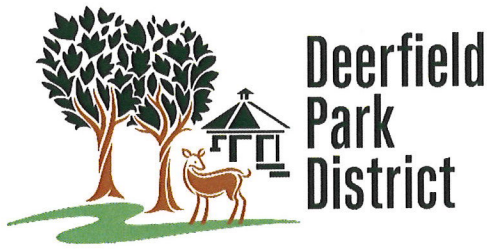


PROJECT DESCRIPTION

Proposed Redevelopment of the Baxter Campus

Bridge Industrial (“Bridge”) is the contract purchaser of 1 Baxter Parkway in unincorporated Lake County. The 101-acre site is currently improved with a series of office buildings totaling 645,688 square feet. Baxter International developed the campus in 1972 as their corporate headquarters but given the age and functional obsolescence of the buildings, they are in the process of relocating to a to be determined, newer, more functional facility. The property is currently zoned LI-Limited Industrial and GO-General Office by Lake County.

Bridge proposes to annex the property to Deerfield and rezone the site for industrial and recreational use. The intent is to demolish all existing structures and redevelop the property as a state-of-the-art business park that will attract new users to the area. The three-building plan includes an 896,700 square foot, speculative, industrial building, a 228,450 square foot, speculative, multi-tenant, industrial building and a 156,600 square foot recreational facility with a full size indoor soccer field, an indoor youth baseball field and 6 outdoor pickleball courts. The two industrial buildings would be able to accommodate a variety of uses including warehouse, distribution, assembly, and light manufacturing. The recreational facility would be designed such that it could be converted to industrial use in the future if need be. The Deerfield Park District has expressed a high level of interest in leasing the recreational facility, which has been designed to meet their needs. All three buildings would be available for use 24 hours a day, seven days a week.



March 24, 2023

Village Of Deerfield Plan Commission
850 Waukegan Road
Deerfield, IL 60015

Re: Proposed Sports Facility

This letter is to confirm that the Deerfield Park District is actively engaged with Bridge Industrial in the design and operation of a Sports Facility located within the current Baxter complex. The facility is envisioned to contain a full-size soccer field and a smaller scale baseball/softball field as the main components of the indoor component of the facility. In addition, 6 outdoor pickleball courts are also a component of the planned complex. The indoor fields can also be used for lacrosse, football and many other athletic based purposes. The projected hours of operation would be weekdays from 400 pm to 1000 pm and anywhere from 700 am to 1100 pm on weekends. No lighting is currently being planned for the pickleball courts.

Please feel free to contact me if you have any questions or require additional information.

Sincerely

Jeff Nehila

Executive Director

Deerfield Park District

Commissioners

Michael Brown Jan Caron
Joe Cohen Rick Patinkin
Debbie Serota

Jeff Nehila, Executive Director

Affiliated With

National Recreation and Park Association
Illinois Association of Park Districts
Illinois Park and Recreation Association



PROPERTY DESCRIPTION:

THAT PART OF LOTS 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39 AND 40 IN VERNON RIDGE COUNTRY HOME SUBDIVISION IN THE NORTH HALF OF SECTION 31, TOWNSHIP 43 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED JUNE 25, 1924 AS DOCUMENT 241933, IN BOOK "N" OF PLATS, PAGE 14, IN LAKE COUNTY, ILLINOIS, AND ALSO PART OF THE SOUTH HALF OF SECTION 31, TOWNSHIP 43 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ALL LYING EAST OF THE EAST LINE OF SAUNDERS ROAD, SOUTH OF THE SOUTH LINE OF HAWTHORNE LANE, WEST OF THE WEST LINE OF NORTHERN ILLINOIS TOLLWAY I-94 RIGHT OF WAY, AND NORTH OF THE NORTH LINE OF TAKEDA PHARMACEUTICALS ACCORDING TO THE FINAL PLAT OF SUBDIVISION RECORDED AUGUST 13, 2007 AS DOCUMENT 6226756, ALL IN LAKE COUNTY, ILLINOIS.

PROPERTY OWNERSHIP STRUCTURE

Bridge intends to own and maintain the two industrial buildings (Buildings B & C) and to own the rec center (Building A) with each building having its own lot and PIN for real estate tax purposes. Per the proposed plat of subdivision, the internal roadway, detention basins and forested wetland area will be separate outlots with maintenance costs being divided proportionately among the three buildings. All features and improvements within the property will be privately owned and maintained with the Development/Annexation Agreement governing the Villages rights to access and maintain water mains and stormwater structures if the owner is in default of its obligations. Given that Bridge will own all three buildings, there will be no owners' association or CCRs unless or until one or more of the properties is sold to an unrelated party.

MARKET ANALYSIS, FEASIBILITY REPORT & STATEMENT OF PROPOSED FINANCING

- Item r is the marketing study and method of proposed financing. The market study will need to be summarized at the public hearing. Example market studies can be provided.

Bridge Response:

Market Study/ Statistics – OFFICE:

- Per CBRE market reports through Q3 2022, the overall market trends and statistics show decreasing trends in absorption and subsequent increasing trends in vacancies supporting an overall theme of struggling fundamentals in the health and future of suburban office not only in Lake County but throughout Chicago.
 - CBRE reports:
 - “Q3 2022 saw over 70,000 SF of net negative absorption to date in 2022.”
 - “The sublease market saw an all-time high this quarter, reaching roughly 4.8MSF of total available sublet space. Shedding space to accommodate hybrid work models is continuing to be a favorable option among cost-conscious tenants.”
 - “Direct vacancy rates increased in the suburbs by 20 basis points. Class A was most affected, hitting an all-time high of ~25%.”
- As the economy continues to experience volatility while the fed continues to work through and employ QT (quantitative tightening) as well as in the wake of the pandemic, suburban office tenants and companies will be hit the hardest and continue to rethink how they use office space; shorter term leases in

furnished spec suites are becoming more popular. With uncertain macroeconomic headwinds, office occupiers are welcoming the flexibility to relocate or adjust their footprints in the market.

FIGURE 1: YTD 2022 Annual Absorption and Direct Vacancy

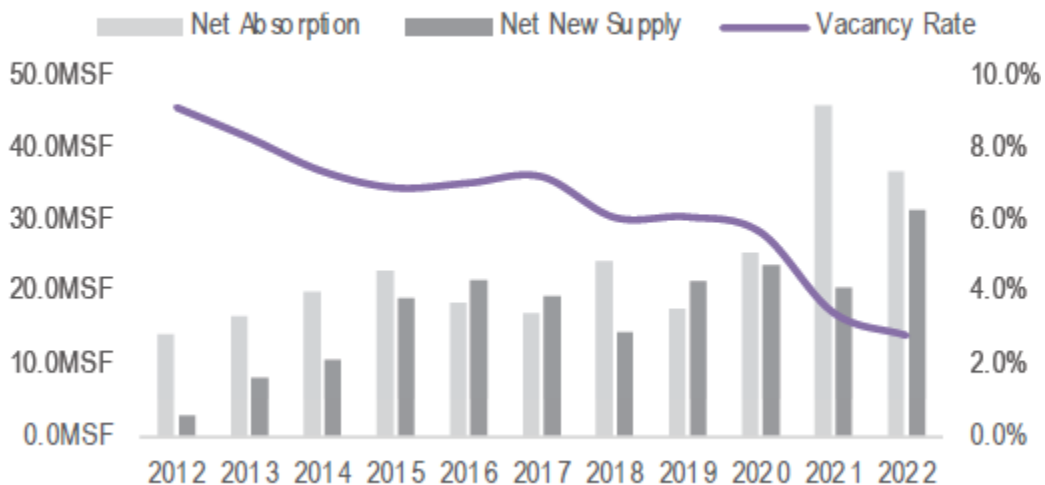


○ *Source: CBRE*

Market Study/ Statistics – INDUSTRIAL:

- On the contrary to Office market trends, the overall outlook on the industrial market fundamentals in Chicago is robust, supporting record low vacancy rates and record high net absorption.
 - Jones Lang LaSalle reports:
 - “Leasing volume over-all in 2022 reached 49.6M SF - the second largest annual volume ever.”

- “Big box users experienced the largest increase in demand as 7 leases were signed in 2022, almost double the 5-year average of 4 transactions.”
 - “The year end vacancy rate in Chicago was 2.8%. One year ago, the rate was 3.5%; representing a 25% decrease in vacancy year over year.”
- Despite the volatility in the economy, industrial developers remain active in their quest for industrial land sites given the reliable real estate fundamentals in the product space. Tenant demand will remain robust in 2023 and as construction deliveries begin to teeter off in the new year the limited options will continue to compress vacancies supporting continued strong leasing activity. The appetite for infill development sites, particularly for sites with big box warehouses, is anticipated to draft off the tailwinds of 2022 and gain momentum into 2023 and beyond.



- Source: Jones Lang LaSalle

Proposed Financing:

- Bridge Industrial (<https://bridgeindustrial.com/>) is an investment manager and industrial developer with the purpose to acquire and develop / redevelop industrial properties in Chicago and other locations. Bridge Industrial, through its investment ventures with their capital partners, has uncalled capital commitments in excess of the purchase price and construction cost for the property that are available to Bridge to close on the purchase of the property and move forward with construction of the speculative industrial facilities proposed herein. As a result, Bridge is capable of moving forward with the development plan for the property.
- Considering Bridge's capital commitments, upon acquisition, Bridge intends to pursue construction financing in the debt markets.

LEASING AND SELLING OF THE PROPERTY

Bridge will own and maintain the two industrial buildings (Buildings B & C) long term but with the understanding that one or both could be sold to a qualified purchaser in the future. The buildings are being developed on a speculative basis so there are no tenants in place currently. Bridge will hire a qualified leasing team from the industrial brokerage community to aggressively pursue tenants. Based upon past performance and given the continued strength of the industrial market, Bridge believes the buildings will be fully occupied within 18 months of completion.

As of now, Bridge will own the rec center (Building A) and the Deerfield Park District will lease, operate, and maintain it. The terms and conditions of the lease are yet to be negotiated.

SUSTAINABLE (GREEN) ELEMENTS

LEED

- Bridge Baxter Industrial Campus buildings will be enrolled in the Bridge LEEDv4 Volume (BILV) program which streamlines the LEED certification process by integrating several green design features into the project's design.
- The BILV Program is a Bridge-specific, streamlined path to LEED certification that relies on a degree of uniformity with respect to approaches to LEED prerequisites and credits. The BILV program provides other benefits such as reduced paperwork and reduced soft costs.
- Bridge Baxter Industrial Campus buildings will be able to achieve LEED certification using the following green strategies and features:
 - Project located on a previously-developed site with well-developed existing infrastructure as opposed to a less-developed greenfield site
 - Stormwater Pollution Prevention and Erosion Control measures implemented per EPA's 2012 Construction General Permit (CGP) guidelines.
 - Concrete truck court, sidewalks contribute to reduced Heat Island effect on site.
 - Site landscape designed to use zero potable water.
 - LED interior and exterior lights with zero-mercury help reduce energy costs by more than 30% while contributing to better occupant health at the same time.
 - All shell-building MEP and Envelope systems tested and commissioned by an independent third-party commissioning authority to ensure quality control and operational readiness.
 - Project slated to use more than 10 (third-party certified) environmentally safe and healthy materials.

- Whole-building Lifecycle Analysis (LCA) performed to analyze the impact of construction materials.
- More than 50% of const. waste expected to be diverted from landfills in addition to an overall waste prevention goal of generating less than 10 lbs./SF of waste during construction.
- In addition to the shell building features above, tenant design and construction guidelines are provided to future tenants aimed at helping them implement sustainable design features such as indoor water-use reduction and increased ventilation.

Solar Ready:

- In addition to LEED Certified, this project will invest in accommodating solar ready infrastructure. More specifically, the steel roof structure will be upsized the steel structure to accommodate the weight loading of future solar system.

TRANSIT PLAN

Transit to and from the two Deerfield train stations will be determined by the future tenants that occupy the buildings. If transit for employees is requested, Bridge will work with the tenant/tenants to help accommodate the need.

ANNEXATION, ZONING & COMPREHENSIVE PLAN

The subject property is currently improved with a functionally obsolete office headquarters campus. Bridge proposes to annex the property into the Village of Deerfield and re-zone it for industrial and recreational use. The plan is to demolish all existing structures on the site and redevelop it with two, speculative, state of the art, multi-tenant industrial buildings and an indoor recreation center.

The Village Comprehensive Plan from 2004 shows this site as future Office/Research. Since that time, the suburban office market has gone through an extensive downturn with excessive vacancy rates. Future projections for the suburban office market do not show any improvements. In particular, the suburban office headquarters campus has been hard hit with many corporations relocating out of state for tax and quality of life benefits or to downtown Chicago. Also, because of the Covid shutdown, a much larger percentage of employees are working remote so the demand for office space is significantly reduced. Given this dynamic, Bridge believes that the highest and best use of the site is for industrial use. The demand for industrial product in suburban Chicago has been very strong and is projected to continue into the near future. Therefore, Bridge is proposing to redevelop the site for industrial use, which will increase the tax base and create more job opportunities for area residents.

FINDINGS IN SUPPORT OF REZONING

Section 13.10-D of the Deerfield Zoning Ordinance requires that the Plan Commission make certain findings with respect to particular matters in order to support a rezoning. The criteria are addressed as follows:

1. Existing Uses. Existing uses of the property within the general area of the property in question.

The subject site, which fronts on Saunders Road to the west and I-94 to the east, is surrounded by commercial properties to the southeast, south, southwest, and north, with residential properties to the northeast and northwest. I-94 acts as a significant buffer for properties to the east while Saunders Road and the wooded/open green spaces on the west side of the subject property are a good buffer for the properties to the west.

2. Current Zoning in Area. The zoning classification of property within the general area of the property in question.

The commercial properties to the north, southeast and south are located in Deerfield and are zoned I-1 Office, Research, Restricted Industrial. The residential properties to the northeast are in Deerfield and are zoned R-1, R-2, and R-3 Single Family Residential. The commercial properties to the southwest are in Riverwoods and are zoned O&R-1, Office & Research and the residential properties to the northwest are zoned R-1 and R-1 PUD, Single Family Residential.

3. Suitability of Present Zoning. The suitability of the property in question for the uses permitted under the existing zoning classification and the proposed classification.

The subject site is currently located in unincorporated Lake County with LI, Limited Industrial and GO General Office zoning. In general, the proposed use would be permitted under the LI zoning with some variances.

4. Trend of Development. The trend of development, if any, in the general area of the property in question, including changes, if any, which may have taken place since the day the property in question was placed in its present zoning classification.

The trend in the Chicago suburban office market is to redevelop sites containing functionally obsolete office buildings with much in demand industrial facilities. This trend is apparent in the immediate area with the ongoing redevelopment of the Allstate headquarters campus in Northbrook with multiple industrial buildings, the recent redevelopment of the 225 acre Cardinal Health campus in Waukegan from office, research & development and manufacturing facilities to 3,500,000 square feet of industrial facilities, and the redevelopment of an office/research facility at the southeast intersection of I-294 and I-94 in Northbrook with a soon to be completed industrial building.

FINDINGS IN SUPPORT OF PUD PLAN

Pursuant to Section 12.09-D(2)(c) of the Deerfield Zoning Ordinance, a Planned Unit Development shall not be recommended for approval unless the Plan Commission is satisfied that it can make the six findings specifically delineated in the Ordinance. The criteria are addressed as follows:

1. **Effect on Community.** That the proposed Planned Unit Development will not be significantly or materially detrimental to or endanger the public health, safety, or general welfare of the community. This shall include consideration of the impact on the development upon physical development, tax base, and economic well-being of the Village.

Response: The subject property is currently improved with multiple office buildings comprising the Baxter corporate headquarters located in unincorporated Lake County. Bridge is proposing to annex the property to the Village of Deerfield, which will add to the tax base without putting a burden on the school system. The proposed redevelopment will remove an underutilized, functionally obsolete office campus and provide job opportunities to area residents while decreasing the traffic volume as compared to Baxter when they operated at full capacity. The development will preserve the wooded green space at the west end of the site and improve it by removing all the buckthorn and putting in a walking path and wet basins with fountains. The buildings are also being designed to be solar ready, which will be a major benefit to the tenants and the community.

In addition, the Deerfield Park District is very interested in developing one of the three proposed buildings as an indoor

recreational center. This facility will provide much needed indoor fields that can be used for soccer, lacrosse, football, baseball, and softball, among other activities, for area youth and young adults. The center will also include several outdoor pickleball courts, which are in high demand.

2. **Effect on Neighborhood.** That the proposed Plan Unit Development will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted nor will it diminish or impair property values within the neighborhood.

Response: At full occupancy, the proposed development will produce less traffic volume and put less demand on the existing infrastructure than what Baxter did at full capacity. The wooded green area at the west end of the site will be preserved and enhanced with a walking path and basin fountains for the enjoyment of tenants as well as the neighborhood.

As stated previously, the Deerfield Park District is very interested in developing one of the buildings as an indoor recreational center. This facility will provide much needed indoor fields that can be used for soccer, lacrosse, football, baseball, and softball, among other activities, for area youth and young adults. The center will also include several outdoor pickleball courts, which are in high demand.

3. **Effect on Development of Surrounding Property.** That the proposed Planned Unit Development will not impede the normal and orderly development and improvement of the surrounding property.

Response: As opposed to the existing buildings, which are severely underutilized and functionally obsolete, the proposed development will add energy and interest to the surrounding properties by providing new job opportunities to area residents, increased use of restaurants and hotels along with a recreation center that will draw from the entire area.

- 4. Adequacy of Utilities and Facilities.** That the applicant has demonstrated that adequate sewer and water, access roads, drainage and other necessary facilities are present or will be provided.

All utilities are adequately sized and have served the existing Baxter campus for many years. The proposed redevelopment will put less demand on the existing infrastructure than Baxter did at its peak, including traffic volumes.

- 5. Adequacy of Ingress and Egress.** That the applicant has demonstrated that adequate means of ingress and egress designed to handle the traffic contemplated are present or will be provided.

The traffic study, which is part of the overall submittal, verifies that the existing infrastructure is more than adequate to accommodate the projected traffic volumes from the redevelopment. The study shows the traffic volume generated by Baxter at its peak exceeds what the proposed redevelopment will produce at full occupancy.

- 6. Conformity to Regulations.** That the proposed Planned Unit Development meets all the regulations of this Ordinance except as

such regulations may in each instance be modified by the Board of Trustees.

The proposed redevelopment of the site meets all the regulations of this Ordinance other than the list of exceptions that have been included in this submittal along with the reasons they are needed.

TEXT AMENDMENT

Bridge is requesting a text amendment to redevelop the property located at 1 Baxter Parkway in unincorporated Lake County. The proposed redevelopment of the site will benefit the public in a number of ways.

- Removal of a severely underutilized, functionally obsolete, suburban office headquarters facility.
- Annexation of the site will increase the tax base for the Village of Deerfield without burdening the school districts.
- The proposed development will create new job opportunities for area residents and increase use at area restaurants and hotels.
- The proposed development of the Deerfield Park District recreation center will provide much needed indoor fields that can be used for soccer, lacrosse, football, baseball and softball, among other activities, for area youth and young adults. The center will also include a number of outdoor pickleball courts, which are in high demand.

PROPOSED EXCEPTIONS FOR THE INDUSTRIAL PLANNED UNIT DEVELOPMENT

Bridge is proposing the following exceptions to the bulk standards under the I-2 zoning:

- a. A building height exception of up to 60 feet from the maximum height of 35 feet in the I-2 Limited Industrial District.

The reason for the exception is that tenants and capital partners require an interior clear height of 40 feet to maximize use of the facility and compete with other such facilities in the Chicago market. To achieve a 40' interior clear height, another 10' to 12' is required for the bar joists, girders, roofing and parapet. An additional 8' to 10' will be needed to accommodate solar panels and mechanical systems, which gives a building height of approximately 60 feet from the base of the building.

- b. An exception to the perimeter setbacks of the development to allow 9 feet in lieu of 25 feet on the south (side yard setback).

The reason for the exception is to allow for more efficient circulation of traffic and car parking and to preserve the large green space and setbacks along Sanders Road.

- c. An exception to the perimeter setbacks of the development to allow 25 feet in lieu of 100 feet on the north (corner side yard setback).

The reason for the exception is to allow for more efficient circulation of traffic and car parking and to preserve the large green space and setbacks along Saunders Road.

- d. An exception to the car parking count for Buildings B and C to a total of 767 spaces in lieu of 997.

The reason for the exception is that while Building B meets the requirement, Building C is a cross dock facility, which typically needs far less car parking. Bridge's experience with cross dock facilities is that if more car parking is needed, the tenant requires fewer dock positions so that a section of the dock area can be designated for car parking to make up for the deficit. It is also typical in the market that car parking is determined by the employee count. Bridge's experience is that the car parking shown will meet the needs of most users and if not, a portion of the dock area can be converted to the number of spaces needed.

- e. An exception for the monument sign to allow 85 square feet for each sign face and a total of 170 square feet for a double sided sign in lieu of 45 square feet for each sign face and 90 square feet for a double sided sign.

The reason for the exception is a larger sign is needed for a site of this size (100 acres) with extensive frontage on Saunders Road so that is easily seen. The proposed sign is in keeping with the current monument sign for Baxter.

- f. An exception to the wall sign so that it may be placed within one foot of the top of the wall even though it may be above the roof deck.

The reason for the exception is to allow placement of the building address in the most visible area of the building without exceeding the allowable sign square footage.



Property Tax Due Diligence Acquisition Report

1.855.RYAN.TAX

www.ryan.com



**PROPERTY TAX PRE-ACQUISITION
DUE DILIGENCE REPORT**

Baxter Campus Redevelopment
1 Baxter Pky
Deerfield IL 60015
Lake County
Warehouse

Prepared:
April 13, 2023
Tax Years: 2021 Through 2027

Prepared For:
Ben Bischmann
Bridge Industrial
9525 W. Bryn Mawr Avenue, Suite 700
Rosemont, IL 60018

Prepared By:
Anna Smagala
Ryan LLC
311 S Wacker Drive Suite 4800
Chicago, Illinois 60606
Reviewed By:
Kara Nutting

LETTER OF TRANSMITTAL

Ben Bischmann
Bridge Industrial
9525 W. Bryn Mawr Avenue, Suite 700
Rosemont, IL 60018
630.626.4354

RE: Baxter Campus Redevelopment
1 Baxter Pky
Deerfield IL 60015

Dear Ben Bischmann,

Pursuant to your request, we have researched and analyzed the property tax issues regarding the above-captioned property. Our research and analysis are outlined herein. The report concludes with our five year forecast of property taxes based on stabilization, which is presented later in this report.

The scope of this study involves a limited analysis reported in a restricted format, which is attached hereto and made a part hereof. The analysis and conclusions are made expressly subject to the conditions and comments appearing herein. This report is not an appraisal and does not include an on-site inspection or a review of the building plans and specifications.

Respectfully submitted,

Anna Smagala
Ryan LLC
311 S Wacker Drive Suite 4800
Chicago, Illinois 60606
312.980.1144
Anna.Smagala@ryan.com

ASSUMPTIONS AND LIMITING CONDITIONS

This report is subject to the following assumptions and limiting conditions:

Limit of Liability

1. It is assumed that the legal description and/or parcel number(s) as obtained from public records or as furnished is correct.
2. No responsibility is assumed for matters of a legal nature, or matters of audit.
3. It is also assumed that the title to this interest is marketable.
4. The information contained within this report was obtained from sources deemed to be reliable. However, no warranty is given as to their accuracy. A reasonable effort has been made to verify information relating to tax assessments. Property description information and income and expense information supplied by the client were not verified and are assumed to be correct.
5. The opinions expressed within this report are the result of and subject to the information and conditions described herein.
6. The liability of Ryan, LLC and its staff members is limited to the client only and only up to the amount of the fee actually received for the assignment.

Publication, Distribution, Use of Report

7. Possession of this report or a copy thereof does not give the holder the right of publication, nor may the report or any part thereof be used by anyone other than Ryan, LLC.
8. Ryan, LLC and its staff shall not be required to give testimony or appear in court because of having prepared this report with reference to the property described herein, unless prior arrangements have been made.
9. Neither all nor part of the contents of this report, or copy thereof, shall be conveyed to the public through advertising, public relations, news, sales or any other media without written consent and approval of the appraisers. Nor shall Ryan, LLC and its staff be identified without the written consent of the appraisers.

Property Specific Limiting Conditions

10. Competent management and responsible ownership are assumed.
11. No survey was made for this report and no responsibility is assumed for its presentation herein.
12. The physical condition of the improvements described herein is based on information provided by the property owner. No inspection was conducted.
13. It is assumed that there are no hidden or precarious conditions of the property, subsoil, or structures, which would render it more or less valuable. Ryan, LLC and its staff assume no responsibility for such conditions, or for engineering which might be required to discover such factors. It is assumed that no soil contamination exists as a result of chemical drainage or leakage in connection with any production operations on or near the property. Ryan, LLC and its staff assume the property is not adversely affected by asbestos.
14. Any valuation models of income and expenses in this report are not predictions of the future. No warranty or representation is made that the model will coincide with future events. Furthermore, there

Property & Acquisition Information

Purpose, Use and Scope of Report

The purpose of this report is to provide the Client with the financial property tax impact as a result of the potential redevelopment. The information in this report is considered preliminary and is not considered full or complete because of the limited data about the property that was provided to Ryan, LLC, and because the Client has requested a limited report. No site inspection was conducted. No plans and specifications were reviewed. No appraisal was conducted.

Property Description

Property Name:	Baxter Campus Redevelopment		
Address:	1 Baxter Pky, Deerfield IL 60015		
Assessor's Parcel Number(s):	16-31-202-039 ; 16-31-300-059 ; 16-31-300-056 ; 16-31-300-057 ; 16-31-300-058		
Taxing Jurisdiction:	Lake County		
General Description:	The subject property is located at 12405 W Hawthorne Ln, Deerfield, IL. It is a re development project which entails the demolition of the existing Baxter Campus and development of 2 warehouse properties estimated to be completed Q1, 2025. Additional 156,600 recreational center estimated to be completed Q3 2025. The sites is 4 parcels consisting of 101.04 acres. It is currently owned by Baxter Healthcare Corp. Currently seeking annexation to the Village of Deerfield which assumes to occur in tax year 2024.		
Year Built:	2025		
Building Square Feet:	1,280,871		
Land Area:	4,401,320	Square Feet	
	101.04	Acres	

Acquisition Information

Date of Acquisition:	September 1, 2023	
		<u>\$/ Per Land Sq. Ft.</u>
Purchase Price:	\$51,500,000	\$11.70
Current Owner Name:	Baxter Healthcare Corp.	
Current Assessment:	\$35,913,519	

Assessment Information

Property Tax Calendar

Current Tax Year	2021
Payment Due Date(s) RE	06/06/2022; 09/06/2022
Payment Delinquency Date(s) RE	06/07/2022; 09/07/2022
Payment Due Date(s) PP	N/A
Payment Delinquency Date(s) PP	N/A

Real Estate Appeal Deadline	9/19/2022
Personal Property Appeal Date	N/A
Personal Property File Deadline	N/A
Lien Date	1/1/2021
Fiscal Year	1/1/2021-12/31/2021

HISTORICAL TAX RATES

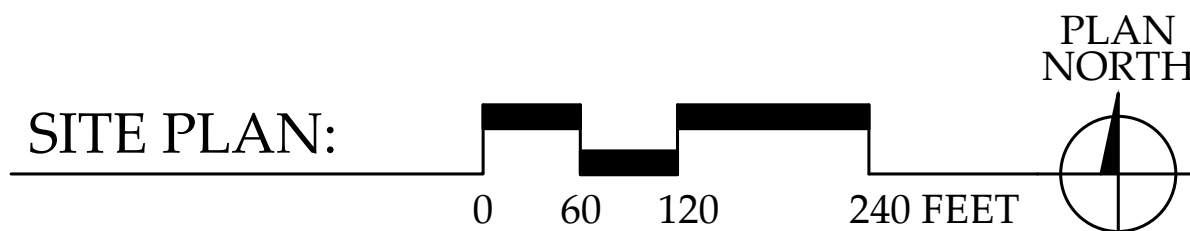
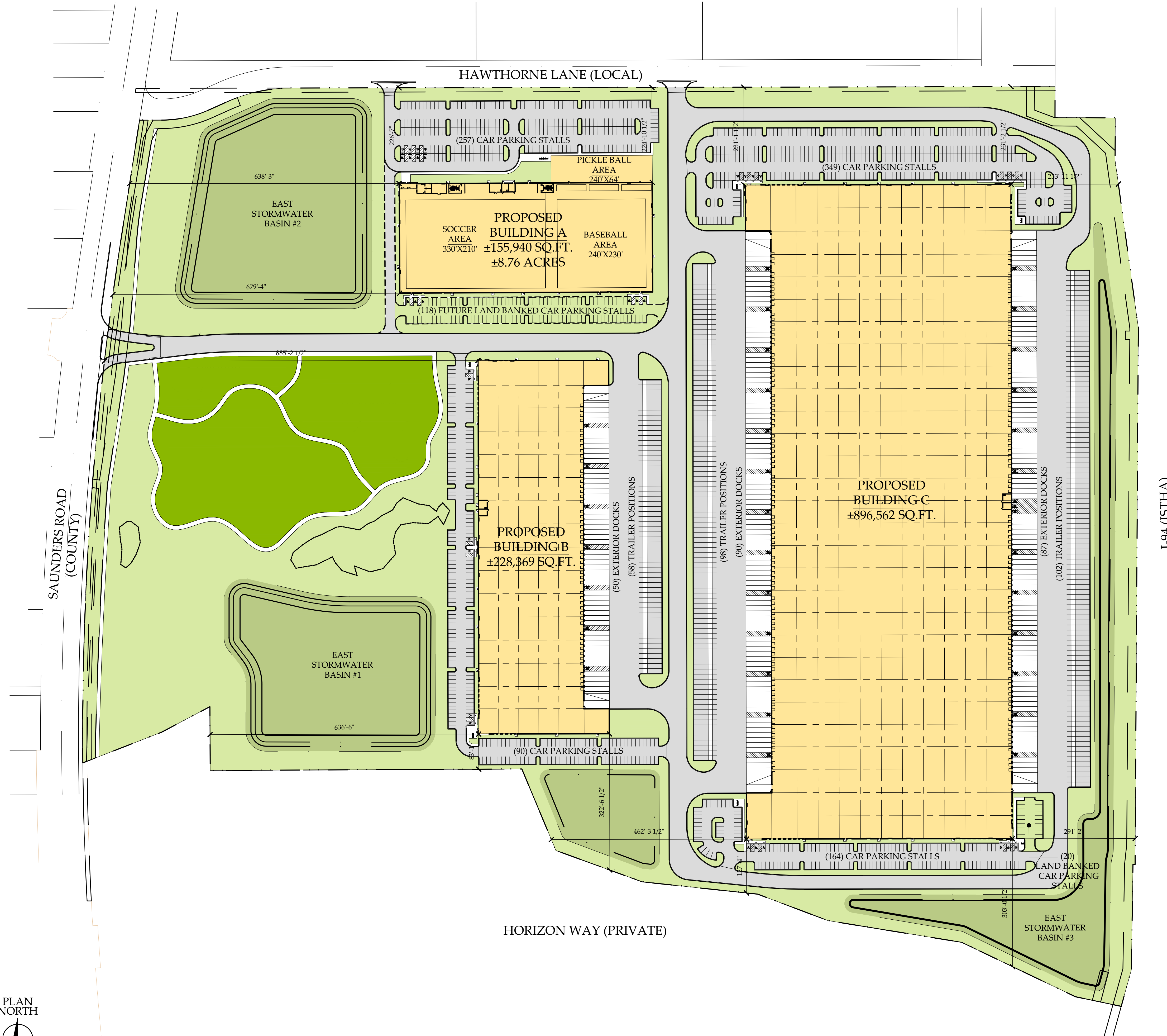
Lake County

Tax Rate Area: West Deerfield - 17034

<u>Tax Year</u>	<u>Effective Tax Rates</u>	<u>% Change</u>
2017	2.318342%	
2018	2.345880%	1.19%
2019	2.380353%	1.47%
2020	2.491859%	4.68%
2021	2.587964%	3.86%

Assessed Value and Tax Bill Information - ACTUAL (2021)

Parcel Number	Land (MV)	Improvements (MV)	Personal property	Total (MV)	Rate	Advalorem Tax	Direct Assessments	Total Tax
16-31-202-039	\$456,163	\$0	\$0	\$456,163	2.587964%	\$256.70	\$237.30	\$494.00
16-31-300-056	\$338,863	\$0	\$0	\$338,863	2.587964%	\$8,769.65	\$80.00	\$8,849.65
16-31-300-057	\$1,402,169	\$16,636,522	\$0	\$18,038,691	2.587964%	\$466,834.74	\$998.30	\$467,833.04
16-31-300-058	\$169,787	\$0	\$0	\$169,787	2.587964%	\$4,394.03	\$120.90	\$4,514.93
16-31-300-059	\$16,910,015	\$0	\$0	\$16,910,015	2.587964%	\$100,095.18	\$2,682.90	\$102,778.08
Total:	\$19,276,997	\$16,636,522	\$0	\$35,913,519	2.587964%	\$580,350.29	\$4,119.40	\$584,469.69



PROPOSED BUSINESS CAMPUS

SAUNDERS ROAD & HAWTHORNE LANE, DEERFIELD, ILLINOIS

MARCH 20, 2023 #22283

©CORNERSTONE ARCHITECTS LTD. 2023





RYAN PROPERTY TAX
Aggregate Building A, B, and C

TAX FORECAST							
BEST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$37,249,499	\$20,393,980	\$68,492,000	\$79,743,000	\$83,730,000
Market Value / SF					\$53.47	\$62.26	\$65.37
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$7,474,246	\$7,575,645	\$12,415,258	\$6,797,314	\$22,828,384	\$26,578,342	\$27,907,209
Effective Tax Rate	2.587964%	2.652663%	2.599609%	3.183690%	3.263282%	3.344864%	3.277967%
RE Tax	\$580,350	\$602,929	\$968,341	\$649,281	\$2,235,087	\$2,667,295	\$2,744,641
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$607,049	\$972,461	\$653,400	\$2,239,206	\$2,671,414	\$2,748,761
Total Tax / SF				\$0.51	\$1.75	\$2.09	\$2.15

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value will increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building B and C and 30% of building A. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 5% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 2.5% in non-revaluation years. The rate is expected to decrease 2% in revaluation year (2023,2027).

MOST PROBABLE CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$38,739,479	\$20,793,862	\$78,225,000	\$91,028,000	\$97,400,000
Market Value / SF					\$61.07	\$71.07	\$76.04
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$7,474,246	\$7,575,645	\$12,911,868	\$6,930,594	\$26,072,393	\$30,339,632	\$32,463,420
Effective Tax Rate	2.587964%	2.665602%	2.585634%	3.182021%	3.277482%	3.375807%	3.274532%
RE Tax	\$580,350	\$605,870	\$1,001,661	\$661,665	\$2,563,810	\$3,072,929	\$3,189,394
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$609,990	\$1,005,781	\$665,785	\$2,567,930	\$3,077,049	\$3,193,514
Total Tax / SF				\$0.52	\$2.00	\$2.40	\$2.49

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building B and C and 30% of building A. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 7% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 3% in non-revaluation years. The rate is expected to decrease 3% in revaluation year (2023,2027).

WORST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$40,974,000	\$23,093,183	\$103,341,000	\$121,542,000	\$131,354,000
Market Value / SF					\$80.68	\$94.89	\$102.55
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$7,474,246	\$7,575,645	\$13,656,634	\$7,696,958	\$34,443,555	\$40,509,949	\$43,780,288
Effective Tax Rate	2.587964%	2.691482%	2.56908%	3.177219%	3.304308%	3.436480%	3.264656%
RE Tax	\$580,350		\$1,047,667	\$733,721	\$3,414,705	\$4,176,767	\$4,288,257
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$4,119	\$1,051,787	\$737,840	\$3,418,824	\$4,180,886	\$4,292,376
Total Tax / SF				\$0.58	\$2.67	\$3.26	\$3.35

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 revaluation year is expected to increase 10% from 2022. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 5%, which is supported by historical trends. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building B and C and 30% of building A. The 2026 full value is based on proforma income and expense analysis, which is also supported by construction costs. The 2027 value assumes an 8% increase. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 4% in non-revaluation years. The rate is expected to decrease 5% in revaluation year (2023,2027).

Information in this report was obtained from sources deemed reliable, however no warranty is given as to its accuracy. Assumptions on estimates may change over time. Ryan PTS is not responsible for variances between values herein and eventual results. Unless indicated otherwise, liability for any errors associated with this report is limited to the fee received for this report. If no fee was received, or a third party relies on this report, all liability is disclaimed. Possession of this report does not give the holder the right of publication.



**RYAN PROPERTY TAX
Building A**

TAX FORECAST							
BEST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$37,249,499	\$20,393,980	\$4,698,000	\$15,660,000	\$16,443,000
Market Value / SF					\$30.13	\$100.42	\$105.44
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$7,474,246	\$7,575,645	\$12,415,258	\$6,797,314	\$1,565,843	\$5,219,478	\$5,480,452
Effective Tax Rate	2.587964%	2.652663%	2.599609%	3.183690%	3.263282%	3.344864%	3.277967%
RE Tax	\$580,350	\$988,104	\$968,341	\$649,281	\$153,309	\$523,806	\$538,996
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$992,223	\$972,461	\$653,400	\$157,428	\$527,925	\$543,115
Total Tax / SF				\$4.19	\$1.01	\$3.39	\$3.48

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value will increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 30% of the anticipated full value for building A. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 5% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 2.5% in non-revaluation years. The rate is expected to decrease 2% in revaluation year (2023,2027).

MOST PROBABLE CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$38,739,479	\$20,793,862	\$5,403,000	\$18,009,000	\$19,270,000
Market Value / SF					\$34.65	\$115.49	\$123.57
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$11,969,976	\$12,415,258	\$12,911,868	\$6,930,594	\$1,800,820	\$6,002,400	\$6,422,691
Effective Tax Rate	2.587964%	2.665602%	2.585634%	3.182021%	3.277482%	3.375807%	3.274532%
RE Tax	\$580,350	\$992,924	\$1,001,661	\$661,665	\$177,082	\$607,949	\$631,002
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$997,043	\$1,005,781	\$665,785	\$181,202	\$612,068	\$635,122
Total Tax / SF				\$4.27	\$1.16	\$3.93	\$4.07

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 30% of the anticipated full value for building A. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 7% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 3% in non-revaluation years. The rate is expected to decrease 3% in revaluation year (2023,2027).

WORST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$40,974,000	\$23,093,183	\$6,107,000	\$20,358,000	\$21,987,000
Market Value / SF					\$39.16	\$130.55	\$141.00
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$11,969,976	\$12,415,258	\$13,656,634	\$7,696,958	\$2,035,463	\$6,785,321	\$7,328,267
Effective Tax Rate	2.587964%	2.691482%	2.586908%	3.177219%	3.304308%	3.436480%	3.264656%
RE Tax	\$580,350	\$1,002,564	\$1,047,667	\$733,721	\$201,794	\$699,599	\$717,800
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$1,006,683	\$1,051,787	\$737,840	\$205,913	\$703,718	\$721,919
Total Tax / SF				\$4.73	\$1.32	\$4.51	\$4.63

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 revaluation year is expected to increase 10% from 2022. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 5%, which is supported by historical trends. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 30% of the anticipated full value for building A. The 2026 full value is based on proforma income and expense analysis, which is also supported by construction costs. The 2027 value assumes an 8% increase. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 4% in non-revaluation years. The rate is expected to decrease 5% in revaluation year (2023,2027).

Information in this report was obtained from sources deemed reliable, however no warranty is given as to its accuracy. Assumptions on estimates may change over time. Ryan PTS is not responsible for variances between values herein and eventual results. Unless indicated otherwise, liability for any errors associated with this report is limited to the fee received for this report. If no fee was received, or a third party relies on this report, all liability is disclaimed. Possession of this report does not give the holder the right of publication.



**RYAN PROPERTY TAX
Building B**

T A X F O R E C A S T							
BEST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$37,249,499	\$20,393,980	\$14,298,000	\$17,872,000	\$18,766,000
Market Value / SF					\$62.61	\$78.26	\$82.17
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$7,474,246	\$7,575,645	\$12,415,258	\$6,797,314	\$4,765,523	\$5,956,738	\$6,254,708
Effective Tax Rate	2.587964%	2.652663%	2.599609%	3.183690%	3.263282%	3.344864%	3.277967%
RE Tax	\$580,350	\$988,104	\$968,341	\$649,281	\$466,584	\$597,794	\$615,143
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$992,223	\$972,461	\$653,400	\$470,703	\$601,913	\$619,263
Total Tax / SF				\$2.86	\$2.06	\$2.64	\$2.71

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value will increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building B. Additionally, we are assuming 12 acres of excess land. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 5% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 2.5% in non-revaluation years. The rate is expected to decrease 2% in revaluation year (2023,2027).

MOST PROBABLE CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$38,739,479	\$20,793,862	\$15,374,000	\$19,217,000	\$20,562,000
Market Value / SF					\$67.32	\$84.15	\$90.04
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$11,969,976	\$12,415,258	\$12,911,868	\$6,930,594	\$5,124,154	\$6,405,026	\$6,853,315
Effective Tax Rate	2.587964%	2.665602%	2.585634%	3.182021%	3.277482%	3.375807%	3.274532%
RE Tax	\$580,350	\$992,924	\$1,001,661	\$661,665	\$503,880	\$648,729	\$673,309
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$997,043	\$1,005,781	\$665,785	\$507,999	\$652,848	\$677,429
Total Tax / SF				\$2.92	\$2.22	\$2.86	\$2.97

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building B. Additionally, we are assuming 12 acres of excess land. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 7% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 3% in non-revaluation years. The rate is expected to decrease 3% in revaluation year (2023,2027).

WORST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$40,974,000	\$23,093,183	\$20,036,000	\$25,045,000	\$27,049,000
Market Value / SF					\$87.74	\$109.67	\$118.44
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$11,969,976	\$12,415,258	\$13,656,634	\$7,696,958	\$6,677,999	\$8,347,499	\$9,015,432
Effective Tax Rate	2.587964%	2.691482%	2.556908%	3.177219%	3.304308%	3.436480%	3.264656%
RE Tax	\$580,350	\$1,002,564	\$1,047,667	\$733,721	\$662,051	\$860,667	\$883,057
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$1,006,683	\$1,051,787	\$737,840	\$666,171	\$864,786	\$887,176
Total Tax / SF				\$3.23	\$2.92	\$3.79	\$3.88

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 revaluation year is expected to increase 10% from 2022. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 5%, which is supported by historical trends. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building B. Additionally, we are assuming 12 acres of excess land. The 2026 full value is based on proforma income and expense analysis, which is also supported by construction costs. The 2027 value assumes an 8% increase. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 4% in non-revaluation years. The rate is expected to decrease 5% in revaluation year (2023,2027).

Information in this report was obtained from sources deemed reliable, however no warranty is given as to its accuracy. Assumptions on estimates may change over time. Ryan PTS is not responsible for variances between values herein and eventual results. Unless indicated otherwise, liability for any errors associated with this report is limited to the fee received for this report. If no fee was received, or a third party relies on this report, all liability is disclaimed. Possession of this report does not give the holder the right of publication.



**RYAN PROPERTY TAX
Building C**

TAX FORECAST							
BEST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$37,249,499	\$20,393,980	\$37,010,000	\$46,262,000	\$48,575,000
Market Value / SF					\$41.28	\$51.60	\$54.18
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$7,474,246	\$7,575,645	\$12,415,258	\$6,797,314	\$12,335,433	\$15,419,125	\$16,190,048
Effective Tax Rate	2.587964%	2.652663%	2.599609%	3.183690%	3.263282%	3.344864%	3.277967%
RE Tax	\$580,350	\$988,104	\$968,341	\$649,281	\$1,207,741	\$1,547,401	\$1,592,272
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$992,223	\$972,461	\$653,400	\$1,211,860	\$1,551,520	\$1,596,392
Total Tax / SF				\$0.73	\$1.35	\$1.73	\$1.78

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value will increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building C. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 5% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 2.5% in non-revaluation years. The rate is expected to decrease 2% in revaluation year (2023,2027).

MOST PROBABLE CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$38,739,479	\$20,793,862	\$43,042,000	\$53,802,000	\$57,568,000
Market Value / SF					\$48.01	\$60.01	\$64.21
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$11,969,976	\$12,415,258	\$12,911,868	\$6,930,594	\$14,345,899	\$17,932,207	\$19,187,414
Effective Tax Rate	2.587964%	2.665602%	2.585634%	3.182021%	3.277482%	3.375807%	3.274532%
RE Tax	\$580,350	\$992,924	\$1,001,661	\$661,665	\$1,410,694	\$1,816,251	\$1,885,083
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$997,043	\$1,005,781	\$665,785	\$1,414,813	\$1,820,371	\$1,889,202
Total Tax / SF				\$0.74	\$1.58	\$2.03	\$2.11

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 value is expected to remain flat. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 4%. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building C. The 2026 full value is based on comparable properties, income, and trends. The 2027 Quadrennial reassessment assumes a 7% increase in value. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 3% in non-revaluation years. The rate is expected to decrease 3% in revaluation year (2023,2027).

WORST CASE	Actual	Forecast	Forecast REVAL	Forecast	Forecast	Forecast	Forecast REVAL
Tax Year	2021	2022	2023	2024	2025	2026	2027
Lien Date	1/1/21	1/1/22	1/1/23	1/1/24	1/1/25	1/1/26	1/1/27
Fair Market Value	\$35,913,519	\$37,249,499	\$40,974,000	\$23,093,183	\$60,976,000	\$76,220,000	\$82,318,000
Market Value / SF					\$68.01	\$85.01	\$91.82
Assessment Ratio	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%	33.33%
Total Assessed Value	\$11,969,976	\$12,415,258	\$13,656,634	\$7,696,958	\$20,323,301	\$25,404,126	\$27,436,589
Effective Tax Rate	2.587964%	2.691482%	2.56908%	3.177219%	3.304308%	3.436480%	3.264656%
RE Tax	\$580,350	\$1,002,564	\$1,047,667	\$733,721	\$2,014,835	\$2,619,285	\$2,687,400
Special Assessments	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119	\$4,119
Total Tax	\$584,470	\$1,006,683	\$1,051,787	\$737,840	\$2,018,954	\$2,623,405	\$2,691,519
Total Tax / SF				\$0.82	\$2.25	\$2.93	\$3.00

The 2021 and 2022 FMVs are actual. Assuming no open space exemption after 2022. The 2023 revaluation year is expected to increase 10% from 2022. The 2024 value assumes land value only due to demolition and construction commencing 4Q23/1Q24. 2024 land value is anticipated to increase 5%, which is supported by historical trends. In 2024 assumes annexation to the Village of Deerfield. 2025 assumes 80% of the anticipated full value for building C. The 2026 full value is based on proforma income and expense analysis, which is also supported by construction costs. The 2027 value assumes an 8% increase. The tax rate is based off the 2021 actual rate of 2.587964%. The rate is assumed to increase 4% in non-revaluation years. The rate is expected to decrease 5% in revaluation year (2023,2027).

Information in this report was obtained from sources deemed reliable, however no warranty is given as to its accuracy. Assumptions on estimates may change over time. Ryan PTS is not responsible for variances between values herein and eventual results. Unless indicated otherwise, liability for any errors associated with this report is limited to the fee received for this report. If no fee was received, or a third party relies on this report, all liability is disclaimed. Possession of this report does not give the holder the right of publication.

Breakout by Taxing Entity

2027 Most Probable 2027 Assessed Value \$ 32,463,420

Taxing Body	2027 payable 2028 estimated tax lev
DEERFIELD SCHOOL DISTRICT #109	\$ 1,166,467
DEERFIELD SCHOOL DISTRICT #109 PENSION	\$ 20,764
DEERFIELD-BANNOCKBURN FIRE PROT	\$ 194,240
DEERFIELD-BANNOCKBURN FIRE PROT PENSION	\$ 48,297
TOWNSHIP HIGH SCHOOL DISTRICT 113	\$ 832,329
TOWNSHIP HIGH SCHOOL DISTRICT 113 PENSION	\$ 22,304
TOWNSHIP OF WEST DEERFIELD	\$ 12,392
TOWNSHIP OF WEST DEERFIELD PENSION	\$ 252
COLLEGE OF LAKE COUNTY #532	\$ 100,890
COUNTY OF LAKE	\$ 169,897
COUNTY OF LAKE PENSION	\$ 35,599
FOREST PRESERVE	\$ 58,280
FOREST PRESERVE PENSION	\$ 3,225
VIL OF DEERFIELD	\$ 209,093
VIL OF DEERFIELD LIBRARY	\$ 103,088
DEERFIELD PARK DIST	\$ 183,633
DEERFIELD PARK DIST PENSION	\$ 24,206
SOUTHLAKE MOSQUITO ABATEMENT	\$ 4,437
TOTAL SUM	\$ 3,189,394

Taxing Body	2027 payable 2028 estimated tax lev
DEERFIELD SCHOOL DISTRICT #109	\$ 1,166,467
DEERFIELD SCHOOL DISTRICT #109 PENSION	\$ 20,764
DEERFIELD-BANNOCKBURN FIRE PROT	\$ 194,240
DEERFIELD-BANNOCKBURN FIRE PROT PENSION	\$ 48,297
TOWNSHIP HIGH SCHOOL DISTRICT 113	\$ 832,329
TOWNSHIP HIGH SCHOOL DISTRICT 113 PENSION	\$ 22,304
VIL OF DEERFIELD	\$ 209,093
VIL OF DEERFIELD LIBRARY	\$ 103,088
DEERFIELD PARK DIST	\$ 183,633
DEERFIELD PARK DIST PENSION	\$ 24,206
TOTAL SUM	\$ 2,804,422



Taxing Body	Rate 2021	Pay 202	2022	2023	2024	2025	2026	2027
DEERFIELD SCHOOL DISTRICT #109	3.393016	3.494806	3.389962	3.491661	3.596411	3.704303	3.593174	
DEERFIELD SCHOOL DISTRICT #109 PENSION	0.060399	0.062211	0.060345	0.062155	0.06402	0.06594	0.063962	
DEERFIELD-BANNOCKBURN FIRE PROT	0.565005	0.581955	0.564496	0.581431	0.598874	0.616841	0.598335	
DEERFIELD-BANNOCKBURN FIRE PROT PENSION	0.140485	0.1447	0.140359	0.144569	0.148906	0.153374	0.148772	
TOWNSHIP HIGH SCHOOL DISTRICT 113	2.421075	2.493707	2.418896	2.491463	2.566207	2.643193	2.563897	
TOWNSHIP HIGH SCHOOL DISTRICT 113 PENSION	0.064879	0.066825	0.064821	0.066765	0.068768	0.070831	0.068706	
TOWNSHIP OF WEST DEERFIELD	0.036046	0.037127	0.036014	0.037094	0.038207	0.039353	0.038172	
TOWNSHIP OF WEST DEERFIELD PENSION	0.000734	0.000756	0.000733	0.000755	0.000778	0.000801	0.000777	
COLLEGE OF LAKE COUNTY #532	0.293469	0.302273	0.293205	0.302001	0.311061	0.320393	0.310781	
COUNTY OF LAKE	0.494197	0.509023	0.493752	0.508565	0.523822	0.539536	0.52335	
COUNTY OF LAKE PENSION	0.103550	0.106657	0.103457	0.106561	0.109757	0.11305	0.109659	
FOREST PRESERVE	0.169525	0.174611	0.169372	0.174454	0.179687	0.185078	0.179525	
FOREST PRESERVE PENSION	0.009380	0.009661	0.009372	0.009653	0.009942	0.010241	0.009933	
VIL OF DEERFIELD	0.608208	0.626454	0.607661	0.62589	0.644667	0.664007	0.644087	
VIL OF DEERFIELD LIBRARY	0.299862	0.308858	0.299592	0.30858	0.317837	0.327372	0.317551	
DEERFIELD PARK DIST	0.534152	0.550177	0.533671	0.549681	0.566172	0.583157	0.565662	
DEERFIELD PARK DIST PENSION	0.070411	0.072523	0.070348	0.072458	0.074632	0.076871	0.074565	
SOUTHLAKE MOSQUITO ABATEMENT	0.012907	0.013294	0.012895	0.013282	0.013681	0.014091	0.013668	

	2022 Rollback Taxes Due	2021 Rollback Taxes Due	2020 Rollback Taxes Due
16-31-202-039	\$ 11,987.78	\$ 11,548.63	\$ 11,143.70
16-31-300-059	\$ 363,792.04	\$ 337,529.84	\$ 325,691.62
Totals:	\$ 375,779.83	\$ 349,078.47	\$ 336,835.32

Total Rollback Due: \$ 375,779.83 \$ 349,078.47 \$ 336,835.32 \$ 1,061,694
Plus additional 5% interest

2022							
Parcel	Acreage	Classification	OS Asmt	Full Land Asmt	Difference	2021 Tax Rate	Rollback Tax
16-31-202-039	2.48	Open Space	\$ 3,306	\$ 157,695	\$ 154,389	7.764667%	\$ 11,987.78
16-31-300-059	84.35	Open Space	\$ 1,160,547	\$ 5,845,771	\$ 4,685,224	7.764667%	\$ 363,792.04
16-31-300-056	2.5147	Com Vac Land					
16-31-300-057	10.433	Com Imp Land					
16-31-300-058	1.2627	Com Vac Land					

2021							
Parcel	Acreage	Classification	OS Asmt	Full Land Asmt	Difference	2021 Tax Rate	Rollback Tax
16-31-202-039	2.48	Open Space	\$ 3,306	\$ 152,039	\$ 148,733	7.764667%	\$ 11,548.63
16-31-300-059	84.35	Open Space	\$ 1,289,111	\$ 5,636,108	\$ 4,346,997	7.764667%	\$ 337,529.84
16-31-300-056	2.5147	Com Vac Land					
16-31-300-057	10.433	Com Imp Land					
16-31-300-058	1.2627	Com Vac Land					

2020							
Parcel	Acreage	Classification	OS Asmt	Full Land Asmt	Difference	2020 Tax Rate	Rollback Tax
16-31-202-039	2.48	Open Space	\$ 3,306	\$ 152,359	\$ 149,053	7.476326%	\$ 11,143.70
16-31-300-059	84.35	Open Space	\$ 1,291,663	\$ 5,647,969	\$ 4,356,306	7.476326%	\$ 325,691.62
16-31-300-056	2.5147	Com Vac Land					
16-31-300-057	10.433	Com Imp Land					
16-31-300-058	1.2627	Com Vac Land					

PROPERTY TAX DEFINITIONS

Ad Valorem Tax: Latin for “according to value”. A tax on the owner of real or personal property based on the value assessed on the property by assessing jurisdiction. Synonymous with Property Tax.

Assessed Value/AKA: Assessment: The result of applying a the assessment ratio to the basis of assessment. The tax rate is applied to the assessment, not the basis of assessment, to determine property tax liability.

The Basis of Assessment: The basis of assessment is the actual value, true value, current value, market value, etc. In most jurisdictions Basis of Assessment approximates the concept of market value as of the assessment date. The tax rate is applied to the assessment, not the basis of assessment, to determine property tax liability.

Assessment Date: The date determined by law at which an assessing jurisdiction determines the value of property for the purpose of assessment. The assessment date is generally the same each year. However, depending upon statutory requirements and the resources available to the assessor, some assessing jurisdictions do not reassess every year.

Assessment Ratio/AKA: Assessment to Market Value Ratio or Equalization Ratio: A statutory percentage applied to the basis of assessment to arrive at the assessed value. A tax rate is applied to the assessed value to arrive at the property tax.

Delinquency Date/AKA: Tax Bill Due Date: The last date on which a property tax bill may be paid or a personal property return submitted without the levying of penalties or interest. The delinquency date is distinct from the “due and payable” date, although in some jurisdictions, the same date applies.

Market Value: The most probable price, as of a specified ate, in cash, or in terms equivalent to cash, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeably, and for self-interest, and assuming that neither is under undue duress.

Lien Date: The date on which property taxes owned for a specific tax year becomes a lien on the property. The lien date generally coincides with the assessment date. However, the lien date applies annually whereas the assessment date may not.

Parcel: A single unit of property. Term applied to both real estate and personal property.

Personal Property: Property not included by a taxing jurisdiction as real estate. Including but is not limited to furniture and fixtures, machinery and equipment, inventories and supplies.

Property Tax Calendar: A chronological list of all property tax return and payment due dates and appeal deadlines for each jurisdiction in which property is owned. Ideally, a property tax calendar will be augmented by a comprehensive assessor’s and tax collector’s parcel number listing in order to develop a property tax calendar down to the parcel level for each property owned.

Appeal/AKA: Protest or Assessment Appeal: A challenging of the assessed value of a parcel. Usually conducted in multiple steps with the first being an informal meeting with the tax authority, the second before an elected or appointed board or judge, and the third through legal proceeding. Once a taxpayer (or his/her representative) is satisfied with a negotiated reduction in assessed value, the process terminates. Strict deadlines are imposed to restrict each level of the process.

Real Estate (Real Property): Generally described as land, building improvements and fixtures. Does not include items of personal property.

Return (Rendition): A rendering to a taxing authority disclosing information on real estate or personal property owned by a taxpayer. Usually requested by the taxing authority to assist with the assessment of a property.

Tax year: The twelve month period to which a specific property tax applies.

About Ryan

Ryan is an award-winning global tax services firm, with the largest indirect and property tax practices in North America and the sixth largest corporate tax practice in the United States. Headquartered in Dallas, Texas, the Firm provides a comprehensive range of state, local, federal, and international tax advisory and consulting services on a multi-jurisdictional basis, including audit defense, tax recovery, credits and incentives, tax process improvement and automation, tax appeals, tax compliance, and strategic planning. Ryan is a three-time recipient of the International Service Excellence Award from the Customer Service Institute of America (CSIA) for its commitment to world-class client service. Empowered by the dynamic *myRyan* work environment, which is widely recognized as the most innovative in the tax services industry, Ryan's multi-disciplinary team of more than 1,700 professionals and associates serves over 9,000 clients in 40 countries, including many of the world's most prominent Global 5000 companies. More information about Ryan can be found at www.ryan.com.

Major Practice Areas

<i>Abandoned and Unclaimed Property</i>	<i>Transfer Pricing</i>
<i>Business License Tax</i>	<i>Net Proceeds Tax</i>
<i>Captive Insurance</i>	<i>Property Tax</i>
<i>Communications Transaction Tax</i>	<i>Public Affairs</i>
<i>Controversies and Appeals</i>	<i>Severance Tax</i>
<i>Credits and Incentives</i>	<i>State Income and Franchise Tax</i>
<i>Customs and Foreign Trade</i>	<i>Tax Account Analysis</i>
<i>Human Capital Tax Services</i>	<i>Tax Compliance Services</i>
<i>Insurance Tax</i>	<i>Tax Credit Services</i>
<i>Federal Income Tax</i>	<i>Tax Technology</i>
<i>Fraud and Forensic Recovery</i>	<i>Transaction Tax</i>
<i>Fuels and Excise Tax</i>	<i>Value-Added Tax</i>
<i>International Tax</i>	

Property Tax National Team

As the largest property tax practice in North America, with more than 700 professionals in 35 cities and relationships in nearly every jurisdiction, our experience is unmatched by any other national, regional, or local provider.



Award-Winning Tax Services

For additional information

1.855.RYAN.TAX

www.ryan.com

© 2014 Ryan, LLC. All rights reserved.

Traffic Impact Study Proposed Industrial Development

Deerfield, Illinois



Prepared For:



March 23, 2023

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O’Hara, Aboona, Inc. (KLOA, Inc.) for a proposed industrial development to be annexed to Deerfield, Illinois. The site, which is currently occupied by Baxter Corporate Headquarters, is located at 1 Baxter Parkway on the east side of Saunders Road between Lake Cook Road and Deerfield Parkway. As proposed, the site will be redeveloped to contain two warehouse/distribution buildings totaling approximately 1,124,931 square feet of building area and a 155,940 square-foot indoor sports complex that will contain soccer and baseball fields. Access to the proposed warehouse/distribution buildings will be provided via Baxter Parkway, which has a signalized intersection with Saunders Road and via Hawthorne Lane, which is under stop sign control at its intersection with Saunders Road. All truck traffic will enter the site from the Baxter Parkway entrance. Access to the proposed indoor sports complex will be provided off Hawthorne Lane only.

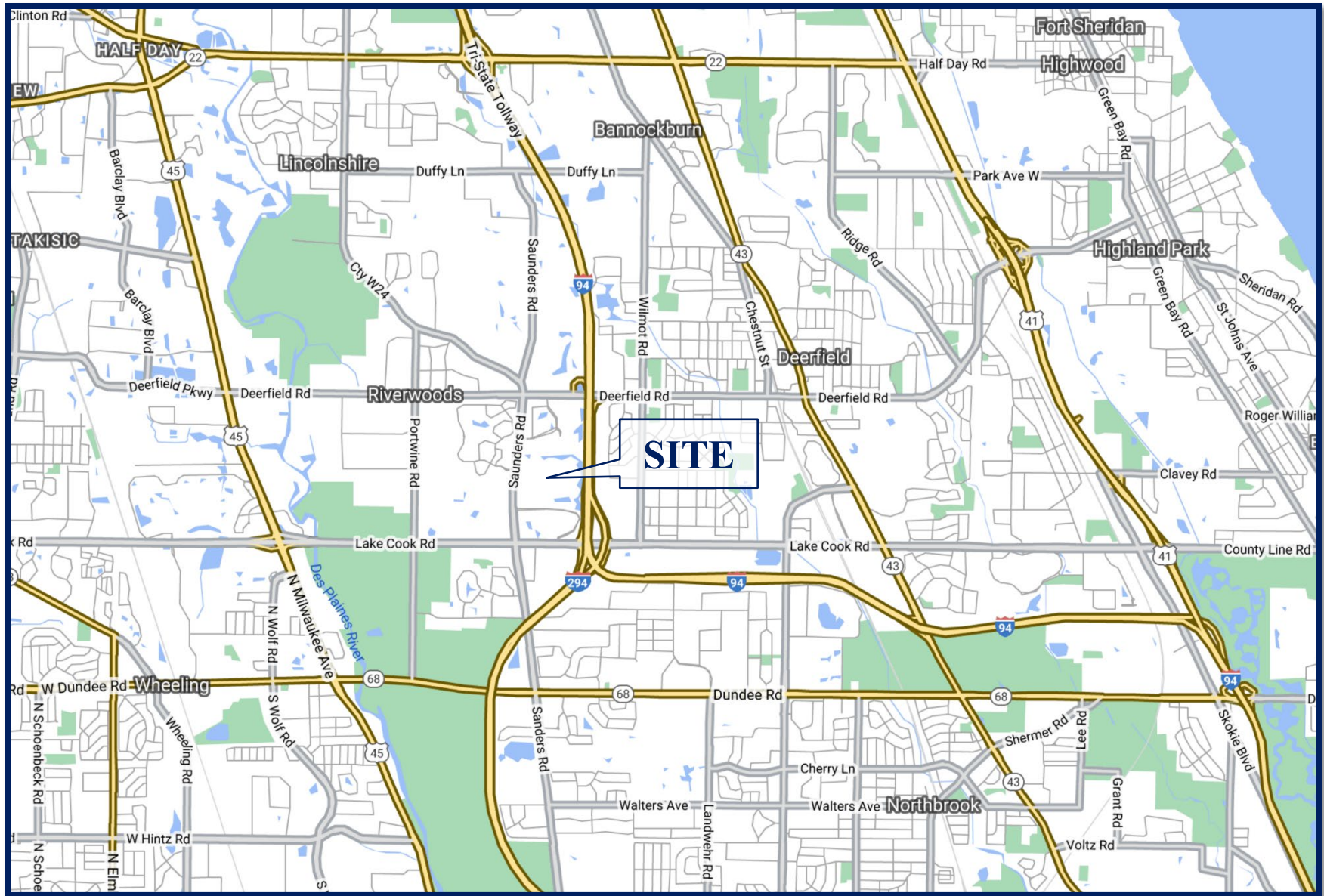
The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate the traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development.
- Traffic analyses for the weekday morning and weekday evening peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes determined from traffic counts.
2. Year 2025 No Build Conditions – Analyzes the capacity of the future roadway systems that include the existing traffic volumes and an ambient traffic growth not attributable to any particular development.
3. Year 2025 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the Year 205 no-build traffic volumes and the traffic estimated to be generated by the proposed development.



Site Location

Figure 1

*Proposed Industrial Development
Deerfield, Illinois*



Aerial View of Site

Figure 2

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

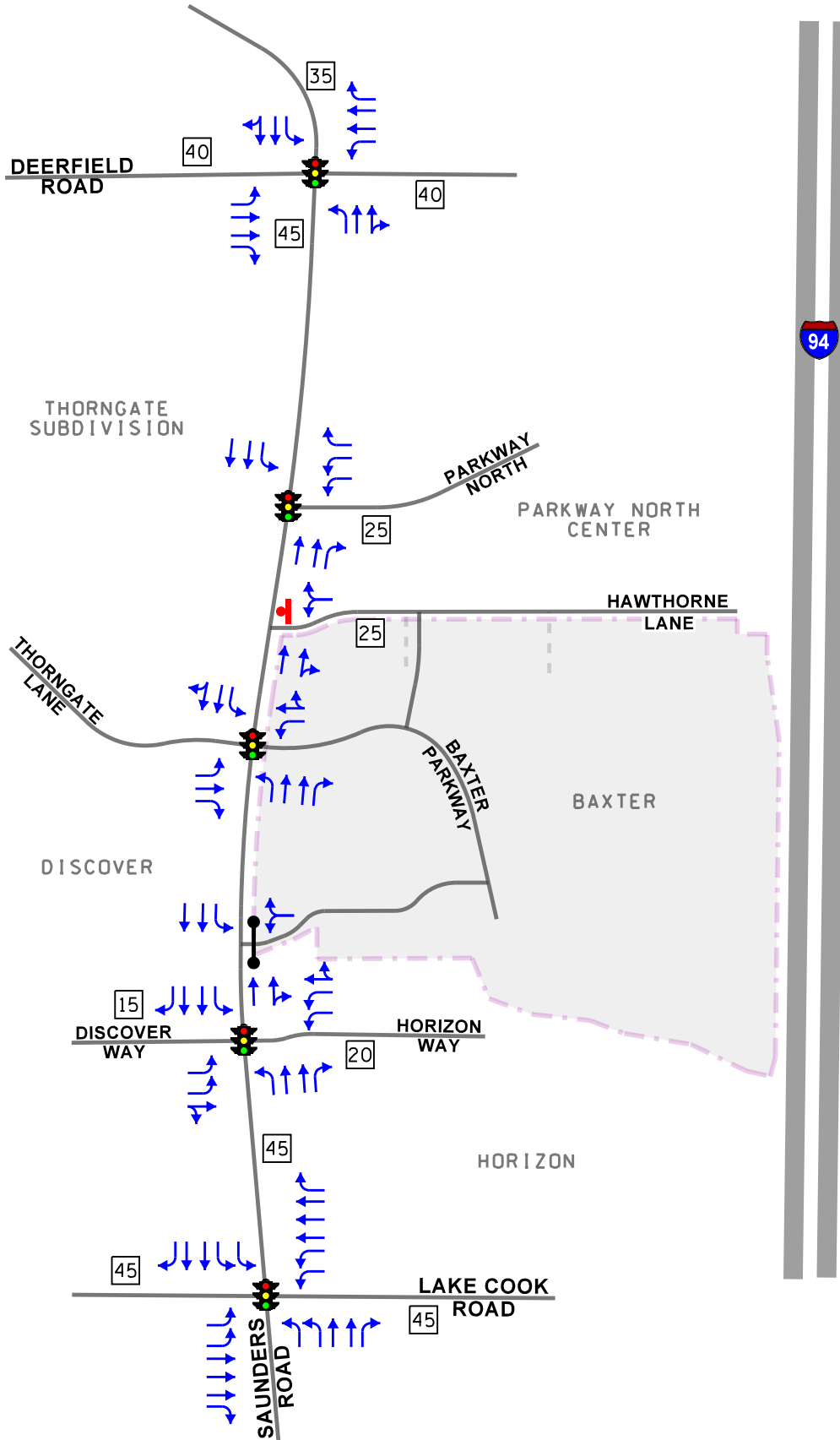
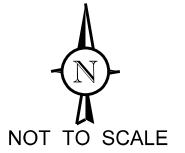
The site, which is currently occupied by Baxter Corporate Headquarters, is located at 1 Baxter Parkway in unincorporated Lake County, Illinois. The site is bounded by Hawthorne Lane to the north, Interstate 94 to the east, Horizon Way to the south, and Saunders Road to the west. Other land uses in the area are primarily commercial to the north and south and residential to the west.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Interstate 94 (Tri-State Tollway) is north-south, tollway. South of Lake Cook Road, the tollway divides into *Interstate 94 (Edens Spur)* which travels east and then south towards downtown Chicago and *Interstate 294 (Tri-State Tollway)* which travels south around the outside of Chicago. I-94 and I-294 are both under the jurisdiction of the Illinois State Toll Highway Authority (ISTHA).

Saunders Road (Lake County Highway W24, Cook County Highway W24) is a north-south minor arterial roadway that provides two lanes in each direction narrowing to one lane in each direction north of Deerfield Road and south of Lake Cook Road. At its signalized intersection Deerfield Road, Saunders Road provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. At its signalized intersection Parkway North, Saunders Road provides two through lanes and an exclusive right-turn lane on the northbound approach and two through lanes and an exclusive left-turn lane on the southbound approach. At its signalized intersection with Baxter Parkway/Thorngate Lane, Saunders Road provides an exclusive left-turn lane, two through lanes and an exclusive right-turn lane on the northbound approach and an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on the southbound approach. At its signalized intersection with Discover Way/Horizon Way, Saunders Road provides an exclusive left-turn lane, two through lanes and an exclusive right-turn lane on both approaches. At its signalized intersection with Lake Cook Road, Saunders Road provides dual left-turn lanes, two through lanes and an exclusive right-turn lane on both approaches. At its unsignalized intersection with Hawthorne Lane, Saunders Road provides a through lane and a shared through/right-turn lane on the northbound approach and two through lanes and an exclusive left-turn lane on the southbound approach. Saunders Road is under the jurisdiction of the Lake County Division of Transportation (LCDOT) north of Lake Cook Road and the Cook County Department of Transportation and Highway (CCDOTH) south of Lake Cook Road.



- LEGEND**
- TRAVEL LANE
 - TRAFFIC SIGNAL
 - STOP SIGN
 - SPEED LIMIT
 - GATED

Proposed Industrial
Development
Deerfield, Illinois

Existing Roadway Characteristics

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.
Job No: 22-370 Figure: 3

According to the Illinois Department of Transportation (IDOT) Saunders Road carries an Annual Average Daily Traffic (AADT) volume of 7,200 vehicles north of Deerfield Road (IDOT 2019), 13,800 vehicles between Deerfield Road and Lake Cook Road (IDOT 2019), and 15,600 vehicles south of Lake Cook Road (IDOT 2018). Saunders Road has a posted speed limit of 45 miles per hour south of Deerfield Road and 35 miles per hour north of Deerfield Road. Saunders Road is not designated as a Strategic Regional Arterial (SRA).

Lake Cook Road (Cook County Highway A50) is an east-west principal arterial roadway that in the vicinity of the site provides three lanes in each direction. At its signalized intersection with Saunders Road, Lake Cook Road provides dual left-turn lanes, three through lanes, and an exclusive right-turn lane on both approaches. Approximately one-half mile east of Saunder Road, Deerfield Road has a signalized diamond interchange with I-94/I-294. At this interchange vehicles are able to enter northbound I-94 and southbound I-294 and exit from southbound I-94 and northbound I-294. Movements on to southbound I-94 and from north bound I-94 (to/from the Edens Spur) are not possible. Lake Cook Road is under the jurisdiction of CCDOTH, carries an AADT volume of 46,900 vehicles (IDOT 2018), has a posted speed limit of 45 miles per hour, and is designated as an SRA.

Deerfield Road (Lake County Highway A47) is an east-west minor arterial roadway that provides two lanes in each direction narrowing to one lane in each direction west of Saunders Road. At its signalized intersection with Saunders Road, Deerfield Road provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on both approaches. Approximately one-half mile east of Saunder Road, Deerfield Road has a signalized interchange with I-94. At this interchange vehicles are able to enter southbound I-94 and exit from northbound I-95. As this interchange is north of the I-94/I-294 merge, movements to/from the Edens Spur are possible. Deerfield Road is under the jurisdiction of LCDOT, carries an AADT volume of 16,600 vehicles west of Saunders Road and 22,300 vehicles east of Saunder Road (IDOT 2019), and has a posted speed limit of 40 miles per hour.

Parkway North is a private roadway that serves the Parkway North Center business park. Parkway North extends between Saunders Road and Deerfield Road and provides one lane in each direction generally divided by a landscape median. At its signalized intersection with Saunders Road, Parkway North provides dual left-turn lanes and an exclusive right-turn lane. Parkway North has a posted speed limit of 25 miles per hour.

Hawthorne Lane is an east-west private roadway that primarily serves the Parkway North Center business park. Hawthorne Lane extends east from Saunders Road and provides one lane in each direction. At its unsignalized intersection with Saunders Road, Hawthorne Lane provides a shared left-turn/right-turn lane and is under stop sign control. An access road serving the Baxter Corporate Headquarters is located on the south side of Hawthorne Lane approximately 680 feet east of Saunders Road. Hawthorne Lane has a posted speed limit of 25 miles per hour.

Thorngate Lane is an east-west local roadway that serves the Thorngate residential subdivision. Thorngate Lane extends west from Saunders Road and provides one lane in each direction. At its signalized intersection with Saunders Road, Thorngate Lane is aligned opposite Baxter Parkway and provides an exclusive left-turn lane, a through lane, and an exclusive right-turn lane on the eastbound approach. Thorngate Lane is under the jurisdiction of the Village of Riverwoods and has a posted speed limit of 20 miles per hour.

Baxter Parkway is an east-west private roadway that serves the Baxter Corporate Headquarters. Baxter Parkway extends east from Saunders Road and provides one lane in each direction. At its signalized intersection with Saunders Road, Baxter Parkway is aligned opposite Thorngate Lane and provides an exclusive left-turn lane and a shared through/right-turn lane on the westbound approach.

Discover Way is an east-west private roadway that serves a Discover office building. Discover Way extends west from Saunders Road and provides one lane in each direction generally divided by a landscape median. At its signalized intersection with Saunders Road, Discover Way is aligned opposite Horizon Way and provides dual left-turn lanes and a shared through/right-turn lane on the eastbound approach. Discover Way has a posted speed limit of 15 miles per hour.

Horizon Way is an east-west private roadway that serves a Horizon office building. Horizon Way extends east from Saunders Road and provides one lane in each direction generally divided by a landscape median. At its signalized intersection with Saunders Road, Horizon Way is aligned opposite Discover Way and provides dual left-turn lanes and a shared through/right-turn lane on the eastbound approach. Horizon Way has a posted speed limit of 20 miles per hour.

Existing Traffic Volumes

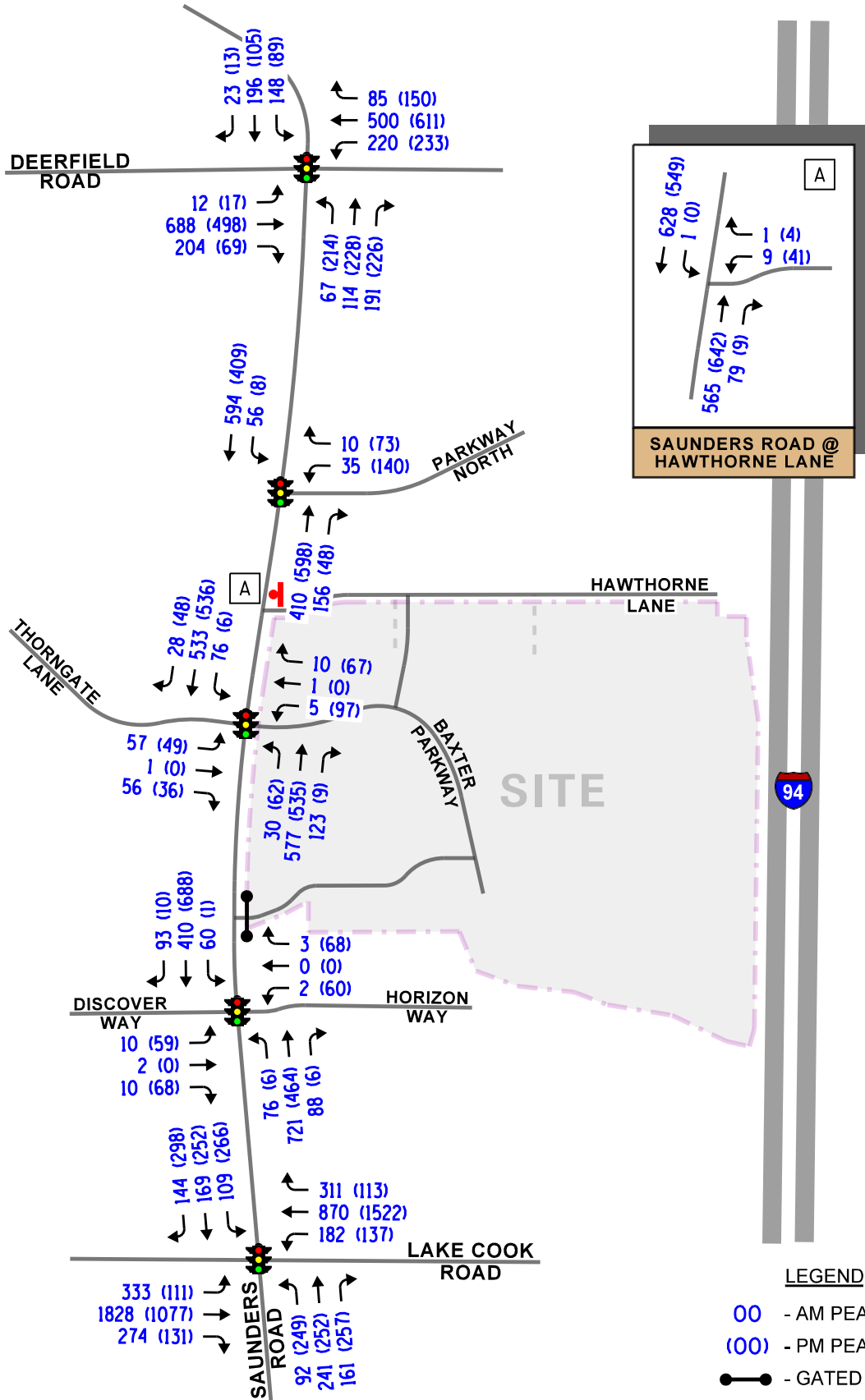
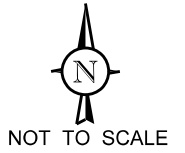
In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak hour traffic counts at the following intersections:

- Saunders Road with Deerfield Road
- Saunders Road with Parkway North
- Saunders Road with Hawthorn Lane
- Saunders Road with Baxter Parkway/Thorngate Lane
- Saunders Road with Discover Way/Horizon Way
- Saunders Road with Lake Cook Road

The traffic counts were conducted on Tuesday, November 29, 2022 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods. The results of the traffic counts show that the peak hours of traffic generally occurred between 7:45 A.M. and 8:45 A.M. during the weekday morning peak period and between 4:30 P.M. and 5:30 P.M. during the weekday evening peak period.

The existing peak hour vehicle traffic volumes, inclusive of heavy vehicles, are shown in **Figure 4**. The existing heavy vehicle peak hour traffic volumes are shown in **Figure 5**. Copies of the traffic count summary sheets are included in the Appendix.

It should be noted that additional counts were conducted at the intersections of Saunders Road with Deerfield Road and Lake Cook Road on Saturday in 2023. The results of the counts indicated that area roadway volumes during the Saturday midday peak hour were approximately 35 percent lower than weekday peak hour volumes. Further, the proposed development is projected to generate fewer trips on Saturday than on a weekday. As such, the Saturday midday peak hour was not analyzed.



LEGEND

- 00 - AM PEAK HOUR (7:45-8:45 AM)
- (00) - PM PEAK HOUR (4:30-5:30 PM)
- - GATED

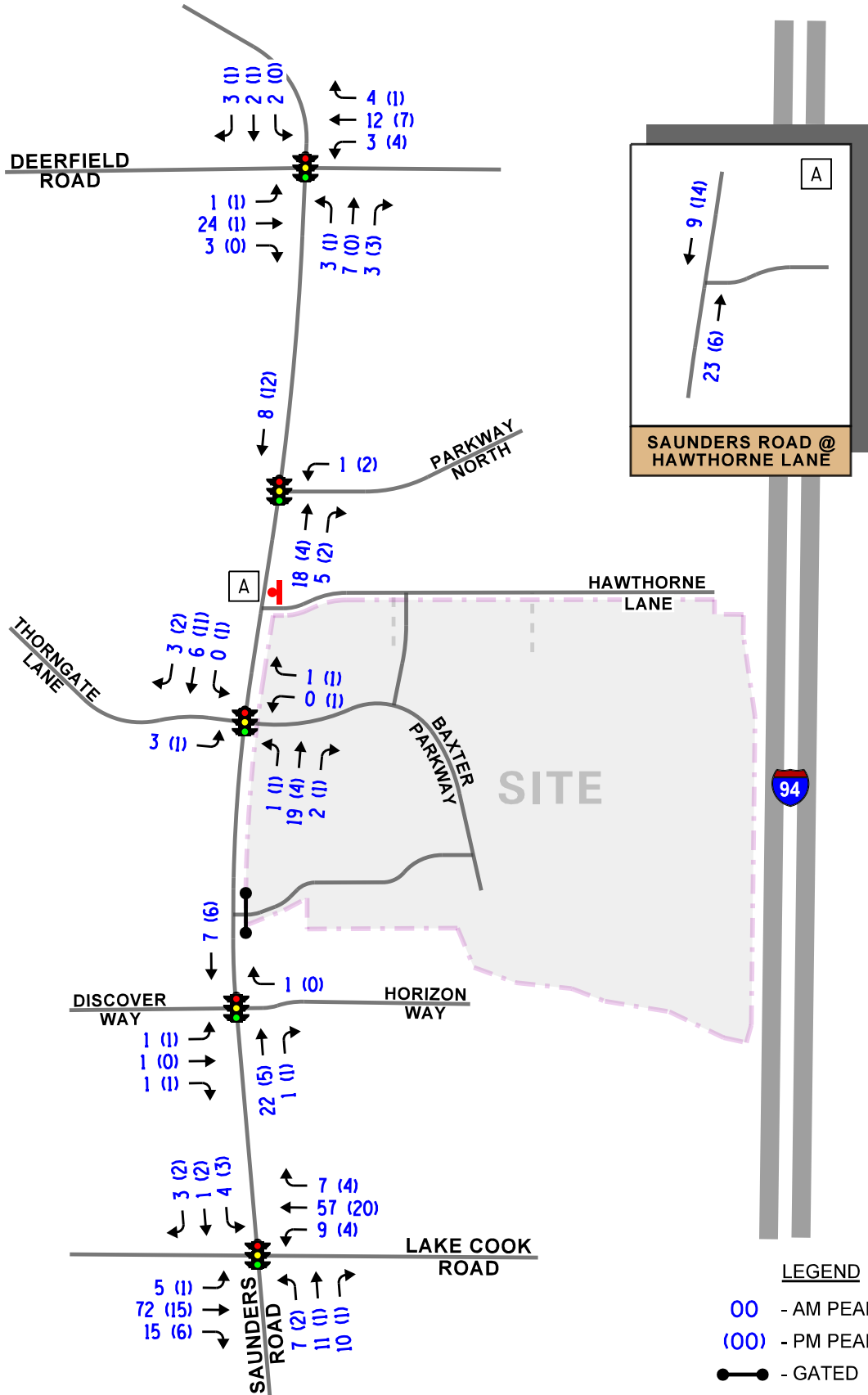
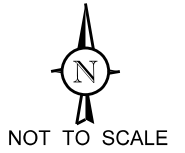
Proposed Industrial Development
Deerfield, Illinois

Existing Traffic Volumes



Job No: 22-370

Figure: 4



LEGEND

- 00 - AM PEAK HOUR (7:45-8:45 AM)
- (00) - PM PEAK HOUR (4:30-5:30 PM)
- - GATED

Proposed Industrial Development
Deerfield, Illinois

Existing Traffic Volumes
Heavy Vehicles



Job No: 22-370

Figure: 5

Crash Analysis

KLOA, Inc. obtained crash data¹ from IDOT for the most recent available five years (2017 to 2021) for the intersections of the study area intersections. A review of the crash data indicated the following:

- No crashes were reported at the intersections of Saunders Road with, Parkway North, Hawthorn Lane, or Discover Way/Horizon Way.
- A total of four crashes were reported at the intersection of Saunders Road with Baxter Parkway/Thorngate Lane
- No fatalities were reported at any of the study area intersections during the review period.

Tables 1 and 2 summarize the crash data at the remaining intersections.

Table 1

SAUNDERS ROAD WITH DEERFIELD ROAD - CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2017	0	0	0	2	0	5	0	7
2018	0	0	0	4	0	2	0	6
2019	2	0	0	0	0	8	0	10
2020	0	0	0	0	0	0	0	0
2021	<u>0</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>1</u>
Total	2	0	1	6	0	15	0	24
Average	<1.0	--	<1.0	1.2	--	3.0	-	4.8

Table 2

SAUNDERS ROAD WITH LAKE COOK ROAD – CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2017	2	0	0	5	2	3	0	12
2018	1	0	1	6	0	3	0	11
2019	1	0	1	5	0	5	0	12
2020	2	0	0	1	1	1	0	5
2021	<u>0</u>	<u>0</u>	<u>1</u>	<u>4</u>	<u>0</u>	<u>1</u>	<u>0</u>	<u>6</u>
Total	6	0	3	21	3	13	0	46
Average	1.2	--	<1.0	4.2	<1.0	2.6	--	9.2

¹ IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the site will be redeveloped to contain two warehouse/distribution buildings totaling approximately 1,124,931 square feet of building area and a 155,940 square-foot indoor sports complex that will contain soccer and baseball fields. A copy of the preliminary site plan is included in the appendix.

Site Access

Access to the proposed development will be provided via the following:

- Baxter Parkway, which has a signalized intersection with Saunders Road in alignment with Thorngate Lane. Baxter Parkway will serve warehouse employee traffic and all warehouse truck traffic.
- A proposed full-movement access drive on Hawthorne Lane approximately 620 feet east of Saunders Road. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. This access drive will serve the sports complex.
- A proposed full-movement access drive on Hawthorne Lane approximately 1,300 feet east of Saunders Road. This access drive will provide one inbound lane and one outbound lane with outbound movements under stop sign control. This access drive will serve warehouse employee traffic.

It should be noted that as part of the development the existing access drive on Saunders Road in the southwest corner of the site will be removed. This access drive is currently gated and not in use. In addition, the existing site access drive on Hawthorne Lane will be removed.

Truck Access

Truck access to the proposed development will be provided via Baxter Parkway which has a signalized intersection with Saunders Road. Truck traffic should be prohibited from using Hawthorne Lane to access the site. In addition, all truck drivers will be directed to approach and depart the site via Lake Cook Road and to avoid Deerfield Road. Signage should be provided on Baxter Parkway directing outbound truck traffic to the south.

A majority of truck-generated truck traffic is expected to travel between the site and I-94/I-294 and will be able to utilize the signalized interchange of Lake Cook Road with I-94/I-294. As previously mentioned, at this interchange access is not possible to/from the Edens Spur (I-94 east of its split with I-294). Trucks traveling to and from the Edens Spur will be required to exit at Skokie Highway (U.S. Route 41) and approach via Lake Cook Road.

It is acknowledged that not all trucks approaching from the Edens Spur, particularly drivers that have not been to the site, will be exiting at Lake Cook Road. As such, it is anticipated that a limited volume of truck traffic may approach the site via Deerfield Road from its interchange with I-94. Trucks exiting the site will be directed to travel south via signage and via the restricted radius at the northeast corner of the intersection which is not large enough to allow trucks to make a right turn without encroachment. Furthermore, the proximity of the Lake Cook Road interchange with I-294 to the site makes it very convenient for trucks to utilize.

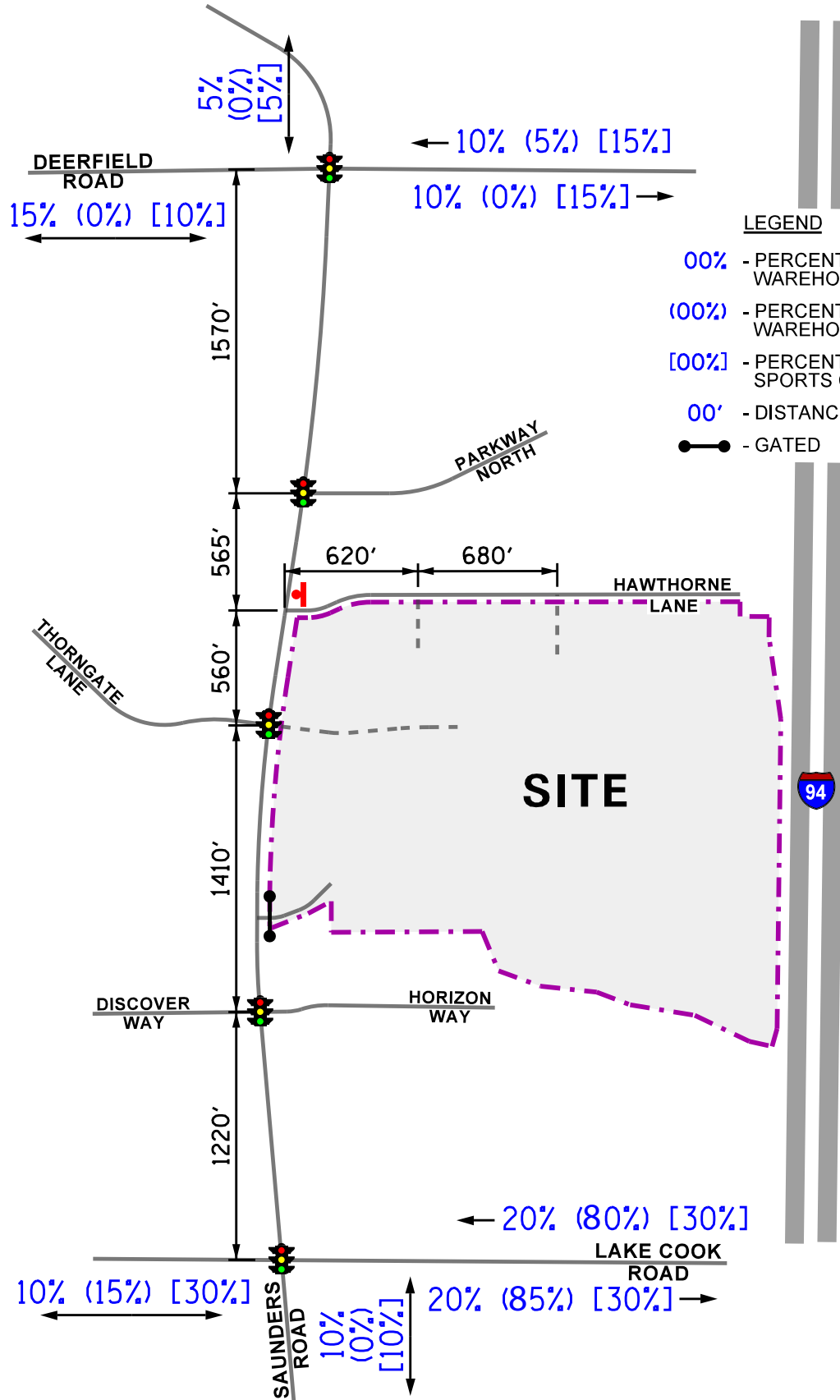
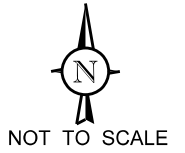
Directional Distribution

The directions from which passenger vehicles and trucks will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 6** illustrates the directional distribution of site traffic. As previously mentioned, all truck traffic will be directed to approach and depart via Lake Cook Road, but it is anticipated that a limited number of trucks will approach via Deerfield Road.

Peak Hour Traffic Volumes

The number of peak hour vehicle trips estimated to be generated by the proposed industrial development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The “Warehousing” (ITE Land-Use Code 150) and “Soccer Complex” (Land-Use Code 488) rates were used for the proposed development. **Table 3** summarizes the trips projected to be generated by the development during the peak hours and on a daily basis.

The volume of truck traffic estimated to be generated by the proposed development during each hour of the day was based on ITE’s Hourly Distribution of Entering and Exiting Truck Trips tables for ITE LUC 150. **Table 4** summarizes the truck trips projected to be generated by the proposed development throughout the day.



Proposed Industrial
Development
Deerfield, Illinois

Directional Distribution



Job No: 22-370

Figure: 6

Table 3

ESTIMATED PEAK HOUR AND DAILY TRIP GENERATION

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
150	Warehouse Buildings (1,124,931 s.f.)	122	37	159	45	116	161	908	908	1,816
	<i>Trucks</i>	<i>13</i>	<i>21</i>	<i>34</i>	<i>23</i>	<i>19</i>	<i>42</i>	<i>308</i>	<i>308</i>	<i>616</i>
	<i>Passenger Vehicles</i>	<i>109</i>	<i>16</i>	<i>125</i>	<i>22</i>	<i>97</i>	<i>119</i>	<i>600</i>	<i>600</i>	<i>1,200</i>
488	Sports Complex (Four Fields)	5	5	10	43	23	66	143	143	286
	Total	127	42	169	88	139	227	1,051	1,051	2,102

Table 4

ESTIMATED 24-HOUR TRUCK TRIP GENERATION

Hour	Warehouse (ITE LUC 150) – 1,124,931 s.f.					
	Weekday Morning			Weekday Evening		
	In	Out	Total	In	Out	Total
12:00	1	1	2	25	16	41
1:00	1	0	1	25	24	49
2:00	4	4	8	19	18	37
3:00	5	2	7	32	24	56
4:00	5	10	15	23	19	42
5:00	11	11	22	11	14	25
6:00	16	11	27	3	3	6
7:00	10	25	35	2	2	4
8:00	13	21	34	5	4	9
9:00	37	23	60	1	4	5
10:00	25	36	61	0	0	0
11:00	33	36	69	1	0	1

Based on daily truck trips (Table 1) and ITE's Hourly Distribution of Entering and Exiting Truck Trips tables.

Trip Generation Comparison

As indicated earlier, the site is currently occupied by the Baxter Corporate Headquarters, which is approximately 645,699 square feet in size with a peak employee occupancy of 900 people. The amount of traffic that was generated by Baxter at full occupancy was also estimated utilizing trip rates published by ITE for Corporate Headquarters Building (Land-Use Code 714). **Table 5** summarizes this traffic with the trips estimated for the proposed development including the warehouse/distribution buildings and the indoor sports complex.

As can be seen, the Baxter Corporate Headquarters at full occupancy generated approximately four to five times more trips during the peak hours and approximately twice the amount of traffic on a daily basis. This reduction in the number of trips will result in a significantly lower traffic impact on the area roadways, allowing for additional reserve capacity at the impacted intersections to accommodate future increases in traffic resulting from regional growth and/or other potential developments in the area.

Table 5
TRIP GENERATION COMPARISON

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
150/488	Proposed Development	127	42	169	88	139	227	1,051	1,051	2,102
714	Corporate Headquarters Building (645,699 s.f.)	732	55	787	70	712	782	2,220	2,220	4,440
Difference		-605	-13	-618	+18	-573	-555	-1,169	-1,169	-2,338
Percent Reduction		-82%	-24%	-79%	+25%	-80%	-71%	-53%	-53%	-53%

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed subject development.

Development Traffic Assignment

The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 6). **Figure 7** illustrates the traffic assignment of the new warehouse passenger vehicle trips, **Figure 8** illustrates the traffic assignment of the new warehouse truck trips, and **Figure 9** illustrates the traffic assignment of the new sports complex trips.

Background Traffic Conditions

The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). As per Lake County’s Highway Access and Use Ordinance, the existing volumes were increased by three percent for two years for a total of six percent. **Figure 10** illustrates the Year 2025 No-Build traffic volumes.

Total Projected Traffic Volumes

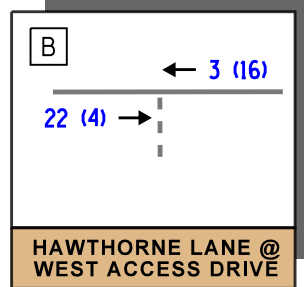
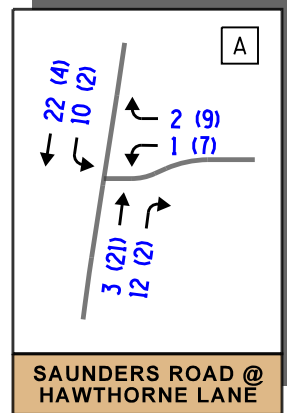
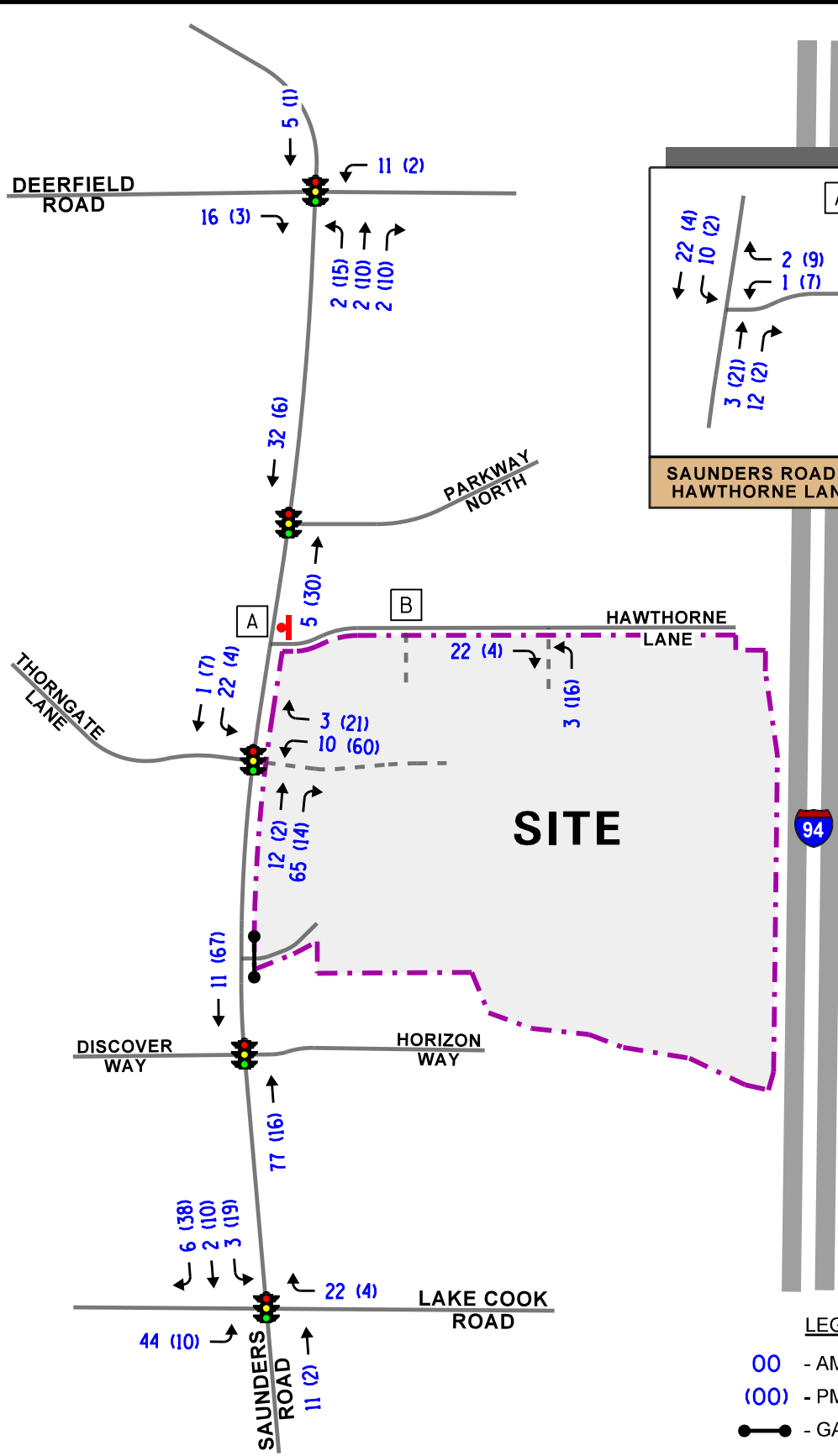
The new development-generated vehicle trips (Figures 7, 8, and 9) were added to the no-build traffic volumes (Figure 10) to determine the Year 2025 total projected traffic volumes. The Baxter Corporate Headquarters is currently partially occupied. As such, the volume of traffic that is currently generated by the proposed Baxter Corporate Headquarters on Baxter Parkway was removed from the area roadway system. **Table 6** summarizes the volume of traffic currently generated by the Baxter Corporate Headquarters on Baxter Parkway during the peak hours. No traffic was removed from Hawthorne Lane in order to provide a conservative analysis. **Figure 11** illustrates the Year 2025 total projected traffic volumes.

Table 5
EXISTING BAXTER CORPORATE HEADQUARTERS TRAFFIC ON BAXTER PARKWAY

Weekday Morning Peak Hour			Weekday Evening Peak Hour		
In	Out	Total	In	Out	Total
200	17	217	15	164	179



NOT TO SCALE



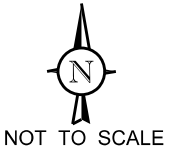
LEGEND

- 00 - AM PEAK HOUR (7:45-8:45 AM)
- (00) - PM PEAK HOUR (4:30-5:30 PM)
- - GATED

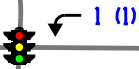
Proposed Industrial Development
Deerfield, Illinois

Site-Generated Traffic Volumes
Warehouse - Passenger Vehicles

Job No: 22-370 Figure: 7



DEERFIELD ROAD

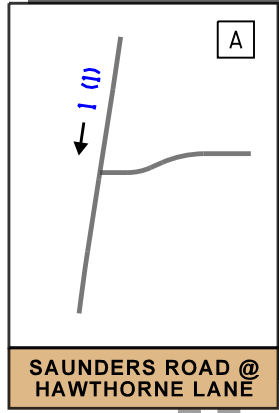


1 (0)

PARKWAY NORTH



1 (0)



SAUNDERS ROAD @ HAWTHORNE LANE

HAWTHORNE LANE

THORNGATE LANE

1 (0)

21 (19)

SITE

12 (22)

21 (19)

DISCOVER WAY

HORIZON WAY



12 (22)

3 (3)

18 (16)

10 (19)

LAKE COOK ROAD

2 (3)

SAUNDERS ROAD



LEGEND

- 00 - AM PEAK HOUR (7:45-8:45 AM)
- (00) - PM PEAK HOUR (4:30-5:30 PM)
- - GATED

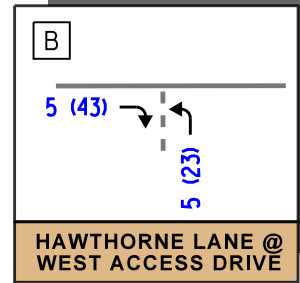
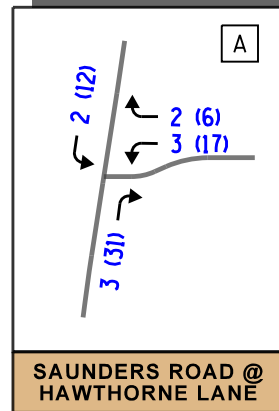
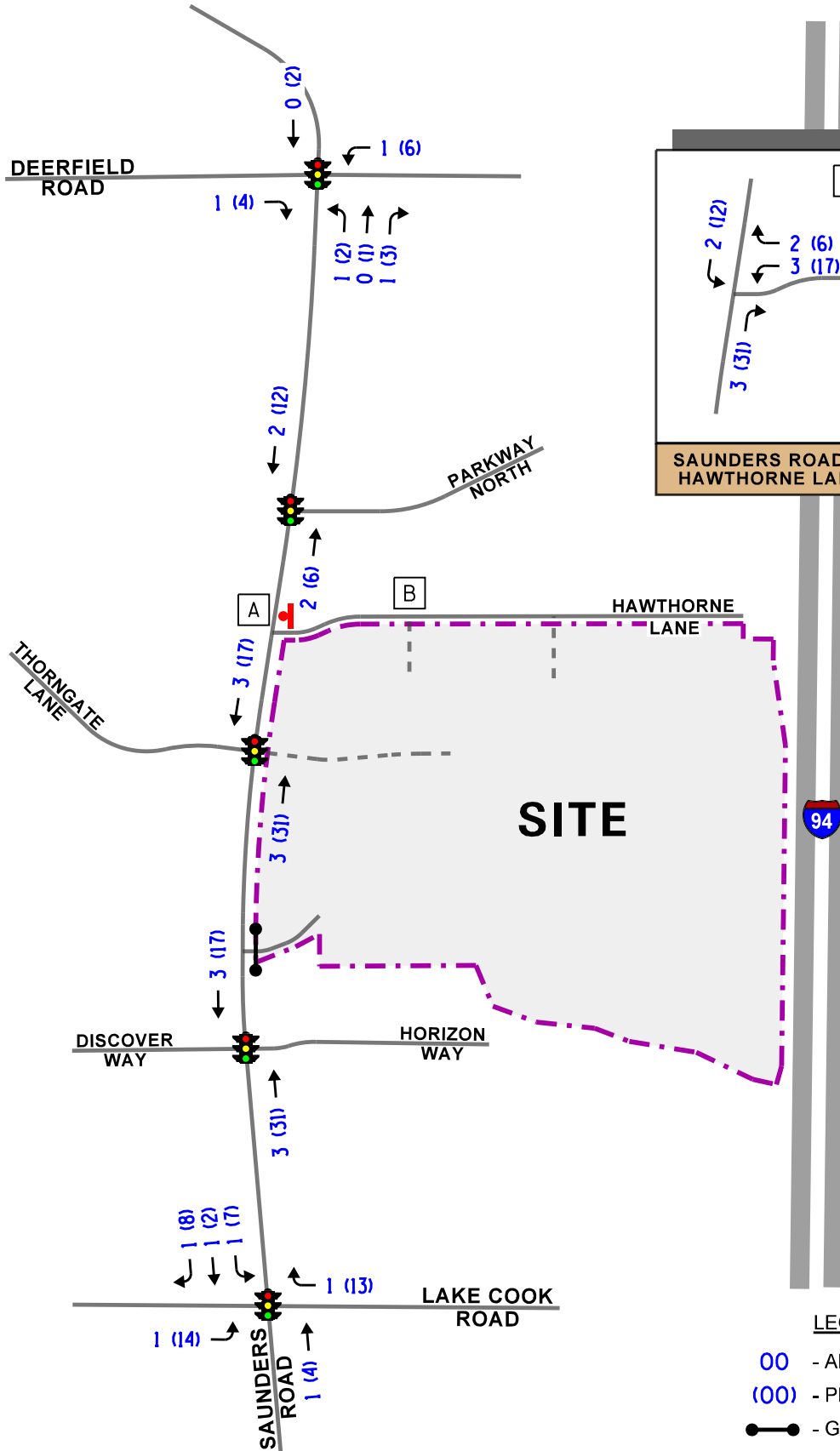
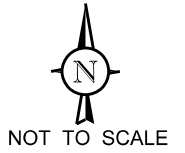
Proposed Industrial Development
Deerfield, Illinois

Site-Generated Traffic Volumes
Warehouse - Trucks



Job No: 22-370

Figure: 8



LEGEND

- 00 - AM PEAK HOUR (7:45-8:45 AM)
- (00) - PM PEAK HOUR (4:30-5:30 PM)
- - GATED

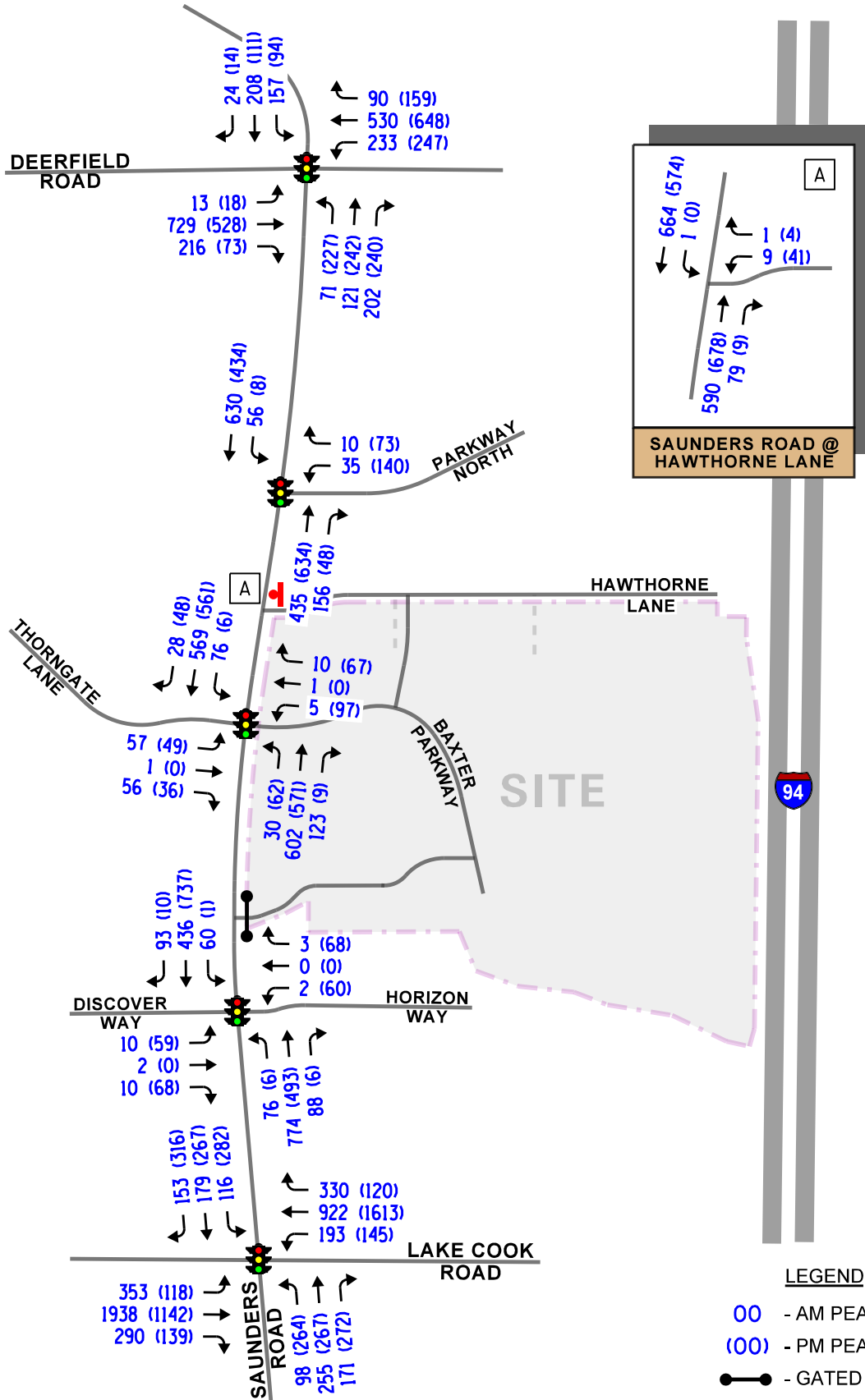
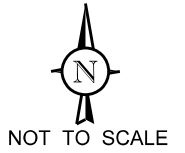
Proposed Industrial Development
Deerfield, Illinois

Site-Generated Traffic Volumes
Sports Complex - Passenger Vehicles



Job No: 22-370

Figure: 9



LEGEND

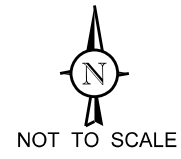
- 00 - AM PEAK HOUR (7:45-8:45 AM)
- (00) - PM PEAK HOUR (4:30-5:30 PM)
- - GATED

Proposed Industrial Development
Deerfield, Illinois

Year 2025 No-Build Traffic Volumes



Job No: 22-370 Figure: 10



DEERFIELD ROAD

THORNGATE LANE

DISCOVER WAY

SAUNDERS ROAD

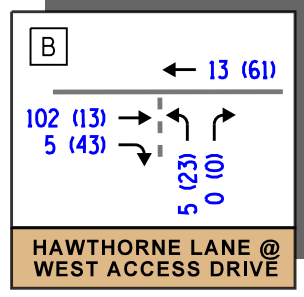
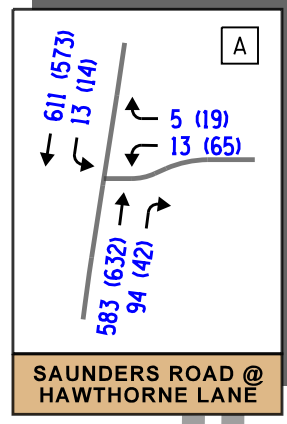
PARKWAY NORTH

HORIZON WAY

LAKE COOK ROAD

HAWTHORNE LANE

SITE



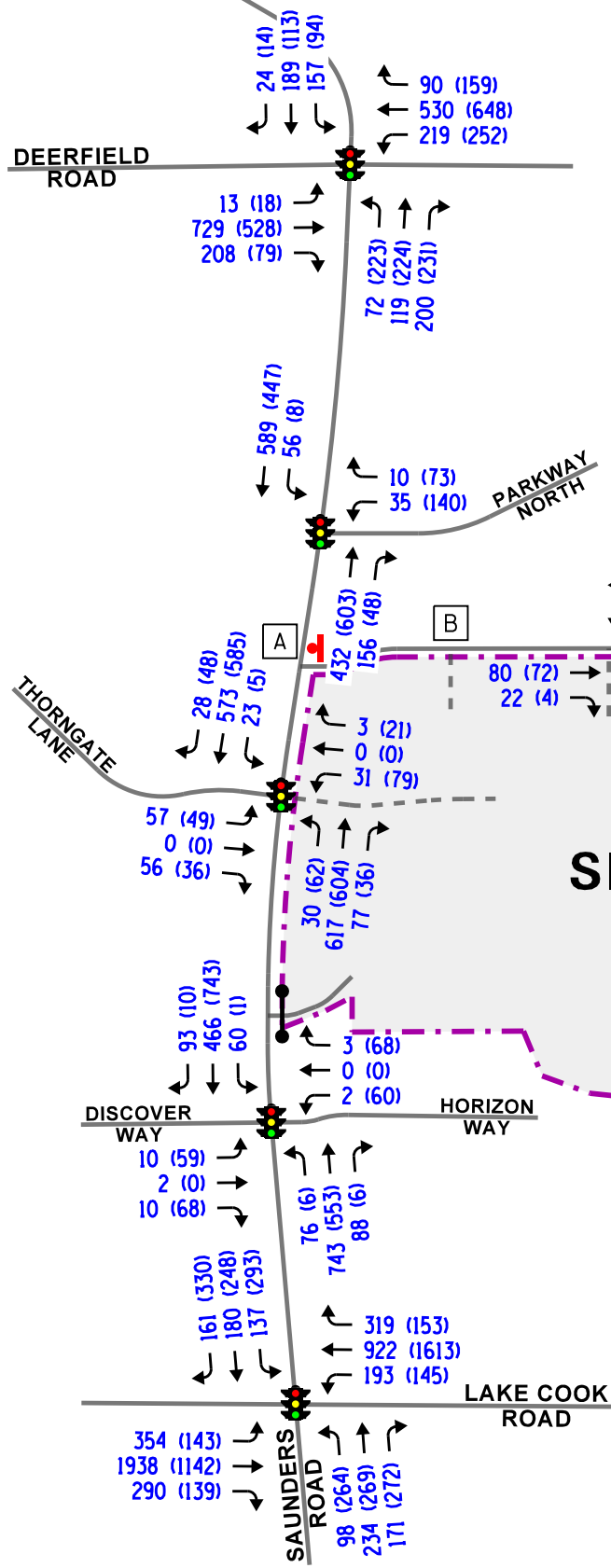
LEGEND

- 00 - AM PEAK HOUR (7:45-8:45 AM)
- (00) - PM PEAK HOUR (4:30-5:30 PM)
- - GATED

Proposed Industrial Development
Deerfield, Illinois

Year 2025 Total Traffic Volumes

Job No: 22-370 Figure: 11



5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing, Year 2025 no-build, and Year 2025 total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the signalized intersections were accomplished using actual cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, Year 2025 no-build, and Year 2025 total projected traffic volumes are presented in **Tables 7** through **12**. A discussion of each intersection follows. Summary

Table 7

CAPACITY ANALYSIS RESULTS – SIGNALIZED – SAUNDERS ROAD WITH DEERFIELD ROAD

	Peak Hour	Eastbound			Westbound			Northbound		Southbound		Overall
		L	T	R	L	T	R	L	T/R	L	T/R	
Existing Conditions	Weekday Morning Peak Hour	A 9.6	B 20.0	A 3.7	B 12.3	B 12.5	A 1.2	C 26.6	B 17.1	D 40.8	D 45.9	B 19.1
		B – 16.2			B – 12.0			B – 18.8		D – 43.8		
	Weekday Evening Peak Hour	B 10.5	C 20.4	A 1.8	B 12.1	B 14.2	A 1.6	D 44.1	D 39.7	D 35.5	D 48.7	C 23.9
		B – 17.9			B – 11.8			D – 41.1		D – 43.0		
Year 2025 No-Build Conditions ¹	Weekday Morning Peak Hour	B 10.2	C 22.2	A 4.6	B 13.6	B 13.0	A 1.3	C 26.7	B 17.3	D 40.7	D 45.6	C 20.0
		B – 18.0			B – 12.0			B – 19.0		D – 43.6		
	Weekday Evening Peak Hour	B 11.4	C 22.4	A 2.2	B 13.6	B 15.4	A 1.7	D 41.9	D 39.8	D 34.7	D 47.8	C 24.5
		B – 19.7			B – 12.9			D – 40.4		D – 42.2		
Year 2025 Total Projected Conditions ¹	Weekday Morning Peak Hour	B 10.2	C 21.6	A 4.4	B 13.3	B 13.1	A 1.2	C 27.3	B 17.1	D 40.5	D 44.5	B 19.6
		B – 17.6			B – 11.8			B – 19.0		D – 42.8		
	Weekday Evening Peak Hour	B 10.6	C 21.1	A 2.0	B 12.8	B 14.4	A 1.4	D 45.6	D 39.4	D 35.9	D 50.5	C 24.1
		B – 18.4			B – 12.1			D – 41.4		D – 44.3		
Letter denotes Level of Service Delay is measured in seconds.				L – Left-Turns T – Through R – Right-Turns								

Table 8

CAPACITY ANALYSIS RESULTS – SIGNALIZED – SAUNDERS ROAD WITH PARKWAY NORTH

	Peak Hour	Westbound		Northbound		Southbound		Overall
		L	R	T	R	L	T	
Existing Conditions	Weekday Morning Peak Hour	D 54.1	C 27.1	A 5.1	A 1.6	A 1.8	A 2.3	A 4.7
		D – 47.9		A – 4.1		A – 2.2		
	Weekday Evening Peak Hour	E 55.3	B 15.3	A 3.2	A 0.1	A 1.9	A 2.2	A 9.1
		D – 41.6		A – 2.9		A – 2.1		
Year 2025 No-Build Conditions ¹	Weekday Morning Peak Hour	D 54.1	C 27.1	A 4.8	A 1.6	A 1.8	A 2.2	A 4.5
		D – 47.9		A – 3.9		A – 2.2		
	Weekday Evening Peak Hour	E 55.3	B 15.3	A 3.2	A 0.1	A 1.9	A 2.1	A 8.9
		D – 41.6		A – 3.0		A – 2.1		
Year 2025 Total Projected Conditions ¹	Weekday Morning Peak Hour	D 54.1	C 27.1	A 5.6	A 1.8	A 1.8	A 2.3	A 4.9
		D – 47.9		A – 4.6		A – 2.2		
	Weekday Evening Peak Hour	E 55.3	B 15.3	A 4.2	A 0.1	A 1.9	A 2.2	A 9.4
		D – 41.6		A – 3.9		A – 2.2		

Letter denotes Level of Service
 Delay is measured in seconds.

L – Left-Turns
 T – Through
 R – Right-Turns

Table 9

CAPACITY ANALYSIS RESULTS – SIGNALIZED – SAUNDERS ROAD WITH BAXTER PARKWAY/THORNGATE LANE

	Peak Hour	Eastbound			Westbound		Northbound			Southbound		Overall
		L	T	R	L	T/R	L	T	R	L	T/R	
Existing Conditions	Weekday Morning Peak Hour	D 48.7	D 45.0	A 1.9	D 40.0	C 29.7	A 3.3	A 5.0	A 0.5	A 2.8	A 5.2	A 6.4
		C – 25.7			C – 32.7		A – 4.2			A – 4.9		
Existing Conditions	Weekday Evening Peak Hour	E 61.1	--	A 0.5	D 46.0	A 0.7	A 4.3	A 5.6	A 0.0	A 5.7	B 11.0	B 11.9
		D - 35.5			C – 27.5		A – 5.4			B – 10.9		
Year 2025 No-Build Conditions ¹	Weekday Morning Peak Hour	D 49.3	D 45.0	A 1.9	D 40.6	C 29.7	A 3.2	A 5.1	A 0.5	A 2.7	A 5.1	A 6.4
		C – 26.0			C – 32.9		A – 4.3			A – 4.8		
Year 2025 No-Build Conditions ¹	Weekday Evening Peak Hour	E 61.1	--	A 0.5	D 46.0	A 0.8	A 4.3	A 5.7	A 0.0	A 5.3	B 10.7	B 11.7
		D - 35.5			C – 27.5		A – 5.5			B – 10.6		
Year 2025 Total Projected Conditions ¹	Weekday Morning Peak Hour	E 61.3	--	A 0.6	D 54.4	A 0.0	A 2.7	A 4.1	A 0.2	A 2.1	A 4.5	A 7.1
		C – 31.2			D – 49.8		A – 3.6			A – 4.4		
Year 2025 Total Projected Conditions ¹	Weekday Evening Peak Hour	E 59.8	--	A 0.5	D 49.3	A 0.2	A 4.1	A 5.1	A 0.1	A 6.2	A 9.9	B 10.8
		D – 34.8			D – 38.8		A – 4.8			A – 9.9		
Letter denotes Level of Service Delay is measured in seconds.				L – Left-Turns T – Through R – Right-Turns								

Table 10

CAPACITY ANALYSIS RESULTS – SIGNALIZED – SAUNDERS ROAD WITH DISCOVER WAY/HORIZON WAY

	Peak Hour	Eastbound		Westbound		Northbound			Southbound			Overall
		L	T/R	L	T/R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning Peak Hour	D 50.8	C 30.3	D 54.5	A 0.0	A 2.8	A 6.4	A 0.9	A 3.6	A 6.1	A 0.4	A 5.9
		D – 39.7		C – 21.8		A – 5.6			A – 4.9			
	Weekday Evening Peak Hour	E 56.7	A 0.9	E 56.7	A 0.6	A 4.2	A 5.6	A 0.0	A 3.0	A 3.7	A 0.0	A 8.4
		C – 26.7		C – 26.8		A – 5.6			A – 3.7			
Year 2025 No-Build Conditions ¹	Weekday Morning Peak Hour	D 50.8	C 30.3	D 54.5	A 0.0	A 2.8	A 6.6	A 0.9	A 4.2	A 7.0	A 0.3	A 6.2
		D – 39.7		C – 21.8		A – 5.7			A – 5.6			
	Weekday Evening Peak Hour	E 56.7	A 1.0	E 56.7	A 0.6	A 4.2	A 5.7	A 0.0	A 3.0	A 3.7	A 0.0	A 8.2
		C – 26.8		C – 26.8		A – 5.6			A – 3.7			
Year 2025 Total Projected Conditions ¹	Weekday Morning Peak Hour	D 50.8	C 30.3	D 54.5	A 0.0	A 2.9	A 6.5	A 0.9	A 4.1	A 6.8	A 0.4	A 6.2
		D – 39.7		C – 21.8		A – 5.7			A – 5.6			
	Weekday Evening Peak Hour	E 56.7	A 1.0	E 56.7	A 0.7	A 4.2	A 5.9	A 0.0	A 3.0	A 3.4	A 0.0	A 8.0
		C – 26.8		C – 26.8		A – 5.8			A – 3.4			
Letter denotes Level of Service Delay is measured in seconds.		L – Left-Turns T – Through R – Right-Turns										

Table 11

CAPACITY ANALYSIS RESULTS – SIGNALIZED – SAUNDERS ROAD WITH LAKE COOK ROAD

	Peak Hour	Eastbound			Westbound			Northbound			Southbound			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning Peak Hour	E 66.9	C 21.8	A 3.9	E 69.2	C 20.2	A 8.3	E 70.1	E 62.2	B 14.7	E 68.3	E 56.9	B 15.4	C 29.5
		C – 26.0			C – 24.0			D – 48.2			D – 45.7			
Existing Conditions	Weekday Evening Peak Hour	E 67.6	C 20.6	A 2.6	E 70.8	C 23.4	A 1.5	E 72.7	E 61.5	D 43.4	E 68.5	E 58.7	D 47.1	D 35.9
		C – 22.8			C – 25.7			E – 59.0			E – 57.7			
Year 2025 No-Build Conditions ¹	Weekday Morning Peak Hour	E 66.0	C 23.2	A 4.9	E 69.5	C 21.4	A 9.6	E 70.8	E 63.0	B 16.2	E 68.4	E 57.0	B 18.3	C 30.6
		C – 27.0			C – 25.1			D – 49.1			D – 46.7			
Year 2025 No-Build Conditions ¹	Weekday Evening Peak Hour	E 67.8	C 21.5	A 3.6	E 71.6	C 24.8	A 2.0	E 74.6	E 62.2	D 45.1	E 69.0	E 58.8	D 48.8	D 37.0
		C – 23.6			C – 26.9			E – 60.5			E – 58.5			
Year 2025 Total Projected Conditions ¹	Weekday Morning Peak Hour	E 66.0	C 23.3	A 5.0	E 69.5	C 21.5	A 8.8	E 70.5	E 64.3	B 16.8	E 69.4	E 56.8	B 19.3	C 30.8
		C – 27.1			C – 25.1			D – 49.3			D – 47.8			
Year 2025 Total Projected Conditions ¹	Weekday Evening Peak Hour	E 69.1	C 20.8	A 3.0	E 71.6	C 24.6	A 4.6	E 74.6	E 59.3	D 40.9	E 68.6	E 59.2	D 52.3	D 36.0
		C – 24.0			C – 26.6			E – 58.1			E – 58.6			
Letter denotes Level of Service Delay is measured in seconds.				L – Left-Turns T – Through R – Right-Turns										

Table 12
 CAPACITY ANALYSIS RESULTS – UNSIGNALIZED
 SAUNDERS ROAD WITH HAWTHORNE LANE

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Existing Conditions				
• Eastbound Approach	B	10.6	B	10.9
• Southbound Left Turn	A	8.0	--	--
Year 2025 No Build Conditions				
• Eastbound Approach	B	10.8	B	11.2
• Southbound Left Turn	A	8.0	--	--
Year 2025 Total Projected Conditions				
• Eastbound Approach	B	10.5	B	11.5
• Southbound Left Turn	A	8.0	A	7.9.
LOS = Level of Service Delay is measured in seconds.				

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Saunders Road with Deerfield Road

The results of the capacity analysis indicate that overall, this intersection currently operates at level of service (LOS) B during the weekday morning peak hour and LOS C during the weekday evening peak hour. Further, all movements operate at LOS D or better. Under Year 2025 no build conditions, this intersection is projected to operate at LOS C during both peak hours.

Under Year 2025 total projected conditions, this intersection is projected to operate at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour with an increase in delay over existing conditions of less than one second and a decrease in delay when compared to no-build conditions. This decrease in delay is the result of the removal of the existing traffic generated by the Baxter Corporate Headquarters. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development.

Saunders Road with Parkway North

The results of the capacity analysis indicate that overall, this intersection currently operates at LOS A during the weekday morning peak hour and weekday evening peak hour. Under Year 2025 no build and total projected conditions, this intersection is projected to continue to operate at LOS A during both peak hours with an increase in delay over existing conditions of less than one second. It should be noted that the proposed development is not projected to increase the volume of turning vehicles at this intersection. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development.

Saunders Road with Baxter Parkway/Thorngate Lane

The results of the capacity analysis indicate that overall, this intersection currently operates at LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour. Under Year 2025 no build conditions, this intersection is projected to continue to operate at the same LOS during both peak hours.

As proposed, Baxter Parkway will serve the proposed development. Under Year 2025 total projected conditions, this intersection is projected to continue to operate LOS A during the weekday morning peak hour and LOS B during the weekday evening peak hour with an increase in delay over existing conditions of less than one second during the weekday morning peak hour and a decrease in delay during the weekday evening peak hour. This decrease in delay is the result of the removal of the existing traffic generated by the Baxter Corporate Headquarters. The following should be noted:

- Outbound movements from the proposed access drive are projected to operate at LOS D or better during both peak hours. Further, westbound-left turn 95th percentile queues are not projected to exceed the existing left-turn lane.
- The southbound left-turn movement into the site is projected to operate at LOS A during both peak hours with 95th percentile queues that can be accommodated within the existing left-turn lane.
- A northbound right-turn lane is provided on Saunders Road that can accommodate northbound right-turns into the site.

As such, this intersection will adequately accommodate the traffic estimated to be generated by the proposed development.

Saunders Road with Discover Way/Horizon Way

The results of the capacity analysis indicate that overall, this intersection currently operates at LOS A during the weekday morning peak hour and weekday evening peak hour. Under Year 2025 no build and total projected conditions, this intersection is projected to continue to operate at LOS A during both peak hours with an increase in delay over existing conditions of less than one second during the weekday morning peak hour and a decrease in delay during the weekday evening peak hour. This decrease in delay is the result of the removal of the existing traffic generated by the Baxter Corporate Headquarters. It should be noted that the proposed development is not projected to increase the volume of turning vehicles at this intersection. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development.

Saunders Road with Lake Cook Road

The results of the capacity analysis indicate that overall, this intersection currently operates at LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour. Under Year 2025 no build conditions, this intersection is projected to continue to operate at the same LOS during both peak hours.

Under Year 2025 total projected conditions, this intersection is projected to continue to operate LOS C during the weekday morning peak hour and LOS D during the weekday evening peak hour with an increase in delay over existing conditions of less than one second during the weekday morning peak hour and a decrease in delay during the weekday evening peak hour. This decrease in delay is the result of the removal of the existing traffic generated by the Baxter Corporate Headquarters. The following should be noted:

- The proposed development will account for only approximately three percent of all traffic under total projected conditions.

- The southbound left-turn movement, which is projected to carry a majority of outbound site-generated truck traffic, is projected to continue to operate at the same LOS during both peak hours under projected condition with an increase in delay of approximately one second. Further, southbound left-turn 95th percentile queues are not projected to exceed the existing left-turn lane.
- The westbound right-turn movement, which is projected to carry a majority of inbound site-generated truck traffic, is projected to continue to operate at LOS A during both peak hours with 95th percentile queues that can be accommodated within the existing left-turn lane.

As such, this intersection will adequately accommodate the traffic estimated to be generated by the proposed development.

Saunders Road with Hawthorne Lane

The results of the capacity analysis indicate that all critical movements at this intersection currently operate at LOS B during the weekday morning and weekday evening peak hours. Under Year 2025 no-build conditions, all movements are projected to continue to operate at the same LOS during both peak hours.

As proposed, two site access drives will be provided on Hawthorne Lane. Under Year 2025 total projected conditions, all movements are projected to continue to operate at the same LOS during both peak hours. Further, westbound 95th percentile queues are not projected to exceed one to two vehicles. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development.

Hawthorne Lane with the Proposed Access Drives.

As proposed, access to the sports complex and additional employee access to the warehouse buildings will be provided via the two proposed access drives on Hawthorne Lane. Hawthorne Lane carries a limited volume of traffic during the peak hours (155 vehicles during the weekday morning peak hour and 74 during the weekday evening peak hour) and only serves local developments. As such, these access drives will adequately accommodate the traffic estimated to be generated by the proposed development.

7. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The proposed Baxter Corporate Headquarters site will be redeveloped to contain two warehouse/distribution buildings totaling approximately 1,124,931 square feet of building area and a 155,940 square-foot indoor sports complex that will contain soccer and baseball fields.
- The volume of traffic estimated to be generated by the proposed development will be significantly less than would have been generated by the Baxter Corporate Headquarters at full occupancy.
- All truck traffic approaching and departing the warehouse buildings will be required to utilize the Baxter Parkway entrance. Further, truck traffic will be directed to approach and depart the site via Lake Cook Road and to avoid Deerfield Road.
- The results of the capacity analyses indicate that the existing roadway system will have sufficient reserve capacity to accommodate the traffic that will be generated by the proposed development.
- The proposed development access system will adequately accommodate the traffic estimated to be generated by the proposed development.

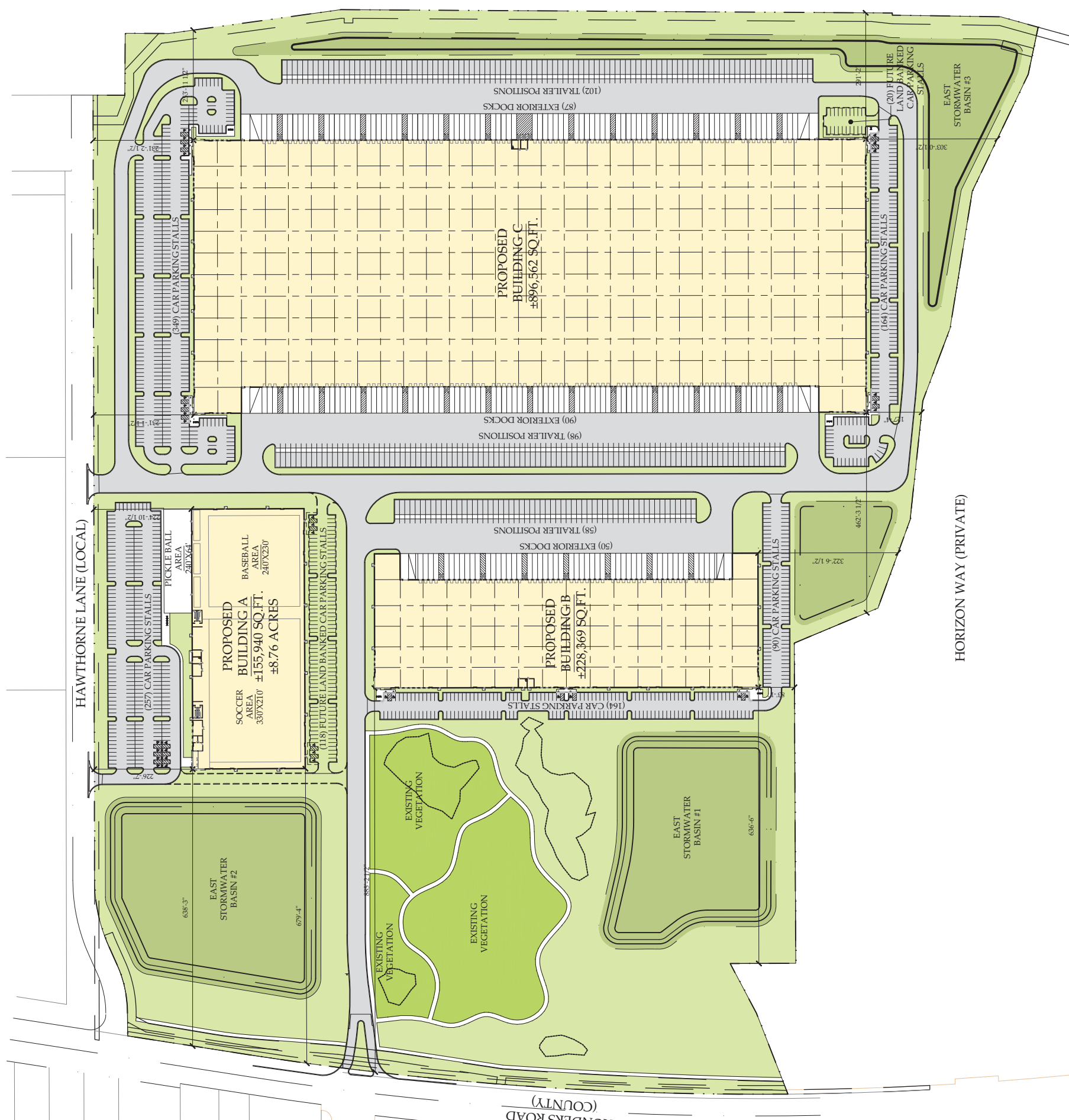
Appendix

Preliminary Site Plan
Traffic Count Summary Sheets
ITE Trip Generation Worksheets
Level of Service Criteria
Capacity Analysis Summary Sheets

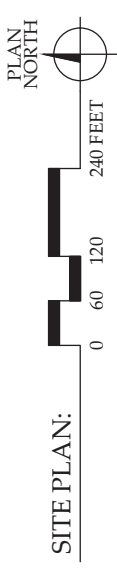
Preliminary Site Plan

DATA:

TOTAL SITE AREA:	±4,400,463 SQ.FT. ±101.02 ACRES
OPEN SPACE/ROAD AREA:	±1,400,353 SQ.FT. ±32.14 ACRES
BUILDING A	
SITE A AREA:	±381,715 SQ.FT. ±8.76 ACRES
BUILDING AREA (GROSS):	±155,940 SQ.FT.
EXTERIOR DOCKS:	0 DOCKS
DRIVE-IN DOORS:	0 DOORS
TRAILER POSITIONS:	0 POSITIONS
CAR PARKING:	257 CARS
FUTURE CAR PARKING:	118 CARS
CLEAR HEIGHT:	40 FEET
F.A.R.:	.41
BUILDING B	
SITE B AREA:	±519,331 SQ.FT. ±11.92 ACRES
BUILDING AREA (GROSS):	±228,369 SQ.FT.
EXTERIOR DOCKS:	50 DOCKS
DRIVE-IN DOORS:	2 DOORS
TRAILER POSITIONS:	58 POSITIONS
CAR PARKING:	254 CARS
CLEAR HEIGHT:	36 FEET
F.A.R.:	.42
BUILDING C	
SITE C AREA:	±2,099,063 SQ.FT. ±48.18 ACRES
BUILDING AREA (GROSS):	±896,562 SQ.FT.
EXTERIOR DOCKS:	177 DOCKS
DRIVE-IN DOORS:	4 DOORS
TRAILER POSITIONS:	200 POSITIONS
CAR PARKING:	513 CARS
LAND BANKED PARKING:	20 CARS
CLEAR HEIGHT:	40 FEET
F.A.R.:	.43



1-94 (ISTHA)



PROPOSED BUSINESS CAMPUS

SAUNDERS ROAD & HAWTHORNE LANE, DEERFIELD, ILLINOIS

MARCH 22, 2023 #22283

Traffic Count Summary Sheets



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 11/29/2022
Page No: 1

Turning Movement Data

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	2	151	28	0	181	0	30	86	14	0	130	0	5	11	57	0	73	0	36	24	1	0	61	445
7:15 AM	0	7	129	42	0	178	0	30	88	16	0	134	0	12	18	60	0	90	0	23	38	2	0	63	465
7:30 AM	0	3	158	41	0	202	0	35	105	15	0	155	0	10	18	64	0	92	0	50	48	2	0	100	549
7:45 AM	0	1	197	52	0	250	0	59	114	20	0	193	0	11	29	57	0	97	0	35	44	5	2	84	624
Hourly Total	0	13	635	163	0	811	0	154	393	65	0	612	0	38	76	238	0	352	0	144	154	10	2	308	2083
8:00 AM	0	3	163	51	0	217	0	40	128	22	0	190	0	13	26	31	0	70	0	19	53	7	1	79	556
8:15 AM	0	6	150	42	0	198	0	61	116	13	0	190	0	25	31	41	0	97	0	41	54	5	0	100	585
8:30 AM	0	2	178	59	0	239	0	60	142	30	0	232	0	18	28	62	0	108	0	53	45	6	0	104	683
8:45 AM	0	4	108	42	0	154	0	43	126	25	0	194	0	15	35	62	0	112	0	46	38	3	0	87	547
Hourly Total	0	15	599	194	0	808	0	204	512	90	0	806	0	71	120	196	0	387	0	159	190	21	1	370	2371
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	3	113	28	0	144	0	65	157	26	2	248	0	34	53	50	0	137	0	32	35	7	0	74	603
4:15 PM	0	2	110	21	0	133	0	75	159	39	0	273	0	48	61	63	0	172	0	32	31	6	1	69	647
4:30 PM	0	2	131	14	0	147	0	58	152	31	0	241	0	46	60	51	0	157	0	22	25	6	0	53	598
4:45 PM	0	7	124	19	0	150	0	57	149	33	0	239	0	52	65	54	0	171	0	20	25	2	0	47	607
Hourly Total	0	14	478	82	0	574	0	255	617	129	2	1001	0	180	239	218	0	637	0	106	116	21	1	243	2455
5:00 PM	0	5	109	15	0	129	0	63	159	38	0	260	0	49	39	53	0	141	0	21	23	4	0	48	578
5:15 PM	0	3	134	21	0	158	0	55	151	48	0	254	0	67	64	68	0	199	0	26	32	1	0	59	670
5:30 PM	0	6	116	17	0	139	0	66	143	52	0	261	0	52	51	49	0	152	0	21	22	2	0	45	597
5:45 PM	0	3	82	6	0	91	0	50	132	28	0	210	0	30	48	45	0	123	0	19	32	4	0	55	479
Hourly Total	0	17	441	59	0	517	0	234	585	166	0	985	0	198	202	215	0	615	0	87	109	11	0	207	2324
Grand Total	0	59	2153	498	0	2710	0	847	2107	450	2	3404	0	487	637	867	0	1991	0	496	569	63	4	1128	9233
Approach %	0.0	2.2	79.4	18.4	-	-	0.0	24.9	61.9	13.2	-	-	0.0	24.5	32.0	43.5	-	-	0.0	44.0	50.4	5.6	-	-	-
Total %	0.0	0.6	23.3	5.4	-	29.4	0.0	9.2	22.8	4.9	-	36.9	0.0	5.3	6.9	9.4	-	21.6	0.0	5.4	6.2	0.7	-	12.2	-
Lights	0	54	2107	488	-	2649	0	836	2061	440	-	3337	0	477	627	859	-	1963	0	490	559	58	-	1107	9056
% Lights	-	91.5	97.9	98.0	-	97.7	-	98.7	97.8	97.8	-	98.0	-	97.9	98.4	99.1	-	98.6	-	98.8	98.2	92.1	-	98.1	98.1
Buses	0	2	12	1	-	15	0	4	12	4	-	20	0	1	1	1	-	3	0	5	2	2	-	9	47
% Buses	-	3.4	0.6	0.2	-	0.6	-	0.5	0.6	0.9	-	0.6	-	0.2	0.2	0.1	-	0.2	-	1.0	0.4	3.2	-	0.8	0.5
Single-Unit Trucks	0	3	23	8	-	34	0	5	22	4	-	31	0	8	8	6	-	22	0	1	3	1	-	5	92
% Single-Unit Trucks	-	5.1	1.1	1.6	-	1.3	-	0.6	1.0	0.9	-	0.9	-	1.6	1.3	0.7	-	1.1	-	0.2	0.5	1.6	-	0.4	1.0
Articulated Trucks	0	0	11	1	-	12	0	2	12	1	-	15	0	1	1	1	-	3	0	0	2	2	-	4	34
% Articulated Trucks	-	0.0	0.5	0.2	-	0.4	-	0.2	0.6	0.2	-	0.4	-	0.2	0.2	0.1	-	0.2	-	0.0	0.4	3.2	-	0.4	0.4
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	3	0	-	3	4



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 11/29/2022
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	0	1	197	52	0	250	0	59	114	20	0	193	0	11	29	57	0	97	0	35	44	5	2	84	624
8:00 AM	0	3	163	51	0	217	0	40	128	22	0	190	0	13	26	31	0	70	0	19	53	7	1	79	556
8:15 AM	0	6	150	42	0	198	0	61	116	13	0	190	0	25	31	41	0	97	0	41	54	5	0	100	585
8:30 AM	0	2	178	59	0	239	0	60	142	30	0	232	0	18	28	62	0	108	0	53	45	6	0	104	683
Total	0	12	688	204	0	904	0	220	500	85	0	805	0	67	114	191	0	372	0	148	196	23	3	367	2448
Approach %	0.0	1.3	76.1	22.6	-	-	0.0	27.3	62.1	10.6	-	-	0.0	18.0	30.6	51.3	-	-	0.0	40.3	53.4	6.3	-	-	-
Total %	0.0	0.5	28.1	8.3	-	36.9	0.0	9.0	20.4	3.5	-	32.9	0.0	2.7	4.7	7.8	-	15.2	0.0	6.0	8.0	0.9	-	15.0	-
PHF	0.000	0.500	0.873	0.864	-	0.904	0.000	0.902	0.880	0.708	-	0.867	0.000	0.670	0.919	0.770	-	0.861	0.000	0.698	0.907	0.821	-	0.882	0.896
Lights	0	11	664	201	-	876	0	217	488	80	-	785	0	64	107	188	-	359	0	146	193	20	-	359	2379
% Lights	-	91.7	96.5	98.5	-	96.9	-	98.6	97.6	94.1	-	97.5	-	95.5	93.9	98.4	-	96.5	-	98.6	98.5	87.0	-	97.8	97.2
Buses	0	1	5	0	-	6	0	2	2	1	-	5	0	0	0	0	-	0	0	2	1	1	-	4	15
% Buses	-	8.3	0.7	0.0	-	0.7	-	0.9	0.4	1.2	-	0.6	-	0.0	0.0	0.0	-	0.0	-	1.4	0.5	4.3	-	1.1	0.6
Single-Unit Trucks	0	0	12	2	-	14	0	1	8	3	-	12	0	3	6	3	-	12	0	0	1	0	-	1	39
% Single-Unit Trucks	-	0.0	1.7	1.0	-	1.5	-	0.5	1.6	3.5	-	1.5	-	4.5	5.3	1.6	-	3.2	-	0.0	0.5	0.0	-	0.3	1.6
Articulated Trucks	0	0	7	1	-	8	0	0	2	0	-	2	0	0	1	0	-	1	0	0	0	2	-	2	13
% Articulated Trucks	-	0.0	1.0	0.5	-	0.9	-	0.0	0.4	0.0	-	0.2	-	0.0	0.9	0.0	-	0.3	-	0.0	0.0	8.7	-	0.5	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	1	0	-	1	2
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	1.2	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.5	0.0	-	0.3	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 11/29/2022
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	2	131	14	0	147	0	58	152	31	0	241	0	46	60	51	0	157	0	22	25	6	0	53	598
4:45 PM	0	7	124	19	0	150	0	57	149	33	0	239	0	52	65	54	0	171	0	20	25	2	0	47	607
5:00 PM	0	5	109	15	0	129	0	63	159	38	0	260	0	49	39	53	0	141	0	21	23	4	0	48	578
5:15 PM	0	3	134	21	0	158	0	55	151	48	0	254	0	67	64	68	0	199	0	26	32	1	0	59	670
Total	0	17	498	69	0	584	0	233	611	150	0	994	0	214	228	226	0	668	0	89	105	13	0	207	2453
Approach %	0.0	2.9	85.3	11.8	-	-	0.0	23.4	61.5	15.1	-	-	0.0	32.0	34.1	33.8	-	-	0.0	43.0	50.7	6.3	-	-	-
Total %	0.0	0.7	20.3	2.8	-	23.8	0.0	9.5	24.9	6.1	-	40.5	0.0	8.7	9.3	9.2	-	27.2	0.0	3.6	4.3	0.5	-	8.4	-
PHF	0.000	0.607	0.929	0.821	-	0.924	0.000	0.925	0.961	0.781	-	0.956	0.000	0.799	0.877	0.831	-	0.839	0.000	0.856	0.820	0.542	-	0.877	0.915
Lights	0	16	497	69	-	582	0	229	604	149	-	982	0	213	228	223	-	664	0	89	104	12	-	205	2433
% Lights	-	94.1	99.8	100.0	-	99.7	-	98.3	98.9	99.3	-	98.8	-	99.5	100.0	98.7	-	99.4	-	100.0	99.0	92.3	-	99.0	99.2
Buses	0	0	0	0	-	0	0	0	2	1	-	3	0	1	0	0	-	1	0	0	0	0	-	0	4
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.7	-	0.3	-	0.5	0.0	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	0.2
Single-Unit Trucks	0	1	1	0	-	2	0	2	2	0	-	4	0	0	0	2	-	2	0	0	1	1	-	2	10
% Single-Unit Trucks	-	5.9	0.2	0.0	-	0.3	-	0.9	0.3	0.0	-	0.4	-	0.0	0.0	0.9	-	0.3	-	0.0	1.0	7.7	-	1.0	0.4
Articulated Trucks	0	0	0	0	-	0	0	2	3	0	-	5	0	0	0	1	-	1	0	0	0	0	-	0	6
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.9	0.5	0.0	-	0.5	-	0.0	0.0	0.4	-	0.1	-	0.0	0.0	0.0	-	0.0	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Takeda Pkwy
Site Code:
Start Date: 11/29/2022
Page No: 1

Turning Movement Data

Start Time	Discover Way Eastbound						Takeda Pkwy Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	2	0	2	0	1	0	2	0	3	0	10	119	4	0	133	0	6	59	7	0	72	210
7:15 AM	0	0	0	3	0	3	0	1	0	0	0	1	0	7	127	9	0	143	0	7	71	4	0	82	229
7:30 AM	0	1	0	0	0	1	0	2	0	0	1	2	0	12	161	13	1	186	0	9	85	7	0	101	290
7:45 AM	0	2	1	2	0	5	0	0	0	1	0	1	1	13	178	17	0	209	0	18	113	15	0	146	361
Hourly Total	0	3	1	7	0	11	0	4	0	3	1	7	1	42	585	43	1	671	0	40	328	33	0	401	1090
8:00 AM	0	5	0	4	0	9	0	0	0	1	0	1	0	19	161	24	0	204	0	12	92	22	0	126	340
8:15 AM	0	0	1	1	0	2	0	1	0	1	0	2	0	20	206	30	0	256	0	16	108	23	0	147	407
8:30 AM	0	3	0	3	0	6	0	1	0	0	0	1	0	23	176	17	0	216	0	14	96	33	0	143	366
8:45 AM	0	1	0	0	0	1	0	1	0	2	0	3	0	24	199	10	0	233	0	15	98	20	0	133	370
Hourly Total	0	9	1	8	0	18	0	3	0	4	0	7	0	86	742	81	0	909	0	57	394	98	0	549	1483
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	5	1	13	0	19	0	7	0	7	0	14	0	1	108	2	0	111	0	1	211	0	0	212	356
4:15 PM	0	9	1	17	0	27	0	11	0	5	0	16	1	2	112	1	0	116	0	0	159	0	0	159	318
4:30 PM	0	12	0	20	0	32	0	13	0	15	0	28	0	1	108	3	0	112	0	0	178	2	0	180	352
4:45 PM	0	11	0	21	0	32	0	15	0	27	0	42	0	3	114	1	0	118	0	1	155	3	0	159	351
Hourly Total	0	37	2	71	0	110	0	46	0	54	0	100	1	7	442	7	0	457	0	2	703	5	0	710	1377
5:00 PM	0	17	0	12	0	29	0	21	0	15	0	36	0	2	109	1	0	112	0	0	172	3	0	175	352
5:15 PM	0	19	0	15	0	34	0	11	0	11	0	22	0	0	133	1	0	134	0	0	183	2	0	185	375
5:30 PM	0	13	0	11	0	24	0	11	0	10	0	21	0	0	116	0	0	116	0	0	169	2	0	171	332
5:45 PM	0	10	0	8	0	18	0	8	0	8	0	16	0	0	81	1	0	82	1	0	107	0	0	108	224
Hourly Total	0	59	0	46	0	105	0	51	0	44	0	95	0	2	439	3	0	444	1	0	631	7	0	639	1283
Grand Total	0	108	4	132	0	244	0	104	0	105	1	209	2	137	2208	134	1	2481	1	99	2056	143	0	2299	5233
Approach %	0.0	44.3	1.6	54.1	-	-	0.0	49.8	0.0	50.2	-	-	0.1	5.5	89.0	5.4	-	-	0.0	4.3	89.4	6.2	-	-	-
Total %	0.0	2.1	0.1	2.5	-	4.7	0.0	2.0	0.0	2.0	-	4.0	0.0	2.6	42.2	2.6	-	47.4	0.0	1.9	39.3	2.7	-	43.9	-
Lights	0	104	3	126	-	233	0	103	0	102	-	205	2	137	2175	131	-	2445	1	97	2028	143	-	2269	5152
% Lights	-	96.3	75.0	95.5	-	95.5	-	99.0	-	97.1	-	98.1	100.0	100.0	98.5	97.8	-	98.5	100.0	98.0	98.6	100.0	-	98.7	98.5
Buses	0	4	0	4	-	8	0	0	0	1	-	1	0	0	1	0	-	1	0	0	5	0	-	5	15
% Buses	-	3.7	0.0	3.0	-	3.3	-	0.0	-	1.0	-	0.5	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.2	0.0	-	0.2	0.3
Single-Unit Trucks	0	0	1	1	-	2	0	1	0	1	-	2	0	0	30	3	-	33	0	2	14	0	-	16	53
% Single-Unit Trucks	-	0.0	25.0	0.8	-	0.8	-	1.0	-	1.0	-	1.0	0.0	0.0	1.4	2.2	-	1.3	0.0	2.0	0.7	0.0	-	0.7	1.0
Articulated Trucks	0	0	0	1	-	1	0	0	0	1	-	1	0	0	2	0	-	2	0	0	6	0	-	6	10
% Articulated Trucks	-	0.0	0.0	0.8	-	0.4	-	0.0	-	1.0	-	0.5	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	0.3	0.0	-	0.3	0.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	3



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Takeda Pkwy
Site Code:
Start Date: 11/29/2022
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Discover Way Eastbound						Takeda Pkwy Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	0	2	1	2	0	5	0	0	0	1	0	1	1	13	178	17	0	209	0	18	113	15	0	146	361
8:00 AM	0	5	0	4	0	9	0	0	0	1	0	1	0	19	161	24	0	204	0	12	92	22	0	126	340
8:15 AM	0	0	1	1	0	2	0	1	0	1	0	2	0	20	206	30	0	256	0	16	108	23	0	147	407
8:30 AM	0	3	0	3	0	6	0	1	0	0	0	1	0	23	176	17	0	216	0	14	96	33	0	143	366
Total	0	10	2	10	0	22	0	2	0	3	0	5	1	75	721	88	0	885	0	60	409	93	0	562	1474
Approach %	0.0	45.5	9.1	45.5	-	-	0.0	40.0	0.0	60.0	-	-	0.1	8.5	81.5	9.9	-	-	0.0	10.7	72.8	16.5	-	-	-
Total %	0.0	0.7	0.1	0.7	-	1.5	0.0	0.1	0.0	0.2	-	0.3	0.1	5.1	48.9	6.0	-	60.0	0.0	4.1	27.7	6.3	-	38.1	-
PHF	0.000	0.500	0.500	0.625	-	0.611	0.000	0.500	0.000	0.750	-	0.625	0.250	0.815	0.875	0.733	-	0.864	0.000	0.833	0.905	0.705	-	0.956	0.905
Lights	0	9	1	8	-	18	0	2	0	2	-	4	1	75	699	87	-	862	0	60	401	93	-	554	1438
% Lights	-	90.0	50.0	80.0	-	81.8	-	100.0	-	66.7	-	80.0	100.0	100.0	96.9	98.9	-	97.4	-	100.0	98.0	100.0	-	98.6	97.6
Buses	0	1	0	1	-	2	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	3
% Buses	-	10.0	0.0	10.0	-	9.1	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	-	0.2	0.2
Single-Unit Trucks	0	0	1	1	-	2	0	0	0	0	-	0	0	0	20	1	-	21	0	0	5	0	-	5	28
% Single-Unit Trucks	-	0.0	50.0	10.0	-	9.1	-	0.0	-	0.0	-	0.0	0.0	0.0	2.8	1.1	-	2.4	-	0.0	1.2	0.0	-	0.9	1.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	1	-	1	0	0	2	0	-	2	0	0	1	0	-	1	4
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	-	33.3	-	20.0	0.0	0.0	0.3	0.0	-	0.2	-	0.0	0.2	0.0	-	0.2	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	-	0.2	0.1
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Takeda Pkwy
Site Code:
Start Date: 11/29/2022
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Discover Way Eastbound						Takeda Pkwy Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	12	0	20	0	32	0	13	0	15	0	28	0	1	108	3	0	112	0	0	178	2	0	180	352
4:45 PM	0	11	0	21	0	32	0	15	0	27	0	42	0	3	114	1	0	118	0	1	155	3	0	159	351
5:00 PM	0	17	0	12	0	29	0	21	0	15	0	36	0	2	109	1	0	112	0	0	172	3	0	175	352
5:15 PM	0	19	0	15	0	34	0	11	0	11	0	22	0	0	133	1	0	134	0	0	183	2	0	185	375
Total	0	59	0	68	0	127	0	60	0	68	0	128	0	6	464	6	0	476	0	1	688	10	0	699	1430
Approach %	0.0	46.5	0.0	53.5	-	-	0.0	46.9	0.0	53.1	-	-	0.0	1.3	97.5	1.3	-	-	0.0	0.1	98.4	1.4	-	-	-
Total %	0.0	4.1	0.0	4.8	-	8.9	0.0	4.2	0.0	4.8	-	9.0	0.0	0.4	32.4	0.4	-	33.3	0.0	0.1	48.1	0.7	-	48.9	-
PHF	0.000	0.776	0.000	0.810	-	0.934	0.000	0.714	0.000	0.630	-	0.762	0.000	0.500	0.872	0.500	-	0.888	0.000	0.250	0.940	0.833	-	0.945	0.953
Lights	0	58	0	67	-	125	0	60	0	68	-	128	0	6	459	5	-	470	0	1	682	10	-	693	1416
% Lights	-	98.3	-	98.5	-	98.4	-	100.0	-	100.0	-	100.0	-	100.0	98.9	83.3	-	98.7	-	100.0	99.1	100.0	-	99.1	99.0
Buses	0	1	0	1	-	2	0	0	0	0	-	0	0	0	1	0	-	1	0	0	1	0	-	1	4
% Buses	-	1.7	-	1.5	-	1.6	-	0.0	-	0.0	-	0.0	-	0.0	0.2	0.0	-	0.2	-	0.0	0.1	0.0	-	0.1	0.3
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	4	1	-	5	0	0	4	0	-	4	9
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.9	16.7	-	1.1	-	0.0	0.6	0.0	-	0.6	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.1	0.0	-	0.1	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Lake Cook Rd
Site Code:
Start Date: 11/29/2022
Page No: 1

Turning Movement Data

Start Time	Lake Cook Rd Eastbound						Lake Cook Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	59	348	47	0	454	0	41	145	43	0	229	0	18	29	30	0	77	0	23	31	18	0	72	832
7:15 AM	0	73	395	55	0	523	0	36	169	42	0	247	0	8	31	38	0	77	0	14	29	21	0	64	911
7:30 AM	0	82	547	50	0	679	0	39	227	59	0	325	0	14	35	32	0	81	0	24	36	20	0	80	1165
7:45 AM	0	81	446	87	0	614	0	53	195	73	0	321	0	18	49	43	0	110	0	32	47	45	0	124	1169
Hourly Total	0	295	1736	239	0	2270	0	169	736	217	0	1122	0	58	144	143	0	345	0	93	143	104	0	340	4077
8:00 AM	0	74	480	67	0	621	0	46	231	76	0	353	0	17	54	41	0	112	0	31	41	27	0	99	1185
8:15 AM	0	91	433	59	0	583	0	38	233	77	0	348	0	31	63	38	0	132	0	26	39	38	0	103	1166
8:30 AM	0	87	469	61	0	617	0	45	211	85	0	341	0	26	63	39	0	128	0	20	42	34	0	96	1182
8:45 AM	1	74	433	62	0	570	1	44	193	84	0	322	0	30	53	44	0	127	0	36	41	32	0	109	1128
Hourly Total	1	326	1815	249	0	2391	1	173	868	322	0	1364	0	104	233	162	0	499	0	113	163	131	0	407	4661
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	24	277	31	0	332	0	38	380	28	0	446	0	59	41	64	0	164	0	51	64	75	0	190	1132
4:15 PM	0	26	264	30	0	320	0	41	384	34	0	459	0	52	59	55	0	166	1	70	66	85	0	222	1167
4:30 PM	0	34	292	44	0	370	0	38	314	25	0	377	0	73	58	81	0	212	0	70	52	75	0	197	1156
4:45 PM	0	18	250	29	0	297	0	41	349	25	0	415	0	69	59	52	0	180	0	81	58	74	0	213	1105
Hourly Total	0	102	1083	134	0	1319	0	158	1427	112	0	1697	0	253	217	252	0	722	1	272	240	309	0	822	4560
5:00 PM	0	30	241	34	0	305	1	35	384	28	0	448	0	60	56	66	0	182	0	50	58	74	0	182	1117
5:15 PM	0	29	294	24	0	347	1	21	475	35	0	532	0	47	58	58	0	163	0	65	68	75	0	208	1250
5:30 PM	0	30	224	37	0	291	0	32	371	24	0	427	0	63	61	59	0	183	0	59	48	99	0	206	1107
5:45 PM	0	12	131	14	0	157	0	9	178	18	0	205	0	20	13	18	0	51	0	21	13	37	0	71	484
Hourly Total	0	101	890	109	0	1100	2	97	1408	105	0	1612	0	190	188	201	0	579	0	195	187	285	0	667	3958
Grand Total	1	824	5524	731	0	7080	3	597	4439	756	0	5795	0	605	782	758	0	2145	1	673	733	829	0	2236	17256
Approach %	0.0	11.6	78.0	10.3	-	-	0.1	10.3	76.6	13.0	-	-	0.0	28.2	36.5	35.3	-	-	0.0	30.1	32.8	37.1	-	-	-
Total %	0.0	4.8	32.0	4.2	-	41.0	0.0	3.5	25.7	4.4	-	33.6	0.0	3.5	4.5	4.4	-	12.4	0.0	3.9	4.2	4.8	-	13.0	-
Lights	1	817	5344	703	-	6865	3	578	4276	751	-	5608	0	587	767	731	-	2085	1	657	724	819	-	2201	16759
% Lights	100.0	99.2	96.7	96.2	-	97.0	100.0	96.8	96.3	99.3	-	96.8	-	97.0	98.1	96.4	-	97.2	100.0	97.6	98.8	98.8	-	98.4	97.1
Buses	0	0	5	1	-	6	0	2	9	1	-	12	0	0	0	4	-	4	0	8	1	5	-	14	36
% Buses	0.0	0.0	0.1	0.1	-	0.1	0.0	0.3	0.2	0.1	-	0.2	-	0.0	0.0	0.5	-	0.2	0.0	1.2	0.1	0.6	-	0.6	0.2
Single-Unit Trucks	0	7	84	21	-	112	0	8	71	3	-	82	0	16	11	12	-	39	0	6	4	5	-	15	248
% Single-Unit Trucks	0.0	0.8	1.5	2.9	-	1.6	0.0	1.3	1.6	0.4	-	1.4	-	2.6	1.4	1.6	-	1.8	0.0	0.9	0.5	0.6	-	0.7	1.4
Articulated Trucks	0	0	91	6	-	97	0	9	83	1	-	93	0	2	4	11	-	17	0	2	1	0	-	3	210
% Articulated Trucks	0.0	0.0	1.6	0.8	-	1.4	0.0	1.5	1.9	0.1	-	1.6	-	0.3	0.5	1.5	-	0.8	0.0	0.3	0.1	0.0	-	0.1	1.2
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	3



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Lake Cook Rd
Site Code:
Start Date: 11/29/2022
Page No: 3

Turning Movement Peak Hour Data (7:45 AM)

Start Time	Lake Cook Rd Eastbound						Lake Cook Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:45 AM	0	81	446	87	0	614	0	53	195	73	0	321	0	18	49	43	0	110	0	32	47	45	0	124	1169
8:00 AM	0	74	480	67	0	621	0	46	231	76	0	353	0	17	54	41	0	112	0	31	41	27	0	99	1185
8:15 AM	0	91	433	59	0	583	0	38	233	77	0	348	0	31	63	38	0	132	0	26	39	38	0	103	1166
8:30 AM	0	87	469	61	0	617	0	45	211	85	0	341	0	26	63	39	0	128	0	20	42	34	0	96	1182
Total	0	333	1828	274	0	2435	0	182	870	311	0	1363	0	92	229	161	0	482	0	109	169	144	0	422	4702
Approach %	0.0	13.7	75.1	11.3	-	-	0.0	13.4	63.8	22.8	-	-	0.0	19.1	47.5	33.4	-	-	0.0	25.8	40.0	34.1	-	-	-
Total %	0.0	7.1	38.9	5.8	-	51.8	0.0	3.9	18.5	6.6	-	29.0	0.0	2.0	4.9	3.4	-	10.3	0.0	2.3	3.6	3.1	-	9.0	-
PHF	0.000	0.915	0.952	0.787	-	0.980	0.000	0.858	0.933	0.915	-	0.965	0.000	0.742	0.909	0.936	-	0.913	0.000	0.852	0.899	0.800	-	0.851	0.992
Lights	0	328	1756	259	-	2343	0	173	813	309	-	1295	0	85	218	151	-	454	0	105	167	141	-	413	4505
% Lights	-	98.5	96.1	94.5	-	96.2	-	95.1	93.4	99.4	-	95.0	-	92.4	95.2	93.8	-	94.2	-	96.3	98.8	97.9	-	97.9	95.8
Buses	0	0	1	1	-	2	0	1	4	0	-	5	0	0	0	3	-	3	0	1	1	2	-	4	14
% Buses	-	0.0	0.1	0.4	-	0.1	-	0.5	0.5	0.0	-	0.4	-	0.0	0.0	1.9	-	0.6	-	0.9	0.6	1.4	-	0.9	0.3
Single-Unit Trucks	0	5	31	9	-	45	0	1	25	1	-	27	0	7	8	4	-	19	0	3	0	1	-	4	95
% Single-Unit Trucks	-	1.5	1.7	3.3	-	1.8	-	0.5	2.9	0.3	-	2.0	-	7.6	3.5	2.5	-	3.9	-	2.8	0.0	0.7	-	0.9	2.0
Articulated Trucks	0	0	40	5	-	45	0	7	28	1	-	36	0	0	3	3	-	6	0	0	0	0	-	0	87
% Articulated Trucks	-	0.0	2.2	1.8	-	1.8	-	3.8	3.2	0.3	-	2.6	-	0.0	1.3	1.9	-	1.2	-	0.0	0.0	0.0	-	0.0	1.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.6	0.0	-	0.2	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Lake Cook Rd
Site Code:
Start Date: 11/29/2022
Page No: 4

Turning Movement Peak Hour Data (4:30 PM)

Start Time	Lake Cook Rd Eastbound						Lake Cook Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:30 PM	0	34	292	44	0	370	0	38	314	25	0	377	0	73	58	81	0	212	0	70	52	75	0	197	1156
4:45 PM	0	18	250	29	0	297	0	41	349	25	0	415	0	69	59	52	0	180	0	81	58	74	0	213	1105
5:00 PM	0	30	241	34	0	305	1	35	384	28	0	448	0	60	56	66	0	182	0	50	58	74	0	182	1117
5:15 PM	0	29	294	24	0	347	1	21	475	35	0	532	0	47	58	58	0	163	0	65	68	75	0	208	1250
Total	0	111	1077	131	0	1319	2	135	1522	113	0	1772	0	249	231	257	0	737	0	266	236	298	0	800	4628
Approach %	0.0	8.4	81.7	9.9	-	-	0.1	7.6	85.9	6.4	-	-	0.0	33.8	31.3	34.9	-	-	0.0	33.3	29.5	37.3	-	-	-
Total %	0.0	2.4	23.3	2.8	-	28.5	0.0	2.9	32.9	2.4	-	38.3	0.0	5.4	5.0	5.6	-	15.9	0.0	5.7	5.1	6.4	-	17.3	-
PHF	0.000	0.816	0.916	0.744	-	0.891	0.500	0.823	0.801	0.807	-	0.833	0.000	0.853	0.979	0.793	-	0.869	0.000	0.821	0.868	0.993	-	0.939	0.926
Lights	0	110	1062	125	-	1297	2	131	1502	112	-	1747	0	247	230	256	-	733	0	264	234	296	-	794	4571
% Lights	-	99.1	98.6	95.4	-	98.3	100.0	97.0	98.7	99.1	-	98.6	-	99.2	99.6	99.6	-	99.5	-	99.2	99.2	99.3	-	99.3	98.8
Buses	0	0	0	0	-	0	0	0	1	1	-	2	0	0	0	0	-	0	0	2	0	0	-	2	4
% Buses	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.1	0.9	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.8	0.0	0.0	-	0.3	0.1
Single-Unit Trucks	0	1	8	6	-	15	0	4	8	0	-	12	0	2	1	1	-	4	0	0	2	2	-	4	35
% Single-Unit Trucks	-	0.9	0.7	4.6	-	1.1	0.0	3.0	0.5	0.0	-	0.7	-	0.8	0.4	0.4	-	0.5	-	0.0	0.8	0.7	-	0.5	0.8
Articulated Trucks	0	0	7	0	-	7	0	0	11	0	-	11	0	0	0	0	-	0	0	0	0	0	-	0	18
% Articulated Trucks	-	0.0	0.6	0.0	-	0.5	0.0	0.0	0.7	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.4
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 02/18/2023
Page No: 1

Turning Movement Data

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
11:00 AM	0	4	99	15	0	118	0	37	100	28	0	165	0	12	18	36	0	66	0	18	26	5	0	49	398
11:15 AM	0	3	118	13	0	134	0	33	93	24	0	150	0	11	17	38	0	66	0	17	25	2	0	44	394
11:30 AM	0	2	93	13	0	108	0	32	98	15	0	145	0	15	22	30	0	67	0	22	18	6	0	46	366
11:45 AM	0	1	82	18	0	101	0	29	107	21	0	157	0	15	27	39	0	81	0	26	19	3	0	48	387
Hourly Total	0	10	392	59	0	461	0	131	398	88	0	617	0	53	84	143	0	280	0	83	88	16	0	187	1545
12:00 PM	0	2	110	16	0	128	0	37	82	14	0	133	0	16	25	32	0	73	0	17	27	2	0	46	380
12:15 PM	0	4	110	17	0	131	0	32	86	24	0	142	0	18	28	29	0	75	0	19	19	3	0	41	389
12:30 PM	0	6	90	6	0	102	0	42	100	23	0	165	0	18	21	35	0	74	0	25	25	0	0	50	391
12:45 PM	0	0	106	19	0	125	0	31	103	25	0	159	0	16	26	24	0	66	0	20	26	3	0	49	399
Hourly Total	0	12	416	58	0	486	0	142	371	86	0	599	0	68	100	120	0	288	0	81	97	8	0	186	1559
1:00 PM	0	6	106	18	0	130	0	35	81	20	0	136	0	9	28	26	0	63	0	23	17	3	0	43	372
1:15 PM	0	3	88	18	0	109	0	35	73	31	0	139	0	19	39	26	0	84	0	24	28	3	0	55	387
1:30 PM	0	3	88	12	0	103	0	35	82	26	0	143	0	13	32	28	0	73	0	23	27	3	0	53	372
1:45 PM	0	2	103	19	0	124	0	25	84	24	0	133	0	18	32	23	0	73	0	23	16	6	0	45	375
Hourly Total	0	14	385	67	0	466	0	130	320	101	0	551	0	59	131	103	0	293	0	93	88	15	0	196	1506
Grand Total	0	36	1193	184	0	1413	0	403	1089	275	0	1767	0	180	315	366	0	861	0	257	273	39	0	569	4610
Approach %	0.0	2.5	84.4	13.0	-	-	0.0	22.8	61.6	15.6	-	-	0.0	20.9	36.6	42.5	-	-	0.0	45.2	48.0	6.9	-	-	-
Total %	0.0	0.8	25.9	4.0	-	30.7	0.0	8.7	23.6	6.0	-	38.3	0.0	3.9	6.8	7.9	-	18.7	0.0	5.6	5.9	0.8	-	12.3	-
Lights	0	35	1188	182	-	1405	0	400	1082	274	-	1756	0	178	314	362	-	854	0	256	272	38	-	566	4581
% Lights	-	97.2	99.6	98.9	-	99.4	-	99.3	99.4	99.6	-	99.4	-	98.9	99.7	98.9	-	99.2	-	99.6	99.6	97.4	-	99.5	99.4
Buses	0	0	0	1	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.0	0.5	-	0.1	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	3	1	-	5	0	3	5	1	-	9	0	2	1	3	-	6	0	1	0	1	-	2	22
% Single-Unit Trucks	-	2.8	0.3	0.5	-	0.4	-	0.7	0.5	0.4	-	0.5	-	1.1	0.3	0.8	-	0.7	-	0.4	0.0	2.6	-	0.4	0.5
Articulated Trucks	0	0	2	0	-	2	0	0	1	0	-	1	0	0	0	1	-	1	0	0	1	0	-	1	5
% Articulated Trucks	-	0.0	0.2	0.0	-	0.1	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.3	-	0.1	-	0.0	0.4	0.0	-	0.2	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 02/18/2023
Page No: 2

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	2	110	16	0	128	0	37	82	14	0	133	0	16	25	32	0	73	0	17	27	2	0	46	380
12:15 PM	0	4	110	17	0	131	0	32	86	24	0	142	0	18	28	29	0	75	0	19	19	3	0	41	389
12:30 PM	0	6	90	6	0	102	0	42	100	23	0	165	0	18	21	35	0	74	0	25	25	0	0	50	391
12:45 PM	0	0	106	19	0	125	0	31	103	25	0	159	0	16	26	24	0	66	0	20	26	3	0	49	399
Total	0	12	416	58	0	486	0	142	371	86	0	599	0	68	100	120	0	288	0	81	97	8	0	186	1559
Approach %	0.0	2.5	85.6	11.9	-	-	0.0	23.7	61.9	14.4	-	-	0.0	23.6	34.7	41.7	-	-	0.0	43.5	52.2	4.3	-	-	-
Total %	0.0	0.8	26.7	3.7	-	31.2	0.0	9.1	23.8	5.5	-	38.4	0.0	4.4	6.4	7.7	-	18.5	0.0	5.2	6.2	0.5	-	11.9	-
PHF	0.000	0.500	0.945	0.763	-	0.927	0.000	0.845	0.900	0.860	-	0.908	0.000	0.944	0.893	0.857	-	0.960	0.000	0.810	0.898	0.667	-	0.930	0.977
Lights	0	12	416	58	-	486	0	140	370	86	-	596	0	67	100	120	-	287	0	81	96	8	-	185	1554
% Lights	-	100.0	100.0	100.0	-	100.0	-	98.6	99.7	100.0	-	99.5	-	98.5	100.0	100.0	-	99.7	-	100.0	99.0	100.0	-	99.5	99.7
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	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	2	0	0	-	2	0	1	0	0	-	1	0	0	0	0	-	0	3
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	1.4	0.0	0.0	-	0.3	-	1.5	0.0	0.0	-	0.3	-	0.0	0.0	0.0	-	0.0	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	1	0	-	1	2
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	1.0	0.0	-	0.5	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 02/18/2023
Page No: 1

Turning Movement Data

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
11:00 AM	0	4	99	15	0	118	0	37	100	28	0	165	0	12	18	36	0	66	0	18	26	5	0	49	398
11:15 AM	0	3	118	13	0	134	0	33	93	24	0	150	0	11	17	38	0	66	0	17	25	2	0	44	394
11:30 AM	0	2	93	13	0	108	0	32	98	15	0	145	0	15	22	30	0	67	0	22	18	6	0	46	366
11:45 AM	0	1	82	18	0	101	0	29	107	21	0	157	0	15	27	39	0	81	0	26	19	3	0	48	387
Hourly Total	0	10	392	59	0	461	0	131	398	88	0	617	0	53	84	143	0	280	0	83	88	16	0	187	1545
12:00 PM	0	2	110	16	0	128	0	37	82	14	0	133	0	16	25	32	0	73	0	17	27	2	0	46	380
12:15 PM	0	4	110	17	0	131	0	32	86	24	0	142	0	18	28	29	0	75	0	19	19	3	0	41	389
12:30 PM	0	6	90	6	0	102	0	42	100	23	0	165	0	18	21	35	0	74	0	25	25	0	0	50	391
12:45 PM	0	0	106	19	0	125	0	31	103	25	0	159	0	16	26	24	0	66	0	20	26	3	0	49	399
Hourly Total	0	12	416	58	0	486	0	142	371	86	0	599	0	68	100	120	0	288	0	81	97	8	0	186	1559
1:00 PM	0	6	106	18	0	130	0	35	81	20	0	136	0	9	28	26	0	63	0	23	17	3	0	43	372
1:15 PM	0	3	88	18	0	109	0	35	73	31	0	139	0	19	39	26	0	84	0	24	28	3	0	55	387
1:30 PM	0	3	88	12	0	103	0	35	82	26	0	143	0	13	32	28	0	73	0	23	27	3	0	53	372
1:45 PM	0	2	103	19	0	124	0	25	84	24	0	133	0	18	32	23	0	73	0	23	16	6	0	45	375
Hourly Total	0	14	385	67	0	466	0	130	320	101	0	551	0	59	131	103	0	293	0	93	88	15	0	196	1506
Grand Total	0	36	1193	184	0	1413	0	403	1089	275	0	1767	0	180	315	366	0	861	0	257	273	39	0	569	4610
Approach %	0.0	2.5	84.4	13.0	-	-	0.0	22.8	61.6	15.6	-	-	0.0	20.9	36.6	42.5	-	-	0.0	45.2	48.0	6.9	-	-	-
Total %	0.0	0.8	25.9	4.0	-	30.7	0.0	8.7	23.6	6.0	-	38.3	0.0	3.9	6.8	7.9	-	18.7	0.0	5.6	5.9	0.8	-	12.3	-
Lights	0	35	1188	182	-	1405	0	400	1082	274	-	1756	0	178	314	362	-	854	0	256	272	38	-	566	4581
% Lights	-	97.2	99.6	98.9	-	99.4	-	99.3	99.4	99.6	-	99.4	-	98.9	99.7	98.9	-	99.2	-	99.6	99.6	97.4	-	99.5	99.4
Buses	0	0	0	1	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.0	0.5	-	0.1	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	1	3	1	-	5	0	3	5	1	-	9	0	2	1	3	-	6	0	1	0	1	-	2	22
% Single-Unit Trucks	-	2.8	0.3	0.5	-	0.4	-	0.7	0.5	0.4	-	0.5	-	1.1	0.3	0.8	-	0.7	-	0.4	0.0	2.6	-	0.4	0.5
Articulated Trucks	0	0	2	0	-	2	0	0	1	0	-	1	0	0	0	1	-	1	0	0	1	0	-	1	5
% Articulated Trucks	-	0.0	0.2	0.0	-	0.1	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.3	-	0.1	-	0.0	0.4	0.0	-	0.2	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 02/18/2023
Page No: 2

Turning Movement Peak Hour Data (11:00 AM)

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
11:00 AM	0	4	99	15	0	118	0	37	100	28	0	165	0	12	18	36	0	66	0	18	26	5	0	49	398
11:15 AM	0	3	118	13	0	134	0	33	93	24	0	150	0	11	17	38	0	66	0	17	25	2	0	44	394
11:30 AM	0	2	93	13	0	108	0	32	98	15	0	145	0	15	22	30	0	67	0	22	18	6	0	46	366
11:45 AM	0	1	82	18	0	101	0	29	107	21	0	157	0	15	27	39	0	81	0	26	19	3	0	48	387
Total	0	10	392	59	0	461	0	131	398	88	0	617	0	53	84	143	0	280	0	83	88	16	0	187	1545
Approach %	0.0	2.2	85.0	12.8	-	-	0.0	21.2	64.5	14.3	-	-	0.0	18.9	30.0	51.1	-	-	0.0	44.4	47.1	8.6	-	-	-
Total %	0.0	0.6	25.4	3.8	-	29.8	0.0	8.5	25.8	5.7	-	39.9	0.0	3.4	5.4	9.3	-	18.1	0.0	5.4	5.7	1.0	-	12.1	-
PHF	0.000	0.625	0.831	0.819	-	0.860	0.000	0.885	0.930	0.786	-	0.935	0.000	0.883	0.778	0.917	-	0.864	0.000	0.798	0.846	0.667	-	0.954	0.970
Lights	0	9	391	57	-	457	0	131	396	88	-	615	0	52	83	140	-	275	0	82	88	16	-	186	1533
% Lights	-	90.0	99.7	96.6	-	99.1	-	100.0	99.5	100.0	-	99.7	-	98.1	98.8	97.9	-	98.2	-	98.8	100.0	100.0	-	99.5	99.2
Buses	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	1.7	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	1	1	1	-	3	0	0	2	0	-	2	0	1	1	3	-	5	0	1	0	0	-	1	11
% Single-Unit Trucks	-	10.0	0.3	1.7	-	0.7	-	0.0	0.5	0.0	-	0.3	-	1.9	1.2	2.1	-	1.8	-	1.2	0.0	0.0	-	0.5	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated 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
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Saunders Rd with Deerfield Rd
Site Code:
Start Date: 02/18/2023
Page No: 3

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Deerfield Rd Eastbound						Deerfield Rd Westbound						Saunders Rd Northbound						Saunders Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:00 PM	0	2	110	16	0	128	0	37	82	14	0	133	0	16	25	32	0	73	0	17	27	2	0	46	380
12:15 PM	0	4	110	17	0	131	0	32	86	24	0	142	0	18	28	29	0	75	0	19	19	3	0	41	389
12:30 PM	0	6	90	6	0	102	0	42	100	23	0	165	0	18	21	35	0	74	0	25	25	0	0	50	391
12:45 PM	0	0	106	19	0	125	0	31	103	25	0	159	0	16	26	24	0	66	0	20	26	3	0	49	399
Total	0	12	416	58	0	486	0	142	371	86	0	599	0	68	100	120	0	288	0	81	97	8	0	186	1559
Approach %	0.0	2.5	85.6	11.9	-	-	0.0	23.7	61.9	14.4	-	-	0.0	23.6	34.7	41.7	-	-	0.0	43.5	52.2	4.3	-	-	-
Total %	0.0	0.8	26.7	3.7	-	31.2	0.0	9.1	23.8	5.5	-	38.4	0.0	4.4	6.4	7.7	-	18.5	0.0	5.2	6.2	0.5	-	11.9	-
PHF	0.000	0.500	0.945	0.763	-	0.927	0.000	0.845	0.900	0.860	-	0.908	0.000	0.944	0.893	0.857	-	0.960	0.000	0.810	0.898	0.667	-	0.930	0.977
Lights	0	12	416	58	-	486	0	140	370	86	-	596	0	67	100	120	-	287	0	81	96	8	-	185	1554
% Lights	-	100.0	100.0	100.0	-	100.0	-	98.6	99.7	100.0	-	99.5	-	98.5	100.0	100.0	-	99.7	-	100.0	99.0	100.0	-	99.5	99.7
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	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	2	0	0	-	2	0	1	0	0	-	1	0	0	0	0	-	0	3
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	1.4	0.0	0.0	-	0.3	-	1.5	0.0	0.0	-	0.3	-	0.0	0.0	0.0	-	0.0	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	1	0	-	1	2
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.3	0.0	-	0.2	-	0.0	0.0	0.0	-	0.0	-	0.0	1.0	0.0	-	0.5	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Lake Cook Rd with Saunders Rd
Site Code:
Start Date: 03/04/2023
Page No: 1

Turning Movement Data

Start Time	Lake Cook Rd Eastbound					Lake Cook Rd Westbound						Saunders Rd Northbound				Saunders Rd Southbound					Int. Total	
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right	Peds		App. Total
12:00 PM	0	24	236	0	260	0	25	220	23	0	268	29	47	37	113	0	11	36	21	0	68	709
12:15 PM	0	28	293	0	321	0	40	195	24	0	259	28	53	39	120	0	16	48	23	0	87	787
12:30 PM	0	19	256	1	275	0	26	222	21	0	269	29	47	32	108	0	28	33	19	0	80	732
12:45 PM	0	25	234	0	259	0	37	224	31	0	292	26	27	22	75	0	14	33	35	0	82	708
Hourly Total	0	96	1019	1	1115	0	128	861	99	0	1088	112	174	130	416	0	69	150	98	0	317	2936
1:00 PM	0	18	219	0	237	2	30	225	15	0	272	32	47	47	126	0	19	32	23	0	74	709
1:15 PM	1	27	245	0	273	1	26	207	21	0	255	21	51	29	101	0	17	37	26	0	80	709
1:30 PM	0	27	249	0	276	0	22	213	22	0	257	27	49	31	107	1	33	36	40	0	110	750
1:45 PM	0	34	265	0	299	1	34	190	18	0	243	14	24	30	68	0	13	34	26	0	73	683
Hourly Total	1	106	978	0	1085	4	112	835	76	0	1027	94	171	137	402	1	82	139	115	0	337	2851
Grand Total	1	202	1997	1	2200	4	240	1696	175	0	2115	206	345	267	818	1	151	289	213	0	654	5787
Approach %	0.0	9.2	90.8	-	-	0.2	11.3	80.2	8.3	-	-	25.2	42.2	32.6	-	0.2	23.1	44.2	32.6	-	-	-
Total %	0.0	3.5	34.5	-	38.0	0.1	4.1	29.3	3.0	-	36.5	3.6	6.0	4.6	14.1	0.0	2.6	5.0	3.7	-	11.3	-
Lights	1	201	1970	-	2172	4	240	1678	174	-	2096	204	340	265	809	1	151	284	212	-	648	5725
% Lights	100.0	99.5	98.6	-	98.7	100.0	100.0	98.9	99.4	-	99.1	99.0	98.6	99.3	98.9	100.0	100.0	98.3	99.5	-	99.1	98.9
Buses	0	0	2	-	2	0	0	0	0	-	0	0	0	0	0	0	0	0	1	-	1	3
% Buses	0.0	0.0	0.1	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	-	0.2	0.1
Single-Unit Trucks	0	1	16	-	17	0	0	12	1	-	13	2	3	1	6	0	0	1	0	-	1	37
% Single-Unit Trucks	0.0	0.5	0.8	-	0.8	0.0	0.0	0.7	0.6	-	0.6	1.0	0.9	0.4	0.7	0.0	0.0	0.3	0.0	-	0.2	0.6
Articulated Trucks	0	0	9	-	9	0	0	6	0	-	6	0	0	1	1	0	0	0	0	-	0	16
% Articulated Trucks	0.0	0.0	0.5	-	0.4	0.0	0.0	0.4	0.0	-	0.3	0.0	0.0	0.4	0.1	0.0	0.0	0.0	0.0	-	0.0	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	0	-	0	0	2	0	2	0	0	4	0	-	4	6
% Bicycles on Road	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.6	0.0	0.2	0.0	0.0	1.4	0.0	-	0.6	0.1
Pedestrians	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Lake Cook Rd with Saunders Rd
Site Code:
Start Date: 03/04/2023
Page No: 2

Turning Movement Peak Hour Data (12:00 PM)

Start Time	Lake Cook Rd Eastbound					Lake Cook Rd Westbound					Saunders Rd Northbound				Saunders Rd Southbound					Int. Total		
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	App. Total	U-Turn	Left	Thru	Right		Peds	App. Total
12:00 PM	0	24	236	0	260	0	25	220	23	0	268	29	47	37	113	0	11	36	21	0	68	709
12:15 PM	0	28	293	0	321	0	40	195	24	0	259	28	53	39	120	0	16	48	23	0	87	787
12:30 PM	0	19	256	1	275	0	26	222	21	0	269	29	47	32	108	0	28	33	19	0	80	732
12:45 PM	0	25	234	0	259	0	37	224	31	0	292	26	27	22	75	0	14	33	35	0	82	708
Total	0	96	1019	1	1115	0	128	861	99	0	1088	112	174	130	416	0	69	150	98	0	317	2936
Approach %	0.0	8.6	91.4	-	-	0.0	11.8	79.1	9.1	-	-	26.9	41.8	31.3	-	0.0	21.8	47.3	30.9	-	-	-
Total %	0.0	3.3	34.7	-	38.0	0.0	4.4	29.3	3.4	-	37.1	3.8	5.9	4.4	14.2	0.0	2.4	5.1	3.3	-	10.8	-
PHF	0.000	0.857	0.869	-	0.868	0.000	0.800	0.961	0.798	-	0.932	0.966	0.821	0.833	0.867	0.000	0.616	0.781	0.700	-	0.911	0.933
Lights	0	95	1001	-	1096	0	128	850	98	-	1076	112	172	129	413	0	69	150	98	-	317	2902
% Lights	-	99.0	98.2	-	98.3	-	100.0	98.7	99.0	-	98.9	100.0	98.9	99.2	99.3	-	100.0	100.0	100.0	-	100.0	98.8
Buses	0	0	2	-	2	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.2	-	0.2	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	1	9	-	10	0	0	10	1	-	11	0	2	1	3	0	0	0	0	-	0	24
% Single-Unit Trucks	-	1.0	0.9	-	0.9	-	0.0	1.2	1.0	-	1.0	0.0	1.1	0.8	0.7	-	0.0	0.0	0.0	-	0.0	0.8
Articulated Trucks	0	0	7	-	7	0	0	1	0	-	1	0	0	0	0	0	0	0	0	-	0	8
% Articulated Trucks	-	0.0	0.7	-	0.6	-	0.0	0.1	0.0	-	0.1	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Bicycles on Road	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

ITE Trip Generation Worksheets

Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 31

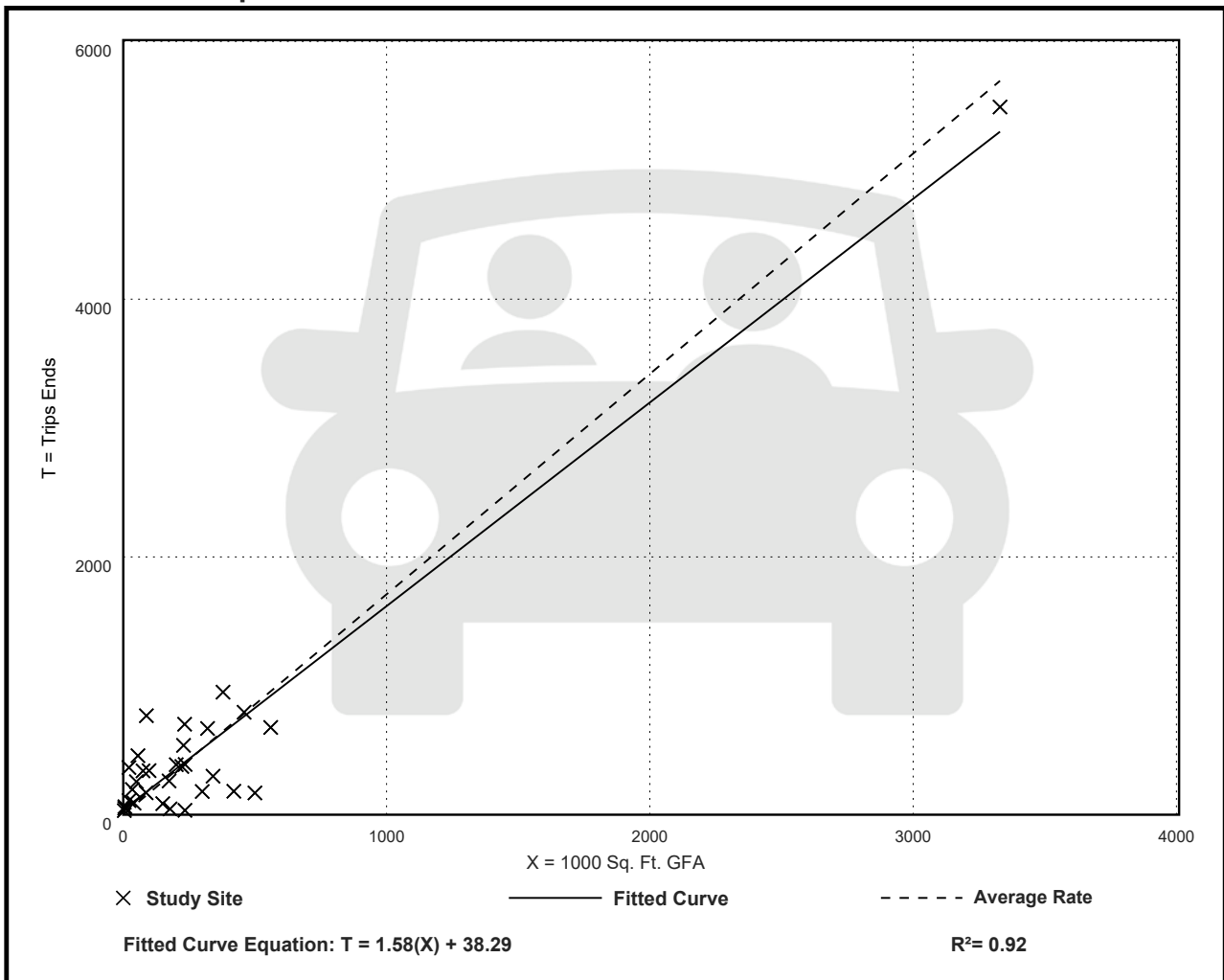
Avg. 1000 Sq. Ft. GFA: 292

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
1.71	0.15 - 16.93	1.48

Data Plot and Equation



Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 36

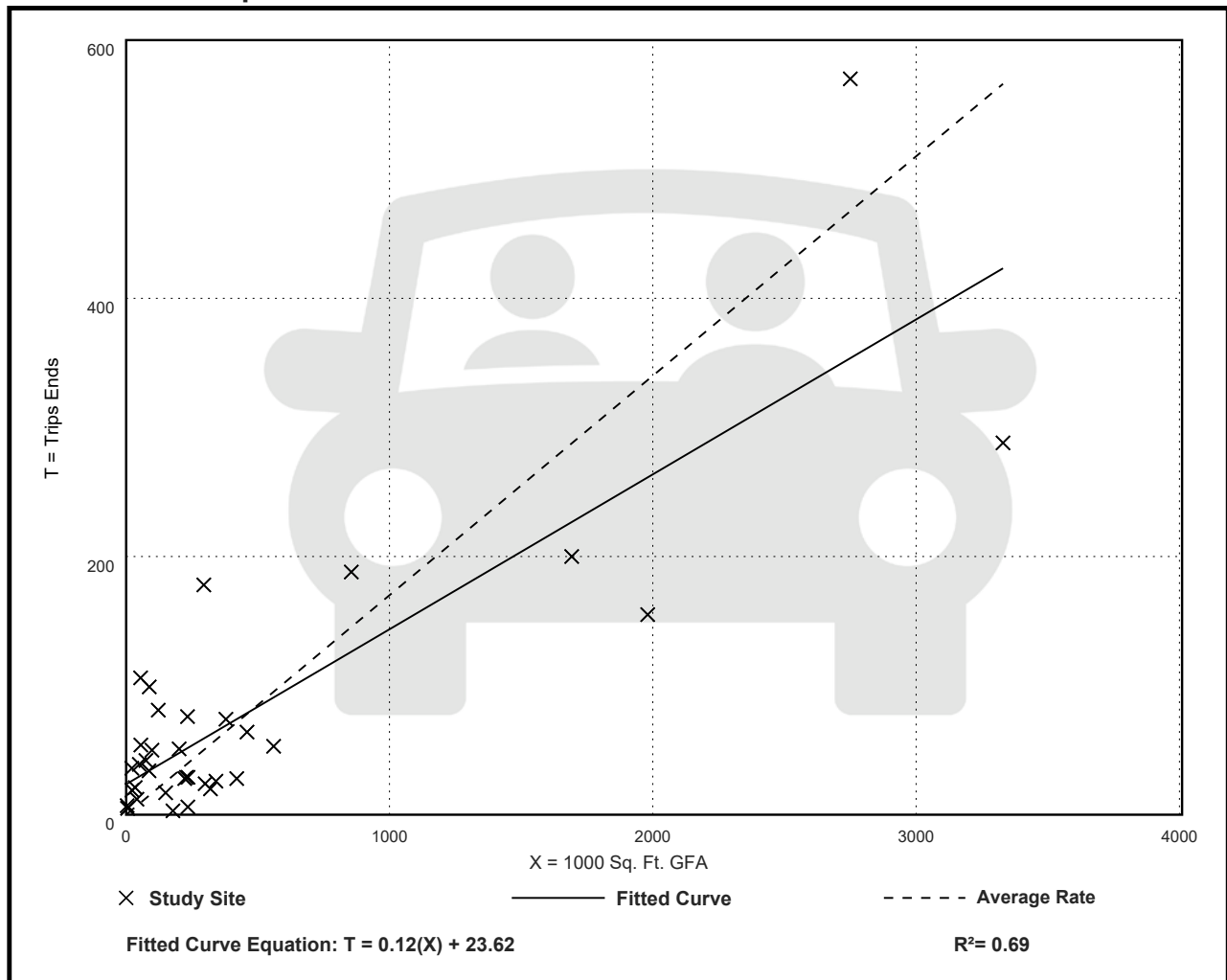
Avg. 1000 Sq. Ft. GFA: 448

Directional Distribution: 77% entering, 23% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.17	0.02 - 1.93	0.19

Data Plot and Equation



Warehousing (150)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 49

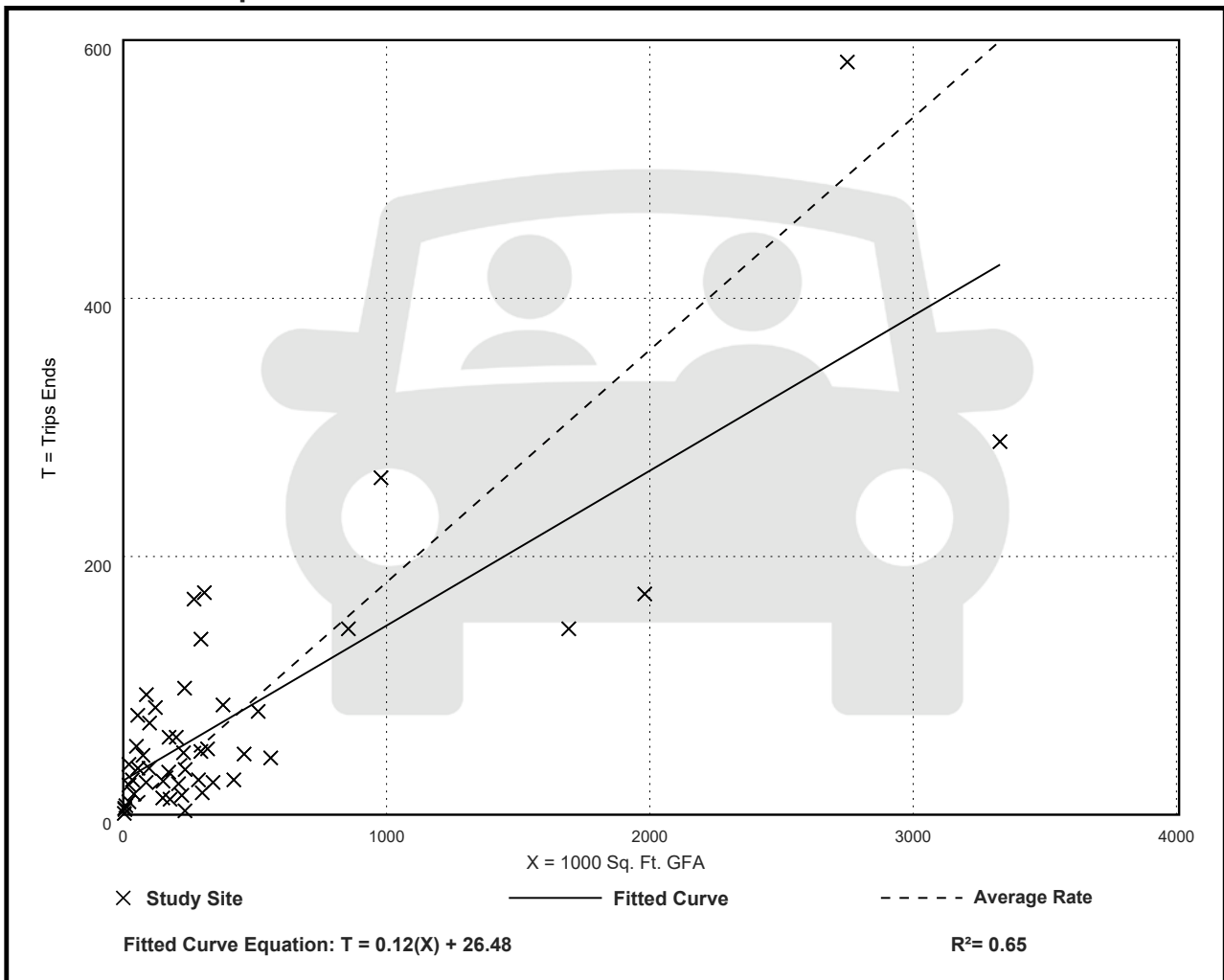
Avg. 1000 Sq. Ft. GFA: 400

Directional Distribution: 28% entering, 72% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
0.18	0.01 - 1.80	0.18

Data Plot and Equation



Soccer Complex (488)

Vehicle Trip Ends vs: Fields
On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 3

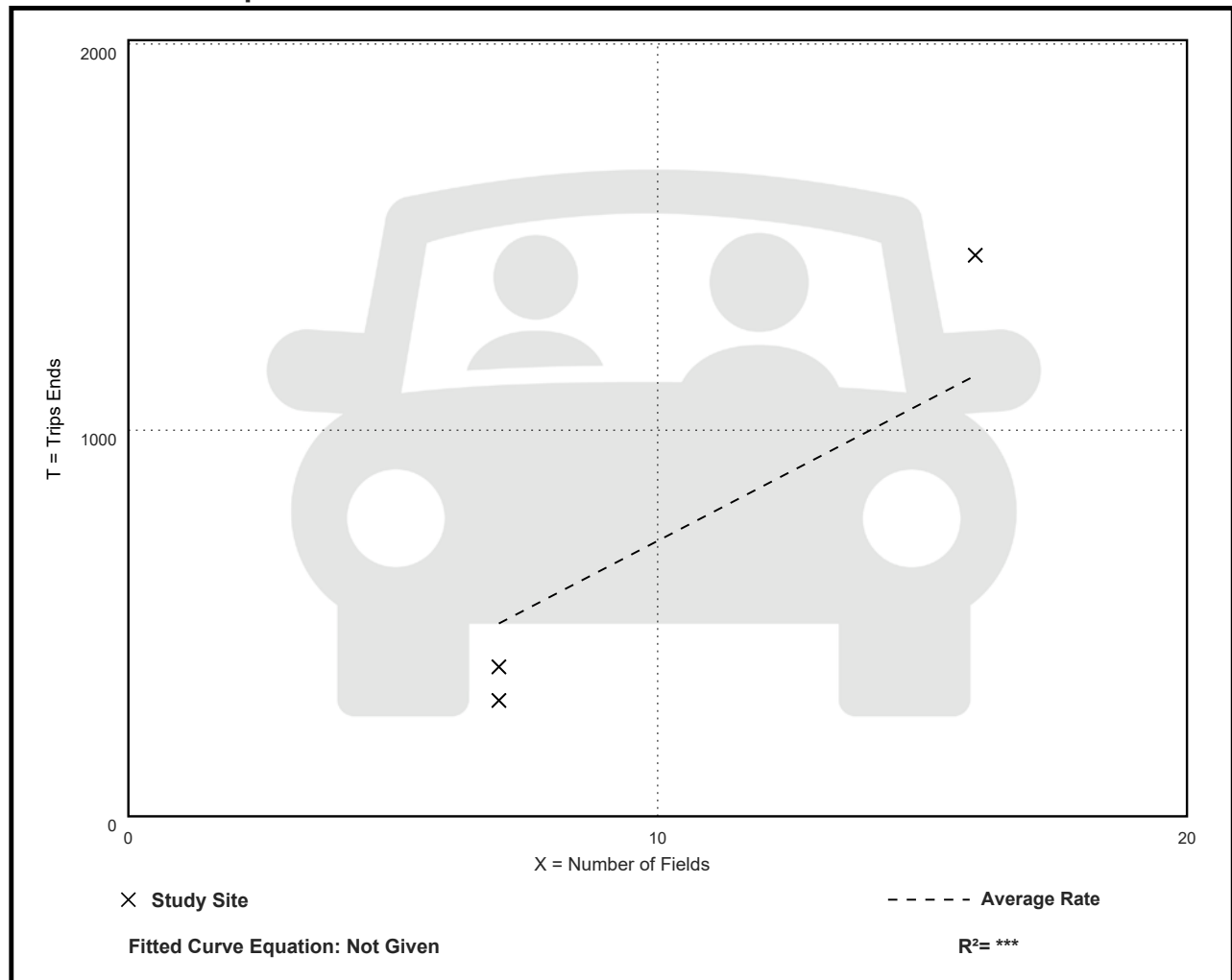
Avg. Num. of Fields: 10

Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
71.33	42.86 - 90.81	26.03

Data Plot and Equation



Soccer Complex (488)

Vehicle Trip Ends vs: Fields

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

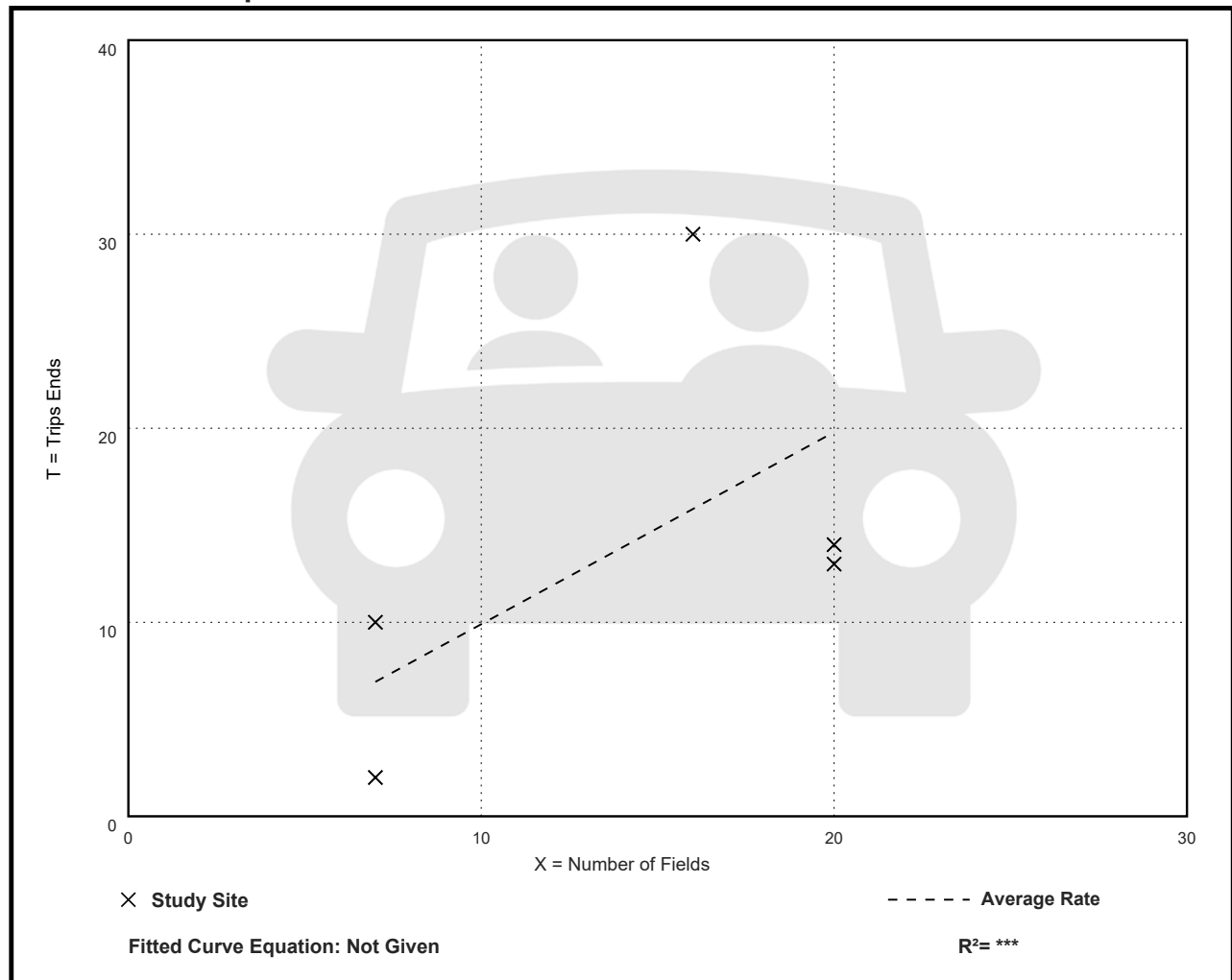
Avg. Num. of Fields: 14

Directional Distribution: 61% entering, 39% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
0.99	0.29 - 1.88	0.62

Data Plot and Equation



Soccer Complex (488)

Vehicle Trip Ends vs: Fields

On a: **Weekday,**

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 5

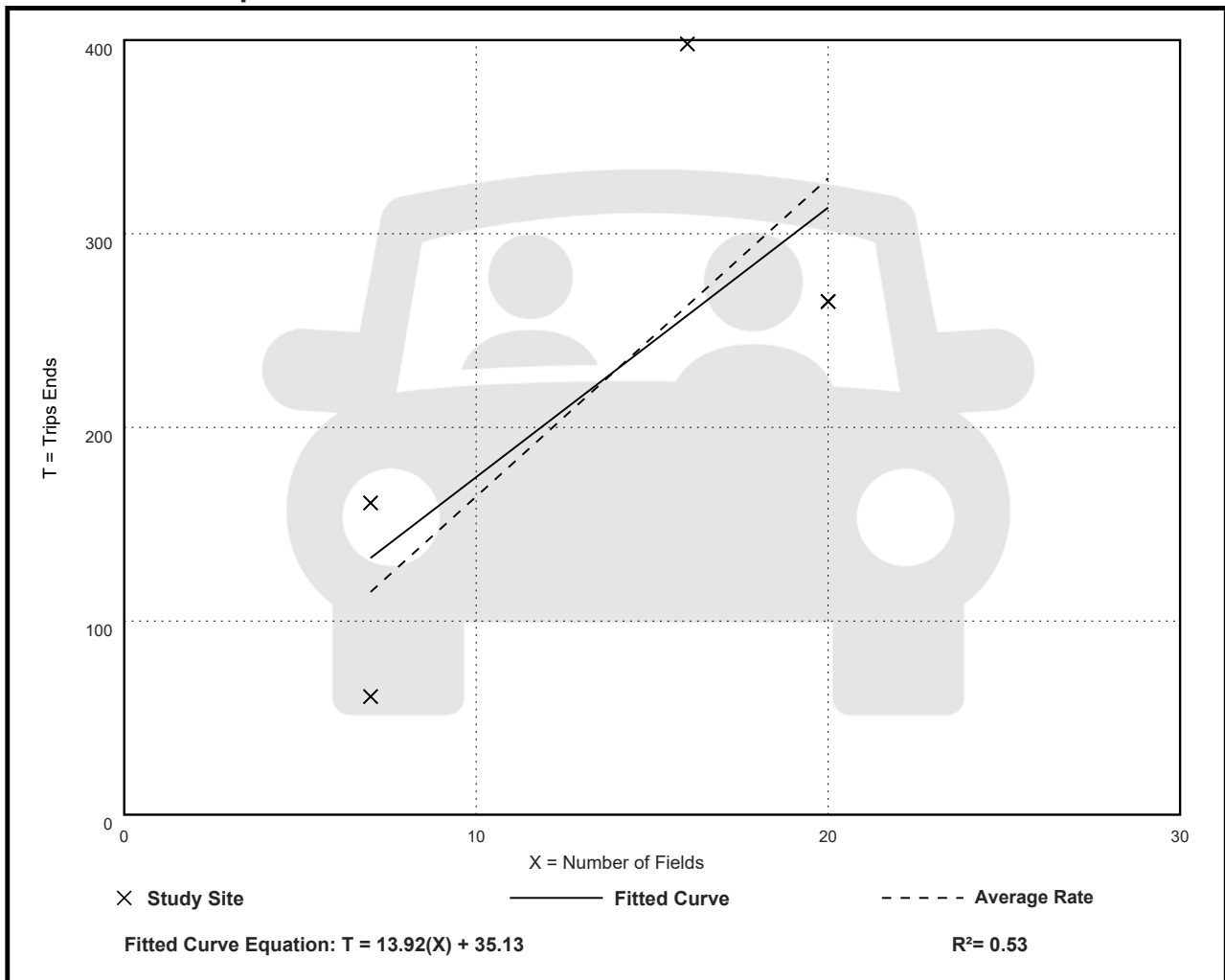
Avg. Num. of Fields: 14

Directional Distribution: 66% entering, 34% exiting

Vehicle Trip Generation per Field

Average Rate	Range of Rates	Standard Deviation
16.43	8.71 - 24.88	6.36

Data Plot and Equation



Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0
Unsignalized Intersections		
Level of Service	Average Total Delay (SEC/VEH)	
A	0 - 10	
B	> 10 - 15	
C	> 15 - 25	
D	> 25 - 35	
E	> 35 - 50	
F	> 50	

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Sheets
Existing Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Saunders Road & Deerfield Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	688	204	220	500	85	67	114	191	148	196	23
Future Volume (vph)	12	688	204	220	500	85	67	114	191	148	196	23
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		115	200		250	300		0	190		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	145			110			180			115		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.906			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	3689	1599	1787	3725	1538	1736	3160	0	1787	3473	0
Flt Permitted	0.444			0.288			0.600			0.258		
Satd. Flow (perm)	781	3689	1599	542	3725	1538	1096	3160	0	485	3473	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			94		212				10
Link Speed (mph)		40			40			45				35
Link Distance (ft)		3875			4252			1571				800
Travel Time (s)		66.1			72.5			23.8				15.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	1%	1%	2%	5%	4%	6%	2%	1%	1%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	764	227	244	556	94	74	339	0	164	244	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	6.5	21.0	6.5	6.5	21.0	6.5	6.5	14.0		6.5	14.0	
Total Split (s)	13.2	45.6	13.2	26.4	58.8	26.4	13.2	21.6		26.4	34.8	
Total Split (%)	11.0%	38.0%	11.0%	22.0%	49.0%	22.0%	11.0%	18.0%		22.0%	29.0%	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	0.0	1.5	0.0	0.0	1.5	0.0	0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	None	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	71.7	62.8	77.6	80.9	74.2	94.7	24.3	12.5		33.1	18.3	
Actuated g/C Ratio	0.60	0.52	0.65	0.67	0.62	0.79	0.20	0.10		0.28	0.15	

Lanes, Volumes, Timings
 1: Saunders Road & Deerfield Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.40	0.21	0.50	0.24	0.08	0.28	0.65		0.56	0.45	
Control Delay	9.6	20.0	3.7	12.3	12.5	1.2	26.6	17.1		40.8	45.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.6	20.0	3.7	12.3	12.5	1.2	26.6	17.1		40.8	45.9	
LOS	A	B	A	B	B	A	C	B		D	D	
Approach Delay		16.2			11.2			18.8			43.8	
Approach LOS		B			B			B			D	
Queue Length 50th (ft)	3	178	13	65	86	0	36	57		102	88	
Queue Length 95th (ft)	13	300	59	131	175	16	41	114		142	117	
Internal Link Dist (ft)		3795			4172			1491			720	
Turn Bay Length (ft)	165		115	200		250	300			190		
Base Capacity (vph)	570	1930	1112	608	2302	1340	289	608		387	841	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.02	0.40	0.20	0.40	0.24	0.07	0.26	0.56		0.42	0.29	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 89 (74%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 19.1
 Intersection Capacity Utilization 64.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C













Splits and Phases: 1: Saunders Road & Deerfield Road



Lanes, Volumes, Timings

2: Saunders Road & Parkway North

03/23/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	35	10	410	156	56	594
Future Volume (vph)	35	10	410	156	56	594
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	120	0		250	200	
Storage Lanes	1	1		1	1	
Taper Length (ft)	150				180	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3286	1561	3654	1568	1805	3762
Flt Permitted	0.950				0.478	
Satd. Flow (perm)	3286	1561	3654	1568	908	3762
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		11		166		
Link Speed (mph)	25		45			45
Link Distance (ft)	752		555			1571
Travel Time (s)	20.5		8.4			23.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	0%	4%	3%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	11	436	166	60	632
Turn Type	Prot	Prot	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	2	8	1	6
Permitted Phases				2	6	
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	15.0	8.0	3.0	15.0
Minimum Split (s)	14.0	14.0	21.0	14.0	7.0	21.0
Total Split (s)	24.0	24.0	80.4	24.0	15.6	96.0
Total Split (%)	20.0%	20.0%	67.0%	20.0%	13.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min	None	None	C-Min
Act Effct Green (s)	8.3	8.3	91.5	107.0	101.7	99.7
Actuated g/C Ratio	0.07	0.07	0.76	0.89	0.85	0.83

Lanes, Volumes, Timings
 2: Saunders Road & Parkway North

03/23/2023

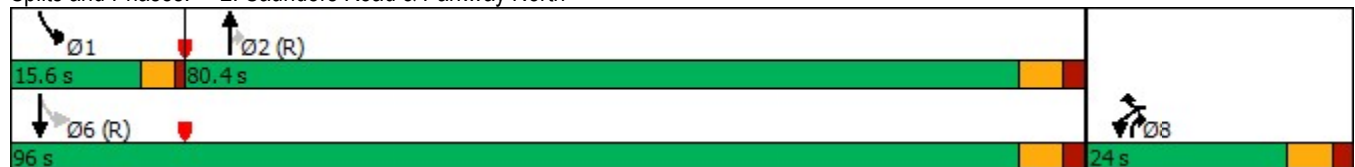


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.16	0.09	0.16	0.12	0.07	0.20
Control Delay	54.1	27.1	5.1	1.6	1.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	27.1	5.1	1.6	1.8	2.3
LOS	D	C	A	A	A	A
Approach Delay	47.9		4.1			2.2
Approach LOS	D		A			A
Queue Length 50th (ft)	14	0	38	0	5	33
Queue Length 95th (ft)	31	19	123	31	13	84
Internal Link Dist (ft)	672		475			1491
Turn Bay Length (ft)	120			250	200	
Base Capacity (vph)	492	243	2785	1505	855	3124
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.05	0.16	0.11	0.07	0.20

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 69 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.20
 Intersection Signal Delay: 4.7
 Intersection Capacity Utilization 35.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 2: Saunders Road & Parkway North



Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	1	56	5	1	10	30	577	123	76	533	28
Future Volume (vph)	57	1	56	5	1	10	30	577	123	76	533	28
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	65		0	120		0	205		275	205		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	115			75			170			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.862				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	1933	1615	1745	1450	0	1805	3654	1599	1805	3532	0
Flt Permitted	0.556						0.427			0.409		
Satd. Flow (perm)	973	1933	1615	1837	1450	0	811	3654	1599	777	3532	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105		11				136			7
Link Speed (mph)		20			30			45				45
Link Distance (ft)		469			662			1404				567
Travel Time (s)		16.0			15.0			21.3				8.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	0%	0%	0%	10%	0%	4%	1%	0%	1%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	1	59	5	12	0	32	607	129	80	590	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	5	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0	3.0	3.0	7.0		3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	7.0	13.0	7.0	7.0	13.0		7.0	21.5	21.5	7.0	21.5	
Total Split (s)	15.6	20.4	13.2	15.6	20.4		13.2	62.4	62.4	21.6	70.8	
Total Split (%)	13.0%	17.0%	11.0%	13.0%	17.0%		11.0%	52.0%	52.0%	18.0%	59.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0		4.0	6.5	6.5	4.0	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	15.3	11.8	21.2	9.9	7.4		94.7	88.6	88.6	96.2	89.4	
Actuated g/C Ratio	0.13	0.10	0.18	0.08	0.06		0.79	0.74	0.74	0.80	0.74	

Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

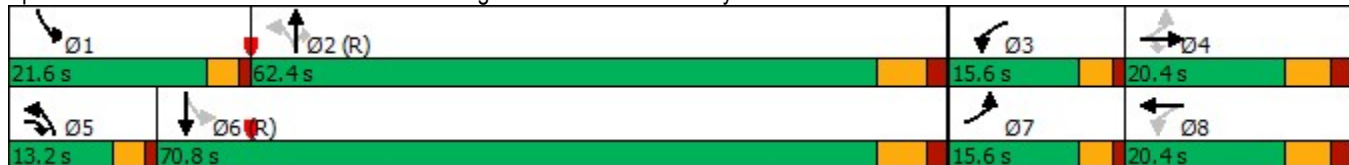


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.34	0.01	0.16	0.03	0.12		0.05	0.22	0.11	0.12	0.22	
Control Delay	48.7	45.0	1.9	40.0	29.7		3.3	5.0	0.5	2.8	5.2	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	48.7	45.0	1.9	40.0	29.7		3.3	5.0	0.5	2.8	5.2	
LOS	D	D	A	D	C		A	A	A	A	A	
Approach Delay		25.7			32.7			4.2				4.9
Approach LOS		C			C			A				A
Queue Length 50th (ft)	45	1	0	4	1		3	49	0	5	38	
Queue Length 95th (ft)	76	6	6	14	21		9	52	6	17	136	
Internal Link Dist (ft)		389			582			1324			487	
Turn Bay Length (ft)	65			120			205		275	205		
Base Capacity (vph)	208	259	412	229	183		733	2698	1216	789	2632	
Starvation Cap Reductn	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
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.00	0.14	0.02	0.07		0.04	0.22	0.11	0.10	0.22	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	102 (85%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.34
Intersection Signal Delay:	6.4
Intersection LOS:	A
Intersection Capacity Utilization	42.9%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 3: Saunders Road & Thorngate Lane/Baxter Parkway



Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

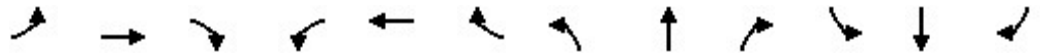
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	2	10	2	0	3	76	721	88	60	410	93
Future Volume (vph)	10	2	10	2	0	3	76	721	88	60	410	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	11	12	12	11	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		250	0		240	295		190	160		295
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (ft)	25			0			215			195		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Fr _t		0.873			0.850				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3077	1428	0	3385	1214	0	1805	3689	1599	1805	3725	1615
Fl _t Permitted	0.950			0.950			0.490			0.335		
Satd. Flow (perm)	3077	1428	0	3385	1214	0	931	3689	1599	636	3725	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			401				97			102
Link Speed (mph)		15			20			45				45
Link Distance (ft)		524			615			1221				1404
Travel Time (s)		23.8			21.0			18.5				21.3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	50%	10%	0%	0%	33%	0%	3%	1%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	13	0	2	3	0	84	792	97	66	451	102
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases							2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.0	14.0		7.0	14.0		7.0	21.5	7.0	7.0	21.5	7.0
Total Split (s)	15.6	24.0		15.6	24.0		18.0	62.4	15.6	18.0	62.4	15.6
Total Split (%)	13.0%	20.0%		13.0%	20.0%		15.0%	52.0%	13.0%	15.0%	52.0%	13.0%
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.5	4.0	4.0	6.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	8.7	8.2		5.7	8.0		97.5	89.6	102.6	97.1	89.4	105.4
Actuated g/C Ratio	0.07	0.07		0.05	0.07		0.81	0.75	0.86	0.81	0.74	0.88

Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

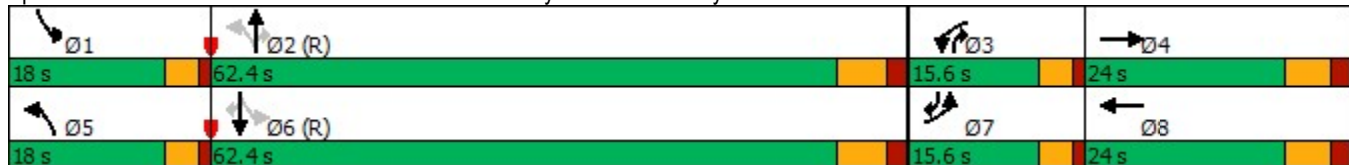


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.12		0.01	0.01		0.10	0.29	0.07	0.11	0.16	0.07
Control Delay	50.8	30.3		54.5	0.0		2.8	6.4	0.9	3.6	6.1	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	30.3		54.5	0.0		2.8	6.4	0.9	3.6	6.1	0.4
LOS	D	C		D	A		A	A	A	A	A	A
Approach Delay		39.7			21.8			5.6			4.9	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	4	1		1	0		5	75	0	1	44	0
Queue Length 95th (ft)	14	22		5	0		26	169	12	23	82	1
Internal Link Dist (ft)		444			535			1141			1324	
Turn Bay Length (ft)							295		190	160		295
Base Capacity (vph)	339	223		327	522		882	2754	1440	669	2775	1472
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06		0.01	0.01		0.10	0.29	0.07	0.10	0.16	0.07

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	97 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.29
Intersection Signal Delay:	5.9
Intersection LOS:	A
Intersection Capacity Utilization:	42.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Saunders Road & Discover Way/Takeda Parkway



Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	333	1828	274	182	870	311	92	241	161	109	169	144
Future Volume (vph)	333	1828	274	182	870	311	92	241	161	109	169	144
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		290	280		190	245		400	215		400
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	300			300			220			300		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5250	1538	3335	5103	1583	3242	3619	1524	3367	3762	1583
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5250	1538	3335	5103	1583	3242	3619	1524	3367	3762	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			179			111			117			86
Link Speed (mph)		45			45			40				45
Link Distance (ft)		2578			4572			1567				1221
Travel Time (s)		39.1			69.3			26.7				18.5
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	5%	5%	7%	2%	8%	5%	6%	4%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	336	1846	277	184	879	314	93	243	163	110	171	145
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	9.0	14.0	9.0	9.0	14.0	9.0
Total Split (s)	35.0	80.0	14.0	20.0	65.0	20.0	14.0	20.0	20.0	20.0	26.0	35.0
Total Split (%)	25.0%	57.1%	10.0%	14.3%	46.4%	14.3%	10.0%	14.3%	14.3%	14.3%	18.6%	25.0%
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0
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)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	19.0	79.8	94.7	12.9	73.7	89.6	8.9	17.4	36.3	9.9	18.5	43.5
Actuated g/C Ratio	0.14	0.57	0.68	0.09	0.53	0.64	0.06	0.12	0.26	0.07	0.13	0.31

Lanes, Volumes, Timings
 5: Saunders Road & Lake Cook Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.72	0.62	0.25	0.60	0.33	0.30	0.45	0.54	0.34	0.46	0.34	0.26
Control Delay	66.9	21.8	3.9	69.2	20.2	8.3	70.1	62.2	14.7	68.3	56.9	15.4
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	66.9	21.8	3.9	69.2	20.2	8.3	70.1	62.2	14.7	68.3	56.9	15.4
LOS	E	C	A	E	C	A	E	E	B	E	E	B
Approach Delay		26.0			24.0			48.2			45.7	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	153	407	30	84	168	76	42	108	32	50	74	38
Queue Length 95th (ft)	198	486	69	122	217	135	72	157	92	80	112	88
Internal Link Dist (ft)		2498			4492			1487			1141	
Turn Bay Length (ft)	205		290	280		190	245		400	215		400
Base Capacity (vph)	760	2991	1108	381	2685	1116	231	449	512	384	537	679
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	0.44	0.62	0.25	0.48	0.33	0.28	0.40	0.54	0.32	0.29	0.32	0.21

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	115 (82%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.72
Intersection Signal Delay:	29.5
Intersection LOS:	C
Intersection Capacity Utilization:	66.2%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 5: Saunders Road & Lake Cook Road



HCM 6th TWSC
6: Saunders Road & Hawthorn Lane

03/23/2023

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	9	1	565	79	1	628
Future Vol, veh/h	9	1	565	79	1	628
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	-	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	1
Mvmt Flow	9	1	589	82	1	654

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	959	336	0	0	671
Stage 1	630	-	-	-	-
Stage 2	329	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	*606	*879	-	-	1201
Stage 1	*774	-	-	-	-
Stage 2	*804	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	*605	*879	-	-	1201
Mov Cap-2 Maneuver	*636	-	-	-	-
Stage 1	*774	-	-	-	-
Stage 2	*804	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.6	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	654	1201
HCM Lane V/C Ratio	-	-	0.016	0.001
HCM Control Delay (s)	-	-	10.6	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0	0

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Existing Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings

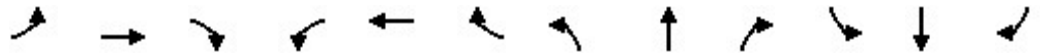
1: Saunders Road & Deerfield Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	498	69	233	611	150	214	228	226	89	105	13
Future Volume (vph)	17	498	69	233	611	150	214	228	226	89	105	13
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		115	200		250	300		0	190		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	145			110			180			115		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.925				0.984
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	3800	1615	1770	3762	1599	1805	3323	0	1805	3491	0
Flt Permitted	0.399			0.390			0.535			0.341		
Satd. Flow (perm)	715	3800	1615	726	3762	1599	1016	3323	0	648	3491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			163		215				10
Link Speed (mph)		40			40			45				35
Link Distance (ft)		3875			4252			1571				800
Travel Time (s)		66.1			72.5			23.8				15.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	0%	2%	1%	1%	0%	0%	1%	0%	1%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	541	75	253	664	163	233	494	0	97	128	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	6.5	21.0	6.5	6.5	21.0	6.5	6.5	14.0		6.5	14.0	
Total Split (s)	12.0	38.4	27.6	21.6	48.0	18.0	27.6	42.0		18.0	32.4	
Total Split (%)	10.0%	32.0%	23.0%	18.0%	40.0%	15.0%	23.0%	35.0%		15.0%	27.0%	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	0.0	1.5	0.0	0.0	1.5	0.0	0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	None	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	68.5	59.4	83.3	78.3	71.5	87.7	35.7	19.4		25.0	11.8	
Actuated g/C Ratio	0.57	0.50	0.69	0.65	0.60	0.73	0.30	0.16		0.21	0.10	

Lanes, Volumes, Timings
 1: Saunders Road & Deerfield Road

03/23/2023

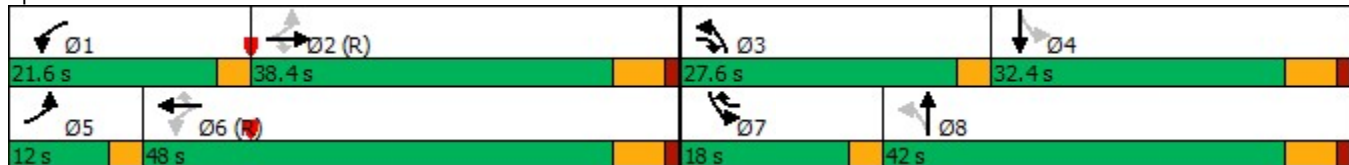


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.04	0.29	0.07	0.43	0.30	0.13	0.56	0.69		0.42	0.36	
Control Delay	10.5	20.4	1.8	12.1	14.2	1.6	44.1	39.7		35.5	48.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.5	20.4	1.8	12.1	14.2	1.6	44.1	39.7		35.5	48.7	
LOS	B	C	A	B	B	A	D	D		D	D	
Approach Delay		17.9			11.8			41.1			43.0	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	4	123	0	72	112	0	183	136		56	45	
Queue Length 95th (ft)	16	212	17	142	220	25	251	195		87	74	
Internal Link Dist (ft)		3795			4172			1491			720	
Turn Bay Length (ft)	165		115	200		250	300			190		
Base Capacity (vph)	499	1882	1232	636	2241	1269	463	1147		305	775	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.04	0.29	0.06	0.40	0.30	0.13	0.50	0.43		0.32	0.17	

Intersection Summary
















Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	5 (4%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle:	55
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.69
Intersection Signal Delay:	23.9
Intersection LOS:	C
Intersection Capacity Utilization:	61.2%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 1: Saunders Road & Deerfield Road



Lanes, Volumes, Timings
2: Saunders Road & Parkway North

03/23/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 			 
Traffic Volume (vph)	140	73	598	48	8	409
Future Volume (vph)	140	73	598	48	8	409
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	120	0		250	200	
Storage Lanes	1	1		1	1	
Taper Length (ft)	150				180	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3351	1561	3762	1553	1805	3689
Flt Permitted	0.950				0.396	
Satd. Flow (perm)	3351	1561	3762	1553	752	3689
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		76		50		
Link Speed (mph)	25		45			45
Link Distance (ft)	752		555			1571
Travel Time (s)	20.5		8.4			23.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	1%	4%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	146	76	623	50	8	426
Turn Type	Prot	Prot	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	2	8	1	6
Permitted Phases				2	6	
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	15.0	8.0	3.0	15.0
Minimum Split (s)	14.0	14.0	21.0	14.0	7.0	21.0
Total Split (s)	39.6	39.6	69.6	39.6	10.8	80.4
Total Split (%)	33.0%	33.0%	58.0%	33.0%	9.0%	67.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min	None	None	C-Min
Act Effct Green (s)	11.6	11.6	94.5	116.8	98.4	96.4
Actuated g/C Ratio	0.10	0.10	0.79	0.97	0.82	0.80

Lanes, Volumes, Timings
2: Saunders Road & Parkway North

03/23/2023

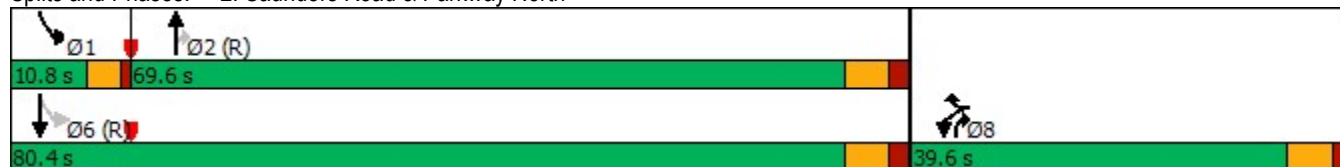


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.45	0.35	0.21	0.03	0.01	0.14
Control Delay	55.3	15.3	3.2	0.1	1.9	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	15.3	3.2	0.1	1.9	2.2
LOS	E	B	A	A	A	A
Approach Delay	41.6		2.9			2.1
Approach LOS	D		A			A
Queue Length 50th (ft)	56	0	40	0	1	23
Queue Length 95th (ft)	88	46	76	0	m2	35
Internal Link Dist (ft)	672		475			1491
Turn Bay Length (ft)	120			250	200	
Base Capacity (vph)	938	491	2961	1553	676	2964
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.15	0.21	0.03	0.01	0.14

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.45
 Intersection Signal Delay: 9.1 Intersection LOS: A
 Intersection Capacity Utilization 32.4% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Saunders Road & Parkway North



Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

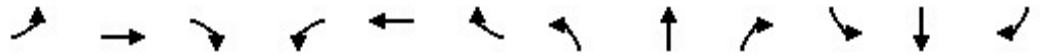
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	0	36	97	0	67	62	535	9	6	536	48
Future Volume (vph)	49	0	36	97	0	67	62	535	9	6	536	48
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	65		0	120		0	205		275	205		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	115			75			170			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.850				0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1933	1615	1728	1546	0	1805	3762	1455	1543	3491	0
Flt Permitted	0.000			0.950			0.383			0.438		
Satd. Flow (perm)	0	1933	1615	1728	1546	0	728	3762	1455	711	3491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			325		399				136			11
Link Speed (mph)		20			30			45				45
Link Distance (ft)		469			662			1404				567
Travel Time (s)		16.0			15.0			21.3				8.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	1%	0%	1%	0%	1%	11%	17%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	0	38	103	71	0	66	569	10	6	621	0
Turn Type	pm+pt		pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	5	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0	3.0	3.0	7.0		3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	7.0	13.0	7.0	7.0	13.0		7.0	21.5	21.5	7.0	21.5	
Total Split (s)	15.6	18.0	14.4	20.4	22.8		14.4	67.2	67.2	14.4	67.2	
Total Split (%)	13.0%	15.0%	12.0%	17.0%	19.0%		12.0%	56.0%	56.0%	12.0%	56.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0		4.0	6.5	6.5	4.0	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	9.1		6.6	20.2	7.0		91.4	87.3	87.3	87.6	80.6	
Actuated g/C Ratio	0.08		0.06	0.17	0.06		0.76	0.73	0.73	0.73	0.67	

Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

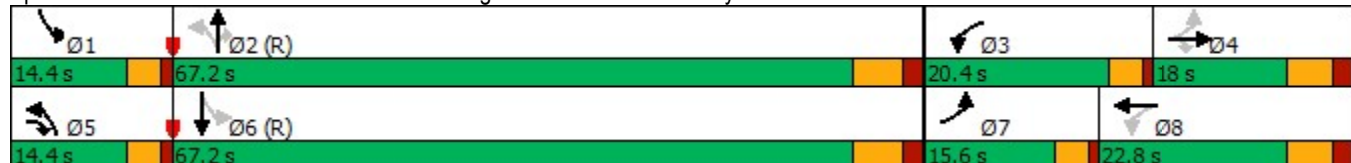


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.40		0.10	0.36	0.15		0.11	0.21	0.01	0.01	0.26	
Control Delay	61.1		0.5	46.0	0.7		4.3	5.6	0.0	5.7	11.0	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	61.1		0.5	46.0	0.7		4.3	5.6	0.0	5.7	11.0	
LOS	E		A	D	A		A	A	A	A	B	
Approach Delay		35.5			27.5			5.4			10.9	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	39		0	70	0		10	56	0	1	118	
Queue Length 95th (ft)	79		0	119	0		23	117	0	6	143	
Internal Link Dist (ft)		389			582			1324			487	
Turn Bay Length (ft)	65			120			205		275	205		
Base Capacity (vph)	168		436	312	559		650	2737	1095	613	2348	
Starvation Cap Reductn	0		0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0		0	0	0		0	0	0	0	0	
Storage Cap Reductn	0		0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.31		0.09	0.33	0.13		0.10	0.21	0.01	0.01	0.26	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	11.9
Intersection LOS:	B
Intersection Capacity Utilization	45.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 3: Saunders Road & Thorngate Lane/Baxter Parkway



Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

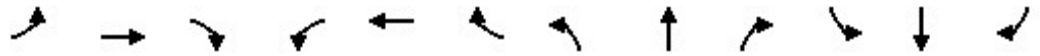
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	68	60	0	68	6	464	6	1	688	10
Future Volume (vph)	59	0	68	60	0	68	6	464	6	1	688	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	11	12	12	11	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		250	0		240	295		190	160		295
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (ft)	25			0			215			195		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.850			0.850				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3319	1599	0	3385	1615	0	1805	3762	1380	1805	3762	1615
Flt Permitted	0.950			0.950			0.364			0.474		
Satd. Flow (perm)	3319	1599	0	3385	1615	0	692	3762	1380	901	3762	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		327			429				64			64
Link Speed (mph)		15			20			45			45	
Link Distance (ft)		524			615			1221			1404	
Travel Time (s)		23.8			21.0			18.5			21.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	0%	1%	17%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	72	0	63	72	0	6	488	6	1	724	11
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases							2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.0	14.0		7.0	14.0		7.0	21.5	7.0	7.0	21.5	7.0
Total Split (s)	18.0	24.0		18.0	24.0		13.2	64.8	18.0	13.2	64.8	18.0
Total Split (%)	15.0%	20.0%		15.0%	20.0%		11.0%	54.0%	15.0%	11.0%	54.0%	15.0%
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.5	4.0	4.0	6.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	7.6	8.0		7.6	8.0		94.4	92.0	103.7	94.2	91.9	103.6
Actuated g/C Ratio	0.06	0.07		0.06	0.07		0.79	0.77	0.86	0.78	0.77	0.86

Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

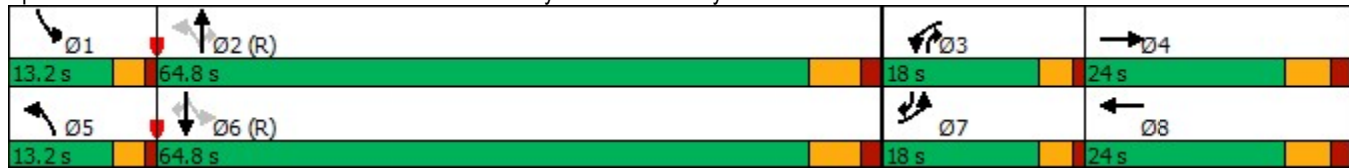


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.18		0.29	0.14		0.01	0.17	0.01	0.00	0.25	0.01
Control Delay	56.7	0.9		56.7	0.6		4.2	5.6	0.0	3.0	3.7	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	0.9		56.7	0.6		4.2	5.6	0.0	3.0	3.7	0.0
LOS	E	A		E	A		A	A	A	A	A	A
Approach Delay		26.7			26.8			5.6			3.7	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	24	0		24	0		1	53	0	0	64	0
Queue Length 95th (ft)	46	0		47	0		5	101	0	m0	76	m0
Internal Link Dist (ft)		444			535			1141			1324	
Turn Bay Length (ft)							295		190	160		295
Base Capacity (vph)	387	517		394	606		633	2883	1252	782	2881	1464
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14		0.16	0.12		0.01	0.17	0.00	0.00	0.25	0.01

Intersection Summary



































Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.29
 Intersection Signal Delay: 8.4 Intersection LOS: A
 Intersection Capacity Utilization 36.9% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Saunders Road & Discover Way/Takeda Parkway



Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	
Traffic Volume (vph)	111	1077	131	137	1522	113	249	252	257	266	252	298
Future Volume (vph)	111	1077	131	137	1522	113	249	252	257	266	252	298
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		290	280		190	245		400	215		400
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	300			300			220			300		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	5406	1538	3400	5406	1553	3467	3800	1615	3467	3762	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3467	5406	1538	3400	5406	1553	3467	3800	1615	3467	3762	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			112			122			55			55
Link Speed (mph)		45			45			40				45
Link Distance (ft)		2578			4572			1567				1221
Travel Time (s)		39.1			69.3			26.7				18.5
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	5%	3%	1%	4%	1%	0%	0%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	119	1158	141	147	1637	122	268	271	276	286	271	320
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	9.0	14.0	9.0	9.0	14.0	9.0
Total Split (s)	18.0	76.0	20.0	16.0	74.0	24.0	20.0	24.0	16.0	24.0	28.0	18.0
Total Split (%)	12.9%	54.3%	14.3%	11.4%	52.9%	17.1%	14.3%	17.1%	11.4%	17.1%	20.0%	12.9%
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0
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)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	10.4	74.5	95.4	10.7	74.9	97.5	14.8	18.2	34.9	16.5	19.9	36.2
Actuated g/C Ratio	0.07	0.53	0.68	0.08	0.54	0.70	0.11	0.13	0.25	0.12	0.14	0.26

Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.46	0.40	0.13	0.57	0.57	0.11	0.73	0.55	0.62	0.70	0.51	0.70
Control Delay	67.6	20.6	2.6	70.8	23.4	1.5	72.7	61.5	43.4	68.5	58.7	47.1
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	67.6	20.6	2.6	70.8	23.4	1.5	72.7	61.5	43.4	68.5	58.7	47.1
LOS	E	C	A	E	C	A	E	E	D	E	E	D
Approach Delay		22.8			25.7			59.0			57.7	
Approach LOS		C			C			E			E	
Queue Length 50th (ft)	54	232	8	67	363	0	122	121	176	130	121	221
Queue Length 95th (ft)	86	278	33	104	444	21	172	172	280	176	166	316
Internal Link Dist (ft)		2498			4492			1487			1141	
Turn Bay Length (ft)	205		290	280		190	245		400	215		400
Base Capacity (vph)	346	2878	1095	291	2893	1153	396	508	458	495	591	494
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	0.34	0.40	0.13	0.51	0.57	0.11	0.68	0.53	0.60	0.58	0.46	0.65

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	80 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	35.9
Intersection LOS:	D
Intersection Capacity Utilization:	65.2%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 5: Saunders Road & Lake Cook Road



HCM 6th TWSC
6: Saunders Road & Hawthorn Lane

03/23/2023

Intersection						
Int Delay, s/veh	0.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	41	4	642	9	0	549
Future Vol, veh/h	41	4	642	9	0	549
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	-	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	3
Mvmt Flow	43	4	676	9	0	578

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	970	343	0	0	685
Stage 1	681	-	-	-	-
Stage 2	289	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	*606	*827	-	-	*1242
Stage 1	*780	-	-	-	-
Stage 2	*829	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	*606	*827	-	-	*1242
Mov Cap-2 Maneuver	*642	-	-	-	-
Stage 1	*780	-	-	-	-
Stage 2	*829	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	655	* 1242
HCM Lane V/C Ratio	-	-	0.072	-
HCM Control Delay (s)	-	-	10.9	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
No Build Weekday Morning Peak Hour Conditions

Lanes, Volumes, Timings
1: Saunders Road & Deerfield Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	729	216	233	530	90	71	121	202	157	208	24
Future Volume (vph)	13	729	216	233	530	90	71	121	202	157	208	24
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		115	200		250	300		0	190		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	145			110			180			115		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.906				0.984
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	3689	1599	1787	3725	1538	1736	3160	0	1787	3474	0
Flt Permitted	0.430			0.262			0.592			0.253		
Satd. Flow (perm)	756	3689	1599	493	3725	1538	1082	3160	0	476	3474	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			177			100		224				10
Link Speed (mph)		40			40			45				35
Link Distance (ft)		3875			4252			1571				800
Travel Time (s)		66.1			72.5			23.8				15.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	1%	1%	2%	5%	4%	6%	2%	1%	1%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	810	240	259	589	100	79	358	0	174	258	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	6.5	21.0	6.5	6.5	21.0	6.5	6.5	14.0		6.5	14.0	
Total Split (s)	13.2	45.6	13.2	26.4	58.8	26.4	13.2	21.6		26.4	34.8	
Total Split (%)	11.0%	38.0%	11.0%	22.0%	49.0%	22.0%	11.0%	18.0%		22.0%	29.0%	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	0.0	1.5	0.0	0.0	1.5	0.0	0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	None	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	69.5	60.6	75.5	80.1	73.4	94.5	24.7	12.8		33.9	19.0	
Actuated g/C Ratio	0.58	0.50	0.63	0.67	0.61	0.79	0.21	0.11		0.28	0.16	

Lanes, Volumes, Timings
1: Saunders Road & Deerfield Road

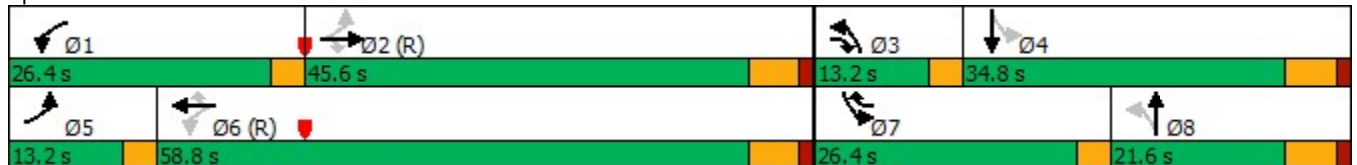
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.44	0.22	0.55	0.26	0.08	0.29	0.67		0.58	0.46	
Control Delay	10.2	22.2	4.6	13.6	13.0	1.3	26.7	17.3		40.7	45.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.2	22.2	4.6	13.6	13.0	1.3	26.7	17.3		40.7	45.6	
LOS	B	C	A	B	B	A	C	B		D	D	
Approach Delay		18.0			12.0			19.0			43.6	
Approach LOS		B			B			B			D	
Queue Length 50th (ft)	3	198	17	71	94	0	37	60		107	93	
Queue Length 95th (ft)	14	340	72	143	190	16	33	120		149	122	
Internal Link Dist (ft)		3795			4172			1491			720	
Turn Bay Length (ft)	165		115	200		250	300			190		
Base Capacity (vph)	542	1862	1086	581	2277	1331	289	620		389	841	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.03	0.44	0.22	0.45	0.26	0.08	0.27	0.58		0.45	0.31	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 89 (74%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 20.0
 Intersection Capacity Utilization 67.3%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C













Splits and Phases: 1: Saunders Road & Deerfield Road



Lanes, Volumes, Timings

2: Saunders Road & Parkway North

03/23/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	35	10	435	156	56	630
Future Volume (vph)	35	10	435	156	56	630
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	120	0		250	200	
Storage Lanes	1	1		1	1	
Taper Length (ft)	150				180	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3286	1561	3654	1568	1805	3762
Flt Permitted	0.950				0.465	
Satd. Flow (perm)	3286	1561	3654	1568	884	3762
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		11		166		
Link Speed (mph)	25		45			45
Link Distance (ft)	752		555			1571
Travel Time (s)	20.5		8.4			23.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	0%	4%	3%	0%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	11	463	166	60	670
Turn Type	Prot	Prot	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	2	8	1	6
Permitted Phases				2	6	
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	15.0	8.0	3.0	15.0
Minimum Split (s)	14.0	14.0	21.0	14.0	7.0	21.0
Total Split (s)	24.0	24.0	80.4	24.0	15.6	96.0
Total Split (%)	20.0%	20.0%	67.0%	20.0%	13.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min	None	None	C-Min
Act Effct Green (s)	8.3	8.3	91.5	107.0	101.7	99.7
Actuated g/C Ratio	0.07	0.07	0.76	0.89	0.85	0.83

Lanes, Volumes, Timings

2: Saunders Road & Parkway North

03/23/2023

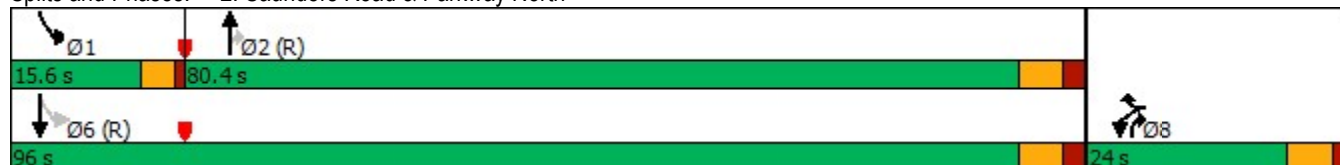


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.16	0.09	0.17	0.12	0.08	0.21
Control Delay	54.1	27.1	4.8	1.6	1.8	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	27.1	4.8	1.6	1.8	2.2
LOS	D	C	A	A	A	A
Approach Delay	47.9		3.9			2.2
Approach LOS	D		A			A
Queue Length 50th (ft)	14	0	44	0	5	36
Queue Length 95th (ft)	31	19	137	37	11	73
Internal Link Dist (ft)	672		475			1491
Turn Bay Length (ft)	120			250	200	
Base Capacity (vph)	492	243	2785	1505	837	3124
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.05	0.17	0.11	0.07	0.21

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	69 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle:	45
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.21
Intersection Signal Delay:	4.5
Intersection LOS:	A
Intersection Capacity Utilization	35.8%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 2: Saunders Road & Parkway North



Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	1	56	5	1	10	30	602	123	76	569	28
Future Volume (vph)	57	1	56	5	1	10	30	602	123	76	569	28
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	65		0	120		0	205		275	205		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	115			75			170			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.862				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	1933	1615	1745	1450	0	1805	3654	1599	1805	3533	0
Flt Permitted	0.556						0.408			0.398		
Satd. Flow (perm)	973	1933	1615	1837	1450	0	775	3654	1599	756	3533	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105		11				136			6
Link Speed (mph)		20			30			45				45
Link Distance (ft)		469			662			1404				567
Travel Time (s)		16.0			15.0			21.3				8.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	0%	0%	0%	10%	0%	4%	1%	0%	1%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	1	59	5	12	0	32	634	129	80	628	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	5	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0	3.0	3.0	7.0		3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	7.0	13.0	7.0	7.0	13.0		7.0	21.5	21.5	7.0	21.5	
Total Split (s)	15.6	20.4	13.2	15.6	20.4		13.2	62.4	62.4	21.6	70.8	
Total Split (%)	13.0%	17.0%	11.0%	13.0%	17.0%		11.0%	52.0%	52.0%	18.0%	59.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0		4.0	6.5	6.5	4.0	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	15.1	11.6	21.0	9.9	7.4		95.0	88.9	88.9	96.4	89.6	
Actuated g/C Ratio	0.13	0.10	0.18	0.08	0.06		0.79	0.74	0.74	0.80	0.75	

Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

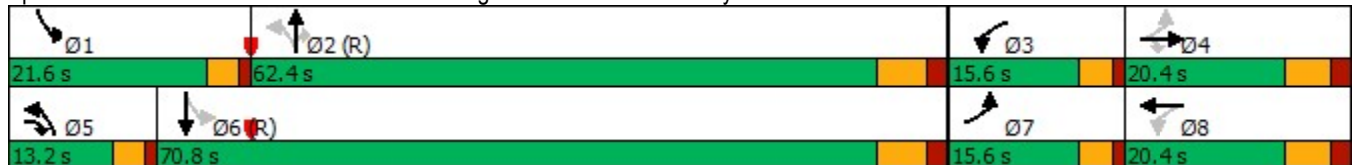


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.34	0.01	0.16	0.03	0.12		0.05	0.23	0.11	0.12	0.24	
Control Delay	49.3	45.0	1.9	40.6	29.7		3.2	5.1	0.5	2.7	5.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	49.3	45.0	1.9	40.6	29.7		3.2	5.1	0.5	2.7	5.1	
LOS	D	D	A	D	C		A	A	A	A	A	
Approach Delay		26.0			32.9			4.3				4.8
Approach LOS		C			C			A				A
Queue Length 50th (ft)	45	1	0	4	1		3	53	1	5	41	
Queue Length 95th (ft)	77	6	6	14	21		8	50	5	17	141	
Internal Link Dist (ft)		389			582			1324			487	
Turn Bay Length (ft)	65			120			205		275	205		
Base Capacity (vph)	205	258	409	229	183		708	2706	1219	777	2639	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.29	0.00	0.14	0.02	0.07		0.05	0.23	0.11	0.10	0.24	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	102 (85%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.34
Intersection Signal Delay:	6.4
Intersection LOS:	A
Intersection Capacity Utilization	43.6%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 3: Saunders Road & Thorngate Lane/Baxter Parkway



Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

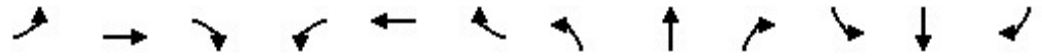
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	2	10	2	0	3	76	774	88	60	436	93
Future Volume (vph)	10	2	10	2	0	3	76	774	88	60	436	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	11	12	12	11	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		250	0		240	295		190	160		295
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (ft)	25			0			215			195		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.873			0.850				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3077	1428	0	3385	1214	0	1805	3689	1599	1805	3725	1615
Flt Permitted	0.950			0.950			0.477			0.311		
Satd. Flow (perm)	3077	1428	0	3385	1214	0	906	3689	1599	591	3725	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			388				97			102
Link Speed (mph)		15			20			45				45
Link Distance (ft)		524			615			1221				1404
Travel Time (s)		23.8			21.0			18.5				21.3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	50%	10%	0%	0%	33%	0%	3%	1%	0%	2%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	13	0	2	3	0	84	851	97	66	479	102
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases							2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.0	14.0		7.0	14.0		7.0	21.5	7.0	7.0	21.5	7.0
Total Split (s)	15.6	24.0		15.6	24.0		18.0	62.4	15.6	18.0	62.4	15.6
Total Split (%)	13.0%	20.0%		13.0%	20.0%		15.0%	52.0%	13.0%	15.0%	52.0%	13.0%
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.5	4.0	4.0	6.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	8.7	8.2		5.7	8.0		97.5	89.6	102.6	97.1	89.4	105.4
Actuated g/C Ratio	0.07	0.07		0.05	0.07		0.81	0.75	0.86	0.81	0.74	0.88

Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

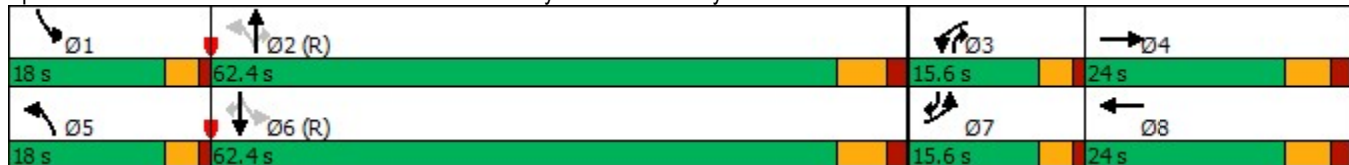


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.12		0.01	0.01		0.11	0.31	0.07	0.12	0.17	0.07
Control Delay	50.8	30.3		54.5	0.0		2.8	6.6	0.9	4.2	7.0	0.3
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	30.3		54.5	0.0		2.8	6.6	0.9	4.2	7.0	0.3
LOS	D	C		D	A		A	A	A	A	A	A
Approach Delay		39.7			21.8			5.7			5.6	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	4	1		1	0		5	82	0	1	39	0
Queue Length 95th (ft)	14	22		5	0		26	184	12	30	102	1
Internal Link Dist (ft)		444			535			1141			1324	
Turn Bay Length (ft)							295		190	160		295
Base Capacity (vph)	339	223		327	511		863	2754	1440	637	2775	1472
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06		0.01	0.01		0.10	0.31	0.07	0.10	0.17	0.07

Intersection Summary

























Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	97 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.31
Intersection Signal Delay:	6.2
Intersection LOS:	A
Intersection Capacity Utilization:	44.1%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 4: Saunders Road & Discover Way/Takeda Parkway



Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	353	1938	290	193	922	330	98	255	171	116	179	153
Future Volume (vph)	353	1938	290	193	922	330	98	255	171	116	179	153
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		290	280		190	245		400	215		400
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	300			300			220			300		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Flt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5250	1538	3335	5103	1583	3242	3619	1524	3367	3762	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5250	1538	3335	5103	1583	3242	3619	1524	3367	3762	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			161			97			117			74
Link Speed (mph)		45			45			40				45
Link Distance (ft)		2578			4572			1567				1221
Travel Time (s)		39.1			69.3			26.7				18.5
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	5%	5%	7%	2%	8%	5%	6%	4%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	357	1958	293	195	931	333	99	258	173	117	181	155
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	9.0	14.0	9.0	9.0	14.0	9.0
Total Split (s)	35.0	80.0	14.0	20.0	65.0	20.0	14.0	20.0	20.0	20.0	26.0	35.0
Total Split (%)	25.0%	57.1%	10.0%	14.3%	46.4%	14.3%	10.0%	14.3%	14.3%	14.3%	18.6%	25.0%
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0
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)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	20.0	79.0	94.0	13.2	72.2	88.4	9.0	17.5	36.8	10.2	18.8	44.8
Actuated g/C Ratio	0.14	0.56	0.67	0.09	0.52	0.63	0.06	0.12	0.26	0.07	0.13	0.32

Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

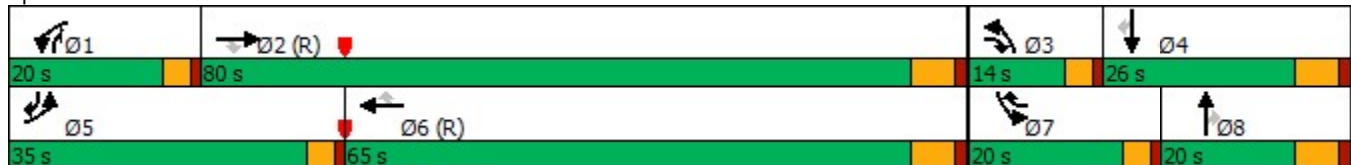
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.73	0.66	0.27	0.62	0.35	0.32	0.48	0.57	0.36	0.48	0.36	0.28
Control Delay	66.0	23.2	4.9	69.5	21.4	9.6	70.8	63.0	16.2	68.4	57.0	18.3
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	66.0	23.2	4.9	69.5	21.4	9.6	70.8	63.0	16.2	68.4	57.0	18.3
LOS	E	C	A	E	C	A	E	E	B	E	E	B
Approach Delay		27.0			25.1			49.1			46.7	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	162	457	42	89	184	94	45	115	38	53	78	52
Queue Length 95th (ft)	208	531	86	129	238	159	76	167	104	85	118	103
Internal Link Dist (ft)		2498			4492			1487			1141	
Turn Bay Length (ft)	205		290	280		190	245		400	215		400
Base Capacity (vph)	760	2962	1095	381	2632	1097	231	453	514	384	539	674
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	0.47	0.66	0.27	0.51	0.35	0.30	0.43	0.57	0.34	0.30	0.34	0.23

Intersection Summary

Area Type: Other
 Cycle Length: 140
 Actuated Cycle Length: 140
 Offset: 115 (82%), Referenced to phase 2:EBT and 6:WBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 30.6
 Intersection Capacity Utilization 68.6%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 5: Saunders Road & Lake Cook Road



HCM 6th TWSC
6: Saunders Road & Hawthorn Lane

03/23/2023

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	1	590	79	1	664
Future Vol, veh/h	9	1	590	79	1	664
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	-	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	1
Mvmt Flow	9	1	615	82	1	692

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1004	349	0	0	697
Stage 1	656	-	-	-	-
Stage 2	348	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	*557	*853	-	-	1219
Stage 1	*799	-	-	-	-
Stage 2	*780	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	*557	*853	-	-	1219
Mov Cap-2 Maneuver	*614	-	-	-	-
Stage 1	*799	-	-	-	-
Stage 2	*779	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	632	1219
HCM Lane V/C Ratio	-	-	0.016	0.001
HCM Control Delay (s)	-	-	10.8	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
No Build Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings

1: Saunders Road & Deerfield Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	528	73	247	648	159	227	242	240	94	111	14
Future Volume (vph)	18	528	73	247	648	159	227	242	240	94	111	14
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		115	200		250	300		0	190		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	145			110			180			115		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.925				0.983
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	3800	1615	1770	3762	1599	1805	3323	0	1805	3487	0
Flt Permitted	0.384			0.366			0.539			0.319		
Satd. Flow (perm)	688	3800	1615	682	3762	1599	1024	3323	0	606	3487	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			82			173		215				10
Link Speed (mph)		40			40			45				35
Link Distance (ft)		3875			4252			1571				800
Travel Time (s)		66.1			72.5			23.8				15.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	0%	2%	1%	1%	0%	0%	1%	0%	1%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	574	79	268	704	173	247	524	0	102	136	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	6.5	21.0	6.5	6.5	21.0	6.5	6.5	14.0		6.5	14.0	
Total Split (s)	12.0	38.4	27.6	21.6	48.0	18.0	27.6	42.0		18.0	32.4	
Total Split (%)	10.0%	32.0%	23.0%	18.0%	40.0%	15.0%	23.0%	35.0%		15.0%	27.0%	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	0.0	1.5	0.0	0.0	1.5	0.0	0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	None	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	66.1	57.0	81.5	76.8	69.9	86.3	37.2	20.8		26.2	12.7	
Actuated g/C Ratio	0.55	0.48	0.68	0.64	0.58	0.72	0.31	0.17		0.22	0.11	

Lanes, Volumes, Timings
 1: Saunders Road & Deerfield Road

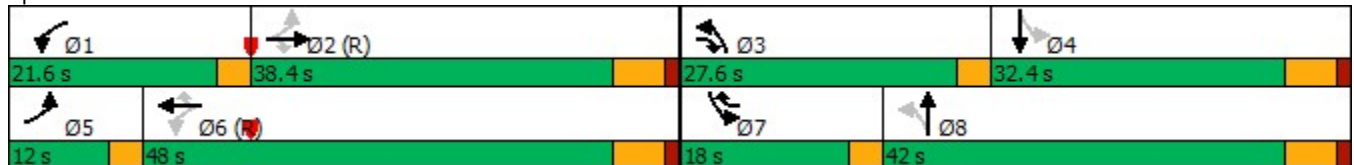
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.32	0.07	0.48	0.32	0.14	0.56	0.70		0.43	0.36	
Control Delay	11.4	22.4	2.2	13.6	15.4	1.7	41.9	39.8		34.7	47.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	11.4	22.4	2.2	13.6	15.4	1.7	41.9	39.8		34.7	47.8	
LOS	B	C	A	B	B	A	D	D		C	D	
Approach Delay		19.7			12.9			40.4			42.2	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	5	140	0	82	127	0	183	149		58	48	
Queue Length 95th (ft)	19	238	20	158	245	28	192	207		88	76	
Internal Link Dist (ft)		3795			4172			1491			720	
Turn Bay Length (ft)	165		115	200		250	300			190		
Base Capacity (vph)	471	1804	1201	607	2190	1252	477	1147		305	774	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.04	0.32	0.07	0.44	0.32	0.14	0.52	0.46		0.33	0.18	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 5 (4%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 24.5
 Intersection Capacity Utilization 63.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B
















Splits and Phases: 1: Saunders Road & Deerfield Road



Lanes, Volumes, Timings

2: Saunders Road & Parkway North

03/23/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	 		 			 
Traffic Volume (vph)	140	73	634	48	8	434
Future Volume (vph)	140	73	634	48	8	434
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	120	0		250	200	
Storage Lanes	1	1		1	1	
Taper Length (ft)	150				180	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3351	1561	3762	1553	1805	3689
Flt Permitted	0.950				0.380	
Satd. Flow (perm)	3351	1561	3762	1553	722	3689
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		76		50		
Link Speed (mph)	25		45			45
Link Distance (ft)	752		555			1571
Travel Time (s)	20.5		8.4			23.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	1%	4%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	146	76	660	50	8	452
Turn Type	Prot	Prot	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	2	8	1	6
Permitted Phases				2	6	
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	15.0	8.0	3.0	15.0
Minimum Split (s)	14.0	14.0	21.0	14.0	7.0	21.0
Total Split (s)	39.6	39.6	69.6	39.6	10.8	80.4
Total Split (%)	33.0%	33.0%	58.0%	33.0%	9.0%	67.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min	None	None	C-Min
Act Effct Green (s)	11.6	11.6	94.5	116.8	98.4	96.4
Actuated g/C Ratio	0.10	0.10	0.79	0.97	0.82	0.80

Lanes, Volumes, Timings
 2: Saunders Road & Parkway North

03/23/2023

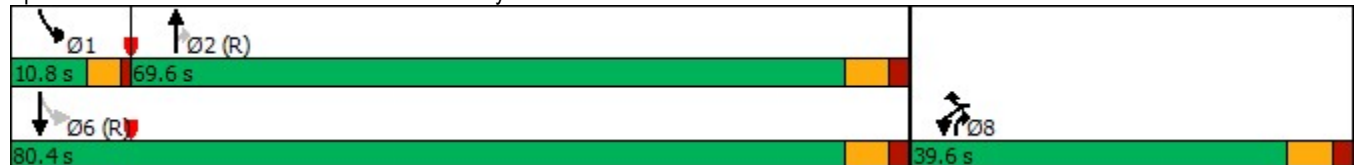


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.45	0.35	0.22	0.03	0.01	0.15
Control Delay	55.3	15.3	3.2	0.1	1.9	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	55.3	15.3	3.2	0.1	1.9	2.1
LOS	E	B	A	A	A	A
Approach Delay	41.6		3.0			2.1
Approach LOS	D		A			A
Queue Length 50th (ft)	56	0	42	0	1	24
Queue Length 95th (ft)	88	46	82	0	m2	35
Internal Link Dist (ft)	672		475			1491
Turn Bay Length (ft)	120			250	200	
Base Capacity (vph)	938	491	2961	1553	653	2964
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.15	0.22	0.03	0.01	0.15

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.45
 Intersection Signal Delay: 8.9 Intersection LOS: A
 Intersection Capacity Utilization 33.3% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Saunders Road & Parkway North



Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

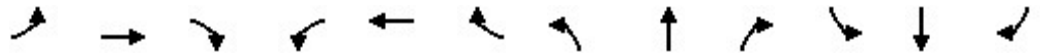
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	0	36	97	0	67	62	571	9	6	561	48
Future Volume (vph)	49	0	36	97	0	67	62	571	9	6	561	48
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	65		0	120		0	205		275	205		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	115			75			170			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.850				0.850		0.988	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1933	1615	1728	1546	0	1805	3762	1455	1543	3491	0
Flt Permitted	0.000			0.950			0.371			0.422		
Satd. Flow (perm)	0	1933	1615	1728	1546	0	705	3762	1455	685	3491	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			311		381				136			11
Link Speed (mph)		20			30			45				45
Link Distance (ft)		469			662			1404				567
Travel Time (s)		16.0			15.0			21.3				8.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	1%	0%	1%	0%	1%	11%	17%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	0	38	103	71	0	66	607	10	6	648	0
Turn Type	pm+pt		pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	5	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0	3.0	3.0	7.0		3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	7.0	13.0	7.0	7.0	13.0		7.0	21.5	21.5	7.0	21.5	
Total Split (s)	15.6	18.0	14.4	20.4	22.8		14.4	67.2	67.2	14.4	67.2	
Total Split (%)	13.0%	15.0%	12.0%	17.0%	19.0%		12.0%	56.0%	56.0%	12.0%	56.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0		4.0	6.5	6.5	4.0	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	9.1		6.6	20.2	7.0		91.4	87.3	87.3	87.6	80.6	
Actuated g/C Ratio	0.08		0.06	0.17	0.06		0.76	0.73	0.73	0.73	0.67	

Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

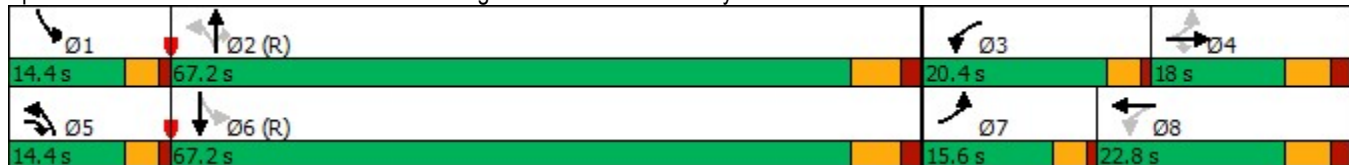


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.40		0.10	0.36	0.16		0.11	0.22	0.01	0.01	0.28	
Control Delay	61.1		0.5	46.0	0.8		4.3	5.7	0.0	5.3	10.7	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	61.1		0.5	46.0	0.8		4.3	5.7	0.0	5.3	10.7	
LOS	E		A	D	A		A	A	A	A	B	
Approach Delay		35.5			27.5			5.5			10.6	
Approach LOS		D			C			A			B	
Queue Length 50th (ft)	39		0	70	0		10	62	0	1	122	
Queue Length 95th (ft)	79		0	119	0		23	130	0	6	142	
Internal Link Dist (ft)		389			582			1324			487	
Turn Bay Length (ft)	65			120			205		275	205		
Base Capacity (vph)	168		424	312	544		634	2737	1095	595	2348	
Starvation Cap Reductn	0		0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0		0	0	0		0	0	0	0	0	
Storage Cap Reductn	0		0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.31		0.09	0.33	0.13		0.10	0.22	0.01	0.01	0.28	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.40
Intersection Signal Delay:	11.7
Intersection LOS:	B
Intersection Capacity Utilization:	46.3%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: Saunders Road & Thorngate Lane/Baxter Parkway



Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

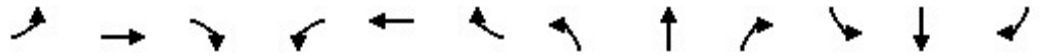
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	59	0	68	60	0	68	6	493	6	1	737	10
Future Volume (vph)	59	0	68	60	0	68	6	493	6	1	737	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	11	12	12	11	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		250	0		240	295		190	160		295
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (ft)	25			0			215			195		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Fr _t		0.850			0.850				0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3319	1599	0	3385	1615	0	1805	3762	1380	1805	3762	1615
Fl _t Permitted	0.950			0.950			0.342			0.460		
Satd. Flow (perm)	3319	1599	0	3385	1615	0	650	3762	1380	874	3762	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		312			412				64			64
Link Speed (mph)		15			20			45				45
Link Distance (ft)		524			615			1221				1404
Travel Time (s)		23.8			21.0			18.5				21.3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	0%	1%	17%	0%	1%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	72	0	63	72	0	6	519	6	1	776	11
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases							2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.0	14.0		7.0	14.0		7.0	21.5	7.0	7.0	21.5	7.0
Total Split (s)	18.0	24.0		18.0	24.0		13.2	64.8	18.0	13.2	64.8	18.0
Total Split (%)	15.0%	20.0%		15.0%	20.0%		11.0%	54.0%	15.0%	11.0%	54.0%	15.0%
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.5	4.0	4.0	6.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	7.6	8.0		7.6	8.0		94.4	92.0	103.7	94.2	91.9	103.6
Actuated g/C Ratio	0.06	0.07		0.06	0.07		0.79	0.77	0.86	0.78	0.77	0.86

Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

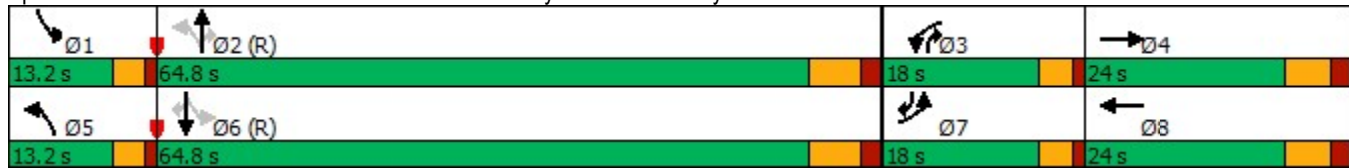


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.18		0.29	0.15		0.01	0.18	0.01	0.00	0.27	0.01
Control Delay	56.7	1.0		56.7	0.6		4.2	5.7	0.0	3.0	3.7	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	1.0		56.7	0.6		4.2	5.7	0.0	3.0	3.7	0.0
LOS	E	A		E	A		A	A	A	A	A	A
Approach Delay		26.8			26.8			5.6			3.7	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	24	0		24	0		1	57	0	0	67	0
Queue Length 95th (ft)	46	0		47	0		5	108	0	m0	76	m0
Internal Link Dist (ft)		444			535			1141			1324	
Turn Bay Length (ft)							295		190	160		295
Base Capacity (vph)	387	505		394	592		603	2883	1252	763	2881	1464
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14		0.16	0.12		0.01	0.18	0.00	0.00	0.27	0.01

Intersection Summary




































Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.29
 Intersection Signal Delay: 8.2 Intersection LOS: A
 Intersection Capacity Utilization 38.1% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Saunders Road & Discover Way/Takeda Parkway



Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 		 	 	 
Traffic Volume (vph)	118	1142	139	145	1613	120	264	267	272	282	267	316
Future Volume (vph)	118	1142	139	145	1613	120	264	267	272	282	267	316
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		290	280		190	245		400	215		400
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	300			300			220			300		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Fr _t			0.850			0.850			0.850			0.850
Fl _t Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	5406	1538	3400	5406	1553	3467	3800	1615	3467	3762	1599
Fl _t Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3467	5406	1538	3400	5406	1553	3467	3800	1615	3467	3762	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			97			115			55			55
Link Speed (mph)		45			45			40				45
Link Distance (ft)		2578			4572			1567				1221
Travel Time (s)		39.1			69.3			26.7				18.5
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	5%	3%	1%	4%	1%	0%	0%	1%	1%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	127	1228	149	156	1734	129	284	287	292	303	287	340
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	9.0	14.0	9.0	9.0	14.0	9.0
Total Split (s)	18.0	76.0	20.0	16.0	74.0	24.0	20.0	24.0	16.0	24.0	28.0	18.0
Total Split (%)	12.9%	54.3%	14.3%	11.4%	52.9%	17.1%	14.3%	17.1%	11.4%	17.1%	20.0%	12.9%
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0
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)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	10.6	73.7	94.7	10.9	74.0	97.0	15.0	18.3	35.3	17.1	20.4	37.0
Actuated g/C Ratio	0.08	0.53	0.68	0.08	0.53	0.69	0.11	0.13	0.25	0.12	0.15	0.26

Lanes, Volumes, Timings
 5: Saunders Road & Lake Cook Road

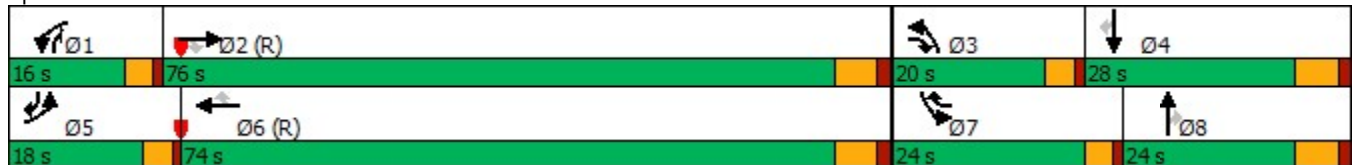
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.48	0.43	0.14	0.59	0.61	0.12	0.76	0.58	0.65	0.72	0.52	0.74
Control Delay	67.8	21.5	3.6	71.6	24.8	2.0	74.6	62.2	45.1	69.0	58.8	48.8
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	67.8	21.5	3.6	71.6	24.8	2.0	74.6	62.2	45.1	69.0	58.8	48.8
LOS	E	C	A	E	C	A	E	E	D	E	E	D
Approach Delay		23.6			26.9			60.5			58.5	
Approach LOS		C			C			E			E	
Queue Length 50th (ft)	58	256	16	71	404	4	130	128	190	138	127	238
Queue Length 95th (ft)	90	298	41	109	481	26	181	181	300	186	175	342
Internal Link Dist (ft)		2498			4492			1487			1141	
Turn Bay Length (ft)	205		290	280		190	245		400	215		400
Base Capacity (vph)	346	2845	1081	291	2856	1141	396	510	459	495	591	500
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	0.37	0.43	0.14	0.54	0.61	0.11	0.72	0.56	0.64	0.61	0.49	0.68

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	80 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.76
Intersection Signal Delay:	37.0
Intersection LOS:	D
Intersection Capacity Utilization:	68.4%
ICU Level of Service:	C
Analysis Period (min):	15

Splits and Phases: 5: Saunders Road & Lake Cook Road



HCM 6th TWSC
6: Saunders Road & Hawthorn Lane

03/23/2023

Intersection

Int Delay, s/veh 0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	41	4	678	9	0	574
Future Vol, veh/h	41	4	678	9	0	574
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	-	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	3
Mvmt Flow	43	4	714	9	0	604

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1021	362	0	0	723
Stage 1	719	-	-	-	-
Stage 2	302	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	*547	*827	-	-	1240
Stage 1	*780	-	-	-	-
Stage 2	*804	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	*547	*827	-	-	1240
Mov Cap-2 Maneuver	*611	-	-	-	-
Stage 1	*780	-	-	-	-
Stage 2	*804	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.2	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	626	1240
HCM Lane V/C Ratio	-	-	0.076	-
HCM Control Delay (s)	-	-	11.2	0
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.2	0

Notes

~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Projected Weekday Morning Peak Hour Conditions

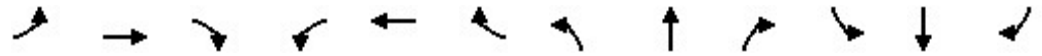
Lanes, Volumes, Timings
1: Saunders Road & Deerfield Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	729	208	219	530	90	72	119	200	157	189	24
Future Volume (vph)	13	729	208	219	530	90	72	119	200	157	189	24
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		115	200		250	300		0	190		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	145			110			180			115		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.906				0.983
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1671	3689	1599	1770	3725	1553	1736	3172	0	1787	3467	0
Flt Permitted	0.430			0.264			0.604			0.256		
Satd. Flow (perm)	756	3689	1599	492	3725	1553	1103	3172	0	482	3467	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			170			100		222				11
Link Speed (mph)		40			40			45				35
Link Distance (ft)		3875			4252			1571				800
Travel Time (s)		66.1			72.5			23.8				15.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	3%	1%	2%	2%	4%	4%	5%	2%	1%	1%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	810	231	243	589	100	80	354	0	174	237	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	6.5	21.0	6.5	6.5	21.0	6.5	6.5	14.0		6.5	14.0	
Total Split (s)	13.2	45.6	13.2	26.4	58.8	26.4	13.2	21.6		26.4	34.8	
Total Split (%)	11.0%	38.0%	11.0%	22.0%	49.0%	22.0%	11.0%	18.0%		22.0%	29.0%	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	0.0	1.5	0.0	0.0	1.5	0.0	0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	None	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	70.2	61.3	76.3	80.1	73.3	94.6	24.6	12.6		33.9	19.0	
Actuated g/C Ratio	0.58	0.51	0.64	0.67	0.61	0.79	0.20	0.10		0.28	0.16	

Lanes, Volumes, Timings
 1: Saunders Road & Deerfield Road

03/23/2023

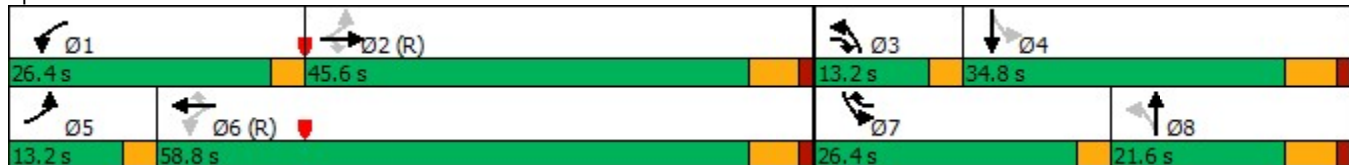


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.03	0.43	0.21	0.52	0.26	0.08	0.29	0.67		0.58	0.43	
Control Delay	10.2	21.6	4.4	13.3	13.1	1.2	27.3	17.1		40.5	44.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.2	21.6	4.4	13.3	13.1	1.2	27.3	17.1		40.5	44.5	
LOS	B	C	A	B	B	A	C	B		D	D	
Approach Delay		17.6			11.8			19.0			42.8	
Approach LOS		B			B			B			D	
Queue Length 50th (ft)	3	195	16	66	94	0	38	61		107	84	
Queue Length 95th (ft)	14	334	68	134	190	16	38	126		149	112	
Internal Link Dist (ft)		3795			4172			1491			720	
Turn Bay Length (ft)	165		115	200		250	300			190		
Base Capacity (vph)	547	1885	1092	577	2276	1343	291	619		390	840	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.03	0.43	0.21	0.42	0.26	0.07	0.27	0.57		0.45	0.28	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 89 (74%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 19.6
 Intersection Capacity Utilization 66.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C













Splits and Phases: 1: Saunders Road & Deerfield Road



Lanes, Volumes, Timings

2: Saunders Road & Parkway North

03/23/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	35	10	432	156	56	589
Future Volume (vph)	35	10	432	156	56	589
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	120	0		250	200	
Storage Lanes	1	1		1	1	
Taper Length (ft)	150				180	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3286	1561	3654	1568	1805	3725
Flt Permitted	0.950				0.467	
Satd. Flow (perm)	3286	1561	3654	1568	887	3725
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		11		166		
Link Speed (mph)	25		45			45
Link Distance (ft)	752		555			1571
Travel Time (s)	20.5		8.4			23.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	0%	4%	3%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	37	11	460	166	60	627
Turn Type	Prot	Prot	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	2	8	1	6
Permitted Phases				2	6	
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	15.0	8.0	3.0	15.0
Minimum Split (s)	14.0	14.0	21.0	14.0	7.0	21.0
Total Split (s)	24.0	24.0	80.4	24.0	15.6	96.0
Total Split (%)	20.0%	20.0%	67.0%	20.0%	13.0%	80.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min	None	None	C-Min
Act Effct Green (s)	8.3	8.3	91.5	107.0	101.7	99.7
Actuated g/C Ratio	0.07	0.07	0.76	0.89	0.85	0.83

Lanes, Volumes, Timings
 2: Saunders Road & Parkway North

03/23/2023

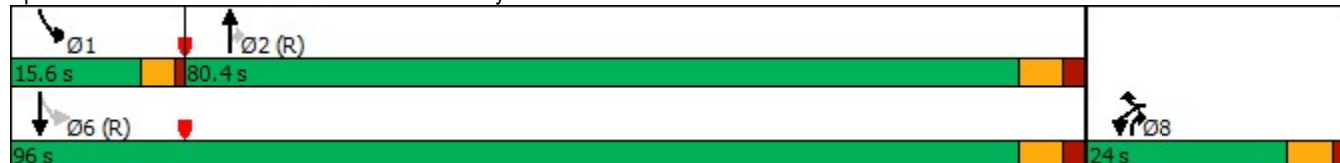


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
v/c Ratio	0.16	0.09	0.17	0.12	0.08	0.20
Control Delay	54.1	27.1	5.6	1.8	1.8	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	54.1	27.1	5.6	1.8	1.8	2.3
LOS	D	C	A	A	A	A
Approach Delay	47.9		4.6			2.2
Approach LOS	D		A			A
Queue Length 50th (ft)	14	0	41	0	5	34
Queue Length 95th (ft)	31	19	154	40	11	74
Internal Link Dist (ft)	672		475			1491
Turn Bay Length (ft)	120			250	200	
Base Capacity (vph)	492	243	2785	1505	840	3093
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.05	0.17	0.11	0.07	0.20

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	69 (58%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle:	45
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.20
Intersection Signal Delay:	4.9
Intersection LOS:	A
Intersection Capacity Utilization	35.8%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 2: Saunders Road & Parkway North



Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

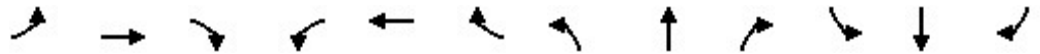
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	0	56	31	0	3	30	617	77	23	573	28
Future Volume (vph)	57	0	56	31	0	3	30	617	77	23	573	28
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	65		0	120		0	205		275	205		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	115			75			170			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.850				0.850		0.993	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1662	1933	1615	1039	1561	0	1752	3689	1392	1736	3533	0
Flt Permitted							0.397			0.403		
Satd. Flow (perm)	1749	1933	1615	1093	1561	0	732	3689	1392	736	3533	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			359		417				136			6
Link Speed (mph)		20			30			45				45
Link Distance (ft)		469			662			1404				567
Travel Time (s)		16.0			15.0			21.3				8.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	5%	0%	0%	68%	0%	0%	3%	3%	16%	4%	1%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	0	59	33	3	0	32	649	81	24	632	0
Turn Type	pm+pt		pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	5	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0	3.0	3.0	7.0		3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	7.0	13.0	7.0	7.0	13.0		7.0	21.5	21.5	7.0	21.5	
Total Split (s)	15.6	20.4	13.2	15.6	20.4		13.2	62.4	62.4	21.6	70.8	
Total Split (%)	13.0%	17.0%	11.0%	13.0%	17.0%		11.0%	52.0%	52.0%	18.0%	59.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0		4.0	6.5	6.5	4.0	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	9.9		8.6	12.1	7.0		99.2	94.2	94.2	98.2	92.2	
Actuated g/C Ratio	0.08		0.07	0.10	0.06		0.83	0.78	0.78	0.82	0.77	

Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

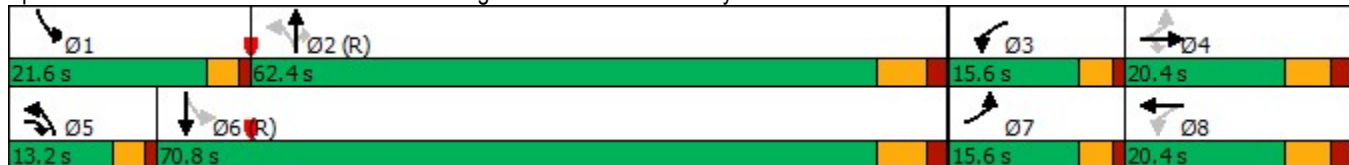


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.43		0.13	0.31	0.01		0.05	0.22	0.07	0.04	0.23	
Control Delay	61.3		0.6	54.4	0.0		2.7	4.1	0.2	2.1	4.5	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	61.3		0.6	54.4	0.0		2.7	4.1	0.2	2.1	4.5	
LOS	E		A	D	A		A	A	A	A	A	
Approach Delay		31.2			49.8			3.6				4.4
Approach LOS		C			D			A				A
Queue Length 50th (ft)	45		0	25	0		3	56	0	1	42	
Queue Length 95th (ft)	88		0	50	0		10	61	1	7	143	
Internal Link Dist (ft)		389			582			1324			487	
Turn Bay Length (ft)	65			120			205		275	205		
Base Capacity (vph)	167		482	127	554		694	2897	1122	769	2716	
Starvation Cap Reductn	0		0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0		0	0	0		0	0	0	0	0	
Storage Cap Reductn	0		0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.36		0.12	0.26	0.01		0.05	0.22	0.07	0.03	0.23	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	102 (85%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.43
Intersection Signal Delay:	7.1
Intersection LOS:	A
Intersection Capacity Utilization:	43.6%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: Saunders Road & Thorngate Lane/Baxter Parkway



Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

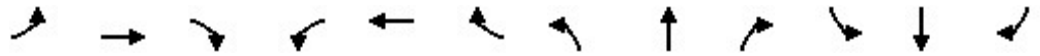


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	2	10	2	0	3	76	743	88	60	466	93
Future Volume (vph)	10	2	10	2	0	3	76	743	88	60	466	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	11	12	12	11	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		250	0		240	295		190	160		295
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (ft)	25			0			215			195		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.873			0.850				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3077	1428	0	3385	1214	0	1805	3654	1599	1805	3585	1615
Flt Permitted	0.950			0.950			0.462			0.325		
Satd. Flow (perm)	3077	1428	0	3385	1214	0	878	3654	1599	618	3585	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			395				97			102
Link Speed (mph)		15			20			45				45
Link Distance (ft)		524			615			1221				1404
Travel Time (s)		23.8			21.0			18.5				21.3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	50%	10%	0%	0%	33%	0%	4%	1%	0%	6%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	13	0	2	3	0	84	816	97	66	512	102
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases							2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.0	14.0		7.0	14.0		7.0	21.5	7.0	7.0	21.5	7.0
Total Split (s)	15.6	24.0		15.6	24.0		18.0	62.4	15.6	18.0	62.4	15.6
Total Split (%)	13.0%	20.0%		13.0%	20.0%		15.0%	52.0%	13.0%	15.0%	52.0%	13.0%
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.5	4.0	4.0	6.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	8.7	8.2		5.7	8.0		97.5	89.6	102.6	97.1	89.4	105.4
Actuated g/C Ratio	0.07	0.07		0.05	0.07		0.81	0.75	0.86	0.81	0.74	0.88

Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

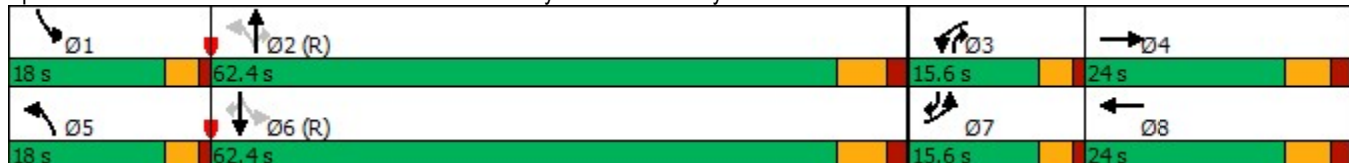


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.12		0.01	0.01		0.11	0.30	0.07	0.12	0.19	0.07
Control Delay	50.8	30.3		54.5	0.0		2.9	6.5	0.9	4.1	6.8	0.4
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.8	30.3		54.5	0.0		2.9	6.5	0.9	4.1	6.8	0.4
LOS	D	C		D	A		A	A	A	A	A	A
Approach Delay		39.7			21.8			5.7			5.6	
Approach LOS		D			C			A			A	
Queue Length 50th (ft)	4	1		1	0		5	78	0	1	44	0
Queue Length 95th (ft)	14	22		5	0		26	176	12	26	109	1
Internal Link Dist (ft)		444			535			1141			1324	
Turn Bay Length (ft)							295		190	160		295
Base Capacity (vph)	339	223		327	517		843	2728	1440	655	2671	1472
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.06		0.01	0.01		0.10	0.30	0.07	0.10	0.19	0.07

Intersection Summary




































Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	97 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.30
Intersection Signal Delay:	6.2
Intersection LOS:	A
Intersection Capacity Utilization	43.3%
ICU Level of Service	A
Analysis Period (min)	15

Splits and Phases: 4: Saunders Road & Discover Way/Takeda Parkway



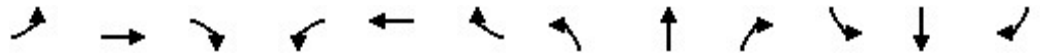
Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		  	  		 	 		 	 	
Traffic Volume (vph)	354	1938	290	193	922	319	98	234	171	137	180	161
Future Volume (vph)	354	1938	290	193	922	319	98	234	171	137	180	161
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		290	280		190	245		400	215		400
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	300			300			220			300		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Flt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	5250	1524	3335	5103	1538	3273	3619	1524	3019	3762	1553
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	5250	1524	3335	5103	1538	3273	3619	1524	3019	3762	1553
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			160			101			117			74
Link Speed (mph)		45			45			40				45
Link Distance (ft)		2578			4572			1567				1221
Travel Time (s)		39.1			69.3			26.7				18.5
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	4%	6%	5%	7%	5%	7%	5%	6%	16%	1%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	358	1958	293	195	931	322	99	236	173	138	182	163
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	9.0	14.0	9.0	9.0	14.0	9.0
Total Split (s)	35.0	80.0	14.0	20.0	65.0	20.0	14.0	20.0	20.0	20.0	26.0	35.0
Total Split (%)	25.0%	57.1%	10.0%	14.3%	46.4%	14.3%	10.0%	14.3%	14.3%	14.3%	18.6%	25.0%
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0
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)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	20.1	78.8	93.8	13.2	72.0	89.7	9.0	16.2	35.4	11.7	18.9	45.0
Actuated g/C Ratio	0.14	0.56	0.67	0.09	0.51	0.64	0.06	0.12	0.25	0.08	0.14	0.32

Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

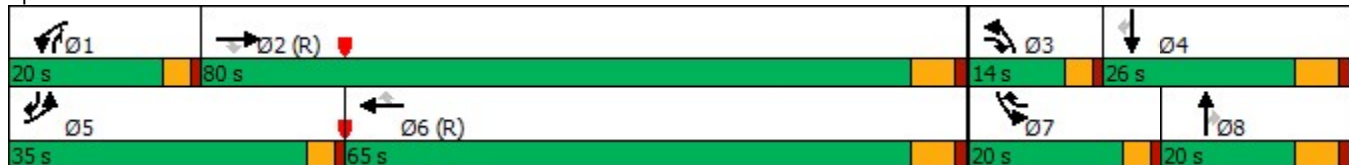


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.73	0.66	0.27	0.62	0.35	0.32	0.47	0.56	0.37	0.55	0.36	0.30
Control Delay	66.0	23.3	5.0	69.5	21.5	8.8	70.5	64.3	16.8	69.4	56.8	19.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	23.3	5.0	69.5	21.5	8.8	70.5	64.3	16.8	69.4	56.8	19.3
LOS	E	C	A	E	C	A	E	E	B	E	E	B
Approach Delay		27.1			25.1			49.3			47.8	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	163	457	42	89	184	85	45	106	39	63	79	58
Queue Length 95th (ft)	208	531	86	129	239	145	76	157	106	96	119	110
Internal Link Dist (ft)		2498			4492			1487			1141	
Turn Bay Length (ft)	205		290	280		190	245		400	215		400
Base Capacity (vph)	760	2956	1084	381	2625	1065	233	418	500	345	539	664
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	0.47	0.66	0.27	0.51	0.35	0.30	0.42	0.56	0.35	0.40	0.34	0.25

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	115 (82%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.73
Intersection Signal Delay:	30.8
Intersection LOS:	C
Intersection Capacity Utilization	68.6%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 5: Saunders Road & Lake Cook Road



HCM 6th TWSC
6: Saunders Road & Hawthorn Lane

03/23/2023

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘↗		↑↑		↘	↑↑
Traffic Vol, veh/h	13	5	583	94	13	611
Future Vol, veh/h	13	5	583	94	13	611
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	-	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	0	4	0	0	2
Mvmt Flow	14	5	607	98	14	636

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1002	353	0	0	705
Stage 1	656	-	-	-	-
Stage 2	346	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	*582	*853	-	-	1209
Stage 1	*799	-	-	-	-
Stage 2	*804	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	*575	*853	-	-	1209
Mov Cap-2 Maneuver	*626	-	-	-	-
Stage 1	*799	-	-	-	-
Stage 2	*795	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	676	1209
HCM Lane V/C Ratio	-	-	0.028	0.011
HCM Control Delay (s)	-	-	10.5	8
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.1	0

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Capacity Analysis Summary Sheets
Projected Weekday Evening Peak Hour Conditions

Lanes, Volumes, Timings

1: Saunders Road & Deerfield Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	528	79	252	648	159	223	224	231	94	113	14
Future Volume (vph)	18	528	79	252	648	159	223	224	231	94	113	14
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	165		115	200		250	300		0	190		0
Storage Lanes	1		1	1		1	1		0	1		0
Taper Length (ft)	145			110			180			115		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850			0.850		0.924				0.984
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1703	3800	1615	1770	3762	1599	1805	3319	0	1805	3495	0
Flt Permitted	0.384			0.370			0.524			0.357		
Satd. Flow (perm)	688	3800	1615	689	3762	1599	996	3319	0	678	3495	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			86			173		224				10
Link Speed (mph)		40			40			45				35
Link Distance (ft)		3875			4252			1571				800
Travel Time (s)		66.1			72.5			23.8				15.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	6%	0%	0%	2%	1%	1%	0%	0%	1%	0%	1%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	20	574	86	274	704	173	242	494	0	102	138	0
Turn Type	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Detector Phase	5	2	3	1	6	7	3	8		7	4	
Switch Phase												
Minimum Initial (s)	3.0	15.0	3.0	3.0	15.0	3.0	3.0	8.0		3.0	8.0	
Minimum Split (s)	6.5	21.0	6.5	6.5	21.0	6.5	6.5	14.0		6.5	14.0	
Total Split (s)	12.0	38.4	27.6	21.6	48.0	18.0	27.6	42.0		18.0	32.4	
Total Split (%)	10.0%	32.0%	23.0%	18.0%	40.0%	15.0%	23.0%	35.0%		15.0%	27.0%	
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5		3.0	4.5	
All-Red Time (s)	0.0	1.5	0.0	0.0	1.5	0.0	0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.0	6.0	3.0	3.0	6.0	3.0	3.0	6.0		3.0	6.0	
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min	None	None	C-Min	None	None	None		None	None	
Act Effct Green (s)	67.7	58.6	83.1	78.3	71.4	87.8	35.7	19.3		24.7	11.2	
Actuated g/C Ratio	0.56	0.49	0.69	0.65	0.60	0.73	0.30	0.16		0.21	0.09	

Lanes, Volumes, Timings
 1: Saunders Road & Deerfield Road

03/23/2023

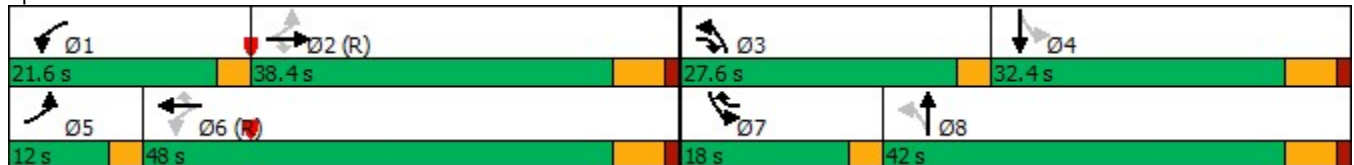
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.05	0.31	0.08	0.48	0.31	0.14	0.57	0.69		0.43	0.41	
Control Delay	10.6	21.1	2.0	12.8	14.4	1.5	45.6	39.4		35.9	50.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	10.6	21.1	2.0	12.8	14.4	1.5	45.6	39.4		35.9	50.5	
LOS	B	C	A	B	B	A	D	D		D	D	
Approach Delay		18.4			12.1			41.4			44.3	
Approach LOS		B			B			D			D	
Queue Length 50th (ft)	5	133	0	79	120	0	192	132		59	50	
Queue Length 95th (ft)	18	229	20	154	235	26	215	190		91	80	
Internal Link Dist (ft)		3795			4172			1491			720	
Turn Bay Length (ft)	165		115	200		250	300			190		
Base Capacity (vph)	481	1855	1222	619	2237	1270	462	1152		306	776	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.04	0.31	0.07	0.44	0.31	0.14	0.52	0.43		0.33	0.18	

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 5 (4%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.69
 Intersection Signal Delay: 24.1
 Intersection Capacity Utilization 63.5%
 Analysis Period (min) 15













Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 1: Saunders Road & Deerfield Road



Lanes, Volumes, Timings
2: Saunders Road & Parkway North

03/23/2023

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	140	73	603	48	8	447
Future Volume (vph)	140	73	603	48	8	447
Ideal Flow (vphpl)	1900	1900	2000	1900	1900	2000
Lane Width (ft)	11	11	12	12	12	12
Grade (%)	0%		0%			0%
Storage Length (ft)	120	0		250	200	
Storage Lanes	1	1		1	1	
Taper Length (ft)	150				180	
Lane Util. Factor	0.97	1.00	0.95	1.00	1.00	0.95
Ped Bike Factor						
Frt		0.850		0.850		
Flt Protected	0.950				0.950	
Satd. Flow (prot)	3351	1561	3800	1553	1805	3689
Flt Permitted	0.950				0.394	
Satd. Flow (perm)	3351	1561	3800	1553	749	3689
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)		76		50		
Link Speed (mph)	25		45			45
Link Distance (ft)	752		555			1571
Travel Time (s)	20.5		8.4			23.8
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	0%	0%	4%	0%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%		0%			0%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	146	76	628	50	8	466
Turn Type	Prot	Prot	NA	pm+ov	pm+pt	NA
Protected Phases	8	8	2	8	1	6
Permitted Phases				2	6	
Detector Phase	8	8	2	8	1	6
Switch Phase						
Minimum Initial (s)	8.0	8.0	15.0	8.0	3.0	15.0
Minimum Split (s)	14.0	14.0	21.0	14.0	7.0	21.0
Total Split (s)	39.6	39.6	69.6	39.6	10.8	80.4
Total Split (%)	33.0%	33.0%	58.0%	33.0%	9.0%	67.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	3.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	1.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	4.0	6.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min	None	None	C-Min
Act Effct Green (s)	11.6	11.6	94.5	116.8	98.4	96.4
Actuated g/C Ratio	0.10	0.10	0.79	0.97	0.82	0.80

Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

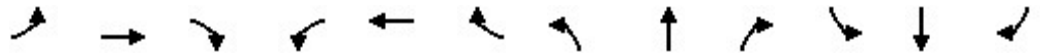
03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	0	36	76	0	21	62	604	36	5	585	48
Future Volume (vph)	49	0	36	76	0	21	62	604	36	5	585	48
Ideal Flow (vphpl)	1900	2000	1900	1900	1900	1900	1900	2000	1900	1900	1900	1900
Lane Width (ft)	11	11	12	11	11	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	65		0	120		0	205		275	205		0
Storage Lanes	1		1	1		0	1		1	1		0
Taper Length (ft)	115			75			170			185		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor												
Frt			0.850		0.850				0.850		0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1711	1933	1615	1407	1561	0	1770	3762	1003	1504	3495	0
Flt Permitted	0.000			0.950			0.364			0.408		
Satd. Flow (perm)	0	1933	1615	1407	1561	0	678	3762	1003	646	3495	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			311		366				136			10
Link Speed (mph)		20			30			45				45
Link Distance (ft)		469			662			1404				567
Travel Time (s)		16.0			15.0			21.3				8.6
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	0%	24%	0%	0%	2%	1%	61%	20%	2%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	52	0	38	81	22	0	66	643	38	5	673	0
Turn Type	pm+pt		pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		
Detector Phase	7	4	5	3	8		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	3.0	7.0	3.0	3.0	7.0		3.0	15.0	15.0	3.0	15.0	
Minimum Split (s)	7.0	13.0	7.0	7.0	13.0		7.0	21.5	21.5	7.0	21.5	
Total Split (s)	15.6	18.0	14.4	20.4	22.8		14.4	67.2	67.2	14.4	67.2	
Total Split (%)	13.0%	15.0%	12.0%	17.0%	19.0%		12.0%	56.0%	56.0%	12.0%	56.0%	
Yellow Time (s)	3.0	4.0	3.0	3.0	4.0		3.0	4.5	4.5	3.0	4.5	
All-Red Time (s)	1.0	2.0	1.0	1.0	2.0		1.0	2.0	2.0	1.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.0	6.0	4.0	4.0	6.0		4.0	6.5	6.5	4.0	6.5	
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None		None	C-Min	C-Min	None	C-Min	
Act Effct Green (s)	9.5		6.6	17.6	7.0		96.2	93.4	93.4	92.4	86.6	
Actuated g/C Ratio	0.08		0.06	0.15	0.06		0.80	0.78	0.78	0.77	0.72	

Lanes, Volumes, Timings

3: Saunders Road & Thorngate Lane/Baxter Parkway

03/23/2023

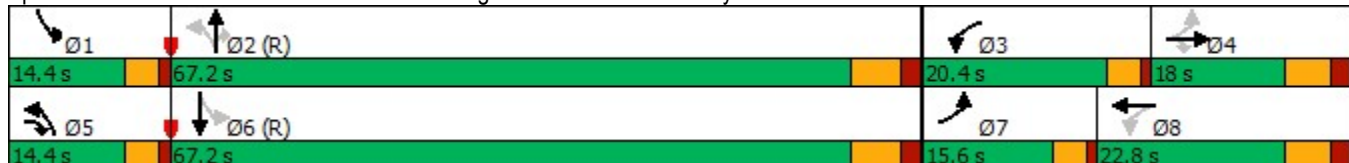


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.38		0.10	0.39	0.05		0.11	0.22	0.05	0.01	0.27	
Control Delay	59.8		0.5	49.3	0.2		4.1	5.1	0.1	6.2	9.9	
Queue Delay	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	59.8		0.5	49.3	0.2		4.1	5.1	0.1	6.2	9.9	
LOS	E		A	D	A		A	A	A	A	A	
Approach Delay		34.8				38.8		4.8				9.9
Approach LOS		C				D		A				A
Queue Length 50th (ft)	39		0	55	0		11	67	0	1	127	
Queue Length 95th (ft)	79		0	100	0		23	131	0	6	143	
Internal Link Dist (ft)		389				582		1324				487
Turn Bay Length (ft)	65			120			205		275	205		
Base Capacity (vph)	168		424	243	533		640	2927	810	591	2526	
Starvation Cap Reductn	0		0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0		0	0	0		0	0	0	0	0	
Storage Cap Reductn	0		0	0	0		0	0	0	0	0	
Reduced v/c Ratio	0.31		0.09	0.33	0.04		0.10	0.22	0.05	0.01	0.27	

Intersection Summary

Area Type:	Other
Cycle Length:	120
Actuated Cycle Length:	120
Offset:	9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle:	50
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.39
Intersection Signal Delay:	10.8
Intersection LOS:	B
Intersection Capacity Utilization:	45.8%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 3: Saunders Road & Thorngate Lane/Baxter Parkway



Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

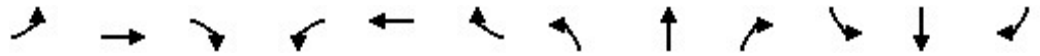


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔		↔↔	↔		↔	↕↕	↔	↔	↕↕	↔
Traffic Volume (vph)	59	0	68	60	0	68	6	553	6	1	743	10
Future Volume (vph)	59	0	68	60	0	68	6	553	6	1	743	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	11	12	12	11	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		250	0		240	295		190	160		295
Storage Lanes	2		1	2		1	1		1	1		1
Taper Length (ft)	25			0			215			195		
Lane Util. Factor	0.97	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt		0.850			0.850				0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3319	1599	0	3385	1615	0	1805	3619	1380	1805	3689	1615
Flt Permitted	0.950			0.950			0.340			0.430		
Satd. Flow (perm)	3319	1599	0	3385	1615	0	646	3619	1380	817	3689	1615
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		310			381				64			64
Link Speed (mph)		15			20			45				45
Link Distance (ft)		524			615			1221				1404
Travel Time (s)		23.8			21.0			18.5				21.3
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	0%	1%	0%	0%	0%	0%	5%	17%	0%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%				0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	62	72	0	63	72	0	6	582	6	1	782	11
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases							2		2	6		6
Detector Phase	7	4		3	8		5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.0	14.0		7.0	14.0		7.0	21.5	7.0	7.0	21.5	7.0
Total Split (s)	18.0	24.0		18.0	24.0		13.2	64.8	18.0	13.2	64.8	18.0
Total Split (%)	15.0%	20.0%		15.0%	20.0%		11.0%	54.0%	15.0%	11.0%	54.0%	15.0%
Yellow Time (s)	3.0	4.0		3.0	4.0		3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	2.0		1.0	2.0		1.0	2.0	1.0	1.0	2.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	6.0		4.0	6.0		4.0	6.5	4.0	4.0	6.5	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Min	None	None	C-Min	None
Act Effct Green (s)	7.6	8.0		7.6	8.0		94.4	92.0	103.7	94.2	91.9	103.6
Actuated g/C Ratio	0.06	0.07		0.06	0.07		0.79	0.77	0.86	0.78	0.77	0.86

Lanes, Volumes, Timings

4: Saunders Road & Discover Way/Takeda Parkway

03/23/2023

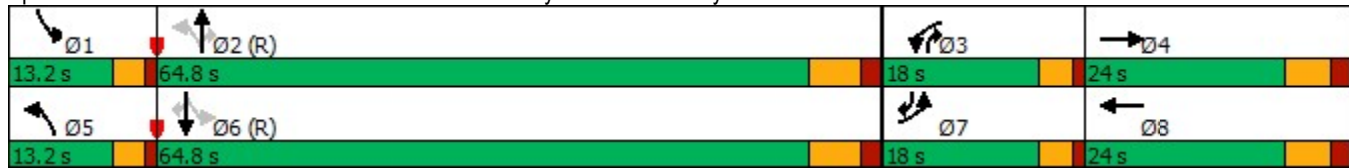


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.29	0.18		0.29	0.16		0.01	0.21	0.01	0.00	0.28	0.01
Control Delay	56.7	1.0		56.7	0.7		4.2	5.9	0.0	3.0	3.4	0.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.7	1.0		56.7	0.7		4.2	5.9	0.0	3.0	3.4	0.0
LOS	E	A		E	A		A	A	A	A	A	A
Approach Delay		26.8			26.8			5.8			3.4	
Approach LOS		C			C			A			A	
Queue Length 50th (ft)	24	0		24	0		1	66	0	0	55	0
Queue Length 95th (ft)	46	0		47	0		5	123	0	m0	68	m0
Internal Link Dist (ft)		444			535			1141			1324	
Turn Bay Length (ft)							295		190	160		295
Base Capacity (vph)	387	503		394	566		600	2774	1252	722	2825	1464
Starvation Cap Reductn	0	0		0	0		0	0	0	0	0	0
Spillback Cap Reductn	0	0		0	0		0	0	0	0	0	0
Storage Cap Reductn	0	0		0	0		0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.14		0.16	0.13		0.01	0.21	0.00	0.00	0.28	0.01

Intersection Summary

Area Type: Other
 Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 14 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.29
 Intersection Signal Delay: 8.0 Intersection LOS: A
 Intersection Capacity Utilization 38.3% ICU Level of Service A
 Analysis Period (min) 15
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 4: Saunders Road & Discover Way/Takeda Parkway



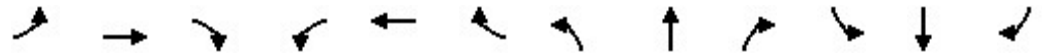
Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	143	1142	139	145	1613	153	264	269	272	193	248	330
Future Volume (vph)	143	1142	139	145	1613	153	264	269	272	193	248	330
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	205		290	280		190	245		400	215		400
Storage Lanes	2		1	2		1	2		1	2		1
Taper Length (ft)	300			300			220			300		
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Ped Bike Factor												
Flt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	5406	1553	3400	5406	1417	3467	3762	1615	3303	3800	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3400	5406	1553	3400	5406	1417	3467	3762	1615	3303	3800	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			108			89			63			55
Link Speed (mph)		45			45			40			45	
Link Distance (ft)		2578			4572			1567			1221	
Travel Time (s)		39.1			69.3			26.7			18.5	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	1%	4%	3%	1%	14%	1%	1%	0%	6%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	154	1228	149	156	1734	165	284	289	292	208	267	355
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Detector Phase	5	2	3	1	6	7	3	8	1	7	4	5
Switch Phase												
Minimum Initial (s)	5.0	15.0	5.0	5.0	15.0	5.0	5.0	8.0	5.0	5.0	8.0	5.0
Minimum Split (s)	9.0	21.0	9.0	9.0	21.0	9.0	9.0	14.0	9.0	9.0	14.0	9.0
Total Split (s)	18.0	76.0	20.0	16.0	74.0	24.0	20.0	24.0	16.0	24.0	28.0	18.0
Total Split (%)	12.9%	54.3%	14.3%	11.4%	52.9%	17.1%	14.3%	17.1%	11.4%	17.1%	20.0%	12.9%
Yellow Time (s)	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0	3.0	4.5	3.0
All-Red Time (s)	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0	1.5	1.0
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)	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0	4.0	6.0	4.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Min	None	None	C-Min	None	None	None	None	None	None	None
Act Effct Green (s)	11.5	74.8	95.9	10.9	74.3	94.4	15.0	20.2	37.1	14.1	19.2	36.7
Actuated g/C Ratio	0.08	0.53	0.68	0.08	0.53	0.67	0.11	0.14	0.26	0.10	0.14	0.26

Lanes, Volumes, Timings
5: Saunders Road & Lake Cook Road

03/23/2023

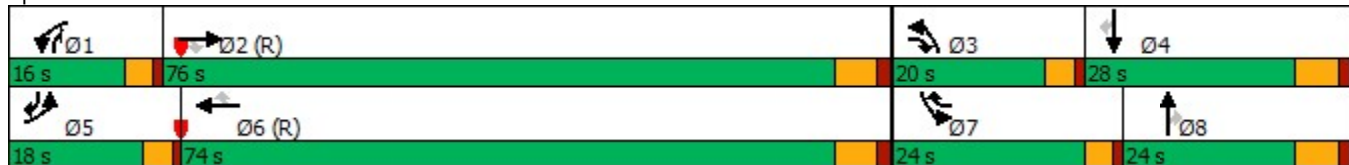


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
v/c Ratio	0.55	0.43	0.14	0.59	0.60	0.17	0.76	0.53	0.62	0.63	0.51	0.78
Control Delay	69.1	20.8	3.0	71.6	24.6	4.6	74.6	59.3	40.9	68.6	59.2	52.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.1	20.8	3.0	71.6	24.6	4.6	74.6	59.3	40.9	68.6	59.2	52.3
LOS	E	C	A	E	C	A	E	E	D	E	E	D
Approach Delay		24.0			26.6			58.1			58.6	
Approach LOS		C			C			E			E	
Queue Length 50th (ft)	70	248	12	71	398	23	130	128	181	95	120	257
Queue Length 95th (ft)	107	298	37	109	481	51	181	180	286	134	164	363
Internal Link Dist (ft)		2498			4492			1487			1141	
Turn Bay Length (ft)	205		290	280		190	245		400	215		400
Base Capacity (vph)	340	2889	1107	291	2867	1040	396	546	485	471	597	483
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	0.45	0.43	0.13	0.54	0.60	0.16	0.72	0.53	0.60	0.44	0.45	0.73

Intersection Summary

Area Type:	Other
Cycle Length:	140
Actuated Cycle Length:	140
Offset:	80 (57%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Natural Cycle:	60
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.78
Intersection Signal Delay:	36.0
Intersection LOS:	D
Intersection Capacity Utilization	69.2%
ICU Level of Service	C
Analysis Period (min)	15

Splits and Phases: 5: Saunders Road & Lake Cook Road



HCM 6th TWSC
6: Saunders Road & Hawthorn Lane

03/23/2023

Intersection						
Int Delay, s/veh	0.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↑↓		↔	↑↑
Traffic Vol, veh/h	65	19	632	42	14	573
Future Vol, veh/h	65	19	632	42	14	573
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	-	-	-	150	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	0	1	0	0	3
Mvmt Flow	68	20	665	44	15	603

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1019	355	0	0	709
Stage 1	687	-	-	-	-
Stage 2	332	-	-	-	-
Critical Hdwy	6.8	6.9	-	-	4.1
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-	2.2
Pot Cap-1 Maneuver	*549	*827	-	-	*1242
Stage 1	*780	-	-	-	-
Stage 2	*804	-	-	-	-
Platoon blocked, %	1	1	-	-	1
Mov Cap-1 Maneuver	*542	*827	-	-	*1242
Mov Cap-2 Maneuver	*607	-	-	-	-
Stage 1	*780	-	-	-	-
Stage 2	*795	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.5	0	0.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	646	* 1242
HCM Lane V/C Ratio	-	-	0.137	0.012
HCM Control Delay (s)	-	-	11.5	7.9
HCM Lane LOS	-	-	B	A
HCM 95th %tile Q(veh)	-	-	0.5	0

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon