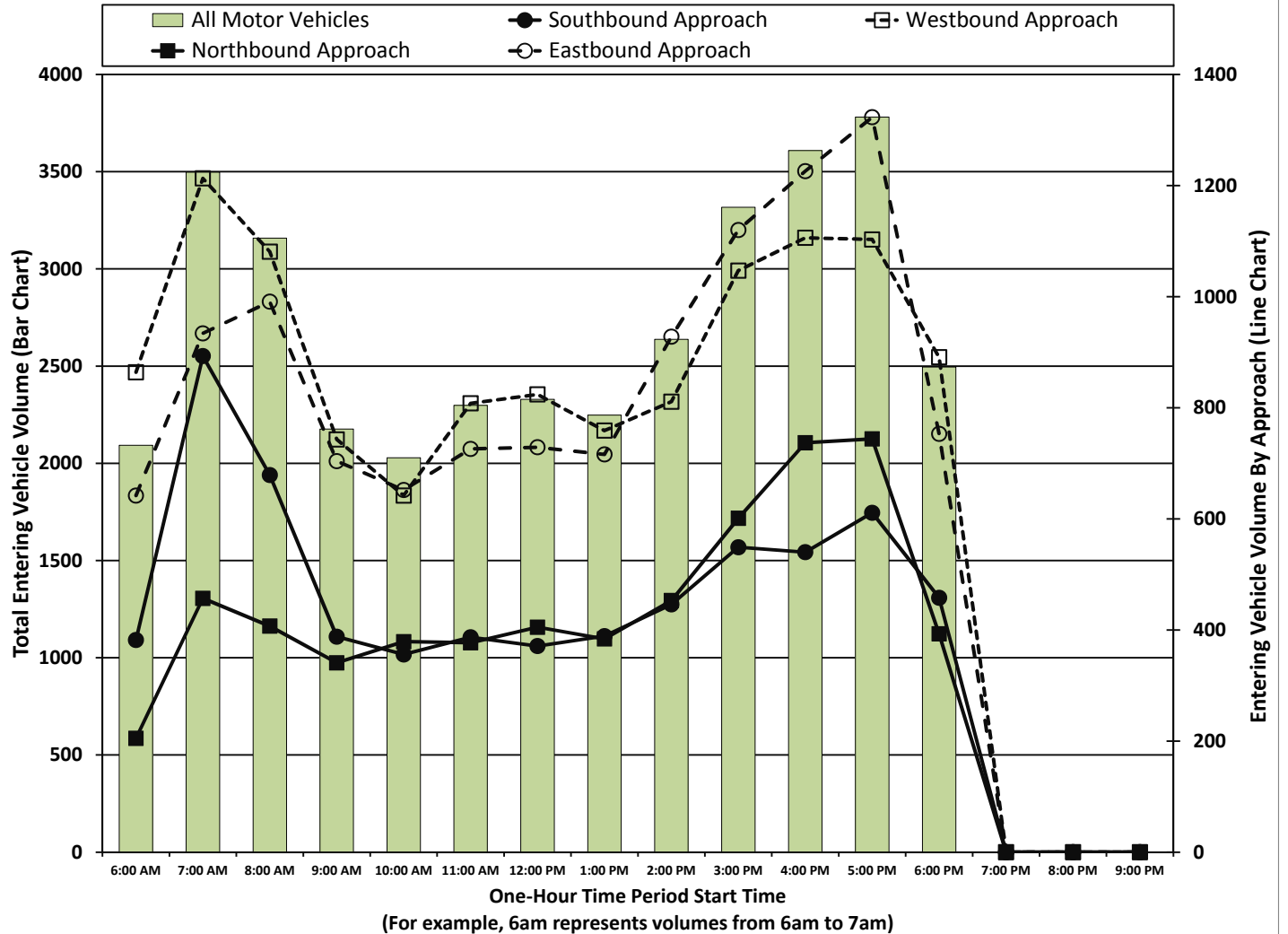
Count Basics			Page 4 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



One-Hour Motor Vehicle Data

One-Hour Time Period Start Time	From North					From East					From South					From West					Total Vehicle Volume	Directional Volume Totals		
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM	6:00 AM	14	184	184	0	382	155	671	38	0	864	44	81	80	0	205	105	531	6	0	642	2093	1506	587
	7:00 AM	44	520	329	0	893	150	999	64	0	1213	79	214	164	0	457	234	692	8	0	934	3497	2147	1350
	8:00 AM	41	407	230	1	679	113	876	92	0	1081	86	154	167	0	407	214	742	35	0	991	3158	2072	1086
	9:00 AM	30	181	177	0	388	91	586	66	0	743	58	166	117	0	341	120	571	13	0	704	2176	1447	729
MD	10:00 AM	31	166	159	0	356	113	473	56	0	642	93	161	125	0	379	122	518	12	0	652	2029	1294	735
	11:00 AM	19	184	184	0	387	132	616	60	0	808	97	157	123	0	377	137	562	27	0	726	2298	1534	764
	12:00 PM	31	180	160	0	371	147	612	65	0	824	98	188	119	0	405	159	548	22	0	729	2329	1553	776
	1:00 PM	31	187	171	0	389	150	544	65	0	759	82	168	134	0	384	133	562	21	0	716	2248	1475	773
PM	2:00 PM	31	209	206	0	446	173	588	50	0	811	78	232	142	1	453	155	752	21	0	928	2638	1739	899
	3:00 PM	26	251	272	0	549	222	770	54	1	1047	120	279	202	0	601	174	914	32	0	1120	3317	2167	1150
	4:00 PM	34	290	216	0	540	255	787	64	0	1106	138	364	235	0	737	186	994	46	0	1226	3609	2332	1277
	5:00 PM	24	305	282	0	611	240	777	86	0	1103	127	386	231	0	744	223	1056	44	0	1323	3781	2426	1355
	6:00 PM	23	265	170	0	458	191	536	164	0	891	68	204	121	0	393	153	588	12	0	753	2495	1644	851
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Totals	379	3329	2740	1	6449	2132	8835	924	1	11892	1168	2754	1960	1	5883	2115	9030	299	0	####	35668	23336	12332

Graphical Summary of Hourly Volumes



15-Minute Motor Vehicle Data

STH 57 - Green Bay Avenue and Good Hope Road



15-Minute Time Period Start Time		↓ From North					← From East					↑ From South					→ From West					15-Min Totals
		STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM Peak Period	6:00 AM	1	19	23	0	43	22	96	5	0	123	9	10	12	0	30	9	86	0	0	95	291
	6:15 AM	3	37	42	0	82	40	141	6	0	187	9	15	18	0	42	17	121	2	0	140	451
	6:30 AM	5	57	57	0	119	49	202	8	0	259	10	30	22	0	62	36	173	1	0	210	650
	6:45 AM	5	71	62	0	138	44	232	19	0	295	17	26	28	0	71	43	151	3	0	197	701
	7:00 AM	9	87	84	0	180	36	217	12	0	265	15	34	29	0	78	59	177	4	0	240	763
	7:15 AM	5	144	88	0	237	37	240	13	0	290	19	53	44	0	116	56	172	3	0	231	874
	7:30 AM	12	170	94	0	276	31	247	19	0	297	19	57	45	0	121	62	187	1	0	250	944
	7:45 AM	18	119	63	0	200	46	295	20	0	361	26	70	46	0	142	57	156	0	0	213	916
	8:00 AM	11	148	61	0	220	25	269	26	0	320	19	43	36	0	98	68	198	3	0	269	907
	8:15 AM	11	122	56	1	190	24	233	17	0	274	17	42	45	0	104	56	165	24	0	245	813
Midday Peak Period	8:30 AM	9	68	59	0	136	32	192	27	0	251	30	35	43	0	108	48	201	2	0	251	746
	8:45 AM	10	69	54	0	133	32	182	22	0	236	20	34	43	0	97	42	178	6	0	226	692
	9:00 AM	5	44	55	0	104	21	145	19	0	185	16	47	27	0	90	45	147	3	0	195	574
	9:15 AM	8	43	45	0	96	27	143	14	0	184	10	36	24	0	70	30	162	2	0	194	544
	9:30 AM	11	50	41	0	102	26	151	17	0	194	17	35	31	0	83	22	128	0	0	150	529
	9:45 AM	6	44	36	0	86	17	147	16	0	180	15	48	35	0	98	23	134	8	0	165	529
	10:00 AM	9	44	28	0	81	28	118	15	0	161	26	27	24	0	77	28	109	3	0	140	459
	10:15 AM	14	42	43	0	99	30	125	14	0	169	29	51	24	0	104	31	119	2	0	152	524
	10:30 AM	2	42	51	0	95	25	113	15	0	153	14	36	38	0	88	29	138	7	0	174	510
	10:45 AM	6	38	37	0	81	30	117	12	0	159	24	47	39	0	110	34	152	0	0	186	536
PM Peak Period	11:00 AM	4	33	48	0	85	25	141	13	0	179	24	40	25	0	89	38	135	6	0	179	532
	11:15 AM	2	51	51	0	104	29	138	17	0	184	19	35	34	0	88	36	134	5	0	175	551
	11:30 AM	5	44	44	0	93	38	179	10	0	227	26	42	26	0	94	30	126	11	0	167	581
	11:45 AM	8	56	41	0	105	40</															

[illegible]

Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	46	581	306	0	933	139	1051	78	0	1268	83	223	171	0	477	243	713	7	0	963	3641
AM 11:45 AM	30	189	174	0	393	156	602	70	0	828	95	173	133	0	401	148	579	22	0	749	2371
PM 4:30 PM	22	318	278	0	618	241	840	71	0	1152	153	395	239	0	787	207	1149	55	0	1411	3968

PHF
0.96
0.93
0.93

Intersection Traffic Volume Report

15-Minute Automobile Data

Count Basics			Page 6 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

STH 57 - Green Bay Avenue and Good Hope Road

Automobiles (Cars, Light Trucks, & Motorcycles)		
		

15-Minute Automobile Data

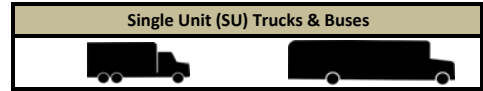
15-Minute Time Period Start Time	From North					From East					From South					From West					15-Min Totals	Hourly Sum	
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road							
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	1	19	21	0	41	22	93	4	0	119	8	10	12	0	30	7	82	0	0	89	279	2004
	6:15 AM	2	35	42	0	79	40	137	6	0	183	7	15	18	0	40	16	112	1	0	129	431	2452
	6:30 AM	5	55	57	0	117	49	193	7	0	249	10	28	22	0	60	33	158	1	0	192	618	2835
	6:45 AM	5	70	62	0	137	43	225	19	0	287	17	25	26	0	68	42	139	3	0	184	676	3123
	7:00 AM	9	87	84	0	180	36	209	11	0	256	13	31	24	0	68	57	162	4	0	223	727	3332
	7:15 AM	5	142	85	0	232	35	227	13	0	275	13	44	41	0	98	49	158	2	0	209	814	3451
	7:30 AM	12	169	91	0	272	30	241	17	0	288	17	55	41	0	113	61	171	1	0	233	906	3393
	7:45 AM	17	118	62	0	197	44	286	19	0	349	25	69	44	0	138	55	146	0	0	201	885	3175
	8:00 AM	9	143	59	0	211	22	254	22	0	298	16	43	36	0	95	63	176	3	0	242	846	2934
	8:15 AM	8	118	56	1	183	23	215	16	0	254	15	40	44	0	99	50	150	20	0	220	756	2617
	8:30 AM	9	63	57	0	129	31	177	25	0	233	26	31	41	0	98	46	180	2	0	228	688	2358
	8:45 AM	9	66	50	0	125	30	172	20	0	222	19	30	42	0	91	40	161	5	0	206	644	2148
9:00 AM	5	40	55	0	100	19	131	18	0	168	15	46	25	0	86	40	133	2	0	175	529	1974	
9:15 AM	8	41	43	0	92	26	125	13	0	164	9	33	22	0	64	28	147	2	0	177	497	1870	
9:30 AM	11	47	40	0	98	24	135	16	0	175	15	30	27	0	72	22	111	0	0	133	478	1854	
9:45 AM	5	41	36	0	82	15	131	15	0	161	14	44	25	0	83	23	116	5	0	144	470	1844	
Midday Peak Period	10:00 AM	7	40	28	0	75	27	109	14	0	150	23	23	24	0	70	27	100	3	0	130	425	1872
	10:15 AM	13	41	41	0	95	28	110	14	0	152	29	44	23	0	96	28	108	2	0	138	481	1940
	10:30 AM	2	39	48	0	89	23	101	12	0	136	14	35	37	0	86	29	121	7	0	157	468	1963
	10:45 AM	6	36	37	0	79	28	104	12	0	144	23	43	33	0	99	32	144	0	0	176	498	2038
	11:00 AM	4	32	45	0	81	25	120	13	0	158	23	38	25	0	86	36	126	6	0	168	493	2126
	11:15 AM	2	50	47	0	99	26	120	16	0	162	17	33	33	0	83	34	121	5	0	160	504	2154
	11:30 AM	4	42	40	0	86	36	165	9	0	210	26	40	25	0	91	28	118	10	0	156	543	2198
	11:45 AM	7	52	37	0	96	40	148	19	0	207	27	38	37	0	102	32	144	5	0	181	586	2206
	12:00 PM	6	42	42	0	90	45	125	17	0	187	27	38	25	0	90	31	116	7	0	154	521	2172
	12:15 PM	4	54	46	0	104	33	139	18	0	190	22	48	25	0	95	41	117	1	0	159	548	2161
	12:30 PM	7	35	41	0	83	31	147	14	0	192	16	39	39	0	94	35	145	2	0	182	551	2117
	12:45 PM	7	44	26	0	77	31	155	15	0	201	28	54	21	0	103	41	126	4	0	171	552	2122
PM Peak Period	1:00 PM	6	58	38	0	102	40	105	17	0	162	13	40	41	0	94	37	110	5	0	152	510	2083
	1:15 PM	7	25	39	0	71	41	126	18	0	185	22	39	27	0	88	29	126	5	0	160	504	2090
	1:30 PM	14	50	48	0	112	36	142	13	0	191	18	44	26	0	88	28	133	4	0	165	556	2226
	1:45 PM	2	48	40	0	90	26	123	12	0	161	25	38	33	0	96	29	132	5	0	166	513	2328
	2:00 PM	6	34	34	0	74	34	111	8	0	153	14	39	36	0	89	28	171	2	0	201	517	2437
	2:15 PM	8	56	60	0	124	46	140	14	0	200	24	53	37	0	114	41	152	9	0	202	640	2650
	2:30 PM	8	56	47	0	111	50	124	12	0	186	20	70	34	1	125	37	195	4	0	236	658	2799
	2:45 PM	4	47	59	0	110	39	145	11	0	195	17	56	29	0	102	43	169	3	0	215	622	3007
	3:00 PM	7	53	79	0	139	32	163	15	0	210	27	63	41	0	131	38	205	7	0	250	730	3145
	3:15 PM	7	64	71	0	142	50	188	13	1	252	30	74	39	0	143	47	201	4	0	252	789	3257
	3:30 PM	8	52	65	0	125	68	189	13	0	270	26	74	59	0	159	44	257	11	0	312	866	3327
	3:45 PM	3	64	50	0	117	64	179	8	0	251	32	55	52	0	139	37	207	9	0	253	760	3357
4:00 PM	11	60	53	0	124	59	195	16	0	270	36	102	50	0	188	40	208	12	0	260	842	3501	
4:15 PM	11	67	53	0	131	73	176	15	0	264	33	80	59	0	172	48	237	7	0	292	859	3684	
4:30 PM	9	78	60	0	147	67	174	20	0	261	36	77	77	0	190	40	248	10	0	298	896	3870	
4:45 PM	2	69	47	0	118	54	200	11	0	265	28	101	45	0	174	52	278	17	0	347	904	3813	
5:00 PM	4	66	94	0	164	75	207	21	0	303	55	94	57	0	206	61	277	14	0	352	1025	3701	
5:15 PM	7	91	76	0	174	42	226	16	0	284	31	121	55	0	207	48	319	13	0	380	1045	3345	
5:30 PM	9	77	66	0	152	59	158	26	0	243	21	93	60	0	174	50	214	6	0	270	839	2974	
5:45 PM	4	65	43	0	112	61	159	20	0	240	19	76	52	0	147	62	221	10	0	293	792	2747	
6:00 PM	9	38	37	0	84	60	162	21	0	243	20	61	32	0	113	39	185	5	0	229	669	2456	
6:15 PM	8	83	56	0	147	51	139	35	0	225	14	60	39	0	113	34	153	2	0	189	674		
6:30 PM	4	71	47	0	122	47	112	58	0	217	16	47	29	0	92	38	140	3	0	181	612		
6:45 PM	2	70	29	0	101	33	109	48	0	190	17	33	19	0	69	41	98	2	0	141	501		
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		349	3203	2669	1	6222	2069	8246	875	1	11191	1108	2637	1865	1	5611	2017	8424	272	0	10713	33737	

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

STH 57 - Green Bay Avenue and Good Hope Road

Count Basics			Page 7 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum
	STH 57 - Green Bay Avenue						Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	1	0	1	0	2	1	0	3	0	0	0	0	0	1	4	0	0	5	9	71
	6:15 AM	1	2	0	0	3	0	2	0	0	2	2	0	0	0	2	1	7	1	0	9	16	91
	6:30 AM	0	2	0	0	2	0	6	1	0	7	0	2	0	0	2	2	12	0	0	14	25	124
	6:45 AM	0	1	0	0	1	1	5	0	0	6	0	1	2	0	3	0	11	0	0	11	21	128
	7:00 AM	0	0	0	0	0	0	6	1	0	7	2	3	4	0	9	2	11	0	0	13	29	132
	7:15 AM	0	1	3	0	4	2	8	0	0	10	5	9	3	0	17	7	10	1	0	18	49	152
	7:30 AM	0	1	3	0	4	1	2	2	0	5	2	2	3	0	7	0	13	0	0	13	29	146
	7:45 AM	1	0	1	0	2	2	7	0	0	9	1	1	2	0	4	2	8	0	0	10	25	166
	8:00 AM	2	5	2	0	9	3	9	3	0	15	3	0	0	0	3	5	17	0	0	22	49	179
	8:15 AM	3	4	0	0	7	1	11	0	0	12	1	2	1	0	4	6	10	4	0	20	43	155
	8:30 AM	0	5	2	0	7	1	12	1	0	14	4	2	2	0	8	1	19	0	0	20	49	143
	8:45 AM	1	3	4	0	8	2	6	2	0	10	1	4	1	0	6	1	13	0	0	14	38	127
	9:00 AM	0	4	0	0	4	2	7	0	0	9	1	1	1	0	3	5	3	1	0	9	25	141
	9:15 AM	0	2	2	0	4	1	12	0	0	13	1	3	1	0	5	2	7	0	0	9	31	142
	9:30 AM	0	3	0	0	3	2	10	1	0	13	0	3	4	0	7	0	10	0	0	10	33	147
	9:45 AM	1	3	0	0	4	2	13	1	0	16	1	4	9	0	14	0	15	3	0	18	52	145
Midday Peak Period	10:00 AM	2	4	0	0	6	1	6	1	0	8	2	4	0	0	6	1	5	0	0	6	26	120
	10:15 AM	1	1	2	0	4	2	13	0	0	15	0	7	0	0	7	3	7	0	0	10	36	124
	10:30 AM	0	3	3	0	6	2	7	3	0	12	0	1	1	0	2	0	11	0	0	11	31	121
	10:45 AM	0	2	0	0	2	2	8	0	0	10	0	3	5	0	8	2	5	0	0	7	27	117
	11:00 AM	0	1	3	0	4	0	16	0	0	16	1	2	0	0	3	1	6	0	0	7	30	125
	11:15 AM	0	1	4	0	5	3	9	1	0	13	2	2	1	0	5	2	8	0	0	10	33	124
	11:30 AM	1	2	3	0	6	2	8	1	0	11	0	2	1	0	3	2	4	1	0	7	27	118
	11:45 AM	1	4	4	0	9	0	6	1	0	7	1	2	1	0	4	1	14	0	0	15	35	114
	12:00 PM	1	0	0	0	1	3	10	0	0	13	1	1	2	0	4	2	7	2	0	11	29	111
	12:15 PM	2	0	3	0	5	1	8	0	0	9	0	2	2	0	4	4	4	1	0	9	27	118
	12:30 PM	1	1	1	0	3	2	6	0	0	8	1	3	2	0	6	1	3	2	0	6	23	121
	12:45 PM	2	3	1	0	6	0	12	0	0	12	3	1	2	0	6	3	5	0	0	8	32	125
	1:00 PM	1	1	2	0	4	4	10	1	0	15	0	2	1	0	3	1	13	0	0	14	36	131
	1:15 PM	1	3	1	0	5	0	8	1	0	9	1	0	1	0	2	2	12	0	0	14	30	137
	1:30 PM	0	0	0	0	0	1	7	0	0	8	1	3	4	0	8	1	10	0	0	11	27	144
	1:45 PM	0	2	0	0	2	1	10	3	0	14	1	2	0	0	3	6	11	2	0	19	38	152
PM Peak Period	2:00 PM	3	5	0	0	8	1	15	2	0	18	1	0	1	0	2	2	11	1	0	14	42	151
	2:15 PM	1	4	2	0	7	1	10	0	0	11	0	5	2	0	7	1	11	0	0	12	37	152
	2:30 PM	1	1	1	0	3	1	13	2	0	16	1	5	1	0	7	0	8	1	0	9	35	154
	2:45 PM	0	5	0	0	5	1	11	0	0	12	1	2	2	0	5	3	11	1	0	15	37	143
	3:00 PM	1	8	3	0	12	3	11	1	0	15	1	2	1	0	4	1	11	0	0	12	43	143
	3:15 PM	0	4	0	0	4	1	9	1	0	11	1	6	2	0	9	4	10	1	0	15	39	122
	3:30 PM	0	3	0	0	3	0	9	0	0	9	1	2	5	0	8	1	3	0	0	4	24	111
	3:45 PM	0	3	2	0	5	4	12	1	0	17	1	2	3	0	6	2	7	0	0	9	37	107
	4:00 PM	0	1	1	0	2	1	6	1	0	8	2	3	2	0	7	1	4	0	0	5	22	89
	4:15 PM	1	2	1	0	4	0	17	0	0	17	0	0	1	0	1	0	6	0	0	6	28	93
	4:30 PM	0	4	0	0	4	0	7	0	0	7	1	0	1	0	2	3	4	0	0	7	20	79
	4:45 PM	0	6	0	0	6	1	5	1	0	7	2	1	0	0	3	1	2	0	0	3	19	68
	5:00 PM	0	3	1	0	4	2	8	1	0	11	0	0	3	0	3	2	6	0	0	8	26	59
	5:15 PM	0	0	0	0	0	0	6	0	0	6	0	1	0	0	1	0	6	1	0	7	14	40
	5:30 PM	0	0	1	0	1	1	5	0	0	6	0	1	1	0	2	0	0	0	0	0	9	35
	5:45 PM	0	2	0	0	2	0	3	1	0	4	0	0	2	0	2	0	2	0	0	2	10	32
	6:00 PM	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	1	1	0	0	2	7	27
	6:15 PM	0	1	0	0	1	0	3	1	0	4	0	0	1	0	1	0	3	0	0	3	9	
	6:30 PM	0	2	0	0	2	0	2	0	0	2	0	1	0	0	1	0	1	0	0	1	6	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	2	0	3	0	0	3	5	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals	29	118	57	0	204	61	418	37	0	516	51	107	84	0	242	89	405	23	0	517	1479		

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

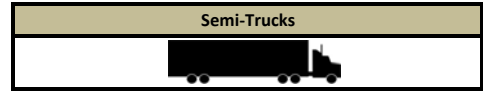
Hourly Time Period Start Time	↓ From North					↶ From East					↑ From South					↷ From West					Total Hourly Volume
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	3	7	9	0	19	8	26	5	0	39	11	12	8	0	31	14	48	1	0	63	152
MD 11:45 AM	5	5	8	0	18	6	30	1	0	37	3	8	7	0	18	8	28	5	0	41	114
PM 4:30 PM	0	13	1	0	14	3	26	2	0	31	3	2	4	0	9	6	18	1	0	25	79

Intersection Traffic Volume Report

15-Minute Semi-Truck Data

STH 57 - Green Bay Avenue and Good Hope Road

Count Basics			Page 8 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



15-Minute Semi-Truck Data

15-Minute Time Period Start Time	From North					From East					From South					From West					15-Min Totals	Hourly Sum		
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	1	3	18
	6:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	0	2	4	22
	6:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	1	3	0	0	4	7	29	
	6:45 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	1	1	0	0	2	4	31	
	7:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	4	0	0	4	7	33	
	7:15 AM	0	1	0	0	1	0	5	0	0	5	1	0	0	0	1	0	4	0	0	4	11	38	
	7:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	1	0	1	1	3	0	0	4	9	41	
	7:45 AM	0	1	0	0	1	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	6	41	
	8:00 AM	0	0	0	0	0	0	6	1	0	7	0	0	0	0	0	0	5	0	0	5	12	45	
	8:15 AM	0	0	0	0	0	0	7	1	0	8	1	0	0	0	1	0	5	0	0	5	14	53	
	8:30 AM	0	0	0	0	0	0	3	1	0	4	0	2	0	0	2	1	2	0	0	3	9	55	
	8:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	1	4	1	0	6	10	64	
9:00 AM	0	0	0	0	0	0	7	1	0	8	0	0	1	0	1	0	11	0	0	11	20	61		
9:15 AM	0	0	0	0	0	0	6	1	0	7	0	0	1	0	1	0	8	0	0	8	16	49		
9:30 AM	0	0	1	0	1	0	6	0	0	6	2	2	0	0	4	0	7	0	0	7	18	40		
9:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	3	0	0	3	7	33		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	3	0	0	3	1	0	0	0	1	0	4	0	0	4	8	37	
	10:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	1	0	1	0	4	0	0	4	7	38	
	10:30 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	0	6	0	0	6	11	45	
	10:45 AM	0	0	0	0	0	0	5	0	0	5	1	1	1	0	3	0	3	0	0	3	11	45	
	11:00 AM	0	0	0	0	0	0	5	0	0	5	0	0	0	0	0	1	3	0	0	4	9	47	
	11:15 AM	0	0	0	0	0	0	9	0	0	9	0	0	0	0	0	0	5	0	0	5	14	48	
	11:30 AM	0	0	1	0	1	0	6	0	0	6	0	0	0	0	0	0	4	0	0	4	11	49	
	11:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	9	0	0	9	13	51	
	12:00 PM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	5	1	0	6	10	46	
	12:15 PM	0	0	0	0	0	1	3	0	0	4	0	2	0	0	2	0	8	1	0	9	15	43	
	12:30 PM	1	0	0	0	1	0	3	1	0	4	0	0	0	0	0	1	7	0	0	8	13	35	
	12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	5	1	0	6	8	34	
	1:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	1	0	1	0	3	0	0	3	7	34	
	1:15 PM	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	7	38	
	1:30 PM	0	0	2	0	2	1	5	0	0	6	0	0	0	0	0	0	4	0	0	4	12	44	
	1:45 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8	45	
PM Peak Period	2:00 PM	0	0	1	0	1	0	3	1	0	4	0	0	0	0	0	0	6	0	0	6	11	50	
	2:15 PM	0	0	2	0	2	0	4	0	0	4	0	1	0	0	1	0	6	0	0	6	13	49	
	2:30 PM	0	1	0	0	1	0	8	0	0	8	0	0	0	0	0	0	4	0	0	4	13	40	
	2:45 PM	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	0	8	0	0	8	13	36	
	3:00 PM	0	0	0	0	0	0	4	2	0	6	0	1	0	0	1	0	3	0	0	3	10	29	
	3:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4	25	
	3:30 PM	0	0	1	0	1	0	3	0	0	3	1	0	0	0	1	0	4	0	0	4	9	26	
	3:45 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	6	19	
	4:00 PM	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	1	2	0	0	3	6	19	
	4:15 PM	0	1	0	0	1	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	5	20	
	4:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	19	
	4:45 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	6	24	
	5:00 PM	0	1	0	0	1	0	1	1	0	2	0	0	1	0	1	0	3	0	0	3	7	21	
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	4	4	15	
	5:30 PM	0	0	1	0	1	0	4	0	0	4	0	0	0	0	0	0	2	0	0	2	7	17	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	2	3	13	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	12	
	6:15 PM	0	0	0	0	0	0	3	1	0	4	0	0	1	0	1	0	1	0	0	1	6		
	6:30 PM	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	3		
	6:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		1	8	14	0	23	2	171	12	0	185	9	10	11	0	30	9	201	4	0	214	452		

Peak Hour Semi-Truck Volume Summary

Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	0	1	0	0	1	0	19	3	0	22	1	0	1	0	2	1	15	0	0	16	41
MD 11:45 AM	1	0	0	0	1	1	10	1	0	12	0	2	2	0	4	1	23	2	0	26	43
PM 4:30 PM	0	3	2	0	5	0	4	0	0	4	0	0	0	0	0	1	9	0	0	10	19

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Data

STH 57 - Green Bay Avenue and Good Hope Road

Count Basics			Page 9 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)



15-Minute Heavy Vehicle Data

15-Minute Time Period Start Time	From North						From East						From South						From West						15-Min Totals	Hourly Sum
	STH 57 - Green Bay Avenue						Good Hope Road						STH 57 - Green Bay Avenue						Good Hope Road							
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total						
AM Peak Period	6:00 AM	0	0	2	0	2	0	3	1	0	4	0	0	0	0	0	2	4	0	0	6	12	89			
	6:15 AM	1	2	0	0	3	0	4	0	0	4	2	0	0	0	2	1	9	1	0	11	20	113			
	6:30 AM	0	2	0	0	2	0	9	1	0	10	0	2	0	0	2	3	15	0	0	18	32	153			
	6:45 AM	0	1	0	0	1	1	7	0	0	8	0	1	2	0	3	1	12	0	0	13	25	159			
	7:00 AM	0	0	0	0	0	0	8	1	0	9	2	3	5	0	10	2	15	0	0	17	36	165			
	7:15 AM	0	2	3	0	5	2	13	0	0	15	6	9	3	0	18	7	14	1	0	22	60	190			
	7:30 AM	0	1	3	0	4	1	6	2	0	9	2	2	4	0	8	1	16	0	0	17	38	187			
	7:45 AM	1	1	1	0	3	2	9	1	0	12	1	1	2	0	4	2	10	0	0	12	31	207			
	8:00 AM	2	5	2	0	9	3	15	4	0	22	3	0	0	0	3	5	22	0	0	27	61	224			
	8:15 AM	3	4	0	0	7	1	18	1	0	20	2	2	1	0	5	6	15	4	0	25	57	208			
Midday Peak Period	8:30 AM	0	5	2	0	7	1	15	2	0	18	4	4	2	0	10	2	21	0	0	23	58	198			
	8:45 AM	1	3	4	0	8	2	10	2	0	14	1	4	1	0	6	2	17	1	0	20	48	191			
	9:00 AM	0	4	0	0	4	2	14	1	0	17	1	1	2	0	4	5	14	1	0	20	45	202			
	9:15 AM	0	2	2	0	4	1	18	1	0	20	1	3	2	0	6	2	15	0	0	17	47	191			
	9:30 AM	0	3	1	0	4	2	16	1	0	19	2	5	4	0	11	0	17	0	0	17	51	187			
	9:45 AM	1	3	0	0	4	2	16	1	0	19	1	4	10	0	15	0	18	3	0	21	59	178			
	10:00 AM	2	4	0	0	6	1	9	1	0	11	3	4	0	0	7	1	9	0	0	10	34	157			
	10:15 AM	1	1	2	0	4	2	15	0	0	17	0	7	1	0	8	3	11	0	0	14	43	162			
	10:30 AM	0	3	3	0	6	2	12	3	0	17	0	1	1	0	2	0	17	0	0	17	42	166			
	10:45 AM	0	2	0	0	2	2	13	0	0	15	1	4	6	0	11	2	8	0	0	10	38	162			
PM Peak Period	11:00 AM	0	1	3	0	4	0	21	0	0	21	1	2	0	0	3	2	9	0	0	11	39	172			
	11:15 AM	0	1	4	0	5	3	18	1	0	22	2	2	1	0	5	2	13	0	0	15	47	172			
	11:30 AM	1	2	4	0	7	2	14	1	0	17	0	2	1	0	3	2	8	1	0	11	38	167			
	11:45 AM	1	4	4	0	9	0	10	1	0	11	1	2	1	0	4	1	23	0	0	24	48	165			
	12:00 PM	1	1	0	0	2	3	13	0	0	16	1	1	2	0	4	2	12	3	0	17	39	157			
	12:15 PM	2	0	3	0	5	2	11	0	0	13	0	4	2	0	6	4	12	2	0	18	42	161			
	12:30 PM	2	1	1	0	4	2	9	1	0	12	1	3	2	0	6	2	10	2	0	14	36	156			
	12:45 PM	2	3	1	0	6	0	13	0	0	13	3	1	3	0	7	3	10	1	0	14	40	159			
	1:00 PM	1	1	2	0	4	4	13	1	0	18	0	2	2	0	4	1	16	0	0	17	43	165			
	1:15 PM	1	3	2	0	6	0	10	1	0	11	2	0	1	0	3	2	15	0	0	17	37	175			
	1:30 PM	0	0	2	0	2	2	12	0	0	14	1	3	4	0	8	1	14	0	0	15	39	188			
	1:45 PM	0	2	0	0	2	1	13	3	0	17	1	2	0	0	3	6	16	2	0	24	46	197			
	2:00 PM	3	5	1	0	9	1	18	3	0	22	1	0	1	0	2	2	17	1	0	20	53	201			
	2:15 PM	1	4	4	0	9	1	14	0	0	15	0	6	2	0	8	1	17	0	0	18	50	201			
	2:30 PM	1	2	1	0	4	1	21	2	0	24	1	5	1	0	7	0	12	1	0	13	48	194			
	2:45 PM	0	5	0	0	5	1	15	0	0	16	1	3	2	0	6	3	19	1	0	23	50	179			
	3:00 PM	1	8	3	0	12	3	15	3	0	21	1	3	1	0	5	1	14	0	0	15	53	172			
	3:15 PM	0	4	0	0	4	1	11	1	0	13	1	6	2	0	9	4	12	1	0	17	43	147			
	3:30 PM	0	3	1	0	4	0	12	0	0	12	2	2	5	0	9	1	7	0	0	8	33	137			
	3:45 PM	0	3	3	0	6	4	13	1	0	18	1	2	3	0	6	2	11	0	0	13	43	126			
	4:00 PM	0	3	2	0	5	1	6	1	0	8	2	3	2	0	7	2	6	0	0	8	28	108			
	4:15 PM	1	3	1	0	5	0	18	0	0	18	0	0	1	0	1	0	9	0	0	9	33	113			
	4:30 PM	0	4	0	0	4	0	9	0	0	9	1	0	1	0	2	3	4	0	0	7	22	98			
	4:45 PM	0	6	0	0	6	1	9	1	0	11	2	1	0	0	3	1	4	0	0	5	25	92			
	5:00 PM	0	4	1	0	5	2	9	2	0	13	0	0	4	0	4	2	9	0	0	11	33	80			
	5:15 PM	0	0	0	0	0	0	6	0	0	6	0	1	0	0	1	0	10	1	0	11	18	55			
	5:30 PM	0	0	2	0	2	1	9	0	0	10	0	1	1	0	2	0	2	0	0	2	16	52			
	5:45 PM	0	2	0	0	2	0	3	1	0	4	1	0	2	0	3	0	4	0	0	4	13	45			
	6:00 PM	0	0	0	0	0	0	4	0	0	4	0	1	0	0	1	1	2	0	0	3	8	39			
	6:15 PM	0	1	0	0	1	0	6	2	0	8	0	0	2	0	2	0	4	0	0	4	15				
	6:30 PM	0	2	1	0	3	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	9				
	6:45 PM	0	0	0	0	0	0	1	0	0	1	1	1	0	0	2	0	4	0	0	4	7				
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					
Totals	30	126	71	0	227	63	589	49	0	701	60	117	95	0	272	98	606	27	0	731	1931					

Peak Hour Heavy Vehicle Volume Summary

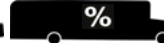
Hourly Time Period Start Time	From North ↓					From East ←					From South ↑					From West →					Total Hourly Volume
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	3	9	9	0	21	8	43	7	0	58	12	12	9	0	33	15	62	1	0	78	190
MD 11:45 AM	6	6	8	0	20	7	43	2	0	52	3	10	7	0	20	9	57	7	0	73	165
PM 4:30 PM	0	14	1	0	15	3	33	3	0	39	3	2	5	0	10	6	27	1	0	34	98

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Percentages

STH 57 - Green Bay Avenue and Good Hope Road

Count Basics			Page 10 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

%	Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)		
%		%	

15-Minute Heavy Vehicle Percentages

15-Minute Time Period Start Time	From North					From East					From South					From West					Total Heavy Vehicle Percent	Hourly Heavy Vehicle Percent	
	STH 57 - Green Bay Avenue					Good Hope Road					STH 57 - Green Bay Avenue					Good Hope Road							
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0.0	0.0	8.7	0.0	4.7	0.0	3.1	20.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	22.2	4.7	0.0	0.0	6.3	4.1	4.3
	6:15 AM	33.3	5.4	0.0	0.0	3.7	0.0	2.8	0.0	0.0	2.1	22.2	0.0	0.0	0.0	4.8	5.9	7.4	50.0	0.0	7.9	4.4	
	6:30 AM	0.0	3.5	0.0	0.0	1.7	0.0	4.5	12.5	0.0	3.9	0.0	6.7	0.0	0.0	3.2	8.3	8.7	0.0	0.0	8.6	4.9	
	6:45 AM	0.0	1.4	0.0	0.0	0.7	2.3	3.0	0.0	0.0	2.7	0.0	3.8	7.1	0.0	4.2	2.3	7.9	0.0	0.0	6.6	3.6	
	7:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	3.7	8.3	0.0	3.4	13.3	8.8	17.2	0.0	12.8	3.4	8.5	0.0	0.0	7.1	4.7	
	7:15 AM	0.0	0.0	1.4	3.4	0.0	2.1	5.4	5.4	0.0	0.0	5.2	31.6	17.0	6.8	0.0	15.5	12.5	8.1	33.3	0.0	9.5	6.9
	7:30 AM	0.0	0.6	3.2	0.0	1.4	3.2	2.4	10.5	0.0	3.0	10.5	3.5	8.9	0.0	6.6	1.6	8.6	0.0	0.0	6.8	4.0	
	7:45 AM	5.6	0.8	1.6	0.0	1.5	4.3	3.1	5.0	0.0	3.3	3.8	1.4	4.3	0.0	2.8	3.5	6.4	0.0	0.0	5.6	3.4	
	8:00 AM	18.2	3.4	3.3	0.0	4.1	12.0	5.6	15.4	0.0	6.9	15.8	0.0	0.0	0.0	3.1	7.4	11.1	0.0	0.0	10.0	6.7	
	8:15 AM	27.3	3.3	0.0	0.0	3.7	4.2	7.7	5.9	0.0	7.3	11.8	4.8	2.2	0.0	4.8	10.7	9.1	16.7	0.0	10.2	7.0	
	8:30 AM	0.0	7.4	3.4	0.0	5.1	3.1	7.8	7.4	0.0	7.2	13.3	11.4	4.7	0.0	9.3	4.2	10.4	0.0	0.0	9.2	7.8	
	8:45 AM	10.0	4.3	7.4	0.0	6.0	6.2	5.5	9.1	0.0	5.9	5.0	11.8	2.3	0.0	6.2	4.8	9.6	16.7	0.0	8.8	6.9	
9:00 AM	0.0	9.1	0.0	0.0	3.8	9.5	9.7	5.3	0.0	9.2	6.2	2.1	7.4	0.0	4.4	11.1	9.5	33.3	0.0	10.3	7.8		
9:15 AM	0.0	4.7	4.4	0.0	4.2	3.7	12.6	7.1	0.0	10.9	10.0	8.3	8.3	0.0	8.6	6.7	9.3	0.0	0.0	8.8	8.6		
9:30 AM	0.0	6.0	2.4	0.0	3.9	7.7	10.6	5.9	0.0	9.8	11.8	14.3	12.9	0.0	13.3	0.0	13.3	0.0	0.0	11.3	9.6		
9:45 AM	16.7	6.8	0.0	0.0	4.7	11.8	10.9	6.2	0.0	10.6	6.7	8.3	28.6	0.0	15.3	0.0	13.4	37.5	0.0	12.7	11.2		
Midday Peak Period	10:00 AM	22.2	9.1	0.0	0.0	7.4	3.6	7.6	6.7	0.0	6.8	11.5	14.8	0.0	0.0	9.1	3.6	8.3	0.0	0.0	7.1	7.4	
	10:15 AM	7.1	2.4	4.7	0.0	4.0	6.7	12.0	0.0	0.0	10.1	0.0	13.7	4.2	0.0	7.7	9.7	9.2	0.0	0.0	9.2	8.2	
	10:30 AM	0.0	7.1	5.9	0.0	6.3	8.0	10.6	20.0	0.0	11.1	0.0	2.8	2.6	0.0	2.3	0.0	12.3	0.0	0.0	9.8	8.2	
	10:45 AM	0.0	5.3	0.0	0.0	2.5	6.7	11.1	0.0	0.0	9.4	4.2	8.5	15.4	0.0	10.0	5.9	5.3	0.0	0.0	5.4	7.1	
	11:00 AM	0.0	3.0	6.2	0.0	4.7	0.0	14.9	0.0	0.0	11.7	4.2	5.0	0.0	0.0	3.4	5.3	6.7	0.0	0.0	6.1	7.3	
	11:15 AM	0.0	2.0	7.8	0.0	4.8	10.3	13.0	5.9	0.0	12.0	10.5	5.7	2.9	0.0	5.7	5.6	9.7	0.0	0.0	8.6	8.5	
	11:30 AM	20.0	4.5	9.1	0.0	7.5	5.3	7.8	10.0	0.0	7.5	0.0	4.8	3.8	0.0	3.2	6.7	6.3	9.1	0.0	6.6	6.5	
	11:45 AM	12.5	7.1	9.8	0.0	8.6	0.0	6.3	5.0	0.0	5.0	3.6	5.0	2.6	0.0	3.8	3.0	13.8	0.0	0.0	11.7	7.6	
	12:00 PM	14.3	2.3	0.0	0.0	2.2	6.2	9.4	0.0	0.0	7.9	3.6	2.6	7.4	0.0	4.3	6.1	9.4	30.0	0.0	9.9	7.0	
	12:15 PM	33.3	0.0	6.1	0.0	4.6	5.7	7.3	0.0	0.0	6.4	0.0	7.7	7.4	0.0	5.9	8.9	9.3	66.7	0.0	10.2	7.1	
	12:30 PM	22.2	2.8	2.4	0.0	4.6	6.1	5.8	6.7	0.0	5.9	5.9	7.1	4.9	0.0	6.0	5.4	6.5	50.0	0.0	7.1	6.1	
	12:45 PM	22.2	6.4	3.7	0.0	7.2	0.0	7.7	0.0	0.0	6.1	9.7	1.8	12.5	0.0	6.4	6.8	7.4	20.0	0.0	7.6	6.8	
1:00 PM	14.3	1.7	5.0	0.0	3.8	9.1	11.0	5.6	0.0	10.0	0.0	4.8	4.7	0.0	4.1	2.6	12.7	0.0	0.0	10.1	7.8		
1:15 PM	12.5	10.7	4.9	0.0	7.8	0.0	7.4	5.3	0.0	5.6	8.3	0.0	3.6	0.0	3.3	6.5	10.6	0.0	0.0	9.6	6.8		
1:30 PM	0.0	0.0	4.0	0.0	1.8	5.3	7.8	0.0	0.0	6.8	5.3	6.4	13.3	0.0	8.3	3.4	9.5	0.0	0.0	8.3	6.6		
1:45 PM	0.0	4.0	0.0	0.0	2.2	3.7	9.6	20.0	0.0	9.6	3.8	5.0	0.0	0.0	3.0	17.1	10.8	28.6	0.0	12.6	8.2		
PM Peak Period	2:00 PM	33.3	12.8	2.9	0.0	10.8	2.9	14.0	27.3	0.0	12.6	6.7	0.0	2.7	0.0	2.2	6.7	9.0	33.3	0.0	9.0	9.3	
	2:15 PM	11.1	6.7	6.2	0.0	6.8	2.1	9.1	0.0	0.0	7.0	0.0	10.2	5.1	0.0	6.6	2.4	10.1	0.0	0.0	8.2	7.2	
	2:30 PM	11.1	3.4	2.1	0.0	3.5	2.0	14.5	14.3	0.0	11.4	4.8	6.7	2.9	0.0	5.3	0.0	5.8	20.0	0.0	5.2	6.8	
	2:45 PM	0.0	9.6	0.0	0.0	4.3	2.5	9.4	0.0	0.0	7.6	5.6	5.1	6.5	0.0	5.6	6.5	10.1	25.0	0.0	9.7	7.4	
	3:00 PM	12.5	13.1	3.7	0.0	7.9	8.6	8.4	16.7	0.0	9.1	3.6	4.5	2.4	0.0	3.7	2.6	6.4	0.0	0.0	5.7	6.8	
	3:15 PM	0.0	5.9	0.0	0.0	2.7	2.0	5.5	7.1	0.0	4.9	3.2	7.5	4.9	0.0	5.9	7.8	5.6	20.0	0.0	6.3	5.2	
	3:30 PM	0.0	5.5	1.5	0.0	3.1	0.0	6.0	0.0	0.0	4.3	7.1	2.6	7.8	0.0	5.4	2.2	2.7	0.0	0.0	2.5	3.7	
	3:45 PM	0.0	4.5	5.7	0.0	4.9	5.9	6.8	11.1	0.0	6.7	3.0	3.5	5.5	0.0	4.1	5.1	5.0	0.0	0.0	4.9	5.4	
	4:00 PM	0.0	4.8	3.6	0.0	3.9	1.7	3.0	5.9	0.0	2.9	5.3	2.9	3.8	0.0	3.6	4.8	2.8	0.0	0.0	3.0	3.2	
	4:15 PM	8.3	4.3	1.9	0.0	3.7	0.0	9.3	0.0	0.0	6.4	0.0	0.0	1.7	0.0	0.6	0.0	3.7	0.0	0.0	3.0	3.7	
	4:30 PM	0.0	4.9	0.0	0.0	2.6	0.0	4.9	0.0	0.0	3.3	2.7	0.0	1.3	0.0	1.0	7.0	1.6	0.0	0.0	2.3	2.4	
	4:45 PM	0.0	8.0	0.0	0.0	4.8	1.8	4.3	8.3	0.0	4.0	6.7	1.0	0.0	0.0	1.7	1.9	1.4	0.0	0.0	1.4	2.7	
	5:00 PM	0.0	5.7	1.1	0.0	3.0	2.6	4.2	8.7	0.0	4.1	0.0	0.0	6.6	0.0	1.9	3.2	3.1	0.0	0.0	3.0	3.1	
	5:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.1	0.0	0.8	0.0	0.0	0.5	0.0	3.0	7.1	0.0	2.8	1.7	
	5:30 PM	0.0	0.0	2.9	0.0	1.3	1.7	5.4	0.0	0.0	4.0	0.0	1.1	1.6	0.0	1.1	0.0	0.9	0.0	0.0	0.7	1.9	
	5:45 PM	0.0	3.0	0.0	0.0	1.8	0.0	1.9	4.8	0.0	1.6	5.0	0.0	3.7	0.0	2.0	0.0	1.8	0.0	0.0	1.3	1.6	
	6:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	1.6	0.0	1.6	0.0	0.0	0.9	2.5	1.1	0.0	0.0	1.3	1.2	
	6:15 PM	0.0	1.2	0.0	0.0	0.7	0.0	4.1	5.4	0.0	3.4	0.0	0.0	4.9	0.0	1.7	0.0	2.5	0.0	0.0	2.1	2.2	
	6:30 PM	0.0	2.7	2.1	0.0	2.4	0.0	2.6	0.0	0.0	1.4	0.0	2.1	0.0	0.0	1.1	0.0	1.4	0.0	0.0	1.1	1.4	
	6:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.5	5.6	2.9	0.0	0.0	2.8	0.0	3.9	0.0	0.0	2.8	1.4	
	7:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
	7:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8:00 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:15 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:30 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
8:45 PM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Intersection Traffic Volume Report

15-Minute Pedestrian and Bicyclist Data

STH 57 - Green Bay Avenue and Good Hope Road

Count Basics			Page 11 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



15-Minute Pedestrian and Bicyclist Data

15-Minute Time Period		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach			15-Min Totals	Hourly Sum
Time Period	Start Time	STH 57 - Green Bay Avenue			Good Hope Road			STH 57 - Green Bay Avenue			Good Hope Road				
		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total		
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	7:00 AM	0	0	0	0	0	0	1	0	1	0	0	0	1	4
	7:15 AM	0	0	0	1	0	1	1	0	1	1	0	1	3	3
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	9:15 AM	0	0	0	0	0	0	1	0	1	0	0	0	1	2
	9:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	11:15 AM	2	0	2	2	0	2	0	0	0	0	0	0	4	11
	11:30 AM	1	0	1	1	0	1	0	0	0	1	0	1	3	7
	11:45 AM	0	0	0	0	0	0	2	0	2	2	0	2	4	4
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	1:45 PM	0	0	0	0	0	0	2	0	2	2	0	2	4	5
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	3:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	3:15 PM	0	1	1	0	1	1	0	0	0	0	0	0	2	2
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	4:15 PM	0	0	0	2	0	2	0	0	0	0	0	0	2	3
	4:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	1	1
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	5:45 PM	0	0	0	1	0	1	0	0	0	0	0	0	1	1
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		3	1	4	7	1	8	7	0	7	9	0	9	28	

Special Pedestrians

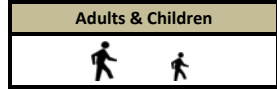
Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementary School Age Children	x					
Visually Impaired (white cane/helper dog)	x					
Elderly/Disabled (except wheelchairs)	x					
Wheelchairs/Electric Scooters	x					
Other (None)	x					

Intersection Traffic Volume Report

Count Basics			Page 12 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

15-Minute Adult & Children Count (Manual Entry)

STH 57 - Green Bay Avenue and Good Hope Road



15-Minute Adult & Children Pedestrian Data

15-Minute Time Period Start Time		Crossing 			Crossing 			Crossing 			Crossing 			15-Min Totals	Hourly Sum
		North Approach			East Approach			South Approach			West Approach				
		STH 57 - Green Bay Avenue			Good Hope Road			STH 57 - Green Bay Avenue			Good Hope Road				
		Adults	Children	Total	Adults	Children	Total	Adults	Children	Total	Adults	Children	Total		
AM Peak Period	6:00 AM	0		0	0		0	0		0	0		0	0	0
	6:15 AM	0		0	0		0	0		0	0		0	0	1
	6:30 AM	0		0	0		0	0		0	0		0	0	4
	6:45 AM	0		0	0		0	0		0	0		0	0	4
	7:00 AM	0		0	0		0	1		1	0		0	1	4
	7:15 AM	0		0	1		1	1		1	1		1	3	3
	7:30 AM	0		0	0		0	0		0	0		0	0	0
	7:45 AM	0		0	0		0	0		0	0		0	0	0
	8:00 AM	0		0	0		0	0		0	0		0	0	0
	8:15 AM	0		0	0		0	0		0	0		0	0	0
	8:30 AM	0		0	0		0	0		0	0		0	0	1
	8:45 AM	0		0	0		0	0		0	0		0	0	2
	9:00 AM	0		0	0		0	0		0	0		0	0	2
	9:15 AM	0		0	0		0	1		1	0		0	1	2
	9:30 AM	0		0	0		0	0		0	1		1	1	1
	9:45 AM	0		0	0		0	0		0	0		0	0	0
Midday Peak Period	10:00 AM	0		0	0		0	0		0	0		0	0	0
	10:15 AM	0		0	0		0	0		0	0		0	0	0
	10:30 AM	0		0	0		0	0		0	0		0	0	4
	10:45 AM	0		0	0		0	0		0	0		0	0	7
	11:00 AM	0		0	0		0	0		0	0		0	0	11
	11:15 AM	2		2	2		2	0		0	0		0	4	11
	11:30 AM	1		1	1		1	0		0	1		1	3	7
	11:45 AM	0		0	0		0	2		2	2		2	4	4
	12:00 PM	0		0	0		0	0		0	0		0	0	0
	12:15 PM	0		0	0		0	0		0	0		0	0	0
	12:30 PM	0		0	0		0	0		0	0		0	0	0
	12:45 PM	0		0	0		0	0		0	0		0	0	0
	1:00 PM	0		0	0		0	0		0	0		0	0	0
	1:15 PM	0		0	0		0	0		0	0		0	0	4
	1:30 PM	0		0	0		0	0		0	0		0	0	5
	1:45 PM	0		0	0		0	2		2	2		2	4	5
PM Peak Period	2:00 PM	0		0	0		0	0		0	1		1	1	1
	2:15 PM	0		0	0		0	0		0	0		0	0	0
	2:30 PM	0		0	0		0	0		0	0		0	0	0
	2:45 PM	0		0	0		0	0		0	0		0	0	0
	3:00 PM	0		0	0		0	0		0	0		0	0	0
	3:15 PM	0		0	0		0	0		0	0		0	0	0
	3:30 PM	0		0	0		0	0		0	0		0	0	2
	3:45 PM	0		0	0		0	0		0	0		0	0	3
	4:00 PM	0		0	0		0	0		0	0		0	0	3
	4:15 PM	0		0	2		2	0		0	0		0	2	3
	4:30 PM	0		0	0		0	0		0	1		1	1	1
	4:45 PM	0		0	0		0	0		0	0		0	0	0
	5:00 PM	0		0	0		0	0		0	0		0	0	1
	5:15 PM	0		0	0		0	0		0	0		0	0	1
	5:30 PM	0		0	0		0	0		0	0		0	0	1
	5:45 PM	0		0	1		1	0		0	0		0	1	1
	6:00 PM	0		0	0		0	0		0	0		0	0	0
	6:15 PM	0		0	0		0	0		0	0		0	0	0
	6:30 PM	0		0	0		0	0		0	0		0	0	0
	6:45 PM	0		0	0		0	0		0	0		0	0	0
	7:00 PM	0		0	0		0	0		0	0		0	0	0
	7:15 PM	0		0	0		0	0		0	0		0	0	0
	7:30 PM	0		0	0		0	0		0	0		0	0	0
	7:45 PM	0		0	0		0	0		0	0		0	0	0
	8:00 PM	0		0	0		0	0		0	0		0	0	0
	8:15 PM	0		0	0		0	0		0	0		0	0	0
	8:30 PM	0		0	0		0	0		0	0		0	0	0
	8:45 PM	0		0	0		0	0		0	0		0	0	0
	9:00 PM	0		0	0		0	0		0	0		0	0	0
	9:15 PM	0		0	0		0	0		0	0		0	0	0
	9:30 PM	0		0	0		0	0		0	0		0	0	0
	9:45 PM	0		0	0		0	0		0	0		0	0	0
Totals		3	0	3	7	0	7	7	0	7	9	0	9	26	

Count Basics		Page 13 of 13
Start Date: #REF!	#REF!	Schools in Session
Total Number of Hours Counted: 13	Non-Holiday	No Special Events

Bicyclists

15-Minute Bicycle Data

Peak Hour Bicycle Turning Movement Volume Summary

[illegible]

Intersection Traffic Volume Report

Count Basics		Version 2013.14.1	Page 1 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



Base Information, Observed (13) Hour and Estimated (24) Hour Volume Summaries

Intersection of: **Range Line Road and STH 57 - Green Bay Road**

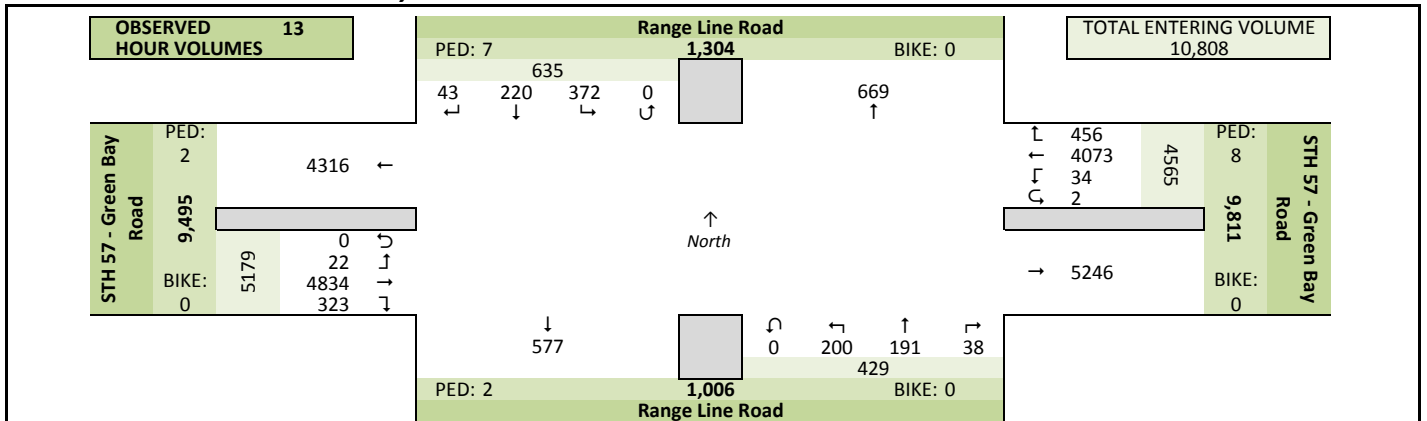
Site Information

Municipality	City of Glendale		
County	Milwaukee	WisDOT Region	SE
Traffic Control	Partial Stop Control		
Roadway Names	North Direction		↑
North Leg	Range Line Road		
East Leg	STH 57 - Green Bay Road		
South Leg	Range Line Road		
West Leg	STH 57 - Green Bay Road		
Special Considerations			
Schools	In Session		
Holidays	None		
Special Events	None		
Special Pedestrians Observed			
	Pre-school children	None	
	Elementry school age children	None	
	Visually impaired (white cane/helper dog)	None	
	Elderly/disabled (except wheelchairs)	None	
	Wheelchairs/electric scooters	None	
	Other (describe)	None	None

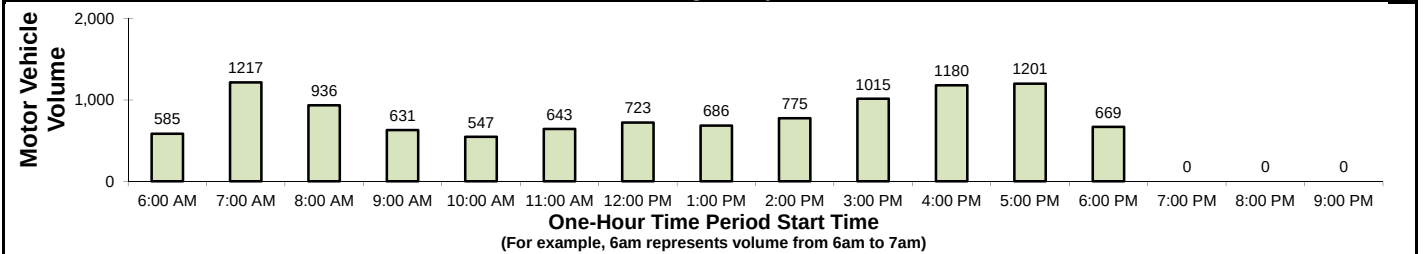
Count Information

Hrs Counted: 6:00 AM-7:00 PM				
1st Day of Count		Tuesday, January 15, 2019		Weather
AM Peak Period		Tuesday, January 15, 2019		Clear & Dry
Midday Peak Period		Tuesday, January 15, 2019		Clear & Dry
PM Peak Period		Tuesday, January 15, 2019		Clear & Dry
Calculated Peak Hours				
	AM	7:15-8:15am	MD	12:15-1:15pm
	PM	4:45-5:45pm		
Peak Hours Selected for Analysis				
	AM	7:15-8:15am	MD	12:15-1:15pm
	PM	4:30-5:30pm		
Daily/Seasonal Adjustment Group		(2) Urban Arterials & Collectors		
Count Expansion Group		(2) Urban Arterials & Collectors		
Daily/Seasonal Adjustment Factor		1	Count Expansion Factor	1.237
Company Name		TADI, Inc.		Manual Adj. 1.000
Observers	AM Peak Period		Amy Scheuerlein	
	Midday Peak Period		Sarah Schmandt	
	PM Peak Period		Wendy Picard	
Comments	2017 DOT Seasonal Factors			

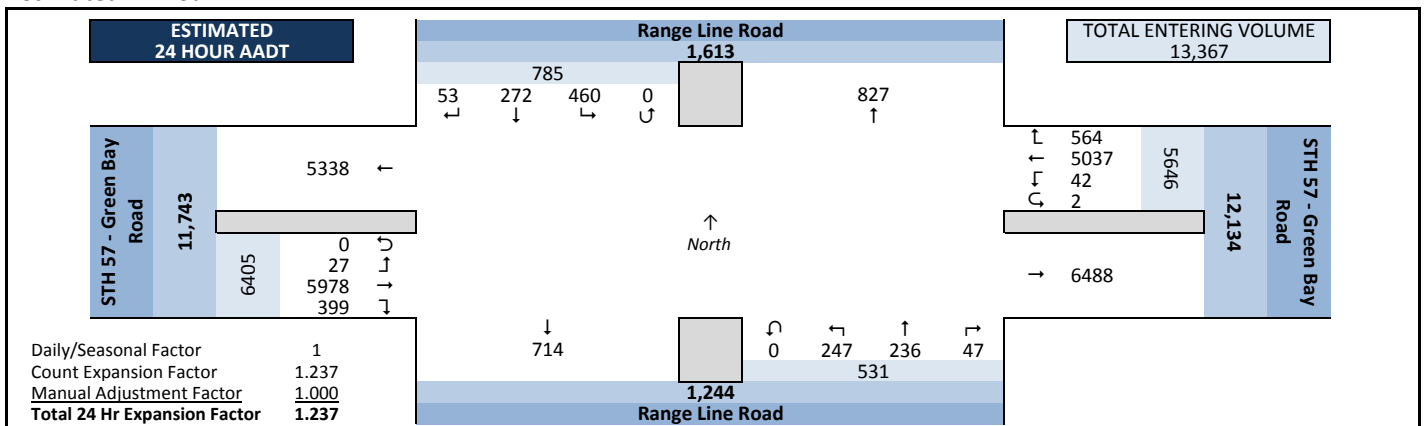
Observed 13 Hour Volume Summary



Total Entering Hourly Volume



Estimated 24 Hour AADT



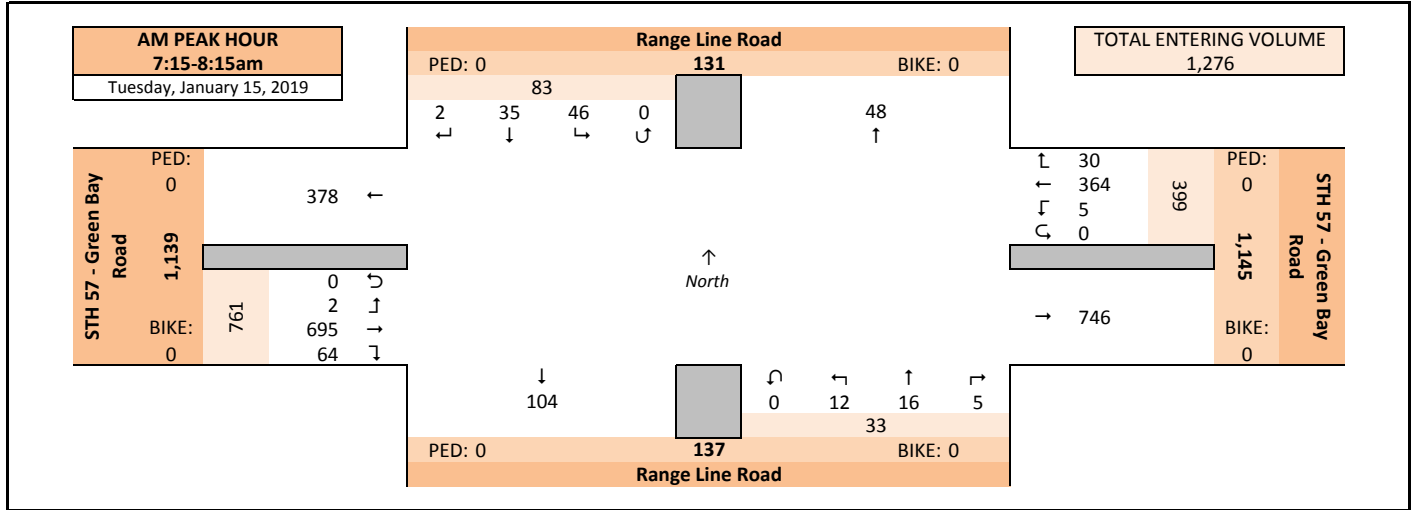
Intersection Traffic Volume Report

Peak Hour Volume Graphical Summary

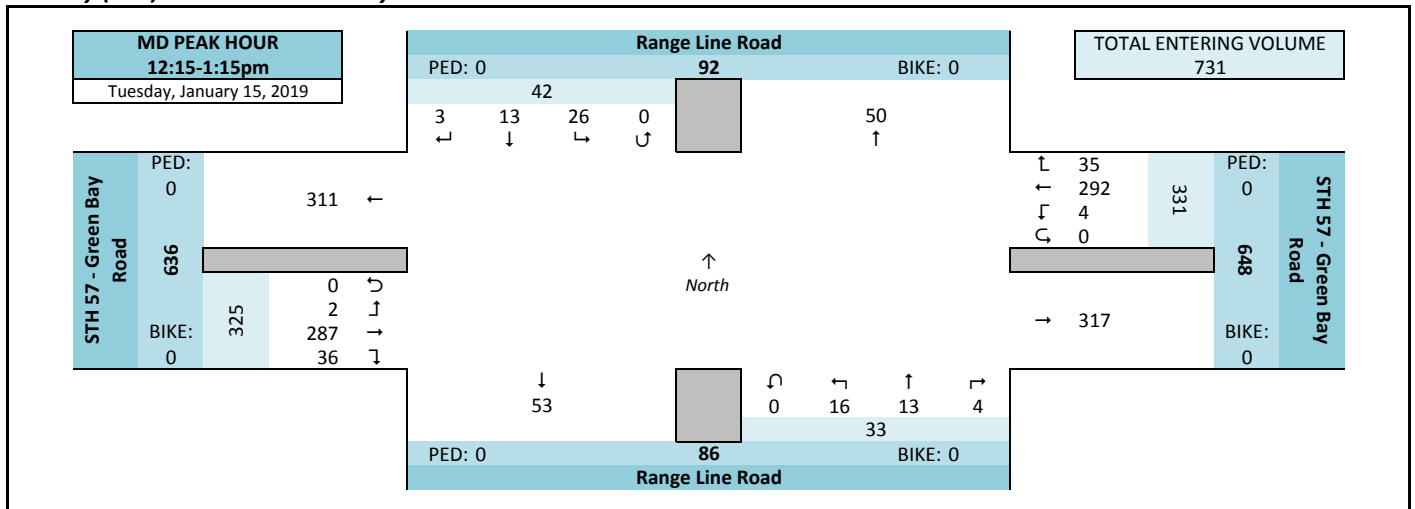
Range Line Road and STH 57 - Green Bay Road

AM Peak Hour Summary

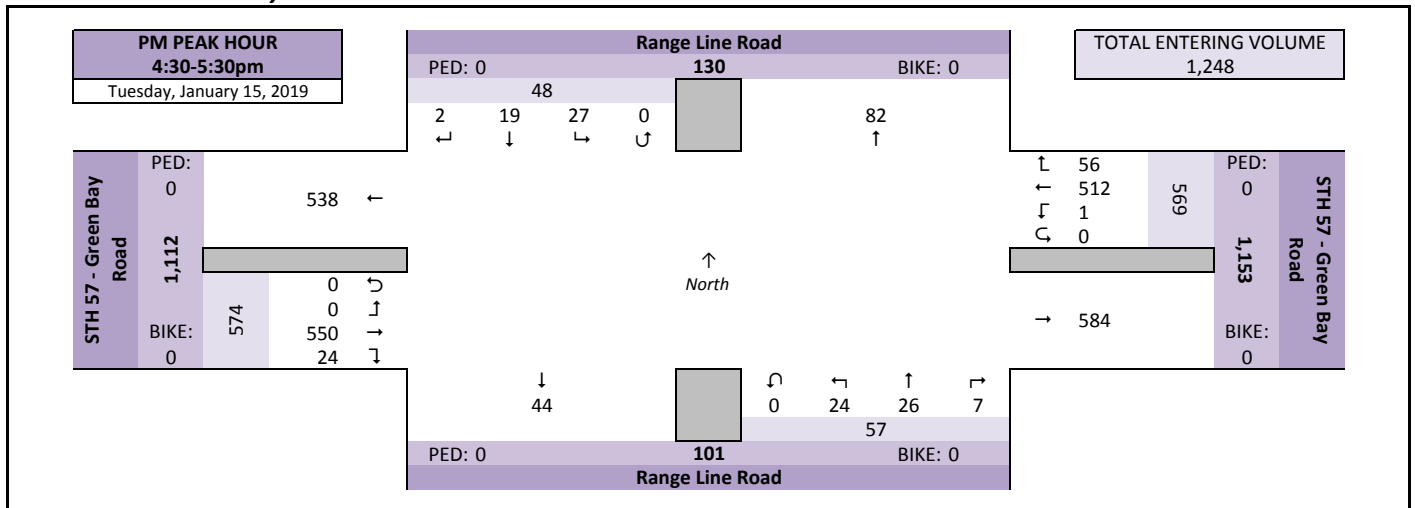
Count Basics			Page 2 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events



Midday (MD) Peak Hour Summary



PM Peak Hour Summary



Range Line Road and STH 57 - Green Bay Road

Count Basics		Page 3 of 13
Start Date: #REF!	#REF!	Schools in Session
Total Number of Hours Counted: 13	Non-Holiday	No Special Events



Peak Hour Volumes, Truck Percentages, and PHFs

Tuesday, January 15, 2019

Tuesday, January 15, 2019		 From North					 From East					 From South					 From West					Totals
AM Peak Hour		Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road					
Start Time		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
7:15 AM		0	5	4	0	9	3	95	1	0	99	1	2	3	0	6	12	181	0	0	193	307
7:30 AM		0	14	12	0	26	11	83	2	0	96	1	6	1	0	8	18	195	2	0	215	345
7:45 AM		2	11	15	0	28	12	91	0	0	103	3	4	5	0	12	20	180	0	0	200	343
8:00 AM		0	5	15	0	20	4	95	2	0	101	0	4	3	0	7	14	139	0	0	153	281
Peak Hour Volume		2	35	46	0	83	30	364	5	0	399	5	16	12	0	33	64	695	2	0	761	1276
Rounded Hourly Volume		0	35	45	0	80	30	365	5	0	400	5	15	10	0	30	65	695	0	0	760	1270
% Single Unit Trucks		50.0	11.4	2.2	0.0	7.2	10.0	1.6	0.0	0.0	2.3	60.0	6.2	0.0	0.0	12.1	1.6	1.4	0.0	0.0	1.4	2.4
% Heavy Trucks		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.4	0.2
% Trucks (Total)		50.0	11.4	2.2	0.0	7.2	10.0	1.6	0.0	0.0	2.3	60.0	6.2	0.0	0.0	12.1	1.6	1.9	0.0	0.0	1.8	2.6
Peak Hour Factor (PHF)		0.25	0.62	0.77	0.00	0.74	0.62	0.96	0.62	0.00	0.97	0.42	0.67	0.60	0.00	0.69	0.80	0.89	0.25	0.00	0.88	0.92

Tuesday, January 15, 2019

Tuesday, January 15, 2019		↓ From North					← From East					↑ From South					→ From West					
Midday (MD) Peak Hour	MD Peak Hour	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road					Totals
	Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
	12:15 PM	1	0	10	0	11	14	77	1	0	92	2	5	6	0	13	6	75	0	0	81	197
	12:30 PM	0	5	5	0	10	7	64	0	0	71	2	2	3	0	7	4	77	1	0	82	170
	12:45 PM	0	4	8	0	12	8	75	0	0	83	0	2	3	0	5	14	65	1	0	80	180
	1:00 PM	2	4	3	0	9	6	76	3	0	85	0	4	4	0	8	12	70	0	0	82	184
	Peak Hour Volume	3	13	26	0	42	35	292	4	0	331	4	13	16	0	33	36	287	2	0	325	731
	Rounded Hourly Volume	5	15	25	0	45	35	290	5	0	330	5	15	15	0	35	35	285	0	0	320	730
	% Single Unit Trucks	0.0	0.0	7.7	0.0	4.8	0.0	2.4	25.0	0.0	2.4	0.0	7.7	0.0	0.0	3.0	2.8	4.2	50.0	0.0	4.3	3.4
	% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.7	25.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.6	0.7
% Trucks (Total)	0.0	0.0	7.7	0.0	4.8	0.0	3.1	50.0	0.0	3.3	0.0	7.7	0.0	0.0	3.0	2.8	4.9	50.0	0.0	4.9	4.1	
Peak Hour Factor (PHF)	0.37	0.65	0.65	0.00	0.87	0.62	0.95	0.33	0.00	0.90	0.50	0.65	0.67	0.00	0.63	0.64	0.93	0.50	0.00	0.99	0.95	

Tuesday, January 15, 2019

Tuesday, January 15, 2019		↓ From North					← From East					↑ From South					→ From West					Totals
PM Peak Hour Start Time	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
4:30 PM	0	9	6	0	15	12	124	0	0	136	0	4	7	0	11	4	121	0	0	125	287	
4:45 PM	1	2	8	0	11	13	131	0	0	144	0	7	2	0	9	5	147	0	0	152	316	
5:00 PM	1	1	7	0	9	13	141	1	0	155	5	9	10	0	24	6	144	0	0	150	338	
5:15 PM	0	7	6	0	13	18	116	0	0	134	2	6	5	0	13	9	138	0	0	147	307	
Peak Hour Volume	2	19	27	0	48	56	512	1	0	569	7	26	24	0	57	24	550	0	0	574	1248	
Rounded Hourly Volume	0	20	25	0	45	55	510	0	0	565	5	25	25	0	55	25	550	0	0	575	1240	
% Single Unit Trucks	0.0	10.5	0.0	0.0	4.2	1.8	1.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.9	1.0	
% Heavy Trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.4	
% Trucks (Total)	0.0	10.5	0.0	0.0	4.2	1.8	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.2	1.4	
Peak Hour Factor (PHF)	0.50	0.53	0.84	0.00	0.80	0.78	0.91	0.25	0.00	0.92	0.35	0.72	0.60	0.00	0.59	0.67	0.94	0.00	0.00	0.94	0.92	

Peak Hour Pedestrian and Bicyclist Volumes

[illegible]

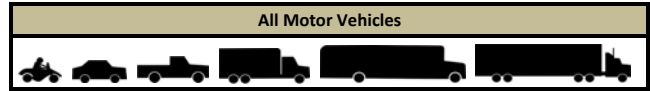
Intersection Traffic Volume Report

Hourly Volume Summary - Motor Vehicle Data

Range Line Road and STH 57 - Green Bay Road

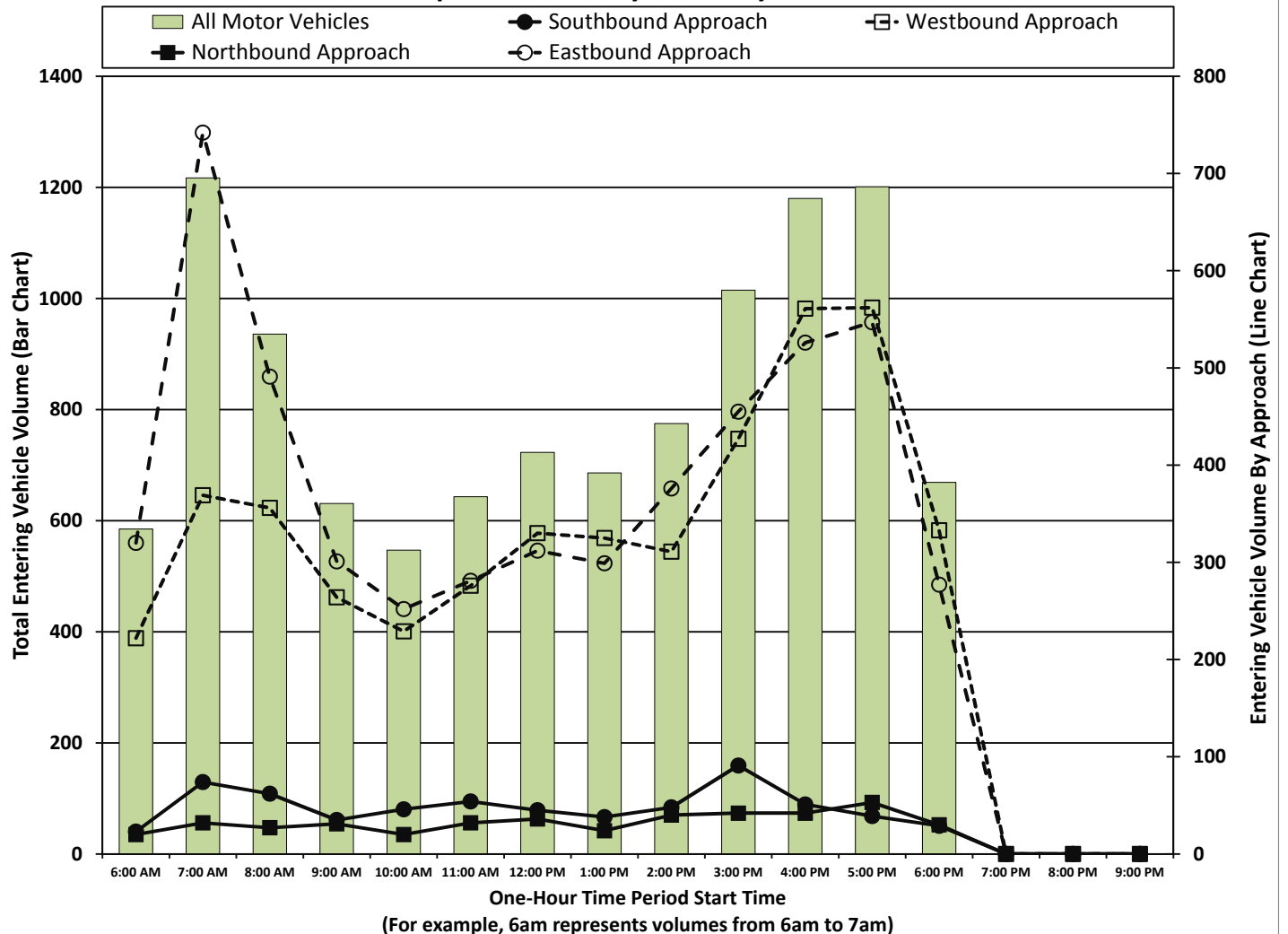
One-Hour Motor Vehicle Data

Count Basics			Page 4 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



One-Hour Time Period Start Time	From North					From East					From South					From West					Total Vehicle Volume	Directional Volume Totals		
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM	6:00 AM	1	9	13	0	23	39	180	3	0	222	0	17	3	0	20	8	306	6	0	320	585	542	43
	7:00 AM	2	33	39	0	74	31	333	5	0	369	7	14	11	0	32	56	683	3	0	742	1217	1111	106
	8:00 AM	0	18	44	0	62	25	327	4	0	356	4	12	11	0	27	34	456	1	0	491	936	847	89
	9:00 AM	4	16	15	0	35	27	235	2	0	264	1	12	18	0	31	21	278	2	0	301	631	565	66
MD	10:00 AM	6	13	27	0	46	29	199	1	0	229	0	7	13	0	20	17	234	1	0	252	547	481	66
	11:00 AM	5	21	28	0	54	27	245	4	0	276	2	17	13	0	32	22	259	0	0	281	643	557	86
	12:00 PM	2	12	31	0	45	37	290	2	1	330	4	11	21	0	36	26	284	2	0	312	723	642	81
	1:00 PM	6	11	21	0	38	33	288	4	0	325	2	9	13	0	24	26	271	2	0	299	686	624	62
PM	2:00 PM	3	13	32	0	48	30	278	2	1	311	3	16	21	0	40	23	353	0	0	376	775	687	88
	3:00 PM	10	27	54	0	91	31	394	2	0	427	4	24	14	0	42	24	429	2	0	455	1015	882	133
	4:00 PM	2	21	28	0	51	48	511	2	0	561	2	20	20	0	42	23	501	2	0	526	1180	1087	93
	5:00 PM	2	16	21	0	39	57	503	2	0	562	7	25	21	0	53	30	516	1	0	547	1201	1109	92
	6:00 PM	0	10	19	0	29	42	290	1	0	333	2	7	21	0	30	13	264	0	0	277	669	610	59
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Totals	43	220	372	0	635	456	4073	34	2	4565	38	191	200	0	429	323	4834	22	0	5179	10808	9744	1064

Graphical Summary of Hourly Volumes



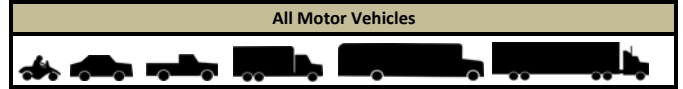
Intersection Traffic Volume Report

15-Minute Motor Vehicle Data

Range Line Road and STH 57 - Green Bay Road

15-Minute Motor Vehicle Data

Count Basics			Page 5 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



15-Minute Time Period Start Time	From North					From East					From South					From West					15-Min Totals	Hourly Sum	PHF	
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road								
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	1	2	1	0	4	4	29	0	0	33	0	2	0	0	2	1	37	1	0	39	78	585	0.69
	6:15 AM	0	2	0	0	2	13	49	0	0	62	0	0	3	0	3	3	65	1	0	69	136	729	0.82
	6:30 AM	0	3	4	0	7	16	42	1	0	59	0	8	0	0	8	0	82	3	0	85	159	900	0.73
	6:45 AM	0	2	8	0	10	6	60	2	0	68	0	7	0	0	7	4	122	1	0	127	212	1086	0.79
	7:00 AM	0	3	8	0	11	5	64	2	0	71	2	2	2	0	6	6	127	1	0	134	222	1217	0.88
	7:15 AM	0	5	4	0	9	3	95	1	0	99	1	2	3	0	6	12	181	0	0	193	307	1276	0.92
	7:30 AM	0	14	12	0	26	11	83	2	0	96	1	6	1	0	8	18	195	2	0	215	345	1197	0.87
	7:45 AM	2	11	15	0	28	12	91	0	0	103	3	4	5	0	12	20	180	0	0	200	343	1079	0.79
	8:00 AM	0	5	15	0	20	4	95	2	0	101	0	4	3	0	7	14	139	0	0	153	281	936	0.83
	8:15 AM	0	4	10	0	14	5	87	0	0	92	2	3	1	0	6	4	112	0	0	116	228	813	0.89
	8:30 AM	0	6	12	0	18	9	80	0	0	89	1	2	1	0	4	7	109	0	0	116	227	752	0.83
	8:45 AM	0	3	7	0	10	7	65	2	0	74	1	3	6	0	10	9	96	1	0	106	200	681	0.85
	9:00 AM	1	7	7	0	15	7	46	0	0	53	0	4	6	0	10	10	69	1	0	80	158	631	0.94
	9:15 AM	1	3	5	0	9	6	68	2	0	76	0	3	4	0	7	3	71	1	0	75	167	594	0.89
	9:30 AM	1	2	1	0	4	9	60	0	0	69	0	4	6	0	10	2	71	0	0	73	156	556	0.89
	9:45 AM	1	4	2	0	7	5	61	0	0	66	1	1	2	0	4	6	67	0	0	73	150	541	0.90
Midday Peak Period	10:00 AM	2	4	5	0	11	5	50	0	0	55	0	1	4	0	5	5	45	0	0	50	121	547	0.88
	10:15 AM	0	1	3	0	4	4	45	1	0	50	0	1	2	0	3	5	66	1	0	72	129	570	0.91
	10:30 AM	2	2	7	0	11	10	51	0	0	61	0	4	5	0	9	0	60	0	0	60	141	605	0.92
	10:45 AM	2	6	12	0	20	10	53	0	0	63	0	1	2	0	3	7	63	0	0	70	156	624	0.95
	11:00 AM	1	5	7	0	13	7	48	0	0	55	1	4	2	0	7	4	65	0	0	69	144	643	0.92
	11:15 AM	2	5	9	0	16	5	69	2	0	76	0	4	3	0	7	7	58	0	0	65	164	675	0.96
	11:30 AM	0	6	4	0	10	7	67	1	0	75	1	3	4	0	8	6	61	0	0	67	160	708	0.90
	11:45 AM	2	5	8	0	15	8	61	1	0	70	0	6	4	0	10	5	75	0	0	80	175	718	0.91
	12:00 PM	1	3	8	0	12	8	74	1	1	84	0	2	9	0	11	2	67	0	0	69	176	723	0.92
	12:15 PM	1	0	10	0	11	14	77	1	0	92	2	5	6	0	13	6	75	0	0	81	197	731	0.93
	12:30 PM	0	5	5	0	10	7	64	0	0	71	2	2	3	0	7	4	77	1	0	82	170	719	0.97
	12:45 PM	0	4	8	0	12	8	75	0	0	83	0	2	3	0	5	14	65	1	0	80	180	729	0.99
	1:00 PM	2	4	3	0	9	6	76	3	0	85	0	4	4	0	8	12	70	0	0	82	184	686	0.93
	1:15 PM	2	3	4	0	9	13	81	1	0	95	2	1	5	0	8	6	66	1	0	73	185	673	0.91
	1:30 PM	1	2	8	0	11	10	77	0	0	87	0	2	3	0	5	5	72	0	0	77	180	678	0.89
	1:45 PM	1	2	6	0	9	4	54	0	0	58	0	2	1	0	3	3	63	1	0	67	137	694	0.89
PM Peak Period	2:00 PM	0	2	7	0	9	6	60	0	0	66	1	7	4	0	12	7	77	0	0	84	171	775	0.89
	2:15 PM	0	4	7	0	11	12	65	1	0	78	0	3	6	0	9	5	87	0	0	92	190	850	0.86
	2:30 PM	1	1	5	0	7	4	71	0	0	75	0	3	8	0	11	5	98	0	0	103	196	927	0.87
	2:45 PM	2	6	13	0	21	8	82	1	1	92	2	3	3	0	8	6	91	0	0	97	218	987	0.92
	3:00 PM	2	12	10	0	24	10	69	1	0	80	1	8	4	0	13	4	125	0	0	129	246	1015	0.95
	3:15 PM	3	5	20	0	28	6	93	0	0	99	1	8	3	0	12	4	124	0	0	128	267	1055	0.92
	3:30 PM	3	7	13	0	23	5	117	1	0	123	0	6	2	0	8	6	96	0	0	102	256	1079	0.93
	3:45 PM	2	3	11	0	16	10	115	0	0	125	2	2	5	0	9	10	84	2	0	96	246	1110	0.95
	4:00 PM	0	7	10	0	17	7	121	2	0	130	0	5	6	0	11	7	119	2	0	128	286	1180	0.93
	4:15 PM	1	3	4	0	8	16	135	0	0	151	2	4	5	0	11	7	114	0	0	121	291	1232	0.91
	4:30 PM	0	9	6	0	15	12	124	0	0	136	0	4	7	0	11	4	121	0	0	125	287	1248	0.92
	4:45 PM	1	2	8	0	11	13	131	0	0	144	0	7	2	0	9	5	147	0	0	152	316	1261	0.93
	5:00 PM	1	1	7	0	9	13	141	1	0	155	5	9	10	0	24	6	144	0	0	150	338	1201	0.89
	5:15 PM	0	7	6	0	13	18	116	0	0	134	2	6	5	0	13	9	138	0	0	147	307	1082	0.88
	5:30 PM	1	3	4	0	8	16	137	0	0	153	0	6	1	0	7	7	124	1	0	132	300	955	0.80
	5:45 PM	0	5	4	0	9	10	109	1	0	120	0	4	5	0	9	8	110	0	0	118	256	797	0.78
	6:00 PM	0	5	9	0	14	14	88	1	0	103	2	2	5	0	9	2	91	0	0	93	219	669	0.76
	6:15 PM	0	2	2	0	4	11	83	0	0	94	0	1	5	0	6	7	69	0	0	76	180		
	6:30 PM	0	3	7	0	10	9	61	0	0	70	0	1	6	0	7	1	54	0	0	55	142		
	6:45 PM	0	0	1	0	1	8	58	0	0	66	0	3	5	0	8	3	50	0	0	53	128		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals	43	220	372	0	635	456	4073	34	2	4565	38	191	200	0	429	323	4834	22	0	5179	10808			

Intersection Traffic Volume Report

15-Minute Automobile Data

Range Line Road and STH 57 - Green Bay Road

Count Basics			Page 6 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

Automobiles (Cars, Light Trucks, & Motorcycles)		
		

15-Minute Automobile Data

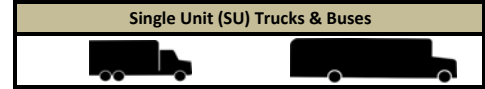
15-Minute Time Period Start Time		From North					From East					From South					From West					15-Min Totals	Hourly Sum
		Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road						
		Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total		
AM Peak Period	6:00 AM	1	2	1	0	4	4	26	0	0	30	0	2	0	0	2	1	37	1	0	39	75	574
	6:15 AM	0	2	0	0	2	13	47	0	0	60	0	0	3	0	3	3	64	1	0	68	133	711
	6:30 AM	0	3	4	0	7	16	41	0	0	57	0	8	0	0	8	0	80	3	0	83	155	880
	6:45 AM	0	2	8	0	10	6	60	2	0	68	0	7	0	0	7	4	121	1	0	126	211	1058
	7:00 AM	0	3	8	0	11	3	61	1	0	65	2	2	0	0	4	6	126	0	0	132	212	1180
	7:15 AM	0	5	4	0	9	3	94	1	0	98	0	2	3	0	5	12	178	0	0	190	302	1243
	7:30 AM	0	11	12	0	23	11	81	2	0	94	1	5	1	0	7	17	190	2	0	209	333	1161
	7:45 AM	1	11	14	0	26	10	89	0	0	99	1	4	5	0	10	20	178	0	0	198	333	1046
	8:00 AM	0	4	15	0	19	3	94	2	0	99	0	4	3	0	7	14	136	0	0	150	275	910
	8:15 AM	0	4	9	0	13	5	84	0	0	89	2	3	1	0	6	4	108	0	0	112	220	783
8:30 AM	0	6	12	0	18	9	76	0	0	85	1	2	1	0	4	7	104	0	0	111	218	722	
8:45 AM	0	3	7	0	10	7	64	2	0	73	1	3	6	0	10	9	94	1	0	104	197	651	
9:00 AM	1	7	7	0	15	6	42	0	0	48	0	4	6	0	10	10	64	1	0	75	148	589	
9:15 AM	1	2	5	0	8	6	62	2	0	70	0	3	4	0	7	3	70	1	0	74	159	551	
9:30 AM	1	2	1	0	4	9	54	0	0	63	0	4	6	0	10	2	68	0	0	70	147	519	
9:45 AM	0	4	2	0	6	5	55	0	0	60	1	1	0	0	2	6	61	0	0	67	135	508	
Midday Peak Period	10:00 AM	2	4	5	0	11	3	43	0	0	46	0	1	4	0	5	5	43	0	0	48	110	522
	10:15 AM	0	1	3	0	4	4	44	1	0	49	0	1	2	0	3	5	65	1	0	71	127	549
	10:30 AM	1	0	7	0	8	10	50	0	0	60	0	4	5	0	9	0	59	0	0	59	136	578
	10:45 AM	2	6	12	0	20	10	50	0	0	60	0	0	2	0	2	6	61	0	0	67	149	595
	11:00 AM	1	4	7	0	12	6	46	0	0	52	1	4	2	0	7	4	62	0	0	66	137	616
	11:15 AM	0	4	9	0	13	5	66	2	0	73	0	3	3	0	6	6	58	0	0	64	156	650
	11:30 AM	0	6	4	0	10	6	64	1	0	71	1	3	4	0	8	6	58	0	0	64	153	687
	11:45 AM	2	5	8	0	15	8	57	1	0	66	0	6	4	0	10	5	74	0	0	79	170	699
	12:00 PM	1	3	8	0	12	8	71	1	1	81	0	2	9	0	11	2	65	0	0	67	171	702
	12:15 PM	1	0	10	0	11	14	76	1	0	91	2	5	6	0	13	6	72	0	0	78	193	701
	12:30 PM	0	5	4	0	9	7	64	0	0	71	2	2	3	0	7	4	74	0	0	78	165	680
	12:45 PM	0	4	7	0	11	8	72	0	0	80	0	1	3	0	4	14	63	1	0	78	173	688
	1:00 PM	2	4	3	0	9	6	71	1	0	78	0	4	4	0	8	11	64	0	0	75	170	648
	1:15 PM	1	3	4	0	8	12	73	1	0	86	2	1	5	0	8	6	64	0	0	70	172	642
	1:30 PM	1	2	8	0	11	10	76	0	0	86	0	1	3	0	4	5	67	0	0	72	173	657
	1:45 PM	1	2	6	0	9	4	53	0	0	57	0	2	1	0	3	3	60	1	0	64	133	673
PM Peak Period	2:00 PM	0	2	6	0	8	6	58	0	0	64	0	7	4	0	11	7	74	0	0	81	164	753
	2:15 PM	0	3	7	0	10	11	65	1	0	77	0	3	6	0	9	5	86	0	0	91	187	825
	2:30 PM	0	1	5	0	6	4	66	0	0	70	0	3	8	0	11	5	97	0	0	102	189	898
	2:45 PM	2	6	13	0	21	8	80	1	1	90	2	3	3	0	8	6	88	0	0	94	213	953
	3:00 PM	2	12	9	0	23	9	64	1	0	74	1	8	4	0	13	4	122	0	0	126	236	978
	3:15 PM	2	5	19	0	26	6	91	0	0	97	1	7	3	0	11	4	122	0	0	126	260	1027
	3:30 PM	2	7	13	0	22	4	109	1	0	114	0	6	2	0	8	6	94	0	0	100	244	1057
	3:45 PM	1	2	10	0	13	9	113	0	0	122	2	2	5	0	9	10	82	2	0	94	238	1093
	4:00 PM	0	7	10	0	17	7	120	2	0	129	0	5	6	0	11	7	119	2	0	128	285	1166
	4:15 PM	1	3	4	0	8	16	135	0	0	151	2	4	5	0	11	7	113	0	0	120	290	1216
	4:30 PM	0	7	6	0	13	11	122	0	0	133	0	4	7	0	11	4	119	0	0	123	280	1230
	4:45 PM	1	2	8	0	11	13	129	0	0	142	0	7	2	0	9	5	144	0	0	149	311	1247
	5:00 PM	1	1	7	0	9	13	139	1	0	153	5	9	10	0	24	6	143	0	0	149	335	1191
	5:15 PM	0	7	6	0	13	18	114	0	0	132	2	6	5	0	13	9	137	0	0	146	304	1075
	5:30 PM	1	3	4	0	8	16	136	0	0	152	0	6	1	0	7	7	122	1	0	130	297	946
	5:45 PM	0	5	4	0	9	10	109	1	0	120	0	4	5	0	9	8	109	0	0	117	255	788
	6:00 PM	0	5	9	0	14	14	88	1	0	103	2	2	5	0	9	2	91	0	0	93	219	659
	6:15 PM	0	2	2	0	4	11	82	0	0	93	0	1	5	0	6	7	65	0	0	72	175	
	6:30 PM	0	3	7	0	10	8	60	0	0	68	0	1	6	0	7	1	53	0	0	54	139	
	6:45 PM	0	0	1	0	1	8	58	0	0	66	0	3	5	0	8	3	48	0	0	51	126	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		33	207	364	0	604	439	3944	30	2	4415	34	185	196	0	415	319	4716	19	0	5054	10488	

Intersection Traffic Volume Report

15-Minute Single Unit (SU) Truck & Bus Data

Range Line Road and STH 57 - Green Bay Road

Count Basics			Page 7 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events



15-Minute Single Unit (SU) Truck & Bus Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum
	Range Line Road						STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	10
	6:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	16
	6:30 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	0	0	1	3	18
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	26
	7:00 AM	0	0	0	0	0	2	3	1	0	6	0	0	2	0	2	0	0	1	0	1	9	35
	7:15 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	3	0	0	3	5	30
	7:30 AM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1	1	4	0	0	5	11	31
	7:45 AM	1	0	1	0	2	2	2	0	0	4	2	0	0	0	2	0	2	0	0	2	10	28
	8:00 AM	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	4	20
	8:15 AM	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	6	25
	8:30 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	5	0	0	5	8	24
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	25
	9:00 AM	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	5	0	0	5	9	36
9:15 AM	0	1	0	0	1	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	5	36	
9:30 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	9	33	
9:45 AM	1	0	0	0	1	0	6	0	0	6	0	0	2	0	2	0	4	0	0	4	13	28	
Midday Peak Period	10:00 AM	0	0	0	0	0	2	5	0	0	7	0	0	0	0	0	0	2	0	0	2	9	20
	10:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	18
	10:30 AM	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4	22
	10:45 AM	0	0	0	0	0	0	2	0	0	2	0	1	0	0	1	1	1	0	0	2	5	24
	11:00 AM	0	1	0	0	1	1	2	0	0	3	0	0	0	0	0	0	3	0	0	3	7	23
	11:15 AM	2	1	0	0	3	0	1	0	0	1	0	1	0	0	1	1	0	0	0	1	6	21
	11:30 AM	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	2	0	0	2	6	18
	11:45 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	1	0	0	1	4	16
	12:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5	18
	12:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	25
	12:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1	0	3	4	33
	12:45 PM	0	0	1	0	1	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	6	35
	1:00 PM	0	0	0	0	0	0	4	1	0	5	0	0	0	0	0	1	6	0	0	7	12	33
1:15 PM	1	0	0	0	1	1	6	0	0	7	0	0	0	0	0	0	2	1	0	3	11	27	
1:30 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	4	0	0	4	6	18	
1:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	19	
PM Peak Period	2:00 PM	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	0	2	0	0	2	6	18
	2:15 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	21
	2:30 PM	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	7	26
	2:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	28
	3:00 PM	0	0	1	0	1	1	4	0	0	5	0	0	0	0	0	0	3	0	0	3	9	33
	3:15 PM	1	0	1	0	2	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	7	25
	3:30 PM	1	0	0	0	1	1	6	0	0	7	0	0	0	0	0	0	1	0	0	1	9	19
	3:45 PM	1	1	1	0	3	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	8	16
	4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	12
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	14
	4:30 PM	0	2	0	0	2	1	1	0	0	2	0	0	0	0	0	0	2	0	0	2	6	13
	4:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	2	0	0	2	4	10
	5:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	6
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	7
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	6:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	
	6:30 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	3	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		10	13	8	0	31	17	107	3	0	127	4	6	4	0	14	4	93	3	0	100	272	

Peak Hour Single Unit (SU) Truck & Buses Volume Summary

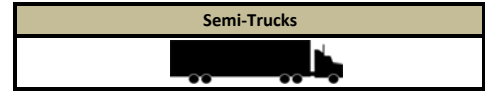
Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	1	4	1	0	6	3	6	0	0	9	3	1	0	0	4	1	10	0	0	11	30
MD 12:15 PM	0	0	2	0	2	0	7	1	0	8	0	1	0	0	1	1	12	1	0	14	25
PM 4:30 PM	0	2	0	0	2	1	5	0	0	6	0	0	0	0	0	0	5	0	0	5	13

Intersection Traffic Volume Report

Count Basics			Page 8 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

15-Minute Semi-Truck Data

Range Line Road and STH 57 - Green Bay Road



15-Minute Semi-Truck Data

15-Minute Time Period Start Time	From North							From East					From South					From West					15-Min Totals	Hourly Sum
	Range Line Road							STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	5	
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	6	
	8:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	1	5	
	8:30 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	6	
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	5		
9:00 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	6	
9:15 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	7	
9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	5		
Midday Peak Period	10:00 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	5	
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	5	
	10:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	5	
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
	11:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4	
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3		
	11:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3	
	12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	5	
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	6	
	12:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	6	
1:00 PM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	5		
1:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	2	4		
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	3		
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2		
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4	
	2:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4	
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	2:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	6	
	3:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	4	
	3:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	3:30 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	3	
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	5	
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	4	
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
	5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	4	
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	2	
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1		
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1		
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
	9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Totals		0	0	0	0	0	0	22	1	0	23	0	0	0	0	0	0	25	0	0	25	48		

Peak Hour Semi-Truck Volume Summary

Hourly Time Period Start Time	From North					From East					From South					From West					Total Hourly Volume
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5
MD 12:15 PM	0	0	0	0	0	0	2	1	0	3	0	0	0	0	0	0	2	0	0	2	5
PM 4:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	

Intersection Traffic Volume Report

15-Minute Heavy Vehicle Data

Range Line Road and STH 57 - Green Bay Road

Count Basics			Page 9 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)



15-Minute Heavy Vehicle Data

15-Minute Time Period Start Time	From North						From East					From South					From West					15-Min Totals	Hourly Sum
	Range Line Road						STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road						
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total			
AM Peak Period	6:00 AM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	3	11
	6:15 AM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	18
	6:30 AM	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	2	0	0	2	4	20
	6:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	28
	7:00 AM	0	0	0	0	0	2	3	1	0	6	0	0	2	0	2	0	1	1	0	2	10	37
	7:15 AM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	3	0	0	3	5	33
	7:30 AM	0	3	0	0	3	0	2	0	0	2	0	1	0	0	1	1	5	0	0	6	12	36
	7:45 AM	1	0	1	0	2	2	2	0	0	4	2	0	0	0	2	0	2	0	0	2	10	33
	8:00 AM	0	1	0	0	1	1	1	0	0	2	0	0	0	0	0	0	3	0	0	3	6	26
	8:15 AM	0	0	1	0	1	0	3	0	0	3	0	0	0	0	0	0	4	0	0	4	8	30
	8:30 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	5	0	0	5	9	30
	8:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	30
9:00 AM	0	0	0	0	0	1	4	0	0	5	0	0	0	0	0	0	5	0	0	5	10	42	
9:15 AM	0	1	0	0	1	0	6	0	0	6	0	0	0	0	0	0	1	0	0	1	8	43	
9:30 AM	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	0	3	0	0	3	9	37	
9:45 AM	1	0	0	0	1	0	6	0	0	6	0	0	2	0	2	0	6	0	0	6	15	33	
Midday Peak Period	10:00 AM	0	0	0	0	0	2	7	0	0	9	0	0	0	0	0	0	2	0	0	2	11	25
	10:15 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	21
	10:30 AM	1	2	0	0	3	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	5	27
	10:45 AM	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	1	2	0	0	3	7	29
	11:00 AM	0	1	0	0	1	1	2	0	0	3	0	0	0	0	0	0	3	0	0	3	7	27
	11:15 AM	2	1	0	0	3	0	3	0	0	3	0	1	0	0	1	1	0	0	0	1	8	25
	11:30 AM	0	0	0	0	0	1	3	0	0	4	0	0	0	0	0	0	3	0	0	3	7	21
	11:45 AM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	1	0	0	1	5	19
	12:00 PM	0	0	0	0	0	0	3	0	0	3	0	0	0	0	0	0	2	0	0	2	5	21
	12:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	30
	12:30 PM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	5	39
	12:45 PM	0	0	1	0	1	0	3	0	0	3	0	1	0	0	1	0	2	0	0	2	7	41
1:00 PM	0	0	0	0	0	0	5	2	0	7	0	0	0	0	0	1	6	0	0	7	14	38	
1:15 PM	1	0	0	0	1	1	8	0	0	9	0	0	0	0	0	0	2	1	0	3	13	31	
1:30 PM	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	0	5	0	0	5	7	21	
1:45 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	3	0	0	3	4	21	
PM Peak Period	2:00 PM	0	0	1	0	1	0	2	0	0	2	1	0	0	0	1	0	3	0	0	3	7	22
	2:15 PM	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	0	1	0	0	1	3	25
	2:30 PM	1	0	0	0	1	0	5	0	0	5	0	0	0	0	0	0	1	0	0	1	7	29
	2:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	34
	3:00 PM	0	0	1	0	1	1	5	0	0	6	0	0	0	0	0	0	3	0	0	3	10	37
	3:15 PM	1	0	1	0	2	0	2	0	0	2	0	1	0	0	1	0	2	0	0	2	7	28
	3:30 PM	1	0	0	0	1	1	8	0	0	9	0	0	0	0	0	0	2	0	0	2	12	22
	3:45 PM	1	1	1	0	3	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	8	17
	4:00 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	14
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	16
	4:30 PM	0	2	0	0	2	1	2	0	0	3	0	0	0	0	0	0	2	0	0	2	7	18
	4:45 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	3	0	0	3	5	14
	5:00 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	10
	5:15 PM	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	1	0	0	1	3	7
	5:30 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	0	0	2	3	9
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	9
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
	6:15 PM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	4	0	0	4	5	
	6:30 PM	0	0	0	0	0	1	1	0	0	2	0	0	0	0	0	0	1	0	0	1	3	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		10	13	8	0	31	17	129	4	0	150	4	6	4	0	14	4	118	3	0	125	320	

Peak Hour Heavy Vehicle Volume Summary

Hourly Time Period Start Time	↓ From North					← From East					↑ From South					→ From West					Total Hourly Volume
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	1	4	1	0	6	3	6	0	0	9	3	1	0	0	4	1	13	0	0	14	33
MD 12:15 PM	0	0	2	0	2	0	9	2	0	11	0	1	0	0	1	1	14	1	0	16	30
PM 4:30 PM	0	2	0	0	2	1	8	0	0	9	0	0	0	0	0	0	7	0	0	7	18

Range Line Road and STH 57 - Green Bay Road

Heavy Vehicles (Single-Unit Trucks, Buses & Semi-Trucks)	
%	

15-Minute Time Period Start Time	From North					From East					From South					From West					Total Heavy		Hourly Heavy Vehicle Percent
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road					Vehicle		
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Percent		
AM Peak Period	6:00 AM	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.8	1.9
	6:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	3.2	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.4	2.2	2.5
	6:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	2.4	100.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.0	0.0	2.4	2.5	2.2
	6:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8	0.5	2.6
	7:00 AM	0.0	0.0	0.0	0.0	0.0	40.0	4.7	50.0	0.0	8.5	0.0	0.0	100.0	0.0	33.3	0.0	0.8	100.0	0.0	1.5	4.5	3.0
	7:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	1.0	100.0	0.0	0.0	0.0	16.7	0.0	1.7	0.0	0.0	1.6	1.6	2.6
	7:30 AM	0.0	21.4	0.0	0.0	11.5	0.0	2.4	0.0	0.0	2.1	0.0	16.7	0.0	0.0	12.5	5.6	2.6	0.0	0.0	2.8	3.5	3.0
	7:45 AM	50.0	0.0	6.7	0.0	7.1	16.7	2.2	0.0	0.0	3.9	66.7	0.0	0.0	0.0	16.7	0.0	1.1	0.0	0.0	1.0	2.9	3.1
	8:00 AM	0.0	20.0	0.0	0.0	5.0	25.0	1.1	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.0	2.1	2.8
	8:15 AM	0.0	0.0	10.0	0.0	7.1	0.0	3.4	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0	0.0	3.4	3.5	3.7
	8:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	5.0	0.0	0.0	4.5	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	4.3	4.0	4.0
	8:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	1.9	1.5	4.4
9:00 AM	0.0	0.0	0.0	0.0	0.0	14.3	8.7	0.0	0.0	9.4	0.0	0.0	0.0	0.0	0.0	0.0	7.2	0.0	0.0	6.2	6.3	6.7	
9:15 AM	0.0	33.3	0.0	0.0	11.1	0.0	8.8	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.3	4.8	7.2	
9:30 AM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	8.7	0.0	0.0	0.0	0.0	0.0	4.2	0.0	0.0	4.1	5.8	6.7	
9:45 AM	100.0	0.0	0.0	0.0	14.3	0.0	9.8	0.0	0.0	9.1	0.0	0.0	100.0	0.0	50.0	0.0	9.0	0.0	0.0	8.2	10.0	6.1	
Midday Peak Period	10:00 AM	0.0	0.0	0.0	0.0	0.0	40.0	14.0	0.0	0.0	16.4	0.0	0.0	0.0	0.0	0.0	0.0	4.4	0.0	0.0	4.0	9.1	4.6
	10:15 AM	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	1.4	1.6	3.7
	10:30 AM	50.0	100.0	0.0	0.0	27.3	0.0	2.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.7	3.5	4.5
	10:45 AM	0.0	0.0	0.0	0.0	0.0	0.0	5.7	0.0	0.0	4.8	0.0	100.0										

Hourly Time Period Start Time	From North					From East					From South					From West					Hourly Heavy Vehicle Percent
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road					
	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	
AM 7:15 AM	50.0	11.4	2.2	0.0	7.2	10.0	1.6	0.0	0.0	2.3	60.0	6.2	0.0	0.0	12.1	1.6	1.9	0.0	0.0	1.8	2.8
MD 12:15 PM	0.0	0.0	7.7	0.0	4.8	0.0	3.1	50.0	0.0	3.3	0.0	7.7	0.0	0.0	3.0	2.8	4.9	50.0	0.0	4.9	4.1
PM 4:30 PM	0.0	10.5	0.0	0.0	4.2	1.8	1.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	1.2	1.4

Intersection Traffic Volume Report

Count Basics			Page 11 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted: 13		Non-Holiday	No Special Events

15-Minute Pedestrian and Bicyclist Data

Range Line Road and STH 57 - Green Bay Road



15-Minute Pedestrian and Bicyclist Data

15-Minute		Crossing 			Crossing 			Crossing 			Crossing 				
Time Period		Range Line Road			STH 57 - Green Bay Road			Range Line Road			STH 57 - Green Bay Road			15-Min	Hourly
Start Time		Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Pedestrian	Bicyclist	Total	Totals	Sum
AM Peak Period	6:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	6:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	6:45 AM	4	0	4	4	0	4	0	0	0	0	0	0	8	8
	7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	9:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Midday Peak Period	10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	10:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	11:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	11:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	12:00 PM	1	0	1	1	0	1	0	0	0	0	0	0	2	2
	12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	1:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1
PM Peak Period	2:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	2:15 PM	1	0	1	0	0	0	0	0	0	0	0	0	1	7
	2:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	8
	2:45 PM	0	0	0	1	0	1	1	0	1	1	0	1	3	8
	3:00 PM	0	0	0	1	0	1	1	0	1	1	0	1	3	5
	3:15 PM	1	0	1	1	0	1	0	0	0	0	0	0	2	2
	3:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	6:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
	7:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
8:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
9:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0		
Totals		7	0	7	8	0	8	2	0	2	2	0	2	19	

Special Pedestrians

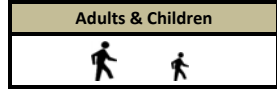
Pedestrian Type	None	1 or 2	A Few	Several	Many	Unknown
Pre-school Children	x					
Elementary School Age Children	x					
Visually Impaired (white cane/helper dog)	x					
Elderly/Disabled (except wheelchairs)	x					
Wheelchairs/Electric Scooters	x					
Other (None)	x					

Intersection Traffic Volume Report

Count Basics			Page 12 of 13
Start Date:	#REF!	#REF!	Schools in Session
Total Number of Hours Counted:	13	Non-Holiday	No Special Events

15-Minute Adult & Children Count (Manual Entry)

Range Line Road and STH 57 - Green Bay Road



15-Minute Adult & Children Pedestrian Data

15-Minute		Crossing North Approach			Crossing East Approach			Crossing South Approach			Crossing West Approach				
Time Period		Range Line Road			STH 57 - Green Bay Road			Range Line Road			STH 57 - Green Bay Road			15-Min	Hourly
Start Time		Adults	Children	Total	Adults	Children	Total	Adults	Children	Total	Adults	Children	Total	Totals	Sum
AM Peak Period	6:00 AM	0		0	0		0	0		0	0		0	0	8
	6:15 AM	0		0	0		0	0		0	0		0	0	8
	6:30 AM	0		0	0		0	0		0	0		0	0	8
	6:45 AM	4		4	4		4	0		0	0		0	8	8
	7:00 AM	0		0	0		0	0		0	0		0	0	0
	7:15 AM	0		0	0		0	0		0	0		0	0	0
	7:30 AM	0		0	0		0	0		0	0		0	0	0
	7:45 AM	0		0	0		0	0		0	0		0	0	0
	8:00 AM	0		0	0		0	0		0	0		0	0	0
	8:15 AM	0		0	0		0	0		0	0		0	0	0
	8:30 AM	0		0	0		0	0		0	0		0	0	0
	8:45 AM	0		0	0		0	0		0	0		0	0	0
	9:00 AM	0		0	0		0	0		0	0		0	0	0
	9:15 AM	0		0	0		0	0		0	0		0	0	0
	9:30 AM	0		0	0		0	0		0	0		0	0	0
	9:45 AM	0		0	0		0	0		0	0		0	0	0
Midday Peak Period	10:00 AM	0		0	0		0	0		0	0		0	0	0
	10:15 AM	0		0	0		0	0		0	0		0	0	0
	10:30 AM	0		0	0		0	0		0	0		0	0	0
	10:45 AM	0		0	0		0	0		0	0		0	0	0
	11:00 AM	0		0	0		0	0		0	0		0	0	0
	11:15 AM	0		0	0		0	0		0	0		0	0	2
	11:30 AM	0		0	0		0	0		0	0		0	0	2
	11:45 AM	0		0	0		0	0		0	0		0	0	2
	12:00 PM	1		1	1		1	0		0	0		0	2	2
	12:15 PM	0		0	0		0	0		0	0		0	0	0
	12:30 PM	0		0	0		0	0		0	0		0	0	0
	12:45 PM	0		0	0		0	0		0	0		0	0	0
	1:00 PM	0		0	0		0	0		0	0		0	0	0
	1:15 PM	0		0	0		0	0		0	0		0	0	0
	1:30 PM	0		0	0		0	0		0	0		0	0	1
	1:45 PM	0		0	0		0	0		0	0		0	0	1
PM Peak Period	2:00 PM	0		0	0		0	0		0	0		0	0	4
	2:15 PM	1		1	0		0	0		0	0		0	1	7
	2:30 PM	0		0	0		0	0		0	0		0	0	8
	2:45 PM	0		0	1		1	1		1	1		1	3	8
	3:00 PM	0		0	1		1	1		1	1		1	3	5
	3:15 PM	1		1	1		1	0		0	0		0	2	2
	3:30 PM	0		0	0		0	0		0	0		0	0	0
	3:45 PM	0		0	0		0	0		0	0		0	0	0
	4:00 PM	0		0	0		0	0		0	0		0	0	0
	4:15 PM	0		0	0		0	0		0	0		0	0	0
	4:30 PM	0		0	0		0	0		0	0		0	0	0
	4:45 PM	0		0	0		0	0		0	0		0	0	0
	5:00 PM	0		0	0		0	0		0	0		0	0	0
	5:15 PM	0		0	0		0	0		0	0		0	0	0
	5:30 PM	0		0	0		0	0		0	0		0	0	0
	5:45 PM	0		0	0		0	0		0	0		0	0	0
	6:00 PM	0		0	0		0	0		0	0		0	0	0
	6:15 PM	0		0	0		0	0		0	0		0	0	0
	6:30 PM	0		0	0		0	0		0	0		0	0	0
	6:45 PM	0		0	0		0	0		0	0		0	0	0
	7:00 PM	0		0	0		0	0		0	0		0	0	0
	7:15 PM	0		0	0		0	0		0	0		0	0	0
	7:30 PM	0		0	0		0	0		0	0		0	0	0
	7:45 PM	0		0	0		0	0		0	0		0	0	0
	8:00 PM	0		0	0		0	0		0	0		0	0	0
	8:15 PM	0		0	0		0	0		0	0		0	0	0
	8:30 PM	0		0	0		0	0		0	0		0	0	0
	8:45 PM	0		0	0		0	0		0	0		0	0	0
9:00 PM	0		0	0		0	0		0	0		0	0	0	
9:15 PM	0		0	0		0	0		0	0		0	0	0	
9:30 PM	0		0	0		0	0		0	0		0	0	0	
9:45 PM	0		0	0		0	0		0	0		0	0	0	
Totals		7	0	7	8	0	8	2	0	2	2	0	2	19	

Count Basics		Page 13 of 13
Start Date: #REF!	#REF!	Schools in Session
Total Number of Hours Counted: 13	Non-Holiday	No Special Events

Bicyclists

15-Minute Bicycle Data

15-Minute Period																							15-Min Totals	Hourly Sum
Time Period	From North					From East					From South					From West								
	Range Line Road					STH 57 - Green Bay Road					Range Line Road					STH 57 - Green Bay Road								
Start Time	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total	Right	Thru	Left	U-Tn	Total				
AM Peak Period	6:00 AM					0					0					0					0	0		
	6:15 AM					0					0					0					0	0		
	6:30 AM					0					0					0					0	0		
	6:45 AM					0					0					0					0	0		
	7:00 AM					0					0					0					0	0		
	7:15 AM					0					0					0					0	0		
	7:30 AM					0					0					0					0	0		
	7:45 AM					0					0					0					0	0		
	8:00 AM					0					0					0					0	0		
	8:15 AM					0					0					0					0	0		
	8:30 AM					0					0					0					0	0		
	8:45 AM					0					0					0					0	0		
	9:00 AM					0					0					0					0	0		
	9:15 AM					0					0					0					0	0		
	9:30 AM					0					0					0					0	0		
9:45 AM					0					0					0					0	0			
Midday Peak Period	10:00 AM					0					0					0					0	0		
	10:15 AM					0					0					0					0	0		
	10:30 AM					0					0					0					0	0		
	10:45 AM					0					0					0					0	0		
	11:00 AM					0					0					0					0	0		
	11:15 AM					0					0					0					0	0		
	11:30 AM					0					0					0					0	0		
	11:45 AM					0					0					0					0	0		
	12:00 PM					0					0					0					0	0		
	12:15 PM					0					0					0					0	0		
	12:30 PM					0					0					0					0	0		
	12:45 PM					0					0					0					0	0		
	1:00 PM					0					0					0					0	0		
	1:15 PM					0					0					0					0	0		
	1:30 PM					0					0					0					0	0		
1:45 PM					0					0					0					0	0			
PM Peak Period	2:00 PM					0					0					0					0	0		
	2:15 PM					0					0					0					0	0		
	2:30 PM					0					0					0					0	0		
	2:45 PM					0					0					0					0	0		
	3:00 PM					0					0					0					0	0		
	3:15 PM					0					0					0					0	0		
	3:30 PM					0					0					0					0	0		
	3:45 PM					0					0					0					0	0		
	4:00 PM					0					0					0					0	0		
	4:15 PM					0					0					0					0	0		
	4:30 PM					0					0					0					0	0		
	4:45 PM					0					0					0					0	0		
	5:00 PM					0					0					0					0	0		
	5:15 PM					0					0					0					0	0		
	5:30 PM					0					0					0					0	0		
	5:45 PM					0					0					0					0	0		
	6:00 PM					0					0					0					0	0		
	6:15 PM					0					0					0					0	0		
	6:30 PM					0					0					0					0	0		
	6:45 PM					0					0					0					0	0		
	7:00 PM					0					0					0					0	0		
	7:15 PM					0					0					0					0	0		
	7:30 PM					0					0					0					0	0		
	7:45 PM					0					0					0					0	0		
8:00 PM					0					0					0					0	0			
8:15 PM					0					0					0					0	0			
8:30 PM					0					0					0					0	0			
8:45 PM					0					0					0					0	0			
9:00 PM					0					0					0					0	0			
9:15 PM					0					0					0					0	0			
9:30 PM					0					0					0					0	0			
9:45 PM					0					0					0					0	0			
Totals	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		

[illegible]

Good Hope & 91st Master - Good Hope & Range Line

Configuration Phase Sequence Page 1

Phase Ring (MM)1-1-1

Phase															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	1	1	1	2	2	2	2	1	1	2	2	1	1	2	2

Hardware Alternate Sequence Enable: No

Phase Ring Sequence

Sequence	Ring	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
	Barrier Mode	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C	C
1	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
1	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
2	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
2	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
3	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
3	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
4	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
4	2	5	6	7	8	11	12	15	16	0	0	0	0	0	0	0	0
5	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
5	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
6	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
6	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
7	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
7	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
8	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
8	2	6	5	7	8	12	11	15	16	0	0	0	0	0	0	0	0
9	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
9	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
10	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
10	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
11	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
11	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
12	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
12	2	5	6	8	7	11	12	16	15	0	0	0	0	0	0	0	0
13	1	1	2	3	4	9	10	13	14	0	0	0	0	0	0	0	0
13	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0
14	1	2	1	3	4	10	9	13	14	0	0	0	0	0	0	0	0
14	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0
15	1	1	2	4	3	9	10	14	13	0	0	0	0	0	0	0	0
15	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0
16	1	2	1	4	3	10	9	14	13	0	0	0	0	0	0	0	0
16	2	6	5	8	7	12	11	16	15	0	0	0	0	0	0	0	0

Good Hope & 91st Master - Good Hope & Range Line

Configuration Phase Sequence Page 2

In Use(MM)1-2

Exclusive Ped(MM)1-2

Backup Prevent(MM)1-1-3

Simultaneous Gap(MM)1-1-4

Disable(MM)1-1-4

Phases In Use
2
4
6
8

Phase

Phase	Timing Phase	Backup
1	2	Yes
3	4	Yes
5	6	Yes
7	8	Yes

Phase	Must Gap with Phase
2	6
4	8
6	2
8	4

Phase

Load Switch Assignments (MMU Channel) (MM)1-3

Phase	Overlap	Type	Dimming				Auto	Power Up			Auto		Flash Together
			Red	Yellow	Green	Dark		Red	Yellow	Dark	Red	Yellow	
1	1	V				+		Yes			Yes		
2	2	V				+		Yes			Yes		Yes
3	3	V				+		Yes			Yes		
4	4	V				+		Yes				Yes	
5	5	V				-		Yes			Yes		
6	6	V				-		Yes			Yes		Yes
7	7	V				-		Yes			Yes		
8	8	V				-		Yes				Yes	
9	2	P				+				Yes			
10	4	P				+				Yes			
11	6	P				-				Yes			
12	8	P				-				Yes			
13	1	O				+		Yes			Yes		
14	2	O				-		Yes			Yes		Yes
15	3	O				+		Yes			Yes		
16	4	O				-		Yes			Yes		Yes

Good Hope & 91st Master - Good Hope & Range Line

Configuration Port 1 (SDLC)**SDLC Options (MM)1-4-1****Bus Interface Terminal/Facilities**

BIU	Term and Facility Enable	Detector Rack Enable
1	Yes	Yes
2	Yes	Yes
3	No	No
4	No	No
5	No	No
6	No	No
7	No	No
8	No	No

Enable TS2/MMU Type Cabinet: Yes

Enable MMU Extended Status: Yes

Enable SDLC Stop Time: Yes

Enable 3 Critical RFE's Lockup: Yes

Diagnostics (Test Fixture) Enable: No

Secondary To Secondary Addressing

ID	Term and Facility Enable	Detector Rack Enable
1	No	No
2	No	No
3	No	No
4	No	No
5	No	No
6	No	No
7	No	No
8	No	No

Secondary To Secondary Addressing MMU: No

Secondary To Secondary Addressing Diagnostics: No

MMU Program (MM)1-4-2

Channel Can Serve with Channel	
Channel 1	Channel 2
2	6
2	9
2	11
4	8
4	10
4	12
6	9
6	11
8	10
8	12
9	11
10	12

Color Check Enable (MM)1-4-3

Enable Color Check: Yes

Color Check Enable

MMU Channel	Green	Yellow	Red
1	Yes	Yes	No
2	Yes	Yes	Yes
3	Yes	Yes	No
4	Yes	Yes	Yes
5	Yes	Yes	No
6	Yes	Yes	Yes
7	Yes	Yes	No
8	Yes	Yes	Yes
9	Yes	No	No
10	Yes	No	No
11	Yes	No	No
12	Yes	No	No
13	Yes	Yes	No
14	Yes	Yes	No
15	Yes	Yes	No
16	Yes	Yes	No

Good Hope & 91st Master - Good Hope & Range Line

Configuration Communications**Ethernet Port Configuration (MM)1-5-1**

Controller IP: 192.168.6.2
 Subnet Mask: 255.255.254.0
 Default Gateway IP: 192.168.6.1
 Server IP: 192.168.6.1

NTCIP Parameters (MM)1-5-5

Backup Time: 0
 UDP Port: 501
 Ethernet Priority: 1
 Port 2 Priority: 4
 Port 3A Priority: 2
 Port 3B Priority: 3

Note for 2070: Port 2 is C50S, Port 3A is C21S, and Port 3B is C22S

Port Configuration (MM)1-5-2 to 1-5-4

Port	Protocol	Enable	Data Rate	Data Parity Stop	Modem Setup String	User String	Comm Port Address	System Detector 9-1	Telemetry Response Delay	Duplex Half/Full	Flow Control	AB3418 NTCIP Group Address	AB3418 NTCIP Single Flag Enable	RTS to CTS Delay	RTS Turn Off Delay	Droupout Time	Early RTS	FSK Hardware	Rail Road	Rail Road Line	ATCS Group	Wayside Device	ATCS Device	Wayside SubNode	ATCS SubNode
2	NTCIP	No	9600	8 N 1	None		1	0	0.0	Full	Yes	0	No	0.0	0.0	10	No	Yes	0	0	0	0	0	0	0
3A	NTCIP	Yes	19.2K	8 N 1	None		1	0	0.0	Full	Yes	0	No	0.0	0.0	10	No	Yes	0	0	0	0	0	0	0
3B	Terminal	No	1200	8 0 1	None		0	0	0.0	Full	Yes	0	No	3.0	2.0	10	No	Yes	0	0	0	0	0	0	0

ECPIP Parameters (MM)1-5-6

Controller Address: 0
 Expanded System Detector Address: 0

Local System Detector

Local System Detector	Number
-----------------------	--------

Good Hope & 91st Master - Good Hope & Range Line

Logic Processor Page 2

Logic Statements (MM)1-8-2

Statement Number: 1

IF:

	Assignment	#	IS	State
IF	DETECTOR	1	IS	ON
AND	DETECTOR	11	IS	ON

THEN:

Assignment	#	State
DELAY FOR	1.0 Sec	
CALL PHASE	1	ON

ELSE:

Assignment	#	State
------------	---	-------

Statement Number: 3

IF:

	Assignment	#	IS	State
IF	DETECTOR	3	IS	ON
AND	DETECTOR	13	IS	ON

THEN:

Assignment	#	State
DELAY FOR	1.0 Sec	
CALL PHASE	3	ON

ELSE:

Assignment	#	State
------------	---	-------

Statement Number: 5

IF:

	Assignment	#	IS	State
IF	DETECTOR	5	IS	ON
AND	DETECTOR	15	IS	ON

THEN:

Assignment	#	State
DELAY FOR	1.0 Sec	
CALL PHASE	5	ON

ELSE:

Assignment	#	State
------------	---	-------

Statement Number: 7

IF:

	Assignment	#	IS	State
IF	DETECTOR	7	IS	ON
AND	DETECTOR	17	IS	ON

THEN:

Assignment	#	State
DELAY FOR	1.0 Sec	
CALL PHASE	1	ON

ELSE:

Assignment	#	State
------------	---	-------

Statement Number: 11

IF:

	Assignment	#	IS	State
IF	DETECTOR FAIL	11	IS	ON
AND	RED ON PHASE	2	IS	ON

THEN:

Assignment	#	State
DELAY FOR	1.0 Sec	
CALL PHASE	1	ON

ELSE:

Assignment	#	State
------------	---	-------

Statement Number: 13

IF:

	Assignment	#	IS	State
IF	DETECTOR FAIL	13	IS	ON
AND	RED ON PHASE	4	IS	ON

THEN:

Assignment	#	State
DELAY FOR	1.0 Sec	
CALL PHASE	3	ON

ELSE:

Assignment	#	State
------------	---	-------

Statement Number: 15

Good Hope & 91st Master - Good Hope & Range Line

Controller Timing Plan (MM)2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Min Green	0	12	0	12	0	12	0	12	0	0	0	0	0	0	0	0
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	0.0	3.0	0.0	5.0	0.0	3.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 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
Max 1	0	25	0	35	0	25	0	35	0	0	0	0	0	0	0	0
Max 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Slp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	3.2	3.5	3.9	3.5	3.2	3.5	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.5	2.5	0.5	1.1	0.5	2.5	0.5	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time B4	0	12	0	12	0	12	0	12	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	6	0	6	0	6	0	6	0	0	0	0	0	0	0	0
Min Gap	0.0	1.0	0.0	3.0	0.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Good Hope & 91st Master - Good Hope & Range Line

Controller Start/Fash (MM) 2-5**Startup**

Phase	Phase Setting
4	W
8	W

Overlap
A
B
C
D

Flash > Mon: No
Flash Time: 0
All Red: 6
Power Start Sequence: 1

Automatic Flash

Entry Phase
2
6

Exit Phase
4
8

Overlap Exit
A
B
C
D

Flash > Mon: No
Exit Flash Interval: G
Minimum Auto Flash: 8
Minimum Recall: No
Cycle Through Phase: No

Good Hope & 91st Master - Good Hope & Range Line

Controller Options**Controller Options (MM)2-6-1**

Phase	Flashing Green Phase	Guaranteed Passage	Non Act 1	Non Act 2	Dual Entry	Conditional Service	Conditional Reservice	Ped Reservice	Rest In Walk	Flashing Walk	Ped Clear Yellow	Ped Clear Red	IGRN + Veh Ext
2	No	No	No	No	Yes	No	No	No	No	No	No	No	No
4	No	No	No	No	Yes	No	No	No	No	No	No	No	No
6	No	No	No	No	Yes	No	No	No	No	No	No	No	No
8	No	No	No	No	Yes	No	No	No	No	No	No	No	No

Ped Clear Protect: On

Red Revert: 2.0

Act Pre-Time (MM)2-7

Pre-Time Mode Enable: No

Free Input Enables Pre-Timed: No

Pre-Timed Phase

Phase Recall Options (MM)2-8

Plan	Phase	Lock Detector	Vehicle Recall	Ped Recall	Max Recall	Soft Recall	No Rest	AI Calc
1	1	No	No	No	No	No	Yes	No
1	3	No	No	No	No	No	Yes	No
1	4	Yes	Yes	No	No	No	No	No
1	5	No	No	No	No	No	Yes	No
1	7	No	No	No	No	No	Yes	No
1	8	Yes	Yes	No	No	No	No	No

Good Hope & 91st Master - Good Hope & Range Line

Coordination Pattern Data

Pattern Data (MM)3-2

Pattern	Split Pattern	TS2	Cycle	Std(COS)	Offset Value	Dwell/Add Time	Splits In	Offsets In	Actuated Coord
1	1	0-1	90	0	30	0	Seconds	Seconds	Yes

Pattern	Timing Plan	Actuated Walk Rest	Sequence	Phase Reservice	Action Plan	Max Select	Force Off	Vehicle Perm 1	Vehicle Perm 2	Vehicle Perm 3
1	0	No	0	No	0	None	None	0	0	0

Pattern	Ring Split Ext 1	Ring Split Ext 2	Ring Split Ext 3	Ring Split Ext 4	Split Demand Pattern 1	Split Demand Pattern 2	XArt Pattern	Ring Displ 2	Ring Displ 3	Ring Displ 4
1	0	0	0	0	0	0	0	0	0	0

Split Preference Phases

Pattern	Phase	Preference 1	Preference 2
---------	-------	--------------	--------------

Special Functions

Pattern	Function	Output
---------	----------	--------

Split Pattern Data (MM)3-3

Coord Phases

Split Pattern	Phase	Split
1	2	35
1	4	55
1	6	35
1	8	55

Split/Modes

Split Pattern	Mode	Phase															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Coord				X				X								

Good Hope & 91st Master - Good Hope & Range Line

Time Base Action Plan
Action Plan (MM)5-2

Plan	Pattern	Veh Det Plan	Flash	Red Rest	Controller Seq	Timing Plan	Override System	Detector Log	Veh Det Diag Plan	Ped Det Diag Plan	Dimming Enable
1	1	0	No	No	0	0	No	None	0	0	No
2	2	0	No	No	0	0	No	None	0	0	No
3	3	0	No	No	0	0	No	None	0	0	No
4	4	0	No	No	0	0	No	None	0	0	No
5	5	0	No	No	0	0	No	None	0	0	No
6	6	0	No	No	0	0	No	None	0	0	No
7	7	0	No	No	0	0	No	None	0	0	No
8	8	0	No	No	0	0	No	None	0	0	No
9	9	0	No	No	0	0	No	None	0	0	No
10	10	0	No	No	0	0	No	None	0	0	No
11	11	0	No	No	0	0	No	None	0	0	No
12	12	0	No	No	0	0	No	None	0	0	No
13	13	0	No	No	0	0	No	None	0	0	No
14	14	0	No	No	0	0	No	None	0	0	No
15	15	0	No	No	0	0	No	None	0	0	No
16	16	0	No	No	0	0	No	None	0	0	No
17	17	0	No	No	0	0	No	None	0	0	No
18	18	0	No	No	0	0	No	None	0	0	No
19	19	0	No	No	0	0	No	None	0	0	No
20	20	0	No	No	0	0	No	None	0	0	No
99	255 - FLSH	0	Yes	No	0	0	No	None	0	0	No
100	254 - FREE	0	No	No	0	0	No	None	0	0	No

Action Plan Phases

Plan	Phase	Ped Rcl	Walk 2	Vex 2	Veh Rcl	Max Rcl	Max 2	Max 3	CS Inhibit	Omit
------	-------	---------	--------	-------	---------	---------	-------	-------	------------	------

Action Plan Special
Functions

Plan	Function
------	----------

Action Plan
Auxiliary Functions

Plan	Function
------	----------

Logic Statement Control

Plan	LP	Statement Control
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Good Hope & 91st Master - Good Hope & Range Line

Time Base Day Plan/Schedule**Day Plan (MM)5-3**

Plan	Event	Action Plan	Start Time
1	1	99	12:00 AM
1	2	100	6:00 AM
1	3	1	7:00 AM
1	4	100	8:00 PM
1	5	99	11:00 PM
2	1	99	12:00 AM
2	2	100	5:00 AM
2	3	1	6:00 AM
2	4	100	8:00 PM
2	5	99	11:00 PM
3	1	100	12:00 AM

Schedule (MM)5-4

Schedule Number	Day Plan Number	Months	Days of Week	Days of Month
1	1	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sept, Oct, Nov, Dec	Sun, Sat	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
2	2	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sept, Oct, Nov, Dec	Mon, Tues, Wed, Thurs, Fri	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
3	3			
4	4			

Good Hope & 91st Master - Good Hope & Range Line

Detectors

Detectors Page 1

Vehicle Detectors Setup (MM)6-1

Vehicle Plan	Detector Number	Called	Type
2	1	1	N
2	2	2	N
2	3	3	N
2	4	4	N
2	5	5	N
2	6	6	N
2	7	7	N
2	8	8	N
2	60	2	N
2	60	4	N
2	60	6	N
2	60	8	N
3	1	1	N
3	2	2	N
3	3	3	N
3	4	4	N
3	5	5	N
3	6	6	N
3	7	7	N
3	8	8	N
3	60	2	N
3	60	4	N
3	60	6	N
3	60	8	N
4	1	1	N
4	2	2	N
4	3	3	N
4	4	4	N
4	5	5	N
4	6	6	N
4	7	7	N
4	8	8	N
4	60	2	N
4	60	4	N
4	60	6	N
4	60	8	N

Appendix B

Peak Hour Analysis Outputs

Year 2019 Existing Traffic
Year 2019 full build (with development) Traffic

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	830	60	60	1225	5	70	15	65	10	40	60
Future Volume (vph)	10	830	60	60	1225	5	70	15	65	10	40	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		100	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.999				0.850			0.850
Flt Protected	0.950			0.950				0.960			0.990	
Satd. Flow (prot)	1703	4844	0	1752	5031	0	0	1806	1599	0	1809	1553
Flt Permitted	0.181			0.287				0.726			0.929	
Satd. Flow (perm)	324	4844	0	529	5031	0	0	1366	1599	0	1697	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			1				42			42
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		495			580			596			444	
Travel Time (s)		8.4			9.9			13.5			10.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	1%	1%	1%	4%	4%	4%
Adj. Flow (vph)	11	892	65	65	1317	5	75	16	35	11	43	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	957	0	65	1322	0	0	91	35	0	54	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

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existing am peak

Synchro 10 Report
Page 1

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8		8	4		4
Detector Phase	6	6		2	2		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	17.7	17.7		17.7	17.7		17.0	17.0	17.0	17.0	17.0	17.0
Total Split (s)	30.7	30.7		30.7	30.7		40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	43.4%	43.4%		43.4%	43.4%		56.6%	56.6%	56.6%	56.6%	56.6%	56.6%
Maximum Green (s)	25.0	25.0		25.0	25.0		35.0	35.0	35.0	35.0	35.0	35.0
Yellow Time (s)	3.2	3.2		3.2	3.2		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	2.5	2.5		2.5	2.5		1.1	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7		5.7	5.7		5.0	5.0		5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Gap (s)	1.0	1.0		1.0	1.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Time To Reduce (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	None
Act Effect Green (s)	23.9	23.9		23.9	23.9		12.3	12.3		12.3	12.3	12.3
Actuated g/C Ratio	0.58	0.58		0.58	0.58		0.30	0.30		0.30	0.30	0.30
v/c Ratio	0.06	0.34		0.21	0.45		0.22	0.07		0.11	0.07	0.07
Control Delay	7.6	7.0		9.5	7.9		13.7	4.8		12.2	4.6	4.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	7.6	7.0		9.5	7.9		13.7	4.8		12.2	4.6	4.6
LOS	A	A		A	A		B	A		B	A	A
Approach Delay	7.1			8.0			11.3			9.4		
Approach LOS	A			A			B			A		

Intersection Summary

Area Type: Other

Cycle Length: 70.7

Actuated Cycle Length: 41.3

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.45

Intersection Signal Delay: 7.8

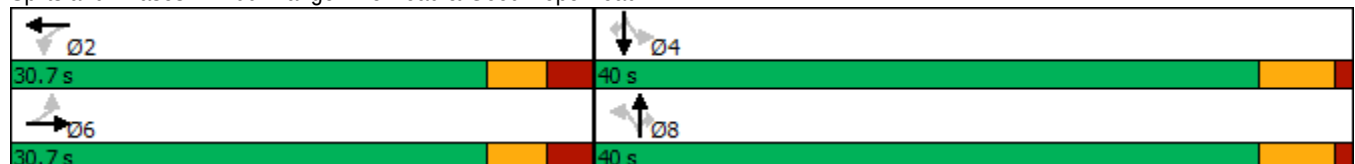
Intersection LOS: A

Intersection Capacity Utilization 58.8%

ICU Level of Service B

Analysis Period (min) 15

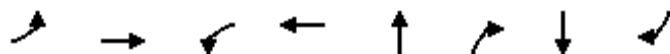
Splits and Phases: 100: Range Line Road & Good Hope Road



Queues

100: Range Line Road & Good Hope Road

01/28/2019



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	11	957	65	1322	91	35	54	32
v/c Ratio	0.06	0.34	0.21	0.45	0.22	0.07	0.11	0.07
Control Delay	7.6	7.0	9.5	7.9	13.7	4.8	12.2	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	7.0	9.5	7.9	13.7	4.8	12.2	4.6
Queue Length 50th (ft)	1	49	9	76	17	0	10	0
Queue Length 95th (ft)	8	75	29	111	45	13	29	12
Internal Link Dist (ft)		415		500	516		364	
Turn Bay Length (ft)	100		100			100		100
Base Capacity (vph)	214	3207	349	3324	1154	1357	1434	1319
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.30	0.19	0.40	0.08	0.03	0.04	0.02
Intersection Summary								

HCM 6th Signalized Intersection Summary

100: Range Line Road & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	10	830	60	60	1225	5	70	15	65	10	40	60
Future Volume (veh/h)	10	830	60	60	1225	5	70	15	65	10	40	60
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1811	1811	1811	1856	1856	1856	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	11	892	65	65	1317	5	75	16	35	11	43	32
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	3	3	3	1	1	1	4	4	4
Cap, veh/h	291	2151	156	373	2382	9	457	82	436	156	439	426
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	402	4704	342	582	5209	20	1067	302	1598	170	1606	1560
Grp Volume(v), veh/h	11	624	333	65	854	468	91	0	35	54	0	32
Grp Sat Flow(s),veh/h/ln	402	1648	1750	582	1689	1852	1368	0	1598	1776	0	1560
Q Serve(g_s), s	0.8	5.0	5.1	3.3	7.3	7.3	1.4	0.0	0.6	0.0	0.0	0.6
Cycle Q Clear(g_c), s	8.1	5.0	5.1	8.4	7.3	7.3	2.3	0.0	0.6	0.9	0.0	0.6
Prop In Lane	1.00		0.20	1.00		0.01	0.82		1.00	0.20		1.00
Lane Grp Cap(c), veh/h	291	1507	800	373	1544	847	539	0	436	594	0	426
V/C Ratio(X)	0.04	0.41	0.42	0.17	0.55	0.55	0.17	0.00	0.08	0.09	0.00	0.08
Avail Cap(c_a), veh/h	361	2077	1102	474	2127	1167	1396	0	1409	1634	0	1376
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	7.2	7.2	10.0	7.8	7.8	11.4	0.0	10.7	10.8	0.0	10.7
Incr Delay (d2), s/veh	0.1	0.2	0.3	0.2	0.3	0.6	0.3	0.0	0.2	0.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.1	1.2	0.3	1.6	1.8	0.6	0.0	0.2	0.3	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.8	7.4	7.6	10.3	8.1	8.4	11.7	0.0	10.9	10.9	0.0	10.9
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h	968		1387				126		86			
Approach Delay, s/veh	7.5		8.3				11.5		10.9			
Approach LOS	A		A				B		B			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	23.8		15.8		23.8		15.8					
Change Period (Y+Rc), s	* 5.7		* 5		* 5.7		* 5					
Max Green Setting (Gmax), s	* 25		* 35		* 25		* 35					
Max Q Clear Time (g_c+I1), s	10.4		2.9		10.1		4.3					
Green Ext Time (p_c), s	7.7		0.7		5.4		1.2					
Intersection Summary												
HCM 6th Ctrl Delay	8.2											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings
200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	5	715	245	80	1050	140	170	225	85	305	580	45
Future Volume (vph)	5	715	245	80	1050	140	170	225	85	305	580	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		130	90		140	170		80	170		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	4803	1495	1719	4940	1538	1687	3374	1509	1770	3539	1583
Flt Permitted	0.950			0.950			0.369			0.473		
Satd. Flow (perm)	1670	4803	1475	1718	4940	1503	655	3374	1488	881	3539	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			113			113			113
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1405			1177			802			706	
Travel Time (s)		23.9			20.1			13.7			12.0	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	50%	100%	100%	50%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	8%	8%	8%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	5	745	128	83	1094	73	177	234	44	318	604	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	745	128	83	1094	73	177	234	44	318	604	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

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Synchro 10 Report
Page 5

Lanes, Volumes, Timings
200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)	0.0			0.0			0.0			0.0		
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	6.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	13.5	24.9	24.9	13.5	24.9	24.9	10.5	24.8	24.8	10.5	24.8	24.8
Total Split (s)	25.5	46.9	46.9	25.5	46.9	46.9	24.5	36.8	36.8	24.5	36.8	36.8
Total Split (%)	19.1%	35.1%	35.1%	19.1%	35.1%	35.1%	18.3%	27.5%	27.5%	18.3%	27.5%	27.5%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	40.0	20.0	30.0	30.0	20.0	30.0	30.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.9	2.9	2.0	2.9	2.9	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	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 Lost Time (s)	5.5	6.9	6.9	5.5	6.9	6.9	4.5	6.8	6.8	4.5	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	2.4	2.4	3.0	2.4	2.4	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5
Time Before Reduce (s)	20.0	28.0	28.0	20.0	28.0	28.0	20.0	30.0	30.0	20.0	30.0	30.0
Time To Reduce (s)	0.0	12.0	12.0	0.0	12.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	8.5	22.5	22.5	10.7	33.0	33.0	29.9	16.0	16.0	40.4	22.0	22.0
Actuated g/C Ratio	0.10	0.26	0.26	0.12	0.38	0.38	0.34	0.18	0.18	0.46	0.25	0.25
v/c Ratio	0.03	0.60	0.28	0.40	0.59	0.11	0.50	0.38	0.12	0.55	0.68	0.05
Control Delay	47.0	32.9	9.9	47.1	24.5	1.9	22.1	35.6	0.7	21.2	36.0	0.2
Queue Delay	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 Delay	47.0	32.9	9.9	47.1	24.5	1.9	22.1	35.6	0.7	21.2	36.0	0.2
LOS	D	C	A	D	C	A	C	D	A	C	D	A
Approach Delay	29.7			24.7			26.9			30.2		
Approach LOS	C			C			C			C		

Intersection Summary

Area Type: Other

Cycle Length: 133.7

Actuated Cycle Length: 87.7

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 27.7

Intersection LOS: C

Intersection Capacity Utilization 72.2%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 200: Green Bay Ave & Good Hope Road

			
Ø1	Ø2	Ø3	Ø4
25.5 s	46.9 s	24.5 s	36.8 s
			
Ø5	Ø6	Ø7	Ø8
25.5 s	46.9 s	24.5 s	36.8 s

TADI
existing am peak

Synchro 10 Report
Page 6

Queues

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	745	128	83	1094	73	177	234	44	318	604	23
v/c Ratio	0.03	0.60	0.28	0.40	0.59	0.11	0.50	0.38	0.12	0.55	0.68	0.05
Control Delay	47.0	32.9	9.9	47.1	24.5	1.9	22.1	35.6	0.7	21.2	36.0	0.2
Queue Delay	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 Delay	47.0	32.9	9.9	47.1	24.5	1.9	22.1	35.6	0.7	21.2	36.0	0.2
Queue Length 50th (ft)	3	135	6	43	160	0	58	62	0	113	159	0
Queue Length 95th (ft)	17	224	57	110	313	12	128	115	0	230	282	0
Internal Link Dist (ft)	1325				1097				722			
Turn Bay Length (ft)	100		130	90		140	170		80	170		90
Base Capacity (vph)	403	2322	771	415	2405	789	537	1223	611	620	1283	638
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.32	0.17	0.20	0.45	0.09	0.33	0.19	0.07	0.51	0.47	0.04
Intersection Summary												

HCM 6th Signalized Intersection Summary

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	5	715	245	80	1050	140	170	225	85	305	580	45
Future Volume (veh/h)	5	715	245	80	1050	140	170	225	85	305	580	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1781	1781	1781	1826	1826	1826	1796	1796	1796	1870	1870	1870
Adj Flow Rate, veh/h	5	745	128	83	1094	73	177	234	44	318	604	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	5	5	5	7	7	7	2	2	2
Cap, veh/h	18	1131	343	157	1556	476	351	593	261	532	833	366
Arrive On Green	0.01	0.23	0.23	0.09	0.31	0.31	0.11	0.17	0.17	0.17	0.23	0.23
Sat Flow, veh/h	1697	4863	1474	1739	4985	1526	1711	3413	1499	1781	3554	1563
Grp Volume(v), veh/h	5	745	128	83	1094	73	177	234	44	318	604	23
Grp Sat Flow(s),veh/h/ln	1697	1621	1474	1739	1662	1526	1711	1706	1499	1781	1777	1563
Q Serve(g_s), s	0.2	9.9	5.2	3.3	13.9	2.5	5.9	4.4	1.8	9.8	11.2	0.8
Cycle Q Clear(g_c), s	0.2	9.9	5.2	3.3	13.9	2.5	5.9	4.4	1.8	9.8	11.2	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1131	343	157	1556	476	351	593	261	532	833	366
V/C Ratio(X)	0.28	0.66	0.37	0.53	0.70	0.15	0.50	0.39	0.17	0.60	0.72	0.06
Avail Cap(c_a), veh/h	474	2716	823	486	2784	852	638	1429	628	722	1488	654
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	24.9	23.1	31.1	21.7	17.8	20.8	26.2	25.2	17.6	25.3	21.3
Incr Delay (d2), s/veh	8.2	0.4	0.5	2.7	0.4	0.1	1.1	0.4	0.3	1.1	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.5	1.7	1.4	4.9	0.8	2.3	1.7	0.6	3.7	4.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	25.4	23.6	33.9	22.1	17.9	21.9	26.7	25.5	18.6	26.5	21.4
LnGrp LOS	D	C	C	C	C	B	C	C	C	B	C	C
Approach Vol, veh/h	878		1250				455		945			
Approach Delay, s/veh	25.2		22.6				24.7		23.7			
Approach LOS	C		C				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	29.3	12.5	23.6	12.0	23.6	16.9	19.3				
Change Period (Y+Rc), s	5.5	6.9	4.5	* 6.8	5.5	6.9	4.5	* 6.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	* 30	20.0	40.0	20.0	* 30				
Max Q Clear Time (g_c+I1), s	2.2	15.9	7.9	13.2	5.3	11.9	11.8	6.4				
Green Ext Time (p_c), s	0.0	6.5	0.3	3.6	0.1	4.4	0.6	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			23.8									
HCM 6th LOS			C									
Notes												

Lanes, Volumes, Timings
300: Range Line Road & Green Bay Ave

01/28/2019

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	695	65	5	365	25	5
Future Volume (vph)	695	65	5	365	25	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.979	
Flt Protected				0.999	0.960	
Satd. Flow (prot)	1840	0	0	1861	1594	0
Flt Permitted				0.999	0.960	
Satd. Flow (perm)	1840	0	0	1861	1594	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	145			802	3307	
Travel Time (s)	2.5			13.7	75.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	12%	12%
Adj. Flow (vph)	755	71	5	397	27	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	826	0	0	402	32	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	50.5%			ICU Level of Service A		
Analysis Period (min)	15					

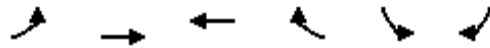
HCM 6th TWSC
300: Range Line Road & Green Bay Ave

01/28/2019

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	695	65	5	365	25	5
Future Vol, veh/h	695	65	5	365	25	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	12	12
Mvmt Flow	755	71	5	397	27	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	826	0	1198	791
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	-	-	4.12	-	6.52	6.32
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	-	-	2.218	-	3.608	3.408
Pot Cap-1 Maneuver	-	-	805	-	196	374
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	805	-	194	374
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	651	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.1		25.2	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	211	-	-	805	-	
HCM Lane V/C Ratio	0.155	-	-	0.007	-	
HCM Control Delay (s)	25.2	-	-	9.5	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0	-	

Lanes, Volumes, Timings
325: Green Bay Ave & Range Line Road

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	695	365	30	70	1
Future Volume (vph)	1	695	365	30	70	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.998	
Flt Protected					0.953	
Satd. Flow (prot)	0	1863	1844	0	1689	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	1863	1844	0	1689	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		846	145		596	
Travel Time (s)		14.4	2.5		13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	7%	7%
Adj. Flow (vph)	1	755	397	33	76	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	756	430	0	77	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 48.0% ICU Level of Service A						
Analysis Period (min) 15						

HCM 6th TWSC
325: Green Bay Ave & Range Line Road

01/28/2019

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	695	365	30	70	1
Future Vol, veh/h	1	695	365	30	70	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	7	7
Mvmt Flow	1	755	397	33	76	1
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	430	0	-	0	1171	414
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	757	-
Critical Hdwy	4.12	-	-	-	6.47	6.27
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.363
Pot Cap-1 Maneuver	1129	-	-	-	208	628
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1129	-	-	-	208	628
Mov Cap-2 Maneuver	-	-	-	-	208	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	454	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		31.8		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1129	-	-	-	210	
HCM Lane V/C Ratio	0.001	-	-	-	0.367	
HCM Control Delay (s)	8.2	0	-	-	31.8	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	1.6	

Lanes, Volumes, Timings
400: Range Line Road & North D/W

01/28/2019

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	30	0	0	110
Future Volume (vph)	0	0	30	0	0	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1881	1881	0	1827
Flt Permitted						
Satd. Flow (perm)	1863	0	1881	1881	0	1827
Link Speed (mph)	25		30			30
Link Distance (ft)	499		444			3307
Travel Time (s)	13.6		10.1			75.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	4%	4%
Adj. Flow (vph)	0	0	33	0	0	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	33	0	0	120
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	9.1%			ICU Level of Service A		
Analysis Period (min)	15					

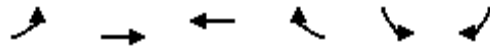
HCM 6th TWSC
400: Range Line Road & North D/W

01/28/2019

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	30	0	0	110
Future Vol, veh/h	0	0	30	0	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	0	0	33	0	0	120
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	153	33	0	0	33	0
Stage 1	33	-	-	-	-	-
Stage 2	120	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	839	1041	-	-	1566	-
Stage 1	989	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	839	1041	-	-	1566	-
Mov Cap-2 Maneuver	839	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1566	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
500: Good Hope Road & East D/W

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↓			↗
Traffic Volume (vph)	0	965	1265	0	0	0
Future Volume (vph)	0	965	1265	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	4893	5036	0	0	1863
Flt Permitted						
Satd. Flow (perm)	0	4893	5036	0	0	1863
Link Speed (mph)		40	40		25	
Link Distance (ft)		580	1405		353	
Travel Time (s)		9.9	23.9		9.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	3%	3%	2%	2%
Adj. Flow (vph)	0	1049	1375	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1049	1375	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type: Unsignalized						
Intersection Capacity Utilization 27.8%				ICU Level of Service A		
Analysis Period (min) 15						

HCM 6th TWSC
500: Good Hope Road & East D/W

01/28/2019

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑			↑↑
Traffic Vol, veh/h	0	965	1265	0	0	0
Future Vol, veh/h	0	965	1265	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	3	3	2	2
Mvmt Flow	0	1049	1375	0	0	0
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	688
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	333
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	333
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB		WB		SB	
HCM Control Delay, s	0		0		0	
HCM LOS					A	
Minor Lane/Major Mvmt	EBT		WBT	WBR	SBLn1	
Capacity (veh/h)	-		-	-	-	
HCM Lane V/C Ratio	-		-	-	-	
HCM Control Delay (s)	-		-	-	0	
HCM Lane LOS	-		-	-	A	
HCM 95th %tile Q(veh)	-		-	-	-	

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1235	55	50	855	10	60	30	80	5	30	15
Future Volume (vph)	25	1235	55	50	855	10	60	30	80	5	30	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		100	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.998				0.850			0.850
Flt Protected	0.950			0.950				0.968			0.993	
Satd. Flow (prot)	1787	5105	0	1770	5075	0	0	1821	1599	0	1850	1583
Flt Permitted	0.295			0.168				0.776			0.955	
Satd. Flow (perm)	555	5105	0	313	5075	0	0	1460	1599	0	1779	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3				42			42
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		495			580			596			444	
Travel Time (s)		8.4			9.9			13.5			10.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	27	1328	59	54	919	11	65	32	43	5	32	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	27	1387	0	54	930	0	0	97	43	0	37	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

TADI
existing pm peak

Synchro 10 Report
Page 1

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		6			2			8			4	
Permitted Phases	6			2			8		8	4		4
Detector Phase	6	6		2	2		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	17.7	17.7		17.7	17.7		17.0	17.0	17.0	17.0	17.0	17.0
Total Split (s)	30.7	30.7		30.7	30.7		40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	43.4%	43.4%		43.4%	43.4%		56.6%	56.6%	56.6%	56.6%	56.6%	56.6%
Maximum Green (s)	25.0	25.0		25.0	25.0		35.0	35.0	35.0	35.0	35.0	35.0
Yellow Time (s)	3.2	3.2		3.2	3.2		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	2.5	2.5		2.5	2.5		1.1	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Lost Time (s)	5.7	5.7		5.7	5.7			5.0	5.0		5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Gap (s)	1.0	1.0		1.0	1.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Time To Reduce (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	None
Act Effect Green (s)	25.3	25.3		25.3	25.3			12.4	12.4		12.4	12.4
Actuated g/C Ratio	0.59	0.59		0.59	0.59			0.29	0.29		0.29	0.29
v/c Ratio	0.08	0.46		0.29	0.31			0.23	0.09		0.07	0.02
Control Delay	7.2	7.7		12.8	6.7			14.6	5.9		12.7	0.0
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	0.0
Total Delay	7.2	7.7		12.8	6.7			14.6	5.9		12.7	0.0
LOS	A	A		B	A			B	A		B	A
Approach Delay		7.7			7.1			11.9			10.4	
Approach LOS		A			A			B			B	

Intersection Summary

Area Type: Other

Cycle Length: 70.7

Actuated Cycle Length: 42.7

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 7.7

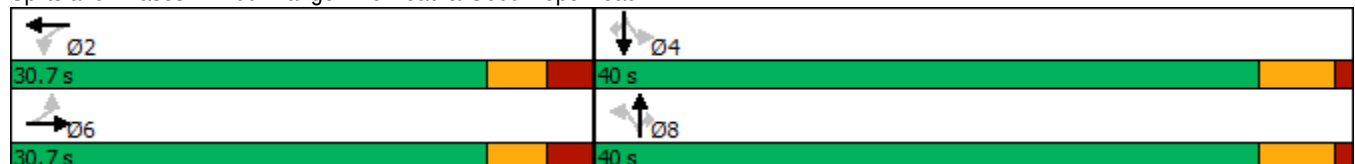
Intersection LOS: A

Intersection Capacity Utilization 60.3%

ICU Level of Service B

Analysis Period (min) 15

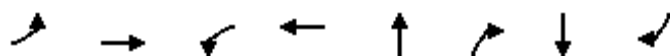
Splits and Phases: 100: Range Line Road & Good Hope Road



Queues

100: Range Line Road & Good Hope Road

01/28/2019



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	27	1387	54	930	97	43	37	8
v/c Ratio	0.08	0.46	0.29	0.31	0.23	0.09	0.07	0.02
Control Delay	7.2	7.7	12.8	6.7	14.6	5.9	12.7	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	7.7	12.8	6.7	14.6	5.9	12.7	0.0
Queue Length 50th (ft)	3	80	8	48	17	0	6	0
Queue Length 95th (ft)	13	114	32	71	51	17	24	0
Internal Link Dist (ft)		415		500	516		364	
Turn Bay Length (ft)	100		100			100		100
Base Capacity (vph)	364	3351	205	3329	1203	1325	1466	1312
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.41	0.26	0.28	0.08	0.03	0.03	0.01
Intersection Summary								

HCM 6th Signalized Intersection Summary

100: Range Line Road & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	1235	55	50	855	10	60	30	80	5	30	15
Future Volume (veh/h)	25	1235	55	50	855	10	60	30	80	5	30	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	27	1328	59	54	919	11	65	32	43	5	32	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	397	2386	106	290	2457	29	390	164	417	124	457	414
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	606	5051	224	390	5201	62	918	629	1598	84	1752	1585
Grp Volume(v), veh/h	27	902	485	54	601	329	97	0	43	37	0	8
Grp Sat Flow(s),veh/h/ln	606	1716	1845	390	1702	1859	1547	0	1598	1836	0	1585
Q Serve(g_s), s	1.2	7.6	7.6	4.6	4.5	4.5	0.8	0.0	0.8	0.0	0.0	0.2
Cycle Q Clear(g_c), s	5.7	7.6	7.6	12.2	4.5	4.5	1.8	0.0	0.8	0.6	0.0	0.2
Prop In Lane	1.00		0.12	1.00		0.03	0.67		1.00	0.14		1.00
Lane Grp Cap(c), veh/h	397	1621	871	290	1608	878	554	0	417	581	0	414
V/C Ratio(X)	0.07	0.56	0.56	0.19	0.37	0.37	0.18	0.00	0.10	0.06	0.00	0.02
Avail Cap(c_a), veh/h	489	2138	1149	349	2121	1158	1478	0	1393	1664	0	1382
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.6	7.6	7.6	11.9	6.8	6.8	11.6	0.0	11.3	11.2	0.0	11.0
Incr Delay (d2), s/veh	0.1	0.3	0.6	0.3	0.1	0.3	0.3	0.0	0.2	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.6	1.8	0.3	1.0	1.1	0.6	0.0	0.3	0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.7	7.9	8.1	12.2	6.9	7.1	11.9	0.0	11.5	11.3	0.0	11.1
LnGrp LOS	A	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h	1414			984			140			45		
Approach Delay, s/veh	8.0			7.3			11.8			11.2		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	24.7			15.5			24.7			15.5		
Change Period (Y+Rc), s	* 5.7			* 5			* 5.7			* 5		
Max Green Setting (Gmax), s	* 25			* 35			* 25			* 35		
Max Q Clear Time (g_c+I1), s	14.2			2.6			9.6			3.8		
Green Ext Time (p_c), s	4.8			0.3			8.1			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	8.0											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings
200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	55	1150	205	70	840	240	240	395	155	280	320	20
Future Volume (vph)	55	1150	205	70	840	240	240	395	155	280	320	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		130	90		140	170		80	170		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1752	5036	1568	1787	3574	1599	1770	3539	1583
Flt Permitted	0.950			0.950			0.545			0.323		
Satd. Flow (perm)	1768	5085	1562	1752	5036	1532	1025	3574	1576	601	3539	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			113			113			113
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1405			1177			802			706	
Travel Time (s)		23.9			20.1			13.7			12.0	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	50%	100%	100%	50%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	59	1237	110	75	903	129	258	425	83	301	344	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	1237	110	75	903	129	258	425	83	301	344	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

TADI
existing pm peak

Synchro 10 Report
Page 5

Lanes, Volumes, Timings

200: Green Bay Ave & Good Hope Road

01/28/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	6.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	13.5	24.9	24.9	13.5	24.9	24.9	10.5	24.8	24.8	10.5	24.8	24.8
Total Split (s)	25.5	46.9	46.9	25.5	46.9	46.9	24.5	36.8	36.8	24.5	36.8	36.8
Total Split (%)	19.1%	35.1%	35.1%	19.1%	35.1%	35.1%	18.3%	27.5%	27.5%	18.3%	27.5%	27.5%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	40.0	20.0	30.0	30.0	20.0	30.0	30.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.9	2.9	2.0	2.9	2.9	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	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 Lost Time (s)	5.5	6.9	6.9	5.5	6.9	6.9	4.5	6.8	6.8	4.5	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	2.4	2.4	3.0	2.4	2.4	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5
Time Before Reduce (s)	20.0	28.0	28.0	20.0	28.0	28.0	20.0	30.0	30.0	20.0	30.0	30.0
Time To Reduce (s)	0.0	12.0	12.0	0.0	12.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	10.0	31.9	31.9	10.8	32.7	32.7	35.7	18.2	18.2	41.4	21.1	21.1
Actuated g/C Ratio	0.10	0.32	0.32	0.11	0.33	0.33	0.36	0.18	0.18	0.42	0.21	0.21
v/c Ratio	0.33	0.76	0.19	0.40	0.55	0.22	0.54	0.65	0.22	0.66	0.46	0.03
Control Delay	53.9	35.2	6.2	54.3	30.0	8.2	26.0	45.2	4.7	29.7	39.7	0.1
Queue Delay	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 Delay	53.9	35.2	6.2	54.3	30.0	8.2	26.0	45.2	4.7	29.7	39.7	0.1
LOS	D	D	A	D	C	A	C	D	A	C	D	A
Approach Delay		33.7			29.1			34.3			34.4	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 133.7

Actuated Cycle Length: 99.6

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 32.7

Intersection LOS: C

Intersection Capacity Utilization 75.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 200: Green Bay Ave & Good Hope Road

Ø1	Ø2	Ø3	Ø4
25.5 s	46.9 s	24.5 s	36.8 s
Ø5	Ø6	Ø7	Ø8
25.5 s	46.9 s	24.5 s	36.8 s

TADI
existing pm peak

Synchro 10 Report
Page 6

Queues

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	1237	110	75	903	129	258	425	83	301	344	11
v/c Ratio	0.33	0.76	0.19	0.40	0.55	0.22	0.54	0.65	0.22	0.66	0.46	0.03
Control Delay	53.9	35.2	6.2	54.3	30.0	8.2	26.0	45.2	4.7	29.7	39.7	0.1
Queue Delay	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 Delay	53.9	35.2	6.2	54.3	30.0	8.2	26.0	45.2	4.7	29.7	39.7	0.1
Queue Length 50th (ft)	39	275	0	49	182	7	116	144	0	139	108	0
Queue Length 95th (ft)	89	379	40	106	257	53	206	217	23	243	177	0
Internal Link Dist (ft)	1325				1097				722			
Turn Bay Length (ft)	100		130	90		140	170		80	170		90
Base Capacity (vph)	380	2183	735	376	2176	726	582	1150	584	504	1139	579
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.57	0.15	0.20	0.41	0.18	0.44	0.37	0.14	0.60	0.30	0.02
Intersection Summary												

HCM 6th Signalized Intersection Summary

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	55	1150	205	70	840	240	240	395	155	280	320	20
Future Volume (veh/h)	55	1150	205	70	840	240	240	395	155	280	320	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	59	1237	110	75	903	129	258	425	83	301	344	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	2	2	2
Cap, veh/h	124	1637	497	136	1660	508	444	595	261	423	664	292
Arrive On Green	0.07	0.32	0.32	0.08	0.33	0.33	0.14	0.17	0.17	0.16	0.19	0.19
Sat Flow, veh/h	1781	5106	1549	1767	5066	1551	1795	3582	1573	1781	3554	1562
Grp Volume(v), veh/h	59	1237	110	75	903	129	258	425	83	301	344	11
Grp Sat Flow(s),veh/h/ln	1781	1702	1549	1767	1689	1551	1795	1791	1573	1781	1777	1562
Q Serve(g_s), s	2.8	18.9	4.5	3.6	12.7	5.3	10.1	9.8	4.0	11.9	7.6	0.5
Cycle Q Clear(g_c), s	2.8	18.9	4.5	3.6	12.7	5.3	10.1	9.8	4.0	11.9	7.6	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1637	497	136	1660	508	444	595	261	423	664	292
V/C Ratio(X)	0.47	0.76	0.22	0.55	0.54	0.25	0.58	0.71	0.32	0.71	0.52	0.04
Avail Cap(c_a), veh/h	409	2345	711	406	2326	712	598	1234	542	540	1224	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	26.5	21.6	38.8	24.0	21.5	24.5	34.4	32.0	24.3	31.9	29.0
Incr Delay (d2), s/veh	2.8	0.7	0.2	3.5	0.2	0.2	1.2	1.6	0.7	3.1	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.2	1.6	1.6	4.8	1.8	4.2	4.2	1.5	5.0	3.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	27.2	21.8	42.2	24.1	21.6	25.7	36.0	32.7	27.5	32.5	29.1
LnGrp LOS	D	C	C	D	C	C	C	D	C	C	C	C
Approach Vol, veh/h		1406			1107			766			656	
Approach Delay, s/veh		27.4			25.1			32.2			30.1	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	35.4	17.0	23.1	12.2	34.8	18.8	21.3				
Change Period (Y+Rc), s	5.5	6.9	4.5	* 6.8	5.5	6.9	4.5	* 6.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	* 30	20.0	40.0	20.0	* 30				
Max Q Clear Time (g_c+I1), s	4.8	14.7	12.1	9.6	5.6	20.9	13.9	11.8				
Green Ext Time (p_c), s	0.1	5.4	0.4	2.0	0.1	7.0	0.5	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			28.1									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
300: Range Line Road & Green Bay Ave

01/28/2019

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	25	1	510	50	5
Future Volume (vph)	550	25	1	510	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994				0.989	
Flt Protected					0.956	
Satd. Flow (prot)	1870	0	0	1863	1779	0
Flt Permitted					0.956	
Satd. Flow (perm)	1870	0	0	1863	1779	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	145			802	3307	
Travel Time (s)	2.5			13.7	75.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%
Adj. Flow (vph)	598	27	1	554	54	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	625	0	0	555	59	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	40.5%			ICU Level of Service A		
Analysis Period (min)	15					

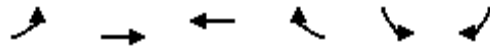
HCM 6th TWSC
300: Range Line Road & Green Bay Ave

01/28/2019

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	550	25	1	510	50	5
Future Vol, veh/h	550	25	1	510	50	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	1	1
Mvmt Flow	598	27	1	554	54	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	625	0	1168	612
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	556	-
Critical Hdwy	-	-	4.12	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	956	-	215	495
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	576	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	956	-	215	495
Mov Cap-2 Maneuver	-	-	-	-	215	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	576	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		26.4	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	227	-	-	956	-	
HCM Lane V/C Ratio	0.263	-	-	0.001	-	
HCM Control Delay (s)	26.4	-	-	8.8	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	1	-	-	0	-	

Lanes, Volumes, Timings
325: Green Bay Ave & Range Line Road

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	550	510	55	45	1
Future Volume (vph)	1	550	510	55	45	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.987		0.997	
Flt Protected					0.953	
Satd. Flow (prot)	0	1881	1839	0	1736	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	1881	1839	0	1736	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		846	145		596	
Travel Time (s)		14.4	2.5		13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	2%	4%	4%
Adj. Flow (vph)	1	598	554	60	49	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	599	614	0	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 40.2% ICU Level of Service A						
Analysis Period (min) 15						

HCM 6th TWSC
325: Green Bay Ave & Range Line Road

01/28/2019

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	550	510	55	45	1
Future Vol, veh/h	1	550	510	55	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	4	4
Mvmt Flow	1	598	554	60	49	1
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	614	0	-	0	1184	584
Stage 1	-	-	-	-	584	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.11	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.209	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	970	-	-	-	207	508
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	970	-	-	-	207	508
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	544	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		27.4		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	970	-	-	-	210	
HCM Lane V/C Ratio	0.001	-	-	-	0.238	
HCM Control Delay (s)	8.7	0	-	-	27.4	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	0.9	

Lanes, Volumes, Timings
400: Range Line Road & North D/W

01/28/2019

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	0	65	0	0	50
Future Volume (vph)	0	0	65	0	0	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	1881	1881	0	1863
Flt Permitted						
Satd. Flow (perm)	1863	0	1881	1881	0	1863
Link Speed (mph)	25		30			30
Link Distance (ft)	499		444			3307
Travel Time (s)	13.6		10.1			75.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Adj. Flow (vph)	0	0	71	0	0	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	71	0	0	54
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	6.8%			ICU Level of Service A		
Analysis Period (min)	15					

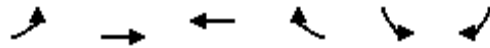
HCM 6th TWSC
400: Range Line Road & North D/W

01/28/2019

Intersection						
Int Delay, s/veh	0					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	65	0	0	50
Future Vol, veh/h	0	0	65	0	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	2	2
Mvmt Flow	0	0	71	0	0	54
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	125	71	0	0	71	0
Stage 1	71	-	-	-	-	-
Stage 2	54	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	870	991	-	-	1529	-
Stage 1	952	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	870	991	-	-	1529	-
Mov Cap-2 Maneuver	870	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	969	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	-	1529	-	
HCM Lane V/C Ratio	-	-	-	-	-	
HCM Control Delay (s)	-	-	0	0	-	
HCM Lane LOS	-	-	A	A	-	
HCM 95th %tile Q(veh)	-	-	-	0	-	

Lanes, Volumes, Timings
500: Good Hope Road & East D/W

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↓			↗
Traffic Volume (vph)	0	1410	1100	0	0	0
Future Volume (vph)	0	1410	1100	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	0	5136	5085	0	0	1863
Flt Permitted						
Satd. Flow (perm)	0	5136	5085	0	0	1863
Link Speed (mph)		40	40		25	
Link Distance (ft)		580	1405		353	
Travel Time (s)		9.9	23.9		9.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	2%	2%	2%
Adj. Flow (vph)	0	1533	1196	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1533	1196	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 30.6% ICU Level of Service A						
Analysis Period (min) 15						

HCM 6th TWSC
500: Good Hope Road & East D/W

01/28/2019

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑			↑↑
Traffic Vol, veh/h	0	1410	1100	0	0	0
Future Vol, veh/h	0	1410	1100	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	2	2
Mvmt Flow	0	1533	1196	0	0	0
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	598
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	382
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	382
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		0		
HCM LOS				A		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	-		
HCM Lane V/C Ratio	-	-	-	-		
HCM Control Delay (s)	-	-	-	0		
HCM Lane LOS	-	-	-	A		
HCM 95th %tile Q(veh)	-	-	-	-		

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	830	60	60	1230	5	70	15	65	25	40	65
Future Volume (vph)	15	830	60	60	1230	5	70	15	65	25	40	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		100	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.990			0.999				0.850			0.850
Flt Protected	0.950			0.950				0.960			0.981	
Satd. Flow (prot)	1703	4844	0	1752	5031	0	0	1806	1599	0	1792	1553
Flt Permitted	0.189			0.287				0.716			0.834	
Satd. Flow (perm)	339	4844	0	529	5031	0	0	1347	1599	0	1524	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18			1				42			42
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		495			580			596			444	
Travel Time (s)		8.4			9.9			13.5			10.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	6%	6%	6%	3%	3%	3%	1%	1%	1%	4%	4%	4%
Adj. Flow (vph)	16	892	65	65	1323	5	75	16	35	27	43	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	16	957	0	65	1328	0	0	91	35	0	70	35
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8		8	4		4
Detector Phase	6	6		2	2		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	17.7	17.7		17.7	17.7		17.0	17.0	17.0	17.0	17.0	17.0
Total Split (s)	30.7	30.7		30.7	30.7		40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	43.4%	43.4%		43.4%	43.4%		56.6%	56.6%	56.6%	56.6%	56.6%	56.6%
Maximum Green (s)	25.0	25.0		25.0	25.0		35.0	35.0	35.0	35.0	35.0	35.0
Yellow Time (s)	3.2	3.2		3.2	3.2		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	2.5	2.5		2.5	2.5		1.1	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7		5.7	5.7		5.0	5.0		5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Gap (s)	1.0	1.0		1.0	1.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Time To Reduce (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	None
Act Effect Green (s)	26.0	26.0		26.0	26.0		12.4	12.4		12.4	12.4	12.4
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.32	0.32		0.32	0.32	0.32
v/c Ratio	0.07	0.29		0.18	0.39		0.21	0.06		0.14	0.07	0.07
Control Delay	7.8	5.8		8.6	6.5		12.9	4.8		12.2	4.8	4.8
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	7.8	5.8		8.6	6.5		12.9	4.8		12.2	4.8	4.8
LOS	A	A		A	A		B	A		B	A	A
Approach Delay		5.9			6.6		10.7				9.7	
Approach LOS		A			A		B				A	

Intersection Summary

Area Type: Other

Cycle Length: 70.7

Actuated Cycle Length: 38.4

Natural Cycle: 40

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.39

Intersection Signal Delay: 6.7

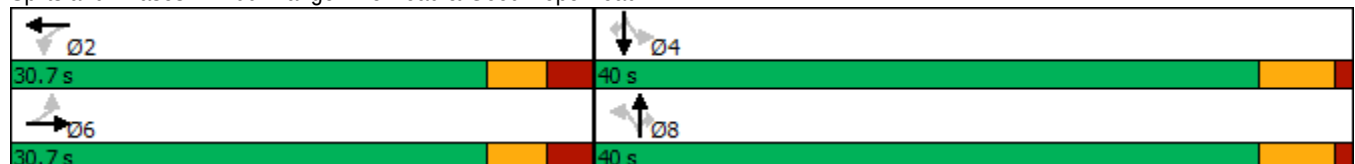
Intersection LOS: A

Intersection Capacity Utilization 58.9%

ICU Level of Service B

Analysis Period (min) 15

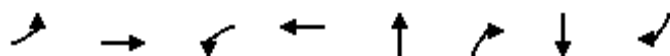
Splits and Phases: 100: Range Line Road & Good Hope Road



Queues

100: Range Line Road & Good Hope Road

01/28/2019



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	16	957	65	1328	91	35	70	35
v/c Ratio	0.07	0.29	0.18	0.39	0.21	0.06	0.14	0.07
Control Delay	7.8	5.8	8.6	6.5	12.9	4.8	12.2	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.8	5.8	8.6	6.5	12.9	4.8	12.2	4.8
Queue Length 50th (ft)	2	49	9	76	17	0	13	0
Queue Length 95th (ft)	10	75	29	112	45	13	36	13
Internal Link Dist (ft)		415		500	516		364	
Turn Bay Length (ft)	100		100			100		100
Base Capacity (vph)	254	3639	397	3775	1199	1428	1357	1387
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.06	0.26	0.16	0.35	0.08	0.02	0.05	0.03
Intersection Summary								

HCM 6th Signalized Intersection Summary

100: Range Line Road & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  							
Traffic Volume (veh/h)	15	830	60	60	1230	5	70	15	65	25	40	65
Future Volume (veh/h)	15	830	60	60	1230	5	70	15	65	25	40	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1811	1811	1811	1856	1856	1856	1885	1885	1885	1841	1841	1841
Adj Flow Rate, veh/h	16	892	65	65	1323	5	75	16	35	27	43	35
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	6	6	6	3	3	3	1	1	1	4	4	4
Cap, veh/h	288	2144	156	371	2374	9	451	81	442	250	336	432
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	400	4704	342	582	5209	20	1038	294	1598	453	1215	1560
Grp Volume(v), veh/h	16	624	333	65	858	470	91	0	35	70	0	35
Grp Sat Flow(s),veh/h/ln	400	1648	1750	582	1689	1852	1332	0	1598	1668	0	1560
Q Serve(g_s), s	1.2	5.1	5.1	3.4	7.4	7.4	1.5	0.0	0.6	0.0	0.0	0.7
Cycle Q Clear(g_c), s	8.6	5.1	5.1	8.5	7.4	7.4	2.6	0.0	0.6	1.1	0.0	0.7
Prop In Lane	1.00		0.20	1.00		0.01	0.82		1.00	0.39		1.00
Lane Grp Cap(c), veh/h	288	1502	797	371	1539	844	533	0	442	586	0	432
V/C Ratio(X)	0.06	0.42	0.42	0.18	0.56	0.56	0.17	0.00	0.08	0.12	0.00	0.08
Avail Cap(c_a), veh/h	356	2059	1093	469	2110	1157	1372	0	1397	1546	0	1364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.1	7.3	7.3	10.2	7.9	7.9	11.5	0.0	10.7	10.9	0.0	10.7
Incr Delay (d2), s/veh	0.1	0.2	0.3	0.2	0.3	0.6	0.3	0.0	0.2	0.2	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.1	1.2	0.3	1.6	1.8	0.6	0.0	0.2	0.4	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.2	7.5	7.7	10.4	8.3	8.5	11.8	0.0	10.9	11.1	0.0	10.9
LnGrp LOS	B	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h		973			1393			126			105	
Approach Delay, s/veh		7.6			8.4			11.5			11.0	
Approach LOS		A			A			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.9		16.1		23.9		16.1				
Change Period (Y+Rc), s		* 5.7		* 5		* 5.7		* 5				
Max Green Setting (Gmax), s		* 25		* 35		* 25		* 35				
Max Q Clear Time (g_c+I1), s		10.5		3.1		10.6		4.6				
Green Ext Time (p_c), s		7.7		1.0		5.4		1.2				
Intersection Summary												
HCM 6th Ctrl Delay				8.4								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	5	725	250	80	1055	140	170	225	85	305	580	45
Future Volume (vph)	5	725	250	80	1055	140	170	225	85	305	580	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		130	90		140	170		80	170		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	4803	1495	1719	4940	1538	1687	3374	1509	1770	3539	1583
Flt Permitted	0.950			0.950			0.368			0.474		
Satd. Flow (perm)	1670	4803	1475	1718	4940	1503	653	3374	1488	882	3539	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			113			113			113
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1405			1177			802			706	
Travel Time (s)		23.9			20.1			13.7			12.0	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	50%	100%	100%	50%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	8%	8%	8%	5%	5%	5%	7%	7%	7%	2%	2%	2%
Adj. Flow (vph)	5	755	130	83	1099	73	177	234	44	318	604	23
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	755	130	83	1099	73	177	234	44	318	604	23
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

200: Green Bay Ave & Good Hope Road

01/28/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	6.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	13.5	24.9	24.9	13.5	24.9	24.9	10.5	24.8	24.8	10.5	24.8	24.8
Total Split (s)	25.5	46.9	46.9	25.5	46.9	46.9	24.5	36.8	36.8	24.5	36.8	36.8
Total Split (%)	19.1%	35.1%	35.1%	19.1%	35.1%	35.1%	18.3%	27.5%	27.5%	18.3%	27.5%	27.5%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	40.0	20.0	30.0	30.0	20.0	30.0	30.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.9	2.9	2.0	2.9	2.9	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	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 Lost Time (s)	5.5	6.9	6.9	5.5	6.9	6.9	4.5	6.8	6.8	4.5	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	2.4	2.4	3.0	2.4	2.4	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5
Time Before Reduce (s)	20.0	28.0	28.0	20.0	28.0	28.0	20.0	30.0	30.0	20.0	30.0	30.0
Time To Reduce (s)	0.0	12.0	12.0	0.0	12.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	8.5	22.7	22.7	10.8	33.1	33.1	29.9	16.1	16.1	40.4	22.1	22.1
Actuated g/C Ratio	0.10	0.26	0.26	0.12	0.38	0.38	0.34	0.18	0.18	0.46	0.25	0.25
v/c Ratio	0.03	0.61	0.28	0.40	0.59	0.11	0.50	0.38	0.12	0.55	0.68	0.05
Control Delay	47.2	33.0	10.2	47.2	24.5	1.9	22.1	35.6	0.7	21.3	36.1	0.2
Queue Delay	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 Delay	47.2	33.0	10.2	47.2	24.5	1.9	22.1	35.6	0.7	21.3	36.1	0.2
LOS	D	C	B	D	C	A	C	D	A	C	D	A
Approach Delay		29.8			24.7			27.0			30.3	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 133.7

Actuated Cycle Length: 87.9

Natural Cycle: 75

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 27.8

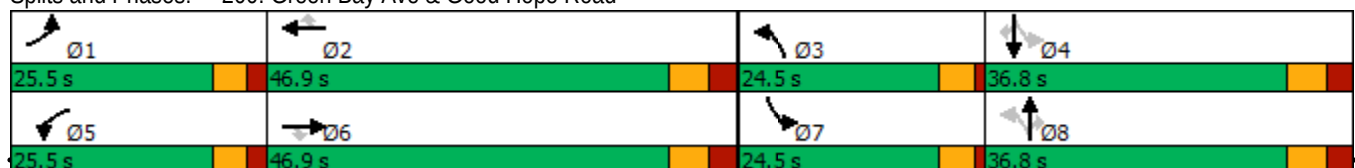
Intersection LOS: C

Intersection Capacity Utilization 72.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 200: Green Bay Ave & Good Hope Road



TADI

2019 full build am peak

Synchro 10 Report

Page 6

Queues

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	5	755	130	83	1099	73	177	234	44	318	604	23
v/c Ratio	0.03	0.61	0.28	0.40	0.59	0.11	0.50	0.38	0.12	0.55	0.68	0.05
Control Delay	47.2	33.0	10.2	47.2	24.5	1.9	22.1	35.6	0.7	21.3	36.1	0.2
Queue Delay	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 Delay	47.2	33.0	10.2	47.2	24.5	1.9	22.1	35.6	0.7	21.3	36.1	0.2
Queue Length 50th (ft)	3	138	7	44	161	0	58	62	0	114	160	0
Queue Length 95th (ft)	17	227	58	110	314	12	129	115	0	231	283	0
Internal Link Dist (ft)	1325				1097				722			
Turn Bay Length (ft)	100		130	90		140	170		80	170		90
Base Capacity (vph)	402	2315	769	414	2399	788	536	1219	610	619	1279	636
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.33	0.17	0.20	0.46	0.09	0.33	0.19	0.07	0.51	0.47	0.04
Intersection Summary												

HCM 6th Signalized Intersection Summary

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	5	725	250	80	1055	140	170	225	85	305	580	45
Future Volume (veh/h)	5	725	250	80	1055	140	170	225	85	305	580	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1781	1781	1781	1826	1826	1826	1796	1796	1796	1870	1870	1870
Adj Flow Rate, veh/h	5	755	130	83	1099	73	177	234	44	318	604	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	8	8	8	5	5	5	7	7	7	2	2	2
Cap, veh/h	18	1136	344	157	1561	478	351	593	260	532	833	366
Arrive On Green	0.01	0.23	0.23	0.09	0.31	0.31	0.11	0.17	0.17	0.17	0.23	0.23
Sat Flow, veh/h	1697	4863	1474	1739	4985	1526	1711	3413	1499	1781	3554	1563
Grp Volume(v), veh/h	5	755	130	83	1099	73	177	234	44	318	604	23
Grp Sat Flow(s),veh/h/ln	1697	1621	1474	1739	1662	1526	1711	1706	1499	1781	1777	1563
Q Serve(g_s), s	0.2	10.1	5.3	3.3	13.9	2.5	5.9	4.4	1.8	9.8	11.3	0.8
Cycle Q Clear(g_c), s	0.2	10.1	5.3	3.3	13.9	2.5	5.9	4.4	1.8	9.8	11.3	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	1136	344	157	1561	478	351	593	260	532	833	366
V/C Ratio(X)	0.28	0.66	0.38	0.53	0.70	0.15	0.50	0.39	0.17	0.60	0.73	0.06
Avail Cap(c_a), veh/h	473	2710	821	484	2777	850	636	1426	627	721	1485	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	25.0	23.1	31.2	21.7	17.8	20.9	26.3	25.2	17.6	25.4	21.4
Incr Delay (d2), s/veh	8.2	0.5	0.5	2.8	0.4	0.1	1.1	0.4	0.3	1.1	1.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	3.6	1.7	1.4	4.9	0.8	2.3	1.7	0.6	3.7	4.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.4	25.4	23.6	34.0	22.1	17.9	22.0	26.7	25.6	18.7	26.6	21.4
LnGrp LOS	D	C	C	C	C	B	C	C	C	B	C	C
Approach Vol, veh/h		890			1255			455			945	
Approach Delay, s/veh		25.3			22.7			24.8			23.8	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	29.4	12.5	23.6	12.0	23.7	16.9	19.3				
Change Period (Y+Rc), s	5.5	6.9	4.5	* 6.8	5.5	6.9	4.5	* 6.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	* 30	20.0	40.0	20.0	* 30				
Max Q Clear Time (g_c+I1), s	2.2	15.9	7.9	13.3	5.3	12.1	11.8	6.4				
Green Ext Time (p_c), s	0.0	6.5	0.3	3.6	0.1	4.5	0.6	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			23.9									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
300: Range Line Road & Green Bay Ave

01/28/2019

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	695	65	5	365	25	5
Future Volume (vph)	695	65	5	365	25	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.988				0.979	
Flt Protected				0.999	0.960	
Satd. Flow (prot)	1840	0	0	1861	1594	0
Flt Permitted				0.999	0.960	
Satd. Flow (perm)	1840	0	0	1861	1594	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	145			802	3307	
Travel Time (s)	2.5			13.7	75.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	12%	12%
Adj. Flow (vph)	755	71	5	397	27	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	826	0	0	402	32	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	50.5%			ICU Level of Service A		
Analysis Period (min)	15					

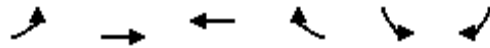
HCM 6th TWSC
300: Range Line Road & Green Bay Ave

01/28/2019

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	695	65	5	365	25	5
Future Vol, veh/h	695	65	5	365	25	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	12	12
Mvmt Flow	755	71	5	397	27	5
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	826	0	1198	791
Stage 1	-	-	-	-	791	-
Stage 2	-	-	-	-	407	-
Critical Hdwy	-	-	4.12	-	6.52	6.32
Critical Hdwy Stg 1	-	-	-	-	5.52	-
Critical Hdwy Stg 2	-	-	-	-	5.52	-
Follow-up Hdwy	-	-	2.218	-	3.608	3.408
Pot Cap-1 Maneuver	-	-	805	-	196	374
Stage 1	-	-	-	-	430	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	805	-	194	374
Mov Cap-2 Maneuver	-	-	-	-	194	-
Stage 1	-	-	-	-	427	-
Stage 2	-	-	-	-	651	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.1		25.2		
HCM LOS	D					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	211	-	-	805	-	
HCM Lane V/C Ratio	0.155	-	-	0.007	-	
HCM Control Delay (s)	25.2	-	-	9.5	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0	-	

Lanes, Volumes, Timings
325: Green Bay Ave & Range Line Road

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	695	365	30	70	1
Future Volume (vph)	1	695	365	30	70	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.990		0.998	
Flt Protected					0.953	
Satd. Flow (prot)	0	1863	1844	0	1689	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	1863	1844	0	1689	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		846	145		596	
Travel Time (s)		14.4	2.5		13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	2%	7%	7%
Adj. Flow (vph)	1	755	397	33	76	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	756	430	0	77	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 48.0% ICU Level of Service A						
Analysis Period (min) 15						

HCM 6th TWSC
325: Green Bay Ave & Range Line Road

01/28/2019

Intersection						
Int Delay, s/veh	1.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	695	365	30	70	1
Future Vol, veh/h	1	695	365	30	70	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	7	7
Mvmt Flow	1	755	397	33	76	1
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	430	0	-	0	1171	414
Stage 1	-	-	-	-	414	-
Stage 2	-	-	-	-	757	-
Critical Hdwy	4.12	-	-	-	6.47	6.27
Critical Hdwy Stg 1	-	-	-	-	5.47	-
Critical Hdwy Stg 2	-	-	-	-	5.47	-
Follow-up Hdwy	2.218	-	-	-	3.563	3.363
Pot Cap-1 Maneuver	1129	-	-	-	208	628
Stage 1	-	-	-	-	657	-
Stage 2	-	-	-	-	454	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1129	-	-	-	208	628
Mov Cap-2 Maneuver	-	-	-	-	208	-
Stage 1	-	-	-	-	656	-
Stage 2	-	-	-	-	454	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		31.8		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1129	-	-	-	210	
HCM Lane V/C Ratio	0.001	-	-	-	0.367	
HCM Control Delay (s)	8.2	0	-	-	31.8	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	1.6	

Lanes, Volumes, Timings
400: Range Line Road & North D/W

01/28/2019

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	20	1	30	5	1	110
Future Volume (vph)	20	1	30	5	1	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994			0.850		
Flt Protected	0.954					
Satd. Flow (prot)	1766	0	1881	1599	0	1827
Flt Permitted	0.954					
Satd. Flow (perm)	1766	0	1881	1599	0	1827
Link Speed (mph)	25		30			30
Link Distance (ft)	499		444			3307
Travel Time (s)	13.6		10.1			75.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	4%	4%
Adj. Flow (vph)	22	1	33	5	1	120
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	33	5	0	121
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	16.6%			ICU Level of Service A		
Analysis Period (min)	15					

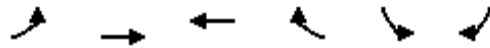
HCM 6th TWSC
400: Range Line Road & North D/W

01/28/2019

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	20	1	30	5	1	110
Future Vol, veh/h	20	1	30	5	1	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	4	4
Mvmt Flow	22	1	33	5	1	120
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	155	33	0	0	38	0
Stage 1	33	-	-	-	-	-
Stage 2	122	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	836	1041	-	-	1559	-
Stage 1	989	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	835	1041	-	-	1559	-
Mov Cap-2 Maneuver	835	-	-	-	-	-
Stage 1	988	-	-	-	-	-
Stage 2	903	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.4	0		0.1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	843	1559	-	
HCM Lane V/C Ratio	-	-	0.027	0.001	-	
HCM Control Delay (s)	-	-	9.4	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanes, Volumes, Timings
500: Good Hope Road & East D/W

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↓			↗
Traffic Volume (vph)	0	920	1290	5	0	5
Future Volume (vph)	0	920	1290	5	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt			0.999			0.865
Flt Protected						
Satd. Flow (prot)	0	4893	5031	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	4893	5031	0	0	1611
Link Speed (mph)		40	40		25	
Link Distance (ft)		580	1405		353	
Travel Time (s)		9.9	23.9		9.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	3%	3%	2%	2%
Adj. Flow (vph)	0	1000	1402	5	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1000	1407	0	0	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 35.0% ICU Level of Service A						
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↑			↑↑
Traffic Vol, veh/h	0	920	1290	5	0	5
Future Vol, veh/h	0	920	1290	5	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	6	6	3	3	2	2
Mvmt Flow	0	1000	1402	5	0	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	704
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	325
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	325
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		16.3		
HCM LOS				C		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	325		
HCM Lane V/C Ratio	-	-	-	0.017		
HCM Control Delay (s)	-	-	-	16.3		
HCM Lane LOS	-	-	-	C		
HCM 95th %tile Q(veh)	-	-	-	0.1		

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	1235	55	50	860	10	60	30	80	20	30	15
Future Volume (vph)	35	1235	55	50	860	10	60	30	80	20	30	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	0		100	0		100
Storage Lanes	1		0	1		0	0		1	0		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.998				0.850			0.850
Flt Protected	0.950			0.950				0.968			0.980	
Satd. Flow (prot)	1787	5105	0	1770	5075	0	0	1821	1599	0	1825	1583
Flt Permitted	0.293			0.172				0.766			0.851	
Satd. Flow (perm)	551	5105	0	320	5075	0	0	1441	1599	0	1585	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10			3				42			42
Link Speed (mph)		40			40			30			30	
Link Distance (ft)		495			580			596			444	
Travel Time (s)		8.4			9.9			13.5			10.1	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	38	1328	59	54	925	11	65	32	43	22	32	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	1387	0	54	936	0	0	97	43	0	54	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2	1	1	2	1
Detector Template	Left	Thru		Left	Thru		Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100		20	100		20	100	20	20	100	20
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	20	6		20	6		20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm

Lanes, Volumes, Timings
100: Range Line Road & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	6			2			8			4		
Permitted Phases	6			2			8		8	4		4
Detector Phase	6	6		2	2		8	8	8	4	4	4
Switch Phase												
Minimum Initial (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Minimum Split (s)	17.7	17.7		17.7	17.7		17.0	17.0	17.0	17.0	17.0	17.0
Total Split (s)	30.7	30.7		30.7	30.7		40.0	40.0	40.0	40.0	40.0	40.0
Total Split (%)	43.4%	43.4%		43.4%	43.4%		56.6%	56.6%	56.6%	56.6%	56.6%	56.6%
Maximum Green (s)	25.0	25.0		25.0	25.0		35.0	35.0	35.0	35.0	35.0	35.0
Yellow Time (s)	3.2	3.2		3.2	3.2		3.9	3.9	3.9	3.9	3.9	3.9
All-Red Time (s)	2.5	2.5		2.5	2.5		1.1	1.1	1.1	1.1	1.1	1.1
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.7	5.7		5.7	5.7		5.0	5.0		5.0	5.0	5.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Gap (s)	1.0	1.0		1.0	1.0		3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	12.0	12.0		12.0	12.0		12.0	12.0	12.0	12.0	12.0	12.0
Time To Reduce (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Recall Mode	Min	Min		Min	Min		None	None	None	None	None	None
Act Effect Green (s)	24.7	24.7		24.7	24.7		12.4	12.4		12.4	12.4	12.4
Actuated g/C Ratio	0.59	0.59		0.59	0.59		0.29	0.29		0.29	0.29	0.29
v/c Ratio	0.12	0.46		0.29	0.31		0.23	0.09		0.12	0.02	0.02
Control Delay	7.7	7.8		12.6	6.8		14.4	5.9		13.1	0.0	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	7.7	7.8		12.6	6.8		14.4	5.9		13.1	0.0	0.0
LOS	A	A		B	A		B	A		B	A	A
Approach Delay		7.8			7.1		11.8			11.4		
Approach LOS		A			A		B			B		

Intersection Summary

Area Type: Other

Cycle Length: 70.7

Actuated Cycle Length: 42.1

Natural Cycle: 50

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.46

Intersection Signal Delay: 7.8

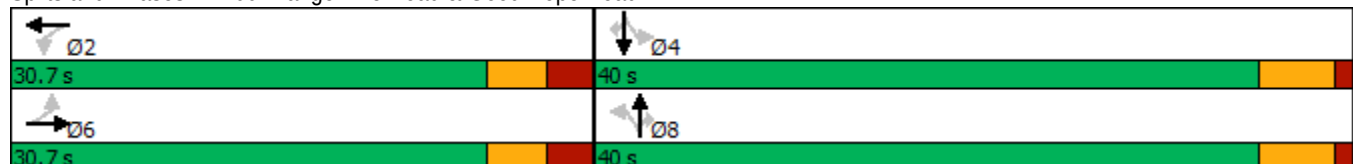
Intersection LOS: A

Intersection Capacity Utilization 60.3%

ICU Level of Service B

Analysis Period (min) 15

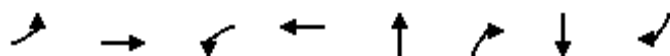
Splits and Phases: 100: Range Line Road & Good Hope Road



Queues

100: Range Line Road & Good Hope Road

01/28/2019



Lane Group	EBL	EBT	WBL	WBT	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	38	1387	54	936	97	43	54	8
v/c Ratio	0.12	0.46	0.29	0.31	0.23	0.09	0.12	0.02
Control Delay	7.7	7.8	12.6	6.8	14.4	5.9	13.1	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.7	7.8	12.6	6.8	14.4	5.9	13.1	0.0
Queue Length 50th (ft)	5	80	8	48	17	0	9	0
Queue Length 95th (ft)	17	114	31	71	52	17	32	0
Internal Link Dist (ft)		415		500	516		364	
Turn Bay Length (ft)	100		100			100		100
Base Capacity (vph)	359	3335	209	3313	1201	1340	1321	1326
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.42	0.26	0.28	0.08	0.03	0.04	0.01
Intersection Summary								

HCM 6th Signalized Intersection Summary

100: Range Line Road & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	1235	55	50	860	10	60	30	80	20	30	15
Future Volume (veh/h)	35	1235	55	50	860	10	60	30	80	20	30	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	38	1328	59	54	925	11	65	32	43	22	32	8
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	392	2378	106	287	2449	29	393	166	424	254	314	421
Arrive On Green	0.47	0.47	0.47	0.47	0.47	0.47	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	603	5051	224	390	5201	62	921	625	1598	487	1183	1585
Grp Volume(v), veh/h	38	902	485	54	605	331	97	0	43	54	0	8
Grp Sat Flow(s),veh/h/ln	603	1716	1845	390	1702	1859	1546	0	1598	1670	0	1585
Q Serve(g_s), s	1.8	7.7	7.7	4.7	4.6	4.6	0.8	0.0	0.8	0.0	0.0	0.2
Cycle Q Clear(g_c), s	6.4	7.7	7.7	12.3	4.6	4.6	1.8	0.0	0.8	0.9	0.0	0.2
Prop In Lane	1.00		0.12	1.00		0.03	0.67		1.00	0.41		1.00
Lane Grp Cap(c), veh/h	392	1615	869	287	1603	875	559	0	424	568	0	421
V/C Ratio(X)	0.10	0.56	0.56	0.19	0.38	0.38	0.17	0.00	0.10	0.10	0.00	0.02
Avail Cap(c_a), veh/h	480	2114	1137	344	2098	1146	1462	0	1378	1525	0	1367
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.0	7.7	7.7	12.1	6.9	6.9	11.6	0.0	11.2	11.3	0.0	11.0
Incr Delay (d2), s/veh	0.1	0.3	0.6	0.3	0.1	0.3	0.3	0.0	0.2	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.7	1.9	0.3	1.0	1.1	0.6	0.0	0.3	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	8.0	8.3	12.4	7.1	7.2	11.9	0.0	11.5	11.4	0.0	11.0
LnGrp LOS	A	A	A	B	A	A	B	A	B	B	A	B
Approach Vol, veh/h	1425			990			140			62		
Approach Delay, s/veh	8.1			7.4			11.8			11.4		
Approach LOS	A			A			B			B		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	24.8			15.8			24.8			15.8		
Change Period (Y+Rc), s	* 5.7			* 5			* 5.7			* 5		
Max Green Setting (Gmax), s	* 25			* 35			* 25			* 35		
Max Q Clear Time (g_c+I1), s	14.3			2.9			9.7			3.8		
Green Ext Time (p_c), s	4.8			0.5			8.1			1.3		
Intersection Summary												
HCM 6th Ctrl Delay	8.1											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings
200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	55	1160	210	70	850	240	245	395	155	280	320	20
Future Volume (vph)	55	1160	210	70	850	240	245	395	155	280	320	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		130	90		140	170		80	170		90
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor	1.00		0.99	1.00		0.98	1.00		0.99	1.00		0.99
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	5085	1583	1752	5036	1568	1787	3574	1599	1770	3539	1583
Flt Permitted	0.950			0.950			0.545			0.325		
Satd. Flow (perm)	1768	5085	1562	1752	5036	1532	1025	3574	1576	605	3539	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			113			113			113			113
Link Speed (mph)		40			40			40			40	
Link Distance (ft)		1405			1177			802			706	
Travel Time (s)		23.9			20.1			13.7			12.0	
Confl. Peds. (#/hr)	1		1	1		1	1		1	1		1
Confl. Bikes (#/hr)			1			1			1			1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	50%	100%	100%	50%	100%	100%	50%	100%	100%	50%
Heavy Vehicles (%)	2%	2%	2%	3%	3%	3%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	59	1247	113	75	914	129	263	425	83	301	344	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	59	1247	113	75	914	129	263	425	83	301	344	11
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2	1	1	2	1	1	2	1
Detector Template	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100	20	20	100	20	20	100	20
Trailing Detector (ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	20	20	6	20	20	6	20	20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	

Lanes, Volumes, Timings

200: Green Bay Ave & Good Hope Road

01/28/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	1	6		5	2		3	8		7	4	
Permitted Phases			6			2	8		8	4		4
Detector Phase	1	6	6	5	2	2	3	8	8	7	4	4
Switch Phase												
Minimum Initial (s)	8.0	15.0	15.0	8.0	15.0	15.0	6.0	10.0	10.0	6.0	10.0	10.0
Minimum Split (s)	13.5	24.9	24.9	13.5	24.9	24.9	10.5	24.8	24.8	10.5	24.8	24.8
Total Split (s)	25.5	46.9	46.9	25.5	46.9	46.9	24.5	36.8	36.8	24.5	36.8	36.8
Total Split (%)	19.1%	35.1%	35.1%	19.1%	35.1%	35.1%	18.3%	27.5%	27.5%	18.3%	27.5%	27.5%
Maximum Green (s)	20.0	40.0	40.0	20.0	40.0	40.0	20.0	30.0	30.0	20.0	30.0	30.0
Yellow Time (s)	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0	3.5	4.0	4.0
All-Red Time (s)	2.0	2.9	2.9	2.0	2.9	2.9	1.0	2.8	2.8	1.0	2.8	2.8
Lost Time Adjust (s)	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 Lost Time (s)	5.5	6.9	6.9	5.5	6.9	6.9	4.5	6.8	6.8	4.5	6.8	6.8
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	2.4	2.4	3.0	2.4	2.4	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	1.5	2.0	2.0	1.5	2.0	2.0	1.5	1.5	1.5	1.5	1.5	1.5
Time Before Reduce (s)	20.0	28.0	28.0	20.0	28.0	28.0	20.0	30.0	30.0	20.0	30.0	30.0
Time To Reduce (s)	0.0	12.0	12.0	0.0	12.0	12.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	Min	None	Min	Min	None	None	None	None	None	None
Act Effect Green (s)	10.0	32.3	32.3	10.8	33.1	33.1	36.0	18.3	18.3	41.2	20.9	20.9
Actuated g/C Ratio	0.10	0.32	0.32	0.11	0.33	0.33	0.36	0.18	0.18	0.41	0.21	0.21
v/c Ratio	0.33	0.76	0.19	0.40	0.55	0.22	0.54	0.65	0.22	0.66	0.47	0.03
Control Delay	54.2	35.2	6.5	54.6	29.9	8.2	26.3	45.5	4.7	30.0	40.2	0.1
Queue Delay	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 Delay	54.2	35.2	6.5	54.6	29.9	8.2	26.3	45.5	4.7	30.0	40.2	0.1
LOS	D	D	A	D	C	A	C	D	A	C	D	A
Approach Delay		33.7			29.1			34.5			34.8	
Approach LOS		C			C			C			C	

Intersection Summary

Area Type: Other

Cycle Length: 133.7

Actuated Cycle Length: 100.1

Natural Cycle: 80

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 32.8

Intersection LOS: C

Intersection Capacity Utilization 75.3%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 200: Green Bay Ave & Good Hope Road

Ø1	Ø2	Ø3	Ø4
25.5 s	46.9 s	24.5 s	36.8 s
Ø5	Ø6	Ø7	Ø8
25.5 s	46.9 s	24.5 s	36.8 s

TADI

2019 full build pm peak

Synchro 10 Report

Page 6

Queues

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	59	1247	113	75	914	129	263	425	83	301	344	11
v/c Ratio	0.33	0.76	0.19	0.40	0.55	0.22	0.54	0.65	0.22	0.66	0.47	0.03
Control Delay	54.2	35.2	6.5	54.6	29.9	8.2	26.3	45.5	4.7	30.0	40.2	0.1
Queue Delay	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 Delay	54.2	35.2	6.5	54.6	29.9	8.2	26.3	45.5	4.7	30.0	40.2	0.1
Queue Length 50th (ft)	39	278	0	49	185	7	119	145	0	140	109	0
Queue Length 95th (ft)	89	383	41	106	260	53	210	217	23	243	177	0
Internal Link Dist (ft)	1325				1097				722			
Turn Bay Length (ft)	100		130	90		140	170		80	170		90
Base Capacity (vph)	378	2174	732	374	2170	724	580	1145	581	502	1135	577
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.57	0.15	0.20	0.42	0.18	0.45	0.37	0.14	0.60	0.30	0.02
Intersection Summary												

HCM 6th Signalized Intersection Summary

200: Green Bay Ave & Good Hope Road

01/28/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	55	1160	210	70	850	240	245	395	155	280	320	20
Future Volume (veh/h)	55	1160	210	70	850	240	245	395	155	280	320	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No				No				No			
Adj Sat Flow, veh/h/ln	1870	1870	1870	1856	1856	1856	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	59	1247	113	75	914	129	263	425	83	301	344	11
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	3	3	3	1	1	1	2	2	2
Cap, veh/h	124	1646	499	135	1668	511	444	594	261	423	655	288
Arrive On Green	0.07	0.32	0.32	0.08	0.33	0.33	0.15	0.17	0.17	0.16	0.18	0.18
Sat Flow, veh/h	1781	5106	1549	1767	5066	1551	1795	3582	1573	1781	3554	1562
Grp Volume(v), veh/h	59	1247	113	75	914	129	263	425	83	301	344	11
Grp Sat Flow(s),veh/h/ln	1781	1702	1549	1767	1689	1551	1795	1791	1573	1781	1777	1562
Q Serve(g_s), s	2.8	19.2	4.7	3.6	12.9	5.3	10.3	9.8	4.1	11.9	7.6	0.5
Cycle Q Clear(g_c), s	2.8	19.2	4.7	3.6	12.9	5.3	10.3	9.8	4.1	11.9	7.6	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1646	499	135	1668	511	444	594	261	423	655	288
V/C Ratio(X)	0.48	0.76	0.23	0.55	0.55	0.25	0.59	0.72	0.32	0.71	0.53	0.04
Avail Cap(c_a), veh/h	407	2335	708	404	2316	709	593	1228	540	537	1219	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.2	26.6	21.7	38.9	24.0	21.5	24.6	34.5	32.1	24.5	32.2	29.3
Incr Delay (d2), s/veh	2.8	0.7	0.2	3.5	0.2	0.2	1.3	1.6	0.7	3.2	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	7.3	1.6	1.6	4.8	1.8	4.3	4.2	1.5	5.0	3.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.0	27.3	21.8	42.4	24.2	21.6	25.8	36.2	32.8	27.6	32.9	29.4
LnGrp LOS	D	C	C	D	C	C	C	D	C	C	C	C
Approach Vol, veh/h	1419		1118				771		656			
Approach Delay, s/veh	27.5		25.1				32.3		30.4			
Approach LOS	C		C				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.6	35.7	17.3	22.9	12.2	35.1	18.9	21.3				
Change Period (Y+Rc), s	5.5	6.9	4.5	* 6.8	5.5	6.9	4.5	* 6.8				
Max Green Setting (Gmax), s	20.0	40.0	20.0	* 30	20.0	40.0	20.0	* 30				
Max Q Clear Time (g_c+I1), s	4.8	14.9	12.3	9.6	5.6	21.2	13.9	11.8				
Green Ext Time (p_c), s	0.1	5.4	0.4	2.0	0.1	7.0	0.5	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			28.2									
HCM 6th LOS			C									
Notes												

Lanes, Volumes, Timings
300: Range Line Road & Green Bay Ave

01/28/2019

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	550	25	1	510	50	5
Future Volume (vph)	550	25	1	510	50	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994				0.989	
Flt Protected					0.956	
Satd. Flow (prot)	1870	0	0	1863	1779	0
Flt Permitted					0.956	
Satd. Flow (perm)	1870	0	0	1863	1779	0
Link Speed (mph)	40			40	30	
Link Distance (ft)	145			802	3307	
Travel Time (s)	2.5			13.7	75.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	2%	1%	1%
Adj. Flow (vph)	598	27	1	554	54	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	625	0	0	555	59	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	40.5%			ICU Level of Service A		
Analysis Period (min)	15					

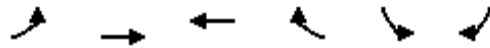
HCM 6th TWSC
300: Range Line Road & Green Bay Ave

01/28/2019

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	550	25	1	510	50	5
Future Vol, veh/h	550	25	1	510	50	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	1	1
Mvmt Flow	598	27	1	554	54	5
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	625	0	1168	612
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	556	-
Critical Hdwy	-	-	4.12	-	6.41	6.21
Critical Hdwy Stg 1	-	-	-	-	5.41	-
Critical Hdwy Stg 2	-	-	-	-	5.41	-
Follow-up Hdwy	-	-	2.218	-	3.509	3.309
Pot Cap-1 Maneuver	-	-	956	-	215	495
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	576	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	956	-	215	495
Mov Cap-2 Maneuver	-	-	-	-	215	-
Stage 1	-	-	-	-	542	-
Stage 2	-	-	-	-	576	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0		26.4	
HCM LOS					D	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	227	-	-	956	-	
HCM Lane V/C Ratio	0.263	-	-	0.001	-	
HCM Control Delay (s)	26.4	-	-	8.8	0	
HCM Lane LOS	D	-	-	A	A	
HCM 95th %tile Q(veh)	1	-	-	0	-	

Lanes, Volumes, Timings
325: Green Bay Ave & Range Line Road

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	1	550	510	55	45	1
Future Volume (vph)	1	550	510	55	45	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.987		0.997	
Flt Protected					0.953	
Satd. Flow (prot)	0	1881	1839	0	1736	0
Flt Permitted					0.953	
Satd. Flow (perm)	0	1881	1839	0	1736	0
Link Speed (mph)		40	40		30	
Link Distance (ft)		846	145		596	
Travel Time (s)		14.4	2.5		13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	2%	4%	4%
Adj. Flow (vph)	1	598	554	60	49	1
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	599	614	0	50	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type: Other						
Control Type: Unsignalized						
Intersection Capacity Utilization 40.2% ICU Level of Service A						
Analysis Period (min) 15						

HCM 6th TWSC
325: Green Bay Ave & Range Line Road

01/28/2019

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	1	550	510	55	45	1
Future Vol, veh/h	1	550	510	55	45	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	4	4
Mvmt Flow	1	598	554	60	49	1
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	614	0	-	0	1184	584
Stage 1	-	-	-	-	584	-
Stage 2	-	-	-	-	600	-
Critical Hdwy	4.11	-	-	-	6.44	6.24
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.209	-	-	-	3.536	3.336
Pot Cap-1 Maneuver	970	-	-	-	207	508
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	970	-	-	-	207	508
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	544	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		27.4		
HCM LOS				D		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	970	-	-	-	210	
HCM Lane V/C Ratio	0.001	-	-	-	0.238	
HCM Control Delay (s)	8.7	0	-	-	27.4	
HCM Lane LOS	A	A	-	-	D	
HCM 95th %tile Q(veh)	0	-	-	-	0.9	

Lanes, Volumes, Timings
400: Range Line Road & North D/W

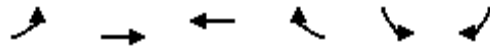
01/28/2019

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	15	1	65	10	1	50
Future Volume (vph)	15	1	65	10	1	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992			0.850		
Flt Protected	0.955					0.999
Satd. Flow (prot)	1765	0	1881	1599	0	1861
Flt Permitted	0.955					0.999
Satd. Flow (perm)	1765	0	1881	1599	0	1861
Link Speed (mph)	25		30			30
Link Distance (ft)	499		444			3307
Travel Time (s)	13.6		10.1			75.2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Adj. Flow (vph)	16	1	71	11	1	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	71	11	0	55
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	13.4%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑	↑		↑
Traffic Vol, veh/h	15	1	65	10	1	50
Future Vol, veh/h	15	1	65	10	1	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	0	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	2	2
Mvmt Flow	16	1	71	11	1	54
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	127	71	0	0	82	0
Stage 1	71	-	-	-	-	-
Stage 2	56	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	868	991	-	-	1515	-
Stage 1	952	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	867	991	-	-	1515	-
Mov Cap-2 Maneuver	867	-	-	-	-	-
Stage 1	951	-	-	-	-	-
Stage 2	967	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9.2	0		0.1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	874	1515	-	
HCM Lane V/C Ratio	-	-	0.02	0.001	-	
HCM Control Delay (s)	-	-	9.2	7.4	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Lanes, Volumes, Timings
500: Good Hope Road & East D/W

01/28/2019



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑↓			↗
Traffic Volume (vph)	0	1335	915	15	0	5
Future Volume (vph)	0	1335	915	15	0	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.91	0.91	0.91	1.00	1.00
Frt			0.998			0.865
Flt Protected						
Satd. Flow (prot)	0	5136	5075	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	5136	5075	0	0	1611
Link Speed (mph)		40	40		25	
Link Distance (ft)		580	1405		353	
Travel Time (s)		9.9	23.9		9.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	2%	2%	2%	2%
Adj. Flow (vph)	0	1451	995	16	0	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	1451	1011	0	0	5
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	29.1%			ICU Level of Service A		
Analysis Period (min)	15					

HCM 6th TWSC
500: Good Hope Road & East D/W

01/28/2019

Intersection						
Int Delay, s/veh	0					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑↑↑↑	↑↑↑			↑
Traffic Vol, veh/h	0	1335	915	15	0	5
Future Vol, veh/h	0	1335	915	15	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	2	2	2	2
Mvmt Flow	0	1451	995	16	0	5
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	-	0	-	0	-	506
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.92
Pot Cap-1 Maneuver	0	-	-	-	0	438
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	438
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		13.3		
HCM LOS				B		
Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1		
Capacity (veh/h)	-	-	-	438		
HCM Lane V/C Ratio	-	-	-	0.012		
HCM Control Delay (s)	-	-	-	13.3		
HCM Lane LOS	-	-	-	B		
HCM 95th %tile Q(veh)	-	-	-	0		

Appendix C

Warrant Analysis

***All-Way Stop Warrant Analysis - Green Bay Avenue at Range
Line Road***

***Traffic Signal Warrant Analysis - Green Bay Avenue at Range
Line Road***

***Traffic Signal Warrant Analysis/Sensitivity Analysis - Green Bay
Avenue at Range Line Road***

AWSC WARRANT VOLUME SUMMARY:

Green Bay Avenue at Range Line Road

2019 Existing Traffic													
Start Time	MAJOR MINOR Range Line Road from North Range Line Road from South			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West			Intersection Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
6-7am	1	9	13	39	180	3	0	17	3	8	306	6	585
7-8am	2	33	39	31	333	5	7	14	11	56	683	3	1217
8-9am	0	18	44	25	327	4	4	12	11	34	456	1	936
9-10am	4	16	15	27	235	2	1	12	18	21	278	2	631
10-11am	6	13	27	29	199	1	0	7	13	17	234	1	547
11am-12pm	5	21	28	27	245	4	2	17	13	22	259	0	643
12-1pm	2	12	31	37	290	2	4	11	21	26	284	2	722
1-2pm	6	11	21	33	288	4	2	9	13	26	271	2	686
2-3pm	3	13	32	30	278	2	3	16	21	23	353	0	774
3-4pm	10	27	54	31	394	2	4	24	14	24	429	2	1015
4-5pm	2	21	28	48	511	2	2	20	20	23	501	2	1180
5-6pm	2	16	21	57	503	2	7	25	21	30	516	1	1201
12:00 AM	0	10	19	42	290	1	2	7	21	13	264	0	669
7:15-8:15 am	2	35	46	30	365	5	5	16	12	64	695	2	1277
4:30-5:30 pm	2	19	27	56	512	1	7	26	24	24	550	0	1248

CONDITIONS

< 10,000 Population	No
Major Street Speed > 40	No
Major Street Lanes	One
Minor Street Lanes	One
1.5 x Minor Thresholds	No

HOURLY VOLUME SUMMARY

Percent Right Turns --> 100%		
Start Time	MAJOR	MINOR
6-7am	542	43
7-8am	1111	106
8-9am	847	89
9-10am	565	66
10-11am	481	66
11am-12pm	557	86
12-1pm	641	81
1-2pm	624	62
2-3pm	686	88
3-4pm	882	133
4-5pm	1087	93
5-6pm	1109	92
12:00 AM		
7:15-8:15 am	1161	116
4:30-5:30 pm	1143	105

By: DJL
Date: 1/17/19

ALL-WAY STOP CONTROL WARRANT

Start Time	MAJOR	MINOR
6-7am	YES	NO
7-8am	YES	NO
8-9am	YES	NO
9-10am	YES	NO
10-11am	YES	NO
11am-12pm	YES	NO
12-1pm	YES	NO
1-2pm	YES	NO
2-3pm	YES	NO
3-4pm	YES	NO
4-5pm	YES	NO
5-6pm	YES	NO
12:00 AM		
7:15-8:15 am	YES	NO
4:30-5:30 pm	YES	NO

Threshold Volume*	300	200
# that Meet Criteria	0	
Condition Met	NO	

* 70% Warrant Thresholds

100% 300 200 * 100% Warrant Thresholds
70% 210 140 * 70% Warrant Thresholds

2019 Existing Traffic

Start Time	↓			←			↑			→			Intersection Totals	---	
	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West				IN	OUT
6-7am	1	9	13	39	180	3	0	17	3	8	306	6	585	0	0
7-8am	2	33	39	31	333	5	7	14	11	56	683	3	1217	0	0
8-9am	0	18	44	25	327	4	4	12	11	34	456	1	936	0	0
9-10am	4	16	15	27	235	2	1	12	18	21	278	2	631	0	0
10-11am	6	13	27	29	199	1	0	7	13	17	234	1	547	0	0
11am-12pm	5	21	28	27	245	4	2	17	13	22	259	0	643	0	0
12-1pm	2	12	31	37	290	2	4	11	21	26	284	2	722	0	0
1-2pm	6	11	21	33	288	4	2	9	13	26	271	2	686	0	0
2-3pm	3	13	32	30	278	2	3	16	21	23	353	0	774	0	0
3-4pm	10	27	54	31	394	2	4	24	14	24	429	2	1015	0	0
4-5pm	2	21	28	48	511	2	2	20	20	23	501	2	1180	0	0
5-6pm	2	16	21	57	503	2	7	25	21	30	516	1	1201	0	0
	0	10	19	42	290	1	2	7	21	13	264	0			
7:15-8:15 am	2	35	46	30	365	5	5	16	12	64	695	2	1277	0	0
4:30-5:30 pm	2	19	27	56	512	1	7	26	24	24	550	0	1248	0	0
IN or OUT PERCENTAGE															

1.000

Proposed Development

	↓			←			↑			→			Intersection	---		0%		0%		<- % Reduction, Sensitivity Test
	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West				IN		OUT				
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals	IN	OUT	% AADT IN	% AADT OUT	Notes		
6-7am	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.8%	6.6%	<== WisDOT % for LU220 (Apartment)		
7-8am	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.1%	10.7%	<== WisDOT % for LU220 (Apartment)		
8-9am	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.6%	5.7%	<== WisDOT % for LU220 (Apartment)		
9-10am	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.8%	5.4%	<== WisDOT % for LU220 (Apartment)		
10-11am	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.0%	5.0%	<== WisDOT % for LU220 (Apartment)		
11am-12pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.2%	5.1%	<== WisDOT % for LU220 (Apartment)		
12-1pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7.0%	5.4%	<== WisDOT % for LU220 (Apartment)		
1-2pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.9%	6.3%	<== WisDOT % for LU220 (Apartment)		
2-3pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8.1%	6.8%	<== WisDOT % for LU220 (Apartment)		
3-4pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.1%	6.6%	<== WisDOT % for LU220 (Apartment)		
4-5pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.8%	9.5%	<== WisDOT % for LU220 (Apartment)		
5-6pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14.8%	9.5%	<== WisDOT % for LU220 (Apartment)		
7:15-8:15 am	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.1%	10.7%	<== WisDOT % for LU220 (Apartment)		
4:30-5:30 pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9.8%	9.5%	<== WisDOT % for LU220 (Apartment)		
IN or OUT PERCENTAGE																				
			</																	

AADT IN	AADT OUT	
0	0	
0%	0%	
0	0	
% AADT IN	% AADT OUT	Notes
1.8%	6.6%	<== WisDOT % for LU220 (Apartment)
4.1%	10.7%	<== WisDOT % for LU220 (Apartment)
4.6%	5.7%	<== WisDOT % for LU220 (Apartment)
4.8%	5.4%	<== WisDOT % for LU220 (Apartment)
4.0%	5.0%	<== WisDOT % for LU220 (Apartment)
5.2%	5.1%	<== WisDOT % for LU220 (Apartment)
7.0%	5.4%	<== WisDOT % for LU220 (Apartment)
8.9%	6.3%	<== WisDOT % for LU220 (Apartment)
8.1%	6.8%	<== WisDOT % for LU220 (Apartment)
9.1%	6.6%	<== WisDOT % for LU220 (Apartment)
9.8%	9.5%	<== WisDOT % for LU220 (Apartment)
14.8%	9.5%	<== WisDOT % for LU220 (Apartment)
4.1%	10.7%	<== WisDOT % for LU220 (Apartment)
9.8%	9.5%	<== WisDOT % for LU220 (Apartment)
82.2%	82.6%	

Sensitivity Analysis Increase

Start Time	↓			←			↑			→			Intersection Totals	---		0	0	<- % Reduction, Sensitivity Test
	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West				IN	OUT			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left						
6-7am	1	5	8	23	0	2	0	10	2	5	0	4	60	0	0	0.0%	0.0%	
7-8am	1	20	23	19	0	3	4	8	7	34	0	2	121	0	0	0.0%	0.0%	
8-9am	0	11	26	15	0	2	2	7	7	20	0	1	91	0	0	0.0%	0.0%	
9-10am	2	10	9	16	0	1	1	7	11	13	0	1	71	0	0	0.0%	0.0%	
10-11am	4	8	16	17	0	1	0	4	8	10	0	1	69	0	0	0.0%	0.0%	
11am-12pm	3	13	17	16	0	2	1	10	8	13	0	0	83	0	0	0.0%	0.0%	
12-1pm	1	7	19	22	0	1	2	7	13	16	0	1	89	0	0	0.0%	0.0%	
1-2pm	4	7	13	20	0	2	1	5	8	16	0	1	77	0	0	0.0%	0.0%	
2-3pm	2	8	19	18	0	1	2	10	13	14	0	0	87	0	0	0.0%	0.0%	
3-4pm	6	16	32	19	0	1	2	14	8	14	0	1	113	0	0	0.0%	0.0%	
4-5pm	1	13	17	29	0	1	1	12	12	14	0	1	101	0	0	0.0%	0.0%	
5-6pm	1	10	13	34	0	1	4	15	13	18	0	1	110	0	0	0.0%	0.0%	
														0	0	0.0%	0.0%	
														0	0	0.0%	0.0%	
7:15-8:15 am	1	21	28	18	0	3	3	10	7	38	0	1	130	0	0	0.0%	0.0%	
4:30-5:30 pm	1	11	16	34	0	1	4	16	14	14	0	0	111	0	0	0.0%	0.0%	
IN or OUT PERCENTAGE														1.6		background percentage increase		

1.6 background percentage increase

TRAFFIC SIGNAL WARRANT VOLUME SUMMARY:

Green Bay Avenue at Range Line Road

2019 Existing Traffic (Sensitivity Analysis)

Start Time	MAJOR MINOR ↓			←			↑			→			Intersection Totals
	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West			
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
6-7am	2	14	21	62	180	5	0	27	5	13	306	10	645
7-8am	3	53	62	50	333	8	11	22	18	90	683	5	1338
8-9am	0	29	70	40	327	6	6	19	18	54	456	2	1027
9-10am	6	26	24	43	235	3	2	19	29	34	278	3	702
10-11am	10	21	43	46	199	2	0	11	21	27	234	2	616
11am-12pm	8	34	45	43	245	6	3	27	21	35	259	0	726
12-1pm	3	19	50	59	290	3	6	18	34	42	284	3	811
1-2pm	10	18	34	53	288	6	3	14	21	42	271	3	763
2-3pm	5	21	51	48	278	3	5	26	34	37	353	0	861
3-4pm	16	43	86	50	394	3	6	38	22	38	429	3	1128
4-5pm	3	34	45	77	511	3	3	32	32	37	501	3	1281
5-6pm	3	26	34	91	503	3	11	40	34	48	516	2	1311
12:00 AM	0	10	19	42	290	1	2	7	21	13	264	0	669
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-8:15 am	3	56	74	48	365	8	8	26	19	102	695	3	1407
4:30-5:30 pm	3	30	43	90	512	2	11	42	38	38	550	0	1359

CONDITIONS

< 10,000 Population	No
Major Street Speed > 40	No
Major Street Lanes	One
Minor Street Lanes	One
1.5 x Minor Thresholds	No

HOULY VOLUME SUMMARY

Start Time	MAJOR	MINOR
6-7am	576	37
7-8am	1169	118
8-9am	885	99
9-10am	596	56
10-11am	510	74
11am-12pm	588	87
12-1pm	681	72
1-2pm	663	62
2-3pm	719	77
3-4pm	917	145
4-5pm	1132	82
5-6pm	1163	85
12:00 AM	610	30
12:00 AM	0	0
7:15-8:15 am	1221	133
4:30-5:30 pm	1192	91

WARRANT 1: EIGHT HOUR WARRANT: MAJOR vs. MINOR

Start Time	1A (100%)		1B (100%)		1C (80%)		1B (80%)	
	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
6-7am	YES	NO	NO	NO	YES	NO	NO	NO
7-8am	YES	NO	YES	YES	YES	NO	YES	YES
8-9am	YES	NO	YES	YES	YES	NO	YES	YES
9-10am	YES	NO	NO	NO	YES	NO	NO	NO
10-11am	YES	NO	NO	NO	YES	NO	NO	YES
11am-12pm	YES	NO	NO	YES	YES	NO	NO	YES
12-1pm	YES	NO	NO	NO	YES	NO	YES	YES
1-2pm	YES	NO	NO	NO	YES	NO	YES	YES
2-3pm	YES	NO	NO	YES	YES	NO	YES	YES
3-4pm	YES	NO	YES	YES	YES	YES	YES	YES
4-5pm	YES	NO	YES	YES	YES	NO	YES	YES
5-6pm	YES	NO	YES	YES	YES	NO	YES	YES
12:00 AM	YES	NO	NO	NO	YES	NO	YES	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO
7:15-8:15 am	YES	NO	YES	YES	YES	YES	YES	YES
4:30-5:30 pm	YES	NO	YES	YES	YES	NO	YES	YES

Threshold Volume	500	150	750	75	400	120	600	60
# that Meet Criteria	0		5		1			
Condition Met	NO		NO		NO			

HOURLY VOLUME SUMMARY

Start Time	WB Th+Rt	EB Lt
6-7am	242	10
7-8am	383	5
8-9am	367	2
9-10am	278	3
10-11am	245	2
11am-12pm	288	0
12-1pm	349	3
1-2pm	341	3
2-3pm	326	0
3-4pm	444	3
4-5pm	588	3
5-6pm	594	2
12:00 AM	332	0
12:00 AM	0	0
7:15-8:15 am	413	3
4:30-5:30 pm	602	0

WARRANT 1: EIGHT HOUR WARRANT: EB Lt vs. WB Th+Rt

Start Time	1A (100%)		1B (100%)		1C (80%)		1B (80%)		LEFT-TURN CONFLICT
	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	
6-7am	NO	NO	NO	NO	NO	NO	NO	NO	NO
7-8am	NO	NO	NO	NO	NO	NO	NO	NO	NO
8-9am	NO	NO	NO	NO	NO	NO	NO	NO	NO
9-10am	NO	NO	NO	NO	NO	NO	NO	NO	NO
10-11am	NO	NO	NO	NO	NO	NO	NO	NO	NO
11am-12pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
12-1pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
1-2pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
2-3pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
3-4pm	NO	NO	NO	NO	YES	NO	NO	NO	NO
4-5pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
5-6pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
7:15-8:15 am	NO	NO	NO	NO	YES	NO	NO	NO	NO
4:30-5:30 pm	YES	NO	NO	NO	YES	NO	YES	NO	NO

Threshold Volume	500	150	750	75	400	120	600	60	80,000
# that Meet Criteria	0		0		0				
Condition Met	NO		NO		NO				NO

HOULY VOLUME SUMMARY

Start Time	EB Th+Rt	WB Lt
6-7am	319	5
7-8am	773	8
8-9am	510	6
9-10am	312	3
10-11am	261	2
11am-12pm	294	6
12-1pm	326	3
1-2pm	313	6
2-3pm	390	3
3-4pm	467	3
4-5pm	538	3
5-6pm	564	3
12:00 AM	277	1
12:00 AM	0	0
7:15-8:15 am	797	8
4:30-5:30 pm	588	2

WARRANT 1: EIGHT HOUR WARRANT: WB Lt vs. EB Th+Rt

Start Time	1A (100%)		1B (100%)		1C (80%)		1B (80%)		LEFT-TURN CONFLICT
	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	
6-7am	NO	NO	NO	NO	NO	NO	NO	NO	NO
7-8am	YES	NO	YES	NO	YES	NO	YES	NO	NO
8-9am	YES	NO	NO	NO	YES	NO	NO	NO	NO
9-10am	NO	NO	NO	NO	NO	NO	NO	NO	NO
10-11am	NO	NO	NO	NO	NO	NO	NO	NO	NO
11am-12pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
12-1pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
1-2pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
2-3pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
3-4pm	NO	NO	NO	NO	YES	NO	NO	NO	NO
4-5pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
5-6pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
7:15-8:15 am	YES	NO	YES	NO	YES	NO	YES	NO	NO
4:30-5:30 pm	YES	NO	NO	NO	YES	NO	NO	NO	NO

Threshold Volume	500	150	750	75	400	120	600	60	80,000
# that Meet Criteria	0		0		0				
Condition Met	NO		NO		NO				NO

0
0

TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY (WARRANTS 1 - 3)

2019 Existing Traffic (Sensitivity Analysis)

Green Bay Avenue at Range Line Road

VOLUME SUMMARY		
For Warrant 1		
Percent Right Turns -->		100%
START TIME	MAJOR	MINOR
6-7am	576	37
7-8am	1169	118
8-9am	885	99
9-10am	596	56
10-11am	510	74
11am-12pm	588	87
12-1pm	681	72
1-2pm	663	62
2-3pm	719	77
3-4pm	917	145
4-5pm	1132	82
5-6pm	1163	85
12:00 AM	610	30
12:00 AM	0	0
7:15-8:15 am	1221	133
4:30-5:30 pm	1192	91

Warrant 1 (Eight Hour Volume - 100% Factor)

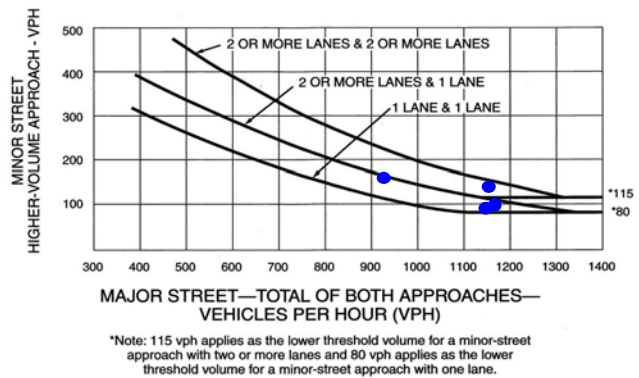
Conditions	Major	Minor	Met?	Hours Met?
Condition A	500	150	NO	0
Condition B	750	75	NO	5
Condition C			NO	1
1A	400	120		
1B	600	60		

Volumes	Major	Minor
	EB/WB	NB/SB
	WB Th+Rt	EB Lt
	EB Th+Rt	WB Lt

Warrant 2 (Four Hour Volume) (100% Factor)

Met?
YES

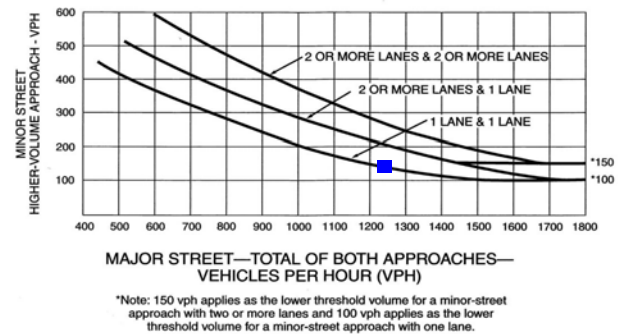
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



Warrant 3 (Peak Hour Volume) (100% Factor)

Met?
NO

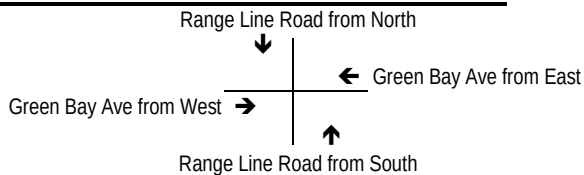
Figure 4C-3. Warrant 3, Peak Hour



VOLUME SUMMARY		
For Warrants 2 and 3		
Percent Right Turns -->		100%
Start Time	MAJOR	MINOR
6-7am	576	37
7-8am	1169	118
8-9am	885	99
9-10am	596	56
10-11am	510	74
11am-12pm	588	87
12-1pm	681	72
1-2pm	663	62
2-3pm	719	77
3-4pm	917	145
4-5pm	1132	82
5-6pm	1163	85
12:00 AM	610	30
12:00 AM	0	0
7:15-8:15 am	1221	133
4:30-5:30 pm	1192	91

CONDITIONS

< 10,000 Population	No
Major Street Speed > 40 mph	No
Major Street Lanes	One
Minor Street Lanes	One
T-Intersection (Y/N)	No



Left-Turn Conflict Analysis

Opp. Thru	x	Lt Turn	Threshold	Met?	Hours Met
WB Th+Rt		EB Lt	80,000	NO	0
EB Th+Rt		WB Lt	80,000	NO	0

2019 Existing Traffic

Start Time	↓			←			↑			→			Intersection Totals	---	
	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West				IN	OUT
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left			
6-7am	1	9	13	39	180	3	0	17	3	8	306	6	585	0	0
7-8am	2	33	39	31	333	5	7	14	11	56	683	3	1217	0	0
8-9am	0	18	44	25	327	4	4	12	11	34	456	1	936	0	0
9-10am	4	16	15	27	235	2	1	12	18	21	278	2	631	0	0
10-11am	6	13	27	29	199	1	0	7	13	17	234	1	547	0	0
11am-12pm	5	21	28	27	245	4	2	17	13	22	259	0	643	0	0
12-1pm	2	12	31	37	290	2	4	11	21	26	284	2	722	0	0
1-2pm	6	11	21	33	288	4	2	9	13	26	271	2	686	0	0
2-3pm	3	13	32	30	278	2	3	16	21	23	353	0	774	0	0
3-4pm	10	27	54	31	394	2	4	24	14	24	429	2	1015	0	0
4-5pm	2	21	28	48	511	2	2	20	20	23	501	2	1180	0	0
5-6pm	2	16	21	57	503	2	7	25	21	30	516	1	1201	0	0
	0	10	19	42	290	1	2	7	21	13	264	0			
7:15-8:15 am	2	35	46	30	365	5	5	16	12	64	695	2	1277	0	0
4:30-5:30 pm	2	19	27	56	512	1	7	26	24	24	550	0	1248	0	0
IN or OUT PERCENTAGE															

1.000

Proposed Development

	↓			←			↑			→				Intersection	---		0%	0%	<= % Reduction, Sensitivity Test
	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West					AADT IN	AADT OUT	255	255	
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Totals	IN	OUT	% AADT IN	% AADT OUT	Notes	
6-7am	0	0	0	0	0	0	0	0	10	5	0	0	15	5	15	1.8%	6.6%	<== WisDOT % for LU220 (Apartment)	
7-8am	0	0	0	0	0	0	0	0	15	5	0	0	20	10	25	4.1%	10.7%	<== WisDOT % for LU220 (Apartment)	
8-9am	0	0	0	0	0	0	0	0	10	5	0	0	15	10	15	4.6%	5.7%	<== WisDOT % for LU220 (Apartment)	
9-10am	0	0	0	0	0	0	0	0	10	5	0	0	15	10	15	4.8%	5.4%	<== WisDOT % for LU220 (Apartment)	
10-11am	0	0	0	0	0	0	0	0	10	5	0	0	15	10	15	4.0%	5.0%	<== WisDOT % for LU220 (Apartment)	
11am-12pm	0	0	0	0	0	0	0	0	10	10	0	0	20	15	15	5.2%	5.1%	<== WisDOT % for LU220 (Apartment)	
12-1pm	0	0	0	0	0	0	0	0	10	10	0	0	20	20	15	7.0%	5.4%	<== WisDOT % for LU220 (Apartment)	
1-2pm	0	0	0	0	0	0	0	0	10	15	0	0	25	25	15	8.9%	6.3%	<== WisDOT % for LU220 (Apartment)	
2-3pm	0	0	0	0	0	0	0	0	10	10	0	0	20	20	15	8.1%	6.8%	<== WisDOT % for LU220 (Apartment)	
3-4pm	0	0	0	0	0	0	0	0	10	15	0	0	25	25	15	9.1%	6.6%	<== WisDOT % for LU220 (Apartment)	
4-5pm	0	0	0	0	0	0	0	0	15	15	0	0	30	25	25	9.8%	9.5%	<== WisDOT % for LU220 (Apartment)	
5-6pm	0	0	0	0	0	0	0	0	15	20	0	0	35	40	25	14.8%	9.5%	<== WisDOT % for LU220 (Apartment)	
7:15-8:15 am	0	0	0	0	0	0	0	0	15	5	0	0	20	10	25	4.1%	10.7%	<== WisDOT % for LU220 (Apartment)	
4:30-5:30 pm	0	0	0	0	0	0	0	0	15	15	0	0	30	25	25	9.8%	9.5%	<== WisDOT % for LU220 (Apartment)	
IN or OUT PERCENTAGE									OUT 50.0%	IN 50.0%							82.2%	82.6%	

Sensitivity Analysis Increase

Start Time	↓			←			↑			→			Intersection Totals	---		0%		Notes
	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West				IN	OUT	% AADT IN	% AADT OUT	
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left		IN	OUT	% AADT IN	% AADT OUT	
6-7am	1	5	8	23	0	2	0	10	2	5	0	4	60	0	0	0.0%	0.0%	<- % Reduction, Sensitivity Test
7-8am	1	20	23	19	0	3	4	8	7	34	0	2	121	0	0	0.0%	0.0%	
8-9am	0	11	26	15	0	2	2	7	7	20	0	1	91	0	0	0.0%	0.0%	
9-10am	2	10	9	16	0	1	1	7	11	13	0	1	71	0	0	0.0%	0.0%	
10-11am	4	8	16	17	0	1	0	4	8	10	0	1	69	0	0	0.0%	0.0%	
11am-12pm	3	13	17	16	0	2	1	10	8	13	0	0	83	0	0	0.0%	0.0%	
12-1pm	1	7	19	22	0	1	2	7	13	16	0	1	89	0	0	0.0%	0.0%	
1-2pm	4	7	13	20	0	2	1	5	8	16	0	1	77	0	0	0.0%	0.0%	
2-3pm	2	8	19	18	0	1	2	10	13	14	0	0	87	0	0	0.0%	0.0%	
3-4pm	6	16	32	19	0	1	2	14	8	14	0	1	113	0	0	0.0%	0.0%	
4-5pm	1	13	17	29	0	1	1	12	12	14	0	1	101	0	0	0.0%	0.0%	
5-6pm	1	10	13	34	0	1	4	15	13	18	0	1	110	0	0	0.0%	0.0%	
																0.0%	0.0%	
																0.0%	0.0%	
7:15-8:15 am	1	21	28	18	0	3	3	10	7	38	0	1	130	0	0	0.0%	0.0%	
4:30-5:30 pm	1	11	16	34	0	1	4	16	14	14	0	0	111	0	0	0.0%	0.0%	
IN or OUT PERCENTAGE														1.6	background percentage increase			

TRAFFIC SIGNAL WARRANT VOLUME SUMMARY:

Green Bay Avenue at Range Line Road

2019 Build Traffic (Sensitivity Analysis)

Start Time	Range Line Road from North			Green Bay Ave from East			Range Line Road from South			Green Bay Ave from West			Intersection Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
6-7am	2	14	21	62	180	5	0	27	15	18	306	10	660
7-8am	3	53	62	50	333	8	11	22	33	95	683	5	1358
8-9am	0	29	70	40	327	6	6	19	28	59	456	2	1042
9-10am	6	26	24	43	235	3	2	19	39	39	278	3	717
10-11am	10	21	43	46	199	2	0	11	31	32	234	2	631
11am-12pm	8	34	45	43	245	6	3	27	31	45	259	0	746
12-1pm	3	19	50	59	290	3	6	18	44	52	284	3	831
1-2pm	10	18	34	53	288	6	3	14	31	57	271	3	788
2-3pm	5	21	51	48	278	3	5	26	44	47	353	0	881
3-4pm	16	43	86	50	394	3	6	38	32	53	429	3	1153
4-5pm	3	34	45	77	511	3	3	32	47	52	501	3	1311
5-6pm	3	26	34	91	503	3	11	40	49	68	516	2	1346
12:00 AM	0	10	19	42	290	1	2	7	21	13	264	0	669
12:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15-8:15 am	3	56	74	48	365	8	8	26	34	107	695	3	1427
4:30-5:30 pm	3	30	43	90	512	2	11	42	53	53	550	0	1389

CONDITIONS

< 10,000 Population	No
Major Street Speed > 40	No
Major Street Lanes	One
Minor Street Lanes	One
1.5 x Minor Thresholds	No

HOULY VOLUME SUMMARY

Start Time	MAJOR	MINOR
6-7am	581	42
7-8am	1174	118
8-9am	890	99
9-10am	601	60
10-11am	515	74
11am-12pm	598	87
12-1pm	691	72
1-2pm	678	62
2-3pm	729	77
3-4pm	932	145
4-5pm	1147	82
5-6pm	1183	100
12:00 AM	610	30
12:00 AM	0	0
7:15-8:15 am	1226	133
4:30-5:30 pm	1207	106

WARRANT 1: EIGHT HOUR WARRANT: MAJOR vs. MINOR

Start Time	1A (100%)		1B (100%)		1C (80%)		1B (80%)	
	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR
6-7am	YES	NO	NO	NO	YES	NO	NO	NO
7-8am	YES	NO	YES	YES	YES	NO	YES	YES
8-9am	YES	NO	YES	YES	YES	NO	YES	YES
9-10am	YES	NO	NO	NO	YES	NO	YES	NO
10-11am	YES	NO	NO	NO	YES	NO	NO	YES
11am-12pm	YES	NO	NO	YES	YES	NO	NO	YES
12-1pm	YES	NO	NO	NO	YES	NO	YES	YES
1-2pm	YES	NO	NO	NO	YES	NO	YES	YES
2-3pm	YES	NO	NO	YES	YES	NO	YES	YES
3-4pm	YES	NO	YES	YES	YES	YES	YES	YES
4-5pm	YES	NO	YES	YES	YES	NO	YES	YES
5-6pm	YES	NO	YES	YES	YES	NO	YES	YES
12:00 AM	YES	NO	NO	NO	YES	NO	YES	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO
7:15-8:15 am	YES	NO	YES	YES	YES	YES	YES	YES
4:30-5:30 pm	YES	NO	YES	YES	YES	NO	YES	YES

Threshold Volume	500	150	750	75	400	120	600	60
# that Meet Criteria	0		5		1			
Condition Met	NO		NO		NO			

HOURLY VOLUME SUMMARY

Start Time	WB Th+Rt	EB Lt
6-7am	242	10
7-8am	383	5
8-9am	367	2
9-10am	278	3
10-11am	245	2
11am-12pm	288	0
12-1pm	349	3
1-2pm	341	3
2-3pm	326	0
3-4pm	444	3
4-5pm	588	3
5-6pm	594	2
12:00 AM	332	0
12:00 AM	0	0
7:15-8:15 am	413	3
4:30-5:30 pm	602	0

WARRANT 1: EIGHT HOUR WARRANT: EB Lt vs. WB Th+Rt

Start Time	1A (100%)		1B (100%)		1C (80%)		1B (80%)		LEFT-TURN CONFLICT
	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	
6-7am	NO	NO	NO	NO	NO	NO	NO	NO	NO
7-8am	NO	NO	NO	NO	NO	NO	NO	NO	NO
8-9am	NO	NO	NO	NO	NO	NO	NO	NO	NO
9-10am	NO	NO	NO	NO	NO	NO	NO	NO	NO
10-11am	NO	NO	NO	NO	NO	NO	NO	NO	NO
11am-12pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
12-1pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
1-2pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
2-3pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
3-4pm	NO	NO	NO	NO	YES	NO	NO	NO	NO
4-5pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
5-6pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
7:15-8:15 am	NO	NO	NO	NO	YES	NO	NO	NO	NO
4:30-5:30 pm	YES	NO	NO	NO	YES	NO	YES	NO	NO

Threshold Volume	500	150	750	75	400	120	600	60	80,000
# that Meet Criteria	0		0		0				
Condition Met	NO		NO		NO				NO

HOULY VOLUME SUMMARY

Start Time	EB Th+Rt	WB Lt
6-7am	324	5
7-8am	778	8
8-9am	515	6
9-10am	317	3
10-11am	266	2
11am-12pm	304	6
12-1pm	336	3
1-2pm	328	6
2-3pm	400	3
3-4pm	482	3
4-5pm	553	3
5-6pm	584	3
12:00 AM	277	1
12:00 AM	0	0
7:15-8:15 am	802	8
4:30-5:30 pm	603	2

WARRANT 1: EIGHT HOUR WARRANT: WB Lt vs. EB Th+Rt

Start Time	1A (100%)		1B (100%)		1C (80%)		1B (80%)		LEFT-TURN CONFLICT
	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	MAJOR	MINOR	
6-7am	NO	NO	NO	NO	NO	NO	NO	NO	NO
7-8am	YES	NO	YES	NO	YES	NO	YES	NO	NO
8-9am	YES	NO	NO	NO	YES	NO	NO	NO	NO
9-10am	NO	NO	NO	NO	NO	NO	NO	NO	NO
10-11am	NO	NO	NO	NO	NO	NO	NO	NO	NO
11am-12pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
12-1pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
1-2pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
2-3pm	NO	NO	NO	NO	NO	NO	NO	NO	NO
3-4pm	NO	NO	NO	NO	YES	NO	NO	NO	NO
4-5pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
5-6pm	YES	NO	NO	NO	YES	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
12:00 AM	NO	NO	NO	NO	NO	NO	NO	NO	NO
7:15-8:15 am	YES	NO	YES	NO	YES	NO	YES	NO	NO
4:30-5:30 pm	YES	NO	NO	NO	YES	NO	YES	NO	NO

Threshold Volume	500	150	750	75	400	120	600	60	80,000
# that Meet Criteria	0		0		0				
Condition Met	NO		NO		NO				NO

TRAFFIC SIGNAL WARRANT ANALYSIS SUMMARY (WARRANTS 1 - 3)

2019 Build Traffic (Sensitivity Analysis)

Green Bay Avenue at Range Line Road

VOLUME SUMMARY		
For Warrant 1		
Percent Right Turns --> 100%		
START TIME	MAJOR	MINOR
6-7am	581	42
7-8am	1174	118
8-9am	890	99
9-10am	601	60
10-11am	515	74
11am-12pm	598	87
12-1pm	691	72
1-2pm	678	62
2-3pm	729	77
3-4pm	932	145
4-5pm	1147	82
5-6pm	1183	100
12:00 AM	610	30
12:00 AM	0	0
7:15-8:15 am	1226	133
4:30-5:30 pm	1207	106

Warrant 1 (Eight Hour Volume - 100% Factor)

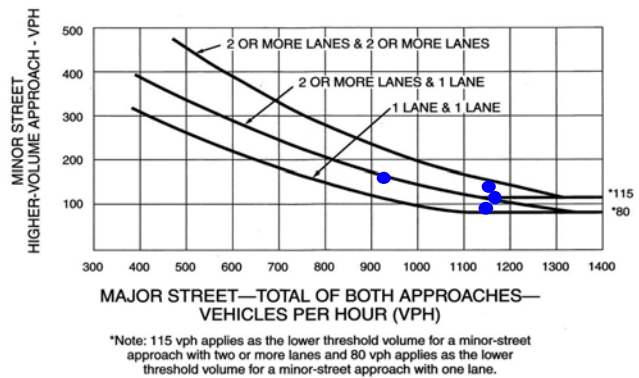
Conditions	Major	Minor	Met?	Hours Met?
Condition A	500	150	NO	0
Condition B	750	75	NO	5
Condition C			NO	1
1A	400	120		
1B	600	60		

Volumes	Major	Minor
	EB/WB	NB/SB
	WB Th+Rt	EB Lt
	EB Th+Rt	WB Lt

Warrant 2 (Four Hour Volume) (100% Factor)

Met?
YES

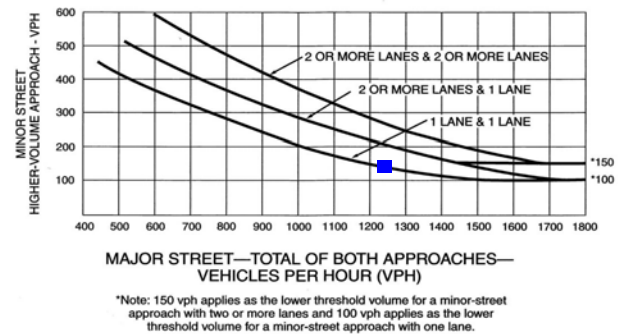
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



Warrant 3 (Peak Hour Volume) (100% Factor)

Met?
NO

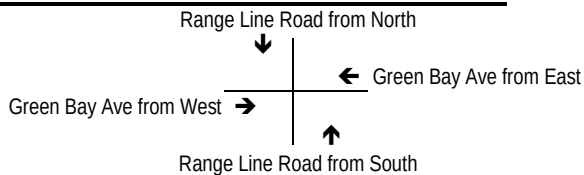
Figure 4C-3. Warrant 3, Peak Hour



VOLUME SUMMARY		
For Warrants 2 and 3		
Percent Right Turns --> 100%		
Start Time	MAJOR	MINOR
6-7am	581	42
7-8am	1174	118
8-9am	890	99
9-10am	601	60
10-11am	515	74
11am-12pm	598	87
12-1pm	691	72
1-2pm	678	62
2-3pm	729	77
3-4pm	932	145
4-5pm	1147	82
5-6pm	1183	100
12:00 AM	610	30
12:00 AM	0	0
7:15-8:15 am	1226	133
4:30-5:30 pm	1207	106

CONDITIONS

< 10,000 Population	No
Major Street Speed > 40 mph	No
Major Street Lanes	One
Minor Street Lanes	One
T-Intersection (Y/N)	No



Left-Turn Conflict Analysis

Opp. Thru	x	Lt Turn	Threshold	Met?	Hours Met
WB Th+Rt		EB Lt	80,000	NO	0
EB Th+Rt		WB Lt	80,000	NO	0



3b. / 3c.

5909 North Milwaukee River Parkway
Glendale, WI 53209

SUBJECT: 2040 Glendale Vision Plan as Adopted by the Glendale Common Council 11-12-18.

FROM: Rachel Safstrom, City Administrator

MEETING DATE: February 5, 2019

FISCAL SUMMARY:

Budget Summary:	N/A
Budgeted Expenditure:	N/A
Budgeted Revenue:	N/A

STATUTORY REFERENCE:

Wisconsin Statutes:	N/A
Municipal Code:	N/A

BACKGROUND/ANALYSIS:

In 2017, the Council authorized the creation of a 2040 Vision Committee. To assist the Committee, the Council also approved the hiring of SRF Consulting. After many months of surveying residents, meeting with consultants and refinements to the document, a final Glendale 2040 Vision has been developed.

The document is meant to have a broad sense of where we can be as a community. You will start to see the key themes show up in documents such as the budget and annual report for the City in the near future.

This document is also a key starting point for the update of the Master Plan. Forwarding this document to the Plan Commission will assist them in the process of that update in 2019.

RECOMMENDATION:

The Vision Committee unanimously recommended that the Council adopt the 2040 Glendale Vision Plan and forward it to the Plan Commission. The Common Council adopted the plan on November 12, 2018. The attached plan is for your reference.

The next step in the process is an update of the City's Comprehensive Plan. The City last reviewed the Comprehensive Plan in 2011. At that time it was recommended that the City consider a complete update to the Comprehensive by 2020. Due to the amount of time required for this project, it is necessary to contract services to assist with this process. Attached is a Request for Qualifications to update the Comprehensive Plan. This will be an ongoing agenda item for the Plan Commission.

ACTION REQUESTED:

Motion to approve the Request for Qualifications to update the Comprehensive Plan.

ATTACHMENTS:

1. 2040 Glendale Vision
2. Request for Qualifications to update the Comprehensive Plan

Glendale 2040 Vision

September 2018

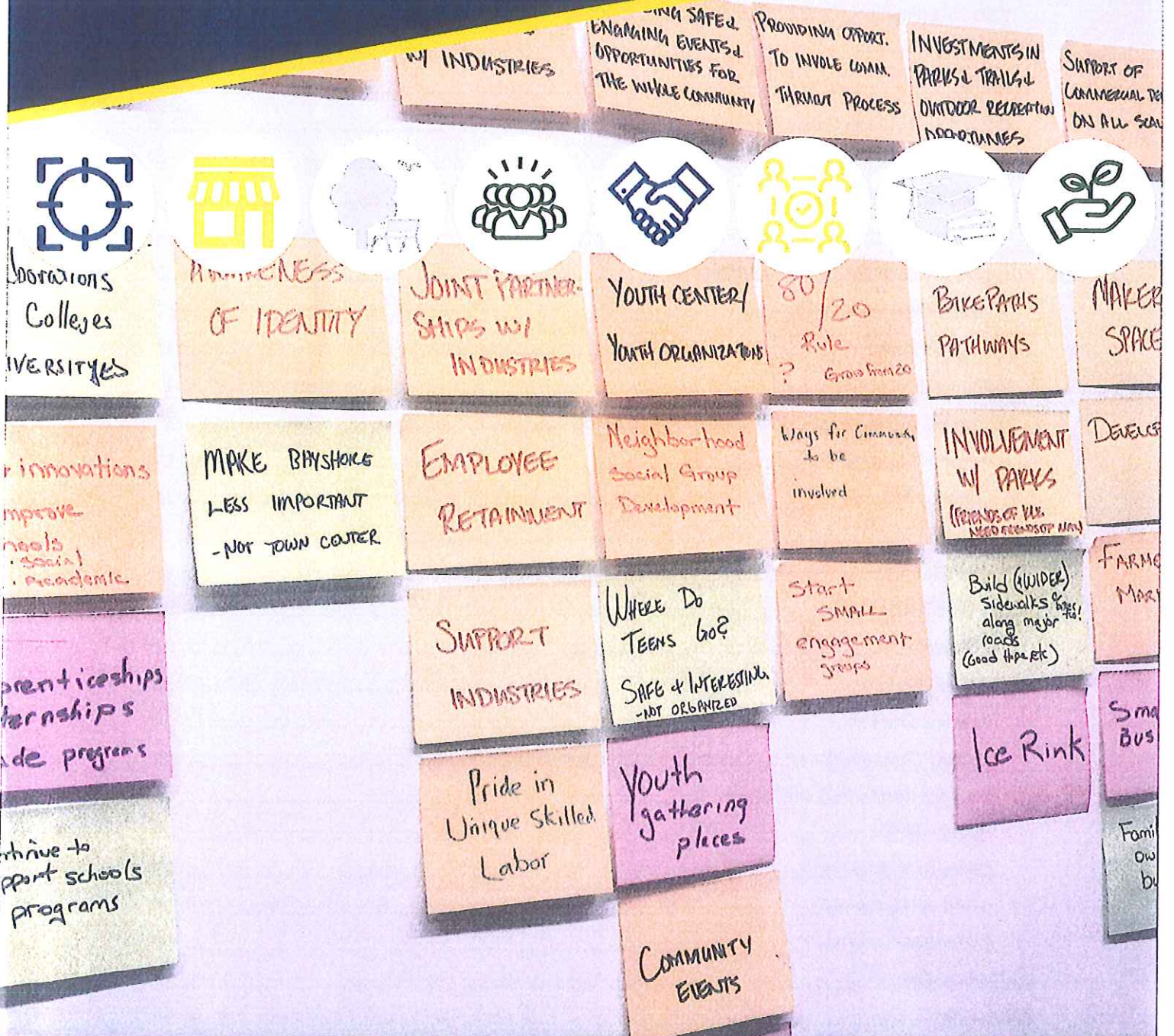


Table of Contents

List of Figures	ii
List of Tables	ii
Vision.....	1
Vision Statement.....	2
Community Overview	3
History.....	3
Current State of the Community	3
Population.....	3
Age Distribution	5
Housing	6
Industry and Commercial Development.....	7
Where is Glendale Going?.....	9
Engaging the Public.....	11
Visioning Committee.....	11
Strengths, Weaknesses, Opportunities and Threats.....	11
Summary of Engagement.....	14
Community Survey.....	14
Pop-Up Events.....	19
Future of Glendale	21
Glendale 2040 Vision	21
Key Themes.....	21
Future Focused.....	23
Business Friendly.....	24
Healthy Communities with Vibrant Parks & Recreation Opportunities	25
Engaged Residents & Businesses	26
Partnerships	27
Connected Neighbors	28
Invest in the Future.....	29
Sustainable Direction	30
Future in Action	31
Conclusion.....	32

List of Figures

Figure 1:	North Shore Communities Population Comparison, 1960 to 2010	4
Figure 2:	Median Age, 2010 and 2015	5
Figure 3:	Glendale Population Pyramid – 2015 ACS	6
Figure 4:	Occupied Housing Units and Average Household size.....	7
Figure 5:	Employment in Glendale by Industry, 2015.....	8
Figure 6:	Median Household Income, 2010 and 2015.....	9
Figure 7:	Glendale Population and Household Projections, 2010 - 2040	10
Figure 8:	In two words, describe the City of Glendale	14
Figure 9:	What are the two most positive attributes of Glendale?	15
Figure 10:	What services do you appreciate in Glendale?.....	16
Figure 11:	Favorite characteristics of your neighborhood.....	16
Figure 12:	Why do you choose to live in Glendale?.....	17
Figure 13:	What types of development are needed?	18
Figure 14:	Where is Glendale's current Town Center?	19
Figure 15:	Favorite Places in Glendale	20
Figure 16:	Glendale 2040 Key Themes.....	22

List of Tables

Table 1:	Population Trends.....	4
Table 2:	Glendale Population Projections.....	10
Table 3:	Strengths, Weaknesses, Opportunities and Threats Analysis.....	12

Vision

Glendale has a lot to be proud of and a very bright future. Its strong history provides a foundation to continue to build upon for future generations.

The City of Glendale embarked on a process to develop a vision for the community that will guide decision making and actions into 2040. The development of the vision is based on input from the community, providing and understanding of the current state of the community and desired direction for the future. The city's tagline, "*Rich Past, Bright Future*", was evident throughout the planning process. The Glendale community is proud of the place they call home and are excited for the future ahead of them.

A community vision serves a variety of purposes; including guiding the decision-making process, directing implementation and actions, and informing other planning processes. The vision and associated actions and implementation actions provide a path for achieving a future that is laid out through public input. For example, this document should be reviewed and incorporated into future comprehensive or long-range planning efforts as it informs the city's future path. Additionally, the specific actions or key themes may inform plan analyses or element inclusion in planning efforts.

Beyond the high-level vision, the 2040 Vision also identifies specific actions and implementation measures that the city and its residents can act upon. The actions may be relatively easy, low-hanging fruit or may be a continuation of on-going activities. Other actions may require additional efforts to be completed first or additional resources collected (funding or support) before implementation. Additionally, all city staff, boards and commissions, and residents will have a role in implementing the action steps identified in this plan.

The Glendale 2040 Vision document is created for all members of the Glendale community – residents, city staff, elected and appointed officials, businesses and other stakeholders. Each of these individuals has investment in the community and should feel welcomed to guiding the future of the community. As Glendale is referred to through this document, it is intended to reference all community members and give a platform for action by anyone.

Glendale's 2040 Vision sets forth a road map and includes the following sections:

- **Community Overview:** This section provides an overview of the existing demographics for the City of Glendale including; population, households and employment. A review of this information



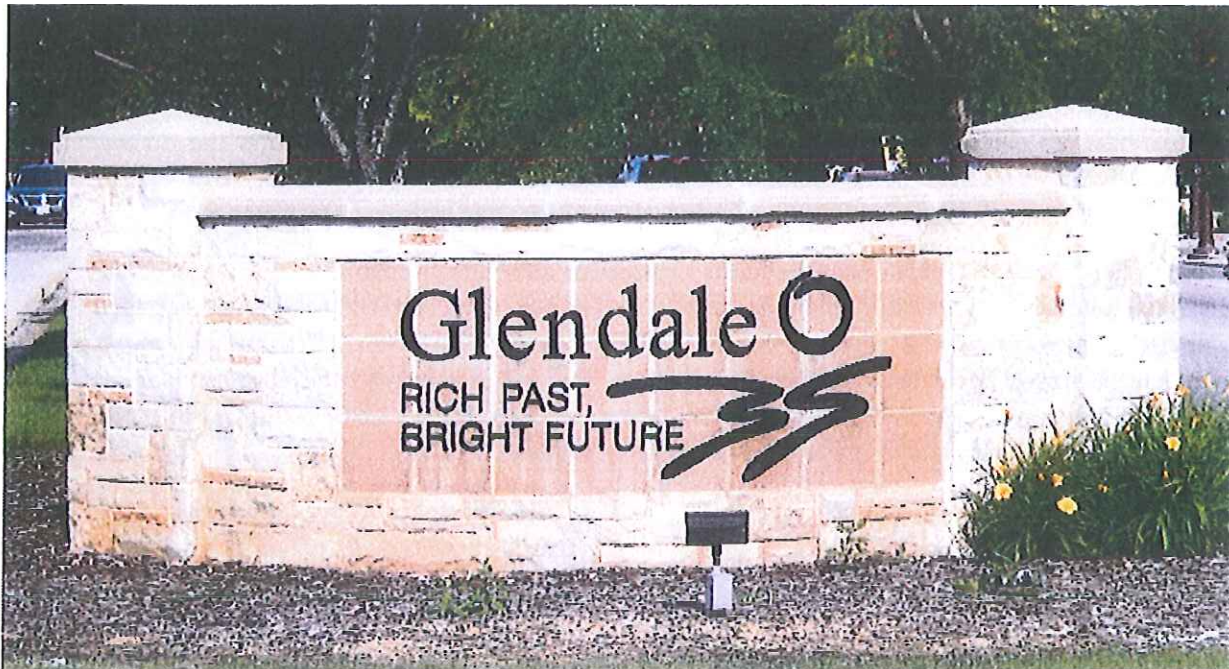
is helpful for understanding the current condition of the community and the people and places that define it today. A discussion of the future population forecasts is also included.

- **Engaging the Public:** This section highlights the public engagement activities that informed the planning process. The results of these activities played a directed role in the development of the vision and resulting actions.
- **Future of Glendale:** This section introduces Glendale's 2040 vision statement, the development behind it, and the direction for the future. Key Themes of the 2040 vision are also introduced.

Vision Statement

Glendale 2040 Vision

Glendale builds upon its **foundation** as the community **grows and evolves** into 2040 for its current and future residents and businesses. A **thriving, diverse, and safe** environment is created through decision making and actions taken by staff, elected officials, stakeholders and residents. Glendale provides a community that physically and socially connects residents, businesses, and visitors to provide access and opportunities for all. **Participation and Engagement** between the city and residents supports progress towards this shared vision that will be modified as new trends emerge. Efforts are made to plan with purpose using a comprehensive view of all facets of the community, followed by meaningful **implementation**. All efforts benefit from an engaged population that is willing to participate in the planning and implementation process to create a **balanced and bright future**.



Community Overview

While planning for the future of a community it is important to understand where the community has come from. This includes an understanding of the people and places that make the community what it is today. This community overview discussion provides a look at past and existing conditions of the City of Glendale.

History

The City of Glendale is in Milwaukee County, located in southeast Wisconsin along Lake Michigan. The community is part of the North Shore suburbs of Milwaukee which includes Bayside, Brown Deer, Fox Point, River Hills, Shorewood, and Whitefish Bay. These North Shore communities share similar demographics and quality of life.

Glendale was incorporated as a city in 1950. It developed rapidly after its incorporation reflecting post-WWII development patterns throughout the United States. Unlike many of the other North Shore suburbs, Glendale developed a mix of industrial and commercial sites along with residential areas of low, medium and high density. The Bayshore Town Square, originally Bayshore Mall, was constructed in 1954 and served as the communities first retail center. Renovations and improvements to the mall have occurred since its construction, serving a retail hub and destination for Glendale residents and the region. The city has maintained ambitious goals to attract residents and businesses including improvements to Bayshore Town Center, the Glendale Business Park and community improvements including Richard E. Maslowski Community Park.



Current State of the Community

Population

According to the 2010 Census, Glendale has a population of 12,791, representing a 4 percent decrease from the 2000 Census population of 13,367. The population has experienced a decline since 1990, decreasing from a record high of 14,088 people. Current population estimates from the American Community Survey (ACS) in 2015 predict a decrease in population to 12,779. Glendale makes up 1 percent of Milwaukee County's total population, which has experienced slight increases in recent years.

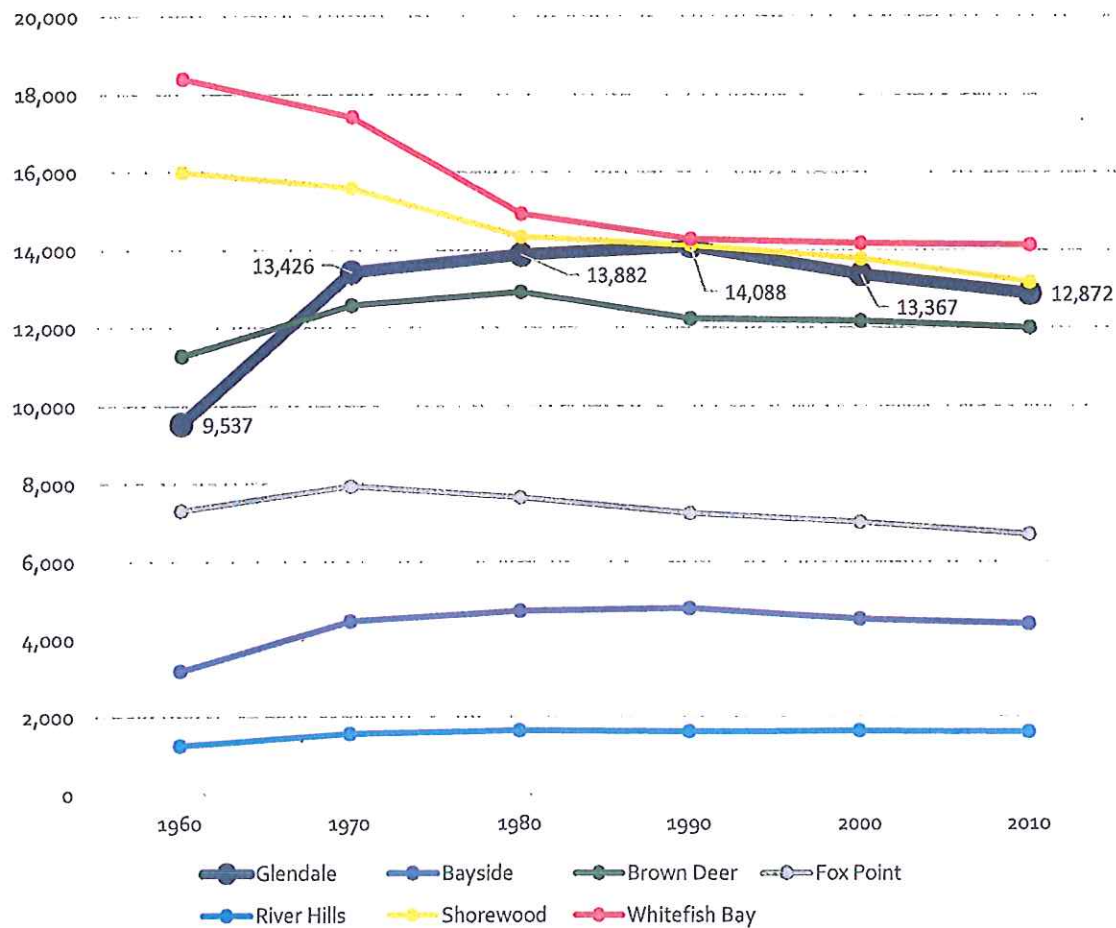
Historically, the City of Glendale experienced its largest population increase shortly after its incorporation between 1960 and 1970, slowly rising to a peak population in 1990. Since then, Glendale has seen a population decrease between one and five percent per decade. Other North Shore communities have experienced similar population declines (see Figure 1). The City of Milwaukee has also experienced a declining population since 1990. The population trends for both the City of Glendale and Milwaukee County are compared to that of the State of Wisconsin in Table 1.

Table 1: Population Trends

Year	Glendale		Milwaukee County		Wisconsin	
	Population	% Change	Population	% Change	Population	% Change
1960	9,537	--	1,036,041	--	3,951,777	--
1970	13,426	40.8%	1,054,063	1.7%	4,417,731	11.8%
1980	13,882	3.4%	964,988	-8.5%	4,705,767	6.5%
1990	14,088	1.5%	959,275	-0.6%	4,891,769	4.0%
2000	13,367	-5.1%	940,164	-2.0%	5,363,675	9.6%
2010	12,872	-3.7%	947,735	0.8%	5,686,986	6.0%
2016*	12,779	-0.7%	951,448	0.4%	5,795,483	1.9%

Source: U.S. Census 1960 – 2010, and American Community Survey 2016

Figure 1: North Shore Communities Population Comparison, 1960 to 2010

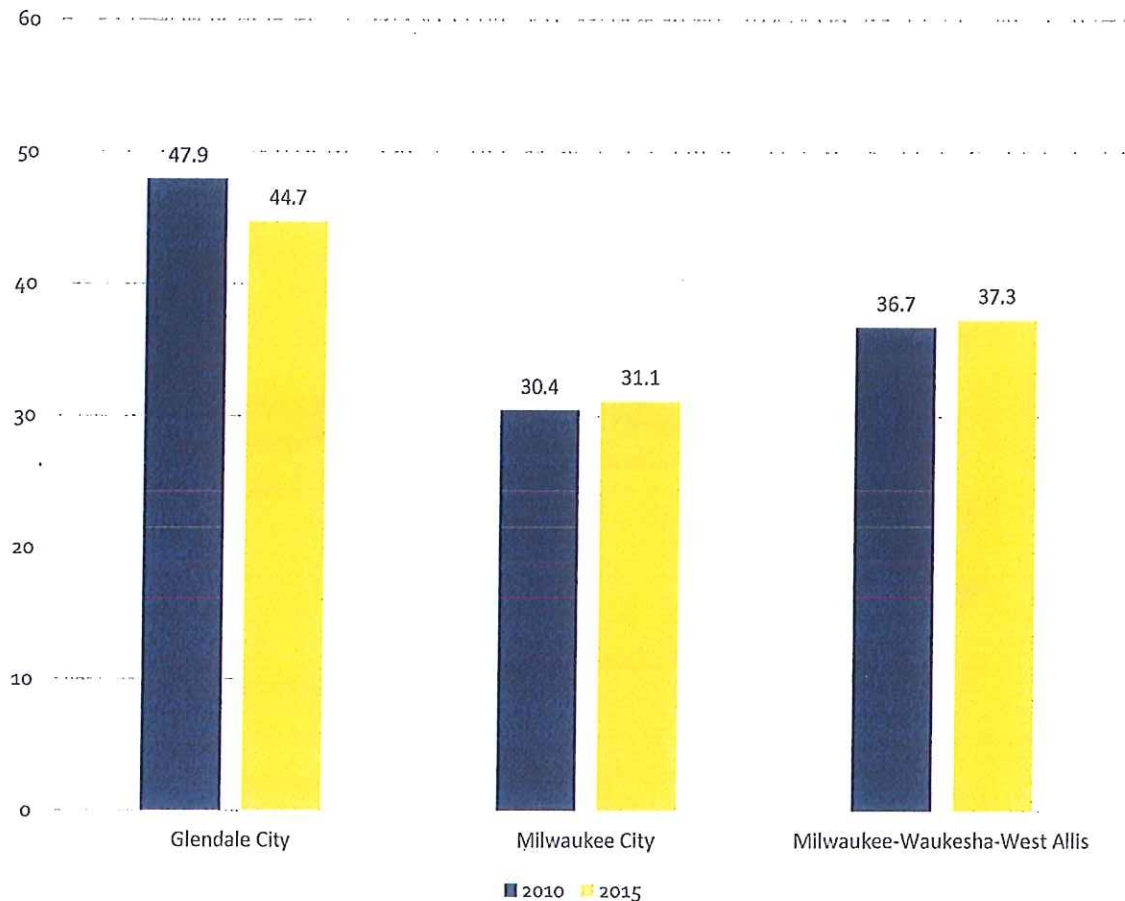


According to the 2010 U.S. Census, Glendale's population is 45.6 percent male and 54.5 percent female. This ratio is slightly more separated than the State of Wisconsin which is evenly split 50 percent male and 50 percent female.

Age Distribution

Glendale's median age according to the 2010 Census was 47.9 years old. The ACS results predict a 2015 median age of 44.7, representing a population that is forecasted to be getting younger. The median ages of neighboring Milwaukee and the Milwaukee Metropolitan Area are over 10 years younger at 30.4 and 36.7, respectively (see Figure 2). Though the City of Glendale is expected to experience a decrease in its median age, both the City of Milwaukee and the region are expected to see an increase to 31.1 and 37.3 years of age.

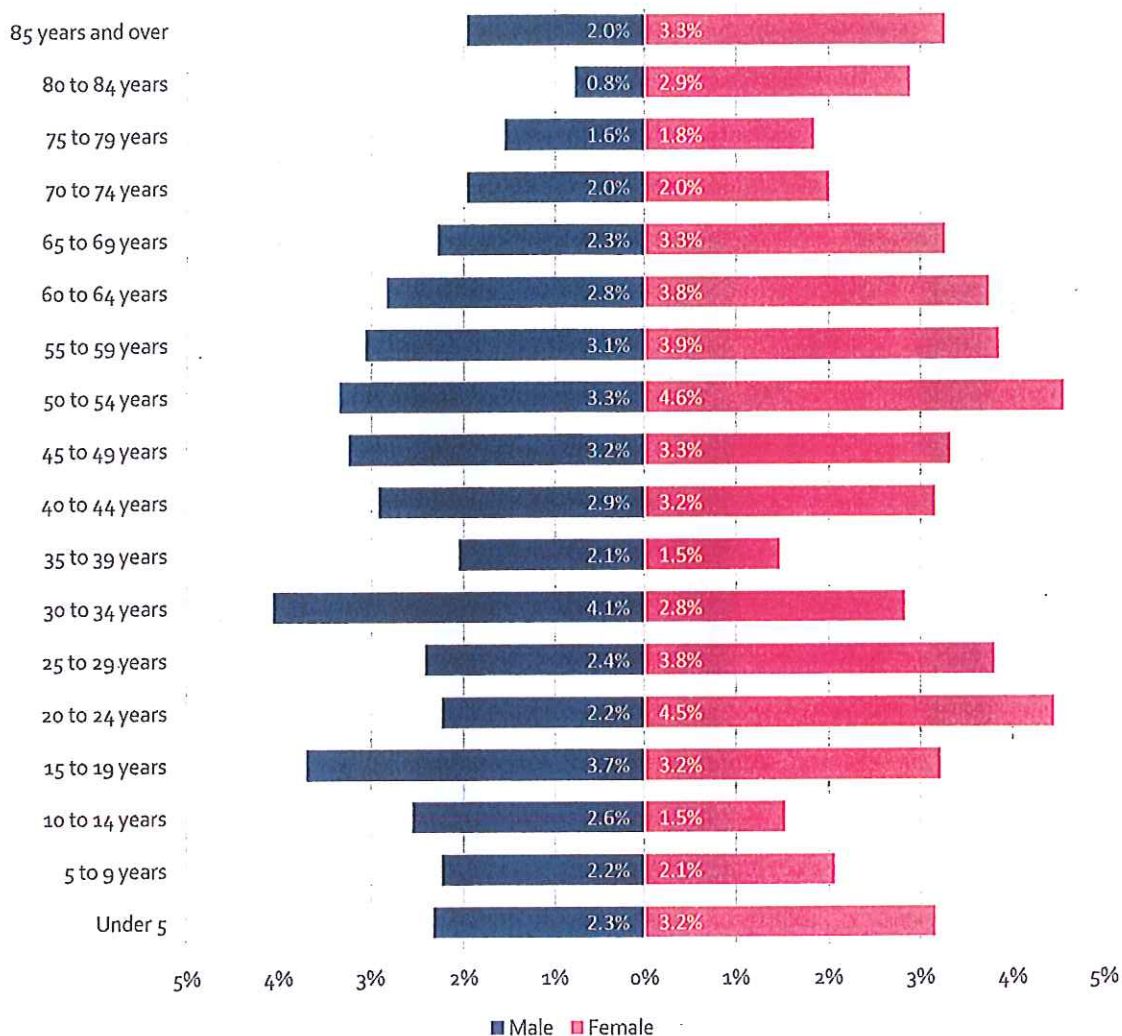
Figure 2: Median Age, 2010 and 2015



A study of a community's age distribution can provide clues into how a population is changing. A population pyramid illustrates the distribution of age groups in a population by gender, and its shape can help to inform a declining or growing population. An elderly population is depicted as a top-heavy pyramid, indicating a decreasing population. Three primary factors can lead to a declining population: 1. Low birth rates; 2. Out-migration of young adults with children; and 3. General out-migration of

populations to other areas. In contrast, a bottom-heavy pyramid shows an increasing population with a potential for rapid growth. Population pyramids that are middle-heavy depict populations that are experiencing a state of change. Glendale's population pyramid based on the 2015 ACS estimates is shown in Figure 3.

Figure 3: Glendale Population Pyramid – 2015 ACS



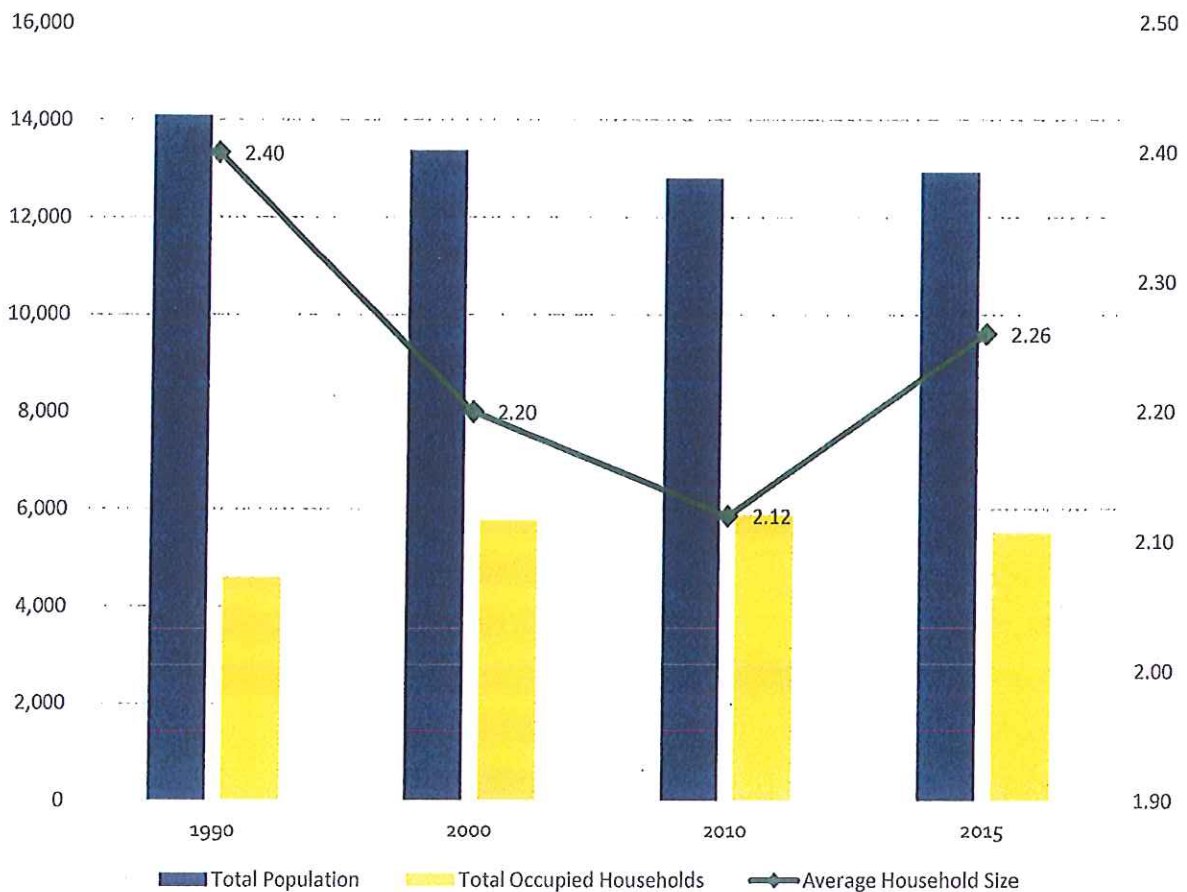
Generally, Glendale's population is middle- to top-heavy, with large populations of both male and female residents between 40-69 years old. Although this characteristic depicts an aging population, the adolescent population (19 years old and younger) accounts for 21 percent of the overall population. These populations may contribute to future growth in the City of Glendale.

Housing

The 2010 Census recorded 6,197 housing units in the City of Glendale, 5,888 of which were occupied (95.0 percent). This is an increase of 4 percent from 2000, which recorded a total of 5,974 housing units (see

Figure 4). Of the 5,888 occupied units, 4,076 (69.2 percent) are owner occupied and 1,812 (30.8 percent) are renter-occupied. The percentage of owner-occupied units decreased between 2000 and 2010 from 73.1 percent to 69.2 percent. This represents a slight change in housing trends for Glendale residents and may have been affected by the Great Recession. The 2010 Census data showed an average of 2.40 people per owner-occupied household and 1.80 per renter-occupied households. This average shows that although 69.2 percent of the occupied households are owner-occupied, 75 percent of the City's total population lives in owner-occupied housing.

Figure 4: Occupied Housing Units and Average Household size



The US Census records the average household size with each census. A household is not determined by related persons or families, but the number of people living within a residence. Since 1990, the average household size in Glendale has decreased from 2.40 people to 2.12 people (see Figure 4). This declining trend mirrors national trends. However, the average household size is projected to have increase to 2.26 people per household according to the 2015 ACS estimates.

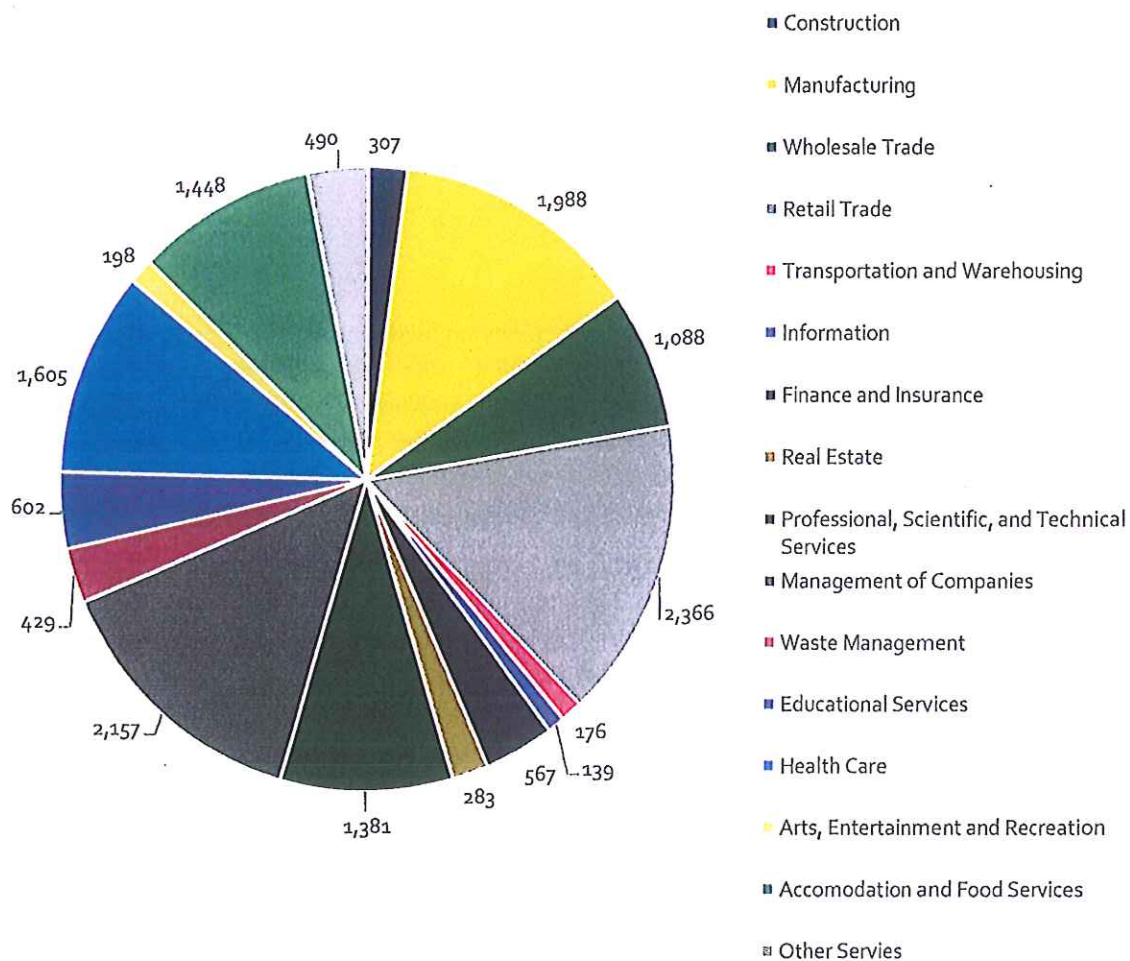
Industry and Commercial Development

In 2015, the ACS estimated a total of 15,224 jobs within the City of Glendale. This number supports the economic health of the community, as the city provides a greater number of jobs for the region than the

population residing within it. The US Census estimates the inflow and outflow of jobs within a community. In 2015, it was estimated that over 90 percent of the jobs within Glendale were held by employees residing outside of the city. Therefore, only 576 (9.7 percent) of the jobs in Glendale were held by residents of the city. Many Glendale residents travel within the region for employment, with over 70 percent working in the City of Milwaukee.

The economic diversity of the city is further supported by the various industries represented. There is not one industry that dominates the greatest number of jobs, with five industry sectors each representing 10 to 15 percent of the total jobs located within the City of Glendale. The Information, Finance and Real Estate (15.5 percent) and Professional, Scientific, and Management (15.3 percent) sectors are the largest employers in Glendale (see Figure 5). The presence of the Johnson Controls headquarters in Glendale contributes to these numbers, as it is the largest employer within the community. There are a total of 15,224 jobs identified within the city, as previously noted, not all are held by Glendale residents.

Figure 5: Employment in Glendale by Industry, 2015



The median household income for the City of Glendale is higher than that of the City of Milwaukee and the Milwaukee-Waukesha-West Allis region. According to the 2010 Census, the city's median household income was \$65,975 in 2010 (see Figure 6). The ACS estimates a decrease of 6 percent to a 2015 median income of \$62,127. The City of Milwaukee and the greater region are anticipated to see similar declines. When preparing estimates for income and other demographics between each decennial Census, the U.S. Census Bureau takes many factors into consideration (i.e., declining household size, regional changes, etc.). The 2015 data presented in the table below provides an estimate of the median household income, not a surveyed response.

Figure 6: Median Household Income, 2010 and 2015



Where is Glendale Going?

Glendale is headed in an exciting direction. The city's steady population, quality educational system and diverse economy provide opportunities for exciting action. With the surrounding communities and current development, focus can be placed on the maintenance and improvement of existing development to continue to improve the quality of life of existing and future residents. Access to employment, entertainment, education and recreational opportunities is abundant for Glendale residents. The city's continued work to improve and enhance these amenities will further improve the quality of life for all.

The Wisconsin Department of Administration (DOA) created population and household projections for each jurisdiction within the state to assist communities with long range planning activities. The DOA projects the historic population trends from 1990 to 2010 to continue to 2040 with a projected population of 12,660, a decrease of only 212 people in 30 years (see Table 2). The average number of people per household is expected to decrease consistently over the next 30 years. This trend is being experienced across the nation as family sizes shrink and housing trends change. These projections serve as an educated guess of how the population may change over the planning period. Social and economic shifts may occur within the timeframe that sway the population totals within Glendale and the greater region that cannot be predicted. The city is nearly fully built out with little room for new greenfield development, supporting slight changes in the population in future years.

There are two population projects provided within the 2040 estimates. The "Population" totals provide a projection of the total number of people who claim permanent residency in the community living in any form of housing situation, including group living (senior living facilities, etc.). The "Household Population"

totals provide a projection of the number of residents of the city that reside in a household containing a family or a limited number of unrelated individuals.

Table 2: Glendale Population Projections

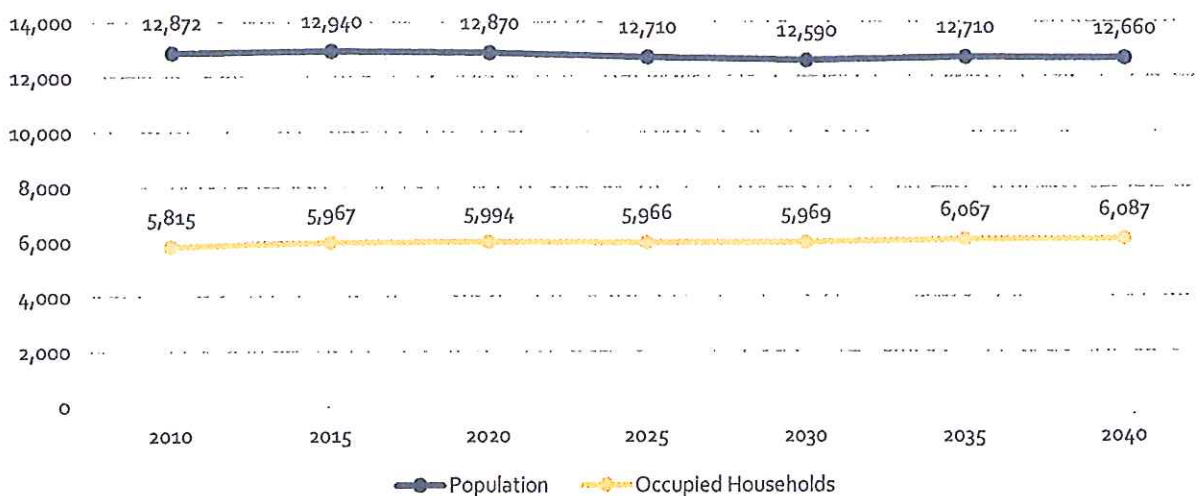
Year	Population	% Change	Household Population	% Change	Occupied Households	% Change	People per Household
2010	12,872	--	12,468	--	5,815	--	2.14
2015	12,940	0.5%	12,546	0.63%	5,967	2.6%	2.10
2020	12,870	-0.5%	12,479	-0.53%	5,994	0.5%	2.08
2025	12,710	-1.2%	12,326	-1.23%	5,966	-0.5%	2.07
2030	12,590	-0.9%	12,204	-0.99%	5,969	0.1%	2.04
2035	12,710	1.0%	12,309	0.86%	6,067	1.6%	2.03
2040	12,660	-0.4%	12,249	-0.49%	6,087	0.3%	2.01

Source: Wisconsin Department of Administration 2013 Population Projections

Though the DOA projects a slight decline in the population over the next 30 years, it is anticipated that the number of households within Glendale will increase by 272 units, or 9 units per year. This growth provides for additional housing options or reinvestment in existing housing within the city. It is also anticipated that the average household size will continue to experience a decrease – expected to be 2.01 people per household in 2040. This average household size does not account for populations living within group quarters, such as nursing homes

The city should continue to monitor these forecasts and future population counts as actions are implemented and future planning occurs. This will ensure that adjustments can be made to accommodate a changing population.

Figure 7: Glendale Population and Household Projections, 2010 - 2040



Engaging the Public

Community input is a critical component of any visioning or long-range planning activity. These efforts help to identify the strengths and weaknesses of a community from the people who live in it each day. Major themes that emerge from these conversations can help to identify great amenities that should be capitalized and preserved or areas that can be improved. To inform the visioning process three primary activities were held, a strengths, weaknesses, threats and opportunities assessment, a community survey, and pop-up events. The results of each of these efforts is described within this section.

Visioning Committee

A Visioning Committee was developed to guide the development of the 2040 Vision. Members of the committee represented a cross section of the community, including elected and appointed officials, city staff, and engaged residents. The committee was tasked with guiding and advocating for the public process and the review of deliverables. The input from this group had direct links into the development of the vision and implementation actions.



Strengths, Weaknesses, Opportunities and Threats

A self-assessment of a community's strengths, weaknesses, opportunities and threats (SWOT) at the early stages of a planning process helps to identify focus areas that should be explored throughout the planning process. During the 2040 Vision process, two SWOT analysis exercises were completed, the first with city staff and the second with the Visioning Committee. This exercise was intended to identify aspects of the community that fit into one of the following categories:

Strengths: positive attributes, both tangible and intangible, that will help the city to achieve its vision.

Weaknesses: aspects of the city that could detract from achieving the vision or may require modification as the vision is pursued.

Opportunities: external factors that can be used to help achieve the city's vision.

Threats: external factors that create a risk for achieving the city's vision.

The two groups worked through these categories asking themselves what the city does well and what improvements are needed; discussing successful actions; and debating the influence of external factors. The results highlighted the great aspects of the City of Glendale along with areas for improvement. The combined results of both SWOT analyses is provided in Table 3. These findings helped to inform public engagement activities and the plan's implementation actions.

Table 3: Strengths, Weaknesses, Opportunities and Threats Analysis

	Strengths	Weaknesses	Opportunities	Threats
City Government/ Services	- Quality of city services and infrastructure - Stability within city departments. Historic knowledge. - City reinvestments -Keep eyes open for possibilities - City leadership - Municipal partnerships – creating internal efficiencies - Safety (Community/neighborhood) - Perception is a factor - Taxes - Snow Plows - Police and fire departments/Safety Services - City leadership and city staff departments - Responsive	"We've always done it that way" - Municipal code needs updating - Tax levy limits – Challenges for maintaining infrastructure and services - Change that does not benefit the community	- Activity collaboration with existing city resources - Providing a format for conversation and debate	- Levy limits - Changes in State Legislation and Guidance - Inter-governmental agreements - Valuation tied to TIFs and when we will receive money - Act 10 - Reduction of local control - Lack of State/Federal assistance
Land Use	Diverse and balanced land use	- Lack of a true downtown or commercial district - Vacant properties, Length of vacancy - Physical barriers: I-43 – Milwaukee River, Community connectivity, Aesthetics (Interstate) - Geography (Land locked) - Built out - Physical barriers		Quality of available land
Parks and Trails	- Parks-Recreational - Golf courses - Trails - Green spaces - Value being outdoors - Recreation - Many Components - Yards/useable space		- Rails to trails if opportunity presents itself (E/W connection) - Whitefish Bay trail extension to park - Maslowski Park – Events - Dog park - Provide options for animal owners	
Transportation	- Access management along Silver Spring - Crime reduction (Crestwood)	- Better connectivity: Vehicular, trails, transit, etc. - Lack of sidewalk network - Bike/pedestrian connectivity - Safety (Wide intersections) - Lack of signage: Wayfinding- local businesses	I-43 widening - Funding source for other improvements Mount Royal subdivision	- I-43 (Congestion/impact to local system) - Increased traffic speeds - Roads under other jurisdictions - Lack of transit

Strengths		Weaknesses		Opportunities		Threats	
Community Cohesion	- Diversity (racial/economic) - Rural feel - Diversity - Attract diverse residents - History	Diversity (i.e. Housing affordability and resulting neighborhoods)	- To build community - Festivals and events - Local businesses (Brick Pub & Grill) - Farmers markets - Block parties- Sense of community	- Proximity to challenged neighborhoods - Results of dam decision and divide in community (polarized) - Impacts of changes to surrounding neighborhoods - Not as unified as a city - Address needs of different areas			
Natural Resources	River	Environmental concerns - Landfills					
Economic Development	- High employment - Regionally - Business environment - Bayshore - Local businesses - Corporate headquarters - Investments in community - Sprecher - Johnson Controls	- Tourism - Downtown is also a regional destination	- Capitalize off Milwaukee Development - Jobs growth in the city benefits Glendale - Demand for Single Family - Bayshore - Northend, Mixed-use, should always be evolving - Business/trail Connections - Vision to help us grow/evolve - Attracts people and businesses	- Internet impact on shopping and office demand - Bayshore not evolving - Success of businesses - We have to grow/develop - Jobs for our youth that haven't been created yet			
Region	- Proximity to downtown - Interstate connectivity - Proximity - 5 minutes from everywhere	Downtown is also a regional destination	- More partnerships with North Shore - More partnerships with Milwaukee	- Decline of neighboring communities - What's good for other areas (North Shore/ Milwaukee) comes at Glendale's expense			
Schools and Community Services	- School system - Schools - Library - Families doing things together	- Opportunities for youth - Recreation opportunities – Lack of programs	- Partnerships to provide programming for teens and families - Utilizing community (city) spaces - Opportunities for development - Industrial areas	Final agreement on the Maslowski Park Development			
Housing	- Housing affordability (housing stock diversity (to 1980)) - Affordable housing compared to other North Shore Communities	Diversity (i.e. Housing affordability and resulting neighborhoods)	- Age of housing stock and redevelopment opportunities - Housing stock turnover – young families into community - Are we meeting needs? - Walkable neighborhoods - Commercial	Potential decline in real estate market			
Resident Perception		Perception of Bayshore and its crime	Generally positive perception				

4

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A community survey was developed to gain feedback and input from residents. The 17-question survey asked open ended and multiple-choice questions about the perception of the city, available services and amenities, and future development. The results of the survey supported many of the concepts and ideas introduced with the SWOT analysis. Survey respondents highlighted the diversity of the community, the sense of community, and the benefits of its location within the Milwaukee region (see Figures 7 and 8). The quality of existing city services was evident in the survey responses, particularly the city's law enforcement, parks system, and library system. People identified with their neighborhoods and the people and places that make each neighborhood unique. Respondents also identified areas or themes that could be modified to improve Glendale's future. The top responses included crime and safety concerns; connectivity through the city; and continued focus on schools (including infrastructure and general safety).

A word cloud of neighborhood attributes for North Shore, Milwaukee. The words are arranged in a circular pattern, with 'Diverse' and 'Home' being the largest. Other prominent words include 'Friendly', 'Affordable', 'Safe', 'Comfortable', 'Great', 'Nice', 'Community', 'Family', 'Clean', 'Convenient', 'Progressive', 'Expensive', 'High Taxes', 'Pleasant', 'Suburban', 'Growing', 'Welcoming', 'Natural', 'Busy', 'Pretty', 'Changing', 'Accessible', 'Middle-Class', 'Family-Friendly', 'Quiet', 'Beautiful', 'Good Community', 'Milwaukee Suburb', 'Close', 'North Shore', and 'High Taxes'.

Figure 9: What are the two most positive attributes of Glendale?

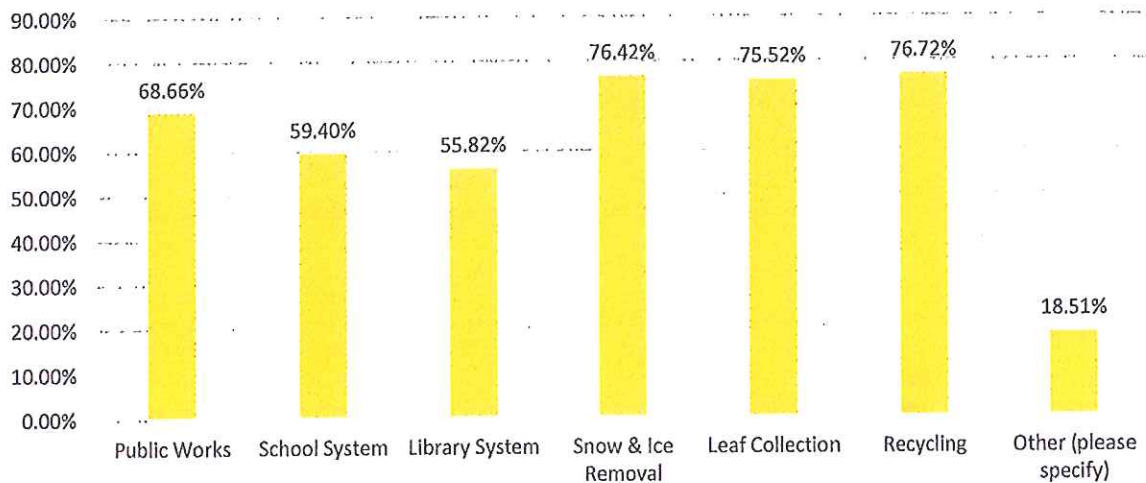


When asked to provide one word to describe Glendale's future, the top responses included: **Bright**, **Promising**, **Progressive**, **Hopeful** and **Positive**. These responses provide a very positive outlook for the community directly from its residents. Many respondents indicated that they see their community continuing to grow and evolve in the future, describing the future as *limitless*. However, other respondents were tentative or unsure of the community's future, using words such as questionable or uncertain to describe its future.

Services

The quality of city services was highlighted throughout the public process. When asked to identify services that residents appreciated in the community, snow and ice removal; leaf collection and recycling were ranked among the highest (see Figure 10). Overall, a majority of the survey respondents appreciate all of the identified services. The city's Police Department and North Shore Fire were also highlighted by many as appreciated and high-quality services. Their focus on crime prevention and quick service is valued by many residents. Additionally, many respondents spoke highly of access to and responses from city staff and elected officials.

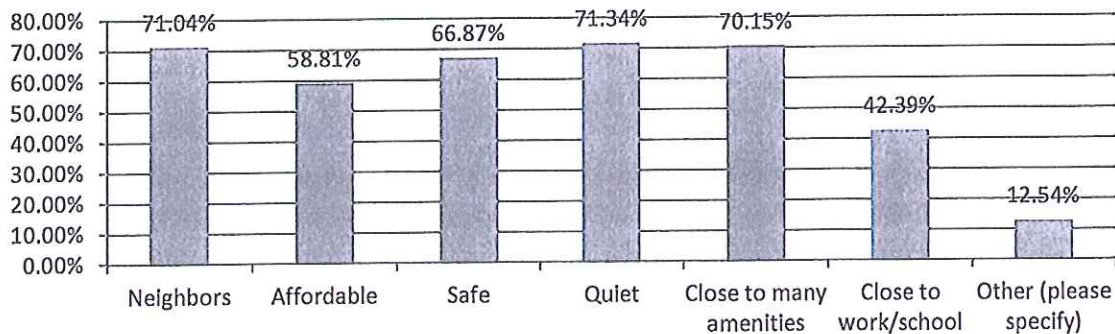
Figure 10: What services do you appreciate in Glendale?



Community Characteristics

Many of the survey questions aimed to identify positive and defining characteristics of the city and its neighborhoods, which assist in the identification of elements that should be preserved or enhanced in the city's future vision. When asked about the favorite characteristics of their neighborhood, respondents identified quiet and neighbors as the top responses (see Figure 11). The access to amenities and safety of their neighborhoods also ranked high among responses. Respondents specifically identified access to natural resources and parks within the "other" responses.

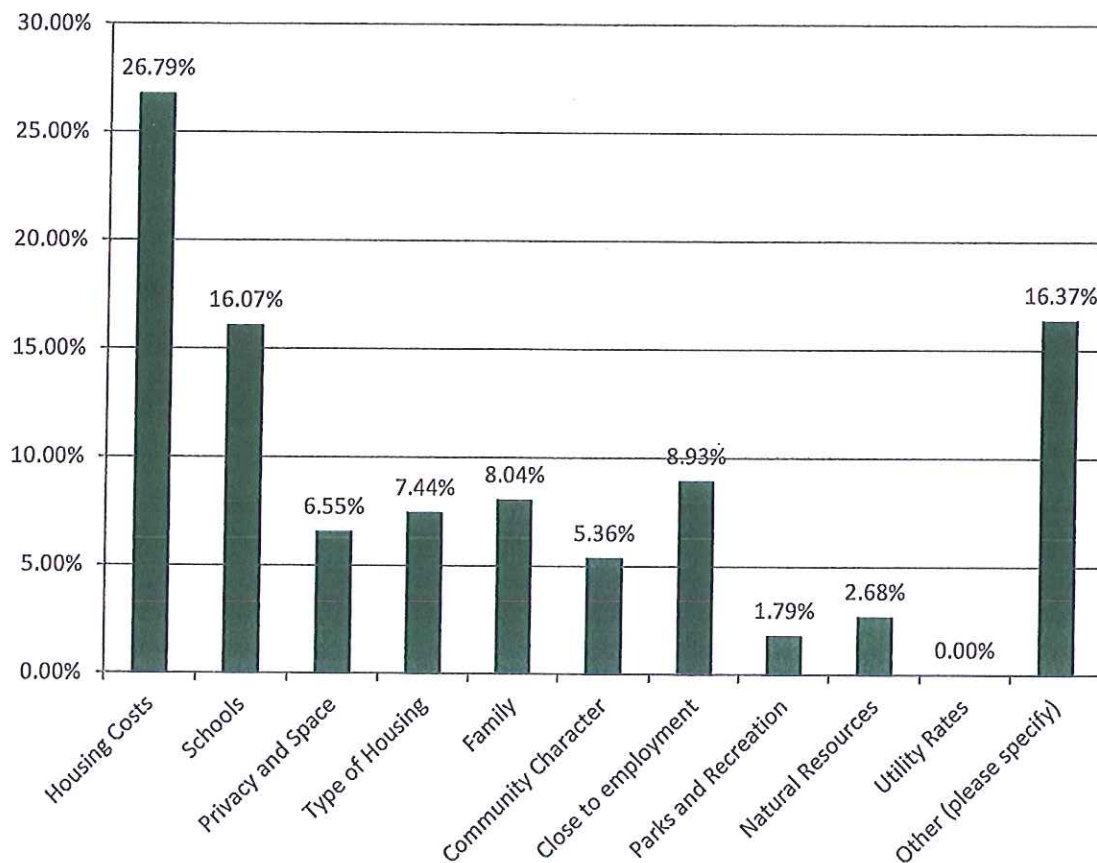
Figure 11: Favorite characteristics of your neighborhood



When asked to identify the defining characteristics of the community as a whole, respondents identified similar qualities of their individual neighborhoods. Top characteristics included friendless of the community, integration of green space, location and convenience, quality schools, and a quiet and smaller community. These responses support the high quality of life for Glendale residents and identify characteristics that should be preserved in the future vision.

When asked to identify their top reason for choosing to live in Glendale, respondents identify housing costs as their top response. Schools, close to employment, and family followed as the other top responses (see Figure 12). Many respondents identified other as their response, commenting that multiple factors play into their choice to make Glendale their home. This solidifies that the city is doing well on multiple faucets and residents are aware of it.

Figure 12: Why do you choose to live in Glendale?

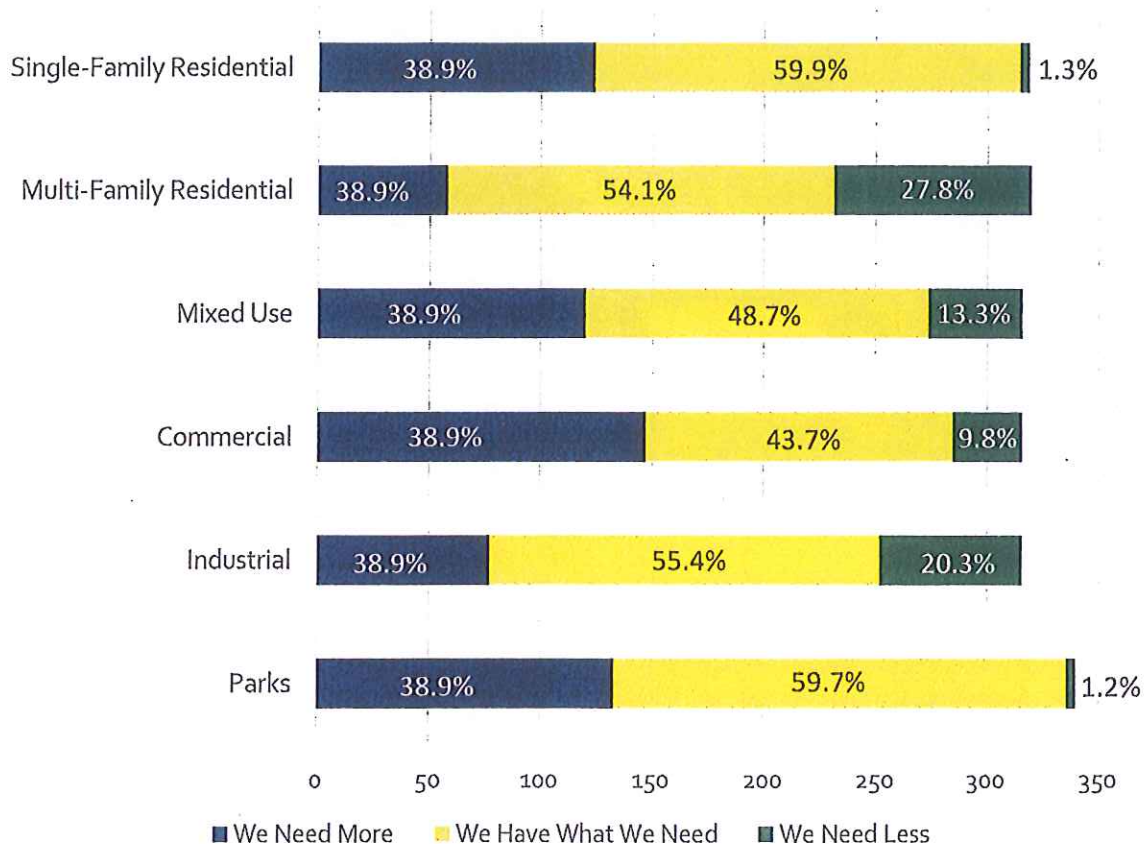


Future Development Needs

The need for new development within a community can be dictated by changes in community needs. Changes in population demographics, closure of regional amenities, or transitions to new transportation modes can affect the business, housing and recreation desires of a community. When asked what types of development are needed in the community, nearly 50 percent of respondents noted that Glendale has what is needed for all types (see Figure 13). However, nearly 40 percent of respondents identified

that additional single-family residential, commercial and parks uses are needed within the community. Over 20 percent of respondents noted that no additional multi-family residential or industrial uses were needed.

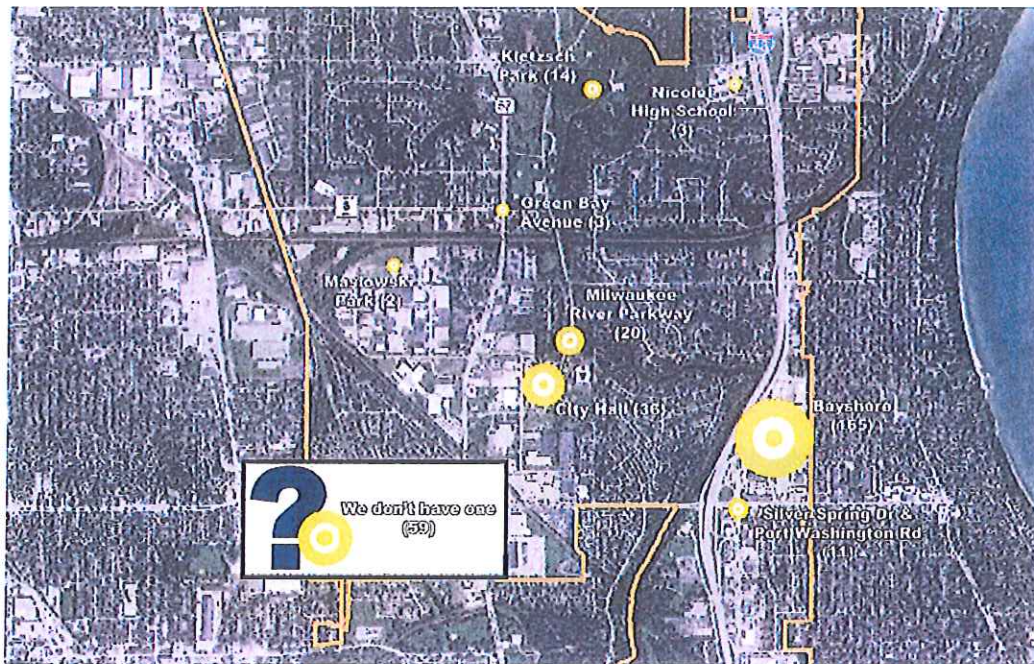
Figure 13: What types of development are needed?



Town Center

A component of the city's previous vision plan was the identification of a Town Center within Glendale. A question was asked within the survey to understand respondents' perception of any existing town center. Many respondents identified Bayshore as the town center, highlighting its plaza and fountain. However, others noted that Bayshore serves as a commercial destination, not a town center. Additionally, many respondents noted that there is currently no defined town center, but desired one to be established. Others identified government building and parks as town centers, including: City Hall, Kletzsch Park, Police Department, Nicolet High School and the Milwaukee River Parkway. These responses may warrant additional efforts to truly identify the city's desired town center and how it should be developed and marketed as such.

Figure 14: Where is Glendale's current Town Center?



Pop-Up Events

Pop-up events were used to interact with community members and gain input for the planning process. These events are designed to meet people where they are, rather than asking people to dedicate time for an event specific to the engagement process. By attending existing community events, we were able to interact with people for a brief time who were already engaging in other community activities. The Christmas Tree Lighting Celebration and a High School basketball game and swimming meet were attended as pop-up events. In each occasion, a table with various engagement activities was set up to provide an opportunity for residents to provide their input for the community. Participants were asked to identify how they would describe Glendale to others, identify what amenities or services they wish Glendale had, and locate their favorite place within the community.



The input received at the pop-up events mirrored the input received from the community survey. When asked to provide one word that could be used to describe Glendale to others, many participants used **diverse**, **friendly**, and **safe**. Other responses included quiet, fun, fantastic, small, tight-knit, calm, cohesive,

and lots of car dealerships. Many of these responses were also identified as top responses in the community survey.

When asked to identify elements that participants wished Glendale had, the top responses included more teen friendly activities, more restaurants, and more recreational activities. These responses highlight the community's focus on a family friendly environment with access to diverse activities.

Top priorities or amenities for participants included safety, parks, and housing. Other priorities included access to nature and recreational activities, a clean environment, and youth activities.

Participants were also asked to identify their favorite place to visit within the city as an activity at the pop-up events. Many responses focused on retail centers and parks within the community. Figure 15 highlights the favorite places identified at the pop-up events and the community survey.

Figure 15: Favorite Places in Glendale



Future of Glendale

Glendale residents have a bright outlook for the future of their community. They identify with the positive aspects that should be preserved and enhanced, while understanding elements that can be improved upon while working towards a shared vision. The review of the input gathered during the community engagement process allowed for the development of a 2040 Vision for Glendale. Key themes were also identified as the most relevant aspects for the future of the community.

Glendale 2040 Vision

A community's vision provides a roadmap to guide future decision making based upon the values and input of its residents. The input gathered during the public engagement phase of the planning process was analyzed and used to develop a future vision for Glendale. The visioning committee used this information to create a vision that captured the positive elements of the community and allowed for continued evolution beyond 2040.

Areas of support for both positive and negative aspects of the community were analyzed in the development of the vision and following key themes. The vision statement was derived in a manner to promote engagement for all community members to create a thriving, diverse and safe community that will continue to evolve and adapt for years to come.



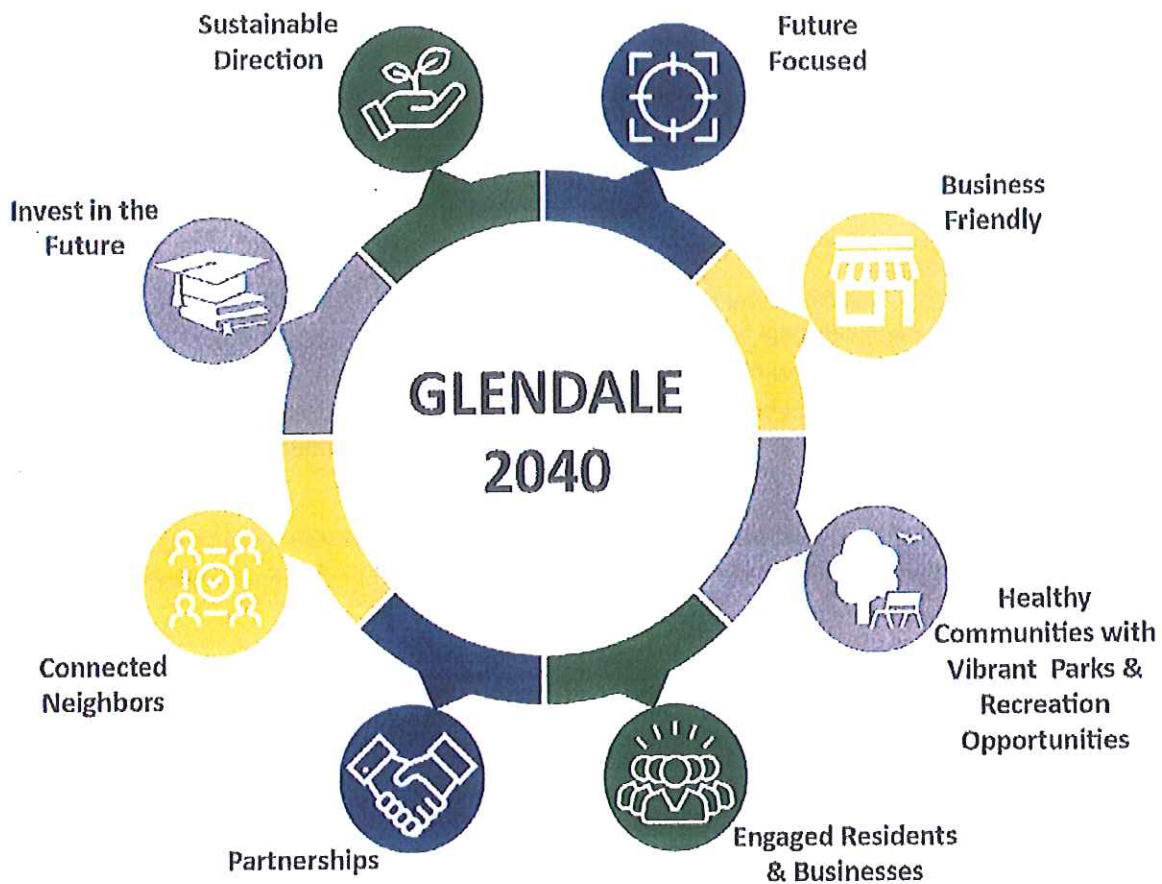
Glendale builds upon its **foundation** as the community **grows** and **evolves** into 2040 for its current and future residents and businesses. A **thriving, diverse, and safe** environment is created through decision making and actions taken by staff, elected officials, stakeholders and residents. Glendale provides a community that physically and socially connects residents, businesses, and visitors to provide access and opportunities for all. **Participation and Engagement** between the city and residents supports progress towards this shared vision that will be modified as new trends emerge. Efforts are made to plan with purpose using a comprehensive view of all facets of the community, followed by meaningful **implementation**. All efforts benefit from an engaged population that is willing to participate in the planning and implementation process to create a **balanced and bright future**.

Key Themes

The 2040 Vision provides an overall view of the community's future vision for its environment and community actions. To support this vision, key themes were identified to highlight specific direction and subsequent action steps that can be taken to achieve the vision.

In response to the input received throughout the planning process, eight key themes emerged. These themes represent elements or ideas that were repeated through many elements of the public engagement process. Focus in each of the eight areas by city staff, elected and appointed officials, and the public will help to provide comprehensive implementation of elements important to the future of Glendale.

Figure 16: Glendale 2040 Key Themes



These key themes identify areas that are tied to action steps that will help to achieve the 2040 vision. Each theme was developed in response to specific elements of the public engagement results, described below.



Future Focused

Glendale is focused on the future - adapting to the changing needs of residents, responding to external changes/opportunities, and collaborating with partners.

Throughout the engagement process, the access to the high-quality community services (e.g., city hall, police department, parks, etc.) was highlighted. As the community continues to grow into 2040, the desire to maintain this access and high-quality of services will be maintained. Additionally, the interaction between staff, official and residents should be expanded to provide additional opportunities to engage the public through the decision-making process.

A strong sense of place is created by characteristics of a community or place that are easily identified by residents and visitors and contribute to its identity and helps to guide a community in future decision making that complements its current identity. The City of Glendale contributes to the sense of place of the North Shore and Milwaukee suburbs. However, the community will continue to foster the sense of place of Glendale. This identity can be used to promote the city to potential residents, visitors, and businesses.

There are many actions to take and metrics to monitor to ensure that Glendale remains focused on the future. The following considerations can be used to help guide decision making in support of this key theme:

- Maintain interagency partnerships (i.e., adjacent communities and counties, school districts, State departments, etc.)
- Review and consider the impacts of decisions to all levels of the city – from neighborhood to regional
- Maintain open communication between the city, residents, businesses, stakeholders, and partners
- Participate in long-range planning efforts, including both local and regional efforts
- Participate and monitor regional and statewide planning and legislative activities that may affect city actions or responsibilities
- Respond to changing trends (aging population, etc.) during the decision-making process

Specific actions that can be taken to support this key theme include:

- Update the city's Smart Growth Plan
- Explore improved interagency partnerships (e.g., North Shore Police)
- Create committees to implement the 2040 Vision



Business Friendly

Glendale supports economic diversity and commercial development of many sizes. The community provides retail options and employment for the city and greater region and support a vibrant local economy. Glendale's economic health will be maintained through diverse options – from large corporations to family-owned and small businesses.

Glendale's residents appreciate access to a variety of commercial opportunities and access to employment. The city will continue to support the economic diversity that supports both large and small-scale businesses and contributes to the city's identity. Glendale will continue to support a range of commercial opportunities and amenities throughout the community.

Economic growth within Glendale includes a two-pronged approach that much consider the maintenance of existing and development of new businesses. Existing shops and retailers provide diverse options to residents to work, shop and eat, and efforts should be made to maintain and improve these establishments. Expansion of the retail and service offers should will also be promoted to provide a range of offerings for residents and visitors.

To make decisions that are business friendly, the following considerations should be included in the decision-making process:

- Promote economic diversity through development decision making and establishment of programs
- Support small, family-owned, and start-up businesses
- Combine community events with commercial offerings
- Increase connectivity and access to commercial establishments for all areas of the community and all modes of transportation

Specific actions that can be taken to support this key theme include:

- Update the city's Smart Growth Plan
- Explore improved interagency partnerships (e.g., North Shore Police)
- Create committees to implement the 2040 Vision



Healthy Communities with Vibrant Parks & Recreation Opportunities

Glendale is a healthy community with diverse recreational opportunities available to residents and visitors. The park and trail system contributes to the environmental health of the community through tree cover and open space and provides opportunities for physical and mental health of residents. The presence of existing natural features and regional parks systems provide opportunities that should be enhanced and promoted.

The parks and recreation opportunities are valued amenities for many Glendale residents. The variety of resources and activities available within the community provide something for everyone. The city supports the development of a vibrant system, working closely with residents and partners to enhance and promote these resources. The recent development of Maslowski Community Park is a shining example of efforts within this key theme.

The health of the built and natural environments and each resident is important to the future of the community. Park and open spaces throughout the community provide an opportunity to protect and enhance the natural environment that also provide activities and spaces that promote health and wellness of residents. Active transportation options provide another opportunity to keep residents active in the community through the provision of sidewalks and bike paths. Glendale encourages active living and health communities through various park and community resources and will continue to explore expansion of options for all residents.

A healthy community is one that not only provides options for an active lifestyle but increases options and availability to healthy decision making. This includes access to healthy foods, defined emergency planning, and provides resources to encourage healthy habits. Glendale will make decision that create and improve physical and social environments and expand resources to support a healthy lifestyle for all.

To support the establishment and maintenance of healthy communities and vibrant parks and recreation opportunities, Glendale should consider the following items during the decision-making process:

- Increase access to active transportation options (e.g., sidewalks, bike lanes, etc.)
- Increase public involvement within the park system
- Monitor and amend sidewalk standards as needed to respond to trends and needs
- Provide a variety of recreation offerings for residents of all ages
- Preserve the quality of and access to natural resources within the community
- Monitor access to healthy foods and resources throughout the community

Specific actions that can be taken to support this key theme include:

- Completing Health Impact Assessments on large infrastructure projects during the planning phase
- Develop a Friends of Maslowski Park organization
- Develop a Comprehensive Outdoor Recreation Plan for the Community
- Create a city-wide bike and pedestrian plan



Engaged Residents & Businesses

Glendale values the opinions and involvement of its diverse population. The community will continue to provide and enhance opportunities to engage residents through every aspect of the civic process. Community engagement is a foundation of decision making at the city level.

An understanding of the needs and desires of community members is a key component of protecting a community's high quality of life. The City of Glendale values the opinions of its residents and encourages involvement at all scales. As the community looks to implement its vision and thoughtfully plans for the future, it will strive to engage as many residents as possible.

Emphasis is placed on providing residents the opportunity to be involved within their community at whatever level is comfortable to them. This can range from running for local office to skimming city activities on the city's website. Glendale will provide engagement options for all levels, welcoming everyone to the table. During planning efforts, emphasis is placed on the feedback gathered from the public during the final decision-making process.

Engagement within the community doesn't stop at residents living with the community. Many business owners, employees and other stakeholders have made large investments in Glendale and will be invited to the table.

To promote an engaged group of residents and businesses throughout all aspects of the civic process, the following items should be considered:

- Promote civic engagement on many scales, providing options for varying level of involvement
- Provide opportunities to be involved, through public meetings, a spot on a committee, or the posting of information
- Create opportunities to build pride and encourage investment in Glendale
- Enhance the safe and welcoming environment
- Embrace diversity

Specific actions that can be taken to support this key theme include:

- Update the city's Smart Growth Plan
- Explore improved interagency partnerships (e.g., North Shore Police)
- Create committees to implement the 2040 Vision



Partnerships

Glendale works collaboratively with its industry and agency partners. Teamwork and collaboration expand opportunities and leverage actions. The employment sector is a key component of the city's framework, and partnerships to support growth and sustainability are important to the future.

The City of Glendale maintains partnerships with local agencies and industries to create opportunities and reach solutions. Partnerships with other governmental agencies aid city functions and provide opportunities to expand city services. Partnerships with industries help to maintain economic diversity, retain and attract a workforce and aid economic development.

The employment sector of Glendale is an important element of the city's identity. Key industries within Glendale provide jobs for community members and the greater region. Industries are member of the community and should be included within the planning process just like residents. The city will continue to strengthen relationships with industries and will support ways to create a shared vision.

Throughout the long-range planning and decision-making process, Glendale shall utilize its existing and identify new partnerships to achieve its vision. The following considerations shall be explored to foster the city's partnerships:

- Maintain and create partnerships with local industries
- Assist with employee retainment and attraction
- Create opportunities to partner with youth organizations
- Foster relationships with governmental entities
- Participate in regional planning efforts

Specific actions that can be taken to support this key theme include:

- Explore workshops and training for skilled professions that are needed within the community.
- Expand workforce housing options for employee retention and attraction



Connected Neighbors

Glendale is a connected community with active neighborhoods. Every community member plays a role in the identity of the city and should have the opportunity to share and connect with others. Residents work together to celebrate the successes and challenges throughout each neighborhood.

Glendale residents identify with their neighborhoods and friendly neighbors. The city will continue to support the development of a sense of community throughout each of its neighborhoods. This can be promoted through community events and neighborhood social group development. These events provide an opportunity for residents to connect with each other and celebrate aspects of the community.

Connected neighbors find opportunities to connect with each other on various levels and create opportunities to learn from one another. Current community events such as the 4th of July and events at Maslowski Park provide opportunities for neighbors to come together and celebrate each other's successes. Expanding opportunities for people to come together creates additional opportunities to connect neighbors and to build a sense of ownership for residents. The organic development of activities within neighborhoods should be promoted as they respond to the desires of a specific area and create opportunities for all ages.

To support the further development of connected neighborhoods, the following items should be considered as actions are taken within Glendale:

- Create safe and interesting activities for youth
- Provide gathering places for youth that promote organic activities and creativity
- Promote a sense of neighborhood throughout the various areas of the city
- Continue to provide and enhance community activities
- Consider both physical and social connectivity through decision-making
- Explore the primary community destinations and identification of a town center
- Promote Glendale and its offerings on a regional scale

Specific actions that can be taken to support this key theme include:

- Plan neighborhood block party events
- Analyze the need, location and funding of a community center
- Explore special needs and resources for community events and destinations



Invest in the Future

Glendale invests in its future generations to promote a sustainable future. With 20 percent of the community under the age of 19, it is important to support the city's future populations and their changing needs.

Glendale recognizes that its future lies in the hands of its youth and efforts should be made to invest in its future. The community will continue to engage its younger demographic throughout the planning process, assisting in the identification of changing needs and ideals that may affect the long-range planning process. Continued efforts to support the high-quality education system can be enhanced with exploring additional programs and offerings for students.

While recognizing the need to invest in its future population, the city shall also consider ways to promote individual's investment in their future in Glendale. A community that supports residents' desires to grow and develop, welcomes opportunities for their personal investment and dedication to the community. Residents are welcomed into the community and invited to make it their own.

As decisions are made for the future of Glendale, the following items will be considered for their impact to the current and future youth demographic:

- Collaborate with schools and universities to promote involvement and input for city decision and needs of a changing youth demographic
- Monitor social and academic needs of residents
- Expand youth program offerings
- Include youth in the civic process
- Monitor housing availability and needs for first time home buyers and young adults
- Maintain status as a top high school in the State of Wisconsin

Specific actions that can be taken to support this key theme include:

- Develop internship and job shadowing opportunities for high school students with industries in the community.
- Create a position for a youth member on each planning committee within the city.



Sustainable Direction

Glendale considers sustainability and resilience in the decision-making process. Through this effort, city investments and improvements sustain the high quality of life for future generations and ensure the ability adapt and respond to changes.

The term “Sustainability” can have multiple definitions. In many case sustainability is the ability to maintain a certain rate, level or condition. In other cases, sustainability is specifically associated with actions related to changing environmental conditions and subsequent actions. When maintain a sustainable direction, Glendale considers both definitions.

As highlighted throughout the 2004 Vision, residents experience a high quality of life in Glendale with access to a diverse range of services and activities. Though this document and future planning efforts, the community will strive to maintain and improve this high quality of life and a sustainable future direction.

Glendale committed to uphold renewable energy goals in support of the international movement to combat global temperature increases by support the goals of the Paris agreement in 2017. This action of the Common Council supports the city’s commitment to a sustainable direction, where a goal was set for the City Hall to be powered by 100 percent renewable energy by 2021. The city’s commitment with government facilities can be used to promote sustainable decision making across public and private investments in the community.

While moving in sustainable direction, the following items should be considered:

- Assess the environmental and social impacts resulting from community actions
- Sustain the community for future generations
- Expand education of tools and resources for a sustainable future

Specific actions that can be taken to support this key theme include:

- Create a sustainability task force
- Identify sustainability factors that must be considered during decision making
- Update and monitor the city’s 2017 resolution for renewable energy use as achievements are made

Future in Action

The identification of a future vision provides a solid foundation for the city to look towards. However, it is identification and implementation of action steps that will direct the city to achieving this vision. The strengths and weaknesses identified by residents provides areas where the city can take action to preserve or improve elements of the community.

Potential action items were identified within the discussion of each key theme. As the city continues to explore future long-range planning efforts and other investments, the actions should be reviewed for how they support each of the eight key themes. This supports the comprehensive view of the community, highlighting areas of emphasis in the future. Implementation efforts for each of these actions will help the city as it moves towards its 2040 vision.

The city should regularly review the future actions and potential implementation measure to ensure continued progress is being made. As actions are completed, the table can be updated to reflect next steps and actions needed to achieve the vision.



Conclusion

Glendale's 2040 Vision and Implementation Plan should be considered as fluid statements that can be adapted and changed to respond to a changing community. As steps are taken towards the future vision, the city should celebrate its successes and identify next steps to continue working towards the future. Continued collaboration and engagement with city staff, elected and appointed officials and the public will aid in the successful implementation of the vision.



Glendale 2040 Vision

Glendale builds upon its **foundation** as the community grows and evolves into 2040 for its current and future residents and businesses. A **thriving, diverse, and safe** environment is created through decision making and actions taken by staff, elected officials, stakeholders and residents. Glendale provides a community that physically and socially connects residents, businesses, and visitors to provide access and opportunities for all. **Participation** and **Engagement** between the city and residents supports progress towards this shared vision that will be modified as new trends emerge. Efforts are made to plan with purpose using a comprehensive view of all facets of the community, followed by meaningful **implementation**. All efforts benefit from an engaged population that is willing to participate in the planning and implementation process to create a **balanced and bright future**.



Request for Qualifications - Consultant Services

Update of Comprehensive Plan

City of Glendale, Wisconsin

Proposals Due: 12:00 noon (CDT), Friday, February 22, 2019

PURPOSE

The City of Glendale, Wisconsin (pop. 12,604), a community located in the southeastern Wisconsin in Milwaukee County and about 7 miles north of downtown Milwaukee, is seeking the services of a qualified consulting firm to update the City's comprehensive master plan meeting Wisconsin State Statutes, coordination and updates of existing subdivision and zoning codes, creation of design guidelines, strategies for infrastructure expansion and improvements, market and economic impact analysis, funding mechanisms, and implementation strategies for the City's Comprehensive Master Plan.

Specifically, the City's desire is to create development goals, create a sense of place, facilitate development and redevelopment within the City, continue the City's ability to apply for grants and aid, and meet State of Wisconsin requirements for comprehensive planning. Individual Firms and Teams submitting Statements of Qualifications should highlight their experience in bringing together a wide variety of community issues into one integrated plan and demonstrate a proven track record in developing and utilizing citizen participation, while working with City Authorities, Committees, Commissions and Boards. An ideal firm or team shall consist of a local team leader (within a day's travel for in person meetings with city staff), urban planner, utilities engineer, transportation engineer, urban design professional or architect, and urban economist, and marketing group, or other similar consortium of professionals.

BACKGROUND

The city contains approximately 5.7 square miles. Current development includes historic Bayshore Town Center, suburban, and urban development. The City has a currently adopted Smart Growth Update as Relates to: The Comprehensive Plan, Glendale, Wisconsin and Appendixes.

DISCUSSION

The city seeks to develop a comprehensive plan (the Plan) that will be a living document that will change and grow as markets, economics, and lifestyle change. The plan will be designed with an overview of the entire community and detailed sub-area or neighborhood plans. Many of the sub-area and neighborhood plans have been created and just need to be reviewed that they are consistent with current planning efforts. The Plan will also address in detail the area of Mill Road and Green Bay Avenue as well as other key corridors within the community. The selected firm will analyze the existing plans and, if needed, update the existing plans.

The City Comprehensive Plan must address future objectives, current and future market demand, land-use development, implementation strategies, and recommendations that conform to the requirements of Wisconsin State Statutes dealing with comprehensive planning, including land use, transportation, population, economic development, natural

resources, cultural resources, aesthetics and community image, community facilities, housing and intergovernmental cooperation.

Coordination with surrounding communities and other governmental agencies will strongly be stressed throughout the process. Agencies that will include the City of Milwaukee, Villages of Bayside, Brown Deer, Fox Point, River Hills, Shorewood and Whitefish Bay as well as the Southeastern Wisconsin Regional Planning Commission (SEWRPC), Milwaukee County State agencies such as the Department of Transportation (DOT) and the Department of Natural Resources (DNR), and others.

TIME SCHEDULE REQUIREMENTS

The Comprehensive Plan is to be completed no later than November 30, 2020. A schedule of completion for specific sub-areas of the City will be negotiated with the selected firm.

STATEMENT CONTENT

The following information must be provided in the Statement of Qualifications:

- Name (including former names), year established, address, and telephone number of the firm and e-mail address for the contact person.
- Type of Services Particularly Qualified to Perform.

Urban Planning
Architecture
Urban Design
Historic Preservation Planning
Engineering -Civil
Engineering - Transportation
Transportation Planning
Environmental Planning
Economic Planning
Financial Planning
Others

- Cover Letter — This shall include a brief summary of the key points of the project and the approach to accomplishing the study.
- Key Personnel — One-paragraph summaries of the qualifications and experience shall be submitted for all key personnel assigned to the project and States in which they are registered (if applicable).
- One-paragraph summaries of the qualifications and experience of the outside consultants usually and currently employed by the Proposer.
- Related Work — Work closely related to that described under the discussion heading which has been performed by the Proposer. Emphasis should be placed on relevant work undertaken in communities of similar size and growth patterns to the City of Glendale. Related work shall also demonstrate a familiarity with and experience in developing detailed comprehensive plans pursuant to Wisconsin Statutes and Wisconsin-based court decisions. List should include In-Progress Projects for which the Proposer was the Principal Professional or serves as a subcontractor, and the costs of each. Two (2) copies of a Comprehensive Plan completed by the Proposer shall be included.
- Study Methodology — This shall include the firm's approach to accomplish the work

described under the discussion heading within the specified time frame. This section should include the firm's understanding of the City of Glendale (Milwaukee metropolitan) area, local growth trends and the relationship between governmental agencies and all stakeholders.

- Timing – The Proposal must include a detailed timing analysis of the project with tasks indicated. Specific dates are not required; however the time schedule shall be indicated by generalized weeks for each task. Specific dates will be coordinated through the awarded contract.
- Proposed fee with cost breakdown, including information about the billing structure shall be provided.
- Detailed list of tasks that are perceived to be required to complete the project.
- Consultant Qualifications. The selected consultant or consultant team shall have registered or certified professionals within the applicable discipline and shall include consultants approved by the Wisconsin DNR to prepare Comprehensive Outdoor Recreation Plans.

SELECTION PROCESS

City staff will review the Statements of Qualifications submitted, verify that the statement content is complete, and select finalists. The finalists may be asked to submit additional information, and may be invited to interview with a panel comprised of members of the City Plan Commission and City Staff. Selection criteria to be used by the panel will include:

- Overall experience
- Time available and proposed time schedule
- Understanding of project objectives
- Relevance of education credentials, and experience of staff
- Creativity exhibited by the consultant for the proposed project
- Clarity and usefulness of the proposed methods and techniques
- Appropriateness of the proposed project management structure
- Consultant's familiarity with the community
- Consultant's team coordination
- Consultant's proposed citizen participation techniques and process
- Consultant's proposed intergovernmental techniques and process

After the interviews, the panel will select a firm based upon a decision matrix using the selection criteria and associated rankings.

GENERAL INFORMATION

The City will not accept faxed information. The City may reject any or all of the submissions as it deems in its best interest. The City reserves the right to waive any irregularities or technicalities when it deems the public interest will be served thereby. The successful firm must enter a contract with the City, which specifies requirements for indemnification, insurance and other applicable policies.

QUESTIONS

Questions may be address to:

Todd Stuebe, Community Development Planner

City of Glendale 5909 N. Milwaukee River Parkway, Glendale, WI 53209

Telephone: 414-228-1704

E-mail t.stuebe@glendale-wi.gov

STATEMENT DUE

Statements of qualifications must be received in the Department of Community Development no later than 12:00 noon (CDT), Friday, February 22, 2019.

NUMBER OF COPIES

Proposal Ten (10)

Work Samples Two (2) copies of each sample

MAIL OR DELIVER TO:

Todd Stuebe

City of Glendale

5909 N. Milwaukee River Parkway

Glendale, WI 53209

MARK ENVELOPE

The envelope must be clearly labeled "Comprehensive Plan".