**Burlington Development Review Board**
149 Church Street, City Hall
Burlington, VT 05401
www.burlingtonvt.gov/pz/DRB
Telephone: (802) 865-7188
Fax (802) 865-7195

*Brad Rabinowitz*
*AJ LaRosa*
*Austin Hart*
*Springer Harris*
*Geoff Hand*
*Alexandra Zipparo*
*Samantha Tilton*
*Jim Drummond, (Alternate)*
*Zoraya Hightower, (Alternate)*

**BURLINGTON DEVELOPMENT REVIEW BOARD**
**Wednesday November 7th, 2018, 5:00 PM**
**PUBLIC HEARING NOTICE**

**The Burlington Development Review Board will hold a meeting on Wednesday November 7th, 2018 at 5:00pm in Contois Auditorium, City Hall.**

1. **19-0211CU; 449 South Prospect St (RL, Ward 6S) Chris Khamnei**
   Establish duplex and expand driveway

2. **19-0303CU; 196 South Willard St (I, Ward 6S) Ellen Wark**
   Permit existing 3-unit use. No site or exterior building changes.

3. **19-0295SD; 45 Grey Meadow Rd (RL, Ward 4N) Joshua and Shanta Karson**
   Subdivide existing lot into 2 lots

4. **19-0202CA/MA; 44 Lakeside Ave (ELM, Ward 5S) Cloverleaf Properties**
   Re-open Public Hearing; Renovate buildings for assembly, office, and seasonal recreational use. Rework parking and circulation.

Plans may be viewed in the Planning and Zoning Office, (City Hall, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.
Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office is considered public and cannot be kept confidential.
This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/pz/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

*The programs and services of the City of Burlington are accessible to people with disabilities.*
*Individuals who require special arrangements to participate are encouraged to contact the Department of Planning & Zoning at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188 (TTY users: 865-7142).*
Printed on 100% Recycled Paper

**Burlington Development Review Board**
149 Church Street, City Hall
Burlington, VT 05401
www.burlingtonvt.gov/pz/DRB
Telephone: (802) 865-7188
Fax (802) 865-7195

*Brad Rabinowitz*
*AJ LaRosa*
*Austin Hart*
*Springer Harris*
*Geoff Hand*
*Alexandra Zipparo*
*Samantha Tilton*
*Jim Drummond, (Alternate)*
*Zoraya Hightower, (Alternate)*

**BURLINGTON DEVELOPMENT REVIEW BOARD**
**Wednesday November 7th, 2018, 5:00 PM**
**Contois Auditorium, City Hall, 149 Church St, Burlington, VT**
**AGENDA**

**I. Agenda**
**II. Communications**
**III. Minutes**
**IV. Consent**

1. **19-0305CA; 147 South Cove Rd (RL-W, Ward 5S) William and Lara Calfee**
   Installation of temporary modular home. (Project Manager: Scott Gustin)

2. **19-0299CA; 1 King St (DW-PT, Ward 5S) The Spot LLC**
   After the fact paving of gravel parking areas. Also, installation of stormwater improvements. (Project Manager: Scott Gustin)

3. **19-0303CU; 196 South Willard St (I, Ward 6S) Ellen Wark**
   Permit existing 3-unit use. No site or exterior building changes. (Project Manager: Scott Gustin)

4. **19-0295SD; 45 Grey Meadow Rd (RL, Ward 4N) Joshua and Shanta Karson**
   Subdivide existing lot into 2 lots. (Project Manager: Ryan Morrison)

5. **19-0211CU; 449 South Prospect St (RL, Ward 6S) Chris Khamnei**
   Establish duplex and expand driveway. (Project Manager: Scott Gustin)

**V. Public Hearing**

6. **19-0202CA/MA; 44 Lakeside Ave (ELM, Ward 5S) Cloverleaf Properties**
   Re-open Public Hearing; Renovate buildings for assembly, office, and seasonal recreational use. Rework parking and circulation. (Project Manager: Scott Gustin)

**VI. Adjournment**

Plans may be viewed in the Planning and Zoning Office, (City Hall, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.
Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/pz/drb/agendas or the office notice board, one week before the hearing for the order in which items will be heard.

*The programs and services of the City of Burlington are accessible to people with disabilities.*
*Individuals who require special arrangements to participate are encouraged to contact the Department of Planning & Zoning at least 72 hours in advance so that proper accommodations can be arranged. For information call 865-7188 (TTY users: 865-7142).*
Printed on 100% Recycled Paper

Department of Planning and Zoning
149 Church St, City Hall
Burlington, VT 05401

To Whom it may concern:

We, Joshua and Shanta Karson, are writing to request the approval of a lot line adjustment to our property at 45 Grey Meadow Drive in Burlington, VT. We are requesting a subdivision of our lot to create a second lot.

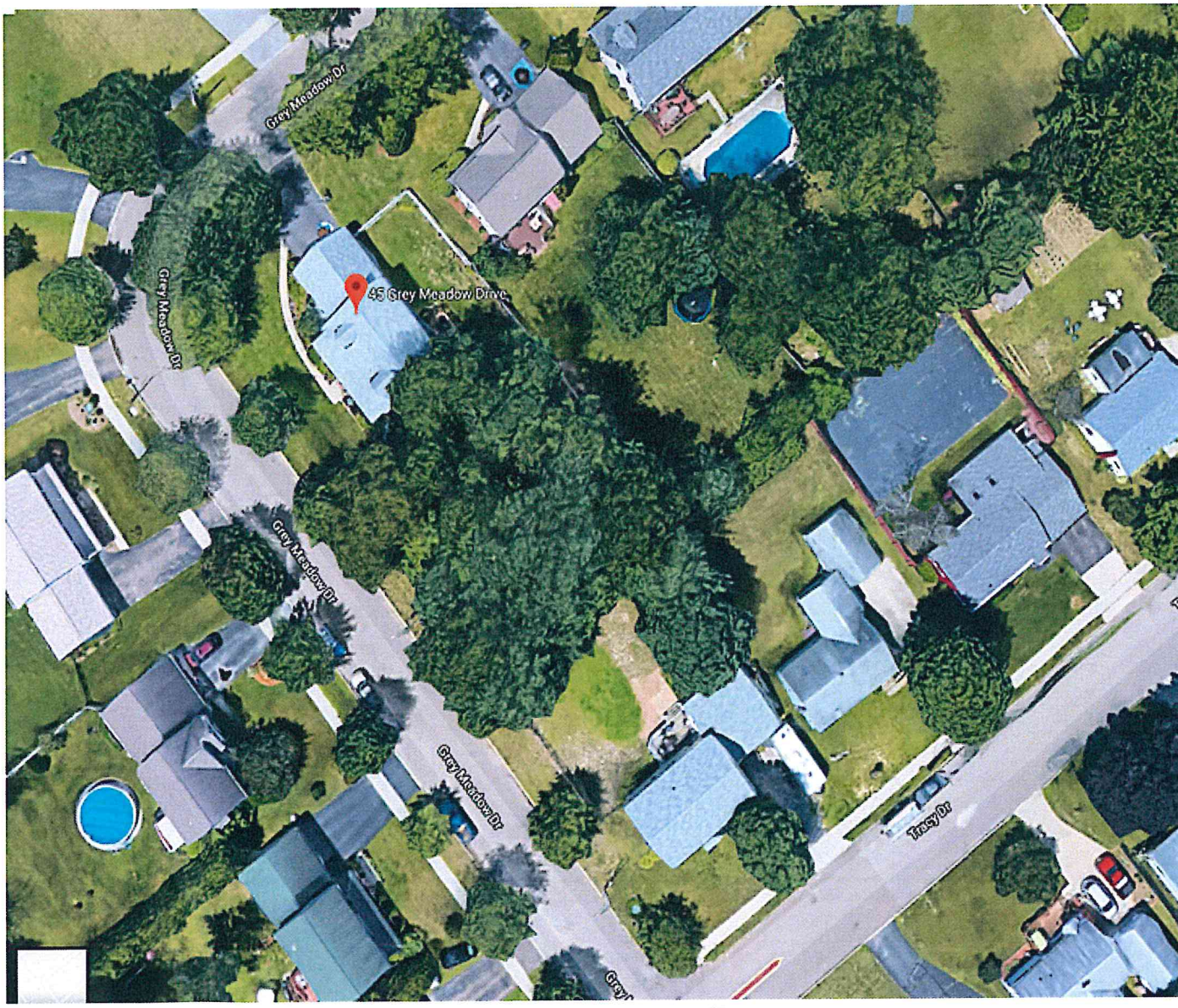
As noted in the submitted designs we hired a professional surveyor, Nate Yager of Latitudes Land Surveying as well as Kevin Worden of Engineering Ventures to assist us in this project.

We request a combined Preliminary and Final review.

Thank you,

Joshua & Shanta Karson

RECEIVED
SEP 27 2018
DEPARTMENT OF
PLANNING & ZONING




RECEIVED
SEP 27 2018
DEPARTMENT OF
PLANNING & ZONING

# 45 Grey Meadow Dr

RECEIVED
SEP 27 2018
DEPARTMENT OF

# 45 Grey Meadow Dr

RECEIVED
SEP 27 2018
DEPARTMENT OF
PLANNING & ZONING

# 45 Grey Meadow Dr

## Ryan Morrison

**From:** Barry Simays
**Sent:** Friday, October 26, 2018 2:47 PM
**To:** Ryan Morrison
**Subject:** RE: 45 Grey Meadow Drive subdivision

Ryan,

No specific comments or concerns from this office with respect to fire department access and water supply (NFPA 1, 2015 ed. Chapter 18 and BCO Chapter 13). Any future construction shall comply with the adopted fire and life safety codes in the State of Vermont and City of Burlington at the time of construction.

Thank you,

BC Barry Simays, CFPS, CFI, IAAI-FIT
Fire Marshal
Burlington Fire Department
132 North Avenue
Burlington, VT 05401
(802) 864-5577
(802) 658-7665 (Fax)
bsimays@burlingtonvt.gov

Please note that this communication and any response to it will be maintained as a public record and may be subject disclosure under the Vermont Public Records Act.

-----Original Message-----
From: Ryan Morrison
Sent: Tuesday, October 23, 2018 3:45 PM
To: Norm Baldwin <nbaldwin@burlingtonvt.gov>; Jesse Bridges <jbridges@burlingtonvt.gov>; Barry Simays <BSimays@burlingtonvt.gov>; Burns, Chris <cburns@burlingtonelectric.com>; Marty Spaulding <mspauldi@bsdvt.org
Subject: 45 Grey Meadow Drive subdivision

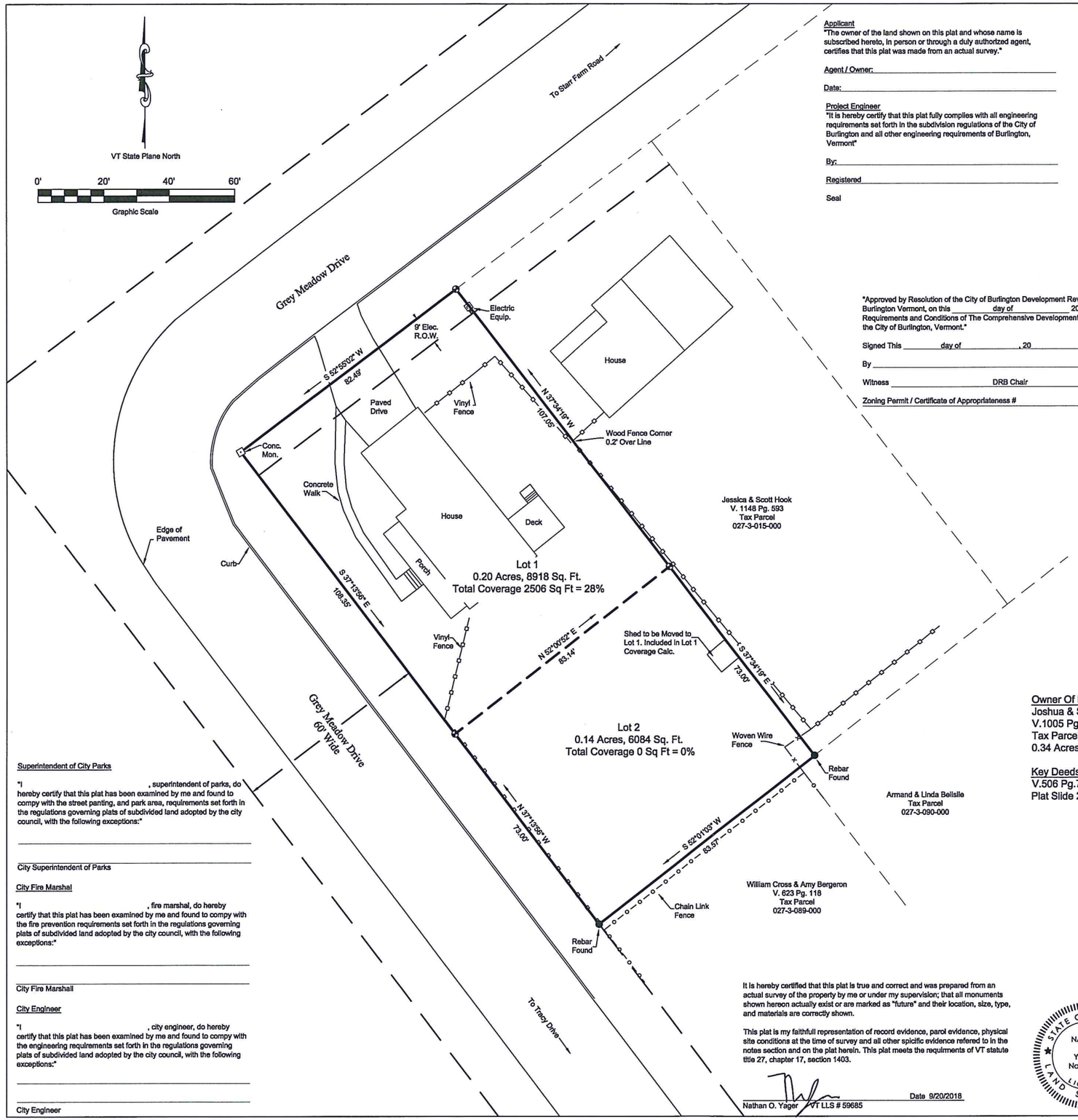
Good afternoon.

Attached is a copy of a subdivision application for 45 Grey Meadow Drive. The subdivision will create a second, vacar lot. This is scheduled for the November 7, 2018 DRB meeting. Please let me know if you have any questions or comments regarding this proposal by October 31, 2018.

Thank you.

Ryan Morrison
Associate Planner
City of Burlington
802-865-7190

"Please note that this communication and any response to it will be maintained as a public record and may be subjec disclosure under the Vermont Public Records Act."




Applicant
"The owner of the land shown on this plat and whose name is subscribed hereto, in person or through a duly authorized agent, certifies that this plat was made from an actual survey."

Agent / Owner: _____

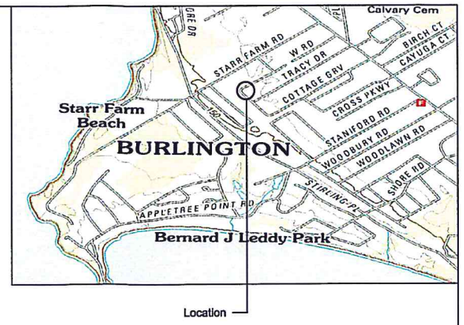
Date: _____

Project Engineer
"It is hereby certify that this plat fully complies with all engineering requirements set forth in the subdivision regulations of the City of Burlington and all other engineering requirements of Burlington, Vermont"

By: _____

Registered _____

Seal




"Approved by Resolution of the City of Burlington Development Review Board, Burlington Vermont, on this _____ day of _____ 20__ Subject to All Requirements and Conditions of The Comprehensive Development Ordinance of the City of Burlington, Vermont."

Signed This _____ day of _____, 20 _____

By _____

Witness _____ DRB Chair

Zoning Permit / Certificate of Appropriateness # _____

Notes

The purpose of this subdivision plat is to divide the lands owned by Joshua and Shanta Karson located at 45 Grey Meadow Drive, tax parcel 027-3-104-016 in two lots, Lot 1, and Lot 2 as shown on plat.

1. This plat is based on records researched in the city of Burlington, VT, land records and a closed loop traverse using a total station in combination with survey grade GPS measurements completed on 7/12/2018. Accuracy of measurements meet the standards for a urban survey.
2. Distances are shown to the hundredth of a foot and bearings are shown to the nearest second for mathematical closure purposes only.
3. Bearings shown are in reference to Vermont State Plane North established using dual frequency survey grade GPS observations on site.
4. An attempt has been made to identify or delineate easements, rights of way, lease lands, encroachment, etc. observed in the field or found in the land records. Additional encumbrances may exist that are not shown on this plat.
5. Map references: survey plat slide numbers in the Burlington land records: Slide 299B.
6. Capped rebar set are 5/8" dia with aluminum cap "Latitudes Land Survey VT59685 NH1005" set flush with existing grade.
7. All parcels are in zoning district RL (Residential-Low Density).

RECEIVED
SEP 27 2018
DEPARTMENT

Legend

- Rebar To Be Set Upon Approval
- Rebar Found As Noted
- Wood Fence
- Metal Fence
- Concrete Monument Found As Noted
- Subdivision Line
- Boundary Line Existing

Owner Of Record:
Joshua & Shanta Karson
V.1005 Pg.700
Tax Parcel 027-3-104-016
0.34 Acres, 15003 Sq. Ft.

Key Deeds:
V.506 Pg.704
Plat Slide 299B

Superintendent of City Parks

"I _____, superintendent of parks, do hereby certify that this plat has been examined by me and found to compy with the street panting, and park area, requirements set forth in the regulations governing plats of subdivided land adopted by the city council, with the following exceptions:"

_____

_____
City Superintendent of Parks

City Fire Marshal

"I _____, fire marshal, do hereby certify that this plat has been examined by me and found to compy with the fire prevention requirements set forth in the regulations governing plats of subdivided land adopted by the city council, with the following exceptions:"

_____

_____
City Fire Marshall

City Engineer

"I _____, city engineer, do hereby certify that this plat has been examined by me and found to compy with the engineering requirements set forth in the regulations governing plats of subdivided land adopted by the city council, with the following exceptions:"

_____

_____
City Engineer

It is hereby certified that this plat is true and correct and was prepared from an actual survey of the property by me or under my supervision; that all monuments shown hereon actually exist or are marked as "future" and their location, size, type, and materials are correctly shown.

This plat is my faithfull representation of record evidence, parol evidence, physical site conditions at the time of survey and all other spicific evidence refered to in the notes section and on the plat herein. This plat meets the requirments of VT statute title 27, chapter 17, section 1403.

Nathan O. Yager VT LLS # 59685 Date 9/20/2018

STATE OF VERMONT
NATHAN O. YAGER
No. 59685
LICENSED LAND SURVEYOR

# Boundary Subdivision
## Lands Of
# Joshua & Shanta Karson
45 Grey Meadow Drive,
Burlington, Vermont

**LATITUDES Land Surveying**
1 Mill St. Suite 169, Burlington, VT
latitudeslandsurveying.com

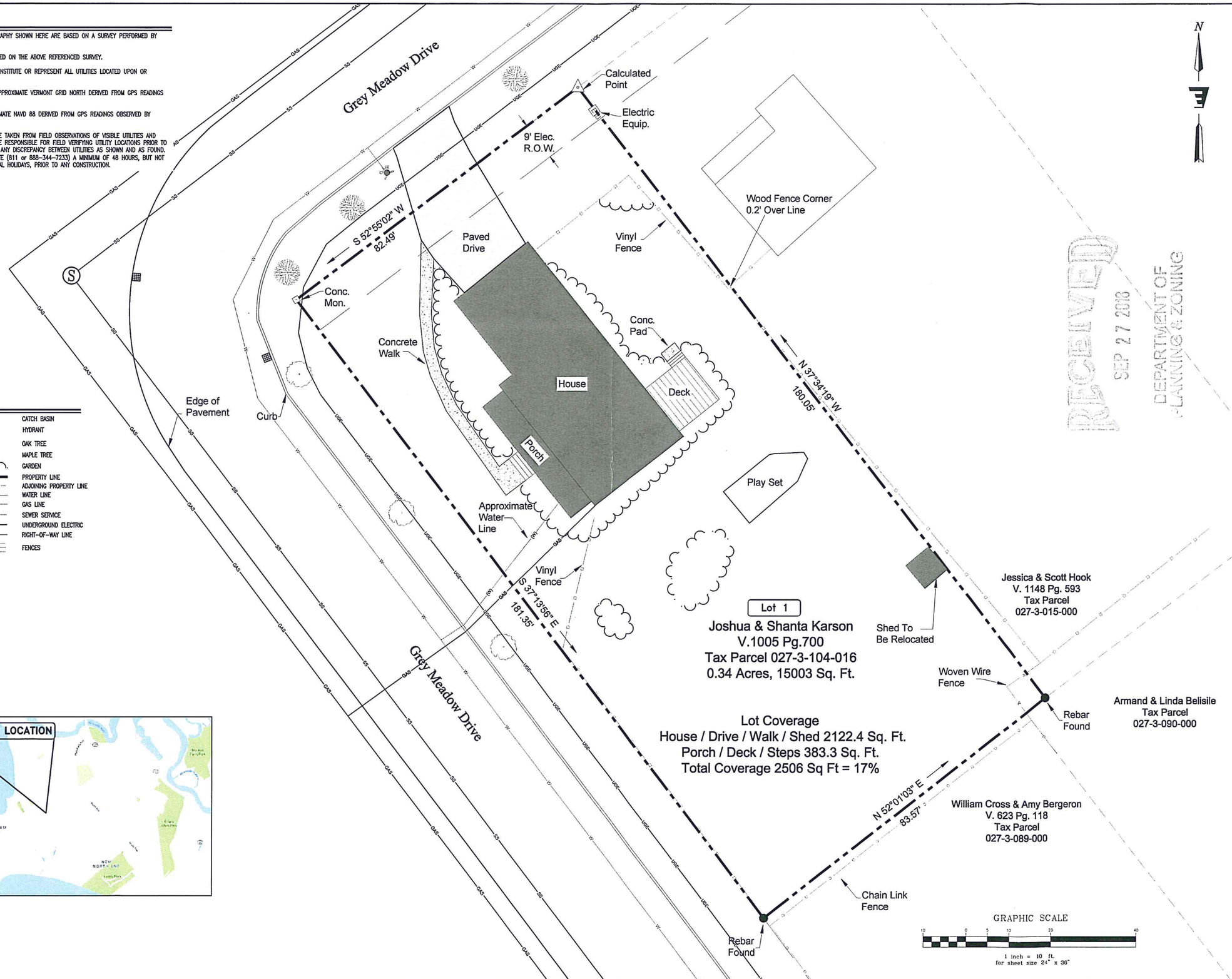
Date 9/20/2018
Scale 1"=20'
Project #092718

## SURVEY NOTES

1. EXISTING PHYSICAL FEATURES AND TOPOGRAPHY SHOWN HERE ARE BASED ON A SURVEY PERFORMED BY LATITUDES LAND SURVEYING, LLC.
2. PROPERTY LINES DEPICTED HERE ARE BASED ON THE ABOVE REFERENCED SURVEY.
3. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
4. NORTH ORIENTATION IS REFERENCED TO APPROXIMATE VERMONT GRID NORTH DERIVED FROM GPS READINGS OBSERVED BY OTHERS.
5. ELEVATIONS ARE REFERENCED TO APPROXIMATE NAVD 88 DERIVED FROM GPS READINGS OBSERVED BY OTHERS.
6. EXISTING UTILITIES SHOWN ON PLANS WERE TAKEN FROM FIELD OBSERVATIONS OF VISIBLE UTILITIES AND PAINTED MARKINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING UTILITY LOCATIONS PRIOR TO COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCY BETWEEN UTILITIES AS SHOWN AND AS FOUND. THE CONTRACTOR SHALL CONTACT DIG SAFE (811 or 888-344-7233) A MINIMUM OF 48 HOURS, BUT NOT INCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO ANY CONSTRUCTION.

## LEGEND

- CATCH BASIN
- HYDRANT
- OAK TREE
- MAPLE TREE
- GARDEN
- PROPERTY LINE
- ADJOINING PROPERTY LINE
- WATER LINE
- GAS LINE
- SEWER SERVICE
- UNDERGROUND ELECTRIC
- RIGHT-OF-WAY LINE
- FENCES




RECEIVED
SEP 27 2018
DEPARTMENT OF PLANNING & ZONING

Stamp

| Rev. No. | Description | Chk'd. |
|---|---|---|
| | | |


ENGINEERING VENTURES PC
208 Flynn Avenue, Suite 2A Burlington, VT 05401
tel. 802.863.6225 • fax 802.863.6306
83 Mechanic Street, Suite 250A Lebanon, NH 03766
tel. 603.448.0333 • fax 603.448.0353
www.engineeringventures.com


Client: Joshua & Shanta Karson
45 Grey Meadow Drive
Burlington, VT 05408

Sheet Title: Existing Conditions Plan

Project Title: 2-Lot Subdivision
Burlington, VT

| | |
|---|---|
| Designed By: | KW |
| Checked By: | KW |
| Drawn By: | TLB |
| Scale: | As Noted |
| Date: | August 2018 |

C1.0

EV#17638

## GENERAL NOTES

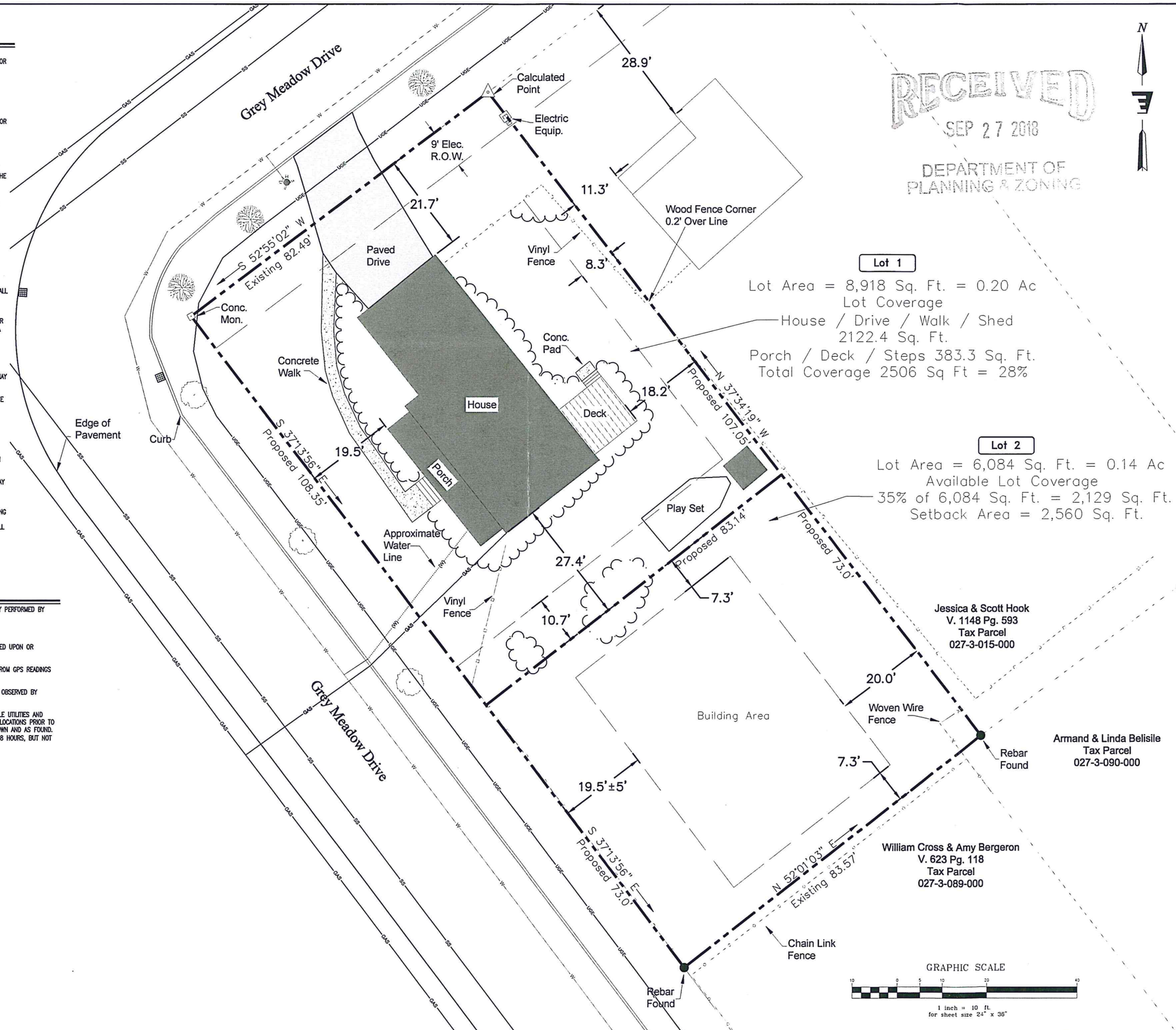
1. EXACT OBJECT LOCATIONS MAY DIFFER FROM THAT AS SHOWN, AND ADDITIONAL SUB-SURFACE AND SURFACE UTILITIES AND STRUCTURES MAY EXIST. THE CONTRACTOR IS TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK.
2. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATION UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITIES. ALL DISCREPANCIES SHALL BE REPORTED TO THE OWNER AND ENGINEER. SITE CONTRACTOR SHALL CALL UTILITY LOCATOR SERVICE AND UTILITY OWNERS 72 HOURS, EXCLUSIVE OF WEEKENDS AND HOLIDAYS, PRIOR TO ANY DIGGING, DRILLING, OR BLASTING.
   A. DIG SAFE (TEL: #811)
   B. NON DIG SAFE MEMBER FACILITY OPERATORS IF KNOWN. A LIST OF DIG SAFE MEMBERS BY STATE CAN BE FOUND ON THE DIG SAFE WEB SITE WWW.DIGSAFE.COM
3. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY CONDITIONS THAT VARY FROM THOSE SHOWN ON THE PLANS. THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL FROM THE ENGINEER.
4. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT.
5. THE CONTRACTOR SHALL RESTORE LAWNS, DRIVEWAYS, CULVERTS, SIGNS AND OTHER PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED TO EXISTING CONDITIONS OR BETTER AS DETERMINED BY THE ENGINEER. ANY DAMAGED TREES, SHRUBS AND/OR HEDGES SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE, UNLESS NOTED OTHERWISE.
6. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
7. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, AND CERTIFICATES.
8. THE CONTRACTOR WILL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE ENGINEER OR OWNER SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A NEW HAMPSHIRE STATE LICENSED LAND SURVEYOR.
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS, AND COORDINATE WORK WITH ALL CONTRACTS FOR THE SITE.
10. IT IS THE CONTRACTOR'S RESPONSIBILITY TO CONDUCT EXPLORATORY TEST PITS AS MAY BE REQUIRED TO DETERMINE UNDERGROUND CONDITIONS.
11. ALL TRENCH EXCAVATION AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH THE LATEST OSHA REGULATIONS FOR CONSTRUCTION.
12. CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DRAINAGE DURING THE COURSE OF WORK.
13. MAINTAIN FLOW FOR ALL EXISTING UTILITIES, UNLESS NOTED OTHERWISE.
14. ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
15. CONTRACTOR TO GRADE ALL AREAS ON THE SITE TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS AND IMPERVIOUS SURFACES.
16. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL FIELD LAYOUT. THE CONTRACTOR SHALL PROVIDE MARKED-UP AS-BUILT PLANS FOR ALL UTILITIES SHOWING CONNECTIONS, BENDS, VALVES, LENGTHS OF LINES AND INVERTS. AS-BUILT PLANS SHALL BE REVIEWED BY THE OWNER AND HIS REPRESENTATIVES BEFORE UTILITIES WILL BE ACCEPTED.
17. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION, MONITORING, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION CONTROL MEASURES AND TAKING PRECAUTIONARY STEPS TO AVOID ANY SEDIMENT TRANSFER TO NEIGHBORING SITES OR WATERS OF THE STATE.

## SURVEY NOTES

1. EXISTING PHYSICAL FEATURES AND TOPOGRAPHY SHOWN HERE ARE BASED ON A SURVEY PERFORMED BY LATITUDES LAND SURVEYING, LLC.
2. PROPERTY LINES DEPICTED HERE ARE BASED ON THE ABOVE REFERENCED SURVEY.
3. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES.
4. NORTH ORIENTATION IS REFERENCED TO APPROXIMATE VERMONT GRID NORTH DERIVED FROM GPS READINGS OBSERVED BY OTHERS.
5. ELEVATIONS ARE REFERENCED TO APPROXIMATE NAVD 88 DERIVED FROM GPS READINGS OBSERVED BY OTHERS.
6. EXISTING UTILITIES SHOWN ON PLANS WERE TAKEN FROM FIELD OBSERVATIONS OF VISIBLE UTILITIES AND PAINTED MARKINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING UTILITY LOCATIONS PRIOR TO COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCY BETWEEN UTILITIES AS SHOWN AND AS FOUND. THE CONTRACTOR SHALL CONTACT DIG SAFE (811 or 888-344-7233) A MINIMUM OF 48 HOURS, BUT NOT INCLUDING SATURDAYS, SUNDAYS AND LEGAL HOLIDAYS, PRIOR TO ANY CONSTRUCTION.

## LEGEND

- CATCH BASIN
- HYDRANT
- OAK TREE
- MAPLE TREE
- GARDEN
- PROPERTY LINE
- ADJOINING PROPERTY LINE
- WATER LINE
- GAS LINE
- SEWER SERVICE
- UNDERGROUND ELECTRIC
- RIGHT-OF-WAY LINE
- SETBACKS PER ZONING REGULATIONS
- FENCES




RECEIVED
SEP 27 2018
DEPARTMENT OF PLANNING & ZONING

**Lot 1**
Lot Area = 8,918 Sq. Ft. = 0.20 Ac
Lot Coverage
House / Drive / Walk / Shed
2122.4 Sq. Ft.
Porch / Deck / Steps 383.3 Sq. Ft.
Total Coverage 2506 Sq Ft = 28%

**Lot 2**
Lot Area = 6,084 Sq. Ft. = 0.14 Ac
Available Lot Coverage
35% of 6,084 Sq. Ft. = 2,129 Sq. Ft.
Setback Area = 2,560 Sq. Ft.

Stamp

| Rev. No. | Description | Chkd. |
|---|---|---|


ENGINEERING VENTURES PC
208 Flynn Avenue, Suite 2A Burlington, VT 05401
tel: 802.863.6225 • fax: 802.863.6306
85 Mechanic Street, Suite 3304, Lebanon, NH 03766
tel: 603.643.3311 • fax: 603.643.3391
www.engineeringventures.com


Client: Joshua & Shanta Karson
45 Grey Meadow Drive
Burlington, VT 05408

Sheet Title: Site Plan

Project Title: 2-Lot Subdivision
Burlington, VT

| | |
|---|---|
| Designed By: | KW |
| Checked By: | KW |
| Drawn By: | TLB |
| Scale: | As Noted |
| Date: | August 2018 |

C1.1

EV#17638

**Department of Planning and Zoning**
149 Church Street
Burlington, VT 05401
http://www.burlingtonvt.gov/PZ/
Telephone: (802) 865-7188
(802) 865-7195 (FAX)

*David E. White, FAICP, Director*
*Meagan Tuttle, AICP, Comprehensive Planner*
*Jay Appleton, Senior GIS/IT Programmer/Analyst*
*Scott Gustin, AICP, CFM, Principal Planner*
*Mary O'Neil, AICP, Principal Planner*
*Ryan Morrison, Associate Planner*
*Layne Darfler, Planning Technician*
*Shaleigh Draper, Planning & Zoning Clerk*

**TO:** Development Review Board
**FROM:** Ryan Morrison
**DATE:** November 7, 2018
**RE:** 19-0295SD; 45 Grey Meadow Drive

---

**Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.**

Zone: RL Ward: 4N

Owner/Representative: Joshua & Shanta Karson

**Request:** Combined preliminary & final plat review of a 2-lot subdivision; no proposed development.

**Applicable Regulations:**
Article 2 (Administrative Mechanisms), Article 4 (Zoning Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Review Standards), Article 10 (Subdivision Review)

**Background Information:**
The applicant is seeking combined preliminary and final plat approval to subdivide an existing lot into two lots. The 15,003 sq ft property contains a single family residence and a small accessory structure (shed). The proposed subdivision will place the existing home and shed on Lot 1, and leave Lot 2 as vacant for future development.

The proposal has been forwarded to the City Engineer's office, to the Burlington Fire Marshal, to the Director of the Parks & Recreation Department, to Burlington Electric, and to the Burlington School District as required. The Fire Marshall provided a response and has no specific comments or concerns with the proposal, and noted that any future construction will have to comply with the adopted fire and life safety codes of the State of Vermont and City of Burlington at the time of construction. No other comments have been received. Should comments be received prior to DRB action, they will be considered as necessary.

Previous zoning actions for this property are noted below.

- **Zoning Permit 94-269**; construction of a single family home on an existing vacant lot. Approved January 4, 1994.

- **Non-Applicability of Zoning Permit 08-107NA**; replace existing asphalt roof with same material. Approved August 1, 2007.
- **Zoning Permit 08-719FC**; install a 4 ft white vinyl picket fence with gates in the rear yard. Approved May 16, 2008.

**Recommendation:** **Consent Approval** as per, and subject to, the findings and conditions below:

**I. Findings**
**Article 2: Administrative Mechanisms**
**Part 7, Enforcement:**
**Section 2.7.8 Withhold Permit**
Per this standard, the applicant is required to remedy all violations and close out all zoning permits issued after July 13, 1989 prior to issuance of a Certificate of Occupancy for this permit. There have been no violation notices placed on the property. There is, however, one permit (ZP08-719FC) that has not been closed out. **Affirmative finding as conditioned**

**Article 4: Zoning Maps & Districts**
***Sec. 4.4.5, Residential Districts:***
***(a) Purpose***
***(1) Residential Low Density (RL)***
*The RL district is intended primarily for low-density residential development in the form of single detached dwellings and duplexes. The district is typically characterized by a compact and cohesive residential development pattern of the respective neighborhood's development history.*
The property is located in the RL zone. The subdivision will result in the existing single family residence situating on Lot 1, and Lot 2 will be vacant. Both lots will exceed 6,000 sf in size (Lot 1: 8,918 sf and Lot 2: 6,084 sf), thus meeting the minimum lot size requirement for single family development. **Affirmative finding**

***(b) Dimensional Standards & Density***
The minimum lot size in the RL zone is 6,000 sf for a single family use, and 10,000 sf for a duplex use. Based on the proposed lot sizes, single family development will be the maximum allowable use.

Minimum lot frontage is 60 ft. Grey Meadow Drive turns around the property, creating a 'corner lot' appearance to the property. Proposed Lot 1 will be on this corner, and will have a combined frontage of 190.84 ft, and Lot 2 will have 73 ft of frontage.

Building setbacks of the RL zone require: a front yard setback to be the average of 2 adjacent lots on both sides, +/- 5 feet; a side yard setback of 10% of lot width; and a rear yard setback of 25% of lot depth. With the new property line separating Lot 1 from Lot 2, the side yard setback for the existing home will be 28 ft, well in excess of the minimum side yard setback requirement of 10.8 ft. The home on Lot 1 will maintain all other setbacks as existing. The relocated shed will have to comply with the setback standards of Sec. 5.2.5 (b) 5 CDO, which allows for 5 ft

minimum side and rear yard setbacks for accessory structures less than 15 ft in height. Future development on Lot 2 will have to comply with all setback requirements.

After the subdivision, lot coverage on Lot 1 will be 28%, below the maximum coverage allowance of 35%. Lot 2 will be vacant.

Building height is not applicable to this proposal; however, future development on Lot 2 will be limited to a height of 35 ft.

The resultant lots (Lot 1: 0.20 acres; Lot 2: 0.13 acres) are sufficiently large enough for single family density (7.0 units/acre) in RL zone. **Affirmative finding as conditioned**

***(c) Permitted & Conditional Uses***
No new construction is included in this proposal. Single family dwellings are permitted uses in the RL zone, while duplexes are conditional uses. Neither lot will be large enough (≥ 10,000 sf) to allow for a duplex. **Affirmative finding**

***(d) District Specific Regulations***
***1. Setbacks***
**A. Encroachment for Residential Driveways**
Not applicable.

**B. Encroachment into the Waterfront Setback**
Not applicable.

***2. Height***
**A. Exceptions in the Waterfront RM District**
Not applicable.

***3. Lot Coverage***
**A. Exceptions for Accessory Residential Features**
Not applicable.

***4. Accessory Residential Structures and Uses***
*An accessory structure and/or use as provided under Sec. 5.1.1 and 5.1.2 customarily incidental and subordinate to a principal residential use, including but not limited to private garages, carriage houses, barns, storage sheds...*
The applicant intends to relocate the existing shed within the area of future Lot 1. Lot 1's lot coverage has been calculated to include this (28%). A**ffirmative finding**

***5. Residential Density***
Not applicable.

***6. Uses***
Not applicable.

***7. Residential Development Bonuses***
Not applicable.

**Article 5: Citywide General Regulations**
***Sec. 5.2.2, Required Frontage of Access***
The existing lot has 263.84 ft of frontage on Grey Meadow Drive. After the subdivision, both lots will continue to have frontage on Grey Meadow Drive (Lot 1: 190.84 ft; Lot 2: 73 ft) **Affirmative finding**

***Sec. 5.2.3, Lot Coverage Requirements***
See Sec. 4.4.5 (b) above.

***Sec. 5.2.4, Buildable Area Calculation***
Not applicable. The existing lot is 15,003 sq. ft. (less than 2 acres).

***Sec. 5.2.5, Setbacks***
See Sec. 4.4.5 (b) above.

***Sec. 5.2.6, Building Height Limits***
See Sec. 4.4.5 (b) above.

***Sec. 5.2.7, Density and Intensity of Development Calculations***
See Sec. 4.4.5 (b) above.

***Sec. 5.5.1, Nuisance Regulations***
Nothing in the proposal appears to constitute a nuisance under this criterion. **Affirmative finding**

***Sec. 5.5.2, Outdoor Lighting***
Not applicable.

***Sec. 5.5.3, Stormwater and Erosion Control***
Not applicable.

**Article 6: Development Review Standards:**
***Part 1, Land Division Design Standards***
***Sec. 6.1.2, Review Standards***
*(a) Protection of important natural features*
The subdivision itself will have no impact on important natural features. **Affirmative finding**

*(b) Block size and arrangement*
Not applicable.

*(c) Arrangement of Lots*

Both lots will front on Grey Meadow Drive, with Lot 1 having two distinct frontages since Grey Meadow Drive turns and creates a 'corner lot' appearance. Lot sizes in this neighborhood vary generally between 8,000 and 15,000 sf. **Affirmative finding**

*Interior lot lines extending from a street should be perpendicular or radial to the street right-of-way line to the greatest extent possible.*
The new property line dividing Lot 1 from Lot 2 is perpendicular to Grey Meadow Drive. **Affirmative finding**

*(d) Connectivity of streets within the city street grid*
Not applicable.

*(e) Connectivity of sidewalks, trails, and natural systems*
Not applicable.

***Part 2, Site Plan Design Standards***
***Sec. 6.2.2 (i), Vehicular Access***
*Curb cuts shall be arranged and limited in number to reduce congestion and improve traffic safety.*
Lot 1 will be served by an existing curb cut. A new curb cut for Lot 2 will require Dept. of Public Works approval. **Affirmative finding**

**Article 10: Subdivision Review**

***Sec. 10.1.7, Combined Preliminary and Final Plat***

> *For subdivisions that will create fewer than five (5) lots or dwelling units, and are not otherwise subject to consideration under Major Impact Review pursuant to the provisions of Article 3, Part 5 or Planned Unit Development pursuant to the provisions of Article 11, the applicant may request, and the DRB may authorize the hearings on preliminary and final subdivision plats to be combined into a single public hearing.*
>
> *In such cases, the submission requirements for final subdivision plats pursuant to Sec. 10.1.9 shall be met at the time of application, and decisions by the DRB shall be based on the project's conformance with the review criteria for both preliminary (Sec. 10.1.8(d)) and final plats (Sec. 10.1.9(d)).*

The proposed subdivision is for two lots and thus qualifies to be considered in a combined hearing. **Affirmative finding**

***Sec. 10.1.9, Final Plat Review***
*(a) Final Plat and Construction Detail Submission Requirements*
*6. Final Plat Specifications*
This criterion requires that the final plat plan be drawn at a scale of 1" = 40', and be on sheets sized 24" x 36" with one inch margins on three sides and a two inch margin on the side to be bound. The final plat plan will need to meet these scale and margin size requirements. **Affirmative finding as conditioned**

*(d) Review Criteria*

*1. The requirements of the underlying zoning district(s) and all applicable overlay district(s) as set forth in Article 4*
See Article 4 of these findings.

*3. The requirements of Article 5 with regard to Special Uses and Performance Standards as applicable*
See Article 5 of these findings.

*4. The land division and site development principles and design standards in Article 6.*
See Article 6 of these findings.

***Sec. 10.1.11, Recording of Final Plats***
*(a) Certifications and Endorsement*
Prior to recording the mylar plat plan, all of the required endorsement blocks must be depicted on the plan itself and signed by the appropriate individuals. **Affirmative finding as conditioned**

**II. Conditions of Approval**

1. **Within 180 days of the date of final approval**, the subdivision plat mylar, with all applicable endorsement signatures, shall be filed with the City Clerk per Sec. 10.1.11 of the Comprehensive Development Ordinance. Failure to do so shall render void the final plat approval.
2. **Prior to filing the mylar** in the city land records, the subdivision plat shall be revised to reflect the following:
    a. Sheet size of 24" x 36" with one-inch margins on three sides and a two-inch margin on the side to be bound.
    b. A scale of 1" = 40'.
    c. Obtain signatures for all certifications and endorsements required under Sec. 10.1.11 (a) of the Comprehensive Development Ordinance. These signature blocks shall be included on the final plat plan.
    d. The relocated shed on Lot 1.
3. Per **Section 2.7.8, Withhold Permit**, all zoning permits issued after July 13, 1989 must be closed out (issued a Certificate of Occupancy) prior to issuance of a Final Certificate of Occupancy for this permit. See attached permit list. Upon expiration of this new zoning permit, no additional zoning permits may be issued until it, and all prior zoning permits, have been closed out with final certificate(s) of occupancy. It is recommended that certificates of occupancy for the old zoning permits be sought prior to seeking a certificate of occupancy for the new zoning permit.
4. No new construction is included in this subdivision approval.
5. Standard permit conditions 1-15.

**Department of Planning and Zoning**
149 Church Street
Burlington, VT 05401
Telephone:(802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7142 (TTY)

*David White, FAICP, Director*
*Meagan Tuttle, AICP, Comprehensive Planner*
*Jay Appleton, GIS Manager*
*Scott Gustin, AICP, CFM, Principal Planner*
*Mary O'Neil, AICP, Principal Planner*
*Ryan Morrison, Associate Planner*
*Layne Darfler, Planning Technician*
*Shaleigh Draper, Zoning Clerk*

**TO:** Development Review Board
**FROM:** Scott Gustin
**DATE:** November 7, 2018
**RE:** 19-0305CA; 147 South Cove Rd

==========

**Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE <u>MUST</u> ATTEND THE MEETING.**

Zone: WRL Ward: 4N

Owner/Applicant: William & Lara Calfee

**Request:** Installation of temporary modular home.

**Applicable Regulations:**
Article 3 (Applications, Permits, and Project Reviews), Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines), Article 8 (Parking)

**Background Information:**
The applicant is seeking approval to install a temporary modular home. It will function as a single family dwelling. The prior dwelling was demolished under separate permit. The applicant is requesting this temporary home in order to live onsite while plans for a new permanent home are developed and constructed. The new home will be placed in approximately the same location as the demolished home. Little site disturbance is included in this application. The applicant anticipates the home to be in place for up to two years.

The Conservation Board will review this project at their November 5, 2018 meeting. Recommendations made by that Board will be provided for DRB consideration on November 7th.

Previous zoning actions for this property are noted below:
- 4/4/18, Approval to demolish existing home

**Recommendation:** **<u>Consent approval</u>** as per, and subject to, the following findings and conditions.

**I. Findings**

**Article 3: Applications, Permits, and Project Reviews:**
***Sec. 3.3.2, Applicability***

The proposed home is subject to this criterion per the provisions of *Part 3: Impact Fees* of Article 3. However, as the new home is smaller than the one it replaces, the net gain in area is 0. As a result, no impact fee is due. **(Affirmative finding)**

**Article 4: Maps & Districts**
***Sec. 4.4.5, Residential Districts:***
***(a) Purpose***
***(2) Waterfront Residential Low Density (WRL)***
The subject property is located in the WRL zone. This zone is intended primarily for low density residential development in the form of single detached dwellings and duplexes with consideration given to design review. The proposed single family home is consistent with this purpose. **(Affirmative finding)**

***(b) Dimensional Standards & Density***
The 1 residential unit on the 0.64 acre lot is acceptable and well below the 7 units/acre density limit.

Lot coverage will be minimal at 10.3%, well below the 35% limit permitted.

The temporary home will be set in basically the same location as the demolished home. Side yard setbacks remain compliant. The prior home encroached into the 75' lakeshore setback. It was set 50' from the 100' elevation. A deck associated with the temporary home will retain this 50'setback. The home itself will be set back further. The demolished home was set back 66' from the front property line, whereas a 45' +/- 5' setback/build-to line (based on the average of neighboring homes) applies. The site plans depict the new home set back even further. It must be shifted towards the road to at least the prior setback to retain the nonconformity or to be made compliant.

The modular home is just a single story and will be up to 14' tall. This height is below the 35' height limit. **(Affirmative finding as conditioned)**

***(c) Permitted & Conditional Uses***
The proposed single family home is a permitted use in the WRL zone. **(Affirmative finding)**

***(d) District Specific Regulations***
***1. Setbacks***
*B. Encroachment into the Waterfront Setback.*
*(i) Replacement of Existing Structure*
The prior home sat 50' from the 100' lakeshore elevation. As noted above, the standard setback requirement is 75.' This provision allows replacement structures to encroach into the standard 75' setback so long as the area or extent of encroachment does not increase. As noted above, existing encroachment will be retained without expansion. **(Affirmative finding)**

***2. Height***
No height bonuses are being sought. **(Not applicable)**

***3. Lot Coverage***
No lot coverage bonuses are being sought. **(Not applicable)**

***4. Accessory Residential Structures and Uses***
**(Not applicable)**

***5. Residential Density***
The home shall be occupied by a "family" as defined in the Comprehensive Development Ordinance. **(Affirmative finding)**

***6. Uses***
No neighborhood commercial use is included in this proposal. **(Not applicable)**

***7. Residential Development Bonuses***
No development bonuses are being sought. **(Not applicable)**

***Sec. 4.5.4, Natural Resource Protection Overlay (NR) District***
***(c) District Specific Regulations: Riparian and Littoral Conservation Zone***
The subject property is located entirely within the Riparian and Littoral Conservation Zone (250' width from the 100' lakeshore elevation). This overlay zone limits the clearing of vegetation and new stormwater outfalls. Several trees alongside the existing driveway will be removed. No trees to the west (lake side) of the home will be removed. No new stormwater outfalls are proposed. The size of the project precludes the need for a post-construction stormwater management plan. The Conservation Board will review this project November 5, 2018. Their recommendation will be provided for consideration by the Development Review Board. **(Affirmative finding)**

***(f) District Specific Regulations: Special Flood Hazard Area***
This lakeshore property is partially affected by the special flood hazard area (SFHA). All areas along the lakeshore under the 102' elevation are within the SFHA. No part of this development is located within the SFHA. **(Affirmative finding)**

**Article 5: Citywide General Regulations**
***Sec. 5.2.3, Lot Coverage Requirements***
See Sec. 4.4.5 (b) above.

***Sec. 5.2.4, Buildable Area Calculation***
**(Not applicable)**

***Sec. 5.2.5, Setbacks***
See Sec. 4.4.5 (b) above.

***Sec. 5.2.6, Building Height Limits***
See Sec. 4.4.5 (b) above.

***Sec. 5.2.7, Density and Intensity of Development Calculations***
See Sec. 4.4.5 (b) above.

***Sec. 5.5.1, Nuisance Regulations***
Nothing in the proposal appears to result in creating a nuisance under this criterion. **(Affirmative finding)**

***Sec. 5.5.2, Outdoor Lighting***
New outdoor lighting is proposed and consists of building mounted fixtures to illuminate building entries. Locations are noted, and cutsheets have been provided. They are acceptable residential fixtures generating low levels of illumination. **(Affirmative finding)**

***Sec. 5.5.3, Stormwater and Erosion Control***
An erosion control plan was reviewed and approved as part of the demolition permit for the prior residence. Earth disturbance associated with this current application is minimal and does not trigger the need for an additional erosion control plan. As noted above, the project is too small to trigger the need for a post-construction stormwater management plan. **(Affirmative finding)**

**Article 6: Development Review Standards**
***Part 1, Land Division Design Standards***
**(Not applicable)**

***Part 2, Site Plan Design Standards***
***Sec. 6.2.2, Review Standards***
*(a) Protection of important natural features*
The property is fairly wooded with some interspersed lawn area. Some tree removal is proposed as noted previously; however, most of the existing trees will remain. The lakeshore itself is a significant natural feature and is protected by the riparian and littoral conservation zone. This overlay limits tree clearing and also triggers review of new stormwater features. As noted previously, no new stormwater outfalls or related features are proposed. **(Affirmative finding)**

*(b) Topographical alterations*
The property slopes down away from the road and towards the lake. No topographic alterations are included in this proposal. **(Affirmative finding)**

*(c) Protection of important public views*
The subject property is not affected by any identified public view corridor. The temporary home will not adversely affect public views from, or to, the lake. **(Affirmative finding)**

*(d) Protection of important cultural resources*
The property is within an archaeologically sensitive area; however, there are no specifically identified archaeologic sites on the property. This archaeological sensitivity stems from the property's lakeshore location. The temporary modular home will be set atop helical piers with very little earth work. Disturbance of archaeologically sensitive features, if present, is unlikely. **(Affirmative finding)**

*(e) Supporting the use of alternative energy*
Solar panels are evident in the elevation drawings. The application contemplates a net zero building. **(Affirmative finding)**

*(f) Brownfield sites*
The subject property is not an identified brownfield. **(Affirmative finding)**

*(g) Provide for nature's events*

As noted above, no post-construction stormwater management plan is needed.

Entries into the home are sheltered, and ample room is available onsite for seasonal snow storage. **(Affirmative finding)**

*(h) Building location and orientation*
The modular home will be set in approximately the same location as the previous home. It will face the street with a well-defined front entry. No garage is included, street-facing or otherwise. **(Affirmative finding)**

*(i) Vehicular access*
The existing private driveway will provide access to the site. **(Affirmative finding)**

*(j) Pedestrian access*
This criterion calls for a front walkway to connect the front door of the home to the public sidewalk along the street. In this case, there is no public sidewalk on this side of South Cove Road, and the proposed home is temporary. Upon application for a permanent residence, a walkway connecting the front door to the street will be required. **(Affirmative finding as conditioned)**

*(k) Accessibility for the handicapped*
No handicap accessibility is evident or required with this proposal. **(Affirmative finding)**

*(l) Parking and circulation*
The driveway contains sufficient space for the two required parking spaces. Circulation is simple for pulling in and backing out. **(Affirmative finding)**

*(m) Landscaping and fences*
Trees to be cleared are noted. Proposed areas of new landscaping are noted on the site plan. An accompanying list of species notes the types and variety of new plantings. **(Affirmative finding)**

*(n) Public plazas and open space*
No public plaza or open space is included or required in this proposal. **(Not applicable)**

*(o) Outdoor lighting*
See Sec. 5.5.2.

*(p) Integrate infrastructure into the design*
No ground mounted mechanical equipment is included in the project plans. If any is proposed, it must be depicted and screened. **(Affirmative finding as conditioned)**

***Part 3, Architectural Design Standards***
***Sec. 6.3.2, Review Standards***
*(a) Relate development to its environment*
1. *Massing, Height, and Scale*
The proposed home is comparatively small within the context of the surrounding neighborhood. It is a single story and is broken into several distinct components that further reduce the perceived scale of the building. A monotonous shoe-box appearance is avoided by

way of varying building sections and color schemes. Features such as an entry canopy and decking add variety to the overall project design. **(Affirmative finding)**

*2. Roofs and Rooflines*
The modular home has a flat roof. While unusual for a detached single family home, the flat roof compliments the boxy, angular nature of the proposed home. **(Affirmative finding)**

*3. Building Openings*
Proposed fenestration reflects the angular appearance of the structure. It is appropriately scaled and placed in consistent rhythm throughout the building. **(Affirmative finding)**

*(b) Protection of important architectural resources*
The site is presently vacant. Placement of the proposed home will not adversely impact Burlington's wealth of historic buildings. **(Affirmative finding)**

*(c) Protection of important public views*
See 6.2.2 (c) above.

*(d) Provide an active and inviting street edge*
The front entry to the modular home is clearly articulated. There are no large blank walls or expanses of roof. Fenestration, roof variations, and related features work successfully to provide an active and inviting street elevation. **(Affirmative finding)**

*(e) Quality of materials*
The proposed home will be clad in vertical cedar siding and corrugated cor-ten siding. Triple-pane casement windows will be installed throughout. Decking material is not noted and must be. **(Affirmative finding as conditioned)**

*(f) Reduce energy utilization*
The proposed building must comply with the current energy efficiency standards of Burlington and the State of Vermont. Seemingly, the building will meet or exceed these standards. **(Affirmative finding as conditioned)**

*(g) Make advertising features complimentary to the site*
No advertising is included in this proposal.

*(h) Integrate infrastructure into the building design*
Rooftop solar panels are depicted on the elevation drawings. No other rooftop equipment is depicted. Utility meter locations are not noted. Their location must be noted and screened. **(Affirmative finding as conditioned)**

*(i) Make spaces safe and secure*
The proposed building must comply with the city's current egress requirements. **(Affirmative finding as conditioned)**

**Article 8: Parking**
***Sec. 8.1.8, Minimum Off-Street Parking Requirements***

The property is located in the Neighborhood Parking District. As such, two parking spaces are required (2 spaces per dwelling unit). As noted previously, the driveway contains sufficient space for the two required parking spaces. **(Affirmative finding)**

## II. Conditions of Approval

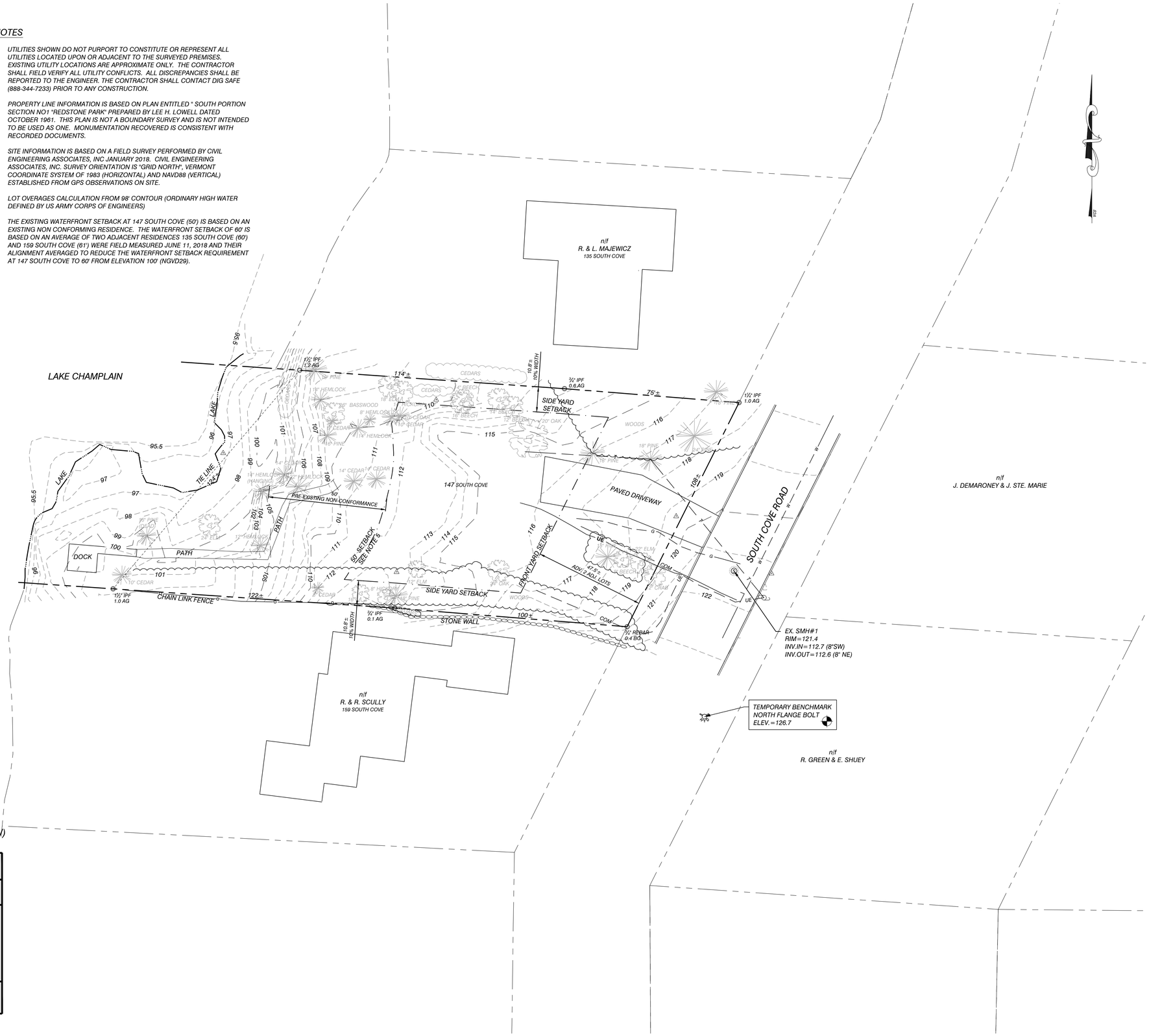
1. **Prior to release of the zoning permit**, revised application materials addressing the following shall be submitted, subject to staff review and approval:
    a. House location shifted towards the road to match the prior home's nonconforming setback or to meet the required front yard setback;
    b. Notation of decking materials;
    c. Notation of utility meter locations and screening; and,
    d. Location and screening of any exterior mechanical equipment, if proposed.
2. A front walkway connecting to the road will be required with construction of a future home on this property.
3. The temporary home shall be removed from the property within two years of the date of approval of this zoning permit. An extension may be sought per Sec. 3.2.9 (d), *Zoning Permits*, of the Comprehensive Development Ordinance.
4. The Applicant/Property Owner is responsible for obtaining all necessary Zoning Permits and Building Permits through the Department of Public Works as well as other permit(s) as may be required, and shall meet all energy efficiency codes of the city and state as required.
5. Standard permit conditions 1-15.

## LEGEND

- APPROXIMATE PROPERTY LINE
- APPROXIMATE SETBACK LINE
- 100 — EXISTING CONTOUR
- EXISTING CURB
- EXISTING FENCE
- EXISTING GRAVEL
- EXISTING PAVEMENT
- EXISTING GUARD RAIL
- E — EXISTING ELECTRIC
- FM — EXISTING FORCEMAIN
- G — EXISTING GAS
- ST — EXISTING STORM
- S — EXISTING GRAVITY SEWER
- T — EXISTING TELEPHONE
- W — EXISTING WATER
- COM — EXISTING COMMUNICATIONS
- EXISTING SEWER MANHOLE
- EXISTING HYDRANT
- EXISTING UTILITY POLE
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EDGE OF BRUSH/WOODS
- IRON ROD/PIPE FOUND
- PROJECT BENCHMARK
- AG / BG — ABOVE GRADE / BELOW GRADE
- CONTROL POINT

## NOTES

1. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITY CONFLICTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL CONTACT DIG SAFE (888-344-7233) PRIOR TO ANY CONSTRUCTION.
2. PROPERTY LINE INFORMATION IS BASED ON PLAN ENTITLED " SOUTH PORTION SECTION NO1 "REDSTONE PARK" PREPARED BY LEE H. LOWELL DATED OCTOBER 1961. THIS PLAN IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS ONE. MONUMENTATION RECOVERED IS CONSISTENT WITH RECORDED DOCUMENTS.
3. SITE INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY CIVIL ENGINEERING ASSOCIATES, INC JANUARY 2018. CIVIL ENGINEERING ASSOCIATES, INC. SURVEY ORIENTATION IS "GRID NORTH", VERMONT COORDINATE SYSTEM OF 1983 (HORIZONTAL) AND NAVD88 (VERTICAL) ESTABLISHED FROM GPS OBSERVATIONS ON SITE.
4. LOT OVERAGES CALCULATION FROM 98' CONTOUR (ORDINARY HIGH WATER DEFINED BY US ARMY CORPS OF ENGINEERS)
5. THE EXISTING WATERFRONT SETBACK AT 147 SOUTH COVE (50') IS BASED ON AN EXISTING NON CONFORMING RESIDENCE. THE WATERFRONT SETBACK OF 60' IS BASED ON AN AVERAGE OF TWO ADJACENT RESIDENCES 135 SOUTH COVE (60') AND 159 SOUTH COVE (61') WERE FIELD MEASURED JUNE 11, 2018 AND THEIR ALIGNMENT AVERAGED TO REDUCE THE WATERFRONT SETBACK REQUIREMENT AT 147 SOUTH COVE TO 60' FROM ELEVATION 100' (NGVD29).




ZONING DISTRICT:
WATERFRONT RESIDENTIAL LOW DENISTY (RL-W)
PARCEL: 22,020 S.F. (0.5 AC.) (SEE NOTE 4)

| CATEGORY | ZONING REGULATIONS | EXISTING |
|---|---|---|
| COVERAGE | | |
| TOTAL | 35% | 16.5% |
| SETBACK | | |
| FRONT YARD | AVG. 2 ADJ. LOTS | 66'± |
| SIDE YARD | 10% WIDTH OR AVG. 2 ADJ. LOTS MAX 20' | 30'± |
| LAKEFRONT | 60' FROM 100' CONTOUR | 50'±* |
| BUILDING HEIGHT | | |
| EXISTING PRIMARY | 35 | -- |

SITE ENGINEER:


CIVIL ENGINEERING ASSOCIATES, INC.
10 MANSFIELD VIEW LANE, SOUTH BURLINGTON, VT 05403
P: 802-864-2323 FAX: 802-864-2271 web: www.cea-vt.com



COPYRIGHT © 2018 - ALL RIGHTS RESERVED


DRAWN: MAB
CHECKED: JLM
APPROVED: JLM

CLIENT:
LARA & WILLIAM CALFEE
147 SOUTH COVE
BURLINGTON VT

PROJECT:
147 SOUTH COVE DRIVE
147 SOUTH COVE
BURLINGTON VT

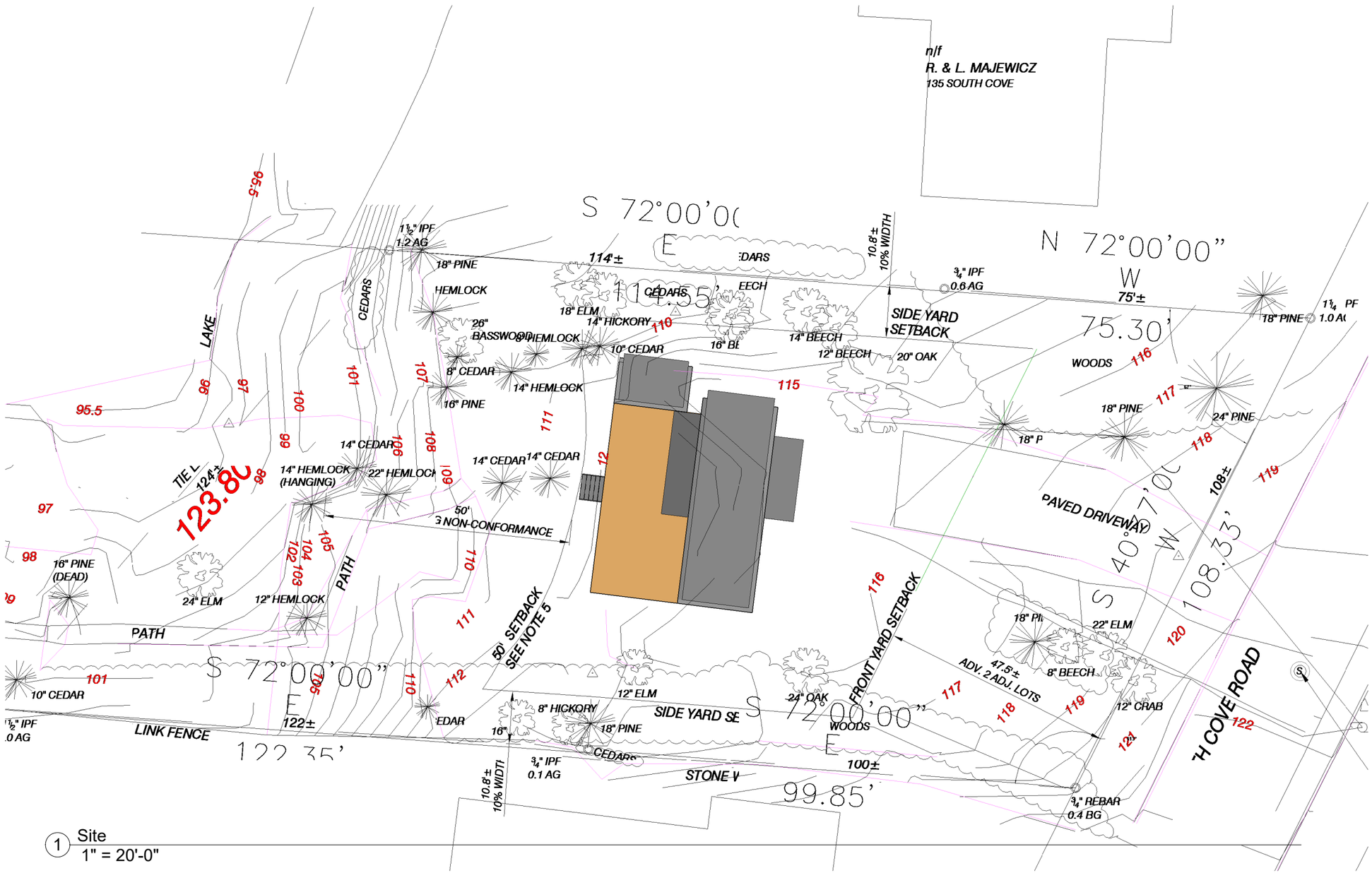
LOCATION MAP
1" = 2000'

| DATE | CHECKED | REVISION |
|---|---|---|
| | | |

EXISTING CONDITIONS SITE PLAN

DATE: 06/14/2018
SCALE: 1" = 20'
PROJ. NO.: 18103
DRAWING NUMBER: C1.0

P:\AutoCADD Projects\2018\18103.0111-CADD Files-\dwg\18103.01-Site.dwg, 10/29/2018 9:12:11 AM, mburke




1 Site
1" = 20'-0"

| | |
|---|---|
| Project Status | |
| ISSUE | |
| FILE | |
| DRAWN | Author |
| CHKD | Checker |
| Date Revised | |

| | |
|---|---|
| SCALE | 1" = 20'-0" |
| DRAWING | S1.1 |
| DATE | 10/25/2018 |

PROJECT DRAWING

# Site Plan

Calfee Residence
147 South Cove Road

DONWELCH ARCHITECTURE
60 BLODGETT STREET, BURLINGTON, VT 05401 DONGDONWELCHARCHITECTURE.COM

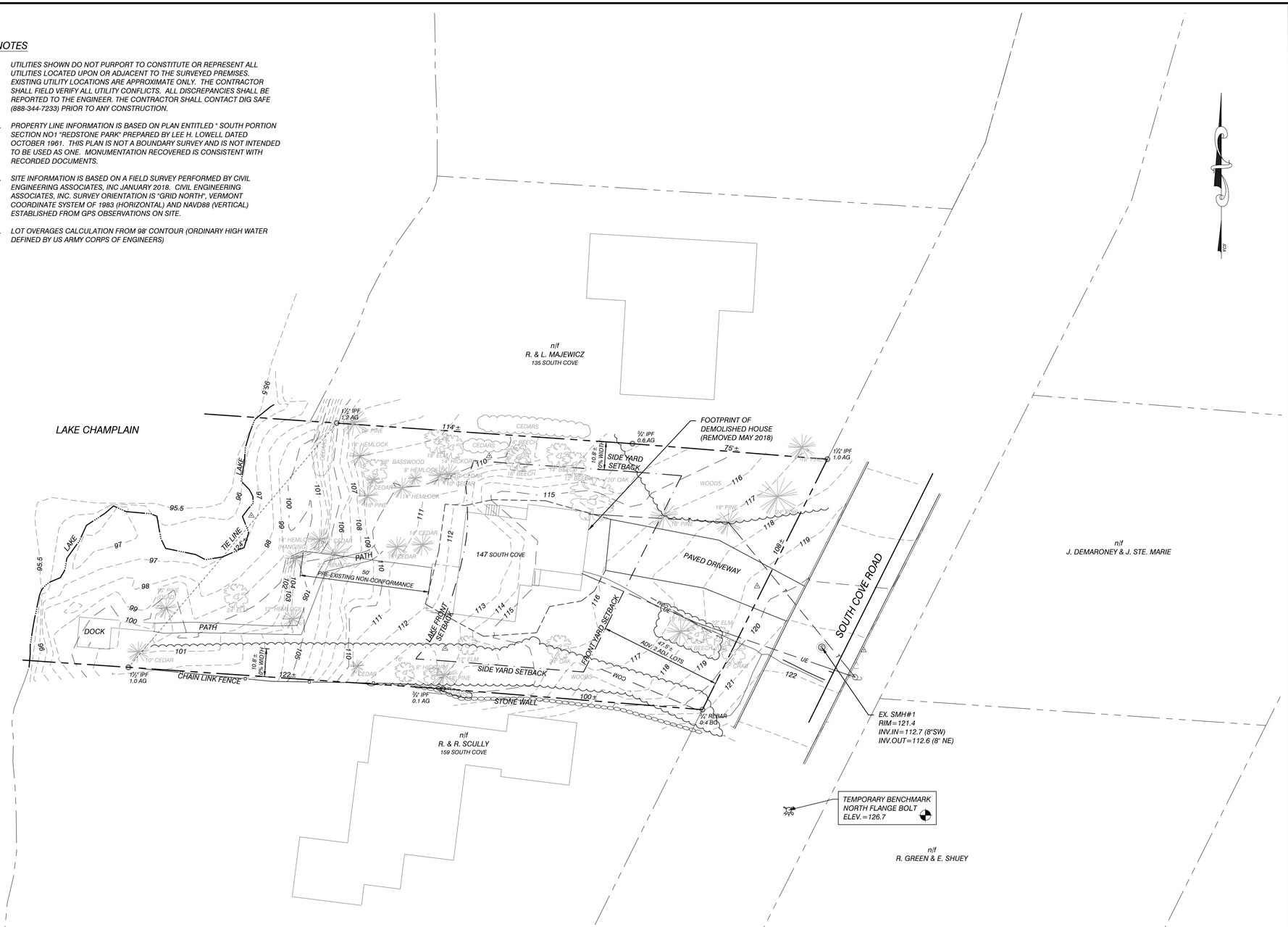
C:\Users\Big A\Dropbox\Jobs\Calfee\Revit\Calfee- for photograph.rvt

## LEGEND

- APPROXIMATE PROPERTY LINE
- APPROXIMATE SETBACK LINE
- 100 — EXISTING CONTOUR
- EXISTING CURB
- EXISTING FENCE
- EXISTING GRAVEL
- EXISTING PAVEMENT
- EXISTING GUARD RAIL
- E — EXISTING ELECTRIC
- FM — EXISTING FORCEMAIN
- G — EXISTING GAS
- ST — EXISTING STORM
- S — EXISTING GRAVITY SEWER
- T — EXISTING TELEPHONE
- W — EXISTING WATER
- COM — EXISTING COMMUNICATIONS
- EXISTING SEWER MANHOLE
- EXISTING HYDRANT
- EXISTING UTILITY POLE
- EXISTING DECIDUOUS TREE
- EXISTING CONIFEROUS TREE
- EDGE OF BRUSH/WOODS
- IRON ROD/PIPE FOUND
- PROJECT BENCHMARK
- AG / BG — ABOVE GRADE / BELOW GRADE
- CONTROL POINT

## NOTES

1. UTILITIES SHOWN DO NOT PURPORT TO CONSTITUTE OR REPRESENT ALL UTILITIES LOCATED UPON OR ADJACENT TO THE SURVEYED PREMISES. EXISTING UTILITY LOCATIONS ARE APPROXIMATE ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL UTILITY CONFLICTS. ALL DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER. THE CONTRACTOR SHALL CONTACT DIG SAFE (888-344-7233) PRIOR TO ANY CONSTRUCTION.
2. PROPERTY LINE INFORMATION IS BASED ON PLAN ENTITLED " SOUTH PORTION SECTION NO1 "REDSTONE PARK" PREPARED BY LEE H. LOWELL DATED OCTOBER 1961. THIS PLAN IS NOT A BOUNDARY SURVEY AND IS NOT INTENDED TO BE USED AS ONE. MONUMENTATION RECOVERED IS CONSISTENT WITH RECORDED DOCUMENTS.
3. SITE INFORMATION IS BASED ON A FIELD SURVEY PERFORMED BY CIVIL ENGINEERING ASSOCIATES, INC JANUARY 2018. CIVIL ENGINEERING ASSOCIATES, INC. SURVEY ORIENTATION IS "GRID NORTH", VERMONT COORDINATE SYSTEM OF 1983 (HORIZONTAL) AND NAVD88 (VERTICAL) ESTABLISHED FROM GPS OBSERVATIONS ON SITE.
4. LOT OVERAGES CALCULATION FROM 98' CONTOUR (ORDINARY HIGH WATER DEFINED BY US ARMY CORPS OF ENGINEERS)




ZONING DISTRICT:
WATERFRONT RESIDENTIAL LOW DENISTY (RL-W)
PARCEL: 22,020 S.F. (0.5 AC.) (SEE NOTE 4)

| CATEGORY | ZONING REGULATIONS | EXISTING |
|---|---|---|
| COVERAGE | | |
| TOTAL | 35% | 16.5% |
| SETBACK | | |
| FRONT YARD | AVG. 2 ADJ. LOTS | 66'± |
| SIDE YARD | 10% WIDTH OR AVG. 2 ADJ. LOTS MAX 20' | 30'± |
| LAKEFRONT | 60' FROM 100' CONTOUR | 50'±* |
| BUILDING HEIGHT | | |
| EXISTING PRIMARY | 35 | -- |

NOTE: THE EXISTING WATERFRONT SETBACK AT 147 SOUTH COVE (50') IS BASED ON AN EXISTING NON CONFORMING RESIDENCE. THE WATERFRONT SETBACK OF 60' IS BASED ON AN AVERAGE OF TWO ADJACENT RESIDENCES 135 SOUTH COVE (60') AND 159 SOUTH COVE (61') WERE FIELD MEASURED JUNE 11, 2018 AND THEIR ALIGNMENT AVERAGED TO REDUCE THE WATERFRONT SETBACK REQUIREMENT AT 147 SOUTH COVE TO 60' FROM ELEVATION 100' (NGVD29).

SITE ENGINEER:


CIVIL ENGINEERING ASSOCIATES, INC.
10 MANSFIELD VIEW LANE, SOUTH BURLINGTON, VT 05403
P: 802-864-2323 FAX: 802-864-2271 web: www.cea-vt.com



COPYRIGHT © 2018 - ALL RIGHTS RESERVED

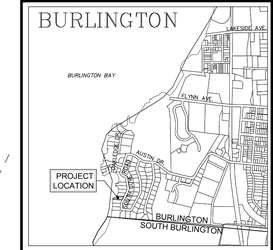

DRAWN: MAB
CHECKED: JLM
APPROVED: JLM

CLIENT:
PAUL BUDNITZ

888 FALLS ROAD
SHELBURNE VT 05482

PROJECT:
147 SOUTH COVE DRIVE

147 SOUTH COVE
BURLINGTON VT




LOCATION MAP
1" = 2000'

| DATE | CHECKED | REVISION |
|---|---|---|
| | | |

EXISTING CONDITIONS SITE PLAN

DATE: 06/14/2018
SCALE: 1" = 20'
PROJ. NO.: 18103
DRAWING NUMBER: C1.0

## Native Perennials and Shrubs for Vermont Gardens

| Common Name | Scientific Name | Flower | Habitat Notes | Biodiversity Notes (LF – larval food for moths and butterflies) |
|---|---|---|---|---|
| New England Aster | *Aster novae-angliae* | Violet, rose; fall | Moist meadows, open woodlands, full- partial sun | Bees, butterflies, moths<br>LF: Northern Flower Moth, Pearl Crescent |
| New York Aster | *Aster novae-belgii* | Violet, rose; fall | Moist meadows and thickets, full – partial sun | Bees, butterflies, moths<br>LF: Pearl Crescent |
| Flat-topped Aster | *Aster umbellatus* | White; fall | Moist thickets and meadows, full – partial sun | Bees, butterflies, moths<br>LF: Harris Checkerspot, Brown-hooded Owlet Moth |
| Cardinal flower | *Lobelia cardinalis* | Crimson; late summer | Wet meadows, stream banks, full – filtered sun | Hummingbirds, butterflies |
| Great Blue Lobelia | *Lobelia siphilitica* | Blue; late summer - fall | Wet meadows, moist thickets, limey soils | LF: Dark-spotted Palthis moth |
| Swamp Milkweed | *Asclepias incarnata* | White and Pink; summer | Damp – wet soils along forest wetland edges, shores | Bees, butterflies, moths, flies<br>LF: Monarch butterfly |
| Joe-Pye Weed | *Eupatorium maculatum* | Reddish-purple; late summer | Damp meadows, forest edges and wetland edges, usually full sun | Bees, butterflies, moths<br>LF: Great Tiger Moth |
| White Boneset | *Eupatorium perfoliatum* | White; late summer | Variety of open habitats with moist – wet soils and full sun | Bees, butterflies<br>LF: Wavy-lined Emerald Moth, Curve-lined Angle Moth |
| Wild Bergamot, Bee-balm | *Monarda fistulosa* | Lilac; summer | Woodland edges, thickets, dry forest openings | Hummingbirds, bees, butterflies<br>LF: Hermit Sphinx |
| Woodland Sunflower | *Helianthu divaricatus* | Yellow, 2-4" wide;late summer | Dry forest openings and edges. | Bees<br>LF: Sunflower Borer Moth |
| Obedient Plant | *Physostegia virginiana* | Pink, white; late summer | Somewhat dry – wet open meadows, forest edges | Butterflies |
| White Beardtongue | *Penstemon digitalis* | White; late spring | Moist forest openings and similar sites with partial shade | Hummingbirds, bees, butterflies, LF: Baltimore Checkerspot, Confused Haploa moth |
| Wild Columbine | *Aquilegia canadensis* | Red and yellow; late spring | Well-drained, neutral soils in open woodlands, ledges | Hummingbirds, bees<br>LF: Columbine Dusky Wing |
| Blue Vervain | *Verbena hastata* | Dark blue; late summer | Moist – wet meadows, edges | Bees, butterflies |
| Monkey Flower | *Mimulus ringens* | Violet; summer | Open wet meadows, wetland edges | Butterflies, moths<br>LF: Baltimore Checkerspot |
| Golden Alexanders | *Zizia aurea* | Yellow; late spring | Moist meadows, open woodlands | Bees, flies<br>LF: Black Swallowtail |
| Turtlehead | *Chelone glabra* | White; late summer | Moist to wet edges of swamps, banks, pond shores in partial – full sun | Bees<br>LF: Baltimore Checkerspot |
| Water Avens | *Geum rivale* | Purplish-red; late spring | Moist – wet meadows, swamp edges | Bees, flies, beetles |
| Coneflower* | *Echinacea purpurea* | Dark rose; summer | Moist meadows, prairies, woodland openings | Bees, butterflies |
| Butterflyweed* | *Asclepias tuberosa* | Orange; summer | Well-drained, sandy soils of woodland edges, fields | Bees, butterflies, moths<br>LF: Monarch butterfly |
| Black-eyed Susan* | *Rudbeckia hirta* | Gold and brown; summer | Wide variety of open habitats | Bees, butterflies, beetles |
| Blazing Star* | *Liatris spicata* | Pink-purple; summer | Moist soils in wet meadows, wetland edges | Butterflies, moths |
| Jack-in-the-Pulpit | *Arisaema triphyllum* | Green and brown; spring | Moist, rich woodlands | LF: Pink-legged Tiger Moth |

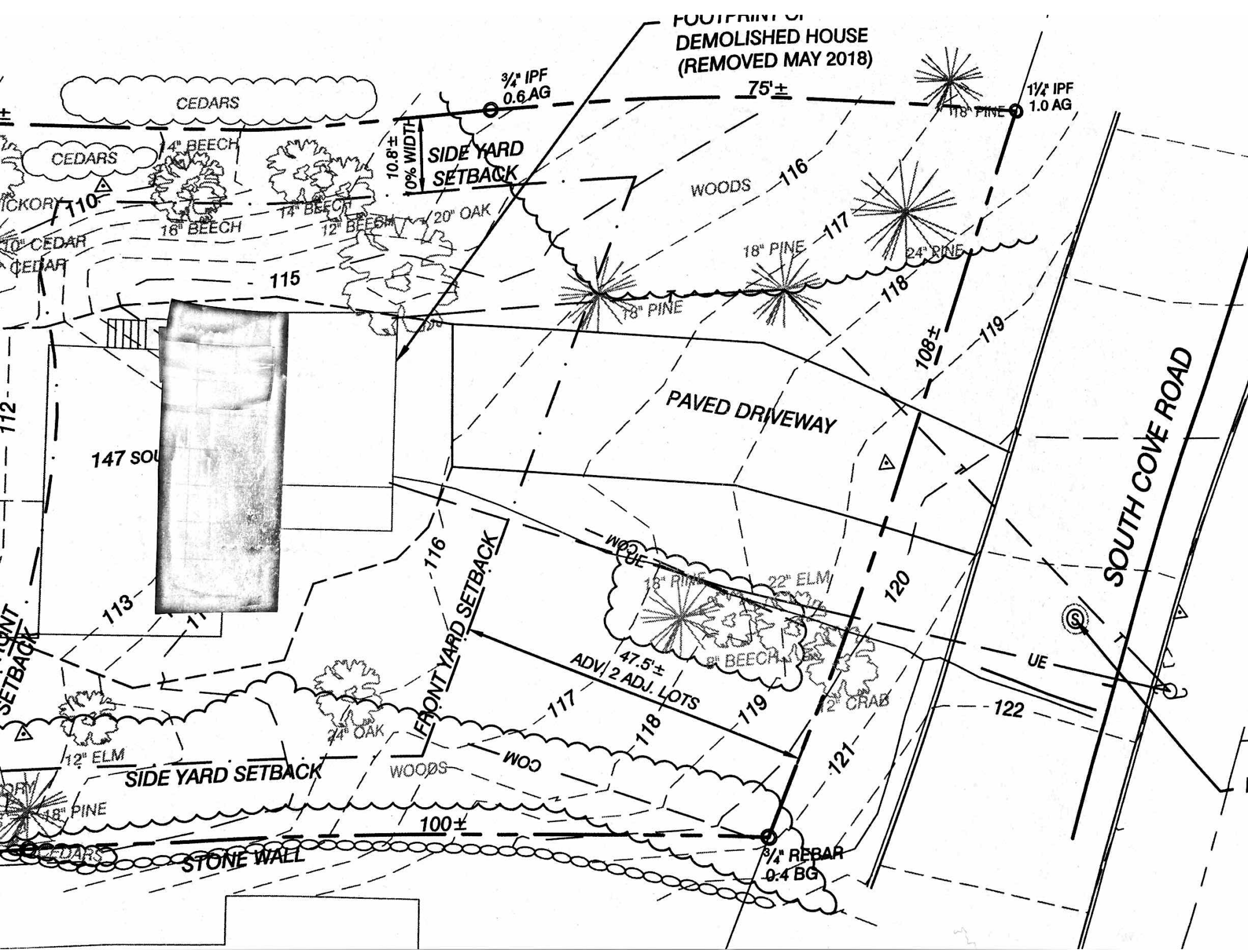
| | | | | |
|---|---|---|---|---|
| Wild Ginger | *Asarum canadense* | Yellow-brown; spring | Rich woodlands, | Beetles |
| Bunchberry | *Cornus canadensis* | White; late spring - summer | Partial sun – shade; moist forests, stream banks | Bees, flies |
| Twinflower | *Linnaea borealis* | Pinkish-white; spring | Moist – dry, cool woodlands | Bees |
| Wild Sarsaparilla | *Aralia nudicaulis* | Greenish-white in umbels | Moist to dry, mostly deciduous woodlands | LF: Spring Azure butterfly |
| Foamflower | *Tiarella cordifolia* | White; spring | Rich woodlands | Bees, bee flies |
| Woodland Phlox | *Phlox divaricata* | Violet | Rich woodlands, partial sun - shade | Butterflies, moths |
| Bloodroot | *Sanguinaria canadensis* | White; 1- ½" wide | Often the first flower to appear. Leaves up to 10" across. | Bees<br>Seeds ant-dispersed. |
| Purple Trillium; Wake-robin | *Trillium erectum* | Maroon, petals ½-1½" long | From seed requires 3-7 years for flowering plant | Bees, beetles, flies<br>Seeds ant-dispersed. |
| White Trillium | *Trillium grandiflorum* | White, showy, petals up to 2 ½" | Bare-root plants for sale are wild-collected. | Bees, beetles, flies<br>Seeds ant-dispersed. |
| Hepatica | *Hepatica americana* | Blue, pink or white, ½-1" wide | May flower before snow melt. | Bees |
| Blue Cohosh | *Caulophyllum thalictroides* | Yellow-green, ½" wide in terminal cluster. | Does best on limey soils; produces blackish-blue fruits. Difficult from seed and uncommon in trade. | Moths |
| Violet | *Viola canadensis; papilionacea, labridorica,* and others | White, blue, purple depending on species. | Depends on species | Bumble bees |
| **Shrubs** | | | | |
| Sweet-fern | *Comptonia peregrina* | Inconspicuous | Open sandy sites, mildly acidic soils | LF: Sweetfern Underwing, Red-fringed Emerald, & many other moths. |
| American black elderberry | *Sambucus canadensis* | Clusters of white flowers, late summer purple black berries | Sun to partial sun | Birds favor fruits |
| Serviceberry | *Amelanchier Canadensis* | White blooms in early spring; red edible fruits in June | Partial sun to sun | Birds favor fruits |
| Highbush blueberry | *Vaccinium corymbosum* | white flowers tinged with pink flowers in spring, edible fruits late summer, red foliage in the fall | Sun to partial shade | One of most copious nectar producers. LF: Spring azure, Hummingbird clearwing, Brown elfin and Striped Hairstreak. |
| Black chokeberry | *Aronia melanocarpa* | White flowers, clusters of purplish black fruit; striking red/orange fall foliage | Sun to partial sun | Beetles, flies. LF: Coral hairstreak and Striped hairstreak. |
| Winterberry | *Ilex verticillata* | White flat flowers May - June; Maroon fall foliage and bright red persistent berries | Sun to shade | Birds eat small brown capsule seeds. LF: Unicorn caterpillar. |

*Native to Northeast, but not Vermont. This list was developed in collaboration with botanist Bob Popp, Vermont Fish & Wildlife and Richard Enser, Consulting Conservation Biologist. *For more information on gardening with natives check out www.beplantwise.org and www.newfs.org. The following books and websites are also excellent resources. Trees, Shrubs and Vines for Attracting Birds by Richard DeGraaf; Bringing Nature Home by Douglas Tallamy www.bringingnaturehome.net; Native Plants of the Northeast,* Donald Leopold; *Designing Gardens with Flora of the American East*, Carolyn Summers; *the Pollinator Partnership http://www.pollinator.org/; Butterflies and Moths of North America http://www.butterfliesandmoths.org/. Go to http://www.birds.cornell.edu/ for more on gardening for birds.*

**Vermont Chapter of The Nature Conservancy**
**Montpelier, Vermont**
**(802) 229-4425**

The Nature Conservancy
Protecting nature. Preserving life.™

For more information, go to www.vtinvasives.org.

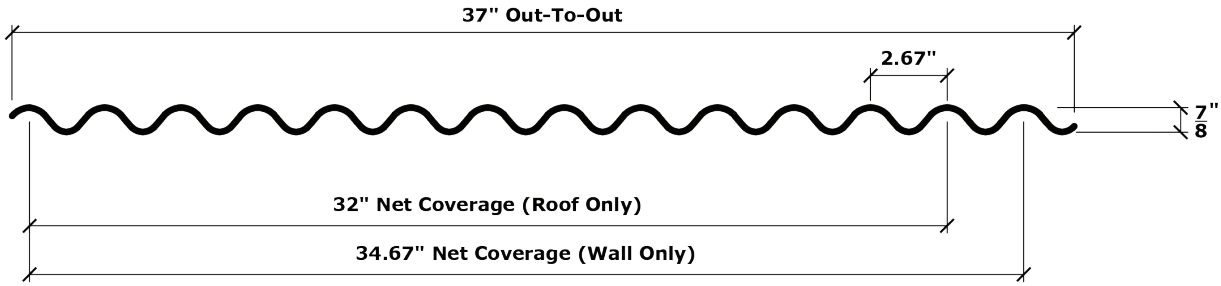

FOOTPRINT OF
DEMOLISHED HOUSE
(REMOVED MAY 2018)
75'±
¾" IPF
0.6 AG
1¼" IPF
1.0 AG
CEDARS
CEDARS
14" BEECH
10.8'± WIDTH
SIDE YARD SETBACK
WOODS
116
110
14" BEECH
18" BEECH
12" BEECH
20" OAK
117
18" PINE
24" PINE
118
115
18" PINE
119
108±
PAVED DRIVEWAY
112
147 SOU
113
116
FRONT YARD SETBACK
WOODS
22" ELM
120
47.5'±
ADV. 2 ADJ. LOTS
8" BEECH
12" CRAB
UE
122
SOUTH COVE ROAD
117
118
119
121
24" OAK
12" ELM
SIDE YARD SETBACK
WOODS
18" PINE
100±
STONE WALL
¾" REBAR
0.4 BG

WESTERN STATES
METAL ROOFING

901 W. Watkins St., Phoenix, AZ 85007
(855) 426-7836 | cortenroofing.com

# 7/8" CORRUGATED

Available in A606-4 (aka Corten®) or Bare Cold Rolled Steel




**There can be variance in the overall width of up to 1". This will NOT lessen roof/wall coverage.**

## SPECIFICATIONS

**Material Type:** 7/8" Corrugated
**Rib Distance (Pitch):** 2.67" Pitch
**Rib Height:** 7/8"
**Available Gauges:**
- **A606-4 (aka Corten®):** 20, 22
- **Bare Cold Rolled:** 20, 22, 24

**Substrate:** A606-4 or Bare Cold Rolled
**Fasteners:** Exposed
**Panel Length:** 1' to 52'
**Recommended Minimum Roof Slope:** 3/12
**Installation:** Over a solid substrate

## RECOMMENDATIONS AND CAUTIONS

- A606-4 and Bare Steel performs best in environments with low humidity
- Load calculations and load tables DO NOT APPLY TO ANY A606 OR BARE STEEL PRODUCT.
- A606-4 should not be used with dissimilar metals other than stainless steel. This will decrease the lifespan of the product.
- Screws and clips for A606-4/Corten MUST be stainless steel. Screw head will be painted brown.
- Roofing Underlayment Should be a HIGH TEMPERATURE UNDERLAYMENT.
- Minimum roof slope 3:12 recommended.
- Not recommended near salt spray environments and frequent rain locations as it will shorten the life expectancy of the products.
- Acid washing will degrade steel performance.
- Rust runoff will likely stain the surrounding surfaces.
- NO WARRANTIES FOR THESE PRODUCTS

*Material does not arrive pre-rusted. Panel will rust naturally with exposure to the weather. Use stainless steel fasteners with a painted brown screw head.*

1 Looking West
12" = 1'-0"

| | |
|---|---|
| SCALE: | 12" = 1'-0" |
| DRAWING: | A1.0 |
| DATE: | 10/25/2018 |

| ISSUE | Project Status |
|---|---|
| FILE: | |
| DRAWN: | |
| CHKED: | AT |
| Date: | |
| Revised: | |

PROJECT DRAWING

# Rendering Looking West

Calfee Residence
147 South Cove Road

DONWELCH
ARCHITECTURE

60 BLODGETT STREET, BURLINGTON, VT 05401 DON@DONWELCHARCHITECTURE.COM

C:\Users\Big A\Desktop\Calfee- for photograph oldfile.rvt

VERTICAL CVG CEDAR SIDING W/CLEAR FINISH

CORRUGATED COR-TEN SIDING

BLACK KOHLTECH TRIPLE-PANE WINDOWS

1 Presentation West
3/16" = 1'-0"

| ISSUE | Project Status |
|---|---|
| FILE | |
| DRAWN | Author |
| CHKD | Checker |
| Date Revised | |

SCALE 3/16" = 1'-0"

# A1.1

10/25/2018

PROJECT DRAWING

# West Elevation

Calfee Residence
147 South Cove Road

DONWELCH ARCHITECTURE

60 BLODGETT STREET, BURLINGTON, VT 05401 DONGDONWELCHARCHITECTURE.COM

C:\Users\Big Al\Desktop\Calfee- for photograph oldfile.rvt

1 Presentation South
3/16" = 1'-0"

| ISSUE | Project Status |
|---|---|
| FILE | |
| DRAWN | Author |
| CHKD | Checker |
| Date Revised | |

SCALE 3/16" = 1'-0"

# A1.2

DATE 10/25/2018

PROJECT DRAWING

# South Elevation

Calfee Residence
147 South Cove Road

DONWELCH ARCHITECTURE
60 BLODGETT STREET, BURLINGTON, VT 05401 DONGDONWELCHARCHITECTURE.COM

C:\Users\Big A\Desktop\Calfee- for photograph oldfile.rvt

VERTICAL CVG CEDAR SIDING W/CLEAR FINISH
CORRUGATED COR-TEN SIDING
BLACK KOHLTECH TRIPLE-PANE WINDOWS

1 Presentation East
3/16" = 1'-0"

| | |
|---|---|
| SCALE | 3/16" = 1'-0" |
| DRAWING | A1.3 |
| DATE | 10/25/2018 |

| ISSUE | Project Status |
|---|---|
| FILE | |
| DRAWN | Author |
| CHKD | Checker |
| Date Revised | |

PROJECT DRAWING

# East Elevation

Calfee Residence
147 South Cove Road

DONWELCH
ARCHITECTURE
50 BLODGETT STREET, BURLINGTON, VT 05401 DONGDONWELCHARCHITECTURE.COM

C:\Users\Big A\Desktop\Calfee- for photograph oldfile.rvt

1 Presentation North
3/16" = 1'-0"

| ISSUE | Project Status |
|---|---|
| FILE | |
| DRAWN | Author |
| CHKD | Checker |
| Date Revised | |

| | |
|---|---|
| Scale | 3/16" = 1'-0" |
| | A1.4 |
| Date | 10/25/2018 |

PROJECT DRAWING

# North Elevation

Calfee Residence
147 South Cove Road

DONWELCH ARCHITECTURE
60 BLODGETT STREET, BURLINGTON, VT 05401 DONGDONWELCHARCHITECTURE.COM

C:\Users\Big Al\Desktop\Calfee- for photograph oldfile.rvt

# Kohltech Windows & Entrance Systems Thermal Performance & Energy Star Ratings

| Glass Options | Energy Rating | U-value (metric) | U-value (imperial) | Solar Heat Gain Coefficient | Visible Transmittance | Energy Star Zones 2016 |
|---|---|---|---|---|---|---|
| No Glazing | 21 | 0.9 | 0.16 | 0.01 | | N, NC, SC, S |
| 1/4 - Clear | 18 | 1.2 | 0.22 | 0.10 | 0.10 | N, NC, SC, S |
| 1/4 - Clear w Grills | 18 | 1.2 | 0.22 | 0.09 | 0.09 | N, NC, SC, S |
| 1/4 - LoE/Argon | 21 | 1.1 | 0.20 | 0.09 | 0.10 | N, NC, SC, S |
| 1/4 - LoE/Argon w Grills | 20 | 1.1 | 0.20 | 0.08 | 0.09 | N, NC, SC, S |
| 1/4 - Energlas | 22 | 1.1 | 0.19 | 0.09 | 0.10 | N, NC, SC, S |
| 1/4 - Energlas w Grills | 22 | 1.1 | 0.19 | 0.08 | 0.09 | N, NC, SC, S |
| 1/4 - Triple LoE/Argon x 1 LSG | 21 | 1.0 | 0.18 | 0.05 | 0.08 | N, NC, SC, S |
| 1/4 - Energlas Plus Argon LSG | 21 | 1.0 | 0.18 | 0.04 | 0.07 | N, NC, SC, S |
| 1/4 - Energlas Plus Argon | 23 | 1.0 | 0.18 | 0.08 | 0.09 | N, NC, SC, S |
| 1/4 - LoE/Argon-LSG | 20 | 1.1 | 0.19 | 0.05 | 0.09 | N, NC, SC, S |
| 1/4 - LoE/Argon-LSG w Grills | 20 | 1.1 | 0.19 | 0.05 | 0.08 | N, NC, SC, S |
| 1/4 - Energlas-LSG | 20 | 1.1 | 0.19 | 0.05 | 0.09 | N, NC, SC, S |
| 1/4 - Energlas-LSG w Grills | 20 | 1.1 | 0.19 | 0.05 | 0.08 | N, NC, SC, S |
| Half - Clear | 16 | 1.6 | 0.28 | 0.19 | 0.20 | |
| Half - Clear w Grills | 15 | 1.6 | 0.28 | 0.17 | 0.17 | |
| Half - LoE/Argon | 21 | 1.2 | 0.22 | 0.17 | 0.19 | N, NC, SC, S |
| Half - LoE/Argon w Grills | 20 | 1.2 | 0.22 | 0.15 | 0.17 | N, NC, SC, S |
| Half - Energlas | 23 | 1.2 | 0.22 | 0.17 | 0.19 | N, NC, SC, S |
| Half - Energlas w Grills | 22 | 1.2 | 0.22 | 0.15 | 0.17 | N, NC, SC, S |
| Half - Triple LoE/Argon x 1 LSG | 21 | 1.1 | 0.20 | 0.09 | 0.15 | N, NC, SC, S |
| Half - Energlas Plus Argon LSG | 22 | 1.1 | 0.19 | 0.08 | 0.13 | N, NC, SC, S |
| Half - Energlas Plus Argon | 26 | 1.1 | 0.19 | 0.15 | 0.17 | N, NC, SC, S |
| Half - LoE/Argon-LSG | 20 | 1.2 | 0.22 | 0.10 | 0.17 | N, NC, SC, S |
| Half - LoE/Argon-LSG w Grills | 20 | 1.2 | 0.22 | 0.09 | 0.15 | N, NC, SC, S |
| Half - Energlas-LSG | 20 | 1.2 | 0.21 | 0.10 | 0.17 | N, NC, SC, S |
| Half - Energlas-LSG w Grills | 20 | 1.2 | 0.21 | 0.09 | 0.15 | N, NC, SC, S |
| 3/4 - Clear | 15 | 1.8 | 0.32 | 0.26 | 0.26 | |
| 3/4 - Clear w Grills | 13 | 1.8 | 0.32 | 0.23 | 0.23 | |
| 3/4 - LoE/Argon | 24 | 1.4 | 0.24 | 0.23 | 0.26 | N, NC, SC, S |
| 3/4 - LoE/Argon w Grills | 22 | 1.4 | 0.24 | 0.20 | 0.22 | N, NC, SC, S |
| 3/4 - Energlas | 25 | 1.3 | 0.23 | 0.23 | 0.26 | N, NC, SC, S |
| 3/4 - Energlas w Grills | 24 | 1.3 | 0.23 | 0.20 | 0.22 | N, NC, SC, S |
| 3/4 - Triple LoE/Argon x 1 LSG | 21 | 1.2 | 0.21 | 0.12 | 0.21 | N, NC, SC, S |
| 3/4 - Energlas Plus Argon LSG | 23 | 1.1 | 0.19 | 0.11 | 0.18 | N, NC, SC, S |
| 3/4 - Energlas Plus Argon | 28 | 1.1 | 0.20 | 0.20 | 0.23 | N, NC, SC, S |
| 3/4 - LoE/Argon-LSG | 19 | 1.3 | 0.23 | 0.13 | 0.23 | N, NC, SC, S |
| 3/4 - LoE/Argon-LSG w Grills | 18 | 1.3 | 0.23 | 0.11 | 0.20 | N, NC, SC, S |
| 3/4 - Energlas-LSG | 19 | 1.2 | 0.22 | 0.13 | 0.23 | N, NC, SC, S |
| 3/4 - Energlas-LSG w Grills | 18 | 1.2 | 0.22 | 0.11 | 0.20 | N, NC, SC, S |
| Full - Clear | 12 | 2.2 | 0.38 | 0.34 | 0.35 | |
| Full - Clear w Grills | 10 | 2.2 | 0.38 | 0.30 | 0.31 | |
| Full - LoE/Argon | 24 | 1.5 | 0.27 | 0.31 | 0.34 | N, NC |
| Full - LoE/Argon w Grills | 23 | 1.5 | 0.27 | 0.27 | 0.30 | N, NC |
| Full - Energlas | 26 | 1.5 | 0.26 | 0.31 | 0.34 | N, NC |
| Full - Energlas w Grills | 24 | 1.5 | 0.26 | 0.27 | 0.30 | N, NC |
| Full - Triple LoE/Argon x 1 LSG | 24 | 1.3 | 0.23 | 0.16 | 0.28 | N, NC, SC, S |
| Full - Energlas Plus Argon LSG | 24 | 1.1 | 0.20 | 0.14 | 0.24 | N, NC, SC, S |
| Full - Energlas Plus Argon | 29 | 1.2 | 0.21 | 0.26 | 0.31 | N, NC |
| Full - LoE/Argon-LSG | 18 | 1.5 | 0.26 | 0.17 | 0.30 | N, NC, SC, S |
| Full - LoE/Argon-LSG w Grills | 17 | 1.5 | 0.26 | 0.15 | 0.26 | N, NC, SC, S |
| Full - Energlas-LSG | 19 | 1.4 | 0.25 | 0.17 | 0.30 | N, NC, SC, S |
| Full - Energlas-LSG w Grills | 18 | 1.4 | 0.25 | 0.15 | 0.26 | N, NC, SC, S |

# The Lighting House

3002 Shelburne Road
Shelburne, VT 05482
Website: www.vermontlightinghouse.com

Phone: 800-649-2204
Fax: 802-985-8931
Email: vermontlighting@aol.com

7 839274 530660

Comments: **For Calfee project at 147 South Cove Rd**

## One Light Outdoor Wall Mount

| | |
|---|---|
| Item ID: | **738694** |
| Manufacturer: | **Kichler** |
| MFG #: | **11250BKT30** |
| Finish: | **Textured Black** |
| Height: | **7"** |
| Width/Dia.: | **5"** |
| Length: | **6.5"** |
| Price: | **$130.00** |

*This LED outdoor wall downlight features smooth lines, a modern look and a Textured Black finish.*

**Bulbs**

| Qty. | Type | Base | Source | Watt | CCT | CRI | Lm | Avg. Life | Dim | Incl. |
|---|---|---|---|---|---|---|---|---|---|---|
| **1** | | | **LED** | **11** | **3000** | **90** | **350** | **40000** | | **Yes** |

**Features**

| | |
|---|---|
| Safety Rating: | **ETL** |
| Safety Listing: | **Wet** |

**Additional Information**

| | |
|---|---|
| Canopy: | **5`` X 5``** |
| Entension: | **6.5"** |
| Top to Outlet: | **3.25"** |
| Voltage: | **120V** |
| Shipped Via: | **UPS** |
| Weight: | **2.6lb** |

Please be advised that all prices and information shown here are subject to verification by our showroom personnel. In the event of a discrepancy, we reserve the right to make any corrections necessary.

## 1X8 RED CEDAR CVG S1S2E

SKU: 18RCCVG
Description: 1X8 RED CEDAR CVG S1S2E

# 1x8 Red Cedar Clear Vertical Grain S1S2E Trim Board

## Red Cedar Trim Board, Clear Vertical Grain (CVG) Specifications

(Red Cedar Trim Board, CVG / Trim Boards & Sheets Products)

| | |
|---|---|
| **Dimension** | **1 x 8** |
| **Wood Specie** | **Red Cedar Wood** |
| **Wood Cut** | **Clear Vertical Grain (CVG)** |
| **Surface / Finish** | **Smooth 1 Side and 2 Edges (S1S2E)** |
| **Type** | **Trim Board, Wood Trim** |

For more information about 1x8 Red Cedar Clear Vertical Grain S1S2E Trim products, we encourage everyone to submit a quote online for orders, visit our store or contact us.

Kohltech Windows & Entrance Systems

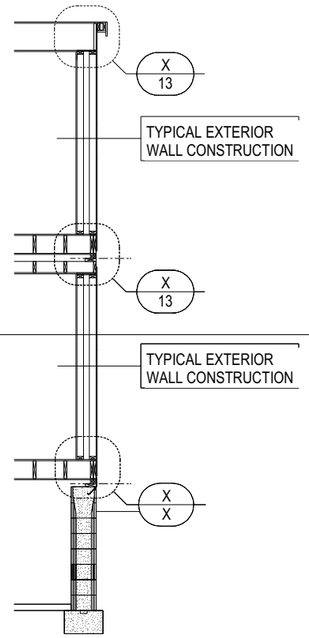
# Thermal Performance, Energy Star and NAFS Ratings

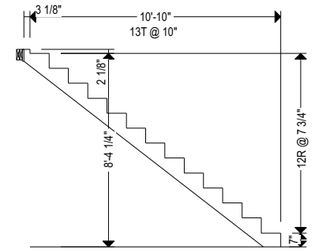
## Supreme Casement

| | NAFS Ratings | NFRC/Energy Star: NFRC | | Range<br>AAMA/WDMA/CSA/I.S.2-/A440-08: CW-PG55-C<br>Size Tested: (38"x78") | | AAMA/WDMA/CSA/I.S.2-/A440-08: CW-PG70-C<br>Size Tested: (32"x63") | |
|---|---|---|---|---|---|---|---|
| **Glass Option** | **Energy Rating** | **U-value (metric)** | **U-value (imperial)** | **Solar Heat Gain Coefficient** | **Visible Transmittance** | **Condensation Resistance** | **Canadian Energy Star Zones 2015** |
| Clear | 18 | 2.3 | 0.41 | 0.51 | 0.53 | 44 | No/non |
| Clear w Grilles | 15 | 2.3 | 0.41 | 0.46 | 0.47 | 44 | No/non |
| LoE/Argon | 31 | 1.6 | 0.28 | 0.46 | 0.52 | 58 | 1\|2 |
| LoE/Argon w Grilles | 28 | 1.6 | 0.28 | 0.41 | 0.47 | 58 | 1 |
| Energlas | 33 | 1.5 | 0.27 | 0.46 | 0.52 | 60 | 1\|2 |
| Energlas w Grilles | 30 | 1.5 | 0.27 | 0.41 | 0.47 | 60 | 1\|2 |
| LoE/Argon-LSG | 21 | 1.5 | 0.27 | 0.25 | 0.45 | 59 | 1 |
| LoE/Argon-LSG w Grilles | 19 | 1.5 | 0.27 | 0.23 | 0.41 | 59 | 1 |
| Energlas-LSG | 22 | 1.5 | 0.26 | 0.25 | 0.45 | 61 | 1 |
| Energlas-LSG w Grilles | 20 | 1.5 | 0.26 | 0.23 | 0.41 | 61 | 1 |
| Triple | 30 | 1.7 | 0.29 | 0.46 | 0.48 | 61 | 1\|2 |
| Triple w Grilles | 28 | 1.7 | 0.29 | 0.42 | 0.43 | 61 | 1 |
| Triple LoE/Argon x 1 | 36 | 1.3 | 0.22 | 0.41 | 0.47 | 70 | 1\|2\|3 |
| Triple LoE/Argon x 1 w Grilles | 34 | 1.3 | 0.22 | 0.37 | 0.43 | 70 | 1\|2\|3 |
| Triple LoE/Argon x 1 LSG | 27 | 1.2 | 0.21 | 0.23 | 0.41 | 70 | 1\|2\|3 |
| Triple LoE/Argon x 1 LSG w Grilles | 26 | 1.2 | 0.21 | 0.21 | 0.37 | 70 | 1\|2\|3 |
| Energlas Plus Argon | 40 | 1.0 | 0.18 | 0.40 | 0.47 | 77 | 1\|2\|3 |
| Energlas Plus Argon w Grilles | 38 | 1.0 | 0.18 | 0.36 | 0.42 | 77 | 1\|2\|3 |
| Energlas Plus Argon LSG | 30 | 1.0 | 0.17 | 0.20 | 0.35 | 78 | 1\|2\|3 |
| Energlas Plus Argon LSG w Grilles | 29 | 1.0 | 0.17 | 0.18 | 0.32 | 78 | 1\|2\|3 |

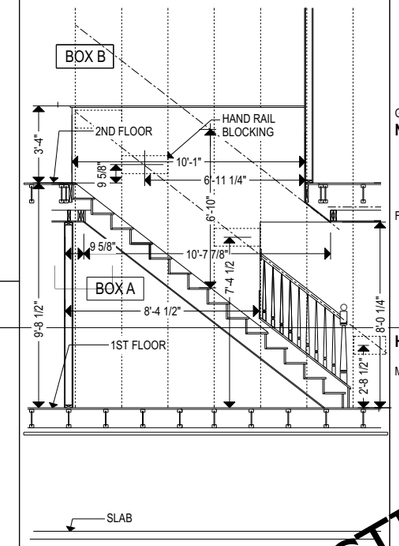
## Supreme Awning

| | NAFS Ratings | NFRC/Energy Star: NFRC | | AAMA/WDMA/CSA/I.S.2-/A440-08: LC-PG35-AP | | Size Tested: (60"x36.375") | |
|---|---|---|---|---|---|---|---|
| **Glass Option** | **Energy Rating** | **U-value (metric)** | **U-value (imperial)** | **Solar Heat Gain Coefficient** | **Visible Transmittance** | **Condensation Resistance** | **Canadian Energy Star Zones 2015** |
| Clear | 17 | 2.4 | 0.42 | 0.51 | 0.53 | 43 | No/non |
| Clear w Grilles | 14 | 2.4 | 0.42 | 0.46 | 0.47 | 43 | No/non |
| LoE/Argon | 30 | 1.7 | 0.29 | 0.46 | 0.52 | 57 | 1\|2 |
| LoE/Argon w Grilles | 27 | 1.7 | 0.29 | 0.41 | 0.47 | 57 | 1 |
| Energlas | 31 | 1.6 | 0.28 | 0.46 | 0.52 | 59 | 1\|2 |
| Energlas w Grilles | 28 | 1.6 | 0.28 | 0.41 | 0.47 | 59 | 1 |
| LoE/Argon-LSG | 21 | 1.5 | 0.27 | 0.25 | 0.45 | 58 | 1 |
| LoE/Argon-LSG w Grilles | 19 | 1.5 | 0.27 | 0.23 | 0.41 | 58 | 1 |
| Energlas-LSG | 22 | 1.5 | 0.26 | 0.25 | 0.45 | 60 | 1 |
| Energlas-LSG w Grilles | 20 | 1.5 | 0.26 | 0.23 | 0.41 | 60 | 1 |
| Triple | 30 | 1.7 | 0.29 | 0.46 | 0.48 | 61 | 1\|2 |
| Triple w Grilles | 28 | 1.7 | 0.29 | 0.42 | 0.43 | 61 | 1 |
| Triple LoE/Argon x 1 | 36 | 1.3 | 0.22 | 0.41 | 0.47 | 69 | 1\|2\|3 |
| Triple LoE/Argon x 1 w Grilles | 34 | 1.3 | 0.22 | 0.37 | 0.43 | 69 | 1\|2\|3 |
| Triple LoE/Argon x 1 LSG | 26 | 1.3 | 0.22 | 0.23 | 0.41 | 71 | 1\|2 |
| Triple LoE/Argon x 1 LSG w Grilles | 24 | 1.3 | 0.22 | 0.21 | 0.37 | 71 | 1\|2 |
| Energlas Plus Argon | 40 | 1.0 | 0.18 | 0.40 | 0.47 | 76 | 1\|2\|3 |
| Energlas Plus Argon w Grilles | 38 | 1.0 | 0.18 | 0.36 | 0.42 | 76 | 1\|2\|3 |
| Energlas Plus Argon LSG | 30 | 1.0 | 0.17 | 0.20 | 0.35 | 77 | 1\|2\|3 |
| Energlas Plus Argon LSG w Grilles | 29 | 1.0 | 0.17 | 0.18 | 0.32 | 77 | 1\|2\|3 |




R --- DATE: --- SCALE: 1/4"=1'-0" STAIR STRINGER CUTTING




## STAIRS: GENERAL

* MIN. WIDTH ABOVE HANDRAIL 36" FINISH
* MAX. HANDRAIL PROJECTION INTO STAIRWAY 4 1/2"
* MIN. HEADROOM 6'-8"
* RISER HEIGHT MAX. 7 3/4", TREAD DEPTH MIN. 10"
* MEASURE RISE AND RUN EXCLUSIVE OF CARPETS, RUGS OR RUNNERS
* TALLEST RISER MAX. 3/8" MORE THAN SHORTEST RISER
* DEEPEST TREAD MAX. > 3/8" DEEPER THAN SHORTEST TREAD
* MAX. 2% SLOPE ON TREADS AND LANDINGS
* ENCLOSED ACCESSIBLE SPACE BELOW STAIRS REQ'S MIN. 1/2" GYPSUM

## NOSING & RISERS

* NOSING REQ'D. FOR SOLID RISERS WITH TREADS < 11" DEEP
* NOSING PROJECTION MIN. 3/4", MAX. 1 1/4"
* DEEPEST NOSING PROJECTION MAX. 3/8" MORE THAN SHORTEST
* BEVELING OF NOSING MAX. 1/2", MAX. NOSING RADIUS 9/16"
* RISERS VERTICAL OR SLOPED FROM TREAD ABOVE MAX. 30 DEG. FROM VERTICAL
* OPEN RISER TREADS MUST PREVENT PASSAGE OF 4" SPHERE

## HANDRAILS

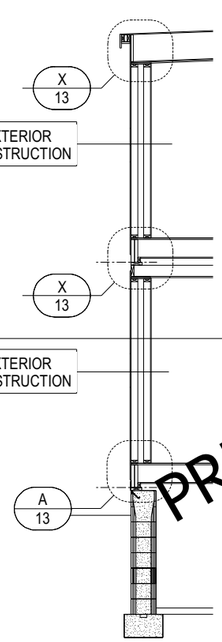
* REQ'D. ON AT LEAST ONE SIDE OF FLIGHTS OF STAIRS WITH 4 OR MORE RISERS
* TOP 34-38" ABOVE LINE CONNECTING NOSING
  EXCEPT: VOLUTE, TURNOUT, OR STARTING EASING OK OVER LOWEST TREAD
  FITTING OR BENDING OK TO EXCEED MAX. HEIGHT AT CONTINUOUS TRANSITION BETWEEN FLIGHTS, START OF FLIGHTS, OR FROM HANDRAIL TO GUARD
* END MUST RETURN TO WALL OR POST OR SAFETY TERMINAL
* MIN. 1 1/2" SPACE BETWEEN WALL AND HANDRAIL
* HANDRAIL CONTINUOUS FROM LINE ABOVE TOP & BOTTOM NOSINGS
  EXCEPT: MAY BE INTERRUPTED BY POST AT LANDING
  VOLUTE, TURNOUT, OR STARTING EASING OK OVER LOWEST TREAD
* ROUND HANDRAILS MIN. 1 1/4" - MAX. 2" DIAMETER
* NON-ROUND TYPE I HANDRAILS PERIMETER 4"-6 1/4"
* IF PERIMETER > 6 1/4", FINGER RECESS REQ'D. BOTH SIDES

K --- -- --- --- RESERVED

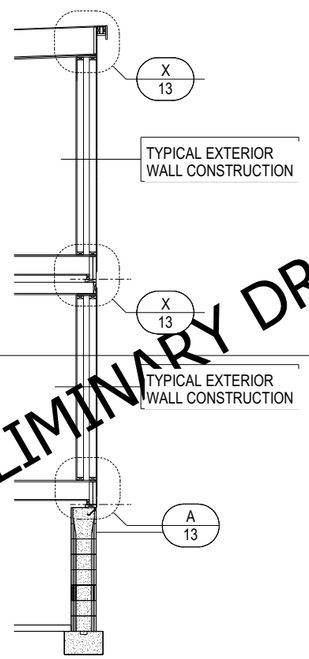
L X-02 DATE: --- SCALE: 1/4"=1'-0" STACKED BOXES GABLE WALL

M --- DATE: --- SCALE: 1/4"=1'-0" RESERVED

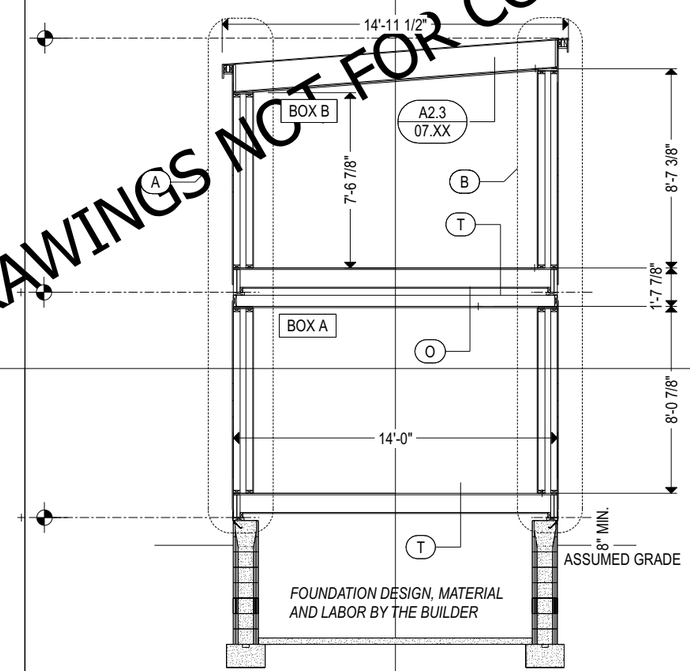
N --- DATE: --- SCALE: 1/4"=1'-0" STAIR SECTION




A A-04 DATE: --- SCALE: 1/4"=1'-0" STACKED BOXES LOW EAVE




B A-05 DATE: --- SCALE: 1/4"=1'-0" STACKED BOXES HIGH EAVE




## TYPICAL EXTERIOR WALL CONSTRUCTION

FINISH SIDING PER PROJECT SPECIFICATION APPLIED PER MANUFACTURERS SPECIFICATIONS
7/16" "ZIP" SHEATHING GLUED AND NAILED TO FRAMING ALL SEAMS TAPED W/ "ZIP" TAPE
OUTER WALL: 2X4 STUDS @ 24" O.C. SINGLE SHOE, SINGLE PLATE
INNER WALL: 2X4 STUDS @ 24" O.C. (ALIGNED W/ OUTER STUDS) SINGLE SHOE, SINGLE PLATE
INNER AND OUTER WALL SHOES SET ON BEADS OF FOAM ADHESIVE AND FASTENED TO DECK FRAMING, FRAMED WALL THICKNESS 10" FACE TO FACE, WALLS ARE TIED TOGETHER WITH 7/16" X 10" PERIMETER WINDOW BUCKS AND 3/4"X10" OSB UPPER TOP PLATE
INTERIOR FINISH: 5/8" GYPSUM BOARD GLUED AND SCREWED TO FRAMING
FILL ALL CAVITIES WITH DENSE PACK BLOWN FIBERGLASS INSULATION

**INTERIOR PARTITIONS** (ALL NON BEARING UNLESS OTHERWISE NOTED)
FRAMING: TYPICALLY 2X4 @ 24" O.C. (BUT MAY BE 2X2, 2X6, 2X8, 2X10 IF REQUIRED PER PROJECT)
SINGLE TOP PLATE, SINGLE SHOE
INTERIOR FINISH 5/8" GYPSUM GLUED AND SCREWED TO FRAMING
MECHANICAL ROOM PARTITIONS INSULATED WITH "ROXUL BATTS"

E CS-4B DATE: --- SCALE: 1/4"=1'-0" SINGLE STACK BPIIa/Ia

PRELIMINARY DRAWINGS NOT FOR CONSTRUCTION

Wednesday, June 13, 2018profile4b

Definition Of Terms
~ **Builder**,The purchaser, who is the contractual purchaser of goods from **VW** will provide experienced professional contractors in responsible charge of the work to connect and complete modular components at site, including but not limited to building, mechanical, electrical, plumbing, and site work. The purchaser will be identified throughout this document as the **"builder"**. All notes containing the term **"by builder"** are defining an obligation, for construction methodology / acceptable building practice for which **VM** accepts no responsibility, and should be reviewed carefully by the builder and the local building inspector. All such work and material shall be in compliance with applicable building codes.
~ **VM**, For simplification, the manufacturer/supplier of the Third Party Inspected and Labeled modular component known as VERMOD HIGH PERFORMANCE MANUFACTURED HOUSING, LLC will be identified throughout this document as the **"VM"**, or **"VERMOD"**

| NO. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| --- | --- | --- | --- |
| --- | --- | --- | --- |
| 1 | PER 8/16 EMAIL | MJD | 8/22/17 |
| 0 | ORIGINAL PRINTING | MJD | 7/28/17 |

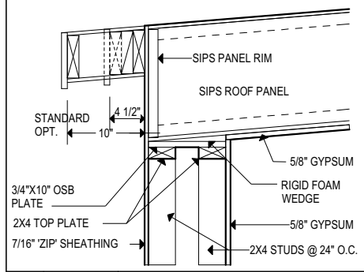
P.O. Box 566 2677 Route 5
Wilder VT. 05088

PROJECT DESCRIPTION:

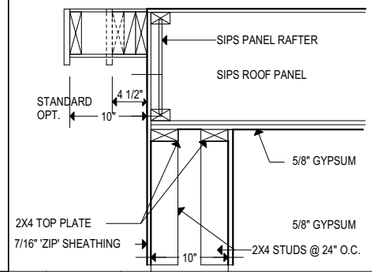
SHEET TITLE: **SECTION A**

8 OF 21

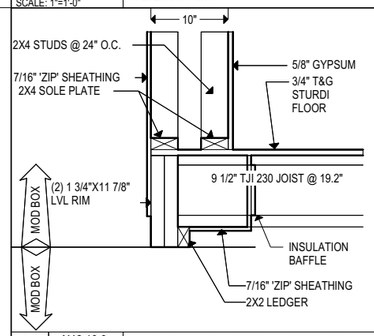
SHEET: **A3.1**
**17013**



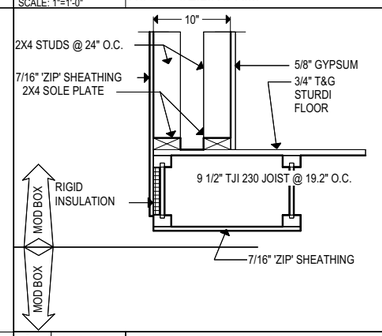

P | A50.10.0 | DATE:--- | SCALE: 1"=1'-0" | TYPICAL SIPS PANEL, EAVE ROOF / CEILING RIM



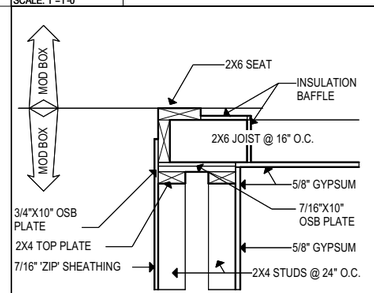

Q | I 70.10.0 | DATE:--- | SCALE: 1"=1'-0" | TYPICAL SIPS PANEL,END WALL ROOF / CEILING RIM



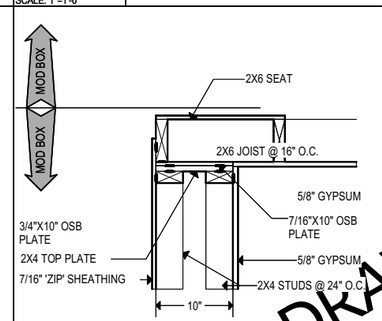

K | Ai42.10.0 | --- --- | SCALE: 1"=1'-0" | TYPICAL EAVE RIM UPPER BOX



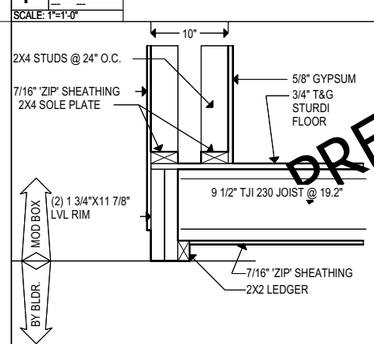

L | li 42.10.0 | --- --- | SCALE: 1"=1'-0" | TYPICAL END WALL RIM UPPER BOX



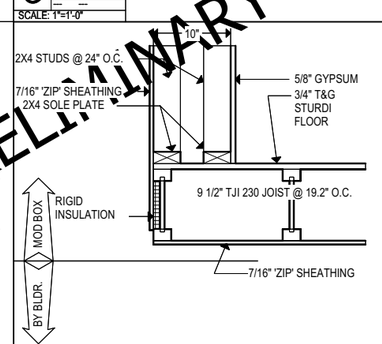

F | Ai50.10.0 | --- --- | SCALE: 1"=1'-0" | TYPICAL EAVE CEILING RIM



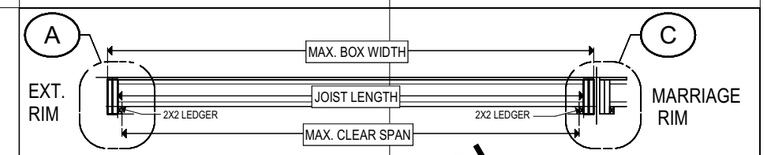

G | li 50.10.0 | --- --- | SCALE: 1"=1'-0" | TYPICAL END WALL CEILING RIM




A | Ai40.10.0 | --- --- | SCALE: 1"=1'-0" | TYPICAL EAVE RIM




B | li 40.10.0 | --- --- | SCALE: 1"=1'-0" | TYPICAL END WALL RIM



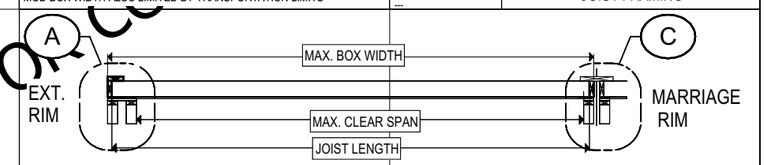

NOTES:
O.A. WIDTH: OUTSIDE FACE OF FRAMING TO OUTSIDE FACE OF FRAMING EQUALS MOD BOX WIDTH.
MAX. JOIST LENGTH: INSIDE FACE OF RIM TO INSIDE FACE OF RIM
MAX. CLEAR SPAN: INSIDE FACE OF BEARING TO INSIDE FACE OF BEARING
SPANS LISTED IN TABLE ARE MAX. ALLOWABLE FOR 9 1/2" TJI 230 JOIST@ 40 PSF LIVE LOAD
LIMITED TO L/360. BOX WIDTH MAY BE EQUAL TO OR LESS THAN THE MAX. DIMENSIONS.
SEE PRODUCTION PLANS FOR ACTUAL BOX WIDTH DIMENSIONS
MOD BOX WIDTH ALSO LIMITED BY TRANSPORTATION LIMITS

**MAX. SPAN / BOX WIDTH**

9 1/2" TJI 230 JOIST MAX. SPAN @ 40 PSF LL LIMITED TO L/480

| | | | | |
|---|---|---|---|---|
| **Dead Load** | 10 psf | 10 psf | 10 psf | 10 psf |
| **o.c. Spacing** | 12"o.c. | 16"o.c. | 19.2"o.c. | 24"o.c. |
| **Max. Clear Span** | 18'-3" | 16'-8" | 15'-9" | 14'-8" |
| **Max. Box Width** | 18'-10" | 17'-3" | 16'-4" | 15'-3" |
| **Dead Load** | 20 psf | 20 psf | 20 psf | 20 psf |
| **Max. Clear Span** | 18'-3" | 16'-8" | 15'-9" | 14'-8" |
| **Max. Box Width** | 18'-10" | 17'-3" | 16'-4" | 15'-3" |

O | --- | --- --- | --- | TYPICAL FLOOR SECTION 9 1/2" TJI 230 JOIST FRAMING



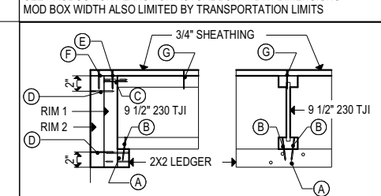

NOTES:
O.A. WIDTH: OUTSIDE FACE OF FRAMING TO OUTSIDE FACE OF FRAMING EQUALS MOD BOX WIDTH.
MAX. JOIST LENGTH: INSIDE FACE OF RIM TO INSIDE FACE OF RIM
MAX. CLEAR SPAN: INSIDE FACE OF BEARING TO INSIDE FACE OF BEARING
TYPICAL SPECIES/GRD @ VERMOD WOULD BE #2 SPF OR #2 SPFS
DEAD LOADS PER IRC TABLE R301.4
LIMITED TO L/240. BOX WIDTH MAY BE EQUAL TO OR LESS THAN THE MAX. DIMENSIONS.
SEE PRODUCTION PLANS FOR ACTUAL BOX WIDTH DIMENSIONS
MOD BOX WIDTH ALSO LIMITED BY TRANSPORTATION LIMITS

**STACKED BOX CEILING JOIST**

2X6 CEILING JOIST: 15'-2" CLEAR SPAN 16'-0" MAX.BOX WIDTH

| | | | | |
|---|---|---|---|---|
| **Dead Load** | 9 psf | 8 psf | 8 psf | 8 psf |
| **o.c. Spacing** | 12"o.c. | 16"o.c. | 19.2"o.c. | 24"o.c. |
| **Min. Species/Grd.** | SPF#3 | SPF#3 | SPF#3 | SPF#2 |
| **Min. Species/Grd.** | SPFs#3 | SPFs#3 | SPFs#3 | N/A |
| | | | | |
| | | | | |
| | | | | |

J | --- | --- --- | --- | TYPICAL CEILING SECTION 2X6 FRAMING (STACKED MOD BOXES)




| | | |
|---|---|---|
| A | 2X2 LEDGER TO RIM 1 | (4) 10d* BELOW EACH TJI |
| B | TJI BOTTOM CHORD TO LEDGER | (1) 10d* EACH SIDE OF WEB |
| C | RIM 1 TO TJI TOP CHORD | (1) 10d* EACH SIDE OF WEB |
| D | RIM 2 TO RIM 1 | (2) ROWS 10d* @ 12" O.C. |
| E | SHEATHING TO RIM 2 | 6d* DEF. SHNK. @ 6" O.C. |
| F | SHEATHING TO RIM 1 | 6d* DEF. SHNK. @ 6" O.C. |
| G | SHEATHING EDGE TO TJI | 6d* DEF. SHNK. @ 6" O.C. |
| | SHEATHING FIELD TO TJI | 6d* DEF. SHNK. @ 6" O.C. |

* PENNY NAIL SIZE OR PNEUMATIC EQUAL

D | --- | --- --- | SCALE: 1"=1'-0" | TJI JOIST TO RIM FASTENING

PRELIMINARY DRAWINGS NOT FOR CONSTRUCTION

Definition Of Terms
~ **Builder**,The purchaser, who is the contractual purchaser of goods from **VW** will provide experienced professional contractors in responsible charge of the work to connect and complete modular components at site, including but not limited to building, mechanical, electrical, plumbing, and site work. The purchaser will be identified throughout this document as the **"builder"**. All notes containing the term **"by builder"** are defining an obligation, for construction methodology / acceptable building practice for which **VM** accepts no responsibility, and should be reviewed carefully by the builder and the local building inspector. All such work and material shall be in compliance with applicable building codes.
~ **VM**, For simplification, the manufacturer/supplier of the Third Party Inspected and Labeled modular component known as VERMOD HIGH PERFORMANCE MANUFACTURED HOUSING, LLC will be identified throughout this document as the **"VM"**, or **"VERMOD"**

| NO. | DESCRIPTION | BY | DATE |
|---|---|---|---|
| --- | --- | --- | --- |
| --- | --- | --- | --- |
| 1 | PER 8/16 EMAIL | MJD | 8/22/17 |
| 0 | ORIGINAL PRINTING | MJD | 7/28/17 |

P.O. Box 566 2677 Route 5
Wilder VT. 05088

PROJECT DESCRIPTION:

SHEET TITLE:
**TYPICAL FRAMING DETAILS**



SHEET:
**A5.1**
**17013**

Wednesday, June 13, 2018profile4b

**Department of Planning and Zoning**
149 Church Street
Burlington, VT 05401
Telephone:(802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7142 (TTY)

*David White, FAICP, Director*
*Meagan Tuttle, AICP, Comprehensive Planner*
*Jay Appleton, GIS Manager*
*Scott Gustin, AICP, CFM, Principal Planner*
*Mary O'Neil, AICP, Principal Planner*
*Ryan Morrison, Associate Planner*
*Layne Darfler, Planning Technician*
*Shaleigh Draper, Zoning Clerk*

**TO:** Development Review Board
**FROM:** Scott Gustin
**DATE:** November 7, 2018
**RE:** 19-0299CA; 1 King Street

==========

**Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE <u>MUST</u> ATTEND THE MEETING.**

Zone: DW-PT Ward: 3C

Owner/Applicant: Lake Champlain Transportation Company

**Request:** After the fact paving of gravel parking areas. Also, installation of stormwater improvements.

**Applicable Regulations:**
Article 2 (Administrative Mechanisms), Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines)

**Background Information:**
The applicant is seeking approval to pave formerly gravel parking areas and for installation of stormwater improvements. Some minor reconfiguration of parking areas and a slight reduction in lot coverage are also included.

The property sits within the Special Flood Hazard Area. This location triggers review under the SFHA criteria of Sec. 4.5.4. Project plans have been provided to the state floodplain coordinator. No comments have yet been received. Any comments received within the 30-day comment period will be incorporated into this permit.

Previous zoning actions for this property:

- 5/23/17, Approval for renovations to restaurant
- 3/7/16, Approval for replacement ticket booth
- 4/27/12, Approval for Lake Monsters Team Headquarters sign
- 6/10/11, Non-app issued for post-flood damage repairs
- 11/30/09, Approval for trussed gable roof
- 2/19/08, Approval for conversion of retail to office space
- 2/17/05, Approval for roof renovations
- 4/13/04, Approval to install ticket window
- 3/27/03, Approval for sur pac and parking lot lighting installation
- 2/21/03, Approval to replace existing restaurant building with larger restaurant building (not acted upon)

- 2/22/01, Approval for Maritime Museum sign
- 2/22/01, Approval to change use to museum
- 8/18/00, Approval to install an interpretative marker
- 5/1/00, Approval to change portion of retail space to creemee stand
- 6/3/99, Approval to amend prior approval for 5 finger docks with marine gas float
- 2/18/99, Approval to install 5 finger docks
- 10/10/95, Approval to install vertical metal siding on maintenance shed
- 10/29/93, Approval for construction of a 20' X 20' storage structure
- 4/9/92, Approval to construct HC accessible bathroom with ramp
- 5/9/91, Approval to construct new structure containing freezer and refrigeration units

**Recommendation: <u>Consent approval</u>** as per, and subject to, the following findings and conditions.

**I. Findings**
**Article 2: Administrative Mechanisms**
***Part 7: Enforcement***
***Sec. 2.7.8, Withhold Permit***
A number of zoning permits have been approved for the subject property. Some, but not all, have final certificates of occupancy. Per this section, prior to issuance of a final certificate of occupancy for this project, any zoning permits not yet closed out with final certificates of occupancy must be addressed. **(Affirmative finding as conditioned)**

**Article 4: Maps & Districts**
***Sec. 4.4.1, Downtown Mixed Use Districts:***
***(a) Purpose***
***(4) Downtown Waterfront – Public Trust District (DW-PT)***
The subject property is located in the Downtown Waterfront – Public Trust (DW-PT) District. This district is intended to enhance and diversify commercial and residential development in the downtown waterfront area, and to increase access, utilization, and enjoyment of the lakeshore by the community. The ferry company is consistent with this intent. **(Affirmative finding)**

***(b) Dimensional Standards & Density***
Dimensional standards are largely unaffected by this project. Lot coverage will decrease slightly with the introduction of some new green space. Lot coverage will drop to 88.2%. Up to 100% lot coverage is permissible. **(Affirmative finding)**

***(c) Permitted & Conditional Uses***
See (d) 2 below.

***(d) District Specific Regulations***
***1. Use Restrictions***
***A. Ground Floor Residential Uses Restricted***
**(Not applicable)**

***2. Public Trust Restrictions***
The subject property is located within that area of the DW-PT: Maple to Main Street. The ferry company is a permitted use and will remain unchanged. **(Affirmative finding)**

***3. Facades and Setbacks on Side and Rear Property Lines***
**(Not applicable)**

***4. Building Height Setbacks***

***A. Principal View Corridors***
**(Not applicable)**

***B. Church Street Buildings***
**(Not applicable)**

***C. Side Street Building Height***
**(Not applicable)**

***5. Lake Champlain Waterfront Setbacks***
No changes proposed. **(Not applicable)**

***6. Residential District Setback***
**(Not applicable)**

***7. Development Bonuses/Additional Allowances***
None are sought.

***Sec. 4.5.4, Natural Resource Protection Overlay District:***
Almost the entire site is located within the Special Flood Hazard Area (at or below the 102' elevation). As a result, the following criteria apply.

***(a) District Specific Regulations: Special Flood Hazard Area***
***(7) Special Review Criteria***
**A. The danger to life and property…**
The pavement work and stormwater improvements have no effect on flood heights or velocities. **(Affirmative finding)**

**B. The danger that material may be swept onto other lands…**
The site work is in little danger of being swept away during times of flooding. **(Affirmative finding)**

**C. The proposed water supply and sanitation systems…**
No changes to water and sewer systems are proposed. **(Affirmative finding)**

**D. The susceptibility of the proposed facility and its contents to flood damage…**
Given its low elevation adjacent to the lakeshore, the property has been flooded a number of times. The pavement of formerly gravel parking areas and the installation of stormwater measures has no bearing on the susceptibility to flooding. **(Affirmative finding)**

**E. The importance of the services provided…**
No new use is proposed. The ferry company will remain. As noted above, the ferry company is consistent with the intent of this DW-PT district. **(Affirmative finding)**

**F. The availability of alternative locations…**
As above, no new use is proposed. The ferry company is logically located along the lakeshore. **(Affirmative finding)**

**G. The compatibility of the proposed use with existing development…**
As previously noted, the ferry company is consistent with the intent of the DW-PT zone. **(Affirmative finding)**

**H. The relationship of the proposed use to the Municipal Development Plan…**
No new use is proposed. The ferry company use strengthens the working waterfront and contributes to the vitality of the downtown waterfront called for in PlanBTV: Downtown and Waterfront. **(Affirmative finding)**

**I. The safety of access to the property…**
While almost the entire property is within the Special Flood Hazard Area, access to it remains possible from King Street during flood events. No changes in access are proposed. **(Affirmative finding)**

**J. The expected heights, velocity, duration, rate of rise…**
The maximum regulatory flood elevation along the lakeshore is 102' above sea level. The velocity of flood waters along the lakeshore is not problematic. Water is more or less stationary as it rises and falls. The duration of flooding and the rate of its rise depend entirely on spring snowmelt and precipitation events. The lake has risen above 102' just once on record (spring 2011). Sediment transport is insubstantial. Sediment transport is associated with moving waterways such as rivers. The parking area pavement has no impact on flood height, velocity, duration, rate of rise, or sediment transport. **(Affirmative finding)**

**K. Conformance with all other applicable requirements…**
See Articles 4, 5, and 6 of these findings.

**Article 5: Citywide General Regulations**
***Sec. 5.2.3, Lot Coverage Requirements***
See Article 4 above.

***Sec. 5.2.4, Buildable Area Calculation***
Not applicable in the DW-PT zone.

***Sec. 5.2.5, Setbacks***
See Article 4 above.

***Sec. 5.2.6, Building Height Limits***
See Article 4 above.

***Sec. 5.2.7, Density and Intensity of Development Calculations***
See Article 4 above.

***Sec. 5.5.1, Nuisance Regulations***

Nothing in the proposal appears to constitute a nuisance under this criterion. **(Affirmative finding)**

***Sec. 5.5.2, Outdoor Lighting***
No new outdoor lighting is proposed. **(Not applicable)**

***Sec. 5.5.3, Stormwater and Erosion Control***
The applicant has worked with the city's stormwater program to improve conditions on this heavily developed lakeshore site. Proposed measures include several underground stormwater attenuation chambers that will collect and treat stormwater runoff from the site prior to discharge into Lake Champlain. Final approval of the post-construction stormwater management system is pending. The erosion control plan has been approved. **(Affirmative finding as conditioned)**

**Article 6: Development Review Standards:**
***Part 1, Land Division Design Standards***
**(Not applicable)**

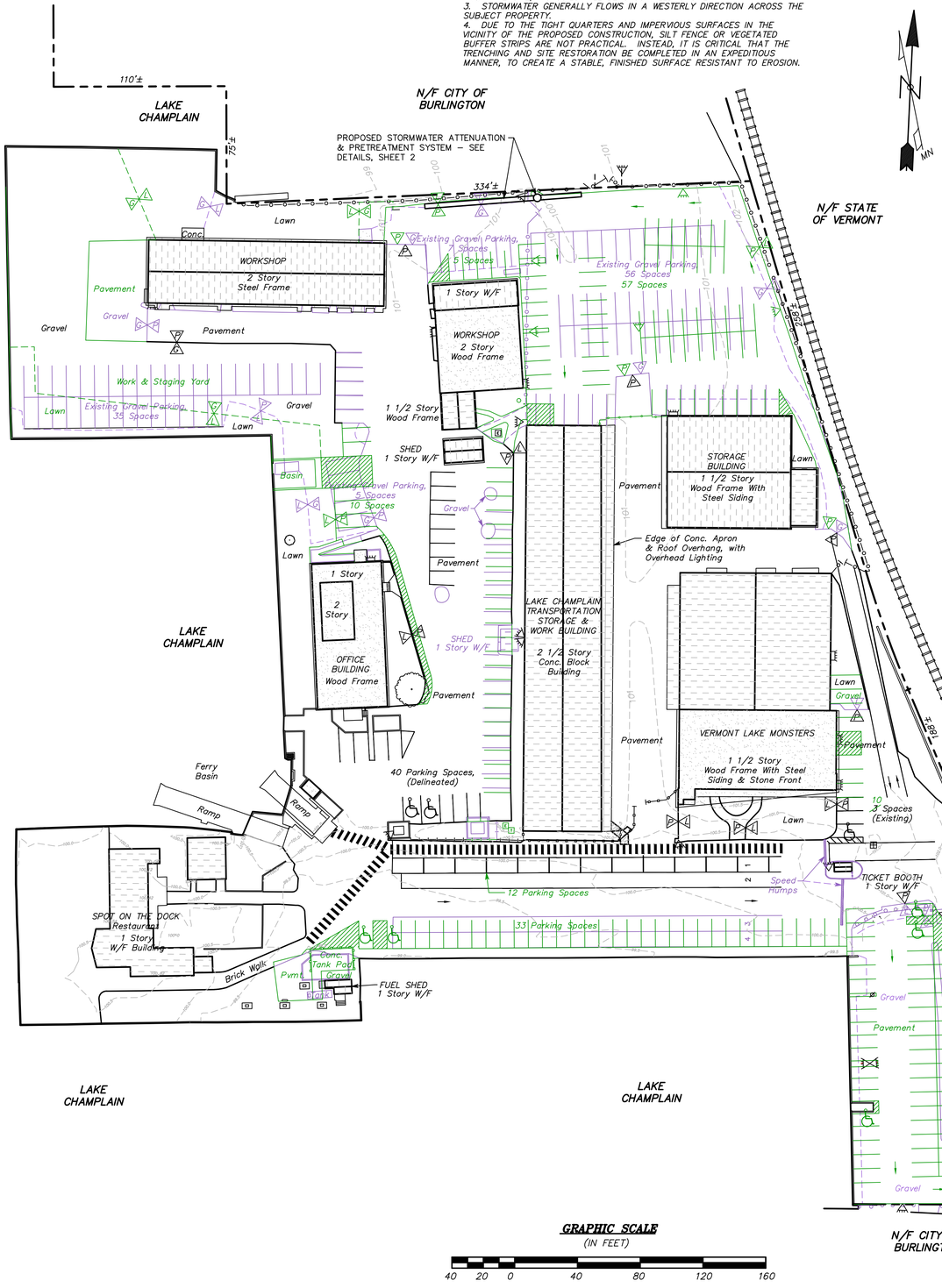
***Part 2, Site Plan Design Standards***
***Sec. 6.2.2, Review Standards***
Site changes are mostly limited to pavement of formerly gravel parking areas. There are some small alterations such as the introduction of some additional lakeshore green space within the northern pier area and some reconfigured parking space striping. **(Affirmative finding)**

***Part 3, Architectural Design Standards***
**(Not applicable)**

**II. Conditions of Approval**

1. Final approval of the post-construction stormwater management plan by city stormwater program staff is required.
2. **Prior to issuance of a certificate of occupancy for this zoning permit**, all prior zoning permits that have expired without their required certificates of occupancy shall be closed out with final certificates of occupancy. The applicant is advised to seek certificates of occupancy for these older zoning permit prior to seeking a certificate of occupancy for this new zoning permit.
3. The Applicant/Property Owner is responsible for obtaining all necessary Zoning Permits and Building Permits through the Department of Public Works as well as other permit(s) as may be required, and shall meet all energy efficiency codes of the city and state as required.
4. Standard permit conditions 1-15.

STORMWATER PERMITTING NOTES:
1. LIMITS OF DISTURBANCE WILL REMAIN WITHIN FIVE FEET OF THE PROPOSED STORMWATER ATTENUATION & PRETREATMENT SYSTEM.
2. EXCAVATED SOILS WILL BE DIRECTLY LOADED ON TRUCKS AND REMOVED FROM THE SITE; NO SOILS WILL BE STOCKPILED ONSITE.
3. STORMWATER GENERALLY FLOWS IN A WESTERLY DIRECTION ACROSS THE SUBJECT PROPERTY.
4. DUE TO THE TIGHT QUARTERS AND IMPERVIOUS SURFACES IN THE VICINITY OF THE PROPOSED CONSTRUCTION, SILT FENCE OR VEGETATED BUFFER STRIPS ARE NOT PRACTICAL. INSTEAD, IT IS CRITICAL THAT THE TRENCHING AND SITE RESTORATION BE COMPLETED IN AN EXPEDITIOUS MANNER, TO CREATE A STABLE, FINISHED SURFACE RESISTANT TO EROSION.




NOTE: THE EASTERLY AND SOUTHERLY PERIMETER OF THIS PARKING LOT IS NOW DELINEATED BY BOULDERS.

## GRAPHIC SCALE
(IN FEET)

40 20 0 40 80 120 160

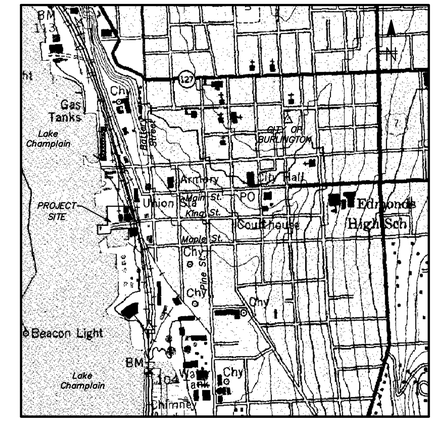
## LEGEND

Note: Existing site features are generally labelled on the plans with italicized, lower case text, while upper case, block-style text generally denotes proposed features.

- EXISTING PROPERTY LINE
- PROPOSED BUILDING
- BUILDING/WALL TO BE REMOVED
- EXISTING EDGE OF PAVEMENT/CONCRETE
- EXISTING EDGE OF GRAVEL
- EXISTING WOOD STOCKADE FENCE
- EXISTING WOOD PICKET FENCE
- EXISTING WOOD PLANK GUARDRAIL
- EXISTING RAILROAD TRACKS
- EXISTING ROOF LINE (DASHED LINES SHOW ALIGNMENT OF DRAINAGE)
- EXISTING FLAT ROOF
- PROPOSED PAVEMENT TO BE CREATED FROM LAWN OR GRAVEL AREA
- PROPOSED GRAVEL AREA TO BE CREATED FROM LAWN
- PROPOSED LAWN AREA TO BE CREATED FROM GRAVEL
- EXISTING SURFACE MATERIAL TRANSITION: P=PAVEMENT, L=LAWN, G=GRAVEL
- EXISTING POLE-MOUNTED LIGHT
- PROPOSED POLE-MOUNTED LIGHT
- EXISTING WALL-MOUNTED LIGHT
- PROPOSED WALL-MOUNTED LIGHT
- PARKING VALET STATION, OCCUPIED AS NEEDED
- UTILITY POLE
- BLACK LINE WORK DEPICTS CURRENT SITE FEATURES, UNCHANGED SINCE OCT., 2002
- VIOLET LINE WORK DEPICTS SITE FEATURES REMOVED SINCE OCT., 2002
- GREEN LINE WORK DEPICTS SITE IMPROVEMENTS INSTALLED SINCE OCT., 2002

## OWNER OF RECORD

LAKE CHAMPLAIN TRANSPORTATION COMPANY
KING STREET DOCK, BURLINGTON, VERMONT 05401
DEEDS RECORDED AT BURLINGTON LAND RECORDS,
VOL. 129, PG. 394–395, DATED FEB. 2, 1948
VOL. 142, PG. 460–461, DATED FEB. 1, 1952
VOL. 235, PG. 435–444, DATED APRIL 8, 1976
TAX MAP PARCEL #049–1–078–000




## LOCATION MAP
N.T.S.

## LOT COVERAGES

EXISTING, OCTOBER, 2002

| | | |
|---|---|---|
| Buildings | = | 61,663 sf |
| Pavement/Concrete Surfaces | = | 89,815 sf |
| Gravel Surfaces | = | 75,718 sf |
| Total Lot Coverage | = | 227,196 sf (88.3%) |
| Green Area | = | 30,126 sf (11.7%) |
| TOTAL AREA | = | 257,322 sf (100.0%) |

PERMITTED, FEBRUARY, 2003 (NOT CONSTRUCTED)

| | | |
|---|---|---|
| Buildings | = | 63,789 sf |
| Pavement/Concrete Surfaces | = | 96,018 sf |
| Gravel Surfaces | = | 67,745 sf |
| Total Lot Coverage | = | 227,552 sf (88.4%) |
| Green Area | = | 29,770 sf (11.6%) |
| TOTAL AREA | = | 257,322 sf (100.0%) |

Permitted 222 Parking Spaces, including 5 handicap–accessible.

EXISTING, JUNE, 2018

| | | |
|---|---|---|
| Buildings | = | 61,390 sf |
| Pavement/Concrete Surfaces | = | 144,265 sf |
| Gravel Surfaces | = | 21,345 sf |
| Total Lot Coverage | = | 227,000 sf (88.2%) |
| Green Area | = | 30,322 sf (11.8%) |
| TOTAL AREA | = | 257,322 sf (100.0%) |

Existing 235 Parking Spaces, including 8 handicap–accessible.

Note: These coverage areas are different from those reported in 2003, due to changes in standard calculation procedures since that time; for example, the 2003 impervious surfaces included dock surfaces and excluded roof overhangs.

## NOTES

1. THESE DRAWINGS ARE PREPARED FOR PERMITTING REVIEW ONLY.

2. AS INSTRUMENTS OF SERVICE THESE DRAWINGS AND COPIES THEREOF ARE PROPERTY OF THE ENGINEER, BUERMANN ENGINEERING, LLC. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

3. IT IS THE RESPONSIBILITY OF THE OWNER AND CONTRACTOR TO ENSURE THAT THESE PLANS CONTAIN THE MOST RECENT REVISIONS.

4. THE CONTRACTOR SHALL BE INSURED FOR THE WORK TO BE PERFORMED, AND SHALL BE PREPARED TO PROVIDE THE OWNER WITH A CERTIFICATE OF INSURANCE PRIOR TO THE START OF CONSTRUCTION.

5. THE CONTRACTOR SHALL NOTIFY DIG–SAFE (888)344–7233 AT LEAST FORTY–EIGHT HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE THAT OTHER BURIED UTILITIES OR STRUCTURES, NOT SHOWN ON THESE PLANS AND/OR NOT LOCATED BY DIG–SAFE, MAY EXIST ON THIS SITE.

6. BUERMANN ENGINEERING, LLC HAS NOT PERFORMED ANY ENVIRONMENTAL SITE ASSESSMENTS ON THE SUBJECT PROPERTY, AND MAKES NO CLAIMS ABOUT THE POSSIBLE PRESENCE OR ABSENCE OF HAZARDOUS MATERIALS ONSITE.

7. THE PURPOSE OF THIS PLAN IS TO DEPICT SITE CONDITIONS AS THEY EXISTING IN OCTOBER, 2002, AND OTHER SITE IMPROVEMENTS MADE SINCE THAT TIME. THE 2002 TOPOGRAPHY SHOWN IS PRIMARILY FROM "BASE PLAN – EXISTING CONDITIONS", DATED OCTOBER 18, 2002 BY LAND LINES SURVEYING AND MAPPING, MICHAEL R. MAGOON, L.S. UPDATED SITE CONDITIONS WERE OBTAINED BY BUERMANN ENGINEERING, LLC ON JUNE 26, 2018 AND AUGUST 8, 2018. SITE TOPOGRAPHY SHOWN NORTH OF THE SUBJECT PROPERTY IS FROM "PROPOSED SITE PLAN, ECHO LEAHY CENTER, PARKING IMPROVEMENTS" (SHEET C–2, DTATED 3/22/18 BY OTTER CREEK ENGINEERING).

| | |
|---|---|
| REV. 9/19/2018 | ADDED STORMWATER PERMITTING NOTES. |
| REV. 9/5/2018 | MOVED PROPOSED STORMWATER ATTENUATION TRENCH. |

SITE PLAN

# LAKE INDUSTRIES

KING STREET DOCK
BURLINGTON, VERMONT

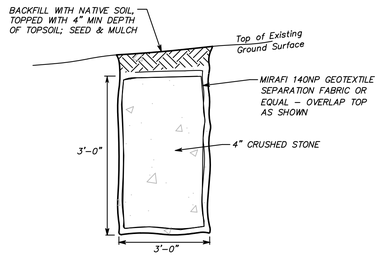
©

Date: 8/17/2018
Project Number: 831
Plan Scale: 1" = 40'
Sheet: 1 of 2


BUERMANN ENGINEERING, LLC
7 Sanderson Road, Milton, Vermont 05468
Tel.: (802) 893–1308 www.belvt.com

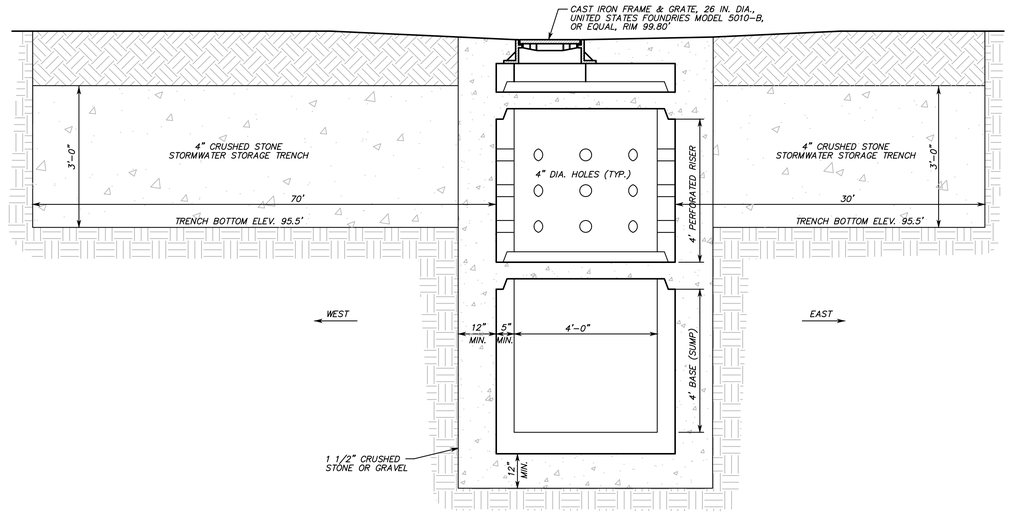

STATE OF VERMONT JOHN M. BUERMANN JR. NO. 7375 PROFESSIONAL ENGINEER

S01R20180919




**STORAGE TRENCH SECTION**

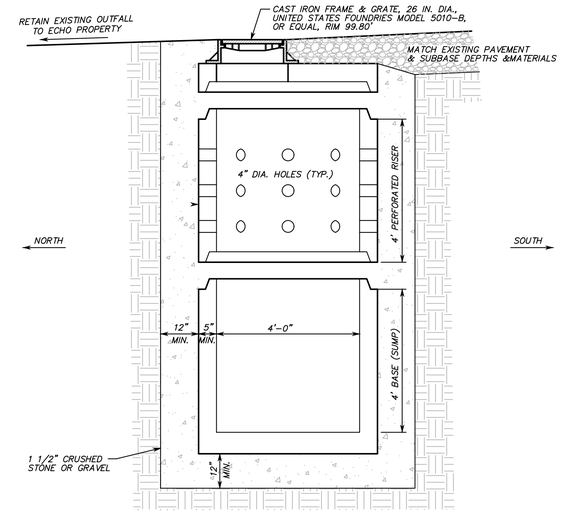
N.T.S.




CATCH BASIN SHALL BE A 48–INCH INSIDE DIAMETER WELL TILE STRUCTURE (H–20 LOADING CAPABLE), AS MANUFACTURED BY CAMP PRECAST CONCRETE PRODUCTS, OR APPROVED EQUAL.

**STORMWATER ATTENUATION & PRETREATMENT SYSTEM**
**CENTERLINE PROFILE**

N.T.S.




CATCH BASIN SHALL BE A 48–INCH INSIDE DIAMETER WELL TILE STRUCTURE (H–20 LOADING CAPABLE), AS MANUFACTURED BY CAMP PRECAST CONCRETE PRODUCTS, OR APPROVED EQUAL.

**STORMWATER ATTENUATION & PRETREATMENT SYSTEM**
**PAVEMENT/OUTFALL SECTION**

N.T.S.

## TURF ESTABLISHMENT PROCEDURES

1. Rough grade the subsoil to the proper elevations, 4–6 inches below the finished grades specified on the plans for the area to be seeded. Spread topsoil to a uniform depth of 4–6 inches. Topsoil shall comply with the Vermont Agency of Transportation Standard Specifications for Construction, latest edition, Section 755.01 "Topsoil".

2. Remove sticks, stones and any other debris from the topsoil that may interfere with fine grading and future mowing of the area. Then fine grade the topsoil, taking care to maintain 4 inches minimum topsoil depth and to provide for surface water runoff in accordance with the plans.

3. Apply commercial fertilizer (10–20–20) to the area, at a rate of 4 pounds per 100 square feet (1,700 pounds per acre). Apply agricultural lime to the area, at rate fo 10 pounds per 100 square feet (2 tons per acre). Harrow or rake the topsoil to mix the fertilizer and lime to a 2 inch minimum depth.

4. Permanent seeding shall occur only between April 15 and October 15. Areas to be regularly mowed should use a mix containing about 45 percent Kentucky bluegrass, 45 percent creeping red fescue, and about 10 percent of ryegrass, applied at 45 pounds per acre. Non–mowed areas should use a mix containing about 65 percent creeping red fescue, 5 percent redtop, and about 30 percent birdsfoot trefoil, applied at 30 pounds per acre. Temporary seeding (including all seeding between October 15 and April 15) shall use annual rye applied at a rate of 45 pounds per acre. Bury permanent and temporary seeds with 1/4 inch of topsoil.

5. Apply hay or straw mulch evenly to the seeded area. Mulch shall be air–dried, and free of undesirable seeds and coarse material. Place mulch at a rate of 75–100 pounds per 1,000 square feet (2–3 bales spread 3 inches deep), or 1.5–2.5 tons per acre (90–120 bales spread 3 inches deep). The mulch may be anchored by the use of a disk harrow or sheepsfoot roller (running parallel to the ground contours), or a tracked vehicle (running perpendicular to the ground slope); alternatively a thin layer of topsoil placed over the mulch as an anchor, or commercial nets, mats or asphalt tacking products may be acceptable with the Engineer's prior approval.

6. Inspect seeded and mulched areas frequently during the first four weeks after seeding, and replace or reanchor the mulch whenever necessary. Check seeding near the end of the first growing season to determine whether all areas have become fully established. Scarify, fertilize, lime, and reseed any areas withou adequate plant cover, and reapply mulch.

7. Areas temporarily seeded and mulched between October 15 and April 15 shall be reseeded and mulched in accordance with these permanent seeding procedures after April 15.

8. Mow and fertilize well–established areas of permanent planting on a regular basis to maintain vigorous growth.

## NOTES

1. THESE DRAWINGS ARE PREPARED FOR PERMITTING REVIEW ONLY.

2. AS INSTRUMENTS OF SERVICE THESE DRAWINGS AND COPIES THEREOF ARE PROPERTY OF THE ENGINEER, BUERMANN ENGINEERING, LLC. CHANGES TO THE DRAWINGS MAY ONLY BE MADE BY THE ENGINEER.

3. IT IS THE RESPONSIBILITY OF THE OWNER AND CONTRACTOR TO ENSURE THAT THESE PLANS CONTAIN THE MOST RECENT REVISIONS.

4. THE CONTRACTOR SHALL BE INSURED FOR THE WORK TO BE PERFORMED, AND SHALL BE PREPARED TO PROVIDE THE OWNER WITH A CERTIFICATE OF INSURANCE PRIOR TO THE START OF CONSTRUCTION.

5. THE CONTRACTOR SHALL NOTIFY DIG–SAFE (888)344–7233 AT LEAST FORTY–EIGHT HOURS PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE AWARE THAT OTHER BURIED UTILITIES OR STRUCTURES, NOT SHOWN ON THESE PLANS AND/OR NOT LOCATED BY DIG–SAFE, MAY EXIST ON THIS SITE.

6. BUERMANN ENGINEERING, LLC HAS NOT PERFORMED ANY ENVIRONMENTAL SITE ASSESSMENTS ON THE SUBJECT PROPERTY, AND MAKES NO CLAIMS ABOUT THE POSSIBLE PRESENCE OR ABSENCE OF HAZARDOUS MATERIALS ONSITE.

7. REFER TO SHEET 1 FOR ADDITIONAL NOTES AND REFERENCES.

| | |
|---|---|
| REV. 9/19/2018 ADDED TURF ESTABLISHMENT PROCEDURES. | |
| REV. 9/5/2018 REVISED ATTENUATION SYSTEM DETAILS. | |
| STORMWATER DETAILS | Date 8/17/2018 |
| LAKE INDUSTRIES<br>KING STREET DOCK<br>BURLINGTON, VERMONT © | Project Number 831<br>Plan Scale AS SHOWN<br>Sheet 2 of 2 |
| BUERMANN ENGINEERING, LLC<br>7 Sanderson Road, Milton, Vermont 05468<br>Tel.: (802) 893–1308 www.belvt.com | STATE OF VERMONT JOHN M. BUERMANN No. 7375 PROFESSIONAL ENGINEER<br>D01R20180919 |

**Department of Planning and Zoning**
149 Church Street
Burlington, VT 05401
Telephone:(802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7142 (TTY)

*David White, FAICP, Director*
*Meagan Tuttle, AICP, Comprehensive Planner*
*Jay Appleton, GIS Manager*
*Scott Gustin, AICP, CFM, Principal Planner*
*Mary O'Neil, AICP, Principal Planner*
*Ryan Morrison, Associate Planner*
*Layne Darfler, Planning Technician*
*Shaleigh Draper, Zoning Clerk*

**TO:** Development Review Board
**FROM:** Scott Gustin
**DATE:** November 7, 2018
**RE:** 19-0303CU; 196 South Willard Street

==========

**Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE <u>MUST</u> ATTEND THE MEETING.**

Zone: I Ward: 6S

Owner/Applicant: David Wark

**Request:** Permit existing 3-unit residential use. No site or exterior building changes.

**Applicable Regulations:**
Article 3 (Applications and Reviews), Article 4 (Maps & Districts), Article 8 (Parking)

**Background Information:**
The applicant is seeking approval for the existing 3-unit residential use. The residence has contained three units for some time now; however, there is no zoning permit on file permitting the use. No site or exterior building changes are proposed.

There are no previous zoning actions for this property.

**Recommendation:** **<u>Consent approval</u>** as per, and subject to, the following findings and conditions:

**I. Findings**

**Article 3: Applications and Reviews**
***Part 5, Conditional Use & Major Impact Review:***
**Section 3.5.6 (a) Conditional Use Review Standards**
*Approval shall be granted only if the DRB, after public notice and public hearing, determines that the proposed conditional use and associated development shall not result in an undue adverse effect on each of the following general standards:*

1. *Existing or planned public utilities, facilities or services are capable of supporting the proposed use in addition to the existing uses in the area;*
   The property is served by municipal utilities. Sufficient water and sewer service are available. It is the applicant's responsibility to inquire with Vermont DEC as to whether a wastewater

permit is needed. If one is needed, a capacity letter issued by the Dept. of Public Works will be required. **(Affirmative finding as conditioned)**

2. *The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the municipal development plan;*

   The subject property is located within the Institutional (I) zone. This district allows for an increased development scale and intensity than would typically be found in adjacent residential districts. While the zone is intended primary for the city's major educational, health care, cultural, and research centers, it allows for other complimentary uses such as multi-family housing. The triplex is consistent with the intent of the Institutional zone. **(Affirmative finding)**

3. *The proposed use will not have nuisance impacts from noise, odor, dust, heat, and vibrations greater than typically generated by other permitted uses in the same zoning district;*

   The triplex has been in place for years. There is no documented evidence in the zoning files that it has generated nuisance impacts from noise, odor, dust, or the like. **(Affirmative finding)**

4. *The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street designations and capacity; level of service and other performance measures; access to arterial roadways; connectivity; transit availability; parking and access; impacts on pedestrian, bicycle and transit circulation; safety for all modes; and adequate transportation demand management strategies;*

   No additional traffic is anticipated as the use exists already. Minimal traffic is associated with the use in any event. No traffic study has been provided or is required for a proposal of this small scale. **(Affirmative finding)**

   *and,*

5. *The utilization of renewable energy resources;*

   No renewable energy utilization is included in this proposal. Future incorporation is not precluded by the proposal. **(Affirmative finding)**

   *and,*

6. *Any standards or factors set forth in existing City bylaws and city and state ordinances**;***

   Building code, minimum housing standards, and other applicable city bylaws and state ordinances will be administered and enforced separately.

**(b) Major Impact Review Standards:**
Not applicable.

**(c) Conditions of Approval:**

*In addition to imposing conditions of approval necessary to satisfy the General Standards specified in (a) or (b) above, the DRB may also impose additional conditions of approval relative to any of the following:*

1. *Mitigation measures, including but not limited to screening, landscaping, where necessary to reduce noise and glare and to maintain the property in a character in keeping with the surrounding area.*
   No mitigation is warranted for this application. **(Affirmative finding)**

2. *Time limits for construction.*
   **(Not applicable)**

   *Hours of operation and/or construction to reduce the impacts on surrounding properties.*
   **(Not applicable)**

3. *That any future enlargement or alteration of the use return for review to the DRB to permit the specifying of new conditions; and,*
   Any future enlargement or alteration will be reviewed under the zoning regulations in effect at that time.

4. *Such additional reasonable performance standards, conditions and safeguards, as it may deem necessary to implement the purposes of this chapter and the zoning regulations.*
   See the recommended conditions.

**Article 4: Maps & Districts**
***Sec. 4.4.4, Institutional District:***
***(a) Purpose***
As noted above, the subject property is located within the Institutional (I) zone. This district allows for an increased development scale and intensity than would typically be found in adjacent residential districts. While the zone is intended primary for the city's major educational, health care, cultural, and research centers, it allows for other complimentary uses such as multi-family housing. The triplex is consistent with the intent of the Institutional zone. **(Affirmative finding)**

***(b) Dimensional Standards & Density***
The property is about 1/3 of an acre (14,571 sf). Permissible residential density in the Institutional zone is 20 units/acre. The 3 residential units on this 1/3 acre lot result in density well below the maximum possible.

No construction is proposed, and lot coverage will remain unchanged.

Setbacks remain unchanged.

Building height remains unchanged. **(Affirmative finding)**

***(c) Permitted & Conditional Uses***

The triplex, as multi-family attached housing, is subject to conditional use review in the Institutional zone.

***(d) District Specific Regulations***

***1. Setbacks***

No setback encroachments are sought.

***2. Height***

Not applicable in the I zone.

***3. Lot Coverage***

No lot coverage exceptions are sought.

***4. Accessory Residential Structures and Uses***

No new accessory structures or uses are proposed.

***5. Residential Density***

Not applicable in the I zone.

***6. Uses***

Not applicable.

***7. Residential Development Bonuses***

None sought.

**Article 8: Parking**

***Sec. 8.1.8, Minimum Off-Street Parking Requirements***

The subject property is within the Shared Use Parking District. As a result, the triplex requires 3 parking spaces (1 space per unit). The driveway contains sufficient space for 3 parking spaces, each accessible without moving another vehicle. **(Affirmative finding)**

***Sec. 8.2.5, Bicycle Parking Requirements***

Not applicable.

**II. Conditions of Approval**

1. A State of Vermont wastewater permit may be required. If one is required, the applicant shall receive written verification of adequate wastewater capacity from the Department of Public Works.
2. Standard Conditions 1-15.

**Department of Planning and Zoning**
149 Church Street
Burlington, VT 05401
Telephone:(802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7142 (TTY)

*David White, FAICP, Director*
*Meagan Tuttle, AICP, Comprehensive Planner*
*Jay Appleton, GIS Manager*
*Scott Gustin, AICP, CFM, Principal Planner*
*Mary O'Neil, AICP, Principal Planner*
*Ryan Morrison, Associate Planner*
*Layne Darfler, Planning Technician*
*Shaleigh Draper, Zoning Clerk*

**TO:** Development Review Board
**FROM:** Scott Gustin
**DATE:** November 7, 2018
**RE:** 19-0211CU; 449 South Prospect Street

==========

**Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE <u>MUST</u> ATTEND THE MEETING.**

Zone: RL Ward: 6S

Owner/Applicant: Chris C. Khamnei

**Request:** Change of use from single family to duplex and widen driveway.

**Applicable Regulations:**
Article 3 (Applications and Reviews), Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines), Article 8 (Parking)

**Background Information:**
The applicant is seeking approval for a duplex. The residence was formerly a single family home. The applicant also seeks to widen the existing driveway. No other changes are proposed. The applicant received approval for the requested conversion and site work in April 2017 but never met the permit conditions or picked up the permit. The zoning permit expired, hence, this new application.

Previous zoning actions for this property.

- 4/10/17, Approval to convert single family home to duplex and widen driveway

**Recommendation:** **<u>Consent approval</u>** as per, and subject to, the following findings and conditions:

## I. Findings

### Article 3: Applications and Reviews

***Part 5, Conditional Use & Major Impact Review:***

**Section 3.5.6 (a) Conditional Use Review Standards**

*Approval shall be granted only if the DRB, after public notice and public hearing, determines that the proposed conditional use and associated development shall not result in an undue adverse effect on each of the following general standards:*

1. *Existing or planned public utilities, facilities or services are capable of supporting the proposed use in addition to the existing uses in the area;*
   The property is served by municipal utilities. Sufficient water and sewer service are available. The conversion to a duplex will entail a slight increase in demand. A State of Vermont wastewater permit will be required. A capacity letter issued by the Dept. of Public Works will be required prior to issuance. **(Affirmative finding as conditioned)**

2. *The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the municipal development plan;*

   The subject property is located within the Residential Low Density (RL) zone. This district is intended primarily for low-density residential development in the form of single detached dwellings and duplexes. This district is typically characterized by a compact and cohesive residential development pattern reflective of the respective neighborhoods' development history. The conversion to a duplex is consistent with this intent. **(Affirmative finding)**

3. *The proposed use will not have nuisance impacts from noise, odor, dust, heat, and vibrations greater than typically generated by other permitted uses in the same zoning district;*

   The duplex is not expected to generate nuisance impacts from noise, odor, dust, or the like that may be more typically associated with industrial uses. **(Affirmative finding)**

4. *The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street designations and capacity; level of service and other performance measures; access to arterial roadways; connectivity; transit availability; parking and access; impacts on pedestrian, bicycle and transit circulation; safety for all modes; and adequate transportation demand management strategies;*

   The conversion from single family home to duplex results in minimal additional traffic generation. No traffic study has been provided or is required for a project of this small scale. **(Affirmative finding)**

   *and,*
5. *The utilization of renewable energy resources;*

   No renewable energy utilization is included in this proposal. Future incorporation is not precluded by the conversion. **(Affirmative finding)**

   *and,*
6. *Any standards or factors set forth in existing City bylaws and city and state ordinances**;***

   Building code, minimum housing standards, and other applicable city bylaws and state ordinances will be administered and enforced separately.

(b) Major Impact Review Standards
Not applicable.

(c) Conditions of Approval:
*In addition to imposing conditions of approval necessary to satisfy the General Standards specified in (a) or (b) above, the DRB may also impose additional conditions of approval relative to any of the following:*

1. *Mitigation measures, including but not limited to screening, landscaping, where necessary to reduce noise and glare and to maintain the property in a character in keeping with the surrounding area.*
   The conversion to a duplex does not require mitigation measures such as screening, landscaping, and/or the reduction of glare. **(Affirmative finding)**

2. *Time limits for construction.*
   No construction timeline or phasing are included in the project plans. The standard 2-year timeframe for zoning permits will apply. **(Affirmative finding)**

3. *Hours of operation and/or construction to reduce the impacts on surrounding properties.*
   Hours of operation do not apply to the duplex.

   No construction hours are noted. Only minimal exterior construction – associated with the driveway – is proposed. Typical construction hours within or close to residential areas are Monday – Friday from 7:00 AM – 5:00 PM. Saturday construction may be allowed upon request. No work on Sunday. **(Affirmative finding as conditioned)**

4. *That any future enlargement or alteration of the use return for review to the DRB to permit the specifying of new conditions; and,*
   Any future enlargement or alteration will be reviewed under the zoning regulations in effect at that time.

5. *Such additional reasonable performance standards, conditions and safeguards, as it may deem necessary to implement the purposes of this chapter and the zoning regulations.*
   See the recommended conditions.

**Article 4: Maps & Districts**
***Sec. 4.4.5, Residential Districts:***
***(a) Purpose***
***(1) Residential Low Density (RL)***
The subject property is located in the RL zone. This zone is primarily intended for low density residential development in the form of single family homes and duplexes. As noted above, the duplex is consistent with the express intent of the RL zone. **(Affirmative finding)**

***(b) Dimensional Standards & Density***
The property is relatively large at 0.42 acre. It exceeds the 10,000 sf minimum lot size required for a duplex in the RL zone. At an allowable density of 7 units per acre, the proposed 2 units are within density limits.

Lot coverage is limited to 35% (with an additional 10% available for decks, patios, and open porches) of the lot area. As proposed, lot coverage would increase to 19.5%.

Setbacks remain unchanged except that the widened driveway would extend to 5' from the side property line. This setback is acceptable for a driveway.

Building height remains unchanged. **(Affirmative finding)**

***(c) Permitted & Conditional Uses***

The duplex is subject to conditional use review in the RL zone.

***(d) District Specific Regulations***

***1. Setbacks***

No setback encroachments are sought.

***2. Height***

Not applicable in RL.

***3. Lot Coverage***

No lot coverage exceptions are sought.

***4. Accessory Residential Structures and Uses***

No new accessory structures or uses are proposed.

***5. Residential Density***

Both of the residential units are subject to occupancy only by a family as defined in the CDO. **(Affirmative finding as conditioned)**

***6. Uses***

Not applicable.

***7. Residential Development Bonuses***

None sought.

**Article 5: Citywide General Regulations**

***Sec. 5.2.3, Lot Coverage Requirements***

See Article 4 above.

***Sec. 5.2.4, Buildable Area Calculation***

Not applicable.

***Sec. 5.2.5, Setbacks***

See Article 4 above.

***Sec. 5.2.6, Building Height Limits***

See Article 4 above.

***Sec. 5.2.7, Density and Intensity of Development Calculations***
See Article 4 above.

***Sec. 5.5.1, Nuisance Regulations***
Nothing in the proposal appears to constitute a nuisance under this criterion. **(Affirmative finding)**

**Article 6: Development Review Standards:**
***Part 1, Land Division Design Standards***
***Sec. 6.1.2, Review Standards***
Not applicable.

***Part 2, Site Plan Design Standards***
***Sec. 6.2.2, Review Standards***

*(i) Vehicular access*
A single driveway presently serves the property. It is narrow at the curb and widens as it approaches the existing 2-bay garage. The applicant proposes to widen the driveway to 18.' This width is the maximum permissible for residential driveways. It may widen to the width of the garage (20') near its intersection with the garage. Note that the site plan depicts an 18' wide driveway that is drawn wider than the 20' wide garage. This discrepancy must be fixed on a revised site plan. **(Affirmative finding as conditioned)**

***Part 3, Architectural Design Standards***
***Sec. 6.3.2, Review Standards***
Not applicable.

**Article 8: Parking**
***Sec. 8.1.8, Minimum Off-Street Parking Requirements***
The subject property is within the Neighborhood Parking District. As a result, the proposed duplex requires 4 parking spaces (2 spaces per unit). Existing conditions seemingly afford space for the 4 required parking spots. The proposed driveway widening, even if limited to 18' as required, will provide ample space for the required parking spaces in conjunction with the 2-bay garage. **(Affirmative finding)**

***Sec. 8.2.5, Bicycle Parking Requirements***
Not applicable.

**II. Conditions of Approval**

1. **Prior to release of the zoning permit**, a revised site plan depicting corrected proportions of the 18' wide driveway and 20' wide garage shall be submitted, subject to staff review and approval.
2. **Prior to release of the zoning permit**, the applicant shall receive written verification of adequate wastewater capacity from the Department of Public Works.

3. Days and hours of construction are limited to Monday – Friday 7:00 AM – 5:00 PM. No construction activity on Saturday or Sunday.
4. Both of the residential units shall be occupied only by a family as defined in the CDO.
5. A State of Vermont wastewater permit is required.
6. It is the applicant's responsibility to comply with all applicable ADA requirements.
7. All new construction is required to meet the Guidelines for Energy Efficient Construction pursuant to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances.
8. Standard Conditions 1-15.

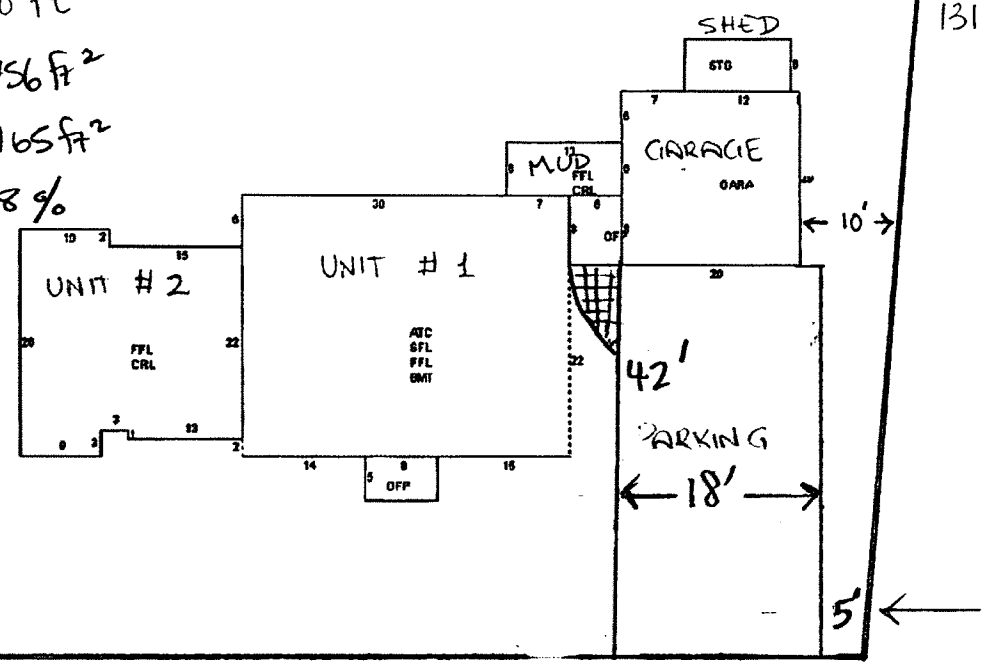
RECEIVED
SEP 04 2018
DEPARTMENT OF
PLANNING & ZONING

146.67'

| | |
|---|---|
| LOT SIZE: | 18,374 $ft^2$ |
| UNIT 1: | 1,110 $ft^2$ |
| UNIT 2: | 650 $ft^2$ |
| MUDROOM: | 126 $ft^2$ |
| GARAGE: | 400 $ft^2$ |
| SHED: | 72 $ft^2$ |
| PORCH: | 40 $ft^2$ |
| PARKING: | 756 $ft^2$ |
| Walkways: | 165 $ft^2$ |
| Lot Coverage: | 18 % |

122.76'

131.46'




142'

**Department of Planning and Zoning**
149 Church Street
Burlington, VT 05401
Telephone:(802) 865-7188
(802) 865-7195 (FAX)
(802) 865-7142 (TTY)

*David White, FAICP, Director*
*Meagan Tuttle, AICP, Comprehensive Planner*
*Jay Appleton, GIS Manager*
*Scott Gustin, AICP, CFM, Principal Planner*
*Mary O'Neil, AICP, Principal Planner*
*Ryan Morrison, Associate Planner*
*Layne Darfler, Planning Technician*
*Shaleigh Draper, Zoning Clerk*

**TO:** Development Review Board
**FROM:** Scott Gustin
**DATE:** November 7, 2018
**RE:** 19-0202CA/MA; 44 Lakeside Avenue

==========

**Note: These are staff comments only; decisions on projects are made by the Development Review Board, which may approve, deny, table or modify any project. THE APPLICANT OR REPRESENTATIVE MUST ATTEND THE MEETING.**

Zone: ELM Ward: 5S

Owner/Applicant: Lakeside Ovens, LLC / John Caulo, Land/Plan

**Request:** Renovate buildings for assembly, office, and seasonal recreational use. Rework parking and circulation.

**Applicable Regulations:**
Article 3 (Applications and Reviews), Article 4 (Maps & Districts), Article 5 (Citywide General Regulations), Article 6 (Development Criteria & Guidelines), Article 8 (Parking), Article 10 (Subdivision)

**Background Information:**
The applicant is seeking approval to renovate the existing oven factory into a mix of office and assembly space. The seasonal recreational use (boat rental) associated with the several outbuildings on the beach has been approved under separate zoning permit. Exterior building changes are relatively minimal and amount to new windows and entry systems for building 50. A small bathhouse is also proposed by the outbuildings along the beach. More significant is the proposed site work that will entail rerouting onsite circulation and provision of additional surface parking to accommodate the proposed uses. Lastly, several lots will be merged into one lot.

The Conservation Board reviewed this application at their September 10, 2018 meeting. Significant discussion was had as to the placement of parking as close to the lakeshore and provision of public access to the property and lakeshore. Recent survey work shows that the bike path actually runs across the property within an easement. Direct access from the bike path has been made for the seasonal recreational use at the northern end of the site. While the property remains under private ownership, strides have been made to enable public access and to afford the recreating public additional opportunity to experience Burlington's lakefront. Ultimately, the Conservation Board voted to recommend approval of the project as designed so long as the applicant works in good faith with the city as to revamping the bike path where it runs across the property and improving public access. Note that the site plan has been revised since Conservation Board review to avoid onsite class 3 wetlands and US Army Corps of Engineer's permitting.

This application was reviewed by the Development Review Board at their October 2, 2018 meeting. The public hearing was continued to allow time for outstanding items related to traffic impacts and onsite parking management. No additional comments have yet been provided by the Department of Public Works. The applicant has put together a parking management plan to address Sec. 8.1.15 of the findings below.

Previous zoning actions for this property:

- 7/23/18, Approval for exterior renovations to building 44 and demo of loading dock
- 5/8/18, Approval to construct one additional outbuilding and a gazebo and establish a seasonal boat rental use
- 9/8/17, Approval for 3 outbuildings
- 9/20/16, Approval for conversion of warehouse to office space
- 1/16/13, Approval to install new piping and exhaust fans on roof
- 9/1/09, Approval to construct link between two existing buildings
- 2/3/06, Approval to install replacement windows and balcony
- 12/7/05, Approval for interior fit up of office space
- 1/11/96, Approval to construct boat dock
- 12/23/77, Approval to enclose loading dock and to construct an office space

**Recommendation: Recommendation: <u>Certificate of appropriateness and major impact approval</u>** as per, and subject to, the following findings and conditions:

**I. Findings**

**Article 3: Applications and Reviews**
***Part 5, Conditional Use & Major Impact Review:***
**Section 3.5.6 (a) Conditional Use Review Standards**
*Approval shall be granted only if the DRB, after public notice and public hearing, determines that the proposed conditional use and associated development shall not result in an undue adverse effect on each of the following general standards:*

1. *Existing or planned public utilities, facilities or services are capable of supporting the proposed use in addition to the existing uses in the area;*

The proposed development will involve connection to the city's wastewater system. There is an onsite septic system that apparently serves the oven factory. Sufficient water and sewer service are available. A State of Vermont wastewater permit will be required for the new connection. A capacity letter issued by the Dept. of Public Works will be required prior to issuance of a zoning permit. **(Affirmative finding as conditioned)**

2. *The character of the area affected as defined by the purpose or purposes of the zoning district(s) within which the project is located, and specifically stated policies and standards of the municipal development plan;*

The subject property is located within the Enterprise – Light Manufacturing zone. This zone is intended primarily for manufacturing, distribution, processing and the like. While the oven factory will discontinue, it will be replaced by a variety of office and assembly uses intended as "incubator" and "accelerator" spaces. The proposed uses are consistent with the intent of the E-LM zone. **(Affirmative finding)**

3. *The proposed use will not have nuisance impacts from noise, odor, dust, heat, and vibrations greater than typically generated by other permitted uses in the same zoning district;*

The proposed office and assembly spaces are not expected to generate nuisance impacts from noise, odor, dust, and the like that may be more typically associated with heavy industry. **(Affirmative finding)**

4. *The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street designations and capacity; level of service and other performance measures; access to arterial roadways; connectivity; transit availability; parking and access; impacts on pedestrian, bicycle and transit circulation; safety for all modes; and adequate transportation demand management strategies;*

A traffic analysis has been provided. It includes the standard items as to anticipated trip generation, high crash location identification, and intersection level of service (LOS) in build and no-build scenarios. 2019 projections are made without the Champlain Parkway. Projections for 2014 include it. The traffic study generously assumes a 20% trip reduction due to alternative means of transportation to and from the site. Conversely, the study projects gross trip generation for the new uses, rather than a net difference from the existing manufacturing use.

Anticipated trip generation is significant. In the AM peak hour, 145 trip ends are anticipated. In the PM peak hour, 127 trip ends are anticipated. A total weekday trip generation estimate is not evident in the traffic study.

LOS impacts on nearby intersections are fairly modest. Those intersections included are Pine St/Lakeside Ave, Champlain Parkway/Lakeside Ave, Pine Street/Flynn Ave, and Lakeside Ave/Central Ave. Intersection level of service LOS remains good in all scenarios with mostly A's and B's. The Champlain Parkway/Lakeside Ave intersection LOS will be C in both build and no-build scenarios in 2024. The Lakeside Ave/Pine St intersection LOS will drop from A to B in the 2019 build scenario.

Written comments from the Department of Public Works have not yet been provided. Such comments are anticipated and will inform provision of any conditions related to traffic. **(No finding possible)**

*and,*

5. *The utilization of renewable energy resources;*

No renewable energy utilization is included in this proposal. Future incorporation is not precluded by the project design. **(Affirmative finding)**

*and,*

6. *Any standards or factors set forth in existing City bylaws and city and state ordinances**;***

As conditioned.

(b) Major Impact Review Standards

*1. Not result in undue water, air, or noise pollution;*
No significant air or noise pollution is anticipated as a result of this development.

See Sec. 5.5.3 for stormwater management. **(Affirmative finding)**

*2. Have sufficient water available for its needs;*
See Sec. 3.5.6 (a) 1.

*3. Not unreasonably burden the city's present or future water supply or distribution system;*
See Sec. 3.5.6 (a) 1.

*4. Not cause unreasonable soil erosion or reduction in the capacity of the land to hold water so that a dangerous or unhealthy condition may result;*
See Sec. 5.5.3.

*5. Not cause unreasonable congestion or unsafe conditions on highways, streets, waterways, railways, bikeways, pedestrian pathways or other means of transportation, existing or proposed;*
See Sec. 3.5.6 (a) 4.

*6. Not cause an unreasonable burden on the city's ability to provide educational services;*
No impacts on the city's educational system are anticipated as a result of this purely commercial development. **(Affirmative finding)**

*7. Not place an unreasonable burden on the city's ability to provide municipal services;*
The proposed renovations and changes in use will generate additional impacts on city services; however, those impacts are expected to be relatively modest. Impacts will be mitigated by payment of impact fees based on the area of buildings converted from industrial to office uses. **(Affirmative finding as conditioned)**

*8. Not have an undue adverse effect on rare, irreplaceable or significant natural areas, historic or archaeological sites, nor on the scenic or natural beauty of the area or any part of the city;*
See Article 6 for effects on significant natural areas, historic buildings, and archaeological significance.

*9. Not have an undue adverse effect on the city's present or future growth patterns nor on the city's fiscal ability to accommodate such growth, nor on the city's investment in public services and facilities;*
The proposed development is located within the ELM zone – an area of the city specifically zoned for a variety of commercial land uses. The project will not adversely impact the city's present or future growth patterns. The scale of existing onsite development will not change and is not expected to have an undue adverse impact on the city's ability to accommodate growth. **(Affirmative finding)**

*10. Be in substantial conformance with the city's municipal development plan;*
Several provisions of the Municipal Development Plan target the Enterprise zones for new commercial investment and redevelopment (Land Use Policies, pg. I-2; Growth Areas, pg. I-22 {The Enterprise District}). The site is easily accessible by bike or by foot with its location along the bike path. Bus service is located nearby as well (Transportation System Plan, pg. V-12). As

required, the renovated buildings will comply with present energy efficiency standards of the city and state (Energy Plan, pg. VIII-1). **(Affirmative finding)**

*11. Not have an undue adverse impact on the present or projected housing needs of the city in terms of amount, type, affordability and location;*
The proposed commercial redevelopment will have no impact on the present or projected housing needs of the city. **(Affirmative finding)**

*12. Not have an undue adverse impact on the present or projected park and recreation needs of the city.*
Little impact on the city's park and recreation needs is expected as a result of this development. The Parks & Recreation Department has an interest in the bike path running through the property and the proposed alterations. Parks & Recreation has offered the following comment:

> The department believes this is an opportune time to explore a bike path alignment closer to the lake, away from the constraints between the Blodgett Building and the railroad fence. The integration of a public Greenway through this beautiful property would also add tremendous value to the HULA proposal. BPRW and HULA are in coordination to ensure that the Burlington Greenway, also known as the Bike Path, will not be adversely affected by the HULA plans. Ongoing coordination will be necessary related to construction, staging, closures and detours.

In addition, parks impact fees will be paid. **(Affirmative finding as conditioned)**

(c) Conditions of Approval:

*In addition to imposing conditions of approval necessary to satisfy the General Standards specified in (a) or (b) above, the DRB may also impose additional conditions of approval relative to any of the following:*

*1. Mitigation measures, including but not limited to screening, landscaping, where necessary to reduce noise and glare and to maintain the property in a character in keeping with the surrounding area.*
The proposed redevelopment will likely not generate offsite noise or glare substantial enough to require mitigation. **(Affirmative finding)**

*2. Time limits for construction.*
No construction timeline or phasing are included in the project plans. The standard 2-year timeframe for zoning permits will apply. **(Affirmative finding)**

*3. Hours of operation and/or construction to reduce the impacts on surrounding properties.*
Multiple tenants are expected to occupy the building spaces. Anticipated days and hours of operation are typically Monday – Friday from 7:30 AM – 6:00 PM. Some segments of the user groups may operate 24/7 for global connectivity.

Proposed days and hours of construction are Monday – Friday from 7:00 AM – 5:30 PM. Saturday from 8:00 AM – 3:30 PM. No work on Sunday. These construction hours are consistent with those recently approved for several large projects. **(Affirmative finding)**

*4. That any future enlargement or alteration of the use return for review to the DRB to permit the specifying of new conditions; and,*
Any future enlargement or alteration will be reviewed under the zoning regulations in effect at that time.

*5. Such additional reasonable performance standards, conditions and safeguards, as it may deem necessary to implement the purposes of this chapter and the zoning regulations.*
See the recommended conditions.

**Article 4: Maps & Districts**
***Sec. 4.4.3, Enterprise Districts:***
***(a) Purpose***
***(1) Light Manufacturing (E-LM)***
The subject property is located in the E-LM zone which is intended as the primary commercial/industrial center of Burlington. The proposed office and maker spaces are consistent with the variety of commercial uses allowed in this zone. **(Affirmative finding)**

***(b) Dimensional Standards & Density***
Building FAR remains unchanged.

Lot coverage will increase to 49%. This percentage is under the maximum allowable 80% coverage.

The front yard setback along Lakeside Avenue remains unchanged. Side yard setbacks are not applicable in the E-LM zone, nor is the lakeshore setback. No construction is proposed anywhere near the rear property line at the far northern end of the site.

Building height remains unchanged. **(Affirmative finding)**

***(c) Permitted & Conditional Uses***
General office and manufacturing are both permitted uses in the E-LM zone. In this case, the manufacturing use amounts to some small-scale "maker" spaces. **(Affirmative finding)**

***(d) District Specific Regulations***
Not applicable.

***Sec. 4.5.4, Natural Resource Protection Overlay District***
***(c) District Specific Regulations: Riparian and Littoral Conservation Zone***
Almost the entire property is affected by the Riparian and Littoral Conservation Zone, an overlay that extends 250' inland from the 95.5' elevation along the lakeshore. This overlay zone establishes criteria for tree clearing and stormwater management. The Conservation Board reviewed the project under these standards and recommended approval as noted previously. Minimal tree clearing is proposed and stormwater management will meet or exceed applicable standards. **(Affirmative finding)**

**Article 5: Citywide General Regulations**
***Sec. 5.2.3, Lot Coverage Requirements***

See Sec. 4.4.3 (b) above.

***Sec. 5.2.4, Buildable Area Calculation***
Not applicable.

***Sec. 5.2.5, Setbacks***
See Sec. 4.4.3 (b) above.

***Sec. 5.2.6, Building Height Limits***
See Sec. 4.4.3 (b) above.

***Sec. 5.2.7, Density and Intensity of Development Calculations***
See Sec. 4.5.3 (b) above.

***Sec. 5.5.1, Nuisance Regulations***
Nothing in the proposal appears to constitute a nuisance under this criterion. **(Affirmative finding)**

***Sec. 5.5.2, Outdoor Lighting***
An outdoor lighting plan has been provided. A variety of fixtures are proposed for different applications, including bollards, poles, wall packs, and canisters. All will use LED light sources.

A photometric plan has been submitted that depicts point-by-point illumination levels. Individual lighting environments are depicted in addition to the overall plan. These separate lighting environments include walkways, parking and circulation areas, building entries, and the bike path.

Walkway lighting is too bright in all instances. Maximum permissible walkway illumination is 2.0 footcandles with a permissible average of 0.5 footcandle. Walkway lighting levels must be dimmed accordingly.

Most building entries comply with the 5.0 footcandle average. Building entries that are too bright are building 50, east entry, and the southwest entry. Illumination levels at these entries needs to be dimmed to 5.0 footcandle average or less.

The north drive parking/circulation area has bright spots up to 5.57 footcandles, whereas 4.0 footcandles is the maximum permissible illumination. The south drive has similar bright spots. The illumination must be dimmed to 4.0 footcandles or less. Reduction will affect the uniformity ratio. It must remain within 20:1.

Illumination levels are depicted along the bike path. The CDO does not contain a specific standard for this environment. In such cases, IESNA standards apply. In this case, the standard for "pedestrian ways and bike ways" would apply. Rather than footcandles, the IESNA standard in this case is in the form of lux. The lighting info for the bike path needs to be revised to reflect this IESNA standard.

The proposed lighting fixtures and illumination sources are acceptable. Lighting levels need to be adjusted as noted above. **(Affirmative finding as conditioned)**

***Sec. 5.5.3, Stormwater and Erosion Control***

Proposed stormwater management centers on constructed gravel wetlands. These new stormwater elements will collect runoff from impervious surfaces within the site and will provide water quality treatment prior to discharge into Lake Champlain. The Conservation Board reviewed the stormwater management proposal and found it to be acceptable. Final review and approval by the city's stormwater program staff is pending. **(Affirmative finding as conditioned)**

**Article 6: Development Review Standards:**
***Part 1, Land Division Design Standards***
***Sec. 6.1.2, Review Standards***
*(a) Protection of important natural features*
The proposed boundary merger will have no impact on important natural features. **(Affirmative finding)**

*(b) Block size and arrangement*
Block size and arrangement will remain unchanged. **(Affirmative finding)**

*(c) Arrangement of Lots*
Several irregular lots will be combined into one triangular lot. **(Affirmative finding)**

*(d) Connectivity of streets within the city street grid*
Not applicable.

*(e) Connectivity of sidewalks, trails, and natural systems*
Not applicable.

***Part 2, Site Plan Design Standards***
***Sec. 6.2.2, Review Standards***
*(a) Protection of important natural features*
See Sec. 4.5.4, *Natural Resource Protection Overlay Districts*.

*(b) Topographical alterations*
No significant topographical alterations are proposed. The site is largely flat with a gently sloping lakeshore. Proposed grading will direct stormwater runoff into receiving stormwater management infrastructure. **(Affirmative finding)**

*(c) Protection of important public views*
There are no identified public view corridors from or through the subject property. That said, it is visible from the bike path and from the lake. As proposed, the new parking lot will be set back from the bike path, and the existing asphalt between the lakeshore and building 44 will be removed. The Conservation Board felt that, at least as perceived from the lake, public views of the property would improve. **(Affirmative finding)**

*(d) Protection of important cultural resources*
The property has no known archaeological significance. The immediate lakeshore is identified as an archaeologically sensitive area (as it is for much of the city's waterfront). Construction of the new parking lot may encroach into this sensitive area. In the event that artifacts are uncovered during earthwork, it is the applicant's responsibility to cease earthwork and contact the Vermont Division for Historic Preservation for direction. **(Affirmative finding as conditioned)**

*(e) Supporting the use of alternative energy*
See Sec. 6.3.2 (f).

*(f) Brownfield sites*
Although the property is located relatively close to several contaminated sites, it does not appear on the Vermont DEC Hazardous Site List. **(Affirmative finding)**

*(g) Provide for nature's events*
See Sec. 5.5.3 for stormwater management.

Ample room will remain for onsite snow storage. Several building entries will be sheltered. **(Affirmative finding)**

*(h) Building location and orientation*
Building location and orientation will remain unchanged. **(Not applicable)**

*(i) Vehicular access*
Vehicular access will continue to come from Lakeside Avenue. The road frontage; however, will be significantly reworked to eliminate the very long curb cut along Lakeside Avenue. A new green belt with street trees will be installed along most of the property's road frontage with the front parking area pulled back from the street. The City Arborist has reviewed and approved the street tree plan. **(Affirmative finding)**

*(j) Pedestrian access*
Pedestrian access to the site will be improved. Two new connections to the bike path are proposed. The existing sidewalk that dead-ends at the eastern end of the Lakeside Avenue frontage will be extended across the length of the property's street frontage. Such extension will require DPW review and approval (as will the entirety of the new green belt). A new walkway will extend from this new sidewalk into the property. Several interior walkways will facilitate pedestrian circulation within the site, including a number of walkways connecting the parking areas with the buildings. The large parking lot to be constructed at the northern end of the site has just two pedestrian walkway connections. Most users would be forced to walk within the vehicular circulation aisles to reach these two walkways. Such configuration is contrary to the requirement that pedestrians be afforded safe routes separate from vehicles. Introduction of a walkway within the interior parking island would remedy this situation. **(Affirmative finding as conditioned)**

*(k) Accessibility for the handicapped*
Several clusters of handicap parking spaces are depicted near the buildings' entrances. It is the applicant's responsibility to comply with all applicable ADA requirements. **(Affirmative finding)**

*(l) Parking and circulation*
Almost all parking will be set behind the buildings along Lakeside Avenue. The existing front yard parking lot will be revamped and pulled back from the street with a new green belt and sidewalk as noted above.

Curbing is evident along portions of the parking and circulation areas. Much of the parking is without curbing. Continuous curbing is not required; however, this criterion requires curb stops or similar items at the edges of parking areas in order to prevent parking creep. The site plans must be revised accordingly.

The proposed parking areas will require shade trees. This criterion establishes a target of 30% shading of the parking areas with new shade trees. At least 1 shade tree for every 5 parking spaces is required. A total of 381 parking spaces are proposed (including the tandem spaces.) The landscaping plan has been revised to include the 76 required shade trees. The percentage of shading achieved is not evident in the shade study; however, it appears to meet the 30% standard. An exact percentage needs to be noted. **(Affirmative finding as conditioned)**

*(m) Landscaping, fences, and retaining walls*
A comprehensive landscaping plan has been submitted and encompasses a diversity of plantings. As noted previously, tree clearing will be minimal, and new trees have been added to adhere to the parking lot shade standard. New street trees will line the newly created green belt along Lakeside Avenue. New trees will also line the walkway along the building's street façade. Within the site, new tree plantings abound, mostly along or within the parking and circulation areas. Shrubs, ground cover, and perennials are also included in the planting mix. The constructed gravel wetlands will be planted with wet-tolerant species. Trees will continue to line much of the property's lakeshore, and much of what is present-day lawn will be converted to meadow. **(Affirmative finding)**

*(n) Public plazas and open space*
No public plazas or open space are included in this proposal. As noted before, public access into the site will be improved. **(Affirmative finding)**

*(o) Outdoor lighting*
See Sec. 5.5.2.

*(p) Integrate infrastructure into the design*
Existing and proposed ground-mounted mechanical equipment will be enclosed with metal panel screening. Similar screening will be provided for trash and recycling facilities onsite. The site plan notes a trash and recycling enclosure along building 50's primary façade – facing Lakeside Avenue. Upon initial review, the Development Review Board seemingly found this location to be acceptable. Any new utility lines must be buried. **(Affirmative finding)**

***Part 3, Architectural Design Standards***
***Sec. 6.3.2, Review Standards***
*(a) Relate development to its environment*

1. *Massing, Height, and Scale*
   Unchanged. **(Not applicable)**

2. *Roofs and Rooflines*
   Unchanged. **(Not applicable)**

3. *Building Openings*

The fenestration of building 50 will be reworked with the introduction of additional windows on all elevations. While somewhat different stylistically from what is there now, the proposed fenestration fits the industrial aesthetic of the long, low brick buildings well. **(Affirmative finding)**

*(b) Protection of important architectural resources*
The buildings are not included on an historic register. The exterior alterations to building 50 will have no adverse impact on Burlington's important architectural resources. **(Affirmative finding)**

*(c) Protection of important public views*
See 6.2.2 (c) above.

*(d) Provide an active and inviting street edge*
Only building 50 is being altered as part of this application. Its southern façade faces Lakeside Avenue and will be improved with additional glazing, entryway enhancements, and some modest architectural accents. **(Affirmative finding)**

*(e) Quality of materials*
Relatively little will change as to building cladding. Brick will remain the predominant exterior material. Metal cable railing systems will be installed along with wooden rain screens at some of the entries. Aluminum-frame windows will be installed throughout. **(Affirmative finding)**

*(f) Reduce energy utilization*
Few energy details are included in the application plans. The renovated building must comply with the current energy efficiency requirements of the city and state. **(Affirmative finding as conditioned)**

*(g) Make advertising features complimentary to the site*
No exterior signs are included in the project plans. Signs are subject to separate zoning permit. **(Affirmative finding as conditioned)**

*(h) Integrate infrastructure into the building design*
No roof-mounted mechanical equipment is depicted in the elevation plans. **(Affirmative finding)**

*(i) Make spaces safe and secure*
Egress requirements per the applicable building code will apply. Building entries, walkways, and parking areas are illuminated. **(Affirmative finding)**

**Article 8: Parking**
***Sec. 8.1.8, Minimum Off-Street Parking Requirements***
The minimum parking requirement is based on the two primary uses: general office and manufacturing (parking for the boat rental use was addressed under separate permit – present parking info allots 10 spaces for that use). Revised project plans include updated parking information. A total of 141,200 sf will be used for general office. A much smaller space, 3,900 sf, will be used for manufacturing/maker space. The office space requires at least 282 onsite parking spaces (2 spaces per 1,000 sf). The manufacturing/maker space requires 4 onsite parking spaces (1 space per 1,000 sf). Total required parking is 286 spaces for these two uses. A total of 381

parking spaces will be provided; however, only 273 are conventional. The remaining 108 are tandem. A parking management plan is required. **(Affirmative finding)**

***Sec. 8.1.9, Maximum Parking Spaces***
This section limits surface parking to 125% of the Neighborhood Parking District minimum parking requirement. In this case, the maximum permissible parking for office use is 353 spaces and for the manufacturing use is 6 spaces. Setting aside the 10 spaces for the boat rental, the 371 onsite parking spaces exceed the 359 onsite parking space limit by 12 spaces.

Within the total onsite parking provided, there are 10 EV spaces and 6 car-share spaces. These 16 spaces are exempt from the maximum parking limitation per criteria 3 and 4 of this section. Deducting these 16 spaces from the total results in a compliant parking maximum. **(Affirmative finding)**

***Sec. 8.1.10, Off-Street Loading Requirements***
This criterion requires an onsite loading area for all nonresidential construction outside of the downtown parking district. While the buildings are already in place, they are being renovated for new interior uses. A loading area is provided along the south façade of building 50. **(Affirmative finding)**

***Sec. 8.1.11, Parking Dimensional Requirements***
Paved parking spaces are dimensionally compliant at 9' X 20.' The tandem and stacked spaces are slightly smaller at 9' X 18' but remain acceptable. Back-up space is narrower than the standard 24' length; however, the 20' back-up length that is provided affords sufficient space for the required 20' wide two-way drive aisles. **(Affirmative finding)**

***Sec. 8.1.12, Limitations, Location, Use of Facilities***

*(a) Offsite parking facilities*
Not applicable.

*(b) Downtown street level setback*
Not applicable.

*(c) Front yard parking restricted*
Not applicable.

*(d) Shared parking in the Neighborhood Parking Districts*
All of the uses on onsite will share the onsite parking facilities. **(Affirmative finding)**

*(e) Single story structures in Shared Use Districts*
Not applicable (no new buildings are proposed).

*(f) Joint use of facilities*
As enabled by this section, parking for all of the proposed uses will share spaces within the onsite parking areas. **(Affirmative finding)**

*(g) Availability of facilities*

None of the proposed parking will be used for the storage or display of vehicles or materials by offsite users. Parking will be for employees and visitors. **(Affirmative finding)**

*(h) Compact car parking*
As noted above, the tandem and stacked parking spaces are slightly sub-standard but are acceptable. The limitation on compact parking spaces pertains only to parking garages. **(Affirmative finding)**

***Sec. 8.1.13, Parking for Disabled Persons***
The site plan depicts several clusters of handicap parking spaces in close proximity to building entries. Associated striping is also shown. ADA compliance is administered via the city's building permit process. **(Affirmative finding as conditioned)**

***Sec. 8.1.14, Stacked and Tandem Parking Restrictions***
A number of tandem parking spaces (2-deep) are proposed. Some of them are needed in order to meet the onsite minimum parking requirement. As required, a parking management plan has been provided. See Sec. 8.1.15 below. **(Affirmative finding)**

***Sec. 8.1.15, Waivers from Parking Requirements / Parking Management Plans***
While more than the minimum required parking will be provided onsite, 14 tandem spaces are needed in order to meet the minimum parking requirement. As such, they cannot be considered as conventional spaces and trigger the need for a parking management plan to demonstrate how parking will work for onsite users.

The parking management plan includes measures to reduce onsite parking demand such as potential CATMA membership, bike parking, and dedicated car-pool spaces and related incentives. As to the tandem spaces, they will be allocated on a per-tenant basis and managed by those tenants. Two separate tenants will not use the same tandem spaces. The arrangement is simple and manageable on a per-tenant basis. **(Affirmative finding)**

***Sec. 8.2.5, Bicycle Parking Requirements***
Onsite bicycle parking has been accounted for in the most recent application materials. Required short term bike parking totals 15 spaces (1 / 10K sf), and required long term bike parking totals 28 spaces (1 / 5K sf). As proposed, 69 short term and 52 long term spaces will be provided. Note that the bike parking is based on 100% office use. The 3,900 sf manufacturing space has a lower requirement that is exceeded by assuming office use for the purposes of bike parking calculations. **(Affirmative finding)**

**Article 10: Subdivision**
***Sec. 10.1.5, Lot Line Adjustments***
*(a) Lot Line Adjustment Submission Requirements*
The required boundary survey prepared by a VT-licensed land surveyor has been provided. It lacks the required Administrative Officer's endorsement block. One must be added. **(Affirmative finding as conditioned)**

**II. Conditions of Approval**

Assuming traffic impacts are satisfactorily addressed prior to close of the public hearing, the following conditions of approval are recommended:

1. **Prior to issuance of the zoning permit**, revised or supplemental information addressing the following items shall be submitted, subject to staff review and approval:
    a. Obtain a wastewater capacity letter from the Dept. of Public Works;
    b. Obtain final approval of the EPSC and stormwater management plans from the city's Stormwater Program;
    c. Revise outdoor lighting levels to be compliant with the applicable standards of Sec. 5.5.2.
    d. Provide a walkway along or within the landscaping island centered within the northern parking area;
    e. Provide confirmation of at least 30% shading of onsite parking and circulation areas; and,
    f. Provision of the required Administrative Officer's endorsement block on the boundary survey.
2. The applicant shall work in good faith with the city as to revamping the bike path where it runs across the subject property and to improve public access.
3. In the event that artifacts are uncovered during earthwork, the applicant shall cease earthwork and contact the Vermont Division for Historic Preservation for direction.
4. Days and hours of construction shall be limited to Monday – Friday 7:00 AM – 5:30 PM and Saturday 8:00 AM – 3:30 PM. No construction activity on Sunday.
5. Within 180 days of the date of final approval, the property plat mylar, with the required Administrative Officer's endorsement block and signature, shall be filed with the City Clerk per Sec. 10.1.11 of the Comprehensive Development Ordinance. Failure to do so shall render void the boundary merger.
6. Impact fees based on the building area converted from manufacturing space to general office space shall be paid to the Department of Planning & Zoning at **least 7 days prior to issuance of a certificate of occupancy**.
7. The Applicant/Property Owner is responsible for obtaining all necessary Zoning Permits and Building Permits through the Department of Public Works as well as other permit(s) as may be required, and shall meet all energy efficiency codes of the city and state as required.
8. Any construction within the public street right-of-way requires review and approval by the City Council in conjunction with the Department of Public Works.
9. All new construction is required to meet the Guidelines for Energy Efficient construction according to the requirements of Article VI. Energy Conservation, Section 8 of the City of Burlington Code of Ordinances.
10. All exterior signage is subject to separate zoning approval.
11. All new utility lines shall be buried.
12. Standard Permit Conditions 1-15.

## SITE NOTES:

1. LOCATE ALL SITE UTILITIES IN AREAS OF PROPOSED PLANTINGS BEFORE STAKING OUT PROPOSED PLANT LOCATIONS. REVIEW STAKED LOCATIONS WITH ARCHITECT BEFORE PROCEEDING.
2. PROTECT EXISTING TREES, PLANTS, AND MONUMENTS THROUGHOUT CONSTRUCTION.
3. SEE CIVIL DRAWINGS FOR CONTRACT LIMIT LINE, BOUNDARY LINE, PROPOSED GRADING, & UNDERGROUND UTILITIES.

## BICYCLE PARKING REQUIREMENTS:

BTV ZONING TABLE 8.2.5-1

**LONG TERM SPACES**
**BUILDING 50**
- OFFICE USE: 83,900 GSF @ 1 PER 5,000 GSF = 17 SPACES REQUIRED
  28 SPACES PROVIDED

**BUILDING 44**
- OFFICE USE: 52,000 GSF @ 1 PER 5,000 GSF = 11 SPACES REQUIRED
  24 SPACES PROVIDED

**SHORT TERM SPACES**
**BUILDING 50**
- OFFICE USE: 83,900 GSF @ 1 PER 10,000 GSF = 9 SPACES REQUIRED
  36 SPACES PROVIDED

**BUILDING 44**
- OFFICE USE: 52,000 GSF @ 1 PER 10,000 GSF = 6 SPACES REQUIRED
  33 SPACES PROVIDED

## ZONING REQUIREMENTS:

DISTRICT: ENTERPRISE-LIGHT MANUFACTURING:
DENSITY/INTENSITY: FAR 2 MAX
LOT COVERAGE: MAX: 80%
BUILDING HEIGHT: MAX: 45'
FRONT SETBACK: MIN: 5'
SIDE SETBACK: MIN: 0'
REAR SETBACK: MIN 10%

## EXISTING COVERAGE AREAS

EXG PARCEL AREA: 607,000 SF

EXG BUILDING 32: 4,950 SF
EXG BUILDING 50: 79,500 SF
EXG BUILDING 44: 58,500 SF
EXG BURLINGTON SURF CLUB: 4,430

EXG GRAVEL SURFACES: 18,950 SF
EXG CONCRETE SURFACES: 5,520 SF
EXG BIKE PATH (ASPHALT): 12,440 SF
EXG ASPHALT SURFACES: 104,100 SF

TOTAL EXISTING SURFACES: 288,390 SF
48% CURRENT COVERAGE

*80% MAXIMUM ALLOWABLE COVERAGE*

## PLANTING SCHEDULE

SEE LANDSCAPE DRAWING FOR PLANTING SCHEDULE.

## PHASE 2 FAR CALCULATION:

10/1/2018

| | | |
|---|---|---|
| EXG BUILDING 32: | 9,200 SF | |
| PROPOSED BUILDING 50: | 83,900 SF | |
| PROPOSED BUILDING 44: | 52,000 SF | |
| TOTAL: | 145,100 GSF | APPROX. ABOVE GROUND GROSS FLOOR AREA |

PARCEL AREA: 607,000 SF

PHASE 1 FAR: 0.24

*2.0 MAXIMUM FAR FOR ENTERPRISE-LIGHT MANUFACTURING*

## PHASE 2 COVERAGE AREAS

10/1/2018

EXG PARCEL AREA: 607,000 SF

EXG BUILDING 32: 4,950 SF
EXG BUILDING 50: 78,540 SF
(EXCLUDING DEMOLISHED FUEL SHOP)
EXG BUILDING 44: 52,000 SF
(EXCLUDING DEMOLISHED LOADING DOCK AND PIPE BARN)
EXG AND PROPOSED BURLINGTON SURF CLUB: 4,680 SF

EXG AND PROPOSED GRAVEL SURFACES: 2,070 SF
EXG AND PROPOSED CONCRETE SURFACES: 15,900 SF
EXG BIKE PATH (ASPHALT): 12,440 SF
EXG AND PROPOSED ASPHALT SURFACES: 106,450 SF
PROPOSED GRANITE PAVERS/ BENCHES: 470 SF
PROPOSED STRUCTURAL PAVERS: 18,160 SF

TOTAL PROPOSED SURFACES: 295,660 SF
49% TOTAL COVERAGE

*80% MAXIMUM ALLOWABLE COVERAGE*

## PARKING SPACE/ SIGNAGE DESIGNATIONS

- HC ACCESSIBLE
- VAN VAN ACCESSIBLE
- EV ELECTRIC VEHICLE CHARGING STATION
- C COMPACT CAR OR MOTORCYCLE
- CP CAR POOL
- CS CAR SHARE
- L LOADING

## PARKING NOTES - PHASE 2:

10/29/2018

PARKING REQUIREMENTS BASED ON BTV ZONING ARTICLE 8.
@ SHARED USE DISTRICT:
OFFICE USE BASED ON 2 CARS/1000 GFA
MAKER SPACE BASED ON 1 CAR/1000 GFA

BUILDING 50 OFFICE @ 80,000 SF INCLUDING MEZZANINE = 160 SPACES

BUILDING 50 MAKER SPACE @ 3,900 SF = 4 SPACES

BUILDING 44 OFFICE @ 52,000 SF - 104 SPACES

BUILDING 32 OFFICE (2 FLOORS AT 4,600 SF) 9,200 SF = 19 SPACES

SUB-TOTAL: 287 CARS
BURLINGTON SURF CLUB = 10 (SEASONAL)
TOTAL: 297 CARS

MAXIMUM ALLOWABLE 125% = 389 CARS

## PROPOSED PARKING:

PAVED PARKING: 273 SPACES (10 EV, 1 OF WHICH IS COMPACT)
TANDEM PARKING: 108 SPACES
TOTAL: 381 SPACES

## ACCESSIBLE PARKING:

SOUTH LOT FOR **BUILDING 32**:
1 VAN ACCESSIBLE

SOUTH LOT FOR **BUILDING 50**:
5 ACCESSIBLE SPACES + 1 VAN ACCESSIBLE

CENTRAL LOT FOR **BUILDING 44**:
3 ACCESSIBLE SPACES + 2 VAN ACCESSIBLE

NORTH LOT FOR OUTSIDE EVENTS @ **BUILDING 44**:
1 VAN ACCESSIBLE

NORTH LOT FOR **BURLINGTON SURF CLUB:**
1 VAN ACCESSIBLE

## ACCESSIBLE PARKING REQUIREMENTS:

ADA TABLE 208.2:

**BUILDING 50**
- FOR 151-200 PARKING SPACES, 6 MINIMUM ACCESSIBLE SPACES

**BUILDING 44**
- FOR 101-150 PARKING SPACES, 5 MINIMUM ACCESSIBLE SPACES

**BUILDING 32**
- FOR 1-25 PARKING SPACES, 1 MINIMUM ACCESSIBLE SPACE

**BURLINGTON SURF CLUB**
- FOR 1-25 PARKING SPACES, 1 MINIMUM ACCESSIBLE SPACE

**FOR ALL PARKING**
- ONE VAN ACCESSIBLE FOR EACH 6 OR FRACTION OF 6 ACCESSIBLE SPACES

## DRAWING KEY

- EXISTING BUILDING
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE
- PROPOSED GRANITE PAVERS, SLAB, OR BENCH
- PROPOSED GRAVEL SURFACE
- PROPOSED MEADOW
- SITE AREA FOR CONSTRUCTION MANAGER TO PRICE
- EXISTING TREE/ SHRUB TO REMAIN
- EXISTING DEAD OR DECLINING TREE TO BE REMOVED
- EXISTING TREE/ SHRUB TO BE REMOVED
- PROPOSED TREE/ SHRUB WITH KEY DESIGNATION
- PROPOSED GROUND COVER/SHRUBS WITH KEY DESIGNATION
- PROPOSED WETLAND PLANTINGS
- POST-MOUNTED SIGN WITH KEY DESIGNATION

### SITE LIGHTING

*SEE DRAWING L-1.1 FOR FIXTURE INFORMATION

| KEY | CATEGORY |
|---|---|
| P | POLE LIGHT |
| | BUILDING MOUNTED LIGHT |
| T | TREE LIGHT |
| B | BOLLARD LIGHT |
| R | RECESSED CEILING LIGHT |

SITE PLAN
1" = 30 ft

COPYRIGHT SMITH ALVAREZ SIENKIEWYCZ ARCHITECTS, PC

SMITH
ALVAREZ
SIENKIEWYCZ
ARCHITECTS
117 St. Paul Street
3rd Floor
Burlington, VT
05401
P: 802•863•2227
F: 802•863•0093

CONSULTANTS

**CIVIL**
ENGINEERING VENTURES
208 FLYNN AVE, SUITE 2A
BURLINGTON, VT 05401
P: 802-863-6225
F: 802-863-6306

**LANDSCAPE**
DISTINCTIVE LANDSCAPING
2111 GREENBUSH ROAD
CHARLOTTE, VT 05445
P: 802-425-2877
F: 802-425-2797

**STRUCTURAL**
ARTISAN ENGINEERING
120 GRAHAM WAY, SUITE 124
SHELBURNE, VT 05482
P: 802-497-3531

**MECHANICAL/ ELECTRICAL**
LN CONSULTING
PO BOX 65178
BURLINGTON, VT 05406-5178
P: 802-655-1753
F: 802-655-7628

SAS PROJECT NUMBER: 0917

PROJECT

# HULA
•
BURLINGTON, VERMONT

DATE: 10/29/2018
SCALE: AS NOTED
CHECKED: SS
DRAWN BY: SAL, JM, OS

REVISIONS

PHASE
**PERMIT APPLICATION**

SITE PLAN SOUTH

# L-1.0

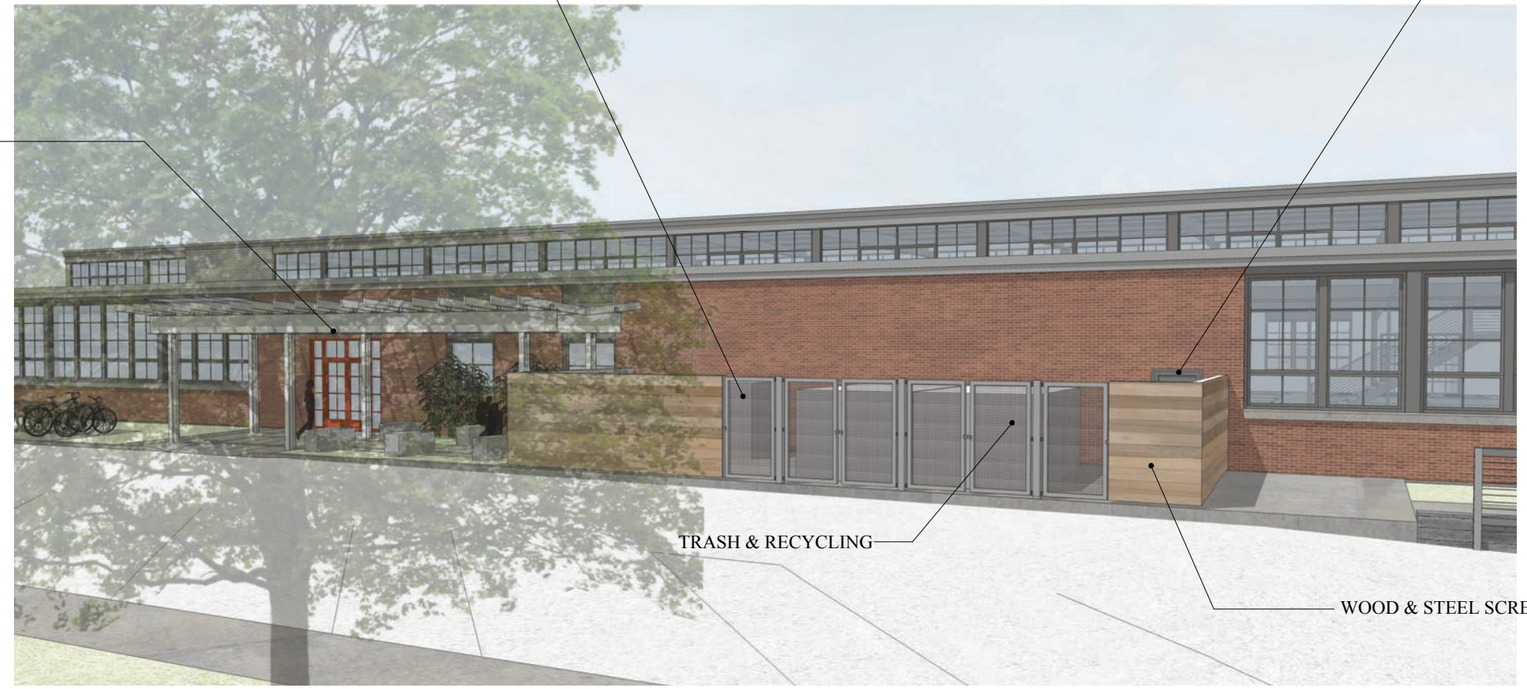
EXISTING

EXG TRANSFORMER

EXG DOOR

NEW CANOPY & ENTRANCE

PROPOSED



TRASH & RECYCLING

WOOD & STEEL SCREENWALL


SMITH ALVAREZ SIENKIEWYCZ ARCHITECTS

117 St. Paul Street
3rd Floor
Burlington, VT
05401

P: 802 • 863 • 2227
F: 802 • 863 • 0093


PROJECT:
HULA

BURLINGTON, VT

PROJECT NO.: 0917

DRAWING:
BUILDING 50 SOUTH SCREEN WALL

SCALE:
AS NOTED

DATE:
09/27/2018

SK-1

EXISTING

PROPOSED

SMITH ALVAREZ SIENKIEWYCZ ARCHITECTS
117 St. Paul Street
3rd Floor
Burlington, VT
05401
P: 802 • 863 • 2227
F: 802 • 863 • 0093

PROJECT:
HULA

BURLINGTON, VT

PROJECT NO.: 0917

DRAWING:
BUILDING 50 SOUTH
SCREEN WALL

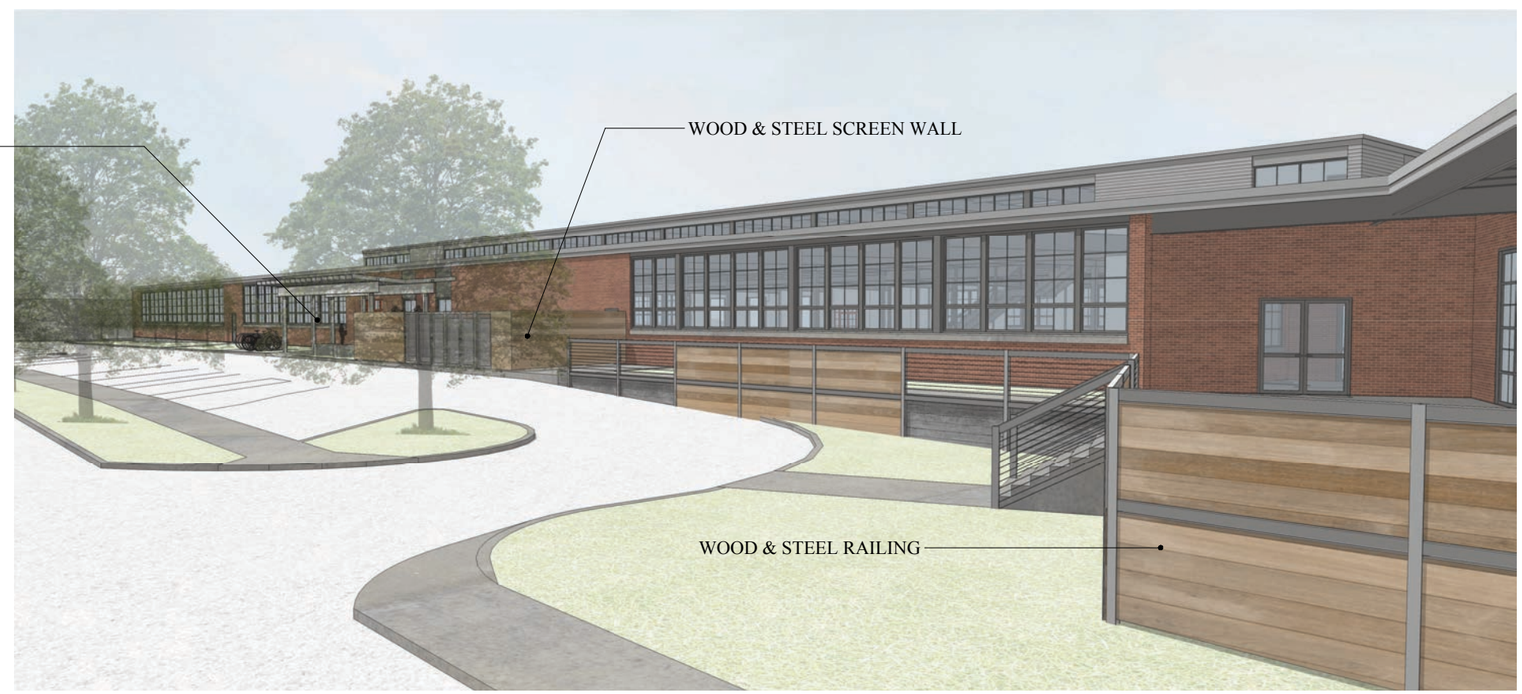
SCALE:
AS NOTED

DATE:
09/27/2018

SK-2

EXISTING

PROPOSED




SMITH ALVAREZ SIENKIEWYCZ ARCHITECTS
117 St. Paul Street
3rd Floor
Burlington, VT
05401
P: 802 • 863 • 2227
F: 802 • 863 • 0093

PROJECT:
HULA

BURLINGTON, VT

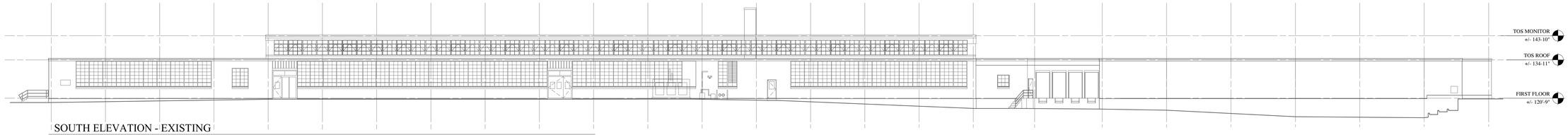
PROJECT NO.: 0917

DRAWING:
BUILDING 50 SOUTH SCREEN WALL

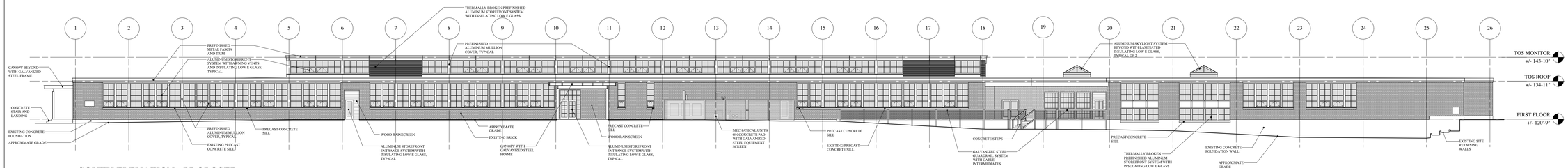
SCALE:
AS NOTED

DATE:
09/27/2018

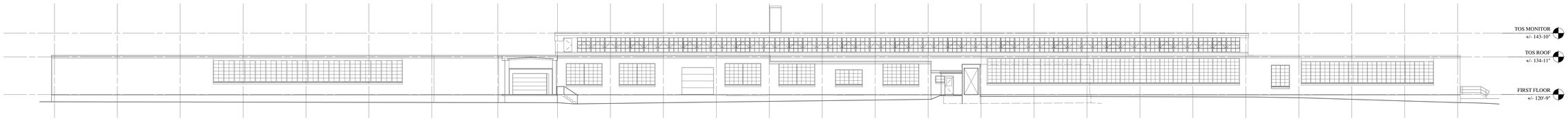
SK-3



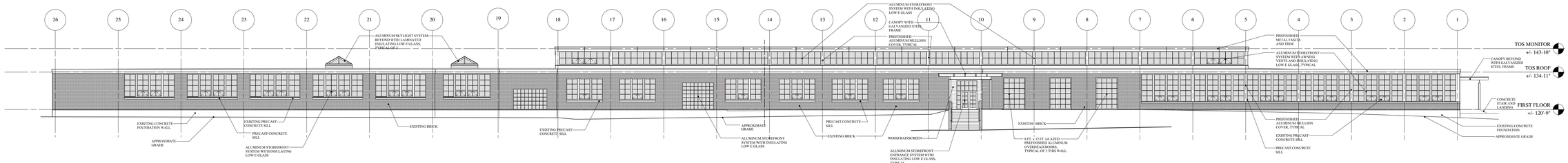

SOUTH ELEVATION - EXISTING
1/16" = 1'-0"



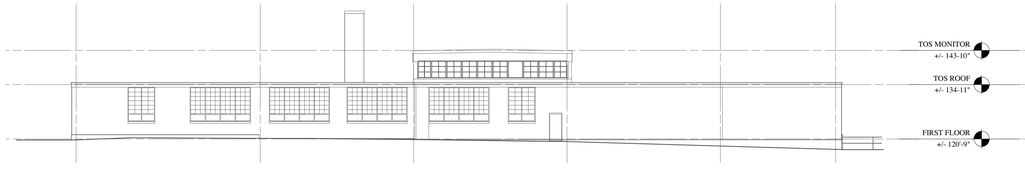

SOUTH ELEVATION - PROPOSED
1/16" = 1'-0"



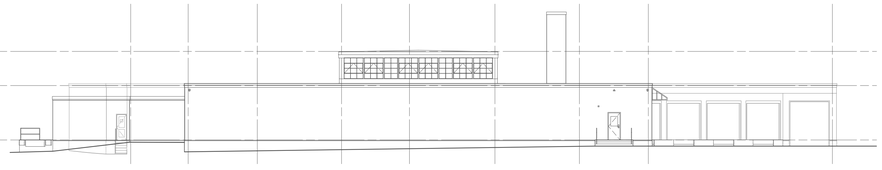

NORTH ELEVATION - EXISTING
1/16" = 1'-0"



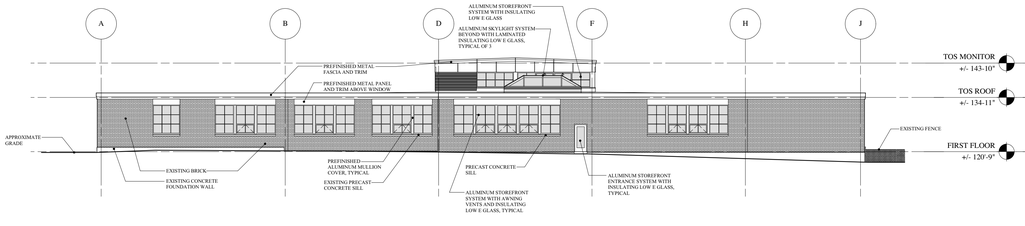

NORTH ELEVATION - PROPOSED
1/16" = 1'-0"



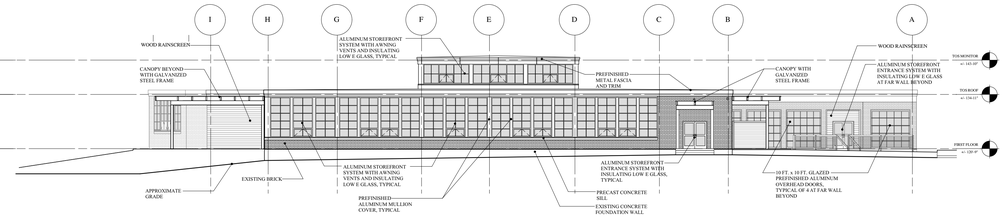

EAST ELEVATION - EXISTING
1/16" = 1'-0"



WEST ELEVATION - EXISTING
1/16" = 1'-0"




EAST ELEVATION - PROPOSED
1/16" = 1'-0"




WEST ELEVATION - PROPOSED
1/16" = 1'-0"

COPYRIGHT SMITH ALVAREZ SIENKIEWYCZ ARCHITECTS, PC

**PROGRESS PRINT 08/31/2018**

SMITH
ALVAREZ
SIENKIEWYCZ
ARCHITECTS
117 St. Paul Street
3rd Floor
Burlington, VT
05401
P: 802 • 863 • 2227
F: 802 • 863 • 0093

CONSULTANTS

**CIVIL**
ENGINEERING VENTURES
208 FLYNN AVE, SUITE 2A
BURLINGTON, VT 05401
P: 802-863-6225
F: 802-863-6306

**LANDSCAPE**
DISTINCTIVE LANDSCAPING
2111 GREENBRUSH ROAD
CHALOTTE, VT 05445
P: 802-425-2877
F: 802-425-2797

**STRUCTURAL**
ARTISAN ENGINEERING
120 GRAHAM WAY, SUITE 124
SHELBURNE, VT 05482
P: 802-497-3531

**MECHANICAL/ ELECTRICAL**
LN CONSULTING
PO BOX 65178
BURLINGTON, VT 05406-5178
P: 802-655-1753
F: 802-655-7628

SAS PROJECT NUMBER: 0917

PROJECT

# HULA
•
BURLINGTON, VERMONT

DATE: 08/31/2018
SCALE: AS NOTED
CHECKED: SS
DRAWN BY: SAL, JM, OS

REVISIONS

PHASE

BUILDING 50
•
EXTERIOR ELEVATIONS

# A-3.0

PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: ES1.11 Permit GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 40.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

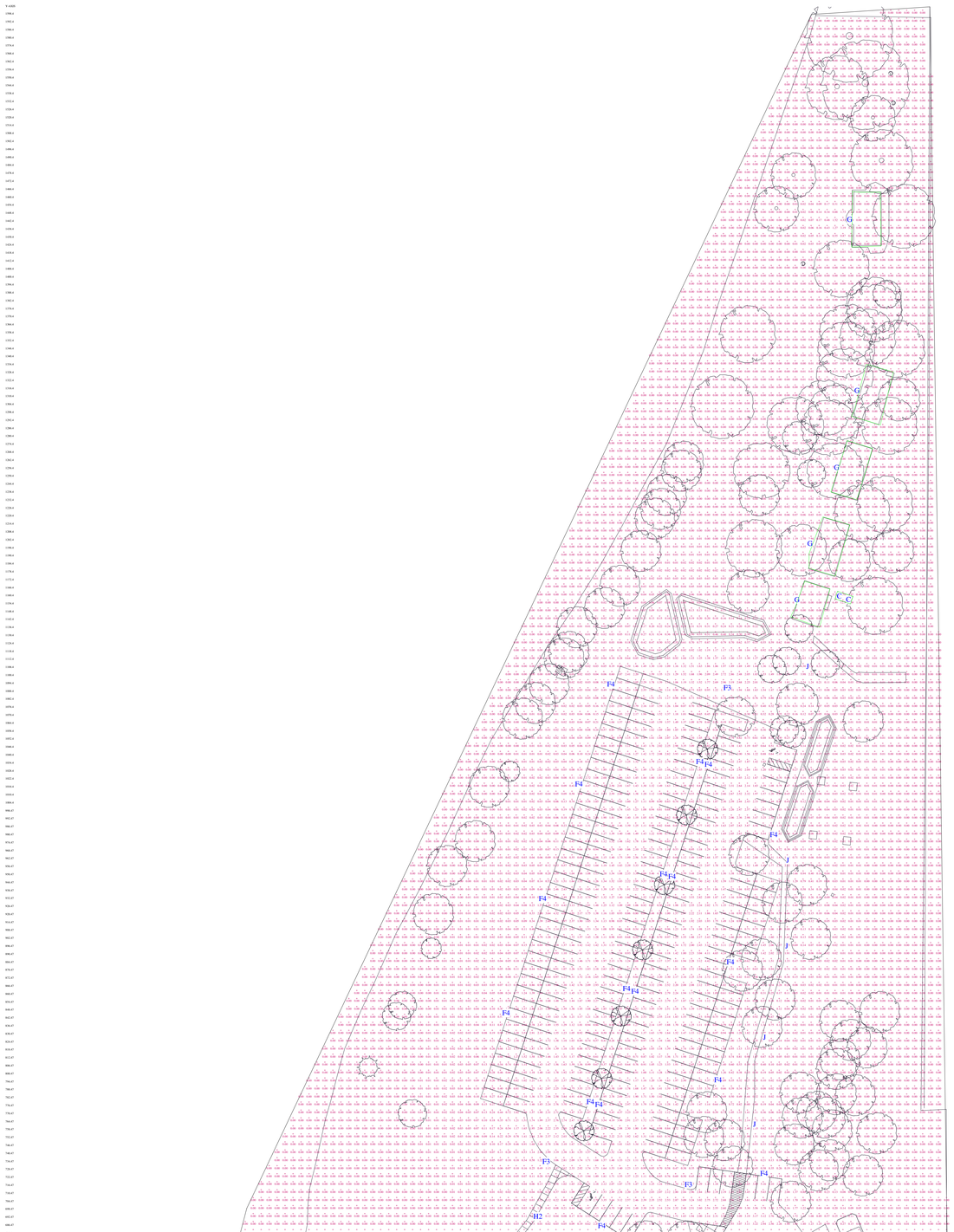
Computed in accordance with IES recommendations

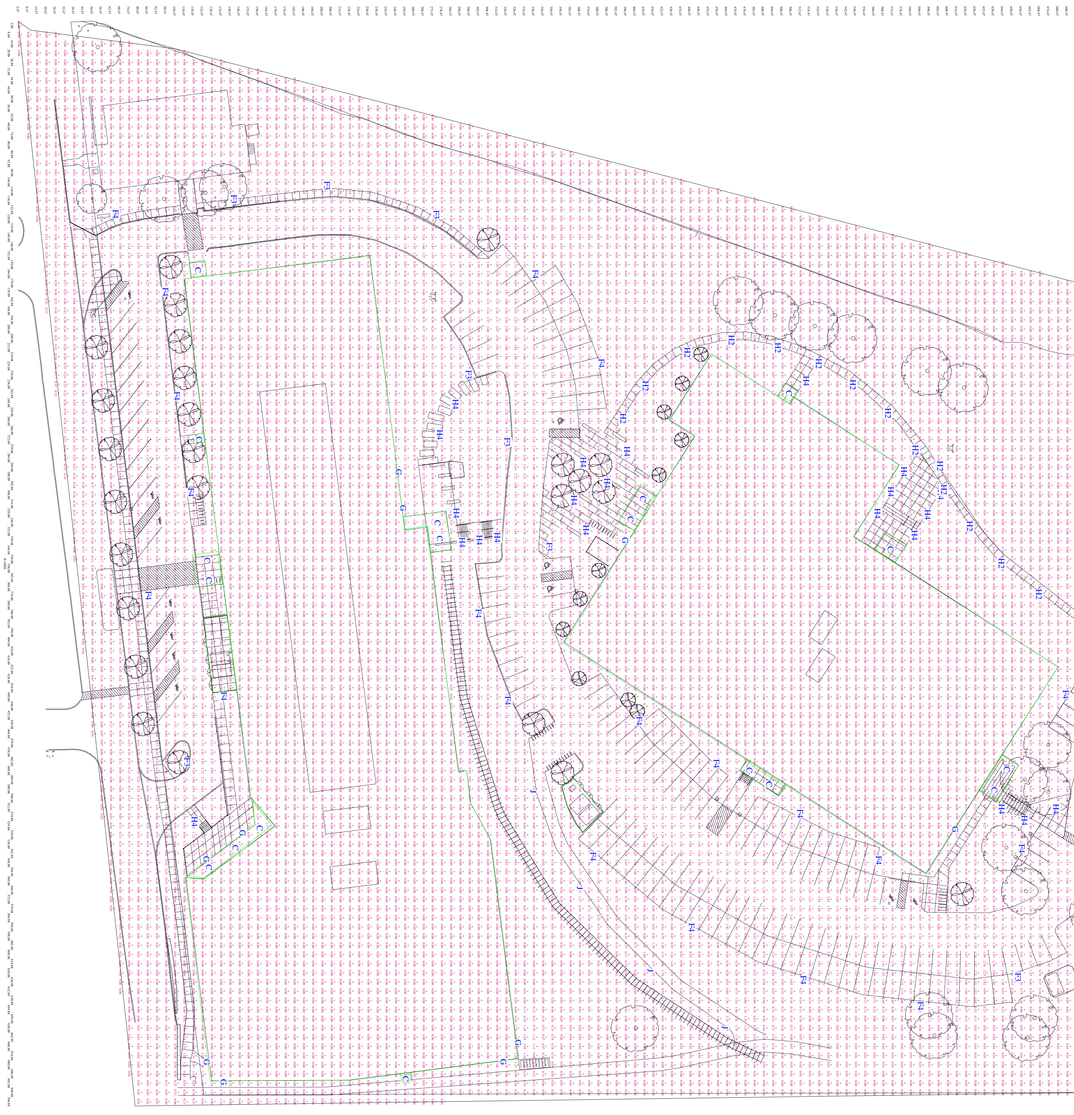
**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.00 | 12.53 | 0.52 | N/A | N/A |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 20 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 |
| F3 | 11 | ALED3T50 | RAB LIGHTING IN, ALED3T50N - RWLED3T50N - RWLED3T50SFN - WPLED3T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED PLASTIC REFLECTOR<br>LAMPS: ( 6 ), 6522 LUMENS, BLST: , LLF = 0.90 @20.00 |
| F4 | 36 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE<br>LAMPS: ( 6 ), 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| G | 15 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1 ), 1252 LUMENS, BLST: , LLF = 0.90 |
| H2 | 15 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T2-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7 ), 677 LUMENS, BLST: , LLF = 0.90 @3.50 |
| H4 | 22 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7 ), 646 LUMENS, BLST: , LLF = 0.90 @3.50 |
| J | 9 | ALED18N | RAB LIGHTING IN, WPLED18N (WALLPACK) - ALED18N (AREA LIGHTER),<br>CAST FINNED METAL HOUSING, MAC, CIRCUIT BOARD WITH 1 LED, MOLD<br>LAMPS: ( 1 ), 2520 LUMENS, BLST: , LLF = 0.90 |





PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 East Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 8.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

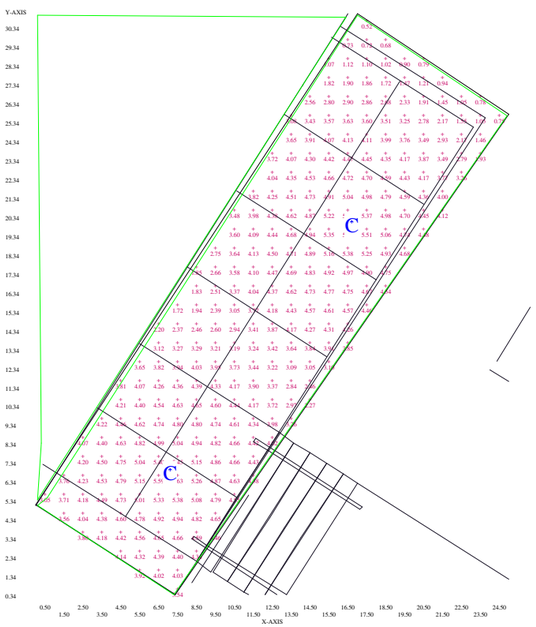
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.52 | 5.65 | 3.87 | 7.49 | 10.95 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 North Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

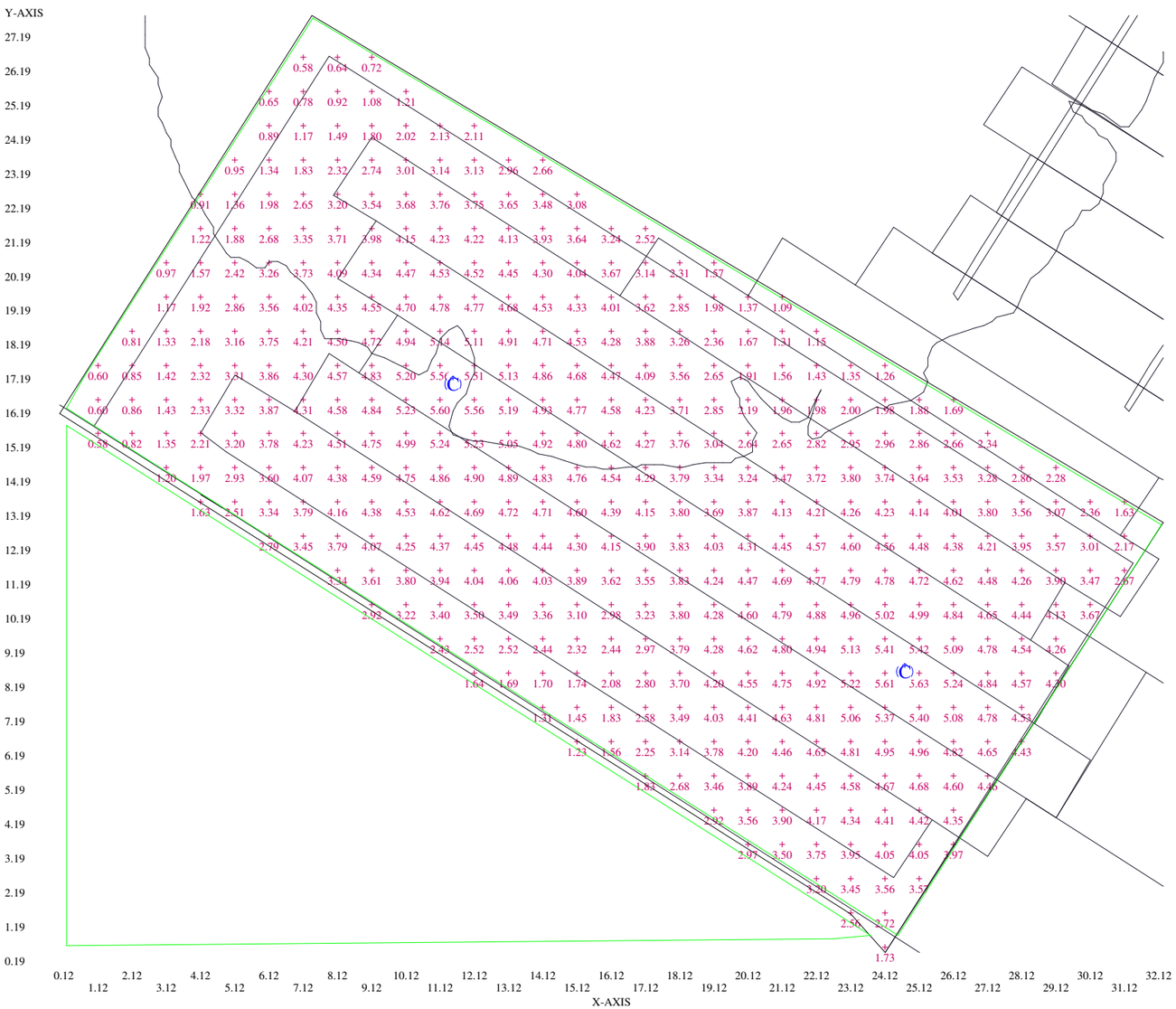
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.58 | 5.63 | 3.54 | 6.13 | 9.75 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 South Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 8.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

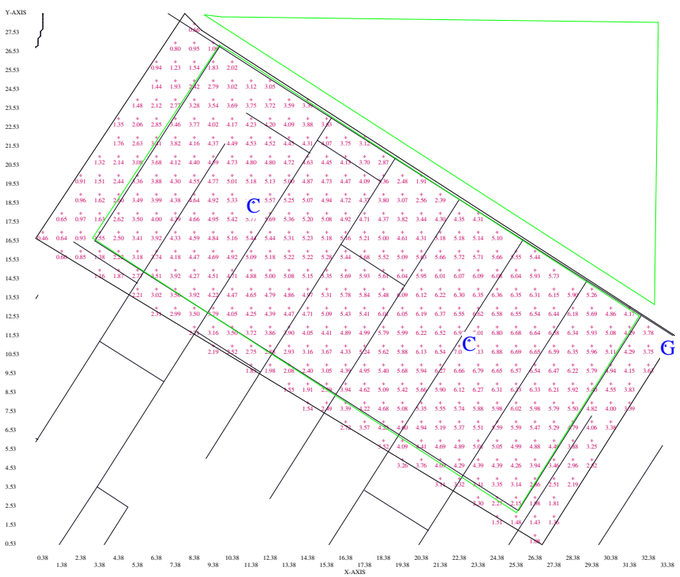
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.46 | 7.13 | 4.31 | 9.45 | 15.62 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |
| G | 1 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @13.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 South Walk GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

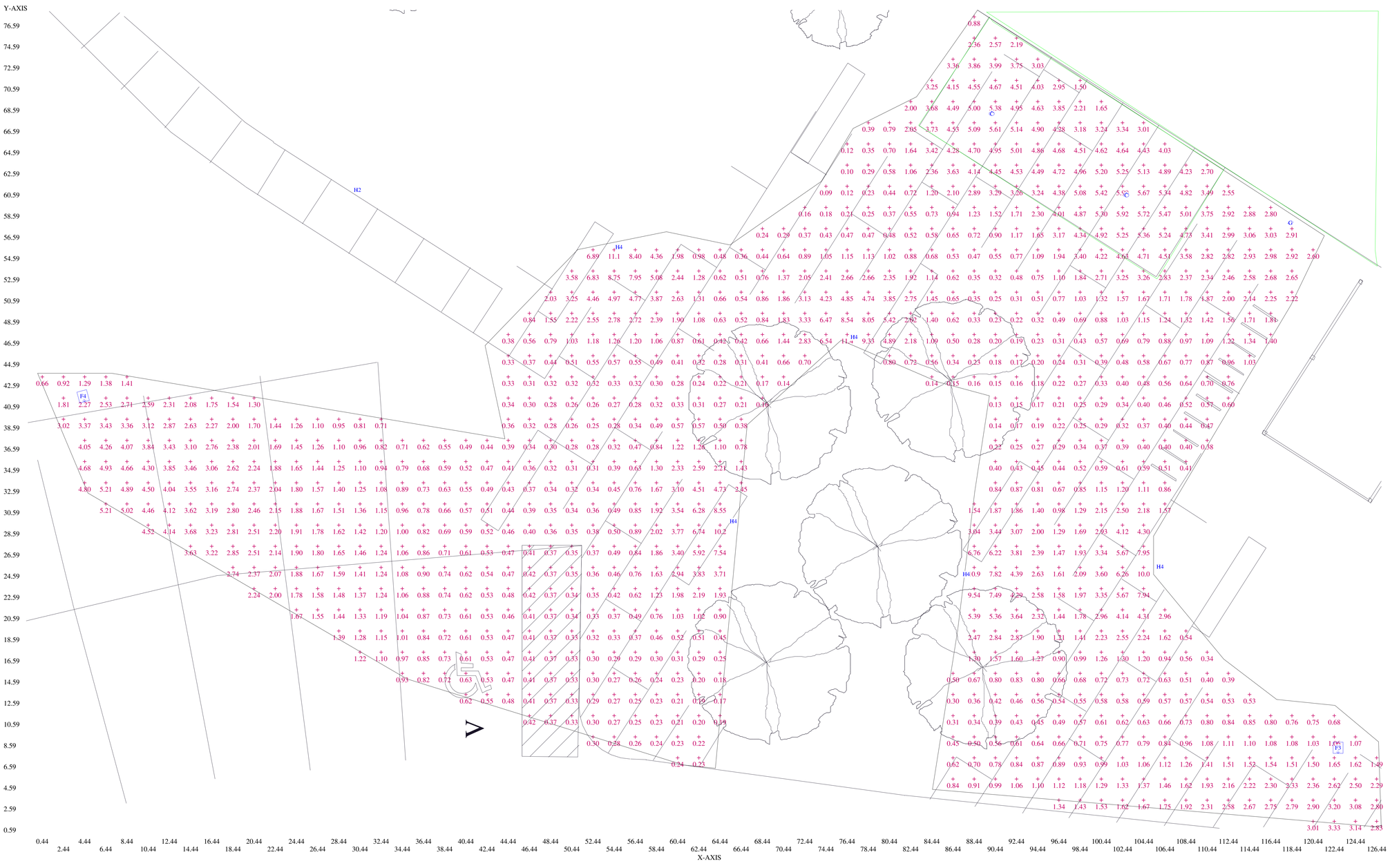
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.09 | 11.36 | 1.75 | 19.61 | 127.37 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |
| F3 | 1 | ALED3T50 | RAB LIGHTING IN, ALED3T50N - RWLED3T50N - RWLED3T50SFN - WPLED3T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED PLASTIC REFLECTOR<br>LAMPS: ( 6) , 6522 LUMENS, BLST: , LLF = 0.90 @20.00 |
| F4 | 1 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE<br>LAMPS: ( 6) , 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| G | 1 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @13.00 |
| H2 | 1 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T2-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 677 LUMENS, BLST: , LLF = 0.90 @3.50 |
| H4 | 5 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 SW Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

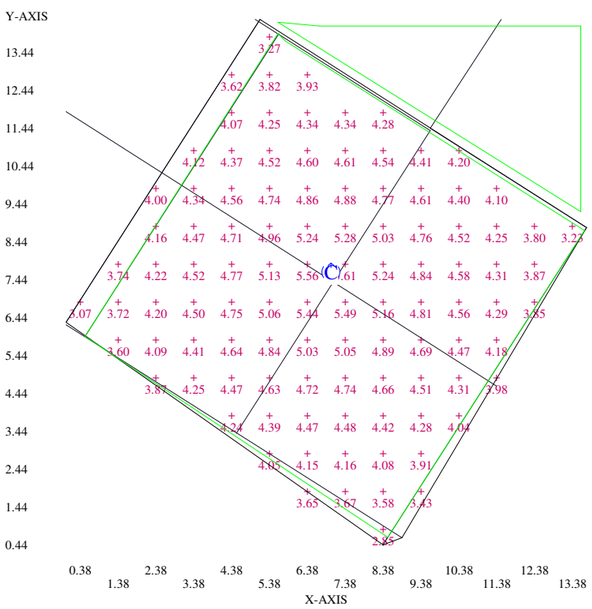
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 2.85 | 5.61 | 4.39 | 1.54 | 1.97 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 1 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |



**LitePro 2.030 Point-By-Point Results** 9/27/2018

PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 SW Walk GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 8.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

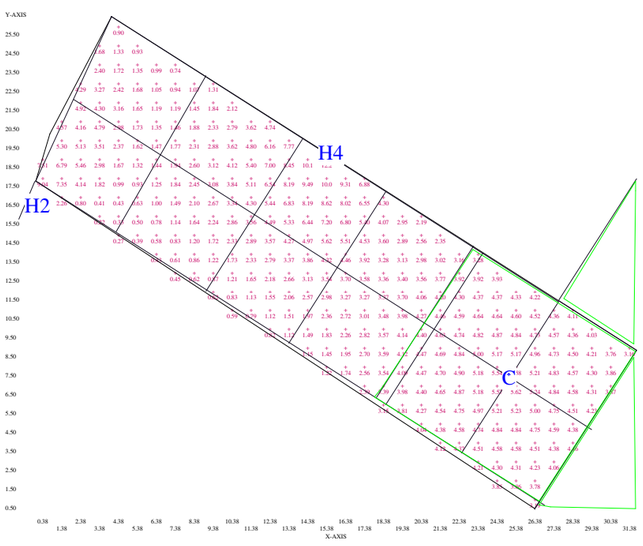
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.22 | 12.25 | 3.57 | 16.38 | 56.12 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 1 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |
| H2 | 1 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T2-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 677 LUMENS, BLST: , LLF = 0.90 @3.50 |
| H4 | 1 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 West Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

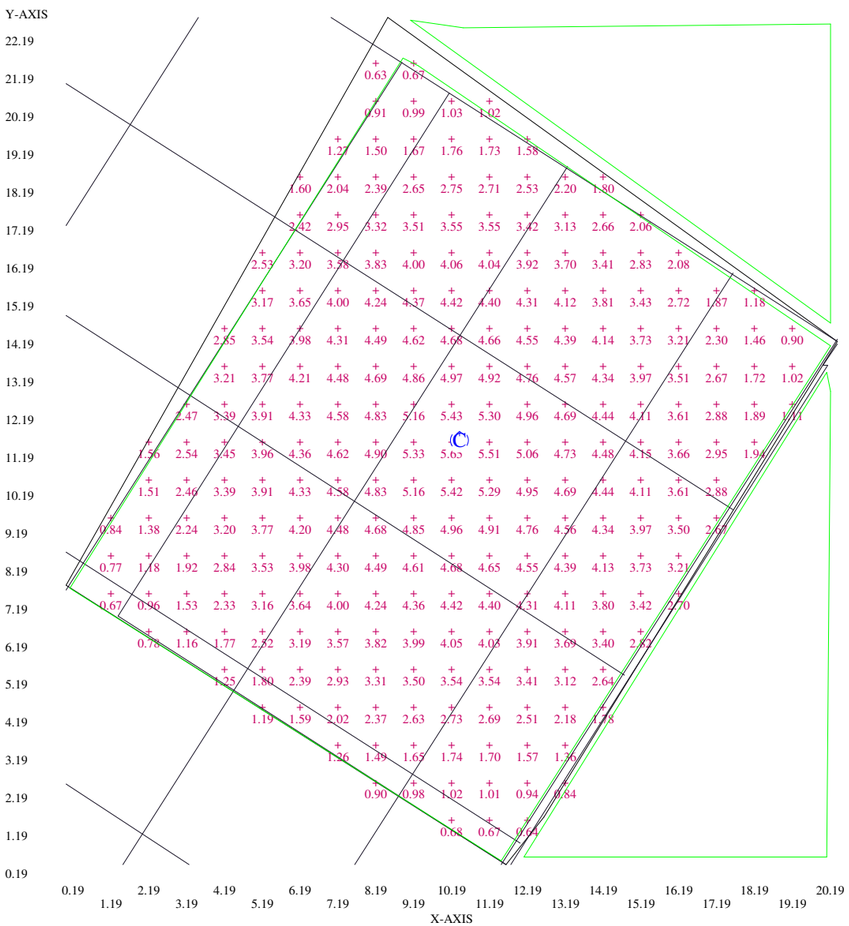
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.63 | 5.65 | 3.20 | 5.08 | 8.96 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 1 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 West Walk GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 10.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

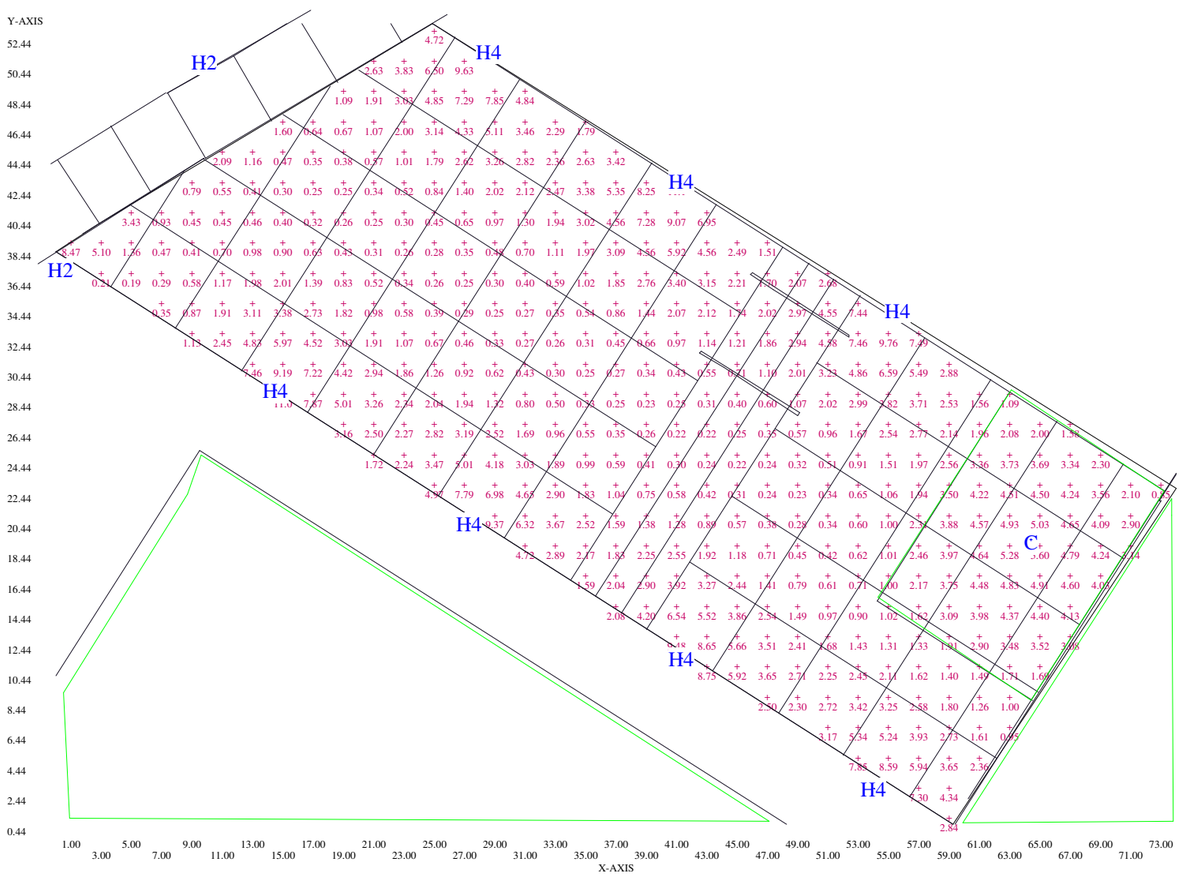
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.19 | 11.07 | 2.48 | 13.36 | 59.71 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 1 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |
| H2 | 2 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T2-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 677 LUMENS, BLST: , LLF = 0.90 @3.50 |
| H4 | 7 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 East Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 2.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

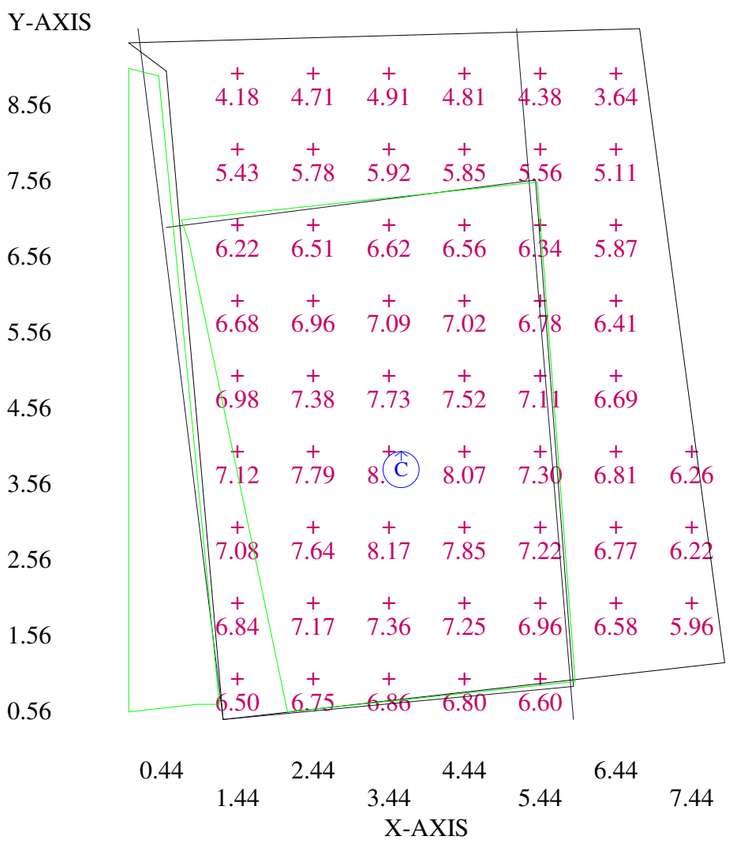
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 3.64 | 8.41 | 6.55 | 1.80 | 2.31 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 1 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @9.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 North Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 8.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

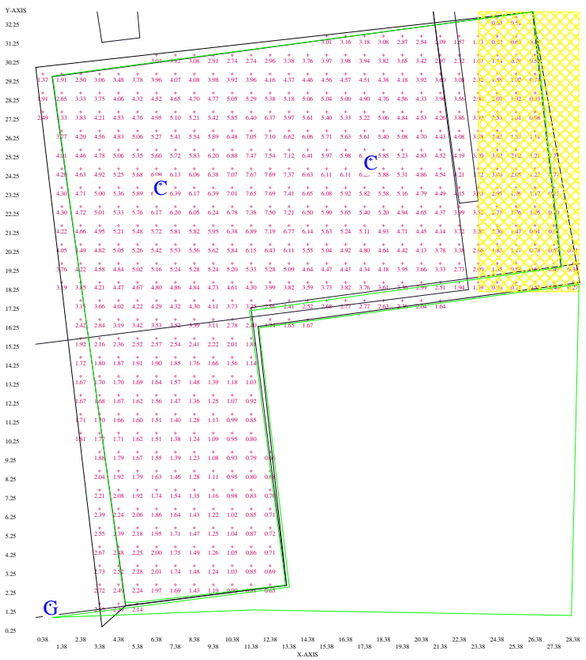
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.27 | 7.69 | 3.45 | 12.70 | 28.34 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |
| G | 1 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @13.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 NE Walk GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 8.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

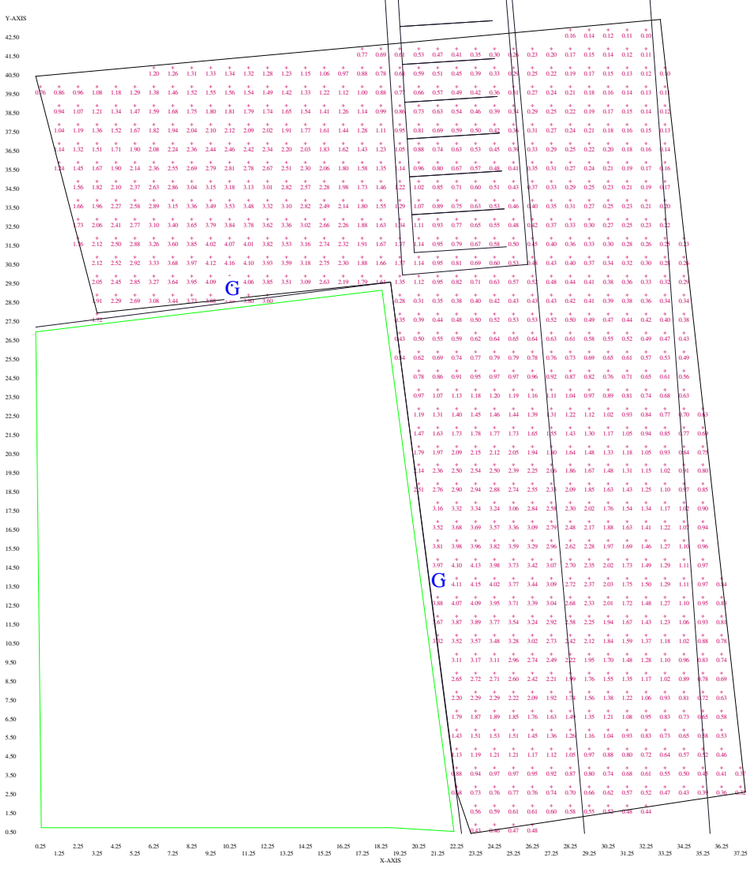
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.10 | 4.16 | 1.44 | 14.36 | 41.41 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| G | 2 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @11.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 North Walk GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

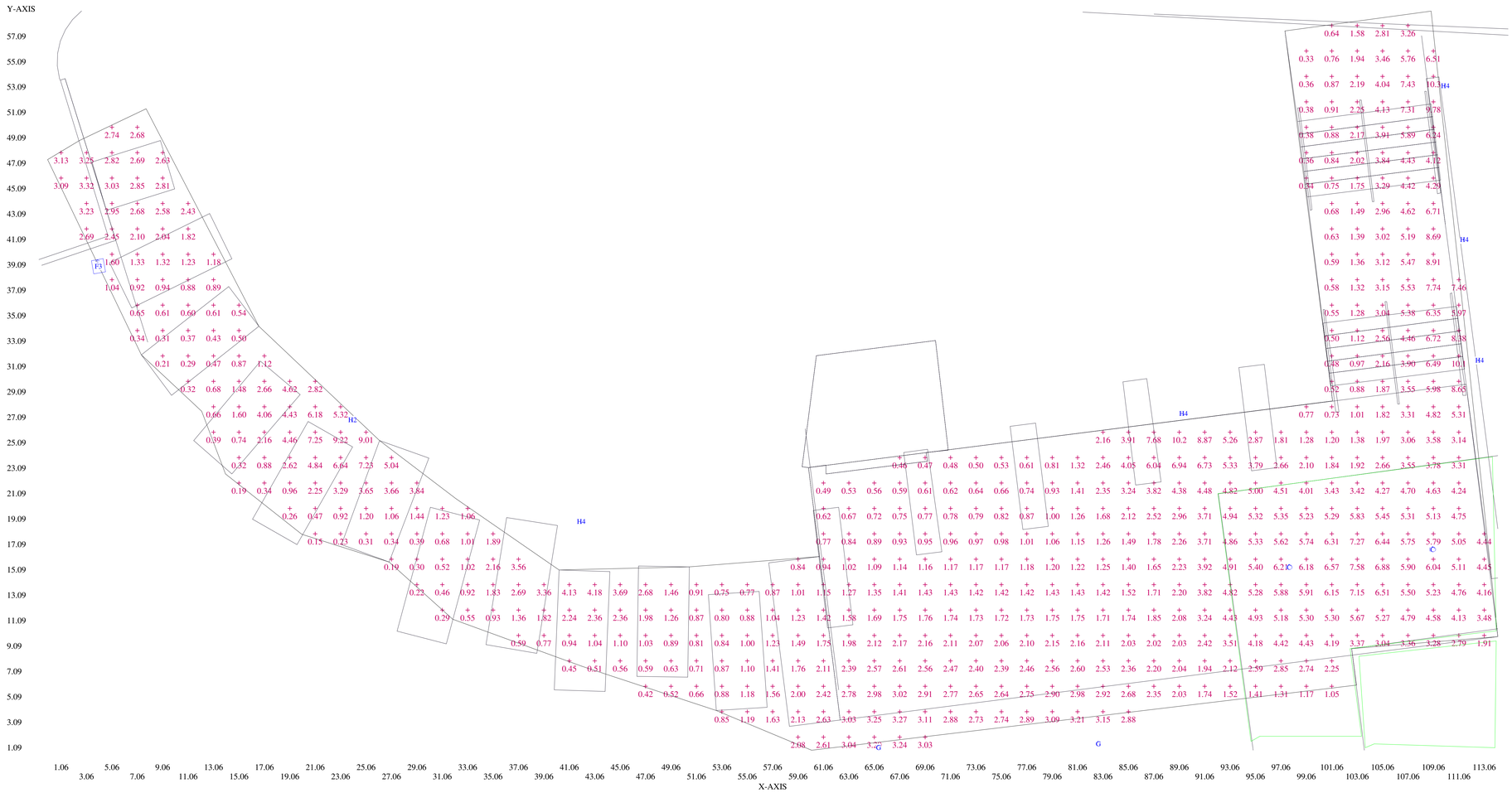
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.15 | 10.31 | 2.65 | 17.70 | 68.79 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |
| F3 | 1 | ALED3T50 | RAB LIGHTING IN, ALED3T50N - RWLED3T50N - RWLED3T50SFN - WPLED3T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED PLASTIC REFLECTOR<br>LAMPS: ( 6) , 6522 LUMENS, BLST: , LLF = 0.90 @20.00 |
| G | 2 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @13.00 |
| H2 | 1 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T2-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 677 LUMENS, BLST: , LLF = 0.90 @3.50 |
| H4 | 5 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 South Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

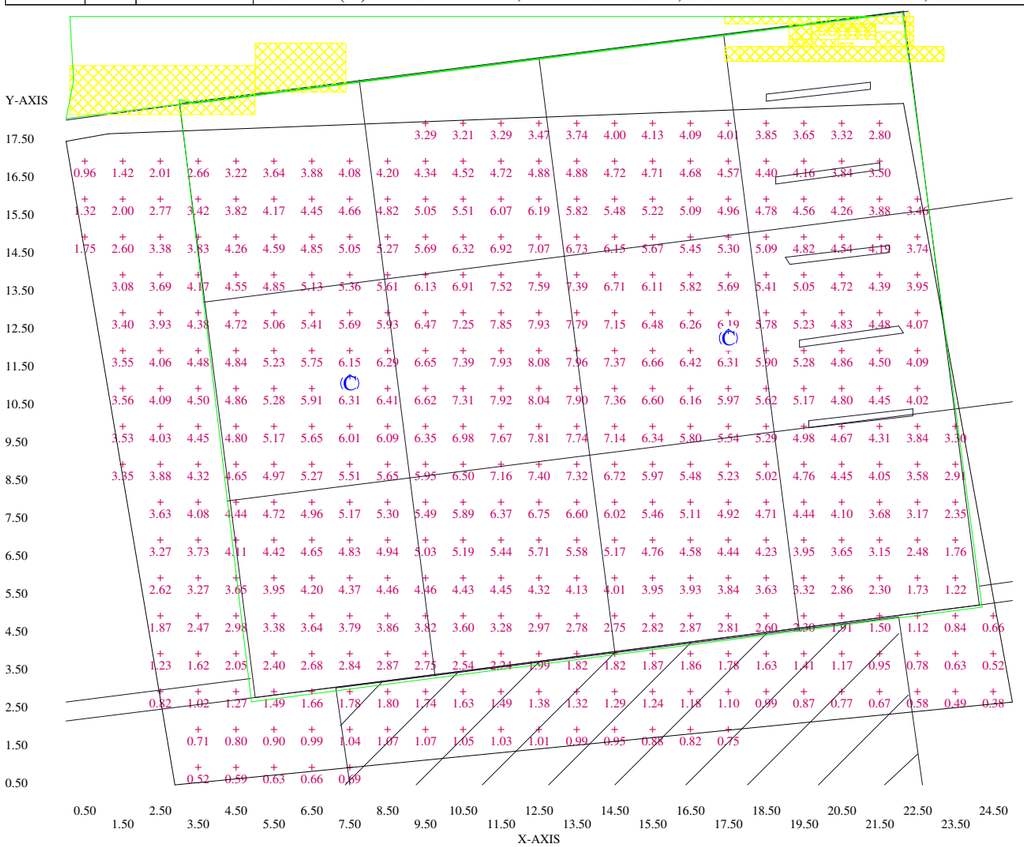
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.38 | 8.08 | 4.12 | 10.76 | 21.08 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 SE Walk GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 8.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

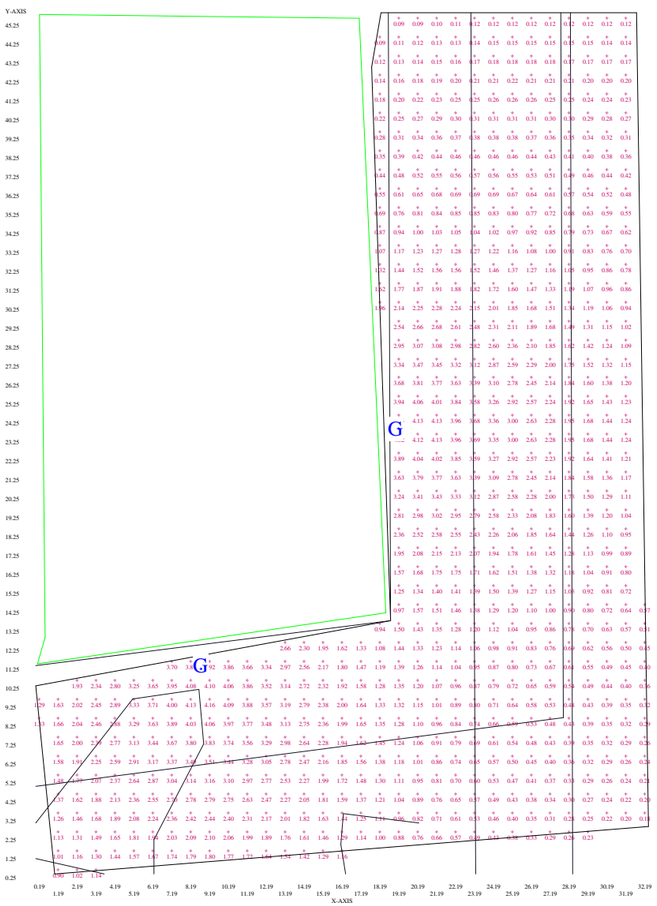
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.09 | 4.16 | 1.49 | 17.32 | 48.44 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| G | 2 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @11.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 South Walk GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

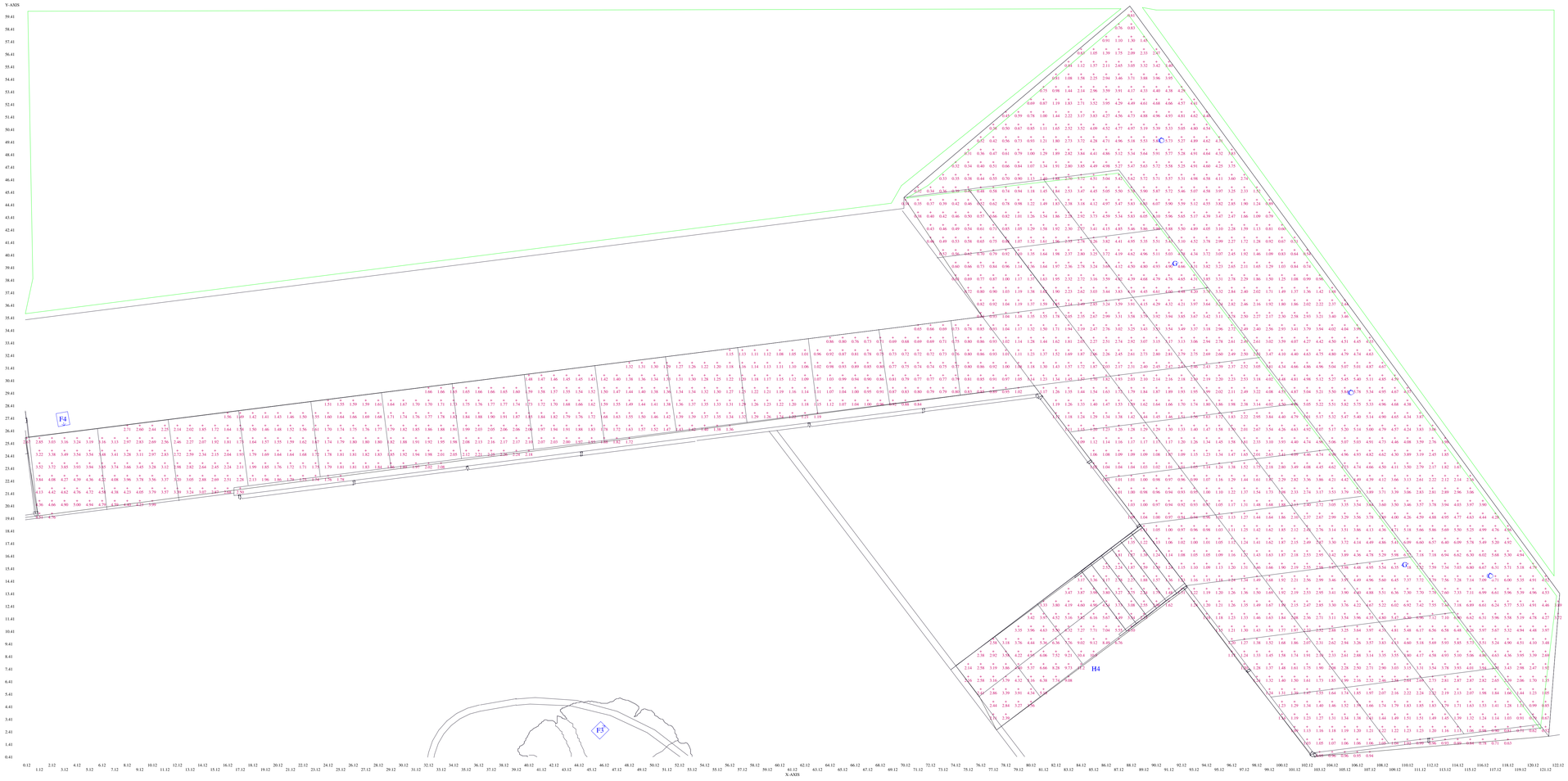
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.31 | 11.23 | 2.69 | 8.73 | 36.39 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 3 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @11.00 |
| F3 | 1 | ALED3T50 | RAB LIGHTING IN, ALED3T50N - RWLED3T50N - RWLED3T50SFN - WPLED3T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED PLASTIC REFLECTOR<br>LAMPS: ( 6) , 6522 LUMENS, BLST: , LLF = 0.90 @20.00 |
| F4 | 1 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE<br>LAMPS: ( 6) , 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| G | 2 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @11.00 |
| H4 | 1 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB11-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 SW Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 2.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

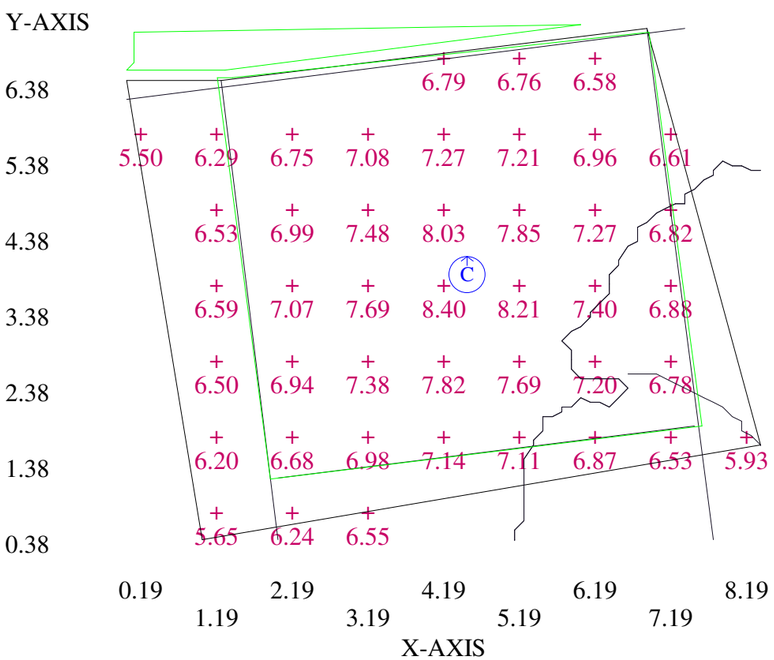
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 5.50 | 8.40 | 6.96 | 1.26 | 1.53 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 1 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @9.00 |



**LitePro 2.030 Point-By-Point Results** 9/27/2018

PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 50 West Entry GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 4.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

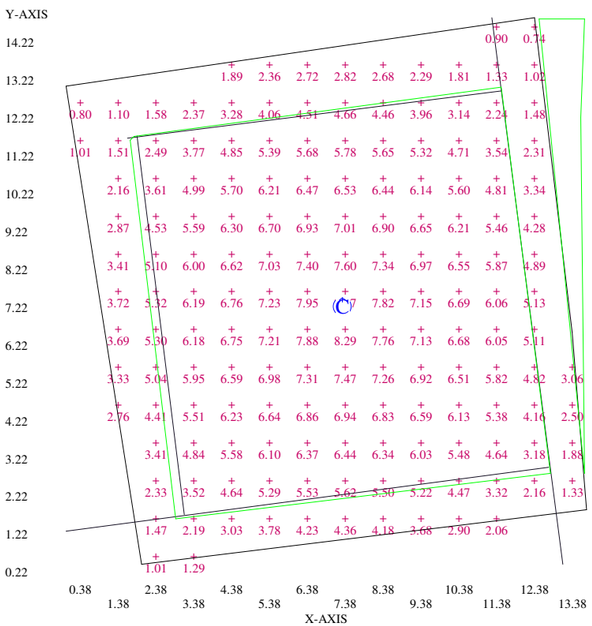
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.74 | 8.37 | 4.81 | 6.53 | 11.37 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 1 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @9.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: North Drive GRID: Ground
PREPARED BY:
VALUES ARE FC, SCALE: 1 IN= 20.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

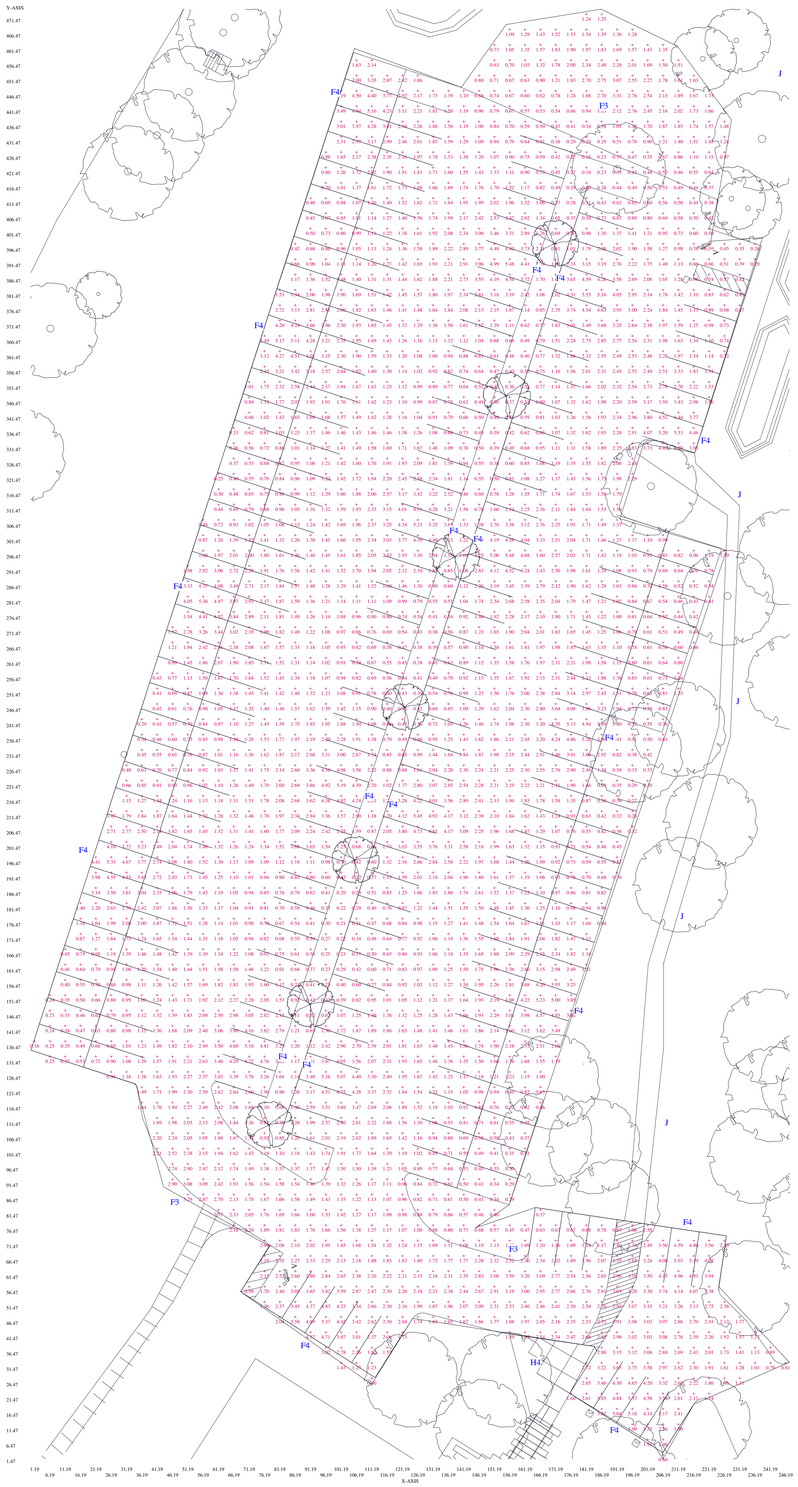
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.16 | 5.57 | 1.74 | 10.81 | 34.58 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| F3 | 3 | ALED3T50 | RAB LIGHTING IN, ALED3T50N - RWLED3T50N - RWLED3T50SFN - WPLED3T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED PLASTIC REFLECTOR<br>LAMPS: ( 6) , 6522 LUMENS, BLST: , LLF = 0.90 @20.00 |
| F4 | 18 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE<br>LAMPS: ( 6) , 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| H4 | 1 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |
| J | 5 | ALED18N | RAB LIGHTING IN, WPLED18N (WALLPACK) - ALED18N (AREA LIGHTER),<br>CAST FINNED METAL HOUSING, MAC, CIRCUIT BOARD WITH 1 LED, MOLD<br>LAMPS: ( 1) , 2520 LUMENS, BLST: , LLF = 0.90 @15.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: Northern Path GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 10.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

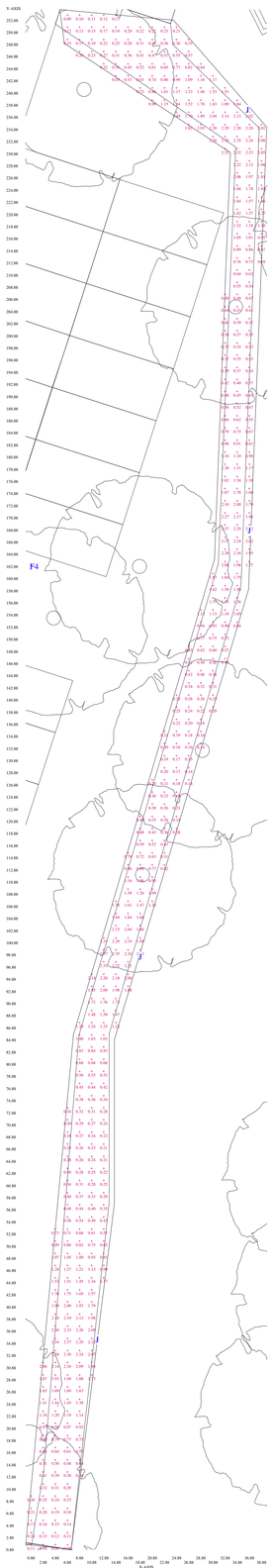
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.08 | 2.37 | 0.98 | 11.71 | 28.38 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| F4 | 1 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE<br>LAMPS: ( 6) , 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| J | 4 | ALED18N | RAB LIGHTING IN, WPLED18N (WALLPACK) - ALED18N (AREA LIGHTER),<br>CAST FINNED METAL HOUSING, MAC, CIRCUIT BOARD WITH 1 LED, MOLD<br>LAMPS: ( 1) , 2520 LUMENS, BLST: , LLF = 0.90 @20.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: Surf Area GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 20.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

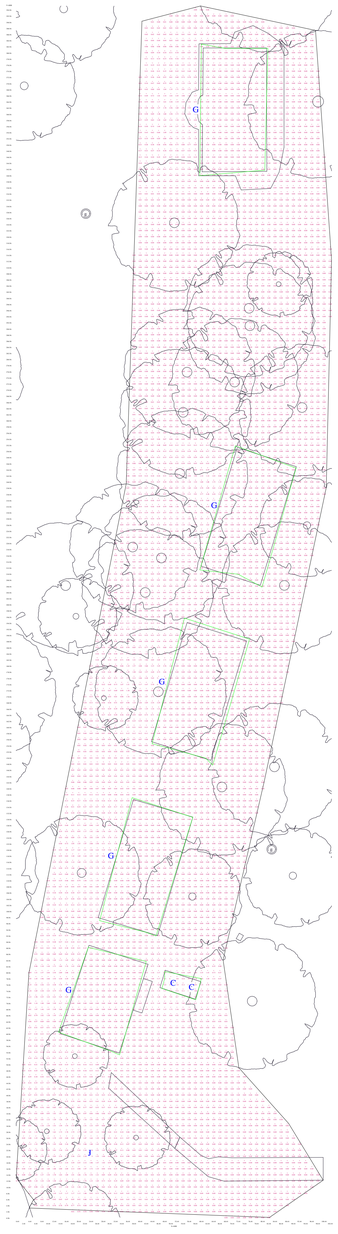
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.00 | 13.31 | 0.30 | N/A | N/A |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 2 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 @9.00 |
| G | 5 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @9.00 |
| J | 1 | ALED18N | RAB LIGHTING IN, WPLED18N (WALLPACK) - ALED18N (AREA LIGHTER),<br>CAST FINNED METAL HOUSING, MAC, CIRCUIT BOARD WITH 1 LED, MOLD<br>LAMPS: ( 1) , 2520 LUMENS, BLST: , LLF = 0.90 @20.00 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: 44 W Path GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 20.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

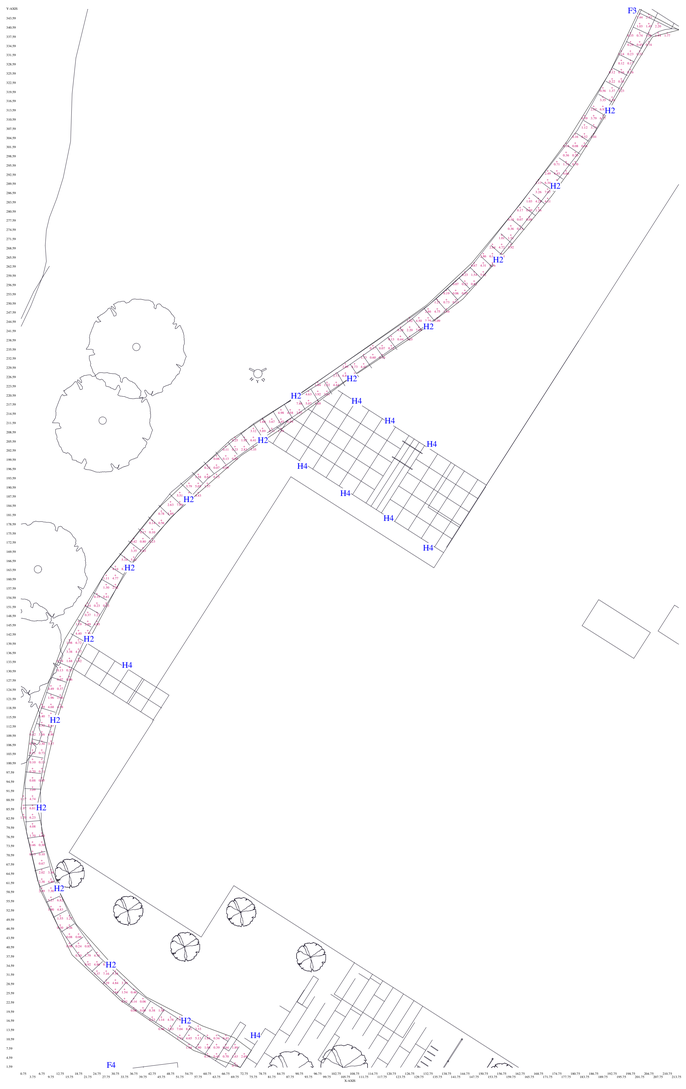
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.05 | 9.68 | 2.39 | 44.01 | 178.48 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| F3 | 1 | ALED3T50 | RAB LIGHTING IN, ALED3T50N - RWLED3T50N - RWLED3T50SFN - WPLED3T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED PLASTIC REFLECTOR<br>LAMPS: ( 6) , 6522 LUMENS, BLST: , LLF = 0.90 @20.00 |
| F4 | 1 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE<br>LAMPS: ( 6) , 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| H2 | 15 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T2-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 677 LUMENS, BLST: , LLF = 0.90 @3.50 |
| H4 | 9 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: South Drive GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 30.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

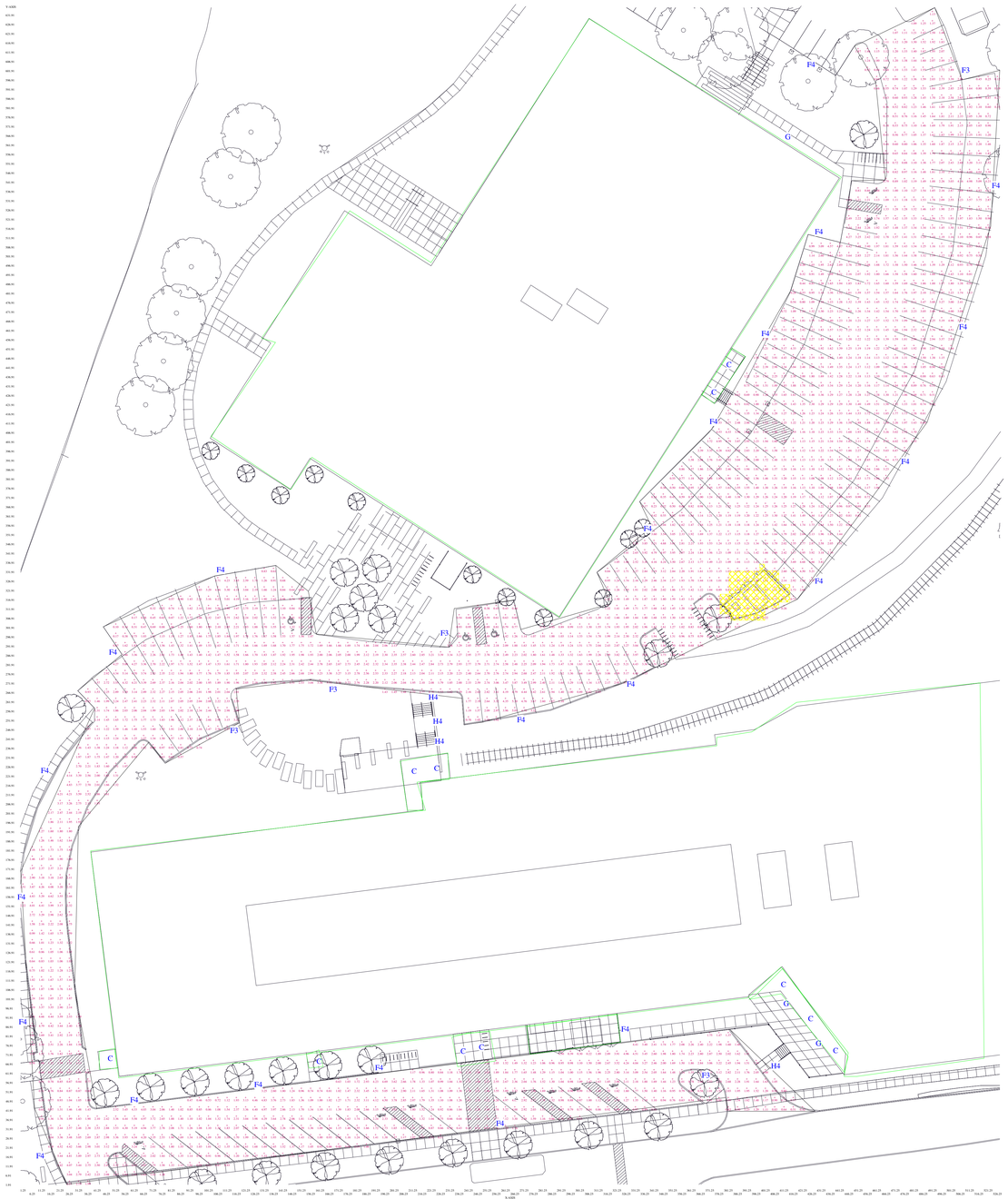
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.10 | 5.58 | 1.86 | 19.17 | 57.48 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| C | 11 | LC6SL_6L | PRESCOLITE, LC6SL 6LCSL10L35K8,<br>6" LED Downlight, 3500K, 3 SDC,<br>LAMPS: ( 1) NFSL757GT-V1, 1071 LUMENS, BLST: LED25W-36-C0700, LLF = 0.90 |
| F3 | 5 | ALED3T50 | RAB LIGHTING IN, ALED3T50N - RWLED3T50N - RWLED3T50SFN - WPLED3T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED PLASTIC REFLECTOR<br>LAMPS: ( 6) , 6522 LUMENS, BLST: , LLF = 0.90 @20.00 |
| F4 | 22 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N,<br>CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE<br>LAMPS: ( 6) , 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| G | 3 | rab02318 | RAB LIGHTING IN, WPLED10N (WALLPACK) - ALED10N (AREA LIGHTER) - BLE,<br>CAST METAL HOUSING, ONE CIRCUI, REFLECTOR WITH SEMI-DIFFUSE FI<br>LAMPS: ( 1) , 1252 LUMENS, BLST: , LLF = 0.90 @11.00 |
| H4 | 4 | 303-B1-L | EATON - LUMIERE, 303-B1-LEDB1-4000-UNV-T4-DIM10-BK,<br>LUMIERE EON 303-B1, SINGLE HEA, TEST IS SCALED FROM IESNA LM-7<br>LAMPS: ( 7) , 646 LUMENS, BLST: , LLF = 0.90 @3.50 |



PROJECT: HULA/18164 GROUP: NEW Permit Site Photometr AREA: South Bikepath GRID: Ground
PREPARED BY: ;
VALUES ARE FC, SCALE: 1 IN= 8.0FT, HORZ GRID (U), HORZ CALC, Z= 0.0

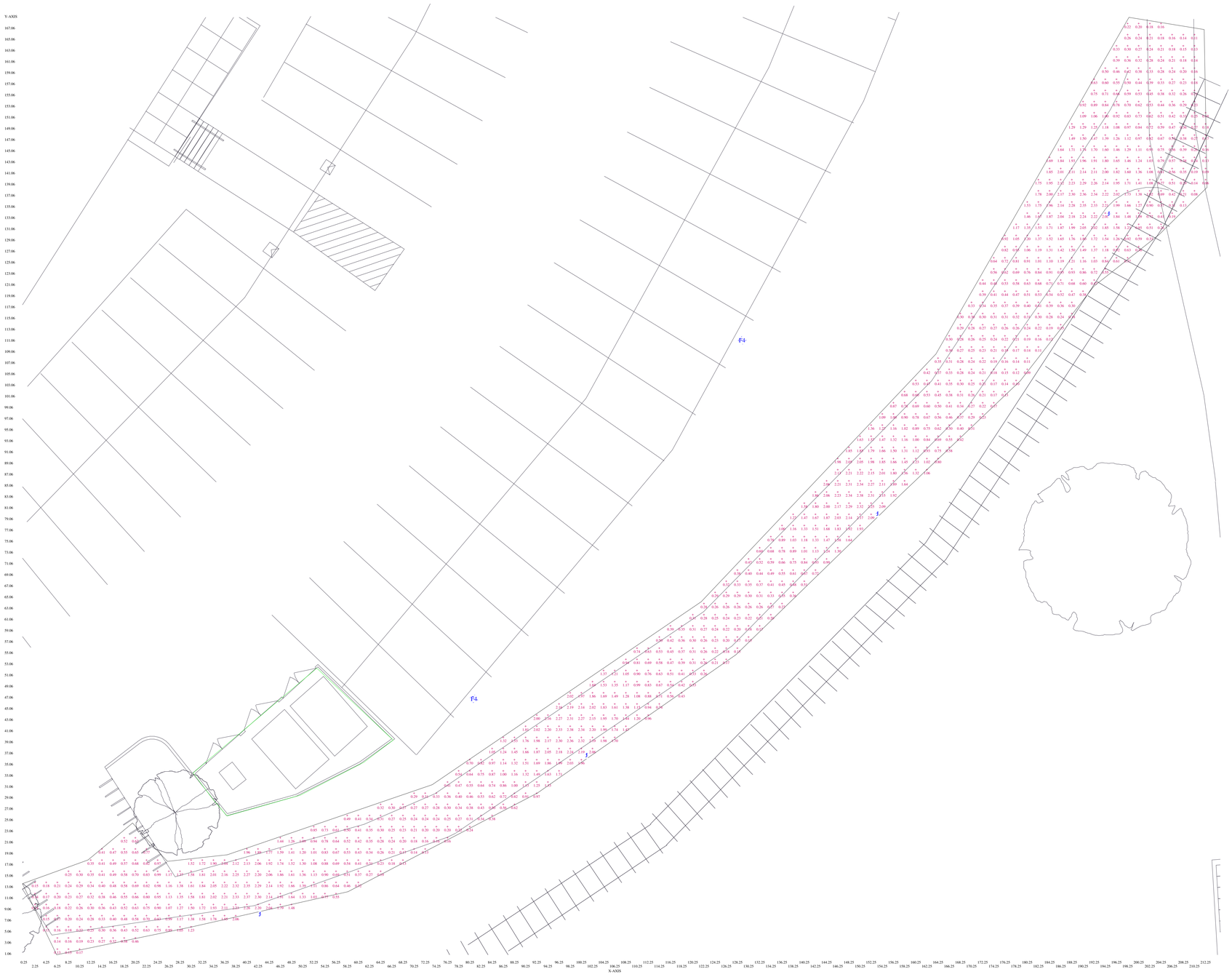
Computed in accordance with IES recommendations

**Statistics**

| GROUP | MIN | MAX | AVE | AVE/MIN | MAX/MIN |
|---|---|---|---|---|---|
| (+) | 0.06 | 2.38 | 0.92 | 14.62 | 38.00 |

**Luminaires Used**

| TYPE | QTY | TEST# | DESCRIPTION |
|---|---|---|---|
| F4 | 2 | ALED4T50 | RAB LIGHTING IN, ALED4T50N - RWLED4T50N - RWLED4T50SFN - WPLED4T50N, CAST FINNED METAL HOUSING, 6 C, LED, MOLDED 2-PIECE PLASTIC RE LAMPS: ( 6) , 10504 LUMENS, BLST: , LLF = 0.90 @20.00 |
| J | 4 | ALED18N | RAB LIGHTING IN, WPLED18N (WALLPACK) - ALED18N (AREA LIGHTER), CAST FINNED METAL HOUSING, MAC, CIRCUIT BOARD WITH 1 LED, MOLD LAMPS: ( 1) , 2520 LUMENS, BLST: , LLF = 0.90 @20.00 |



**Land/Plan**
**61 Central Avenue**
**BTV 05401**

# MEMORANDUM

**TO:** Scott Gustin
**FROM:** John Caulo
**RE:** HULA – Parking Management Plan
**DATE:** 11 October 2018

---

This memorandum has been prepared in response to a request from City of Burlington Planning Department staff to provide additional supporting information related to Lakeside Ovens LLC parking waiver request, as well as to provide details related to the management of the one hundred and eight (108) tandem parking proposed by the applicant and shown on the plan. Specifically, this memorandum addresses the following items requested by Scott Gustin in his email dated 10/3/18:

1. Summary of Parking Requirements
2. Summary of Parking Layout Proposed by Lakeside Ovens, LLC
3. Request for Parking Waiver
4. Parking Management of Tandem Spaces

**Summary of Parking Requirements**
The provision of on-site parking is based on City of Burlington parking requirements as articulated in Article 8 of the Comprehensive Development Ordinance. For the purposes of quantifying the number of spaces required for the Project, the applicant has assumed most of the gross floor areas to be redeveloped within the three (3) existing structures will be designated as "Office" Use. Within 50 Lakeside, 3900SF is designated as "Manufacturing" use. The number of parking spaces required per Article 8 of the Ordinance is summarized below:

| BUILDING | GROSS FLOOR AREA | REQUIRED PARKING | COMMENT |
|---|---|---|---|
| #32 Lakeside | 9,200 SF | 19 | Office Use: 2sp/1000sf |
| #44 Lakeside | 52,000 SF | 104 | Office Use: 2sp/1000sf |
| #50 Lakeside | 80,000 SF | 160 | Office Use: 2sp/1000sf |
| #50 Lakeside | 3,900 SF | 4 | Assembly/Maker Space Use: 1sp/1000sf |
| **Subtotal:** | **145,100 SF** | **287** | |
| Beach Club use | | 10 | Outdoor Recreation Use |
| **TOTAL PARKING** | | **297** | |

**Summary of Parking Layout Proposed by Lakeside Ovens, LLC**
The proposed site plan submitted in support the zoning application includes a total of 381 parking spaces, including 273 paved spaces in a conventional configuration, and 108 tandem spaces constructed on pervious pavers:

| SPACES | QTY. | COMMENT |
|---|---|---|
| Conventional | 273 | Constructed on impervious bituminous surface |
| Tandem | 108 | Constructed on pervious pavers |
| **Total:** | **381** | |

Memorandum
HULA: Parking Management Plan
11 October 2018

**Request for Parking Waiver**
The applicant is requesting a parking waiver of twenty-four (24) parking spaces or ~8%, which represents the difference between the 297 total parking spaces required per the Ordinance for the redevelopment, and the 273 conventional parking spaces as shown on the proposed site plan.

The applicant will use the following strategies to reduce and/or manage the on-site demand for parking into the future including:

1. Education. As part of its initial marketing and lease-up of the Project, and continuing into the operational phase, the Applicant will both educate and encourage employees and patrons to use alternative transportation modes (i.e. carpool, walk, bike, bus) to the Project Site.

2. CATMA Membership. The Applicant will explore membership in the Chittenden Area Transportation Management Association (CATMA), and designate a staff person to serve as an on-site Employee Transportation Coordinator to leverage the benefits of CATMA membership for employees and patrons.

3. Car Pooling. The Applicant will allocate 6 parking spaces on-site to incentivize carpooling by employees and patrons. Once the Project is operational, the Applicant will observe utilization and adjust the number of carpool spaces up or down accordingly to optimize use.

4. Bike Parking. The Applicant will provide bicycle parking for both short and long-term durations in quantities exceeding the amount of bicycle parking called for in Table 8.2.5-1 of City of Burlington *Comprehensive Development Ordinance*.

| Short Term | Required | Proposed |
|---|---|---|
| #44: | 6 | 33 |
| #50: | 9 | 36 |
| Long Term | | |
| #44 | 11 | 24 |
| #50 | 17 | 28 |
| **Total Bike Parking** | **43** | **121** |

5. Tandem Parking. The Applicant will make the 108 tandem spaces available to the tenant/occupants on the same pro rata floor are basis as the adjacent conventional parking. Based on similar Innovation Hub spaces being developed around the country, this is proving to be an effective method to more efficiently manage the on-site supply/demand dynamics of parking. Additional details on tandem parking is below.

**Management of Designated / Assigned Tandem Parking**
Parking spaces (conventional and tandem) will be allocated among the tenant population based on a pro-rata formula with the number parking spaces relating to the amount of floor area leased. The respective tenant/lessees (and employees) shall will be responsible for managing access to the individual parking spaces affected by the tandem parking configuration. To be clear, tandem spaces will be shared on a per-tenant basis. In other words, two separate tenants will not share the same tandem spaces. Such a practice could invite dysfunction, whereas sharing among employees of a particular tenant is manageable.

Memorandum

To: John Caulo
LandPlan Development Services, LLC

Date: September 25, 2018
*Revised October 16, 2018*
*Revised October 29, 2018*
*Revised November 1, 2018*

Project #: 58083.00

From: David Saladino, P.E., AICP
Erica Quallen, E.I.T.

Re: Blodgett Oven Site Redevelopment
Traffic Impact Study and Parking Assessment
Burlington, VT

---

VHB has completed a Traffic Impact Study (TIS) for the proposed redevelopment of the Blodgett Oven property located at 44-50 Lakeside Avenue in Burlington, Vermont. The site lies adjacent to Lake Champlain and is bordered on the south by Lakeside Avenue and on the east by the Burlington Bike Path and Vermont Rail System railroad tracks. The three buildings currently on the site have historically served manufacturing and office uses.

The proposed redevelopment program consists of a program of adaptive reuse and renovation of two of the three buildings located within the project site. Specifically, the redevelopment program includes the following components:

- 44 Lakeside Avenue will be renovated to provide 52,000 square feet of office space with an obsolete 700 square-foot loading dock removed;
- 50 Lakeside Avenue will be renovated provide an 84,500 square foot job creating "Innovation Hub" for the creative economy, resulting in a mixture of office and assembly "maker space" uses;
- 32 Lakeside Avenue will remain unaltered, continuing to provide 9,200 square feet of office space; and
- Parking on the site will be reconfigured to increase total parking capacity.

This Traffic Impact Study includes the following elements:

- A description of the existing roadway network near the site;
- A summary of the crash data within the study area;
- A description of the proposed development program;
- A trip generation and distribution estimate for the proposed development program;
- An evaluation of traffic operations at the intersections shown in **Figure 1**;
- A parking demand evaluation; and
- Conclusions and recommendations to support the project.

## EXISTING CONDITIONS

The project site is comprised of three parcels consisting of 14.89 acres bounded by Lakeside Avenue to the south, rail lines and the Burlington Bike Path to the east, and Lake Champlain to the west. The site can currently be accessed via a driveway opposite Central Avenue or by direct access from Lakeside Avenue. The three existing buildings on the site have historically served manufacturing and office uses. The location of the site in relation to the local street network is shown in **Figure 1.**

40 IDX Drive
Building 100, Suite 200
South Burlington, VT 05403-7771
P 802.497.6100

Memorandum

***Figure 1: Site Location Map and Study Intersections***

Memorandum

### Roadway Characteristics

Lakeside Avenue is a local street that connects a small lakeside neighborhood, the Blodgett Oven site, and other businesses to Pine Street and carries approximately 2,900 vehicles per day[1]. It extends from Pine Street and continues westerly approximately 0.3 miles, terminating at Central Avenue, in close proximity to Lake Champlain. Lakeside Avenue is a two-lane urban street with no posted speed limit. Land use along the road is comprised of a mix of office, industrial, retail, institutional, and residential. There are intermittent sidewalks on the road as land use changes.

Pine Street is a north-south minor arterial that extends from the southern city limit of Burlington north to Pearl Street. Pine Street carries approximately 13,000 vehicles near the project area[2]. Pine Street is a two-lane urban street with sidewalks on both sides of the road and bike markings or lanes in the vicinity of the project area. Land uses along the road is mixed, with primarily retail and industrial uses adjacent to the project area.

Flynn Avenue is a local, urban street that extends from US Route 7 westerly to Oakledge Park and Lake Champlain. Flynn Avenue carries approximately 3,000 vehicles per day near the intersection with Pine Street. The street has one lane in each direction and there are sidewalks on both sides. Parallel parking is allowed on both sides of the street. Land use along the road is primarily residential, office, industrial, and recreational.

Central Avenue is a two-lane local street that begins at Lakeside Avenue and continues approximately 960-feet south. Sidewalks line the road on both sides. Land use on the road is primarily residential.

## CRASH SUMMARY

For a section of roadway to be considered a High Crash Location (HCL), the location must have experienced at least five crashes in five years and the actual-to-critical rate ratio must be greater than or equal to 1.00. A review of VTrans' most recent High Crash Location (HCL) Report (2012-2016) revealed that one roadway segment within the project study area is classified as a HCL by VTrans.[3]

The VTrans Public Crash Data Query Tool[4] was used to investigate crash data from the most recent five years (2013-2017) along the HCL described above. The HCL section is along Pine Street between milemarker 0.3-0.6. For reference, this segment runs from Birchcliff Parkway to north of Locust Street. The Pine Street intersection with Lakeside Avenue is located at milemarker 0.4. Within the period 2013-2017, there were the following within the HCL:

- 59 total crashes within the 0.3-mile HCL segment;
- 31 crashes (53% of all crashes within the HCL) occurred at the Lakeside Avenue / Pine Street intersection;
- Three crashes along the HCL involved a pedestrian, and four involved a cyclist;
- 36% of the crashes in the HCL were rear ends and 33% involved left turning movements.

[1] VTrans Transportation Data Management System. http://vtrans.ms2soft.com. Queried 07/09/18.
[2] 2015 (Route Log) AADTs – Federal Aid Urban Streets, Vermont Agency of Transportation, 2016.

[3] High Crash Location Report: Intersections and Segments (2012-2016), Vermont Agency of Transportation, 2017.

[4] VTrans Transportation Data Management System. http://vtrans.ms2soft.com. Queried 07/09/2018.

Memorandum

In addition, available 2013-2017 crash data along the streets and intersections of interest in this study were queried. Most relevant to the proposed project is crash information along Lakeside Avenue and the Lakeside Avenue / Central Avenue intersection. There were no reported crashes at this intersection, and a total of six crashes along the length of Lakeside Avenue over this time period. Of these crashes, none resulted in injury or fatality. It should be noted that the intersection of Pine Street and Lakeside Avenue has been recently improved through the addition of a new traffic signal which includes protected left turn phasing and an exclusive pedestrian phase. These updates occurred in 2016, so the HCL and three of the study years' data were collected prior to the improvements.

The relevant section of the 2012-2016 VTrans HCL Report and crash data from the last five years on Lakeside Avenue, Pine Street, Lakeside & Pine, and Pine & Flynn is included in the Appendix.

## PROPOSED DEVELOPMENT

The proposed development program consists of renovating the two larger buildings on site (84,500 SF building at 50 Lakeside Avenue and 52,000 SF building at 44 Lakeside Avenue). The smaller 9,200 SF building is to remain as is. Parking areas will be reconfigured to increase capacity by approximately 200 parking spaces. In addition, access management will be significantly improved by providing a curbed island between Lakeside Avenue and the adjacent parking area, which is currently an uncontrolled curb cut. Primary access and egress will be provided via the main driveway opposite Central Avenue and a parking lot exit adjacent to Lakeside Avenue to the east of the driveway. The proposed site plan is shown in **Figure 2** on the following page.

Memorandum

SITE NOTES
PARKING NOTES
PROPOSED PARKING
ACCESSIBLE PARKING
ACCESSIBLE PARKING REQUIREMENTS
PROGRESS PRINT 05/24/2018
LAKE CHAMPLAIN
BUILDING 32
BUILDING 50
BUILDING 44
LAKESIDE AVENUE
HULA
SITE PLAN
L-1

Memorandum

## TRIP GENERATION

Trip generation estimates for the proposed Blodgett Oven Site redevelopment were calculated based on rates published by the Institute of Transportation Engineers (ITE) Trip Generation Manual[5] for the weekday morning and evening peak hours. The land use codes used to estimate the peak period trip generation of the proposed development were as follows: 712 (small office) for the 9,200 SF building at 32 Lakeside Avenue and 710 (general office) for both the 52,000 SF building at 44 Lakeside Avenue and the 84,500 SF building at 50 Lakeside Avenue.

Given the project location, proposed site amenities, and the growing mix of technology-, knowledge-, and creative-based businesses locating in Burlington's South End, it would be reasonable to assume that some significant portion of future employees would seek out alternative commuting options such as bicycling, walking, taking the bus, or carpooling to and from work. Proposed site amenities such as direct access to the Burlington Bike Path and on-site bicycle parking, connectivity to the City's sidewalk network, as well as direct access to GMT bus stops will provide multiple commuting options to these employees. Considering Burlington commute data from the American Community Survey[6] and the site's location, it is assumed that non-vehicular commute trips (i.e. walking, cycling, and transit trips) will comprise approximately 10% of the trips generated by this site on a typical day. The City of Burlington has assumed that the non-auto trip reduction could be as high as 15% but a value of 10% was used in order to be conservative.

**Table 1** summarizes the trip generation estimate for the proposed development. Calculations supporting the proposed trip generation estimates for the proposed development are provided in the Appendix.

***Table 1: Trip Generation Summary***

| Peak Period | Net New Trips Total | Bike, Ped, Transit Reduction | **Net New Trips (Vehicles)** |
|---|---|---|---|
| Weekday Morning | | *10%* | |
| Enter | 155 | -16 | **139** |
| Exit | 26 | -3 | **23** |
| Total | 181 | -19 | **162** |
| | | | |
| Weekday Evening | | *10%* | |
| Enter | 26 | -3 | **23** |
| Exit | 132 | -13 | **119** |
| Total | 158 | -16 | **142** |

[5] Trip Generation, 10th Edition, Institute of Transportation Engineers, Washington D.C., 2017.
[6] 2012-2016 American Community Survey 5-Year Estimates, U.S. Census Bureau. Accessed 12 July 2018.



40 IDX Drive
Building 100, Suite 200
South Burlington, VT 05403-7771
P 802.497.6100

Memorandum

Although the Blodgett site has historically generated high traffic volumes, no reduction was taken to account for previously-generated volumes to provide a conservative assessment. However, the Net New Trips in the table above do take into consideration existing trip generation at the 9,200 SF building which will remain as is.

## Other Development Volumes and Roadway Network Improvements

The traffic analysis considered impacts to background traffic growth and trip distribution resulting from the Burlington City Place development and the construction of the Champlain Parkway. Both projects are slated to be completed by the Build+5 year of 2024. Estimated volumes generated by the Burlington City Place development were taken from the Burlington Town Center Mall Traffic Impact Study prepared by VHB in 2016[7]. These volumes are included in the Appendix.

The Champlain Parkway's construction in the future will have a significant impact on trip distribution from and to destinations along Lakeside Avenue, as many site-generated trips will choose to travel on the parkway rather than Pine Street once the parkway opens. Champlain Parkway roadway improvements, projected traffic volumes, and proposed signal timing and phasing schemes were based on the latest information developed for the project.

The Burlington City Place project is expected to have a lesser degree of impact to the study area intersections due to its relative distance from the site and the traffic dispersal effect of the City's grid network.

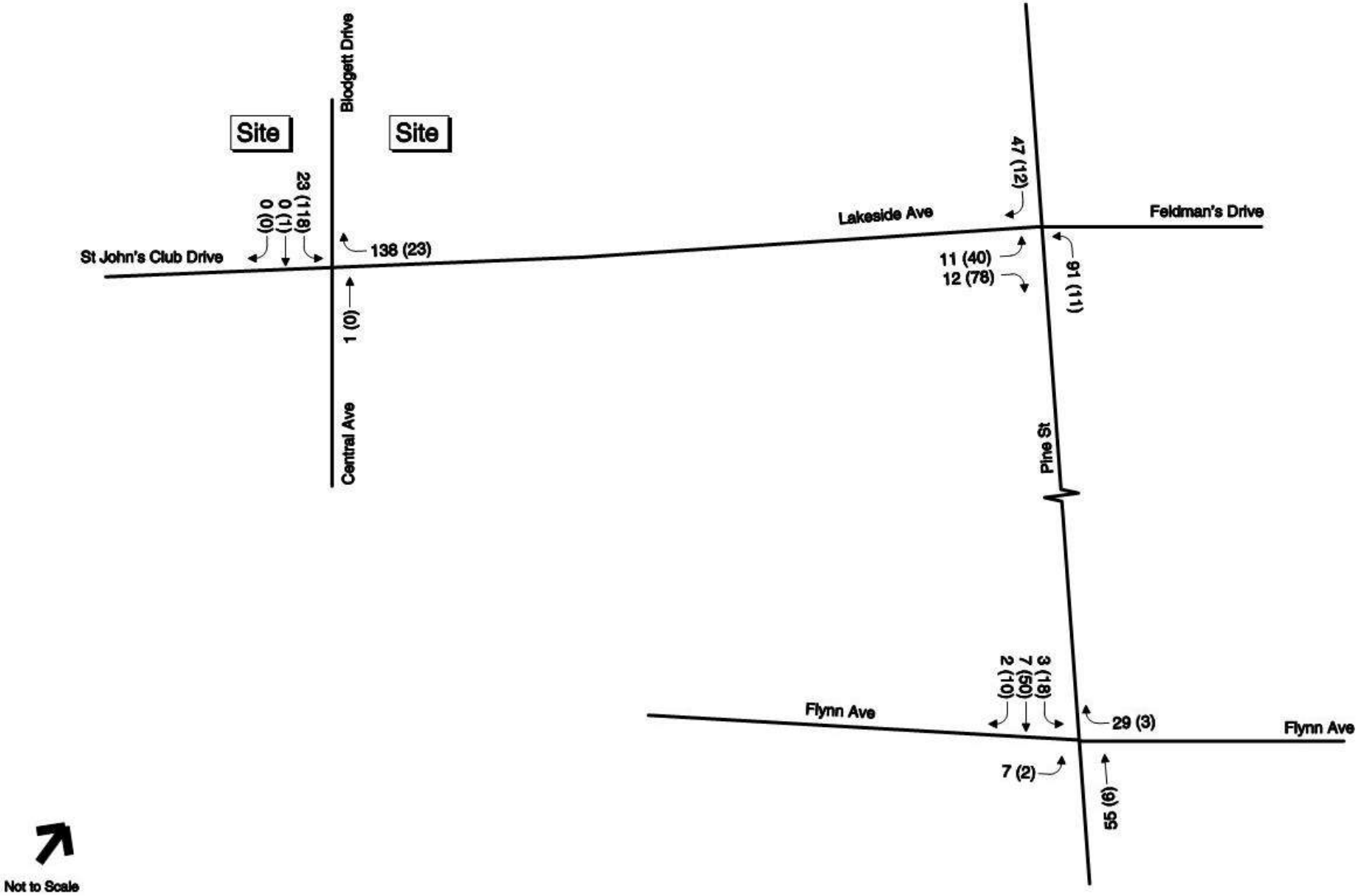
VHB recently completed a Traffic Impact Study for the relocation and expansion of Petra Cliffs Climbing Center on Briggs Street. The trip generation volumes developed as part of that TIS were included in the 2024 weekday evening peak hour analysis (with the Champlain Parkway)[8].

## Trip Distribution

**Figure 3** and **Figure 4** below show the estimated distribution of net new trips generated by the proposed redevelopment program in 2019 and 2024, respectively. The two distributions are different because the Champlain Parkway will provide a new route from South Burlington and alter traffic volumes at many intersections in the local traffic network. Both distributions were generated using the number of net new trips and knowledge of existing traffic patterns.

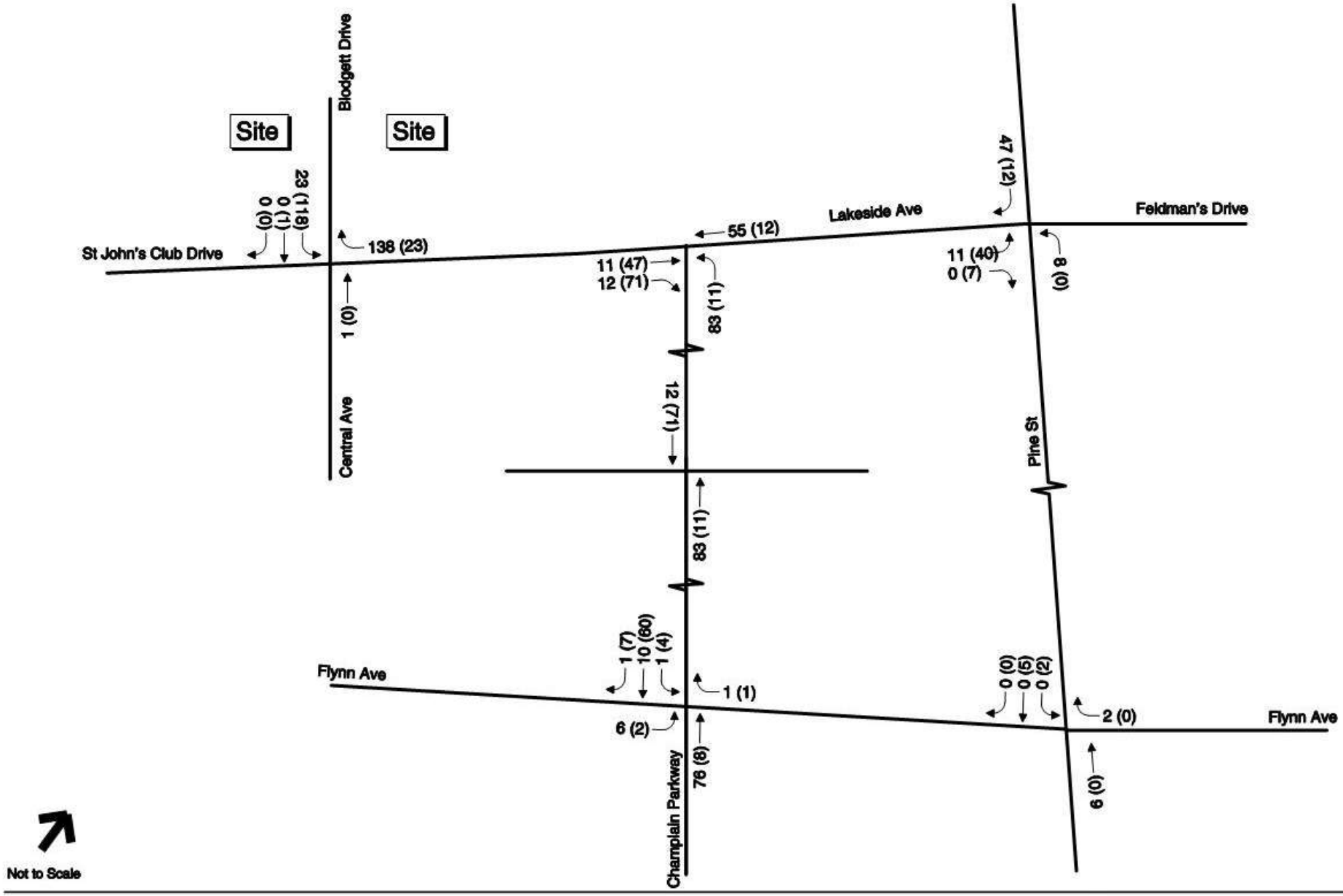
From the 2019 distribution, 95% of trips entering the Blodgett site are estimated to travel from Pine Street and Lakeside Avenue, and 5% are estimated to arrive from the residential neighborhood along Central Avenue. In 2024, however, this percentage is predicted to be significantly reduced as the Champlain Parkway will be a more convenient northbound arterial from the south end of Burlington. In the 2024 trip distribution, 60% of trips arriving via Lakeside Avenue are assumed to have used the Champlain Parkway.

[7] Burlington Town Center Traffic Impact Study, VHB, 23 January 2017.
[8] Petra Cliffs Climbing Center Traffic Impact Study, VHB. 31 August 2018. Analysis completed only for 2024 PM Peak Hour with Champlain Parkway.




Legend
AM Peak Hour
(PM Peak Hour)

Figure 3
2019 Blodgett Trip Distribution, Weekday Peak Hour Traffic Volumes




Legend
AM Peak Hour
(PM Peak Hour)

Figure 4
2024 Blodgett Trip Distribution, Weekday Peak Hour Traffic Volumes

Memorandum

## TRAFFIC NETWORKS

The weekday morning and evening peak periods were selected for analysis purposes as they represent the peak conditions for both the site-generated traffic and the adjacent street system. Turning movement count data at the adjacent study intersections of Lakeside Avenue / Central Avenue, Pine Street / Lakeside Avenue, and Pine Street / Flynn Avenue were obtained from recent counts conducted by VHB on Tuesday, June 12th and Wednesday, June 13th, 2018. To evaluate the impact of the proposed development within the study area, peak hour traffic volumes were projected to the opening year (2019) and a 5-year forecast horizon (2024). Copies of the traffic volume count data are provided in the Appendix.

### Seasonal Variation

Since it is impractical to design for the highest volume encountered during the year, VTrans guidelines recommend a compromise between capacity and cost. Design Hourly Volume (DHV) criteria allow roads to be designed for the 30th highest hourly volume of the year. Historical data from the closest, most comparable VTrans Automatic Traffic Recorder (ATR) station on Pine Street (DXCP) as well as expected DHV values in the VTrans Red Book[9] were reviewed to establish appropriate DHV adjustment factors. The DHV adjustment factor was calculated to be 1.18 for the Pine Street / Flynn Avenue intersection and 1.30 for all other intersections. Detailed calculations for the DHV adjustments are provided in the Appendix.

### Background Growth

Background traffic growth is a function of expected land development in the region. To predict a rate at which traffic can be expected to grow during the forecast period, historical traffic growth was examined. The regression analysis chart in the 2017 VTrans Redbook suggests a background growth rate of 1.02 for projecting traffic volumes from 2019 to 2024.

### No Build and Build Traffic Networks

The 2019 No Build traffic volumes were developed by applying the growth factors from the VTrans regression analysis chart to DHV-adjusted peak hour traffic volumes. Because the Burlington City Place and Champlain Parkway projects are also considered in this study, three traffic network estimates were generated for year 2024. The directional distribution of the new site-generated traffic was approximated based on existing and expected travel patterns in the area. Based on the expected trip distribution, the site-generated trips were added to the 2024 No Build volumes to establish the three scenarios summarized in the figures below.

[9] Continuous Traffic Counter Report (The Redbook), Vermont Agency of Transportation, 2017



40 IDX Drive
Building 100, Suite 200
South Burlington, VT 05403-7771
P 802.497.6100

Memorandum

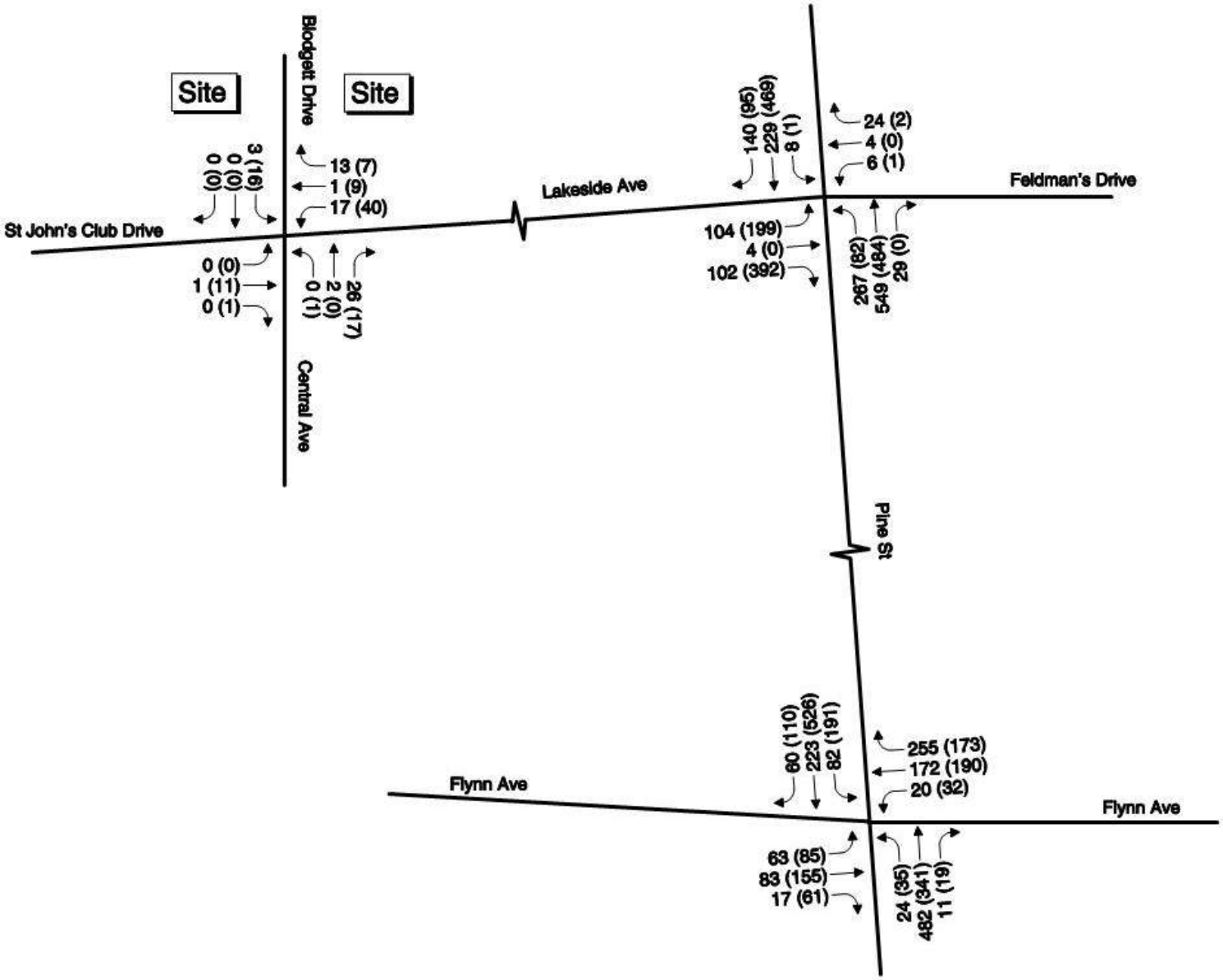
The following are the traffic networks and scenarios developed for this project:

2019 Traffic Network Scenarios

1. 2019 AM & PM No Build – **Figure 5**
2. 2019 AM & PM Build – **Figure 6**

2024 Traffic Network Scenarios

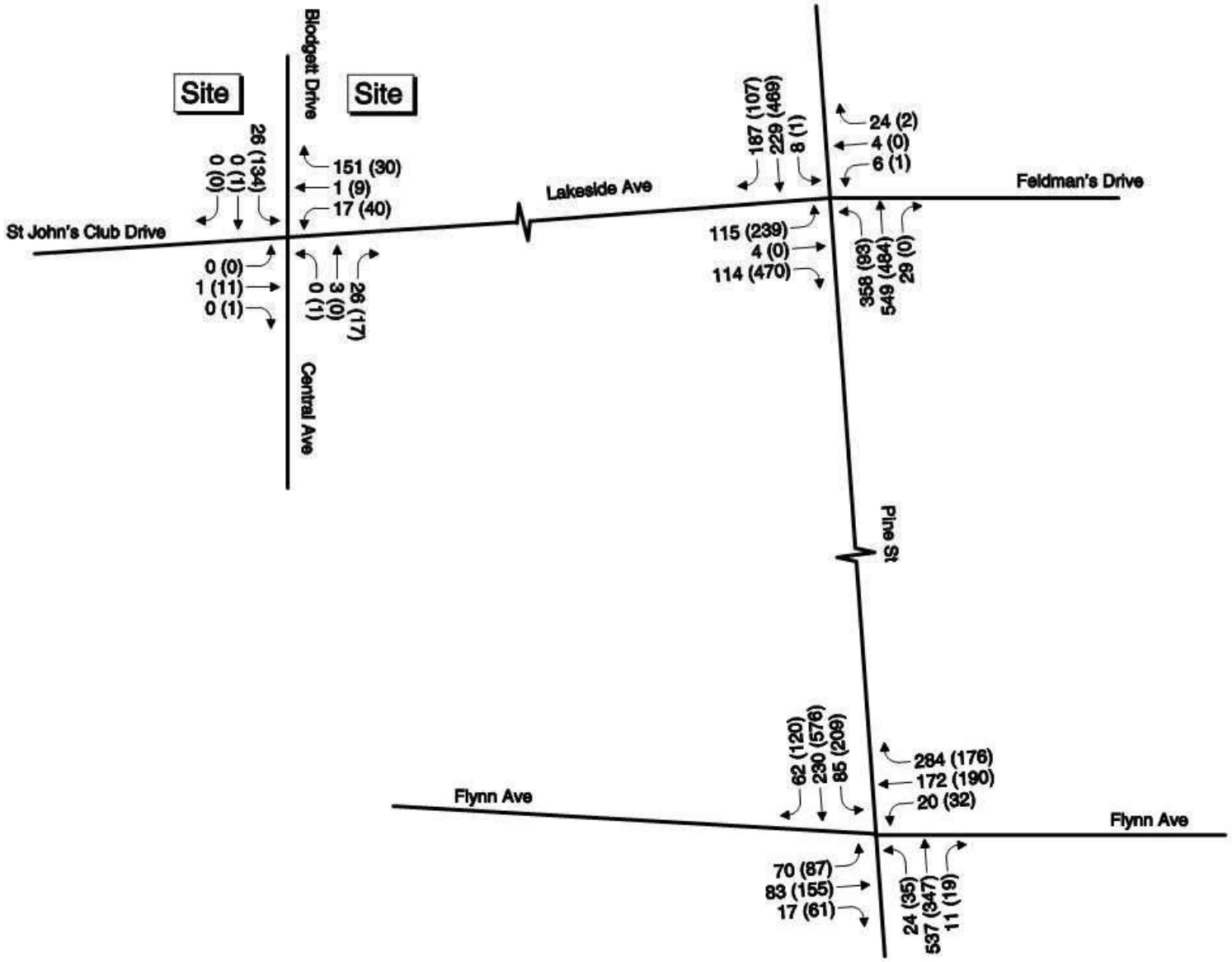
1. 2024 AM & PM No Build and Burlington City Place (BCP) – **Figure 7**
2. 2024 AM & PM No Build, Burlington City Place (BCP) and Champlain Parkway (CP) – **Figure 8**
3. 2024 AM & PM Build, Burlington City Place (BCP) and Champlain Parkway (CP) – **Figure 9**




Not to Scale

Legend
AM Peak Hour
(PM Peak Hour)

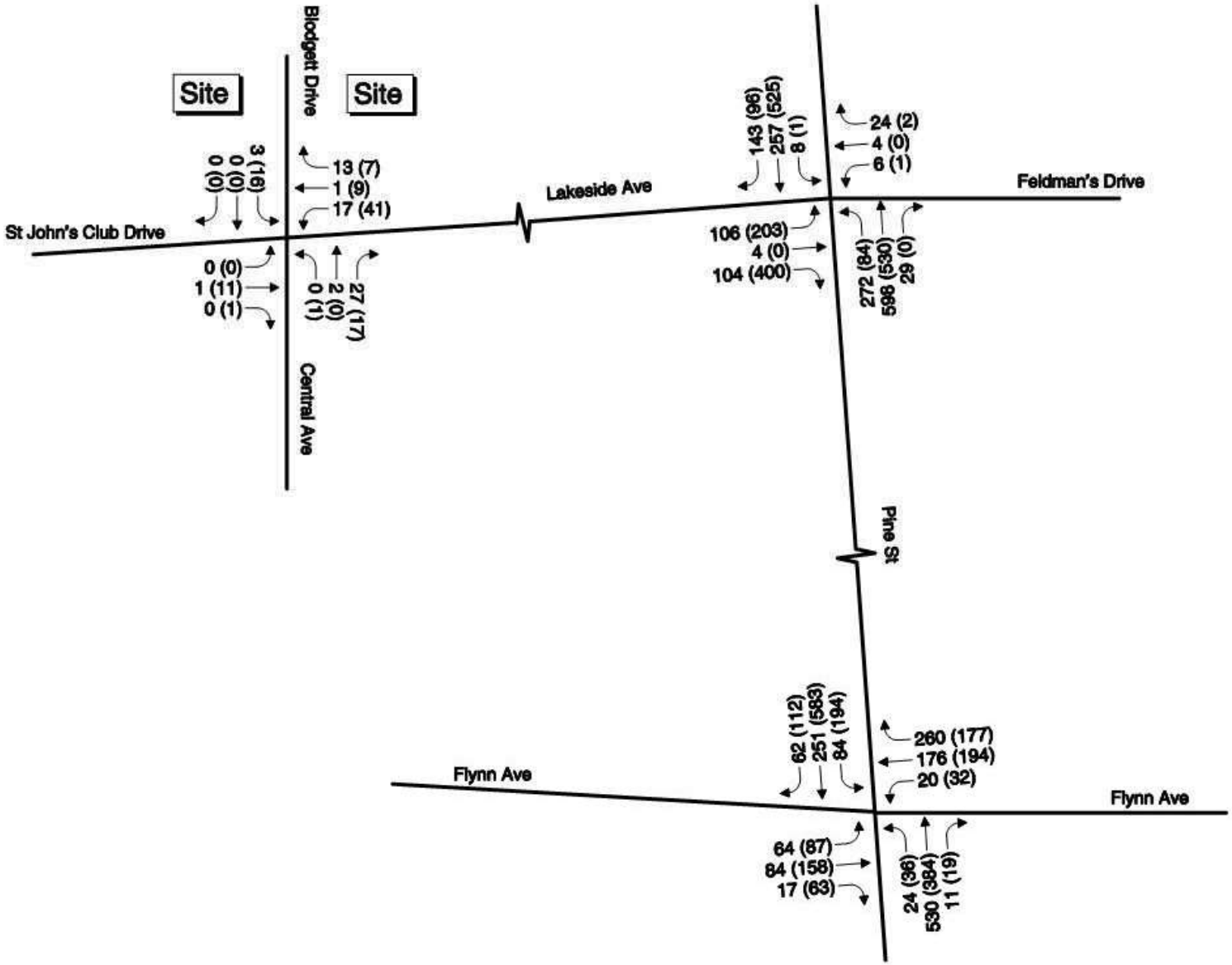
Figure 5
2019 No Build Weekday
Peak Hour Traffic Volumes




Not to Scale

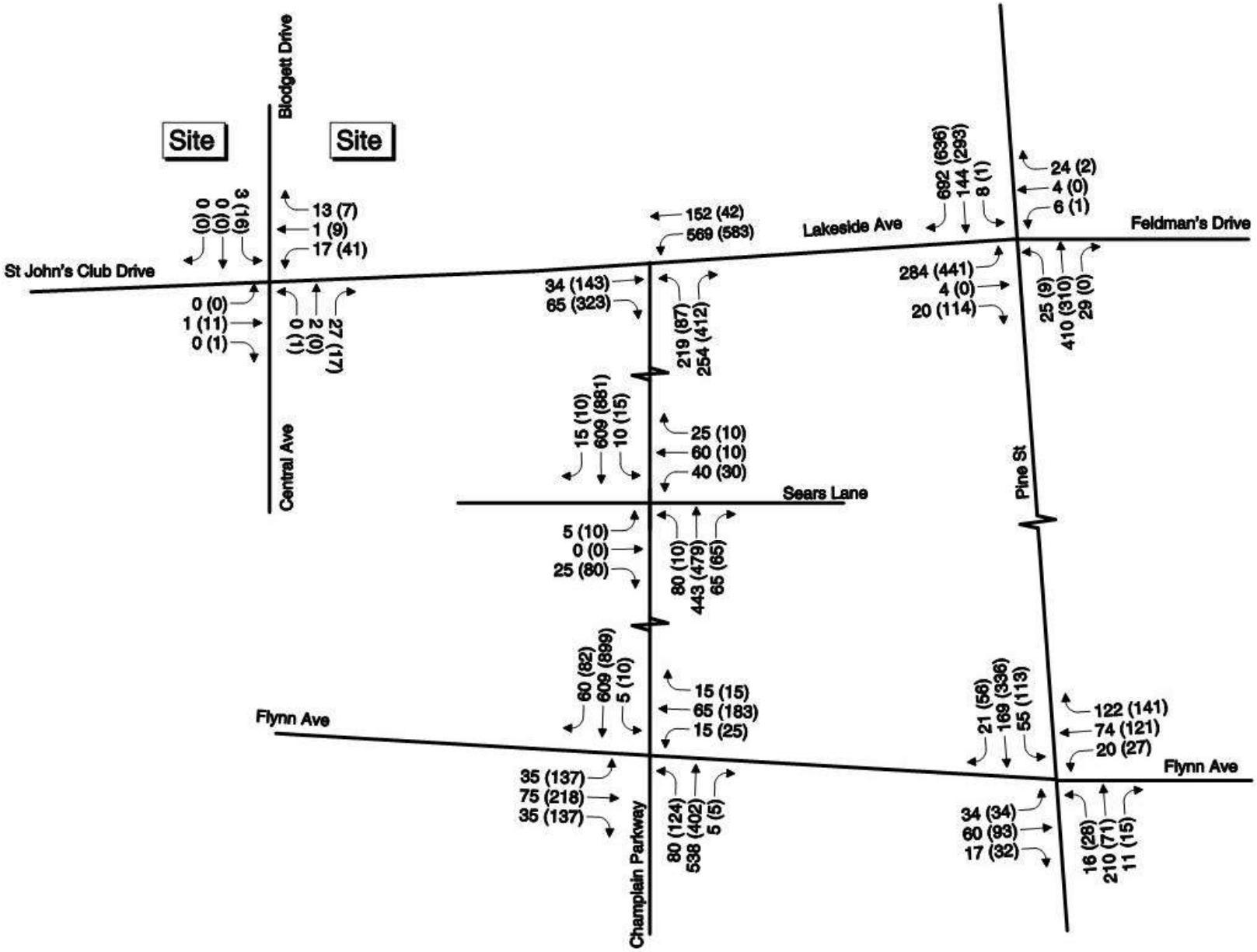
Legend
AM Peak Hour
(PM Peak Hour)

Figure 6
2019 Build Weekday
Peak Hour Traffic Volumes



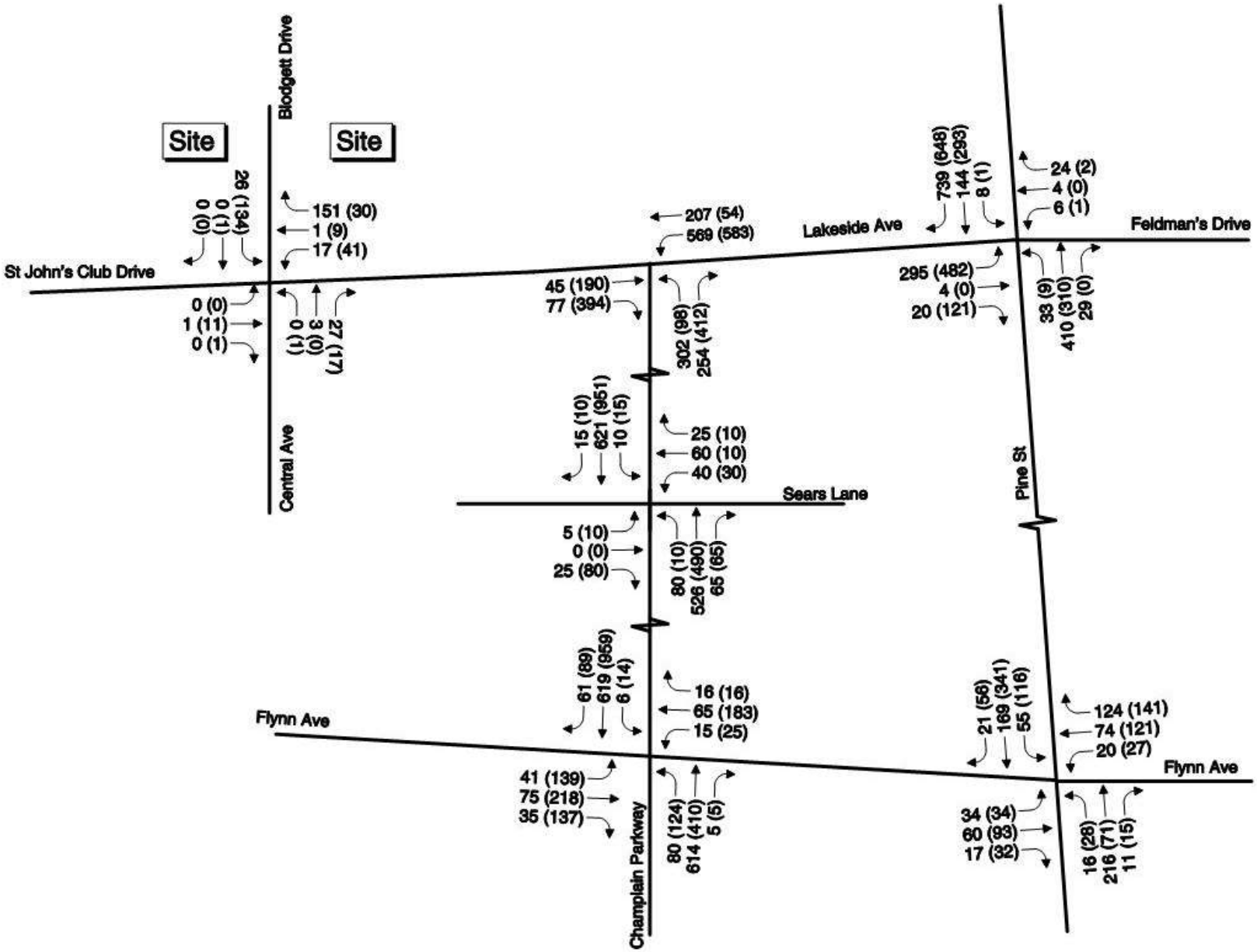

Legend
AM Peak Hour
(PM Peak Hour)

Figure 7
2024 No Build & BCP Weekday
Peak Hour Traffic Volumes




Legend
AM Peak Hour
(PM Peak Hour)

Figure 8
2024 No Build, BCP & CP Weekday
Peak Hour Traffic Volumes




Legend
AM Peak Hour
(PM Peak Hour)

Figure 9
2024 Build, BCP & CP Weekday
Peak Hour Traffic Volumes

# TRAFFIC ANALYSES

## Intersection Capacity Analysis

Intersection capacity analyses were performed for the study area intersections. Levels of service (LOS) were calculated based on the criteria published in the 2000 Highway Capacity Manual.[10] Level of service is the term that defines the conditions that may occur on a given roadway or at an intersection when accommodating various traffic volume loads. Levels of service range from A to F with LOS A representing generally free flowing operating conditions and LOS F representing generally congested conditions. Copies of the LOS calculations are provided in the Appendix.

## Signalized Intersections

**Table 2**, **Table 3**, and **Table 4** summarize the operational analysis at the two signalized study intersections during the 2019 and 2024 morning and evening peak hours under the five operational scenarios described above. In addition to the scenarios outlined in the previous section, a 2024 Build with Burlington City Place and Champlain Parkway scenario was run with mitigation in place at the intersection of Flynn Ave and the Champlain Parkway, which was outlined in the City Market traffic study and also included in the Petra Cliffs traffic study. These mitigation strategies include a right turn lane and the inclusion of an advanced walk phase in place of the planned exclusive pedestrian phase, as well as optimizing the splits within the coordinated network cycle length of 150 seconds. These mitigation measures improve overall intersection delay by approximately 90 seconds in the 2024 weekday evening conditions. Certain approaches, notably the eastbound approach at Lakeside Ave and Pine Street in the morning, are expected to experience decreased levels of service, but do not greatly impact the overall intersection performance. This change is due to the crossing of an inflection point in capacity for the eastbound and westbound left turning movement which results in higher delay for the approach.

## Unsignalized Intersections

**Table 5** summarizes the operational analysis at the unsignalized intersection of Lakeside Avenue and Central Avenue during the 2019 and 2024 morning and evening peak hours under the five operational scenarios considered in this study. As shown in the table, the intersection of Lakeside Avenue and Central Avenue is expected to operate at LOS A on all approaches in each scenario.

[10] Highway Capacity Manual, Federal Highway Administration, Transportation Research Board, 2000.

Memorandum

***Table 2: Signalized Intersection Capacity Analysis Summary***

| 2019 AM Peak Hour | | | | | | |
|---|---|---|---|---|---|---|
| | No Build | | | Build | | |
| **Intersection** | **v/c*** | **Delay**** | **LOS***** | **v/c** | **Delay** | **LOS** |
| **Lakeside Ave & Pine St** | **0.71** | **13.9** | **B** | **0.71** | **14.4** | **B** |
| EB from Lakeside Ave | 0.28 | 15.3 | B | 0.30 | 15.8 | B |
| WB from Feldman's Driveway | 0.15 | 18.0 | B | 0.15 | 18.2 | B |
| NB from Pine St | 0.44 | 13.0 | B | 0.50 | 13.8 | B |
| SB from Pine St | 0.32 | 14.7 | B | 0.36 | 14.9 | B |
| **Pine St & Flynn Ave** | **0.9** | **28.2** | **C** | **0.97** | **32.4** | **C** |
| EB from Flynn Ave | 0.53 | 28.0 | C | 0.60 | 32.4 | C |
| WB from Flynn Ave | 0.82 | 33.1 | C | 0.85 | 35.7 | D |
| NB from Pine St | 0.82 | 36.4 | D | 0.90 | 43.9 | D |
| SB from Pine St | 0.27 | 10.7 | B | 0.28 | 10.9 | B |

| 2019 PM Peak Hour | | | | | | |
|---|---|---|---|---|---|---|
| | No Build | | | Build | | |
| **Intersection** | **v/c*** | **Delay**** | **LOS***** | **v/c** | **Delay** | **LOS** |
| **Lakeside Ave & Pine St** | **0.88** | **13.7** | **B** | **0.93** | **15.1** | **B** |
| EB from Lakeside Ave | 0.51 | 10.8 | B | 0.64 | 14.3 | B |
| WB from Feldman's Driveway | 0.01 | 0.0 | A | 0.01 | 0.0 | A |
| NB from Pine St | 0.34 | 12.7 | B | 0.34 | 12.4 | B |
| SB from Pine St | 0.37 | 17.8 | B | 0.46 | 19.0 | B |
| **Pine St & Flynn Ave** | **1.09** | **27.0** | **C** | **1.12** | **26.9** | **C** |
| EB from Flynn Ave | 0.79 | 39.9 | D | 0.81 | 41.7 | D |
| WB from Flynn Ave | 0.73 | 29.4 | C | 0.74 | 29.8 | C |
| NB from Pine St | 0.81 | 38.3 | D | 0.82 | 39.4 | D |
| SB from Pine St | 0.55 | 15.8 | B | 0.52 | 15.2 | B |

* Volume to capacity ratio; If the approach has multiple lanes, the v/c shown is the average

** Delay expressed in seconds per vehicle

*** Level of service

Memorandum

### *Table 3: Signalized Intersection Capacity Analysis Summary (Continued)*

| 2024 AM Peak Hour | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Build, BCP | | | No Build, BCP & CP | | | Build, BCP & CP | | | Build, BCP & CP w/ City Market Mitigation+ | | |
| Intersection | v/c* | Delay** | LOS*** | v/c | Delay | LOS | v/c | Delay | LOS | v/c | Delay | LOS |
| **Lakeside Ave & Pine St** | **0.74** | **14.3** | **B** | **0.85** | **40.2** | **D** | **0.88** | **45.1** | **D** | SAME AS BUILD, BCP & CP | | |
| EB from Lakeside Ave | 0.28 | 15.5 | B | 0.54 | 96.3 | F | 0.56 | 105.9 | F | | | |
| WB from Feldman's Driveway | 0.15 | 18.1 | B | 0.58 | 92.3 | F | 0.58 | 92.3 | F | | | |
| NB from Pine St | 0.47 | 13.7 | B | 0.21 | 13.1 | B | 0.22 | 13.1 | B | | | |
| SB from Pine St | 0.34 | 14.7 | B | 0.61 | 32.6 | C | 0.54 | 38.6 | D | | | |
| **Pine St & Flynn Ave** | **0.93** | **30.6** | **C** | **0.50** | **13.8** | **B** | **0.51** | **13.9** | **B** | SAME AS BUILD, BCP & CP | | |
| EB from Flynn Ave | 0.56 | 29.4 | C | 0.27 | 16.8 | B | 0.27 | 16.8 | B | | | |
| WB from Flynn Ave | 0.84 | 35.0 | C | 0.46 | 14.2 | B | 0.46 | 14.3 | B | | | |
| NB from Pine St | 0.87 | 41.3 | D | 0.39 | 17.1 | B | 0.40 | 17.2 | B | | | |
| SB from Pine St | 0.29 | 11.0 | B | 0.18 | 8.8 | A | 0.18 | 8.9 | A | | | |
| **Champlain Park. & Lakeside Ave** | NOT INCLUDED IN 2024 AM PEAK HOUR NO BUILD, BCP ANALYSIS | | | **0.60** | **24.2** | **C** | **0.64** | **46.2** | **D** | SAME AS BUILD, BCP & CP | | |
| EB from Lakeside Ave | | | | 0.18 | 13.8 | B | 0.21 | 14.5 | B | | | |
| WB from Lakeside Ave | | | | 0.45 | 16.7 | B | 0.68 | 61.6 | E | | | |
| NB from Champlain Parkway | | | | 0.50 | 37.1 | D | 0.44 | 32.1 | C | | | |
| SB from DPW Driveway | | | | 0.10 | 39.0 | D | 0.07 | 33.7 | C | | | |
| **Champlain Park. & Sears Lane** | NOT INCLUDED IN 2024 AM PEAK HOUR NO BUILD, BCP ANALYSIS | | | **0.63** | **18.5** | **B** | **0.64** | **20.6** | **C** | SAME AS BUILD, BCP & CP | | |
| EB from Sears Lane | | | | 0.11 | 0.8 | A | 0.11 | 0.8 | A | | | |
| WB from Sears Lane | | | | 0.64 | 61.1 | E | 0.64 | 61.1 | E | | | |
| NB from Champlain Parkway | | | | 0.46 | 20.2 | C | 0.50 | 20.1 | C | | | |
| SB from Champlain Parkway | | | | 0.33 | 9.4 | A | 0.34 | 14.1 | B | | | |
| **Champlain Park. & Flynn Ave** | NOT INCLUDED IN 2024 AM PEAK HOUR NO BUILD, BCP ANALYSIS | | | **0.66** | **30.0** | **C** | **0.68** | **31** | **C** | **0.66** | **27.9** | **C** |
| EB from Flynn Ave | | | | 0.72 | 65.6 | E | 0.75 | 68.7 | E | 0.41 | 55.9 | E |
| WB from Flynn Ave | | | | 0.45 | 50.9 | D | 0.45 | 50.3 | D | 0.48 | 52.9 | D |
| NB from Champlain Parkway | | | | 0.50 | 19.2 | B | 0.53 | 19.5 | B | 0.53 | 20.8 | C |
| SB from Champlain Parkway | | | | 0.38 | 29.4 | C | 0.34 | 31.7 | C | 0.34 | 25.4 | C |

* Volume to capacity ratio; If the approach has multiple lanes, the v/c shown is the average

** Delay expressed in seconds per vehicle

*** Level of service

\+ City Market Mitigation includes right turn lane and advanced walk pedestrian phase at the intersection of Flynn Ave and Champlain Parkway

BCP: Burlington City Place

CP: Champlain Parkway

Memorandum

### *Table 4: Signalized Intersection Capacity Analysis Summary (Continued)*

| 2024 PM Peak Hour | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | No Build, BCP | | | No Build, BCP & CP | | | Build, BCP & CP | | | Build, BCP & CP w/ City Market Mitigation+ | | |
| Intersection | v/c* | Delay** | LOS*** | v/c | Delay | LOS | v/c | Delay | LOS | v/c | Delay | LOS |
| **Lakeside Ave & Pine St** | **0.94** | **15.3** | **B** | **0.74** | **39.9** | **D** | **0.75** | **40.2** | **D** | SAME AS BUILD, BCP & CP | | |
| EB from Lakeside Ave | 0.56 | 12.6 | B | 0.41 | 31.3 | C | 0.45 | 35.2 | D | | | |
| WB from Feldman's Driveway | 0.01 | 0.0 | A | 0.06 | 73.0 | E | 0.06 | 73.0 | E | | | |
| NB from Pine St | 0.36 | 12.7 | B | 0.19 | 25.5 | C | 0.19 | 24.6 | C | | | |
| SB from Pine St | 0.42 | 20.4 | C | 0.65 | 49.8 | D | 0.64 | 48.6 | D | | | |
| **Pine St & Flynn Ave** | **1.16** | **29.2** | **C** | **0.59** | **15.4** | **B** | **0.59** | **15.4** | **B** | SAME AS BUILD, BCP & CP | | |
| EB from Flynn Ave | 0.83 | 44.5 | D | 0.34 | 17.2 | B | 0.34 | 17.2 | B | | | |
| WB from Flynn Ave | 0.75 | 30.8 | C | 0.58 | 18.8 | B | 0.58 | 18.8 | B | | | |
| NB from Pine St | 0.86 | 42.3 | D | 0.34 | 21.9 | C | 0.34 | 22.0 | C | | | |
| SB from Pine St | 0.58 | 16.8 | B | 0.33 | 11.4 | B | 0.33 | 11.5 | B | | | |
| **Champlain Park. & Lakeside Ave** | NOT INCLUDED IN 2024 PM PEAK HOUR NO BUILD, BCP ANALYSIS | | | **0.70** | **39.5** | **D** | **0.74** | **49.2** | **D** | SAME AS BUILD, BCP & CP | | |
| EB from Lakeside Ave | | | | 0.50 | 19.6 | B | 0.62 | 51.1 | D | | | |
| WB from Lakeside Ave | | | | 0.39 | 66.5 | E | 0.40 | 66.7 | E | | | |
| NB from Champlain Parkway | | | | 0.54 | 24.0 | C | 0.56 | 25.1 | C | | | |
| SB from DPW Driveway | | | | 0.04 | 57.2 | E | 0.04 | 56.0 | E | | | |
| **Champlain Park. & Sears Lane** | NOT INCLUDED IN 2024 PM PEAK HOUR NO BUILD, BCP ANALYSIS | | | **0.65** | **19.9** | **B** | **0.69** | **19.5** | **B** | SAME AS BUILD, BCP & CP | | |
| EB from Sears Lane | | | | 0.48 | 24.8 | C | 0.48 | 24.8 | C | | | |
| WB from Sears Lane | | | | 0.64 | 91.8 | F | 0.64 | 91.8 | F | | | |
| NB from Champlain Parkway | | | | 0.27 | 7.5 | A | 0.27 | 7.9 | A | | | |
| SB from Champlain Parkway | | | | 0.41 | 23.0 | C | 0.44 | 22.0 | C | | | |
| **Champlain Park. & Flynn Ave** | NOT INCLUDED IN 2024 PM PEAK HOUR NO BUILD, BCP ANALYSIS | | | **1.16** | **169.8** | **F** | **1.20** | **175.5** | **F** | **1.11** | **85.2** | **F** |
| EB from Flynn Ave | | | | 2.21 | 583.7 | F | 2.23 | 592.0 | F | 0.64 | 89.1 | F |
| WB from Flynn Ave | | | | 0.75 | 72.1 | E | 0.75 | 72.2 | E | 0.58 | 53.2 | D |
| NB from Champlain Parkway | | | | 0.52 | 31.3 | C | 0.53 | 31.3 | C | 0.72 | 51.8 | D |
| SB from Champlain Parkway | | | | 0.57 | 60.4 | E | 0.62 | 76.6 | E | 0.64 | 107.2 | F |

* Volume to capacity ratio; If the approach has multiple lanes, the v/c shown is the average

** Delay expressed in seconds per vehicle

*** Level of service

\+ City Market Mitigation includes right turn lane and advanced walk pedestrian phase at the intersection of Flynn Ave and Champlain Parkway

BCP: Burlington City Place

CP: Champlain Parkway

Memorandum

***Table 5: Unsignalized Intersection Capacity Summary***

| 2019 | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | No Build | | | Build | | |
| | Peak Hour | v/c* | Delay** | LOS*** | v/c | Delay | LOS |
| **Lakeside Ave & Central Ave** | | | | | | | |
| EB from St. John's Club | Weekday AM | 0.00 | 7.4 | A | 0.00 | 7.6 | A |
| WB from Lakeside Ave | Weekday AM | 0.03 | 7.1 | A | 0.17 | 7.4 | A |
| NB from Central Ave | Weekday AM | 0.03 | 6.5 | A | 0.03 | 6.8 | A |
| SB from Blodgett Site | Weekday AM | 0.00 | 7.5 | A | 0.03 | 8.0 | A |
| EB from St. John's Club | Weekday PM | 0.01 | 7.1 | A | 0.01 | 7.3 | A |
| WB from Lakeside Ave | Weekday PM | 0.06 | 7.4 | A | 0.09 | 7.5 | A |
| NB from Central Ave | Weekday PM | 0.02 | 6.6 | A | 0.02 | 6.7 | A |
| SB from Blodgett Site | Weekday PM | 0.02 | 7.4 | A | 0.16 | 8.1 | A |

| 2024 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | No Build & BCP | | | No Build, BCP & CP | | | Build, BCP & CP | | |
| | Peak Hour | v/c | Delay | LOS | v/c | Delay | LOS | v/c | Delay | LOS |
| **Lakeside Ave & Central Ave** | | | | | | | | | | |
| EB from St. John's Club | Weekday AM | 0.00 | 7.4 | A | 0.00 | 7.4 | A | 0.00 | 7.6 | A |
| WB from Lakeside Ave | Weekday AM | 0.03 | 7.1 | A | 0.03 | 7.1 | A | 0.17 | 7.4 | A |
| NB from Central Ave | Weekday AM | 0.03 | 6.5 | A | 0.03 | 6.5 | A | 0.03 | 6.8 | A |
| SB from Blodgett Site | Weekday AM | 0.00 | 7.5 | A | 0.00 | 7.5 | A | 0.03 | 8.0 | A |
| EB from St. John's Club | Weekday PM | 0.01 | 7.0 | A | 0.01 | 7.0 | A | 0.01 | 7.3 | A |
| WB from Lakeside Ave | Weekday PM | 0.06 | 7.3 | A | 0.06 | 7.3 | A | 0.09 | 7.6 | A |
| NB from Central Ave | Weekday PM | 0.02 | 6.6 | A | 0.02 | 6.6 | A | 0.02 | 6.8 | A |
| SB from Blodgett Site | Weekday PM | 0.02 | 7.3 | A | 0.02 | 7.3 | A | 0.16 | 8.1 | A |

* Volume to capacity ratio
** Delay expressed in seconds per vehicle
*** Level of service
BCP: Burlington City Place
CP: Champlain Parkway

Memorandum

## PARKING ASSESSMENT

The proposed site redevelopment plan includes 370 on-site parking spaces. Of these spaces, 128 spaces will be tandem and unpaved in the site's northern and central lots. The footprint area of the three buildings on site were used to generate parking estimates using the Institute of Transportation Engineers (ITE) and the Urban Land Institute's (ULI) Parking Demand calculations. As discussed previously in this study, there is an assumed trip reduction due to non-auto trips. The ULI rates calculate a similar non-auto trip reduction so no further reduction was made for the parking assessment.

As shown in **Table 6**, using these assumptions, the peak parking demand for the site is not expected to exceed 360 parking spaces.

***Table 6: Parking Demand Estimation***

| Building | Size (sf) | Use | Weekday Peak Parking Generation Rate (per ksf GLA) | Peak Parking Demand |
|---|---|---|---|---|
| 50 Lakeside Avenue | 84,500 | Office | 2.47 | 209 |
| 44 Lakeside Avenue | 52,000 | Office | 2.47 | 128 |
| 32 Lakeside Avenue | 9,200 | Office | 2.47 | 23 |
| | | | **Total** | **360** |

Based on these calculations the site will have an excess 10 parking spaces during peak periods, which is less than the total supply of 370 proposed parking spaces.

Memorandum

## CONCLUSIONS

The proposed Blodgett Oven Site redevelopment program consists of a program of adaptive reuse and renovation of two of the three buildings located at 44-50 Lakeside Avenue. In total, the redevelopment program includes 145,700 square feet of office space, expanded parking capacity, internal circulation and access improvements, enhanced connectivity to the Burlington Bike Path, and other site amenities.

The trip generation estimates conducted for this study indicate that the proposed development program will generate approximately 162 new vehicle trips during the morning peak hour and 142 new vehicle trips during the evening peak hour.

Primary access and egress is proposed to be provided via the main driveway opposite Central Avenue and a parking lot exit adjacent to Lakeside Avenue. Improved access management will be implemented by providing a green strip between the street and parking lot for a length of Lakeside Avenue that is currently an open curb cut.

The crash data investigation revealed one designated High Crash Locations proximate to the project site. There were six reported crashes within the last five years on Lakeside Avenue, all of which only resulted in property damage.

The parking assessment concluded that the peak on-site parking demand generated by the redevelopment can be accommodated by the proposed parking plan.

From a traffic operations perspective, the intersection capacity analysis results demonstrated that the proposed development does not change the Level of Service more than one letter grade at any study intersection from the 2024 No Build to the 2024 Build conditions. The intersection of Flynn Avenue and the Champlain Parkway is expected to operate at a LOS F in the 2024 PM weekday peak hour in both the No Build and Build scenarios.

There are potential mitigation strategies that could be implemented in order to improve performance at the Lakeside Ave / Pine Street intersection as well as at the Lakeside Ave / Champlain Parkway intersection. One potential mitigation measure is the inclusion of an advanced walk pedestrian phase rather than an exclusive pedestrian phase and the optimizing of splits within the existing network cycle length. It should be noted that these timing and phasing changes would be not be able to be implemented until the permitted time period for the Champlain Parkway has passed and changes can be made to the Parkway design.

# Technical Appendix
# Traffic

- Traffic Volume Data
- Crash Data Summary
- Traffic Volume Adjustments
- Trip Generation Calculations and Trip Distribution
- Trip Distribution: Burlington City Place & Champlain Parkway
- Traffic Networks
- Unsignalized & Signalized Intersection Capacity Analyses

# Traffic Volume Data

| | | | |
|---|---|---|---|
| Intersection: | Lakeside Avenue / Central Avenue | Counter: | VHB |
| Town: | Burlington, VT | VTrans Site Code: | 00000000 |
| Start Date: | 6/12/2018 | | |

| | | | |
|---|---|---|---|
| Project: | Blodgett Oven Site | Project #: | 58083 |
| Location: | Burlington, VT | Sheet: | |
| Calculated by: | NAT | Date: | 6/20/18 |
| Checked by: | | Date: | |

**TMC - Lakeside Avenue / Central Avenue**

**TURNING MOVEMENT COUNT DATA - Totals by Movement**

| | | SB Blodgett Driveway | | | | WB Lakeside Ave. | | | | NB Central Ave. | | | | EB St. John's Club Drive | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Start Time | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds |
| 1 | 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 07:00 AM | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 6 | 07:15 AM | 0 | 0 | 0 | 0 | 0 | 1 | 3 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 07:30 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 5 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| 8 | 07:45 AM | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 08:00 AM | 0 | 0 | 1 | 1 | 3 | 0 | 3 | 0 | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 10 | 08:15 AM | 0 | 0 | 1 | 0 | 1 | 1 | 7 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| 11 | 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 12 | 08:45 AM | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 13 | 09:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 09:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 09:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 09:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 04:00 PM | 0 | 0 | 2 | 0 | 6 | 2 | 12 | 0 | 3 | 0 | 0 | 2 | 0 | 1 | 0 | 1 |
| 42 | 04:15 PM | 0 | 1 | 1 | 1 | 2 | 3 | 10 | 0 | 3 | 0 | 0 | 0 | 1 | 2 | 1 | 1 |
| 43 | 04:30 PM | 0 | 0 | 1 | 5 | 1 | 2 | 8 | 1 | 2 | 0 | 0 | 3 | 0 | 2 | 0 | 0 |
| 44 | 04:45 PM | 0 | 0 | 3 | 5 | 2 | 0 | 5 | 3 | 6 | 0 | 1 | 1 | 0 | 3 | 0 | 1 |
| 45 | 05:00 PM | 1 | 0 | 5 | 5 | 5 | 4 | 8 | 2 | 2 | 0 | 0 | 4 | 0 | 4 | 0 | 0 |
| 46 | 05:15 PM | 0 | 0 | 0 | 1 | 0 | 2 | 8 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 1 |
| 47 | 05:30 PM | 0 | 0 | 1 | 5 | 2 | 4 | 9 | 1 | 5 | 0 | 0 | 0 | 0 | 4 | 0 | 1 |
| 48 | 05:45 PM | 0 | 0 | 2 | 7 | 2 | 1 | 5 | 3 | 4 | 0 | 0 | 0 | 0 | 2 | 0 | 7 |

**PEAK HOUR CALCULATIONS**

**1 HR TOTALS**

| Begin Time | SB | WB | NB | EB | TOTAL |
|---|---|---|---|---|---|
| 06:00 AM | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 1 | 2 | 2 | 0 | 5 |
| 06:30 AM | 1 | 6 | 9 | 0 | 16 |
| 06:45 AM | 1 | 8 | 14 | 0 | 23 |
| 07:00 AM | 3 | 11 | 24 | 0 | 38 |
| 07:15 AM | 3 | 15 | 27 | 0 | 45 |
| 07:30 AM | 4 | 20 | 21 | 1 | 46 |
| 07:45 AM | 4 | 21 | 21 | 1 | 47 |
| 08:00 AM | 2 | 23 | 15 | 1 | 41 |
| 08:15 AM | 1 | 17 | 10 | 1 | 29 |
| 08:30 AM | 0 | 8 | 9 | 0 | 17 |
| 08:45 AM | 0 | 5 | 4 | 0 | 9 |
| 09:00 AM | 0 | 0 | 0 | 0 | 0 |
| 09:15 AM | 0 | 0 | 0 | 0 | 0 |
| 09:30 AM | 0 | 0 | 0 | 0 | 0 |
| 09:45 AM | 0 | 0 | 0 | 0 | 0 |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM | 0 | 0 | 0 | 0 | 0 |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 2 | 20 | 3 | 1 | 26 |
| 03:30 PM | 4 | 35 | 6 | 5 | 50 |
| 03:45 PM | 5 | 46 | 8 | 7 | 66 |
| 04:00 PM | 8 | 53 | 15 | 10 | 86 |
| 04:15 PM | 12 | 50 | 14 | 13 | 89 |
| 04:30 PM | 10 | 45 | 12 | 12 | 79 |
| 04:45 PM | 10 | 49 | 15 | 14 | 88 |
| 05:00 PM | 9 | 50 | 12 | 13 | 84 |

Cell ref.: 8
**AM Peak Hr**
**07:45 AM - 8:45 AM**
**Vol. = 47**

Cell ref.: 19
**Midday Peak Hr**
**10:30 AM - 11:30 AM**
**Vol. = 0**

Cell ref.: 42
**PM Peak Hr**
**04:15 PM - 5:15 PM**
**Vol. = 89**

# Computations - Traffic Volumes

| | | | |
|---|---|---|---|
| **Project:** | **Blodgett Oven Site** | **Project #:** | **58083.00** |
| **Location:** | **Burlington, VT** | **Sheet:** | |
| **Calculated by:** | **NAT** | **Date:** | **6/20/18** |
| **Checked by:** | | **Date:** | |
| **Title:** | **Blodgett Oven Site Redevelopment** | | |
| **Intersection:** | **Lakeside Avenue / Central Avenue** | | |

| | | | |
|---|---|---|---|
| Intersection: | Lakeside Avenue / Central Avenue | Town: | Burlington, VT |
| Count Date(s): | 6/12/2018 | Counter: | VHB |

**Peak Hour Volumes**

| | SB | | | | WB | | | | NB | | | | EB | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Blodgett Driveway | | | | Lakeside Ave. | | | | Central Ave. | | | | St. John's Club Drive | | | | |
| | RT | Thru | LT | Ped | RT | Thru | LT | Ped | RT | Thru | LT | Ped | RT | Thru | LT | Ped | |
| AM pk hr | 0 | 0 | 4 | 1 | 7 | 1 | 13 | 0 | 20 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 47 |
| PM pk hr | 1 | 1 | 10 | 16 | 10 | 9 | 31 | 6 | 13 | 0 | 1 | 8 | 1 | 11 | 1 | 2 | 89 |

**AM Peak Hour**

07:45 AM - 08:45 AM

Blodgett Driveway
1 peds
0 0 4
↙ ↓ ↘

St. John's Club Drive
3 peds
0 ↗
1 →
0 ↘

AM pk hr
47

↖ 7
← 1
↙ 13
0 peds
Lakeside Ave.

↖ ↑ ↗
0 1 20
0 peds
Central Ave.

| % | SB | WB | NB | EB |
|---|---|---|---|---|
| auto | 80% | 90% | 100% | 75% |
| med | 0% | 0% | 0% | 0% |
| heavy | 20% | 10% | 0% | 25% |
| % trucks | 20% | 10% | 0% | 25% |

**PM Peak Hour**

04:15 PM - 05:15 PM

Blodgett Driveway
16 peds
1 1 10
↙ ↓ ↘

St. John's Club Drive
2 peds
1 ↗
11 →
1 ↘

PM pk hr
89

↖ 10
← 9
↙ 31
6 peds
Lakeside Ave.

↖ ↑ ↗
1 0 13
8 peds
Central Ave.

| % | SB | WB | NB | EB |
|---|---|---|---|---|
| auto | 100% | 100% | 100% | 100% |
| med | 0% | 0% | 0% | 0% |
| heavy | 0% | 0% | 0% | 0% |
| % trucks | 0% | 0% | 0% | 0% |

# Computations

| | | | |
|---|---|---|---|
| **Project:** | **Blodgett Redevelopment TIS** | **Project #:** | **58083.00** |
| **Location:** | **Burlington, VT** | **Sheet:** | **1 of 1** |
| **Calculated by:** | **NAT** | **Date:** | **6/12/18** |
| **Checked by:** | **ELQ** | **Date:** | **10/1/18** |
| **Title:** | **Blodgett Driveway Manual Counts** | | |

AM

Starting Number: 9 cars

| Time Period | Cars Entering | Cars Exiting |
|---|---|---|
| 7-7:15 | 1 | 0 |
| 7:15-7:30 | 1 | 0 |
| 7:30-7:45 | 4 | 0 |
| 7:45-8:00 | 3 | 1 |
| 8:00-8:15 | 4 | 3 |
| 8:15-8:30 | 4 | 1 |
| 8:30-8:45 | 2 | 0 |
| 8:45-9:00 | 2 | 0 |

PM

Starting Number: 25 cars

| Time Period | Cars Entering | Cars Exiting |
|---|---|---|
| 4-4:15 | 6 | 2 |
| 4:15-4:30 | 6 | 3 |
| 4:30-4:45 | 8 | 4 |
| 4:45-5:00 | 2 | 1 |
| 5:00-5:15 | 4 | 5 |
| 5:15-5:30 | 3 | 2 |
| 5:30-5:45 | 3 | 4 |
| 5:45-6:00 | 1 | 4 |

| | | | |
|---|---|---|---|
| Intersection: | Pine St / Lakeside Ave | Counter: | VHB |
| Town: | Burlington | VTrans Site Code: | 0 |
| Start Date: | 6/13/2018 | | |

| | | | |
|---|---|---|---|
| Project: | Blodgett Oven Site | Project #: | 58083 |
| Location: | Burlington, VT | Sheet: | |
| Calculated by: | NAT | Date: | 6/19/18 |
| Checked by: | | Date: | |

**TMC - Pine St / Lakeside Ave**

**TURNING MOVEMENT COUNT DATA - Totals by Movement**

| | | SB Pine St | | | | WB Lakeside Ave | | | | NB Pine St | | | | EB Lakeside Ave | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Start Time | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds |
| 1 | 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 07:00 AM | 20 | 31 | 0 | 1 | 4 | 0 | 0 | 3 | 5 | 40 | 12 | 0 | 9 | 1 | 15 | 0 |
| 6 | 07:15 AM | 19 | 33 | 1 | 3 | 3 | 1 | 0 | 2 | 4 | 69 | 18 | 0 | 6 | 0 | 25 | 1 |
| 7 | 07:30 AM | 17 | 46 | 3 | 2 | 4 | 4 | 2 | 3 | 4 | 88 | 33 | 1 | 15 | 0 | 20 | 1 |
| 8 | 07:45 AM | 23 | 57 | 1 | 2 | 2 | 0 | 2 | 2 | 4 | 110 | 51 | 0 | 11 | 2 | 18 | 1 |
| 9 | 08:00 AM | 26 | 51 | 6 | 1 | 5 | 1 | 2 | 11 | 7 | 112 | 54 | 2 | 11 | 1 | 18 | 4 |
| 10 | 08:15 AM | 21 | 31 | 2 | 1 | 6 | 1 | 2 | 4 | 10 | 96 | 46 | 2 | 22 | 0 | 17 | 3 |
| 11 | 08:30 AM | 35 | 38 | 0 | 0 | 6 | 1 | 2 | 1 | 5 | 103 | 54 | 1 | 21 | 2 | 29 | 0 |
| 12 | 08:45 AM | 25 | 56 | 0 | 2 | 7 | 1 | 0 | 3 | 7 | 111 | 49 | 1 | 25 | 1 | 16 | 5 |
| 13 | 09:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 09:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 09:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 09:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 04:00 PM | 18 | 72 | 0 | 1 | 1 | 0 | 0 | 4 | 0 | 83 | 22 | 4 | 63 | 0 | 34 | 2 |
| 42 | 04:15 PM | 12 | 52 | 0 | 0 | 1 | 0 | 0 | 7 | 0 | 78 | 22 | 2 | 61 | 0 | 33 | 1 |
| 43 | 04:30 PM | 26 | 64 | 0 | 0 | 0 | 0 | 1 | 7 | 0 | 93 | 21 | 2 | 85 | 0 | 31 | 2 |
| 44 | 04:45 PM | 20 | 84 | 0 | 2 | 1 | 0 | 0 | 9 | 0 | 89 | 14 | 3 | 78 | 0 | 44 | 1 |
| 45 | 05:00 PM | 12 | 107 | 1 | 2 | 1 | 0 | 0 | 8 | 0 | 91 | 23 | 3 | 86 | 0 | 50 | 3 |
| 46 | 05:15 PM | 28 | 106 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 99 | 17 | 1 | 60 | 0 | 32 | 1 |
| 47 | 05:30 PM | 15 | 83 | 0 | 5 | 0 | 0 | 0 | 12 | 0 | 85 | 16 | 7 | 49 | 0 | 41 | 0 |
| 48 | 05:45 PM | 14 | 67 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 96 | 18 | 0 | 23 | 0 | 20 | 2 |

**PEAK HOUR CALCULATIONS**

**1 HR TOTALS**

| Begin Time | SB | WB | NB | EB | TOTAL |
|---|---|---|---|---|---|
| 06:00 AM | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 51 | 4 | 57 | 25 | 137 |
| 06:30 AM | 104 | 8 | 148 | 56 | 316 |
| 06:45 AM | 170 | 18 | 273 | 91 | 552 |
| 07:00 AM | 251 | 22 | 438 | 122 | 833 |
| 07:15 AM | 283 | 26 | 554 | 127 | 990 |
| 07:30 AM | 284 | 31 | 615 | 135 | 1065 |
| 07:45 AM | 291 | 30 | 652 | 152 | 1125 |
| 08:00 AM | 291 | 34 | 654 | 163 | 1142 |
| 08:15 AM | 208 | 26 | 481 | 133 | 848 |
| 08:30 AM | 154 | 17 | 329 | 94 | 594 |
| 08:45 AM | 81 | 8 | 167 | 42 | 298 |
| 09:00 AM | 0 | 0 | 0 | 0 | 0 |
| 09:15 AM | 0 | 0 | 0 | 0 | 0 |
| 09:30 AM | 0 | 0 | 0 | 0 | 0 |
| 09:45 AM | 0 | 0 | 0 | 0 | 0 |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM | 0 | 0 | 0 | 0 | 0 |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 90 | 1 | 105 | 97 | 293 |
| 03:30 PM | 154 | 2 | 205 | 191 | 552 |
| 03:45 PM | 244 | 3 | 319 | 307 | 873 |
| 04:00 PM | 348 | 4 | 422 | 429 | 1203 |
| 04:15 PM | 378 | 4 | 431 | 468 | 1281 |
| 04:30 PM | 448 | 3 | 447 | 466 | 1364 |
| 04:45 PM | 456 | 2 | 434 | 440 | 1332 |
| 05:00 PM | 433 | 1 | 445 | 361 | 1240 |

Cell ref.: 9
**AM Peak Hr**
**08:00 AM - 9:00 AM**
**Vol. = 1142**

Cell ref.: 19
**Midday Peak Hr**
**10:30 AM - 11:30 AM**
**Vol. = 0**

Cell ref.: 43
**PM Peak Hr**
**04:30 PM - 5:30 PM**
**Vol. = 1364**

# Computations - Traffic Volumes

| | | | |
|---|---|---|---|
| **Project:** | **Blodgett Oven Site** | **Project #:** | **58083.00** |
| **Location:** | **Burlington, VT** | **Sheet:** | |
| **Calculated by:** | **NAT** | **Date:** | **6/19/18** |
| **Checked by:** | | **Date:** | |
| **Title:** | **Blodgett Oven Site Redevelopment** | | |
| **Intersection:** | **Pine Street / Lakeside Avenue** | | |

| | | | |
|---|---|---|---|
| Intersection: | Pine St / Lakeside Ave | Town: | Burlington |
| Count Date(s): | 6/13/2018 | Counter: | VHB |

**Peak Hour Volumes**

| | SB | | | | WB | | | | NB | | | | EB | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pine St | | | | Lakeside Ave | | | | Pine St | | | | Lakeside Ave | | | | |
| | RT | Thru | LT | Ped | RT | Thru | LT | Ped | RT | Thru | LT | Ped | RT | Thru | LT | Ped | |
| AM pk hr | 107 | 176 | 8 | 4 | 24 | 4 | 6 | 19 | 29 | 422 | 203 | 6 | 79 | 4 | 80 | 12 | 1142 |
| PM pk hr | 86 | 361 | 1 | 7 | 2 | 0 | 1 | 38 | 0 | 372 | 75 | 9 | 309 | 0 | 157 | 7 | 1364 |

**AM Peak Hour**

08:00 AM - 09:00 AM

Pine St
4 peds
107 176 8
↙ ↓ ↘

Lakeside Ave — 12 peds
80 ↗
4 →
79 ↘

AM pk hr
1142

↖ 24
← 4
↙ 6
19 peds — Lakeside Ave

↖ ↑ ↗
203 422 29
6 peds
Pine St

| % | SB | WB | NB | EB |
|---|---|---|---|---|
| auto | 91% | 100% | 98% | 91% |
| med | 0% | 0% | 0% | 0% |
| heavy | 9% | 0% | 2% | 9% |
| % trucks | 9% | 0% | 2% | 9% |

**PM Peak Hour**

04:30 PM - 05:30 PM

Pine St
7 peds
86 361 1
↙ ↓ ↘

Lakeside Ave — 7 peds
157 ↗
0 →
309 ↘

PM pk hr
1364

↖ 2
← 0
↙ 1
38 peds — Lakeside Ave

↖ ↑ ↗
75 372 0
9 peds
Pine St

| % | SB | WB | NB | EB |
|---|---|---|---|---|
| auto | 98% | 100% | 98% | 99% |
| med | 0% | 0% | 0% | 0% |
| heavy | 2% | 0% | 2% | 1% |
| % trucks | 2% | 0% | 2% | 1% |

| | | | |
|---|---|---|---|
| Intersection: | Pine Street / Flynn Avenue | Counter: | VHB |
| Town: | Burlington, VT | VTrans Site Code: | 0 |
| Start Date: | 6/12/2018 | | |

| | | | |
|---|---|---|---|
| Project: | Blodgett Oven Site | Project #: | 58083 |
| Location: | Burlington, VT | Sheet: | |
| Calculated by: | NAT | Date: | 6/20/18 |
| Checked by: | | Date: | |

**TMC - Pine Street / Flynn Avenue**

**TURNING MOVEMENT COUNT DATA - Totals by Movement**

| | | SB Pine St. | | | | WB Flynn Ave. | | | | NB Pine St. | | | | EB Flynn Ave. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Start Time | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds | Right | Thru | Left | Peds |
| 1 | 06:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 06:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 06:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 06:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 07:00 AM | 11 | 25 | 17 | 5 | 30 | 17 | 3 | 3 | 1 | 39 | 3 | 0 | 6 | 5 | 6 | 3 |
| 6 | 07:15 AM | 3 | 36 | 12 | 1 | 36 | 27 | 4 | 3 | 2 | 54 | 5 | 2 | 2 | 14 | 3 | 1 |
| 7 | 07:30 AM | 9 | 38 | 16 | 3 | 39 | 28 | 0 | 2 | 2 | 97 | 2 | 0 | 3 | 18 | 18 | 3 |
| 8 | 07:45 AM | 10 | 53 | 18 | 6 | 56 | 29 | 5 | 13 | 2 | 130 | 6 | 0 | 3 | 17 | 11 | 1 |
| 9 | 08:00 AM | 16 | 43 | 10 | 21 | 59 | 37 | 3 | 32 | 0 | 84 | 3 | 3 | 4 | 14 | 12 | 7 |
| 10 | 08:15 AM | 11 | 56 | 23 | 4 | 52 | 46 | 5 | 6 | 4 | 84 | 6 | 2 | 4 | 17 | 15 | 1 |
| 11 | 08:30 AM | 14 | 39 | 19 | 5 | 48 | 34 | 4 | 3 | 3 | 109 | 5 | 0 | 3 | 22 | 15 | 0 |
| 12 | 08:45 AM | 11 | 34 | 13 | 3 | 72 | 28 | 3 | 3 | 2 | 100 | 10 | 2 | 6 | 23 | 23 | 1 |
| 13 | 09:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 09:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 09:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 09:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 34 | 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 38 | 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 39 | 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 40 | 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 41 | 04:00 PM | 10 | 97 | 46 | 3 | 35 | 32 | 3 | 3 | 4 | 56 | 9 | 0 | 7 | 30 | 20 | 0 |
| 42 | 04:15 PM | 17 | 88 | 37 | 2 | 32 | 40 | 2 | 4 | 5 | 70 | 9 | 1 | 9 | 33 | 14 | 2 |
| 43 | 04:30 PM | 12 | 117 | 47 | 3 | 20 | 21 | 4 | 3 | 4 | 65 | 6 | 1 | 13 | 41 | 26 | 0 |
| 44 | 04:45 PM | 18 | 102 | 41 | 6 | 34 | 34 | 8 | 4 | 4 | 78 | 4 | 0 | 15 | 21 | 15 | 1 |
| 45 | 05:00 PM | 24 | 145 | 43 | 7 | 47 | 37 | 4 | 3 | 6 | 75 | 12 | 3 | 10 | 24 | 15 | 3 |
| 46 | 05:15 PM | 30 | 113 | 47 | 4 | 37 | 53 | 10 | 12 | 5 | 68 | 6 | 4 | 14 | 44 | 23 | 3 |
| 47 | 05:30 PM | 22 | 90 | 32 | 5 | 32 | 37 | 5 | 4 | 1 | 74 | 8 | 2 | 13 | 42 | 21 | 3 |
| 48 | 05:45 PM | 26 | 45 | 28 | 7 | 34 | 36 | 6 | 4 | 2 | 92 | 10 | 7 | 9 | 29 | 28 | 3 |

**PEAK HOUR CALCULATIONS**

**1 HR TOTALS**

| Begin Time | SB | WB | NB | EB | TOTAL |
|---|---|---|---|---|---|
| 06:00 AM | 0 | 0 | 0 | 0 | 0 |
| 06:15 AM | 53 | 50 | 43 | 17 | 163 |
| 06:30 AM | 104 | 117 | 104 | 36 | 361 |
| 06:45 AM | 167 | 184 | 205 | 75 | 631 |
| 07:00 AM | 248 | 274 | 343 | 106 | 971 |
| 07:15 AM | 264 | 323 | 387 | 119 | 1093 |
| 07:30 AM | 303 | 359 | 420 | 136 | 1218 |
| 07:45 AM | 312 | 378 | 436 | 137 | 1263 |
| 08:00 AM | 289 | 391 | 410 | 158 | 1248 |
| 08:15 AM | 220 | 292 | 323 | 128 | 963 |
| 08:30 AM | 130 | 189 | 229 | 92 | 640 |
| 08:45 AM | 58 | 103 | 112 | 52 | 325 |
| 09:00 AM | 0 | 0 | 0 | 0 | 0 |
| 09:15 AM | 0 | 0 | 0 | 0 | 0 |
| 09:30 AM | 0 | 0 | 0 | 0 | 0 |
| 09:45 AM | 0 | 0 | 0 | 0 | 0 |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 |
| 10:45 AM | 0 | 0 | 0 | 0 | 0 |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 |
| 03:15 PM | 153 | 70 | 69 | 57 | 349 |
| 03:30 PM | 295 | 144 | 153 | 113 | 705 |
| 03:45 PM | 471 | 189 | 228 | 193 | 1081 |
| 04:00 PM | 632 | 265 | 314 | 244 | 1455 |
| 04:15 PM | 691 | 283 | 338 | 236 | 1548 |
| 04:30 PM | 739 | 309 | 333 | 261 | 1642 |
| 04:45 PM | 707 | 338 | 341 | 257 | 1643 |
| 05:00 PM | 645 | 338 | 359 | 272 | 1614 |

Cell ref.: 8
**AM Peak Hr**
**07:45 AM - 8:45 AM**
**Vol. = 1263**

Cell ref.: 19
**Midday Peak Hr**
**10:30 AM - 11:30 AM**
**Vol. = 0**

Cell ref.: 44
**PM Peak Hr**
**04:45 PM - 5:45 PM**
**Vol. = 1643**

# Computations - Traffic Volumes

| | | | |
|---|---|---|---|
| **Project:** | **Blodgett Oven Site** | **Project #:** | **58083.00** |
| **Location:** | **Burlington, VT** | **Sheet:** | |
| **Calculated by:** | **NAT** | **Date:** | **6/20/18** |
| **Checked by:** | | **Date:** | |
| **Title:** | **Blodgett Oven Site Redevelopment** | | |
| **Intersection:** | **Pine Street / Flynn Avenue** | | |

| | | | |
|---|---|---|---|
| Intersection: | Pine Street / Flynn Avenue | Town: | Burlington, VT |
| Count Date(s): | 6/12/2018 | Counter: | VHB |

**Peak Hour Volumes**

| | SB | | | | WB | | | | NB | | | | EB | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Pine St. | | | | Flynn Ave. | | | | Pine St. | | | | Flynn Ave. | | | | |
| | RT | Thru | LT | Ped | RT | Thru | LT | Ped | RT | Thru | LT | Ped | RT | Thru | LT | Ped | |
| AM pk hr | 51 | 191 | 70 | 36 | 215 | 146 | 17 | 54 | 9 | 407 | 20 | 5 | 14 | 70 | 53 | 9 | 1263 |
| PM pk hr | 94 | 450 | 163 | 22 | 150 | 161 | 27 | 23 | 16 | 295 | 30 | 9 | 52 | 131 | 74 | 10 | 1643 |

**AM Peak Hour**

07:45 AM - 08:45 AM

Pine St.
36 peds
51 ↙ 191 ↓ 70 ↘

Flynn Ave. 9 peds
53 ↗
70 →
14 ↘

AM pk hr
1263

↖ 215
← 146
↙ 17
54 peds Flynn Ave.

↖ 20 ↑ 407 ↗ 9
5 peds
Pine St.

| % | SB | WB | NB | EB |
|---|---|---|---|---|
| auto | 94% | 98% | 99% | 91% |
| med | 0% | 0% | 0% | 0% |
| heavy | 6% | 2% | 1% | 9% |
| % trucks | 6% | 2% | 1% | 9% |

**PM Peak Hour**

04:45 PM - 05:45 PM

Pine St.
22 peds
94 ↙ 450 ↓ 163 ↘

Flynn Ave. 10 peds
74 ↗
131 →
52 ↘

PM pk hr
1643

↖ 150
← 161
↙ 27
23 peds Flynn Ave.

↖ 30 ↑ 295 ↗ 16
9 peds
Pine St.

| % | SB | WB | NB | EB |
|---|---|---|---|---|
| auto | 99% | 98% | 98% | 99% |
| med | 0% | 0% | 0% | 0% |
| heavy | 1% | 2% | 2% | 1% |
| % trucks | 1% | 2% | 2% | 1% |

# Crash Data Summary

# High Crash Location Report: Sections and Intersections

2012-2016

Office of Highway Safety Division
Data Section

***THIS DOCUMENT IS EXEMPT FROM DISCOVERY OR ADMISSION UNDER 23 U.S.C. 409.***

Vermont Agency of Transportation

08/01/2017

Formal Statewide Sections - Route Log Order /2 - Statewide

Years: 2012 - 2016

| H.C.L No. | /3. | Route | System | Town | Mileage | AADT | Years | Crashes | Fatalities | Injuries | PDO Crashes | Critical Rate | Actual Rate | Ratio Actual/Critical | Severity Index ($/Crash/1.) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 553 | MAPLE ST., BRATTLEBORO | Urban Collector (u) | Brattleboro | 0.700 - 1.000 | 2,400 | 5 | 10 | 0 | 3 | 8 | 6.398 | 7.610 | 1.189 | $35,590 |
| | 767 | SOUTH MAIN ST., BRATTLEBORO | Urban Collector (u) | Brattleboro | 0.000 - 0.300 | 3,000 | 5 | 10 | 0 | 2 | 8 | 6.068 | 6.088 | 1.003 | $26,740 |
| | 470 | SOUTH MAIN ST., BRATTLEBORO | Urban Collector (u) | Brattleboro | 0.600 - 0.900 | 3,100 | 5 | 13 | 0 | 0 | 13 | 6.022 | 7.659 | 1.272 | $11,300 |
| | 305 | CHURCH ST., RUTLAND CITY | Urban Collector (u) | Rutland City | 0.000 - 0.300 | 1,300 | 5 | 8 | 0 | 1 | 7 | 7.458 | 11.240 | 1.507 | $20,950 |
| | 213 | FOREST ST., RUTLAND CITY | Urban Collector (u) | Rutland City | 0.700 - 1.000 | 740 | 5 | 6 | 0 | 2 | 4 | 8.629 | 14.809 | 1.716 | $37,033 |
| | 590 | GROVE ST., RUTLAND CITY | Minor Arterial (u) | Rutland City | 0.200 - 0.500 | 2,027 | 5 | 10 | 0 | 8 | 5 | 7.776 | 9.011 | 1.159 | $76,450 |
| | 109 | LINCOLN AVE., RUTLAND CITY | Urban Collector (u) | Rutland City | 0.100 - 0.400 | 958 | 5 | 9 | 1 | 4 | 5 | 8.070 | 17.159 | 2.126 | $212,278 |
| | 609 | STRONGS AVE., RUTLAND CITY | Principal Arterial (u) | Rutland City | 0.000 - 0.300 | 9,800 | 5 | 43 | 0 | 15 | 33 | 7.019 | 8.014 | 1.142 | $39,544 |
| | 432 | VT. 127 BELTLINE, BURLINGTON | Freeway/Expressway (u) | Burlington | 0.000 - 0.300 | 14,060 | 5 | 27 | 0 | 3 | 24 | 2.650 | 3.507 | 1.324 | $19,878 |
| | 367 | VT. 127 BELTLINE, BURLINGTON | Freeway/Expressway (u) | Burlington | 3.100 - 3.400 | 8,310 | 5 | 19 | 1 | 13 | 11 | 2.953 | 4.176 | 1.414 | $146,042 |
| * | 119 | COLCHESTER AVE., BURLINGTON | Minor Arterial (u) | Burlington | 0.100 - 0.400 | 14,663 | 5 | 88 | 1 | 27 | 67 | 5.250 | 10.962 | 2.088 | $52,802 |
| | 196 | EAST AVE., BURLINGTON | Minor Arterial (u) | Burlington | 0.000 - 0.300 | 12,683 | 5 | 66 | 0 | 6 | 61 | 5.370 | 9.505 | 1.770 | $18,489 |
| | 249 | NORTH AVE., BURLINGTON | Minor Arterial (u) | Burlington | 1.900 - 2.200 | 13,300 | 5 | 63 | 0 | 13 | 52 | 5.330 | 8.652 | 1.623 | $27,589 |
| | 683 | NORTH AVE., BURLINGTON | Minor Arterial (u) | Burlington | 2.600 - 2.900 | 10,800 | 5 | 35 | 0 | 6 | 30 | 5.513 | 5.919 | 1.074 | $24,857 |
| | 21 | PEARL ST., BURLINGTON | Minor Arterial (u) | Burlington | 0.000 - 0.300 | 8,040 | 5 | 88 | 0 | 7 | 82 | 5.803 | 19.991 | 3.445 | $17,569 |
| | 404 | PINE ST., BURLINGTON | Minor Arterial (u) | Burlington | 0.300 - 0.600 | 12,480 | 5 | 50 | 0 | 13 | 37 | 5.384 | 7.318 | 1.359 | $31,372 |
| | 579 | PINE ST., BURLINGTON | Minor Arterial (u) | Burlington | 0.800 - 1.100 | 11,827 | 5 | 41 | 0 | 6 | 35 | 5.431 | 6.332 | 1.166 | $22,598 |
| | 172 | PINE ST., BURLINGTON | Minor Arterial (u) | Burlington | 1.100 - 1.400 | 8,450 | 5 | 49 | 0 | 10 | 40 | 5.752 | 10.591 | 1.841 | $27,286 |
| | 69 | ST. PAUL ST., BURLINGTON | Urban Collector (u) | Burlington | 0.200 - 0.500 | 9,400 | 5 | 59 | 0 | 12 | 49 | 4.776 | 11.464 | 2.400 | $27,385 |
| | 602 | S UNION ST., BURLINGTON | Principal Arterial (u) | Burlington | 0.000 - 0.300 | 3,100 | 5 | 17 | 0 | 2 | 15 | 8.696 | 10.016 | 1.152 | $20,382 |
| | 621 | S UNION ST., BURLINGTON | Principal Arterial (u) | Burlington | 0.400 - 0.700 | 3,400 | 5 | 18 | 0 | 4 | 15 | 8.528 | 9.670 | 1.134 | $29,083 |
| | 70 | MALLETTS BAY AVE., WINOOSKI CITY | Minor Arterial (u) | Winooski City | 0.000 - 0.300 | 3,013 | 5 | 28 | 0 | 4 | 25 | 7.090 | 16.974 | 2.394 | $22,732 |
| | 610 | MALLETTS BAY AVE., WINOOSKI CITY | Minor Arterial (u) | Winooski City | 0.300 - 0.600 | 4,423 | 5 | 18 | 0 | 6 | 14 | 6.522 | 7.433 | 1.140 | $38,289 |
| | 177 | W SPRING ST., WINOOSKI CITY | Urban Collector (u) | Winooski City | 0.000 - 0.300 | 3,617 | 5 | 21 | 1 | 7 | 16 | 5.812 | 10.604 | 1.825 | $109,538 |
| | 486 | DORSET ST., SOUTH BURLINGTON | Urban Collector (u) | South Burlington | 3.100 - 3.400 | 13,653 | 5 | 42 | 0 | 7 | 38 | 4.475 | 5.619 | 1.255 | $24,974 |
| | 13 | DORSET ST., SOUTH BURLINGTON | Urban Collector (u) | South Burlington | 3.700 - 4.000 | 14,677 | 5 | 137 | 0 | 12 | 127 | 4.423 | 17.049 | 3.855 | $18,227 |
| | 762 | SWIFT ST., SOUTH BURLINGTON | Urban Collector (u) | South Burlington | 1.000 - 1.300 | 5,893 | 5 | 17 | 0 | 0 | 17 | 5.230 | 5.269 | 1.007 | $11,300 |

| ObjectID | Crash Date | AOT Actual | City/Town | AOT Route | Crash Type | Collision Direction | Weather | Animal | Time of Day | Intersection With | Impairmen | Involving | Non Report | Road Characteristics | Road Condition | Street Addi | Surface Condition |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 123989 | January 15, 2015, 4:15 PM | 0.3 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Sears Ln | None | None | | Not at a Junction | None | Pine St | Wet |
| 87163 | February 2, 2013, 11:50 AM | 0.31 | Burlington | PINE ST. | Property Damage Only | Rear End | Cloudy | None/Other | Day | 699 Pine Street | None | None | | Not at a Junction | None | FAU-5040 I | Dry |
| 809371 | August 9, 2017, 11:57 AM | 0.31 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | None | 700 Pine St | Dry |
| 118281 | May 15, 2014, 7:45 AM | 0.35 | Burlington | PINE ST. | Property Damage Only | Same Direction Sideswipe | Cloudy | None/Other | Day | 683 Pine St | None | None | | Not at a Junction | None | FAU-5040 I | Dry |
| 115860 | June 26, 2014, 8:58 AM | 0.35 | Burlington | PINE ST. | Property Damage Only | Same Direction Sideswipe | Cloudy | None/Other | Day | Able Glass & Floor | None | None | | Not at a Junction | None | FAU 5040 ( | Dry |
| 89140 | March 11, 2013, 11:04 AM | 0.36 | Burlington | PINE ST. | Property Damage Only | Rear End | Cloudy | None/Other | Day | N/A | None | Heavy Truck | | Not at a Junction | None | FAU-676 Pi | Dry |
| 92345 | July 4, 2013, 5:46 PM | 0.37 | Burlington | PINE ST. | Property Damage Only | Single Vehicle Crash | Cloudy | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | None | FAU-5040 I | Wet |
| 134387 | June 25, 2015, 11:58 AM | 0.37 | Burlington | PINE ST. | Property Damage Only | Rear-to-rear | Clear | None/Other | Day | 661 Pine St | None | None | | Parking Lot | None | 661 Pine St | Dry |
| 811880 | November 13, 2017, 1:40 PM | 0.37 | Burlington | PINE ST. | Property Damage Only | | | None/Other | Day | Cumberland Farms | None | None | | | | 661 Pine st | |
| 83614 | January 21, 2013, 4:20 PM | 0.38 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Avenue | None | None | | Not at a Junction | None | FAU-5040 I | Dry |
| 83689 | May 30, 2013, 5:38 AM | 0.38 | Burlington | PINE ST. | Property Damage Only | Left Turn and Thru, Angle Broadside -->v-- | Clear | None/Other | Night | Lakeside Ave | None | Bicycle | | Not at a Junction | None | FAU-5040 ( | Dry |
| 83060 | October 13, 2013, 11:26 AM | 0.38 | Burlington | PINE ST. | Property Damage Only | | | None/Other | Day | Cumberland Farms | None | None | | | | FAU-5040 (661 Pine St) | |
| 115601 | April 29, 2014, 5:23 PM | 0.38 | Burlington | PINE ST. | Injury | Other - Explain in Narrative | Cloudy | None/Other | Day | Lakeside Ave | None | Pedestrian | | Parking Lot | None | FAU-5040 ( | Dry |
| 83829 | July 18, 2013, 1:33 PM | 0.39 | Burlington | PINE ST. | Property Damage Only | No Turns, Thru moves only, Broadside ^< | Clear | None/Other | Day | Pine/Lakeside Ave | None | None | | Four-way Intersection | None | FAU-5040 ( | Dry |
| 116887 | September 12, 2014, 3:58 PM | 0.39 | Burlington | PINE ST. | Property Damage Only | | | None/Other | Day | 660 | None | None | | | | FAU-5040 Pine St | |
| 134505 | June 23, 2015, 8:38 AM | 0.39 | Burlington | PINE ST. | Injury | Rear End | Rain | None/Other | Day | 660 Pine St | None | None | | Not at a Junction | Road Surface Condition(wet, icy, snow, slush, etc) | 660 Pine St | Wet |
| 720815 | March 2, 2016, 6:30 AM | 0.39 | Burlington | PINE ST. | Property Damage Only | Other - Explain in Narrative | Clear | None/Other | Day | 660 Pine St | None | None | | Four-way Intersection | None | 660 Pine St | Dry |
| 730692 | July 7, 2016, 1:40 PM | 0.39 | Burlington | PINE ST. | Property Damage Only | Other - Explain in Narrative | Clear | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | None | 660 Pine St | Dry |
| 73721 | May 22, 2013, 5:00 PM | 0.4 | Burlington | PINE ST. | Injury | Other - Explain in Narrative | Cloudy | None/Other | Day | Lakeside Ave | None | Bicycle | | T - Intersection | None | FAU-5040 I | Dry |
| 122732 | September 22, 2014, 12:54 PM | 0.4 | Burlington | PINE ST. | Injury | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | T - Intersection | None | FAU-5040 I | Dry |
| 111629 | October 30, 2014, 7:25 AM | 0.4 | Burlington | PINE ST. | Injury | Left Turn and Thru, Angle Broadside -->v-- | Cloudy | None/Other | Day | Lakeside Ave | None | Bicycle | | T - Intersection | Unknown | Pine St | Dry |
| 113579 | December 3, 2014, 3:43 PM | 0.4 | Burlington | PINE ST. | Property Damage Only | Left Turn and Thru, Angle Broadside -->v-- | Rain | None/Other | Day | Lakeside Ave | None | None | | Other - Explain in Narrative | None | FAU-5040 I | Wet |
| 124517 | January 21, 2015, 3:09 PM | 0.4 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | T - Intersection | None | Pine St | Dry |
| 127421 | February 16, 2015, 6:34 AM | 0.4 | Burlington | PINE ST. | Property Damage Only | Rear End | Unknown | None/Other | Day | Lakeside Ave | None | None | | Four-way Intersection | Road Surface Condition(wet, icy, snow, slush, etc) | Pine St | Ice |
| 137681 | August 4, 2015, 3:45 PM | 0.4 | Burlington | PINE ST. | Injury | Left Turn and Thru, Angle Broadside -->v-- | Clear | None/Other | Day | Lakeside Ave | None | Bicycle | | T - Intersection | None | FAU-5040 I | Dry |
| 138732 | September 25, 2015, 8:07 AM | 0.4 | Burlington | PINE ST. | Property Damage Only | No Turns, Thru moves only, Broadside ^< | Clear | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | None | Pine St | Dry |
| 745 | November 30, 2015, 4:11 PM | 0.4 | Burlington | PINE ST. | Property Damage Only | No Turns, Thru moves only, Broadside ^< | Clear | None/Other | Day | Lakeside Ave | None | None | | T - Intersection | None | FAU-5040 I | Dry |
| 721064 | January 9, 2017, 6:07 AM | 0.4 | Burlington | PINE ST. | Property Damage Only | Left Turn and Thru, Angle Broadside -->v-- | Clear | None/Other | Day | Lakeside Ave | None | None | | Four-way Intersection | None | Pine St | Dry |
| 807891 | March 13, 2017, 3:38 PM | 0.4 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | T - Intersection | None | Pine St | Dry |
| 805085 | July 19, 2017, 4:00 PM | 0.4 | Burlington | PINE ST. | Property Damage Only | Same Direction Sideswipe | Clear | None/Other | Day | Lakeside Ave | None | None | | Parking Lot | None | Pine St | Unknown |
| 99861 | August 12, 2013, 11:51 AM | 0.41 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | None | FAU-5040 I | Dry |
| 91701 | October 22, 2013, 5:49 PM | 0.41 | Burlington | PINE ST. | Property Damage Only | | | None/Other | Day | Lakeside Ave | None | None | | | | FAU-5040 Pine St | |
| 111674 | January 24, 2014, 7:26 AM | 0.41 | Burlington | PINE ST. | Property Damage Only | Left Turn and Thru, Angle Broadside -->v-- | Clear | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | Road Surface Condition(wet, icy, snow, slush, etc) | FAU-5040 I | Other - Explain in Narrative |
| 116206 | April 1, 2014, 5:45 PM | 0.41 | Burlington | PINE ST. | Injury | Other - Explain in Narrative | Cloudy | None/Other | Day | Lakeside Ave | None | Pedestrian | | Not at a Junction | None | FAU-5040 I | Wet |
| 116743 | June 30, 2014, 2:12 PM | 0.41 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | Four-way Intersection | None | FAU-5040 I | Dry |
| 723659 | August 17, 2016, 12:19 PM | 0.41 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | T - Intersection | None | Pine St | Dry |
| 726746 | December 21, 2016, 7:09 AM | 0.41 | Burlington | PINE ST. | Property Damage Only | Same Direction Sideswipe | Clear | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | None | Pine St | Dry |
| 810173 | August 24, 2017, 5:46 AM | 0.41 | Burlington | PINE ST. | Property Damage Only | Left Turn and Thru, Angle Broadside -->v-- | Clear | None/Other | Night | Lakeside Ave | None | None | | T - Intersection | None | Pine St | Dry |
| 734198 | January 18, 2017, 9:57 PM | 0.42 | Burlington | PINE ST. | Property Damage Only | Single Vehicle Crash | Clear | None/Other | Night | Lakeside Ave | None | None | | Parking Lot | None | 645 Pine St | Dry |
| 805035 | July 20, 2017, 8:49 AM | 0.42 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Lakeside Ave | None | None | | T - Intersection | None | 645 Pine St | Dry |
| 812485 | November 8, 2017, 12:43 PM | 0.42 | Burlington | PINE ST. | Property Damage Only | Same Direction Sideswipe | Clear | None/Other | Day | 645 Pine St | None | None | | Parking Lot | None | 645 Pine St | Dry |
| 737164 | December 1, 2016, 4:14 PM | 0.46 | Burlington | PINE ST. | Property Damage Only | Rear End | Cloudy | None/Other | Day | Lakeside Ave | None | None | | Not at a Junction | None | Pine St | Dry |
| 98941 | August 5, 2013, 8:34 AM | 0.51 | Burlington | PINE ST. | Property Damage Only | Same Direction Sideswipe | Clear | None/Other | Day | Locust St | None | Heavy Truck | | T - Intersection | None | FAU-5040 I | Dry |
| 118899 | June 24, 2014, 8:48 AM | 0.51 | Burlington | PINE ST. | Injury | Head On | Cloudy | None/Other | Day | Locust St | None | None | | Not at a Junction | None | Pine St | Dry |
| 114580 | July 22, 2014, 9:21 AM | 0.51 | Burlington | PINE ST. | Property Damage Only | Left Turn and Thru, Angle Broadside -->v-- | Clear | None/Other | Day | Locust St | None | Bicycle | | Not at a Junction | None | FAU-5040 I | Dry |
| 133890 | July 1, 2015, 2:10 PM | 0.51 | Burlington | PINE ST. | Injury | Right Turn and Thru, Broadside ^<-- | Rain | None/Other | Day | Locust St | None | Heavy Truck | | T - Intersection | Road Surface Condition(wet, icy, snow, slush, etc) | FAU-5040 I | Wet |
| 717907 | May 17, 2016, 12:55 PM | 0.51 | Burlington | PINE ST. | Property Damage Only | Left Turns, Opposite Directions, Head On/Angle Crash --^v-- | Clear | None/Other | Day | Pine St | None | None | | T - Intersection | None | Locust St | Dry |
| 88554 | June 6, 2013, 3:05 PM | 0.52 | Burlington | PINE ST. | Property Damage Only | No Turns, Thru moves only, Broadside ^< | Rain | None/Other | Day | Locust Ave | None | Heavy Truck | | T - Intersection | None | FAU-5040 I | Wet |
| 114605 | February 4, 2014, 3:16 PM | 0.52 | Burlington | PINE ST. | Injury | No Turns, Thru moves only, Broadside ^< | Cloudy | None/Other | Day | Locust St | None | None | | T - Intersection | None | FAU-5040 I | Dry |
| 139469 | September 16, 2015, 4:23 PM | 0.52 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Locust St | None | None | | T - Intersection | None | FAU-5040 I | Dry |
| 809597 | July 6, 2017, 10:11 AM | 0.52 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Locust St | None | None | | T - Intersection | None | Pine St | Dry |
| 118057 | September 25, 2014, 2:41 PM | 0.55 | Burlington | PINE ST. | Injury | Other - Explain in Narrative | Clear | None/Other | Day | | 500 None | Pedestrian | | Not at a Junction | None | FAU-5040 I | Dry |
| 135186 | July 6, 2015, 4:18 PM | 0.55 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | | None | None | | Not at a Junction | None | FAU-5040( | Dry |
| 808982 | March 17, 2017, 4:12 PM | 0.55 | Burlington | PINE ST. | Property Damage Only | Left Turn and Thru, Broadside v<-- | Clear | None/Other | Day | Dealer.com Driveway | None | None | | Driveway | None | 500 Pine St | Dry |
| 811843 | October 18, 2017, 9:09 AM | 0.55 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Jackson Ter | None | None | | Not at a Junction | None | Pine St | Dry |
| 720751 | February 18, 2016, 8:32 AM | 0.58 | Burlington | PINE ST. | Property Damage Only | Rear End | Clear | None/Other | Day | Locust St | None | None | | Not at a Junction | None | Pine St | Dry |
| 91636 | June 21, 2013, 4:50 PM | 999.99 | Burlington | PINE ST | Property Damage Only | Other - Explain in Narrative | Clear | None/Other | Day | Locust Ave | None | None | | Parking Lot | None | Pine St | Dry |
| 85393 | December 16, 2013, 11:38 AM | 999.99 | Burlington | PINE ST | Property Damage Only | Rear-to-rear | Clear | None/Other | Day | Lakeside Avenue | None | None | | Parking Lot | None | Pine Street | Dry |
| 113541 | November 7, 2014, 4:45 PM | 999.99 | Burlington | PINE ST | Injury | Rear End | | None/Other | Day | Locust St | None | None | | Not at a Junction | None | 500 Pine St | Wet |

Total Crashes in HCL 59

**Blodgett Oven Site Redevelopment--Traffic Impact Study**
**Crash Summary (2013-2017)**
**Lakeside Ave**

| Street | Town | Date & Time | Weather | Direction of Collision | Number of Injuries | Number of Fatalities |
|---|---|---|---|---|---|---|
| LAKESIDE AV | Burlington | December 14, 2013, 12:38 PM | Cloudy | Rear End | 0 | 0 |
| LAKESIDE AV | Burlington | March 13, 2013, 8:42 AM | Cloudy | Same Direction Sideswipe | 0 | 0 |
| LAKESIDE AV | Burlington | March 23, 2013, 3:17 PM | Clear | Rear End | 0 | 0 |
| LAKESIDE AVE | Burlington | May 13, 2016, 2:39 PM | Rain | Left Turn and Thru, Same Direction Sideswipe/Angle Crash vv-- | 0 | 0 |
| LAKESIDE AV | Burlington | November 21, 2014, 2:15 PM | Cloudy | No Turns, Thru moves only, Broadside ^< | 0 | 0 |
| LAKESIDE AV | Burlington | November 24, 2015, 12:26 PM | Clear | Head On | 0 | 0 |
| | | | | **TOTAL:** | 0 | 0 |

**Blodgett Oven Site Redevelopment--Traffic Impact Study**
**Crash Summary (2013-2017)**
**Intersection of Pine St and Flynn Ave**

| Street | Town | Mile Marke | Date & Time | Weather | Direction of Collision | Number of Injuries | Number of Fatalities | |
|---|---|---|---|---|---|---|---|---|
| PINE ST. | Burlington | 0 | August 23, 2017, 9:18 AM | Clear | Rear End | 0 | | 0 |
| PINE ST. | Burlington | 0 | August 24, 2017, 11:07 AM | Clear | Same Direction Sideswipe | 0 | | 0 |
| PINE ST. | Burlington | 0 | August 25, 2016, 5:16 PM | Clear | Same Direction Sideswipe | 0 | | 0 |
| PINE ST | Burlington | | August 31, 2016, 5:08 PM | Clear | Rear End | 0 | | 0 |
| PINE ST. | Burlington | 0 | February 3, 2015, 7:27 AM | Clear | No Turns, Thru moves only, Broadside ^< | 1 | | 0 |
| PINE ST. | Burlington | 0.02 | January 5, 2017, 2:05 PM | Clear | Rear End | 0 | | 0 |
| PINE ST. | Burlington | 0.02 | July 14, 2015, 5:42 PM | Clear | Right Turn and Thru, Same Direction Sideswipe/Angle Crash ^^-- | 0 | | 0 |
| PINE ST. | Burlington | 0 | July 2, 2017, 7:55 AM | Clear | No Turns, Thru moves only, Broadside ^< | 1 | | 0 |
| PINE ST | Burlington | | June 18, 2015, 2:08 PM | Clear | Rear End | 0 | | 0 |
| PINE ST | Burlington | | June 24, 2017, 2:10 PM | Cloudy | Rear End | 0 | | 0 |
| PINE ST. | Burlington | 0 | March 28, 2013, 6:12 PM | Clear | Right Turn and Thru, Same Direction Sideswipe/Angle Crash ^^-- | 0 | | 0 |
| PINE ST. | Burlington | 0.02 | March 6, 2013, 7:17 AM | Clear | Rear End | 0 | | 0 |
| PINE ST. | Burlington | 0 | May 1, 2013, 12:46 PM | Clear | Opp Direction Sideswipe | 0 | | 0 |
| PINE ST. | Burlington | 0 | May 13, 2013, 2:37 PM | Cloudy | Other - Explain in Narrative | 0 | | 0 |
| PINE ST. | Burlington | 0 | May 9, 2015, 11:45 AM | Cloudy | No Turns, Thru moves only, Broadside ^< | 1 | | 0 |
| PINE ST. | Burlington | 0 | November 10, 2015, 12:10 PM | Clear | Same Direction Sideswipe | 0 | | 0 |
| PINE ST. | Burlington | 0 | November 29, 2017, 5:00 AM | Unknown | | 0 | | 0 |
| PINE ST. | Burlington | 0 | October 10, 2014, 6:02 PM | Clear | Opp Direction Sideswipe | 0 | | 0 |
| PINE ST. | Burlington | 0.11 | October 23, 2014, 8:09 PM | Rain | Single Vehicle Crash | 1 | | 0 |
| PINE ST. | Burlington | 0.02 | October 31, 2016, 6:27 PM | Clear | Left Turn and Thru, Broadside v<-- | 0 | | 0 |
| PINE ST. | Burlington | 0 | September 26, 2013, 6:26 AM | Clear | No Turns, Thru moves only, Broadside ^< | 1 | | 0 |
| PINE ST. | Burlington | 0 | September 9, 2013, 8:57 AM | Clear | Other - Explain in Narrative | 0 | | 0 |
| FLYNN AVE | Burlington | | April 10, 2017, 3:30 AM | Clear | Same Direction Sideswipe | 0 | | 0 |
| FLYNN AVE. | Burlington | 0.01 | August 17, 2013, 8:06 AM | Cloudy | Rear End | 0 | | 0 |
| FLYNN AVE. | Burlington | 0 | January 3, 2013, 7:05 AM | Cloudy | Other - Explain in Narrative | 0 | | 0 |
| FLYNN AVE. | Burlington | 0.05 | July 4, 2013, 8:48 AM | | | 0 | | 0 |
| FLYNN AVE. | Burlington | 0.04 | June 14, 2014, 8:00 AM | Cloudy | Other - Explain in Narrative | 0 | | 0 |
| FLYNN AVE. | Burlington | 0 | June 2, 2014, 10:16 AM | Clear | Right Turn and Thru, Head On v^-- | 0 | | 0 |
| FLYNN AVE. | Burlington | 0 | May 12, 2017, 6:40 PM | Clear | Same Direction Sideswipe | 0 | | 0 |
| FLYNN AVE. | Burlington | 0 | May 31, 2016, 3:56 PM | Clear | Rear-to-rear | 0 | | 0 |
| | | | | | **TOTAL:** | 5 | | 0 |

**Blodgett Oven Site Redevelopment--Traffic Impact Study**
**Crash Summary (2013-2017)**
**Intersection of Pine St and Lakeside Ave**

| Street | Town | Mile Marke | Date & Time | Weather | Direction of Collision | Number of Injuries | Number of Fatalities |
|---|---|---|---|---|---|---|---|
| PINE ST. | Burlington | 0.41 | April 1, 2014, 5:45 PM | Cloudy | Other - Explain in Narrative | 1 | 0 |
| PINE ST. | Burlington | 0.38 | April 29, 2014, 5:23 PM | Cloudy | Other - Explain in Narrative | 1 | 0 |
| PINE ST. | Burlington | 0.41 | August 12, 2013, 11:51 AM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.41 | August 17, 2016, 12:19 PM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.41 | August 24, 2017, 5:46 AM | Clear | Left Turn and Thru, Angle Broadside -->v-- | 0 | 0 |
| PINE ST. | Burlington | 0.4 | August 4, 2015, 3:45 PM | Clear | Left Turn and Thru, Angle Broadside -->v-- | 1 | 0 |
| PINE ST. | Burlington | 0.31 | August 9, 2017, 11:57 AM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.46 | December 1, 2016, 4:14 PM | Cloudy | Rear End | 0 | 0 |
| PINE ST | Burlington | | December 16, 2013, 11:38 AM | Clear | Rear-to-rear | 0 | 0 |
| PINE ST. | Burlington | 0.41 | December 21, 2016, 7:09 AM | Clear | Same Direction Sideswipe | 0 | 0 |
| PINE ST. | Burlington | 0.4 | December 3, 2014, 3:43 PM | Rain | Left Turn and Thru, Angle Broadside -->v-- | 0 | 0 |
| PINE ST. | Burlington | 0.4 | February 16, 2015, 6:34 AM | Unknown | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.22 | February 9, 2017, 4:43 PM | Freezing Precipitation | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.42 | January 18, 2017, 9:57 PM | Clear | Single Vehicle Crash | 0 | 0 |
| PINE ST. | Burlington | 0.38 | January 21, 2013, 4:20 PM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.4 | January 21, 2015, 3:09 PM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.41 | January 24, 2014, 7:26 AM | Clear | Left Turn and Thru, Angle Broadside -->v-- | 0 | 0 |
| PINE ST. | Burlington | 0.4 | January 9, 2017, 6:07 AM | Clear | Left Turn and Thru, Angle Broadside -->v-- | 0 | 0 |
| PINE ST | Burlington | | July 11, 2017, 11:18 AM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.39 | July 18, 2013, 1:33 PM | Clear | No Turns, Thru moves only, Broadside ^< | 0 | 0 |
| PINE ST. | Burlington | 0.4 | July 19, 2017, 4:00 PM | Clear | Same Direction Sideswipe | 0 | 0 |
| PINE ST. | Burlington | 0.42 | July 20, 2017, 8:49 AM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.37 | July 4, 2013, 5:46 PM | Cloudy | Single Vehicle Crash | 0 | 0 |
| PINE ST. | Burlington | 0.39 | July 7, 2016, 1:40 PM | Clear | Other - Explain in Narrative | 0 | 0 |
| PINE ST. | Burlington | 0.41 | June 30, 2014, 2:12 PM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.4 | March 13, 2017, 3:38 PM | Clear | Rear End | 0 | 0 |
| PINE ST. | Burlington | 0.4 | May 22, 2013, 5:00 PM | Cloudy | Other - Explain in Narrative | 1 | 0 |
| PINE ST. | Burlington | 0.38 | May 30, 2013, 5:38 AM | Clear | Left Turn and Thru, Angle Broadside -->v-- | 0 | 0 |
| PINE ST. | Burlington | 0.4 | November 30, 2015, 4:11 PM | Clear | No Turns, Thru moves only, Broadside ^< | 0 | 0 |
| PINE ST. | Burlington | 0.41 | October 22, 2013, 5:49 PM | | | 0 | 0 |
| PINE ST. | Burlington | 0.4 | October 30, 2014, 7:25 AM | Cloudy | Left Turn and Thru, Angle Broadside -->v-- | 1 | 0 |
| PINE ST. | Burlington | 0.4 | September 22, 2014, 12:54 PM | Clear | Rear End | 1 | 0 |
| PINE ST. | Burlington | 0.4 | September 25, 2015, 8:07 AM | Clear | No Turns, Thru moves only, Broadside ^< | 0 | 0 |
| PINE ST | Burlington | | September 4, 2014, 11:32 AM | Clear | Other - Explain in Narrative | 0 | 0 |
| LAKESIDE A | Burlington | | December 14, 2013, 12:38 PM | Cloudy | Rear End | 0 | 0 |
| LAKESIDE A | Burlington | | May 13, 2016, 2:39 PM | Rain | Left Turn and Thru, Same Direction Sideswipe/Angle Crash vv-- | 0 | 0 |
| | | | | | **TOTAL:** | 6 | 0 |

# Traffic Volume Adjustments

## 20-YEAR AADT GROWTH FACTORS

The factors in the table below may be used to project current year AADTs to a future year. They are applicable on all routes statewide.

The factors are based on a 2017 to 2037 20-year AADT growth factor of 1.09 which was developed from Vermont population and labor statistics.

| | FROM CURRENT YEAR | | |
|---|---|---|---|
| TO FUTURE YEAR | 2017 | 2018 | 2019 |
| 2017 | 1.00 | | |
| 2018 | 1.00 | 1.00 | |
| 2019 | 1.01 | 1.00 | 1.00 |
| 2020 | 1.01 | 1.01 | 1.00 |
| 2021 | 1.02 | 1.01 | 1.01 |
| 2022 | 1.02 | 1.02 | 1.01 |
| 2023 | 1.03 | 1.02 | 1.02 |
| 2024 | 1.03 | 1.03 | 1.02 |
| 2025 | 1.04 | 1.03 | 1.03 |
| 2026 | 1.04 | 1.04 | 1.03 |
| 2027 | 1.05 | 1.04 | 1.04 |
| 2028 | 1.05 | 1.05 | 1.04 |
| 2029 | 1.05 | 1.05 | 1.05 |
| 2030 | 1.06 | 1.05 | 1.05 |
| 2031 | 1.06 | 1.06 | 1.05 |
| 2032 | 1.07 | 1.06 | 1.06 |
| 2033 | 1.07 | 1.07 | 1.06 |
| 2034 | 1.08 | 1.07 | 1.07 |
| 2035 | 1.08 | 1.08 | 1.07 |
| 2036 | 1.09 | 1.08 | 1.08 |
| 2037 | 1.09 | 1.09 | 1.08 |
| 2038 | 1.09 | 1.09 | 1.09 |
| 2039 | 1.10 | 1.09 | 1.09 |
| 2040 | 1.10 | 1.10 | 1.09 |
| 2041 | 1.11 | 1.10 | 1.10 |
| 2042 | 1.11 | 1.11 | 1.10 |
| 2043 | 1.12 | 1.11 | 1.11 |

## *2016 Redbook DHV Chart*

| | Predicted DHV by Seasonal Factor Group by AADT | | | | | |
|---|---|---|---|---|---|---|
| | Rural Interstate | Rural Non-Interstate | Urban | Summer Recreational | Summer/Winter Recreational | Summer/Winter Recreational TH |
| AADT | SF1 | SF2 | SF3 | SF4 | SF5 | SF6 |
| 11000 | 1300 | 1200 | 1200 | | 1400 | |
| 11100 | 1300 | 1200 | 1200 | | 1400 | |
| 11200 | 1400 | 1200 | 1300 | | 1400 | |
| 11300 | 1400 | 1200 | 1300 | | 1400 | |
| 11400 | 1400 | 1200 | 1300 | | 1500 | |
| 11500 | 1400 | 1200 | 1300 | | 1500 | |
| 11600 | 1400 | 1200 | 1300 | | 1500 | |
| 11700 | 1500 | 1200 | 1300 | | 1500 | |
| 11800 | 1500 | 1200 | 1300 | | 1500 | |
| 11900 | 1500 | 1200 | 1300 | | 1500 | |
| 12000 | 1500 | 1200 | 1300 | | 1500 | |
| 12100 | 1500 | 1300 | 1300 | | 1600 | |
| 12200 | 1500 | 1300 | 1400 | | | |
| 12300 | 1600 | 1300 | 1400 | | | |
| 12400 | 1600 | 1300 | 1400 | | | |
| 12500 | 1600 | 1300 | 1400 | | | |
| 12600 | 1600 | 1300 | 1400 | | | |
| 12700 | 1600 | 1300 | 1400 | | | |
| 12800 | 1600 | 1300 | 1400 | | | |
| 12900 | 1700 | 1300 | 1400 | | | |
| 13000 | 1700 | 1300 | 1400 | | | |
| 13100 | 1700 | 1300 | 1400 | | | |
| 13200 | 1700 | 1300 | 1500 | | | |
| 13300 | 1700 | 1300 | 1500 | | | |
| 13400 | 1700 | 1400 | 1500 | | | |
| 13500 | 1800 | 1400 | 1500 | | | |
| 13600 | 1800 | | 1500 | | | |
| 13700 | 1800 | | 1500 | | | |
| 13800 | 1800 | | 1500 | | | |
| 13900 | 1800 | | 1500 | | | |
| 14000 | 1800 | | 1500 | | | |
| 14100 | 1900 | | 1500 | | | |
| 14200 | 1900 | | 1500 | | | |
| 14300 | 1900 | | 1500 | | | |
| 14400 | 1900 | | 1600 | | | |
| 14500 | 1900 | | 1600 | | | |
| 14600 | 2000 | | 1600 | | | |
| 14700 | 2000 | | 1600 | | | |
| 14800 | 2000 | | 1600 | | | |
| 14900 | 2000 | | 1600 | | | |
| 15000 | 2100 | | 1600 | | | |
| 15100 | 2100 | | 1600 | | | |

# Computations - AM Peak Hour Vols

Project: Blodgett | Location: Burlington, VT | design year 1: 2019
Calculated by: NAT | Date: ###### | design year 2: 2024
Checked by: | Date:

Existing Blodgett Trips:
Enter: 15
Exit: 3

NET NEW TRIPS: New Veh. Trips:
Entering 139
Exiting 23

## Unadjusted Data (w/ current Blodgett traffic)

### 1. Central Ave / Lakeside Ave

1 Central Ave / Lakeside Ave / St. John's Club Drive
6//12/18
7:00-9:00

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 13 | 0 | 4 | |
| T | 1 | 1 | 1 | 0 | |
| R | 0 | 7 | 20 | 0 | 47 |
| Enter | 1 | 21 | 21 | 4 | 47 |
| Exit | 25 | 1 | 8 | 13 | 47 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | 7:45-8:45 | | | | |

### 2. Champlain Parkway / Lakeside Ave

2 Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 98 | 358 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 456 |
| Enter | 98 | 358 | 0 | 0 | 456 |
| Exit | 98 | 358 | 0 | 0 | 456 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3. Champlain Parkway / Sears Lane

3 Champlain Parkway / Sears Ln
Estimated

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 98 | 358 | | | |
| R | | | | | 456 |
| Enter | 98 | 358 | 0 | 0 | 456 |
| Exit | 98 | 358 | 0 | 0 | 456 |
| % Trucks | | | | | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 4. Champlain Parkway / Flynn Ave

4 Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 139 | 226 | | | |
| R | | | | | 365 |
| Enter | 139 | 226 | 0 | 0 | 365 |
| Exit | 139 | 226 | 0 | 0 | 365 |
| % Trucks | | | | | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | | | | | |

### 5. Pine St / Lakeside Ave

5 Pine St / Lakeside Ave
6/12/2018
7:00-9:00

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 80 | 6 | 203 | 8 | |
| T | 4 | 4 | 422 | 176 | |
| R | 79 | 24 | 29 | 107 | 1142 |
| Enter | 163 | 34 | 654 | 291 | 1142 |
| Exit | 41 | 314 | 526 | 261 | 1142 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | 7:00-9:00 | | | | |

### 6. Pine St / Flynn Ave

6 Pine St / Flynn Ave
6/12/2018
7:00-9:00

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 53 | 17 | 20 | 70 | |
| T | 70 | 146 | 407 | 191 | |
| R | 14 | 215 | 9 | 51 | 1263 |
| Enter | 137 | 378 | 436 | 312 | 1263 |
| Exit | 149 | 217 | 675 | 222 | 1263 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | 7:45-8:45 | | | | |

### 7. Lakeside Ave / 128 Lakeside

7 Lakeside Ave / 128 Lakeside A

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | 16:45-17:45 | | | | |

Enters and exits to Blodgett curb cut parking lot are added to WB R and SB L--if there was no curb cut there, they would be using Blodgett drive

## Existing Blodgett Traffic

### 1. Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 4 | |
| T | 0 | 0 | 1 | 0 | |
| R | 0 | 7 | 0 | 0 | 12 |
| Enter | 0 | 7 | 1 | 4 | 12 |
| Exit | 4 | 0 | 8 | 0 | 12 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 2. Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 4 | 7 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 11 |
| Enter | 4 | 7 | 0 | 0 | 11 |
| Exit | 4 | 7 | 0 | 0 | 11 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3. Champlain Parkway / Sears Lane

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4. Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 5. Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 2 | 0 | 5 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 2 | 0 | 0 | 2 | 29 |
| Enter | 3 | 0 | 5 | 2 | 10 |
| Exit | 0 | 7 | 2 | 2 | 29 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 6. Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 1 | |
| T | 0 | 0 | 3 | 3 | |
| R | 0 | 1 | 0 | 0 | 8 |
| Enter | 0 | 1 | 3 | 4 | 8 |
| Exit | 1 | 0 | 5 | 3 | 8 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 7. Lakeside Ave / 128 Lakeside

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total traffic entering and exiting Blodgett Drive, including entrances and exits of the site's front parking lot, is removed

## Unadjusted Data (w/o current Blodgett traffic)

### 1. Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 13 | 0 | 0 | |
| T | 1 | 1 | 0 | 0 | |
| R | 0 | 0 | 20 | 0 | 35 |
| Enter | 1 | 14 | 20 | 0 | 35 |
| Exit | 21 | 1 | 0 | 13 | 35 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.30

### 2. Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 94 | 351 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 445 |
| Enter | 94 | 351 | 0 | 0 | 445 |
| Exit | 94 | 351 | 0 | 0 | 445 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.00

### 3. Champlain Parkway / Sears Lane

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 98 | 358 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 456 |
| Enter | 98 | 358 | 0 | 0 | 456 |
| Exit | 98 | 358 | 0 | 0 | 456 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.00

### 4. Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 139 | 226 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 365 |
| Enter | 139 | 226 | 0 | 0 | 365 |
| Exit | 139 | 226 | 0 | 0 | 365 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.00

### 5. Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 78 | 6 | 198 | 8 | |
| T | 4 | 4 | 422 | 176 | |
| R | 77 | 24 | 29 | 105 | 1131 |
| Enter | 159 | 34 | 649 | 289 | 1131 |
| Exit | 41 | 307 | 524 | 259 | 1131 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.30

### 6. Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 53 | 17 | 20 | 69 | |
| T | 70 | 146 | 404 | 188 | |
| R | 14 | 214 | 9 | 51 | 1255 |
| Enter | 137 | 377 | 433 | 308 | 1255 |
| Exit | 148 | 217 | 670 | 219 | 1255 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.18

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

| | |
|---|---|
| ATR ID: | |
| ATR/CTC AADT: | |
| K Factor: | |
| DHV Eqn: | |
| DHV (k factor): | |
| Corr. Count: | |
| DHV Adjust: | |
| MC YR adjust: | |
| Total Adjust: | |

## Existing Blodgett Site trips

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | 3 | |
| T | | | 2 | | |
| R | | 13 | | | 18 |
| Enter | 0 | 13 | 2 | 3 | 18 |
| Exit | 3 | 0 | 15 | 0 | 18 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 3 | 13 | | | |
| R | | | | | 16 |
| Enter | 3 | 13 | 0 | 0 | 16 |
| Exit | 3 | 13 | 0 | 0 | 16 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 0 | 0 | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 0 | 0 | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 2 | | 8 | | |
| T | | | | | |
| R | 1 | | | 4 | 17 |
| Enter | 3 | 0 | 8 | 4 | 16 |
| Exit | 0 | 13 | 2 | 1 | 17 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 1 | | | 0 | |
| T | | | 5 | 1 | |
| R | | 3 | | 0 | 10 |
| Enter | 1 | 3 | 5 | 1 | 10 |
| Exit | 0 | 0 | 8 | 1 | 10 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

Assumed entrances and exits to/of driveways are not subject to adjustments. Numbers in the above tables are modified as such.

## 2019 AM No Build

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 17 | 0 | 3 | |
| T | 1 | 1 | 2 | 0 | |
| R | 0 | 13 | 26 | 0 | 63 |
| Enter | 1 | 31 | 28 | 3 | 63 |
| Exit | 30 | 1 | 15 | 17 | 63 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 97 | 364 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 461 |
| Enter | 97 | 364 | 0 | 0 | 461 |
| Exit | 97 | 364 | 0 | 0 | 461 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 98 | 358 | | | |
| R | | | | | 456 |
| Enter | 98 | 358 | 0 | 0 | 456 |
| Exit | 98 | 358 | 0 | 0 | 456 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 139 | 226 | | | |
| R | | | | | 365 |
| Enter | 139 | 226 | 0 | 0 | 365 |
| Exit | 139 | 226 | 0 | 0 | 365 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 104 | 6 | 267 | 8 | |
| T | 4 | 4 | 549 | 229 | |
| R | 102 | 24 | 29 | 140 | 1465 |
| Enter | 209 | 34 | 844 | 377 | 1465 |
| Exit | 41 | 411 | 676 | 336 | 1465 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 63 | 20 | 24 | 82 | |
| T | 83 | 172 | 482 | 223 | |
| R | 17 | 255 | 11 | 60 | 1491 |
| Enter | 162 | 447 | 516 | 365 | 1491 |
| Exit | 175 | 256 | 800 | 259 | 1491 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

Assumed entrances and exits to/of driveways are not subject to adjustments. Numbers in the above tables are modified as such.

## Trip Generation - Blodgett Site, 2019 -

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | | | 23 | |
| T | | | 1 | 0 | |
| R | | 138 | | 0 | 162 |
| Enter | 0 | 138 | 1 | 23 | 162 |
| Exit | 23 | 0 | 139 | 0 | 162 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 23 | 138 | | | |
| R | | | | | 160 |
| Enter | 23 | 138 | 0 | 0 | 160 |
| Exit | 23 | 138 | 0 | 0 | 160 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 7 | 2 | | | |
| R | | | | | 9 |
| Enter | 7 | 2 | 0 | 0 | 9 |
| Exit | 7 | 2 | 0 | 0 | 9 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 11 | | 91 | | |
| T | | | | | |
| R | 12 | | | 47 | 160 |
| Enter | 23 | 0 | 91 | 47 | 160 |
| Exit | 0 | 138 | 11 | 12 | 160 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 7 | | | 3 | |
| T | | | 55 | 7 | |
| R | | 29 | | 2 | 102 |
| Enter | 7 | 29 | 55 | 12 | 102 |
| Exit | 3 | 2 | 91 | 7 | 102 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Turning movement distribution is generated using proportions from current Blodgett traffic patterns.

% trip gen to/from Central Avenue: 1%
% trip gen to/from Lakeside Ave: 99%

## Trip Generation -Blodgett Site, 2024 -

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | | | 23 | |
| T | | | 1 | 0 | |
| R | | 138 | | 0 | 162 |
| Enter | 0 | 138 | 1 | 24 | 163 |
| Exit | 23 | 0 | 139 | 0 | 162 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | 83 | | |
| T | 11 | 55 | | | |
| R | 12 | | | | 160 |
| Enter | 23 | 55 | 83 | 0 | 160 |
| Exit | 11 | 138 | 0 | 12 | 160 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | 83 | 12 | |
| R | | | | | 94 |
| Enter | 0 | 0 | 83 | 12 | 94 |
| Exit | 0 | 0 | 83 | 12 | 94 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 6 | | | 1 | |
| T | | | 76 | 10 | |
| R | | 1 | | 1 | 95 |
| Enter | 6 | 1 | 76 | 12 | 95 |
| Exit | 1 | 1 | 83 | 10 | 95 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 11 | | 8 | | |
| T | | | | | |
| R | 0 | | | 47 | 66 |
| Enter | 11 | 0 | 8 | 47 | 66 |
| Exit | 0 | 55 | 11 | 0 | 66 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | | | 0 | |
| T | | | 6 | 0 | |
| R | | 2 | | 0 | 8 |
| Enter | 0 | 2 | 6 | 0 | 8 |
| Exit | 0 | 0 | 8 | 0 | 8 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 23 | 138 | | | |
| R | | | | | 160 |
| Enter | 23 | 138 | 0 | 0 | 160 |
| Exit | 23 | 138 | 0 | 0 | 160 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

% trip gen to/from Central Avenue: 1%
% trip gen of Lakeside Avenue trips utilizing Champlain Parkway: 60%

Build Year Growt 1.02

## 2024 AM No Build

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 17 | 0 | 3 | |
| T | 1 | 1 | 2 | 0 | |
| R | 0 | 13 | 27 | 0 | 64 |
| Enter | 1 | 31 | 28 | 3 | 64 |
| Exit | 31 | 1 | 15 | 17 | 64 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 99 | 371 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 470 |
| Enter | 99 | 371 | 0 | 0 | 470 |
| Exit | 99 | 371 | 0 | 0 | 470 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 100 | 365 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 465 |
| Enter | 100 | 365 | 0 | 0 | 465 |
| Exit | 100 | 365 | 0 | 0 | 465 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 142 | 230 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 373 |
| Enter | 142 | 230 | 0 | 0 | 373 |
| Exit | 142 | 230 | 0 | 0 | 373 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 106 | 6 | 272 | 8 | |
| T | 4 | 4 | 560 | 233 | |
| R | 104 | 24 | 29 | 143 | 1492 |
| Enter | 213 | 34 | 860 | 385 | 1492 |
| Exit | 41 | 419 | 689 | 343 | 1492 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 64 | 20 | 24 | 84 | |
| T | 84 | 176 | 492 | 227 | |
| R | 17 | 260 | 11 | 62 | 1520 |
| Enter | 165 | 456 | 527 | 373 | 1520 |
| Exit | 179 | 261 | 816 | 264 | 1520 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Trip Generation (BCP only)

### 1: Central Ave/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Pine St/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | 38 | 24 | |
| R | | | | | 62 |
| Enter | 0 | 0 | 38 | 24 | 62 |
| Exit | 0 | 0 | 38 | 24 | 62 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Pine St/Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | 38 | 24 | |
| R | | | | | 62 |
| Enter | 0 | 0 | 38 | 24 | 62 |
| Exit | 0 | 0 | 38 | 24 | 62 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Champlain Parkway 2028 No Build*

### 1: Central Ave/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 175 | 390 | | | |
| R | | | | | 565 |
| Enter | 175 | 390 | 0 | 0 | 565 |
| Exit | 175 | 390 | 0 | 0 | 565 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 30 | 215 | | | |
| R | | | | | 245 |
| Enter | 30 | 215 | 0 | 0 | 245 |
| Exit | 30 | 215 | 0 | 0 | 245 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 145 | 235 | | | |
| R | | | | | 380 |
| Enter | 145 | 235 | 0 | 0 | 380 |
| Exit | 145 | 235 | 0 | 0 | 380 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Pine St/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 55 | | 155 | | |
| T | | | 590 | 645 | |
| R | 120 | | | 235 | 1800 |
| Enter | 175 | 0 | 745 | 880 | 1800 |
| Exit | 0 | 390 | 645 | 765 | 1800 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Pine St/Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 65 | 10 | 15 | 145 | |
| T | 70 | 130 | 555 | 490 | |
| R | 10 | 235 | 10 | 90 | 1825 |
| Enter | 145 | 375 | 580 | 725 | 1825 |
| Exit | 225 | 235 | 855 | 510 | 1825 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Champlain Parkway 2028 Build*

### 1: Central Ave/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | 570 | 230 | | |
| T | 60 | 160 | | | |
| R | 115 | | 220 | | 1355 |
| Enter | 175 | 730 | 450 | 0 | 1355 |
| Exit | 280 | 390 | 0 | 685 | 1355 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 40 | 80 | 10 | |
| T | | 60 | 420 | 660 | |
| R | 25 | 25 | 60 | 15 | 1400 |
| Enter | 30 | 125 | 560 | 685 | 1400 |
| Exit | 70 | 155 | 450 | 725 | 1400 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 35 | 15 | 80 | 5 | |
| T | 75 | 65 | 515 | 660 | |
| R | 35 | 15 | 5 | 60 | 1565 |
| Enter | 145 | 95 | 600 | 725 | 1565 |
| Exit | 85 | 205 | 565 | 710 | 1565 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Pine St/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 265 | | 15 | | |
| T | | | 390 | 335 | |
| R | 20 | | | 715 | 1740 |
| Enter | 285 | 0 | 405 | 1050 | 1740 |
| Exit | 0 | 730 | 655 | 355 | 1740 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Pine St/Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 35 | 10 | 10 | 95 | |
| T | 50 | 55 | 220 | 165 | |
| R | 0 | 110 | 10 | 30 | 790 |
| Enter | 85 | 175 | 240 | 290 | 790 |
| Exit | 155 | 95 | 365 | 175 | 790 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Net Effect of Champlain Parkway

### 1: Central Ave/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 570 | 230 | 0 | |
| T | -65 | -230 | 0 | 0 | |
| R | 65 | 0 | 220 | 0 | 790 |
| Enter | 0 | 340 | 450 | 0 | 790 |
| Exit | 155 | 0 | 0 | 635 | 790 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 40 | 80 | 10 | |
| T | -100 | -305 | 420 | 595 | |
| R | 25 | 25 | 60 | 15 | 870 |
| Enter | -70 | -240 | 560 | 620 | 870 |
| Exit | -30 | -210 | 450 | 660 | 870 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 35 | 15 | 80 | 5 | |
| T | -67 | -170 | 515 | 660 | |
| R | 35 | 15 | 5 | 60 | 1188 |
| Enter | 3 | -140 | 600 | 725 | 1188 |
| Exit | -57 | -30 | 565 | 710 | 1188 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 3: Pine St/Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 317 | 0 | -165 | 0 | |
| T | 0 | 0 | -236 | -120 | |
| R | -151 | 0 | 0 | 566 | 211 |
| Enter | 166 | 0 | -401 | 446 | 211 |
| Exit | 0 | 401 | 81 | -271 | 211 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 4: Pine St/Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0.5 | 1.0 | 0.7 | 0.7 | |
| T | 0.7 | 0.4 | 0.4 | 0.3 | |
| R | 0.0 | 0.5 | 1.0 | 0.3 | 7 |
| Enter | 1 | 2 | 2 | 1 | 7 |
| Exit | 2 | 1 | 1 | 1 | 7 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 2019 AM Build

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 17 | 0 | 26 | |
| T | 1 | 1 | 3 | 0 | |
| R | 0 | 151 | 26 | 0 | 225 |
| Enter | 1 | 169 | 29 | 26 | 225 |
| Exit | 53 | 1 | 154 | 17 | 225 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 120 | 502 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 622 |
| Enter | 120 | 502 | 0 | 0 | 622 |
| Exit | 120 | 502 | 0 | 0 | 622 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 98 | 358 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 456 |
| Enter | 98 | 358 | 0 | 0 | 456 |
| Exit | 98 | 358 | 0 | 0 | 456 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 147 | 228 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 374 |
| Enter | 147 | 228 | 0 | 0 | 374 |
| Exit | 147 | 228 | 0 | 0 | 374 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 115 | 6 | 358 | 8 | |
| T | 4 | 4 | 549 | 229 | |
| R | 114 | 24 | 29 | 187 | 1627 |
| Enter | 233 | 34 | 936 | 424 | 1627 |
| Exit | 41 | 549 | 688 | 349 | 1627 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 70 | 20 | 24 | 85 | |
| T | 83 | 172 | 537 | 230 | |
| R | 17 | 284 | 11 | 62 | 1593 |
| Enter | 169 | 476 | 571 | 377 | 1593 |
| Exit | 178 | 258 | 890 | 266 | 1593 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 2024 AM No Build & BCP

Build Year Growt 1.02

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 17 | 0 | 3 | |
| T | 1 | 1 | 2 | 0 | |
| R | 0 | 13 | 27 | 0 | 64 |
| Enter | 1 | 31 | 28 | 3 | 64 |
| Exit | 31 | 1 | 15 | 17 | 64 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 99 | 371 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 470 |
| Enter | 99 | 371 | 0 | 0 | 470 |
| Exit | 99 | 371 | 0 | 0 | 470 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 100 | 365 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 465 |
| Enter | 100 | 365 | 0 | 0 | 465 |
| Exit | 100 | 365 | 0 | 0 | 465 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 142 | 230 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 373 |
| Enter | 142 | 230 | 0 | 0 | 373 |
| Exit | 142 | 230 | 0 | 0 | 373 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 106 | 6 | 272 | 8 | |
| T | 4 | 4 | 598 | 257 | |
| R | 104 | 24 | 29 | 143 | 1554 |
| Enter | 213 | 34 | 898 | 409 | 1554 |
| Exit | 41 | 419 | 727 | 367 | 1554 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 64 | 20 | 24 | 84 | |
| T | 84 | 176 | 530 | 251 | |
| R | 17 | 260 | 11 | 62 | 1582 |
| Enter | 165 | 456 | 565 | 397 | 1582 |
| Exit | 179 | 261 | 854 | 288 | 1582 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 2024 AM No Build & CP (unbalanced)

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 17 | 0 | 3 | |
| T | 1 | 1 | 2 | 0 | |
| R | 0 | 13 | 27 | 0 | 64 |
| Enter | 1 | 31 | 28 | 3 | 64 |
| Exit | 31 | 1 | 15 | 17 | 64 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 570 | 230 | 0 | |
| T | 34 | 141 | 0 | 0 | |
| R | 65 | 0 | 220 | 0 | 1260 |
| Enter | 99 | 711 | 450 | 0 | 1260 |
| Exit | 254 | 371 | 0 | 635 | 1260 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 40 | 80 | 10 | |
| T | 0 | 60 | 420 | 595 | |
| R | 25 | 25 | 60 | 15 | 1335 |
| Enter | 30 | 125 | 560 | 620 | 1335 |
| Exit | 70 | 155 | 450 | 660 | 1335 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 35 | 15 | 80 | 5 | |
| T | 75 | 60 | 515 | 660 | |
| R | 35 | 15 | 5 | 60 | 1561 |
| Enter | 145 | 90 | 600 | 725 | 1561 |
| Exit | 85 | 200 | 565 | 710 | 1561 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 423 | 6 | 107 | 8 | |
| T | 4 | 4 | 362 | 137 | |
| R | -47 | 24 | 29 | 709 | 1765 |
| Enter | 379 | 34 | 497 | 855 | 1765 |
| Exit | 41 | 820 | 808 | 96 | 1765 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 34 | 20 | 16 | 55 | |
| T | 60 | 74 | 210 | 169 | |
| R | 17 | 122 | 11 | 21 | 809 |
| Enter | 112 | 216 | 237 | 245 | 809 |
| Exit | 126 | 111 | 366 | 206 | 809 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 0 | 0 | 25 | |
| T | 130 | 65 | 0 | 0 | |
| R | 0 | 250 | 0 | 5 | 480 |
| Enter | 135 | 315 | 0 | 30 | 480 |
| Exit | 155 | 70 | 255 | 0 | 480 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

*Numbers taken from BCP TIS
\\vhb\gbl\proj\SBurlington\57881.00 BTV Mall Traffic\docs\VARIOUS\Background\Champlain Parkway Volumes\

Note: Champlain Parkway / Flynn Ave Volumes from Petra Cliffs No Build Scenario

## Balancing & BCP

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | -1 | -11 | | |
| T | | 11 | | | |
| R | | | 34 | | 33 |
| Enter | 0 | 10 | 23 | 0 | 33 |
| Exit | 34 | 0 | 0 | -1 | 33 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | 23 | 14 | |
| R | | | 5 | | 42 |
| Enter | 0 | 0 | 28 | 14 | 42 |
| Exit | 5 | 0 | 23 | 14 | 42 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | 5 | 23 | -51 | |
| R | | | | | -23 |
| Enter | 0 | 5 | 23 | -51 | -23 |
| Exit | 0 | 5 | 23 | -51 | -23 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | -139 | | -82 | | |
| T | | | 48 | 7 | |
| R | 67 | | | -17 | -116 |
| Enter | -72 | 0 | -34 | -10 | -116 |
| Exit | 0 | -99 | -91 | 74 | -116 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | -56 | 56 | | | |
| R | | | | | 0 |
| Enter | -56 | 56 | 0 | 0 | 0 |
| Exit | -56 | 56 | 0 | 0 | 0 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

Note: Champlain Parkway /
Flynn Ave Volumes from Petra
Cliffs No Build Scenario

## 2024 AM No Build, BCP & CP (Balanced)

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 17 | 0 | 3 | |
| T | 1 | 1 | 2 | 0 | |
| R | 0 | 13 | 27 | 0 | 64 |
| Enter | 1 | 31 | 28 | 3 | 64 |
| Exit | 31 | 1 | 15 | 17 | 64 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 569 | 219 | 0 | |
| T | 34 | 152 | 0 | 0 | |
| R | 65 | 0 | 254 | 0 | 1293 |
| Enter | 99 | 721 | 473 | 0 | 1293 |
| Exit | 288 | 371 | 0 | 634 | 1293 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 40 | 80 | 10 | |
| T | 0 | 60 | 443 | 609 | |
| R | 25 | 25 | 65 | 15 | 1377 |
| Enter | 30 | 125 | 588 | 634 | 1377 |
| Exit | 75 | 155 | 473 | 674 | 1377 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 35 | 15 | 80 | 5 | |
| T | 75 | 65 | 538 | 609 | |
| R | 35 | 15 | 5 | 60 | 1538 |
| Enter | 145 | 95 | 623 | 674 | 1538 |
| Exit | 85 | 205 | 588 | 659 | 1538 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 284 | 6 | 25 | 8 | |
| T | 4 | 4 | 410 | 144 | |
| R | 20 | 24 | 29 | 692 | 1649 |
| Enter | 307 | 34 | 463 | 845 | 1649 |
| Exit | 41 | 721 | 717 | 170 | 1649 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 34 | 20 | 16 | 55 | |
| T | 60 | 74 | 210 | 169 | |
| R | 17 | 122 | 11 | 21 | 809 |
| Enter | 112 | 216 | 237 | 245 | 809 |
| Exit | 126 | 111 | 366 | 206 | 809 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 0 | 0 | 25 | |
| T | 74 | 121 | 0 | 0 | |
| R | 0 | 250 | 0 | 5 | 480 |
| Enter | 79 | 371 | 0 | 30 | 480 |
| Exit | 99 | 126 | 255 | 0 | 480 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

Note: Champlain Parkway /
Flynn Ave Volumes from Petra
Cliffs No Build Scenario

## 2024 AM Build, BCP & CP

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 17 | 0 | 26 | |
| T | 1 | 1 | 3 | 0 | |
| R | 0 | 151 | 27 | 0 | 226 |
| Enter | 1 | 169 | 30 | 26 | 226 |
| Exit | 53 | 1 | 154 | 17 | 226 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 569 | 302 | 0 | |
| T | 45 | 207 | 0 | 0 | |
| R | 77 | 0 | 254 | 0 | 1454 |
| Enter | 122 | 776 | 556 | 0 | 1454 |
| Exit | 299 | 509 | 0 | 646 | 1454 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 40 | 80 | 10 | |
| T | 0 | 60 | 526 | 621 | |
| R | 25 | 25 | 65 | 15 | 1471 |
| Enter | 30 | 125 | 671 | 646 | 1471 |
| Exit | 75 | 155 | 556 | 686 | 1471 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 41 | 15 | 80 | 6 | |
| T | 75 | 65 | 614 | 619 | |
| R | 35 | 16 | 5 | 61 | 1632 |
| Enter | 151 | 96 | 699 | 686 | 1632 |
| Exit | 86 | 206 | 671 | 669 | 1632 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 295 | 6 | 33 | 8 | |
| T | 4 | 4 | 410 | 144 | |
| R | 20 | 24 | 29 | 739 | 1716 |
| Enter | 319 | 34 | 472 | 892 | 1716 |
| Exit | 41 | 776 | 729 | 170 | 1716 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 34 | 20 | 16 | 55 | |
| T | 60 | 74 | 216 | 169 | |
| R | 17 | 124 | 11 | 21 | 818 |
| Enter | 112 | 219 | 243 | 245 | 818 |
| Exit | 126 | 111 | 375 | 206 | 818 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 0 | 0 | 25 | |
| T | 97 | 259 | 0 | 0 | |
| R | 0 | 250 | 0 | 5 | 640 |
| Enter | 102 | 509 | 0 | 30 | 640 |
| Exit | 122 | 264 | 255 | 0 | 640 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

# Computations - PM Peak Hour Vols

Project: Blodgett | Location: Burlington, VT | design year 1: 2019
Calculated by: NAT | Date: | design year 2: 2024
Checked by: | Date:

Existing Blodgett Trips (small office):
Enter: 7
Exit: 16

NET NEW TRIPS: New Veh. Trips:
Entering 23
Exiting 119

Build Year Growth Factor: 1.02

* underlined roadway is N/S

## 1 Central Ave / Lakeside Ave — Unadjusted Data (w/ current Blodgett traffic)

**Central Ave / Lakeside Ave / St. John's Club Drive**
6/12/18
16:00-18:00

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 1 | 31 | 1 | 23 | |
| T | 11 | 9 | 0 | 1 | |
| R | 1 | 30 | 13 | 1 | 122 |
| Enter | 13 | 70 | 14 | 25 | 122 |
| Exit | 47 | 11 | 31 | 33 | 122 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 2 | 6 | 8 | 16 | PHF |
| Peak Hour | 16:15-17:15 | | | | |

## 1 Central Ave / Lakeside Ave — Removing Blodgett Traffic

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 1 | 0 | 0 | 23 | |
| T | 0 | 0 | 0 | 1 | |
| R | 0 | 30 | 0 | 1 | 56 |
| Enter | 1 | 30 | 0 | 25 | 56 |
| Exit | 23 | 1 | 31 | 1 | 56 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 1 Central Ave / Lakeside Ave — Unadjusted Data (w/o current Blodgett traffic)

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 31 | 1 | 0 | |
| T | 11 | 9 | 0 | 0 | |
| R | 1 | 0 | 13 | 0 | 66 |
| Enter | 12 | 40 | 14 | 0 | 66 |
| Exit | 24 | 10 | 0 | 32 | 66 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

ATR ID:
ATR/CTC AADT:
assume same as #3
DHV:
Corr. Count:
DHV Adjust:
TMC YR adjust:
Total Adjust: 1.30

## 1 Central Ave / Lakeside Ave — Existing Blodgett Trips

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | 16 | |
| T | | | 0 | | |
| R | | 7 | | | 23 |
| Enter | 0 | 7 | 0 | 16 | 23 |
| Exit | 16 | 0 | 7 | 0 | 23 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 1 Central Ave / Lakeside Ave — 2019 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 40 | 1 | 16 | |
| T | 11 | 9 | 0 | 0 | |
| R | 1 | 7 | 17 | 0 | 102 |
| Enter | 12 | 56 | 18 | 16 | 102 |
| Exit | 44 | 10 | 7 | 41 | 102 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 2 | 6 | 8 | 16 | PHF |
| Peak Hour | | | | | |

## 1 Central Ave / Lakeside Ave — Trip Generation - Blodgett Site, 2019 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | | | 118 | |
| T | | | 0 | 1 | |
| R | | 23 | | 0 | 142 |
| Enter | 0 | 23 | 0 | 119 | 142 |
| Exit | 118 | 0 | 23 | 1 | 142 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 1 Central Ave / Lakeside Ave — Trip Generation -Blodgett Site, 2024 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | | | 118 | |
| T | | | 0 | 1 | |
| R | | 23 | | 0 | 142 |
| Enter | 0 | 23 | 0 | 119 | 142 |
| Exit | 118 | 0 | 23 | 1 | 142 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 1 Central Ave / Lakeside Ave — 2024 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 41 | 1 | 16 | |
| T | 11 | 9 | 0 | 0 | |
| R | 1 | 7 | 17 | 0 | 103 |
| Enter | 12 | 57 | 18 | 16 | 103 |
| Exit | 44 | 10 | 7 | 42 | 103 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 2 | 6 | 8 | 16 | PHF |
| Peak Hour | | | | | |

## 2 Champlain Parkway / Lakeside Ave — Unadjusted Data (w/ current Blodgett traffic)

**Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 362 | 122 | | | |
| R | | | | | 484 |
| Enter | 362 | 122 | 0 | 0 | 484 |
| Exit | 362 | 122 | 0 | 0 | 484 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 2 Champlain Parkway / Lakeside Ave — Removing Blodgett Traffic

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 23 | 30 | | | |
| R | | | | | 53 |
| Enter | 23 | 30 | 0 | 0 | 53 |
| Exit | 23 | 30 | 0 | 0 | 53 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 2 Champlain Parkway / Lakeside Ave — Unadjusted Data (w/o current Blodgett traffic)

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 339 | 92 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 431 |
| Enter | 339 | 92 | 0 | 0 | 431 |
| Exit | 339 | 92 | 0 | 0 | 431 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

ATR ID:
ATR/CTC AADT:
K Factor:
DHV Eqn:
DHV (k factor):
Corr. Count:
DHV Adjust:
TMC YR adjust:
Total Adjust: 1.00

## 2 Champlain Parkway / Lakeside Ave — Existing Blodgett Trips

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 16 | 7 | | | |
| R | | | | | 23 |
| Enter | 16 | 7 | 0 | 0 | 23 |
| Exit | 16 | 7 | 0 | 0 | 23 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 2 Champlain Parkway / Lakeside Ave — 2019 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 457 | 126 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 583 |
| Enter | 457 | 126 | 0 | 0 | 583 |
| Exit | 457 | 126 | 0 | 0 | 583 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 2 Champlain Parkway / Lakeside Ave — Trip Generation - Blodgett Site, 2019 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 118 | 23 | | | |
| R | | | | | 141 |
| Enter | 118 | 23 | 0 | 0 | 141 |
| Exit | 118 | 23 | 0 | 0 | 141 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 2 Champlain Parkway / Lakeside Ave — Trip Generation -Blodgett Site, 2024 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | 11 | | |
| T | 47 | 12 | | | |
| R | 71 | | | | 141 |
| Enter | 118 | 12 | 11 | 0 | 141 |
| Exit | 47 | 23 | 0 | 71 | 141 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 2 Champlain Parkway / Lakeside Ave — 2024 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 466 | 129 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 595 |
| Enter | 466 | 129 | 0 | 0 | 595 |
| Exit | 466 | 129 | 0 | 0 | 595 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 3 Champlain Parkway / Sears Lane — Unadjusted Data (w/ current Blodgett traffic)

**Champlain Parkway / Sears Ln**

Estimated

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 87 | 24 | | | |
| R | | | | | 111 |
| Enter | 87 | 24 | 0 | 0 | 111 |
| Exit | 87 | 24 | 0 | 0 | 111 |
| % Trucks | | | | | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

## 3 Champlain Parkway / Sears Lane — Removing Blodgett Traffic

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 3 Champlain Parkway / Sears Lane — Unadjusted Data (w/o current Blodgett traffic)

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 87 | 24 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 111 |
| Enter | 87 | 24 | 0 | 0 | 111 |
| Exit | 87 | 24 | 0 | 0 | 111 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.00

## 3 Champlain Parkway / Sears Ln — Existing Blodgett Trips

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 0 | 0 | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 3 Champlain Parkway / Sears Ln — 2019 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 87 | 24 | | | |
| R | | | | | 111 |
| Enter | 87 | 24 | 0 | 0 | 111 |
| Exit | 87 | 24 | 0 | 0 | 111 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 3 Champlain Parkway / Sears Ln — Trip Generation - Blodgett Site, 2019 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 3 Champlain Parkway / Sears Ln — Trip Generation -Blodgett Site, 2024 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | 11 | 71 | |
| R | | | | | 81 |
| Enter | 0 | 0 | 11 | 71 | 81 |
| Exit | 0 | 0 | 11 | 71 | 81 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 3 Champlain Parkway / Sears Ln — 2024 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 88 | 25 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 113 |
| Enter | 88 | 25 | 0 | 0 | 113 |
| Exit | 88 | 25 | 0 | 0 | 113 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 4 Champlain Parkway / Flynn Ave — Unadjusted Data (w/ current Blodgett traffic)

**Champlain Parkway / Flynn Ave**

From Petra Cliffs TIS

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 0 | 0 | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | | | | | |

## 4 Champlain Parkway / Flynn Ave — Removing Blodgett Traffic

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 4 Champlain Parkway / Flynn Ave — Unadjusted Data (w/o current Blodgett traffic)

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

Total Adjust: 1.00

## 4 Champlain Parkway / Flynn Ave — Existing Blodgett Trips

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 0 | 0 | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 4 Champlain Parkway / Flynn Ave — 2019 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 0 | 0 | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 4 Champlain Parkway / Flynn Ave — Trip Generation - Blodgett Site, 2019 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 2 | 10 | | | |
| R | | | | | 12 |
| Enter | 2 | 10 | 0 | 0 | 12 |
| Exit | 2 | 10 | 0 | 0 | 12 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 4 Champlain Parkway / Flynn Ave — Trip Generation -Blodgett Site, 2024 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 2 | | | 4 | |
| T | | | 8 | 60 | |
| R | | 1 | | 7 | 82 |
| Enter | 2 | 1 | 8 | 71 | 82 |
| Exit | 4 | 7 | 11 | 60 | 82 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 4 Champlain Parkway / Flynn Ave — 2024 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 5 Pine St / Lakeside Ave — Unadjusted Data (w/ current Blodgett traffic)

**Pine St / Lakeside Ave**
6/12/2018
16:00-18:00

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 157 | 1 | 75 | 1 | |
| T | 0 | 0 | 372 | 361 | |
| R | 309 | 2 | 0 | 86 | 1364 |
| Enter | 466 | 3 | 447 | 448 | 1364 |
| Exit | 1 | 161 | 531 | 671 | 29 |
| % Trucks | 1% | 0% | 2% | 2% | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | 16:30-17:30 | | | | |

## 5 Pine St / Lakeside Ave — Removing Blodgett Traffic

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 8 | 0 | 13.98 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 15 | 0 | 0 | 16.02 | 53 |
| Enter | 23 | 0 | 14 | 16 | 53 |
| Exit | 0 | 30 | 8 | 15 | 53 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 5 Pine St / Lakeside Ave — Unadjusted Data (w/o current Blodgett traffic)

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 149 | 1 | 61 | 1 | |
| T | 0 | 0 | 372 | 361 | |
| R | 294 | 2 | 0 | 70 | 1311 |
| Enter | 443 | 3 | 433 | 432 | 1311 |
| Exit | 1 | 131 | 523 | 656 | 1311 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

ATR ID: BURL45
ATR/CTC AADT: 13076
K Factor:
DHV Eqn:
DHV (k factor): 1400
Corr. Count: 1089
DHV Adjust: 1.29
TMC YR adjust: 1.01
Total Adjust: 1.30

## 5 Pine St / Lakeside Ave — Existing Blodgett Trips

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | | 3 | | |
| T | | | | | |
| R | 11 | | | 4 | 23 |
| Enter | 16 | 0 | 3 | 4 | 23 |
| Exit | 0 | 7 | 5 | 11 | 23 |
| % Trucks | 2% | 1% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 5 Pine St / Lakeside Ave — 2019 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 199 | 1 | 82 | 1 | |
| T | 0 | 0 | 484 | 469 | |
| R | 392 | 2 | 0 | 95 | 1726 |
| Enter | 592 | 3 | 566 | 565 | 1726 |
| Exit | 1 | 177 | 685 | 863 | 1726 |
| % Trucks | 1% | 0% | 2% | 2% | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | | | | | |

## 5 Pine St / Lakeside Ave — Trip Generation - Blodgett Site, 2019 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 40 | | 11 | | |
| T | 0 | | | | |
| R | 78 | | | 12 | 141 |
| Enter | 118 | 0 | 11 | 12 | 141 |
| Exit | 0 | 23 | 40 | 78 | 141 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 5 Pine St / Lakeside Ave — Trip Generation -Blodgett Site, 2024 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 40 | | 0 | | |
| T | | | | | |
| R | 7 | | | 12 | 59 |
| Enter | 47 | 0 | 0 | 12 | 59 |
| Exit | 0 | 12 | 40 | 7 | 59 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 5 Pine St / Lakeside Ave — 2024 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 203 | 1 | 84 | 1 | |
| T | 0 | 0 | 493 | 479 | |
| R | 400 | 2 | 0 | 96 | 1760 |
| Enter | 604 | 3 | 577 | 576 | 1760 |
| Exit | 1 | 181 | 699 | 880 | 1760 |
| % Trucks | 1% | 0% | 2% | 2% | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | | | | | |

## 6 Pine St / Flynn Ave — Unadjusted Data (w/ current Blodgett traffic)

**Pine St / Flynn Ave**
6/12/2018
16:00-18:00

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 74 | 27 | 30 | 163 | |
| T | 131 | 161 | 295 | 450 | |
| R | 52 | 150 | 16 | 94 | 1643 |
| Enter | 257 | 338 | 341 | 707 | 1643 |
| Exit | 310 | 285 | 519 | 529 | 1643 |
| % Trucks | 1% | 2% | 2% | 1% | |
| Peds | 10 | 23 | 9 | 22 | PHF |
| Peak Hour | 16:45-17:45 | | | | |

## 6 Pine St / Flynn Ave — Removing Blodgett Traffic

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 2 | 0 | 0 | 4 | |
| T | 0 | 0 | 8 | 10 | |
| R | 0 | 4 | 0 | 2 | 29 |
| Enter | 2 | 4 | 8 | 15 | 29 |
| Exit | 4 | 2 | 14 | 10 | 29 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 6 Pine St / Flynn Ave — Unadjusted Data (w/o current Blodgett traffic)

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 72 | 27 | 30 | 159 | |
| T | 131 | 161 | 287 | 440 | |
| R | 52 | 146 | 16 | 92 | 1614 |
| Enter | 255 | 334 | 333 | 692 | 1614 |
| Exit | 306 | 283 | 505 | 519 | 1614 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

ATR ID: BURL45
ATR/CTC AADT: 13076
K Factor:
DHV Eqn:
DHV (k factor): 1400
Corr. Count: 1197
DHV Adjust: 1.17
TMC YR adjust: 1.01
Total Adjust: 1.18

## 6 Pine St / Flynn Ave — Existing Blodgett Trips

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | | | 2 | |
| T | | | 2 | 7 | |
| R | | 1 | | 1 | 14 |
| Enter | 0 | 1 | 2 | 11 | 14 |
| Exit | 2 | 1 | 3 | 7 | 14 |
| % Trucks | 2% | 1% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 6 Pine St / Flynn Ave — 2019 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 85 | 32 | 35 | 191 | |
| T | 155 | 190 | 341 | 526 | |
| R | 61 | 173 | 19 | 110 | 1918 |
| Enter | 301 | 395 | 395 | 827 | 1918 |
| Exit | 364 | 335 | 599 | 620 | 1918 |
| % Trucks | 1% | 2% | 2% | 1% | |
| Peds | 10 | 23 | 9 | 22 | PHF |
| Peak Hour | | | | | |

## 6 Pine St / Flynn Ave — Trip Generation - Blodgett Site, 2019 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 2 | | | 18 | |
| T | | | 6 | 50 | |
| R | | 3 | | 10 | 89 |
| Enter | 2 | 3 | 6 | 78 | 89 |
| Exit | 18 | 10 | 11 | 50 | 89 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 6 Pine St / Flynn Ave — Trip Generation -Blodgett Site, 2024 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | | | 2 | |
| T | | | 0 | 5 | |
| R | | 0 | | | 7 |
| Enter | 0 | 0 | 0 | 7 | 7 |
| Exit | 2 | 0 | 0 | 5 | 7 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 6 Pine St / Flynn Ave — 2024 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 87 | 32 | 36 | 194 | |
| T | 158 | 194 | 347 | 537 | |
| R | 63 | 177 | 19 | 112 | 1956 |
| Enter | 307 | 403 | 403 | 843 | 1956 |
| Exit | 371 | 342 | 611 | 632 | 1956 |
| % Trucks | 1% | 2% | 2% | 1% | |
| Peds | 10 | 23 | 9 | 22 | PHF |
| Peak Hour | | | | | |

## 7 Lakeside Ave / 128 Lakeside Ave — Unadjusted Data (w/ current Blodgett traffic)

**Lakeside Ave / 128 Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | 16:45-17:45 | | | | |

## 7 Pine St / Flynn Ave — Removing Blodgett Traffic

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 7 Lakeside Ave / 128 Lakeside Ave — Unadjusted Data (w/o current Blodgett traffic)

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

ATR ID:
ATR/CTC AADT:
K Factor:
DHV Eqn:
DHV (k factor):
Corr. Count:
DHV Adjust:
TMC YR adjust:
Total Adjust:

## 7 Lakeside Ave / 128 Lakeside Ave — Existing Blodgett Trips

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 7 Lakeside Ave / 128 Lakeside Ave — 2019 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 7 Lakeside Ave / 128 Lakeside Ave — Trip Generation - Blodgett Site, 2019 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 7 Lakeside Ave / 128 Lakeside Ave — Trip Generation -Blodgett Site, 2024 -

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 118 | 23 | | | |
| R | | | | | 141 |
| Enter | 118 | 23 | 0 | 0 | 141 |
| Exit | 118 | 23 | 0 | 0 | 141 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 7 Lakeside Ave / 128 Lakeside Ave — 2024 PM No Build

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 0 | 0 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 1% | 2% | 2% | 1% | |
| Peds | 10 | 23 | 9 | 22 | PHF |
| Peak Hour | | | | | |

Total traffic entering and exiting Blodgett Drive, including entrances and exits of the site's front parking lot, is removed

Assumed entrances and exits at driveways are not subject to adjustments. Numbers in the above tables are modified as such.

Assumed entrances and exits at driveways are not subject to adjustments. Numbers in the above tables are modified as such.

Turning movement distribution generated using proportions from current Blodgett traffic patterns.

% trip gen to/from Central Avenue: 1%
% trip gen to/from Lakeside Ave: 99%

% trip gen to/from Central Avenue: 1%
% trip gen of Lakeside Avenue trips utilizing Champlain Parkway: 60%

This column was created to compare to the CP. ETC+20 No B scenario given from the BCP TIS because those values did not well with count adjusted numbers. Additionally, since adjustr do not apply to drives, the enters and exits from the drives ar adjusted by the growth scaling factor (Blodgett Drive, St. John' and Fledman's Bagels)

PM Peak Hour Volumes

| NET NEW TRIPS: | New Veh. Trips: |
|---|---|
| Entering | 42 |
| Exiting | 57 |

Build Year Growt 1.02

## Trip Generation (BCP only)

**1: Central Ave/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Pine St/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | 37 | 46 | 83 |
| Enter | 0 | 0 | 37 | 46 | 83 |
| Exit | 0 | 0 | 37 | 46 | 83 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | 37 | 46 | 83 |
| Enter | 0 | 0 | 37 | 46 | 83 |
| Exit | 0 | 0 | 37 | 46 | 83 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Champlain Parkway 2028 No Build*

**1: Central Ave/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 505 | 245 | | | |
| R | | | | | 750 |
| Enter | 505 | 245 | 0 | 0 | 750 |
| Exit | 505 | 245 | 0 | 0 | 750 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 90 | 25 | | | |
| R | | | | | 115 |
| Enter | 90 | 25 | 0 | 0 | 115 |
| Exit | 90 | 25 | 0 | 0 | 115 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Pine St/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 180 | | 145 | | |
| T | | | 565 | 945 | |
| R | 325 | | | 100 | 2260 |
| Enter | 505 | 0 | 710 | 1045 | 2260 |
| Exit | 0 | 245 | 745 | 1270 | 2260 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 125 | 30 | 20 | 300 | |
| T | 155 | 140 | 380 | 815 | |
| R | 45 | 225 | 25 | 90 | 2350 |
| Enter | 325 | 395 | 425 | 1205 | 2350 |
| Exit | 480 | 250 | 730 | 890 | 2350 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Champlain Parkway 2028 Build*

**1: Central Ave/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 540 | 165 | 0 | |
| T | 160 | 85 | 0 | 0 | |
| R | 350 | 0 | 310 | 0 | 1610 |
| Enter | 510 | 625 | 475 | 0 | 1610 |
| Exit | 470 | 250 | 0 | 890 | 1610 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 10 | 30 | 5 | 15 | |
| T | 0 | 10 | 455 | 865 | |
| R | 80 | 10 | 55 | 10 | 1545 |
| Enter | 90 | 50 | 515 | 890 | 1545 |
| Exit | 70 | 25 | 475 | 975 | 1545 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Pine St/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 405 | | 15 | | |
| T | | | 330 | 505 | |
| R | 60 | | | 610 | 1925 |
| Enter | 465 | 0 | 345 | 1115 | 1925 |
| Exit | 0 | 625 | 735 | 565 | 1925 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 40 | 25 | 15 | 175 | |
| T | 80 | 80 | 70 | 235 | |
| R | 20 | 180 | 20 | 40 | 980 |
| Enter | 140 | 285 | 105 | 450 | 980 |
| Exit | 275 | 135 | 290 | 280 | 980 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Net Effect of Champlain Parkway

**1: Central Ave/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 567 | 87 | 0 | |
| T | -323 | -87 | 0 | 0 | |
| R | 323 | 0 | 388 | 0 | 955 |
| Enter | 0 | 480 | 475 | 0 | 955 |
| Exit | 65 | 0 | 0 | 890 | 955 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 10 | 30 | 5 | 15 | |
| T | -90 | -15 | 455 | 865 | |
| R | 80 | 10 | 55 | 10 | 1430 |
| Enter | 0 | 25 | 515 | 890 | 1430 |
| Exit | -20 | 0 | 475 | 975 | 1430 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Pine St/Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 220 | 0 | -75 | 0 | |
| T | 0 | 0 | -274 | -255 | |
| R | -286 | 0 | 0 | 555 | -115 |
| Enter | -66 | 0 | -349 | 300 | -115 |
| Exit | 0 | 480 | -54 | -541 | -115 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0.3 | 0.8 | 0.8 | 0.6 | |
| T | 0.5 | 0.6 | 0.2 | 0.3 | |
| R | 0.4 | 0.8 | 0.8 | 0.4 | 7 |
| Enter | 1 | 2 | 2 | 1 | 7 |
| Exit | 2 | 2 | 1 | 2 | 7 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Pine St/Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## Trip Generation -Petra Cliffs, 2024 -

**1: Central Ave / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | 8 | | | |
| T | | | | | |
| R | | | 13 | | 21 |
| Enter | 0 | 8 | 13 | 0 | 21 |
| Exit | 13 | 0 | 0 | 8 | 21 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | 13 | 8 | |
| R | | | | | 21 |
| Enter | 0 | 0 | 13 | 8 | 21 |
| Exit | 0 | 0 | 13 | 8 | 21 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 13 | | 12 | | |
| T | 23 | 17 | | | |
| R | 13 | | | 8 | 86 |
| Enter | 49 | 17 | 12 | 8 | 86 |
| Exit | 23 | 37 | 13 | 13 | 86 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**5: Pine St / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 13 | | | | |
| T | | | | | |
| R | | | | 8 | 21 |
| Enter | 13 | 0 | 0 | 8 | 21 |
| Exit | 0 | 8 | 13 | 0 | 21 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**6: Pine St / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 7 | | 1 | | |
| T | 12 | 10 | | | |
| R | 5 | | | 6 | 39 |
| Enter | 23 | 10 | 1 | 6 | 39 |
| Exit | 12 | 16 | 7 | 5 | 39 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

**7: Lakeside Ave / 128 Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | | | | | |
| Peds | | | | | PHF |
| Peak Hour | | | | | |

## 2019 PM Build

**1: Central Ave / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 40 | 1 | 134 | |
| T | 11 | 9 | 0 | 1 | |
| R | 1 | 30 | 17 | 0 | 244 |
| Enter | 12 | 79 | 18 | 135 | 244 |
| Exit | 162 | 10 | 30 | 42 | 244 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 2 | 6 | 8 | 16 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 575 | 149 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 724 |
| Enter | 575 | 149 | 0 | 0 | 724 |
| Exit | 575 | 149 | 0 | 0 | 724 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | 0 | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 87 | 24 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 111 |
| Enter | 87 | 24 | 0 | 0 | 111 |
| Exit | 87 | 24 | 0 | 0 | 111 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 2 | 10 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 12 |
| Enter | 2 | 10 | 0 | 0 | 12 |
| Exit | 2 | 10 | 0 | 0 | 12 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**5: Pine St / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 239 | 1 | 93 | 1 | |
| T | 0 | 0 | 484 | 469 | |
| R | 470 | 2 | 0 | 107 | 1866 |
| Enter | 709 | 3 | 577 | 577 | 1866 |
| Exit | 1 | 200 | 725 | 940 | 1866 |
| % Trucks | 1% | 0% | 2% | 2% | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | | | | | |

**6: Pine St / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 87 | 32 | 35 | 209 | |
| T | 155 | 190 | 347 | 576 | |
| R | 61 | 176 | 19 | 120 | 2007 |
| Enter | 303 | 398 | 401 | 905 | 2007 |
| Exit | 382 | 346 | 610 | 669 | 2007 |
| % Trucks | 1% | 2% | 2% | 1% | |
| Peds | 10 | 23 | 9 | 22 | PHF |
| Peak Hour | | | | | |

**7: Lakeside Ave / 128 Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 2024 PM No Build & BCP

**1: Central Ave / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 41 | 1 | 16 | |
| T | 11 | 9 | 0 | 0 | |
| R | 1 | 7 | 17 | 0 | 103 |
| Enter | 12 | 57 | 18 | 16 | 103 |
| Exit | 44 | 10 | 7 | 42 | 103 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 2 | 6 | 8 | 16 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 466 | 129 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 595 |
| Enter | 466 | 129 | 0 | 0 | 595 |
| Exit | 466 | 129 | 0 | 0 | 595 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 0 | 0 | 0 | |
| T | 88 | 25 | 0 | 0 | |
| R | 0 | 0 | 0 | 0 | 113 |
| Enter | 88 | 25 | 0 | 0 | 113 |
| Exit | 88 | 25 | 0 | 0 | 113 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**5: Pine St / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 203 | 1 | 84 | 1 | |
| T | 0 | 0 | 530 | 525 | |
| R | 400 | 2 | 0 | 96 | 1843 |
| Enter | 604 | 3 | 614 | 622 | 1843 |
| Exit | 1 | 181 | 736 | 926 | 1843 |
| % Trucks | 1% | 0% | 2% | 2% | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | | | | | |

**6: Pine St / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 87 | 32 | 36 | 194 | |
| T | 158 | 194 | 384 | 583 | |
| R | 63 | 177 | 19 | 112 | 2039 |
| Enter | 307 | 403 | 440 | 889 | 2039 |
| Exit | 371 | 342 | 648 | 678 | 2039 |
| % Trucks | 1% | 2% | 2% | 1% | |
| Peds | 10 | 23 | 9 | 22 | PHF |
| Peak Hour | | | | | |

**7: Lakeside Ave / 128 Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

## 2024 PM No Build & CP & Petra (unbalanced)

**1: Central Ave / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 41 | 1 | 16 | |
| T | 11 | 9 | 0 | 0 | |
| R | 1 | 7 | 17 | 0 | 103 |
| Enter | 12 | 57 | 18 | 16 | 103 |
| Exit | 44 | 10 | 7 | 42 | 103 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 575 | 87 | 0 | |
| T | 143 | 42 | 0 | 0 | |
| R | 323 | 0 | 401 | 0 | 1570 |
| Enter | 466 | 617 | 488 | 0 | 1570 |
| Exit | 544 | 129 | 0 | 898 | 1570 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 10 | 30 | 5 | 15 | |
| T | 0 | 10 | 468 | 873 | |
| R | 80 | 10 | 55 | 10 | 1565 |
| Enter | 90 | 50 | 528 | 898 | 1565 |
| Exit | 70 | 25 | 488 | 983 | 1565 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 123 | 25 | 112 | 10 | |
| T | 196 | 166 | 389 | 907 | |
| R | 124 | 15 | 5 | 74 | 2146 |
| Enter | 443 | 206 | 506 | 991 | 2146 |
| Exit | 211 | 352 | 527 | 1056 | 2146 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**5: Pine St / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 436 | 1 | 9 | 1 | |
| T | 0 | 0 | 256 | 270 | |
| R | 114 | 2 | 0 | 659 | 1749 |
| Enter | 551 | 3 | 265 | 930 | 1749 |
| Exit | 1 | 668 | 695 | 385 | 1749 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

**6: Pine St / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 34 | 27 | 28 | 113 | |
| T | 93 | 121 | 71 | 336 | |
| R | 32 | 141 | 15 | 56 | 1068 |
| Enter | 160 | 289 | 114 | 505 | 1068 |
| Exit | 222 | 204 | 246 | 396 | 1068 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

**7: Lakeside Ave / 128 Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 0 | 0 | 240 | |
| T | 180 | 170 | 0 | 0 | |
| R | 0 | 25 | 0 | 5 | 625 |
| Enter | 185 | 195 | 0 | 245 | 625 |
| Exit | 420 | 175 | 30 | 0 | 625 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

Note: Champlain Parkway / Flynn Ave Volumes from Petra Cliffs No Build Scenario

## Balancing & BCP

**1: Central Ave / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

**2: Champlain Parkway / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | 8 | | | |
| T | | | | | |
| R | | | 11 | | 19 |
| Enter | 0 | 8 | 11 | 0 | 19 |
| Exit | 11 | 0 | 0 | 8 | 19 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**3: Champlain Parkway / Sears Ln**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | 5 | | |
| T | | | 11 | 8 | |
| R | | | 10 | | 34 |
| Enter | 0 | 0 | 26 | 8 | 34 |
| Exit | 10 | 5 | 11 | 8 | 34 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**4: Champlain Parkway / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 14 | | 12 | | |
| T | 22 | 17 | 13 | -8 | |
| R | 13 | | | 8 | 91 |
| Enter | 49 | 17 | 25 | 0 | 91 |
| Exit | 22 | 37 | 27 | 5 | 91 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

**5: Pine St / Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | | | | |
| T | | | 54 | 23 | |
| R | | | | -23 | 59 |
| Enter | 5 | 0 | 54 | 0 | 59 |
| Exit | 0 | -23 | 59 | 23 | 59 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

**6: Pine St / Flynn Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | | | | | |
| R | | | | | 0 |
| Enter | 0 | 0 | 0 | 0 | 0 |
| Exit | 0 | 0 | 0 | 0 | 0 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

**7: Lakeside Ave / 128 Lakeside Ave**

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | | | | | |
| T | 46 | -66 | | | |
| R | | | | | -20 |
| Enter | 46 | -66 | 0 | 0 | -20 |
| Exit | 46 | -66 | 0 | 0 | -20 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

Note: Champlain Parkway / Flynn Ave Volumes from Petra Cliffs No Build Scenario

*\\vhb\gbl\proj\SBurlington\57881.00 BTV Mall Traffic\docs\VARIOUS\Background\Champlain Parkway Volumes\

build
t align
nents
re not
's Club,

## 2024 PM No Build, BCP & CP & Petra (Balanced)

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 41 | 1 | 16 | |
| T | 11 | 9 | 0 | 0 | |
| R | 1 | 7 | 17 | 0 | 103 |
| Enter | 12 | 57 | 18 | 16 | 103 |
| Exit | 44 | 10 | 7 | 42 | 103 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 583 | 87 | 0 | |
| T | 143 | 42 | 0 | 0 | |
| R | 323 | 0 | 412 | 0 | 1589 |
| Enter | 466 | 625 | 499 | 0 | 1589 |
| Exit | 555 | 129 | 0 | 906 | 1589 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 10 | 30 | 10 | 15 | |
| T | 0 | 10 | 479 | 881 | |
| R | 80 | 10 | 65 | 10 | 1599 |
| Enter | 90 | 50 | 554 | 906 | 1599 |
| Exit | 80 | 30 | 499 | 991 | 1599 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 137 | 25 | 124 | 10 | |
| T | 218 | 183 | 402 | 899 | |
| R | 137 | 15 | 5 | 82 | 2237 |
| Enter | 492 | 223 | 531 | 991 | 2237 |
| Exit | 233 | 389 | 554 | 1061 | 2237 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 441 | 1 | 9 | 1 | |
| T | 0 | 0 | 310 | 293 | |
| R | 114 | 2 | 0 | 636 | 1808 |
| Enter | 556 | 3 | 319 | 930 | 1808 |
| Exit | 1 | 645 | 754 | 408 | 1808 |
| % Trucks | 9% | 0% | 2% | 9% | |
| Peds | 12 | 19 | 6 | 4 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 34 | 27 | 28 | 113 | |
| T | 93 | 121 | 71 | 336 | |
| R | 32 | 141 | 15 | 56 | 1068 |
| Enter | 160 | 289 | 114 | 505 | 1068 |
| Exit | 222 | 204 | 246 | 396 | 1068 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 0 | 0 | 240 | |
| T | 226 | 104 | 0 | 0 | |
| R | 0 | 25 | 0 | 5 | 605 |
| Enter | 231 | 129 | 0 | 245 | 605 |
| Exit | 466 | 109 | 30 | 0 | 605 |
| % Trucks | 9% | 2% | 1% | 6% | |
| Peds | 9 | 54 | 5 | 36 | PHF |
| Peak Hour | | | | | |

Note: Champlain Parkway / Flynn Ave Volumes from Petra Cliffs No Build Scenario

## 2024 PM Build, BCP & CP & Petra

### 1: Central Ave / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 41 | 1 | 134 | |
| T | 11 | 9 | 0 | 1 | |
| R | 1 | 30 | 17 | 0 | 245 |
| Enter | 12 | 80 | 19 | 135 | 245 |
| Exit | 162 | 10 | 30 | 43 | 245 |
| % Trucks | 25% | 10% | 0% | 20% | |
| Peds | 3 | 0 | 0 | 1 | PHF |
| Peak Hour | | | | | |

### 2: Champlain Parkway / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 0 | 583 | 98 | 0 | |
| T | 190 | 54 | 0 | 0 | |
| R | 394 | 0 | 412 | 0 | 1730 |
| Enter | 584 | 637 | 510 | 0 | 1730 |
| Exit | 602 | 152 | 0 | 976 | 1730 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 3: Champlain Parkway / Sears Ln

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 10 | 30 | 10 | 15 | |
| T | 0 | 10 | 490 | 951 | |
| R | 80 | 10 | 65 | 10 | 1681 |
| Enter | 90 | 50 | 565 | 976 | 1681 |
| Exit | 80 | 30 | 510 | 1061 | 1681 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 4: Champlain Parkway / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 139 | 25 | 124 | 14 | |
| T | 218 | 183 | 410 | 959 | |
| R | 137 | 16 | 5 | 89 | 2319 |
| Enter | 494 | 224 | 539 | 1062 | 2319 |
| Exit | 237 | 396 | 565 | 1121 | 2319 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

### 5: Pine St / Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 482 | 1 | 9 | 1 | |
| T | 0 | 0 | 310 | 293 | |
| R | 121 | 2 | 0 | 648 | 1867 |
| Enter | 603 | 3 | 319 | 942 | 1867 |
| Exit | 1 | 658 | 794 | 415 | 1867 |
| % Trucks | 1% | 0% | 2% | 2% | |
| Peds | 7 | 38 | 9 | 7 | PHF |
| Peak Hour | | | | | |

### 6: Pine St / Flynn Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 34 | 27 | 28 | 116 | |
| T | 93 | 121 | 71 | 341 | |
| R | 32 | 141 | 15 | 56 | 1075 |
| Enter | 160 | 289 | 114 | 512 | 1075 |
| Exit | 224 | 204 | 246 | 400 | 1075 |
| % Trucks | 1% | 2% | 2% | 1% | |
| Peds | 10 | 23 | 9 | 22 | PHF |
| Peak Hour | | | | | |

### 7: Lakeside Ave / 128 Lakeside Ave

| | EB | WB | NB | SB | |
|---|---|---|---|---|---|
| L | 5 | 0 | 0 | 240 | |
| T | 344 | 127 | 0 | 0 | |
| R | 0 | 25 | 0 | 5 | 746 |
| Enter | 349 | 152 | 0 | 245 | 746 |
| Exit | 584 | 132 | 30 | 0 | 746 |
| % Trucks | 0% | 0% | 0% | 0% | |
| Peds | 0 | 0 | 0 | 0 | PHF |
| Peak Hour | | | | | |

# Trip Generation Calculations and Trip Distribution

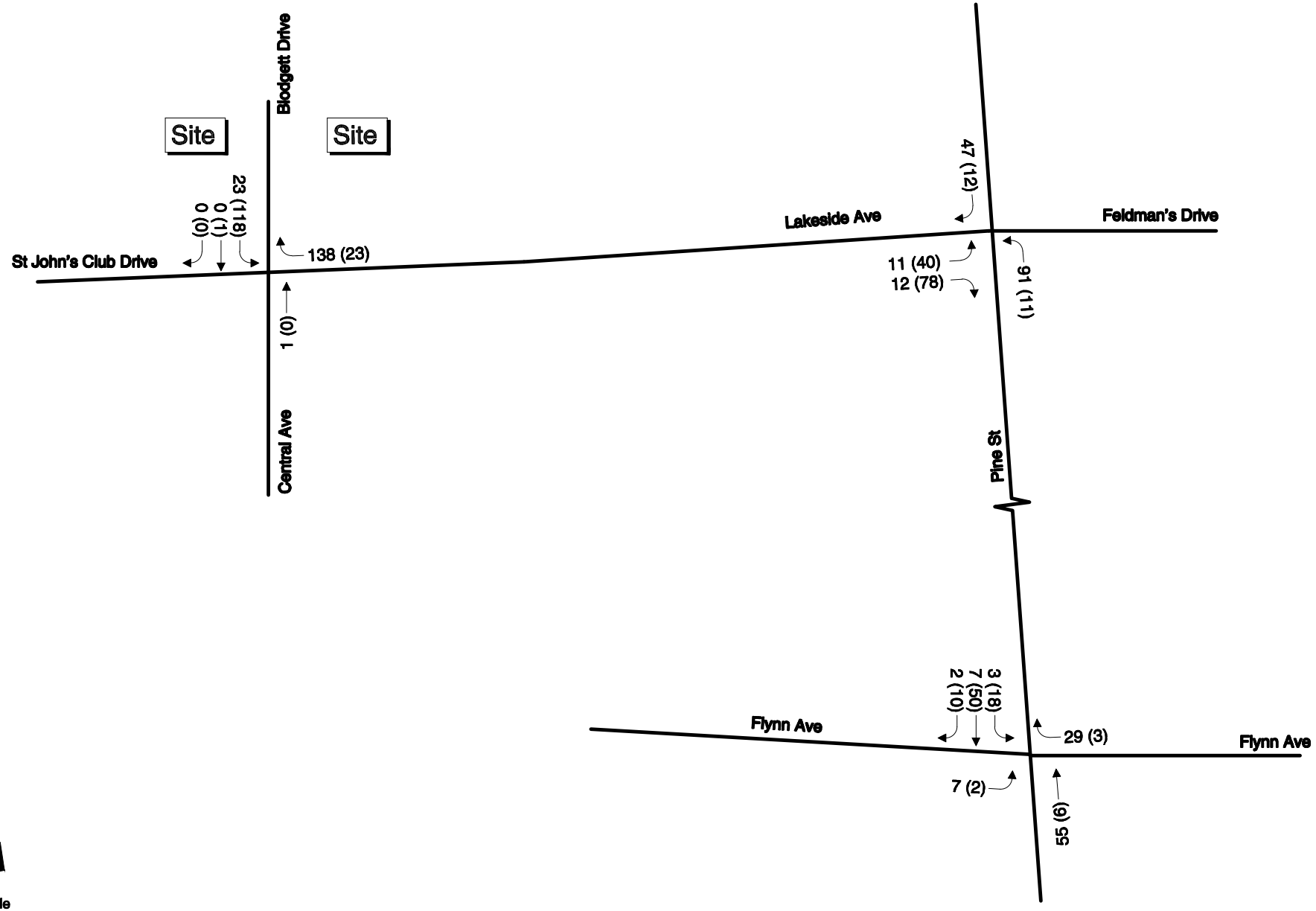
**Trip Generation - Blodgett Site**

Total Site generated trips (not accounting for internal, pass-by, or diverted trips)

| Site Land Uses and Descriptions | | | | Weekday AM Peak Hour of Adajcent Street | | | | Weekday PM Peak Hour of Adajcent Stree | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Code | Land Use | Size | Unit | Total Trips | % Entering | Entering | Exiting | Total Trips | % Entering | Entering | Exiting |
| 1 | 2 | 3 | 4 | | | | | | | | |
| **EXISTING** | | | | | | | | | | | |
| 712 | Small Office Building | 9.2 | 1k sf | **18** | 83% | **15** | **3** | **23** | 32% | **7** | **16** |
| | | | | **18** | | **15** | **3** | **23** | | **7** | **16** |
| **PROPOSED** | | | | | | | | | | | |
| 712 | Small Office Building | 9.2 | 1k sf | 18 | 83% | 15 | 3 | 23 | 32% | 7 | 16 |
| 710 | General Office Building | 52 | 1k sf | 75 | 86% | 64 | 11 | 61 | 16% | 10 | 51 |
| 710 | General Office Building | 84.5 | 1k sf | 106 | 86% | 91 | 15 | 97 | 16% | 16 | 81 |
| | | | | **199** | | **170** | **29** | **181** | | **33** | **148** |
| | | | | **Total** | | **Entering** | **Exiting** | **Total Trips** | | **Entering** | **Exiting** |
| | | | **NET NEW TRIPS** | **181** | | **155** | **26** | **158** | | **26** | **132** |

Source: Trip Generation, 10th Edition, Institute of Transportation Engineers, Washington D.C., 2017.

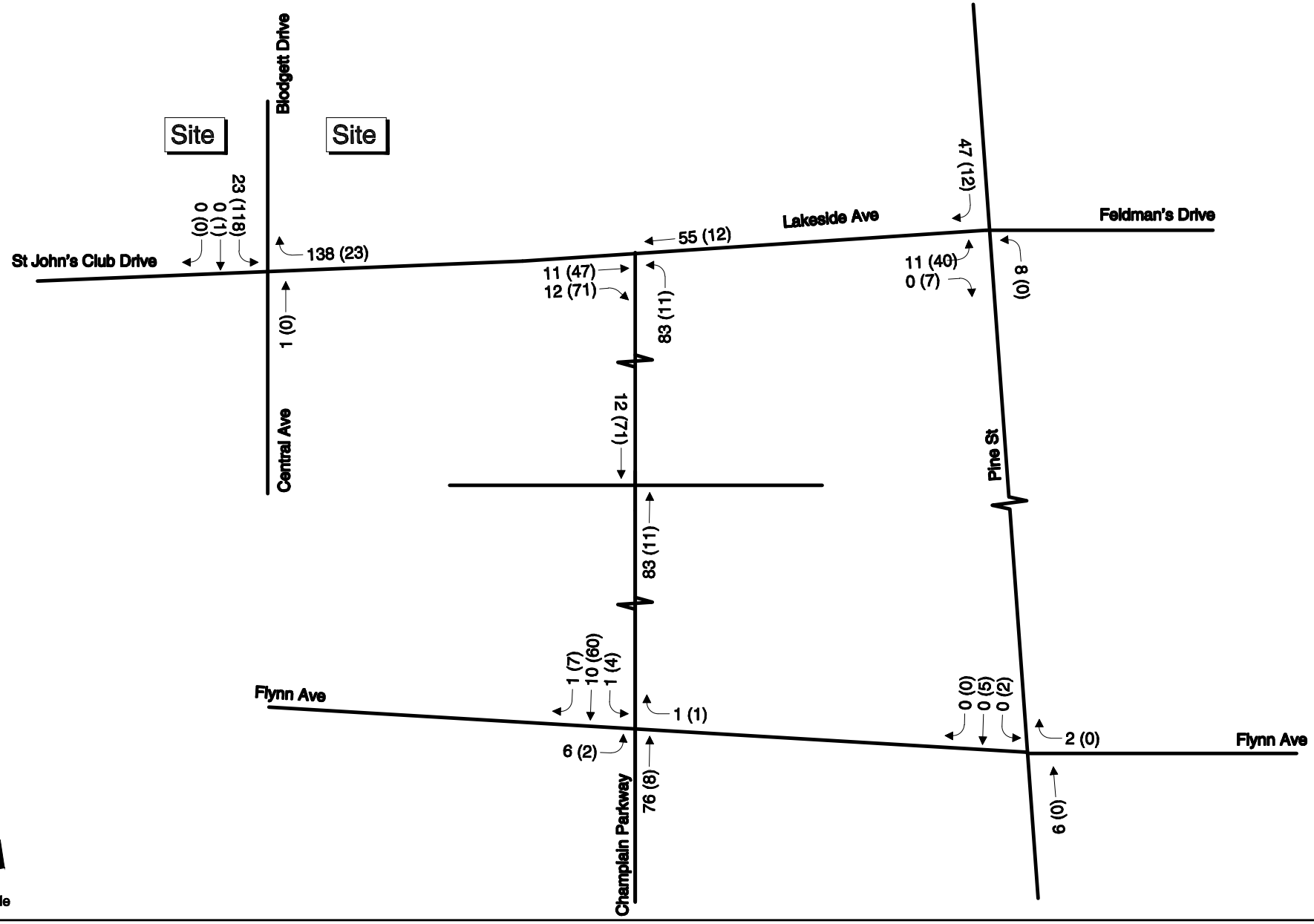
\\vhb\gbl\proj\SBurlington\58083.00 LandPlan Blodgett\cad\te\planmisc\Complete TraffNet.dwg




Legend
AM Peak Hour
(PM Peak Hour)

Figure 3
2019 Blodgett Trip Distribution,
Peak Hour Traffic Volumes

\\vhb\gbl\proj\SBurlington\58083.00 LandPlan Blodgett\cad\te\planmisc\Complete TraffNet.dwg




Legend

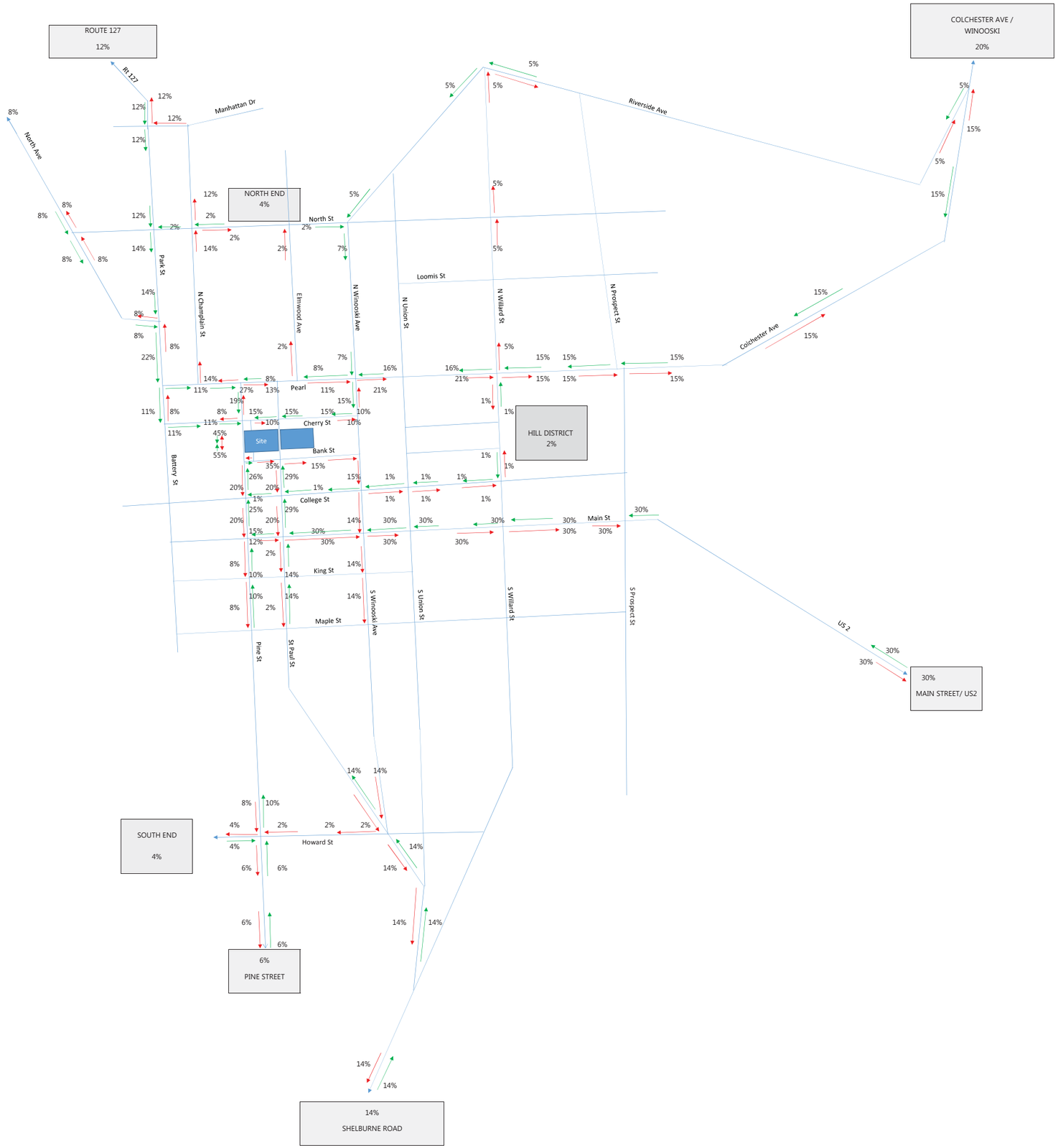
AM Peak Hour
(PM Peak Hour)

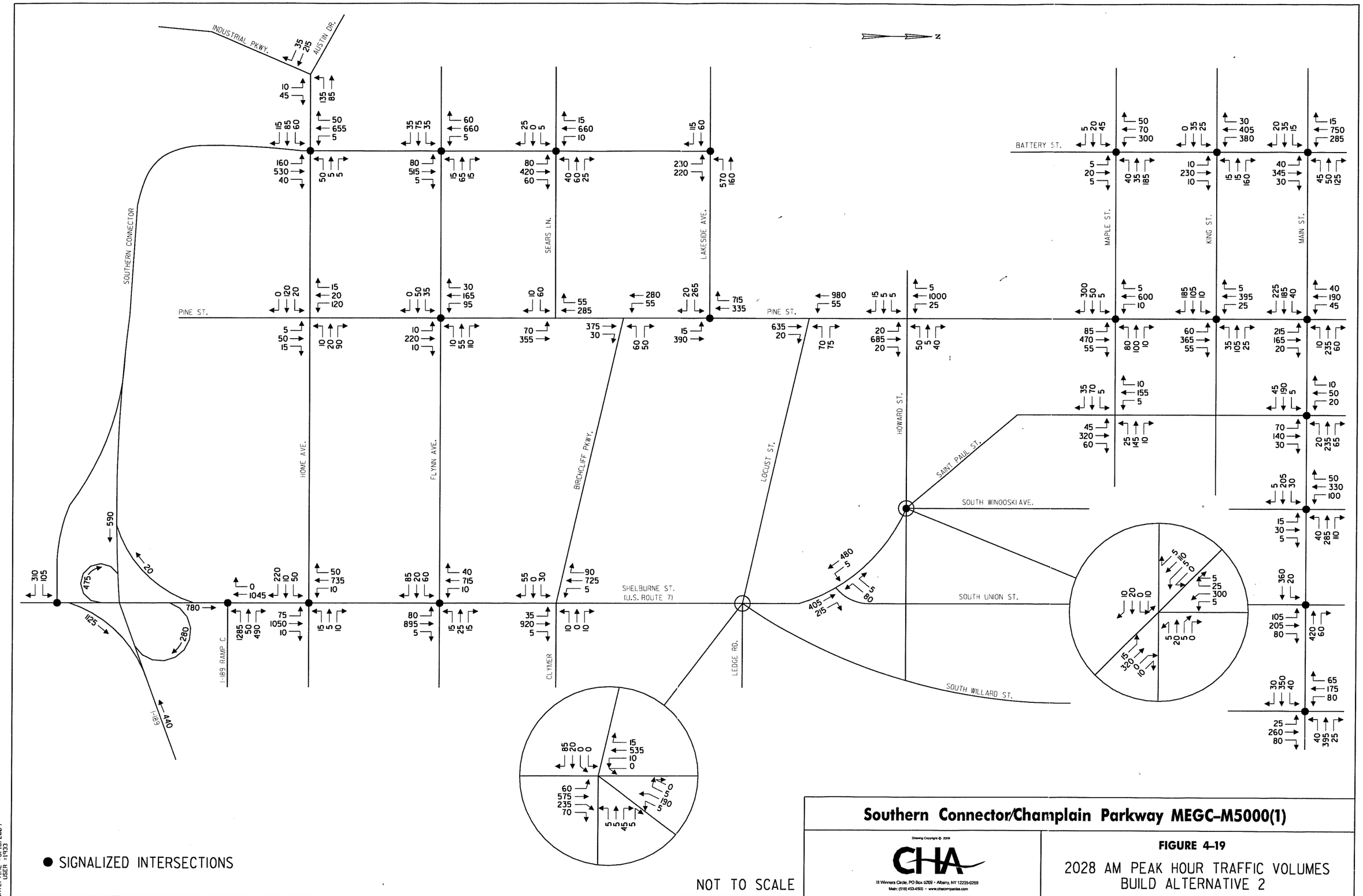
Figure 4

2024 Blodgett Trip Distribution,
Peak Hour Traffic Volumes

# Trip Distribution: Burlington City Place & Champlain Parkway

# Trip Generation Assumptions






**Southern Connector/Champlain Parkway MEGC-M5000(1)**

Drawing Copyright © 2009

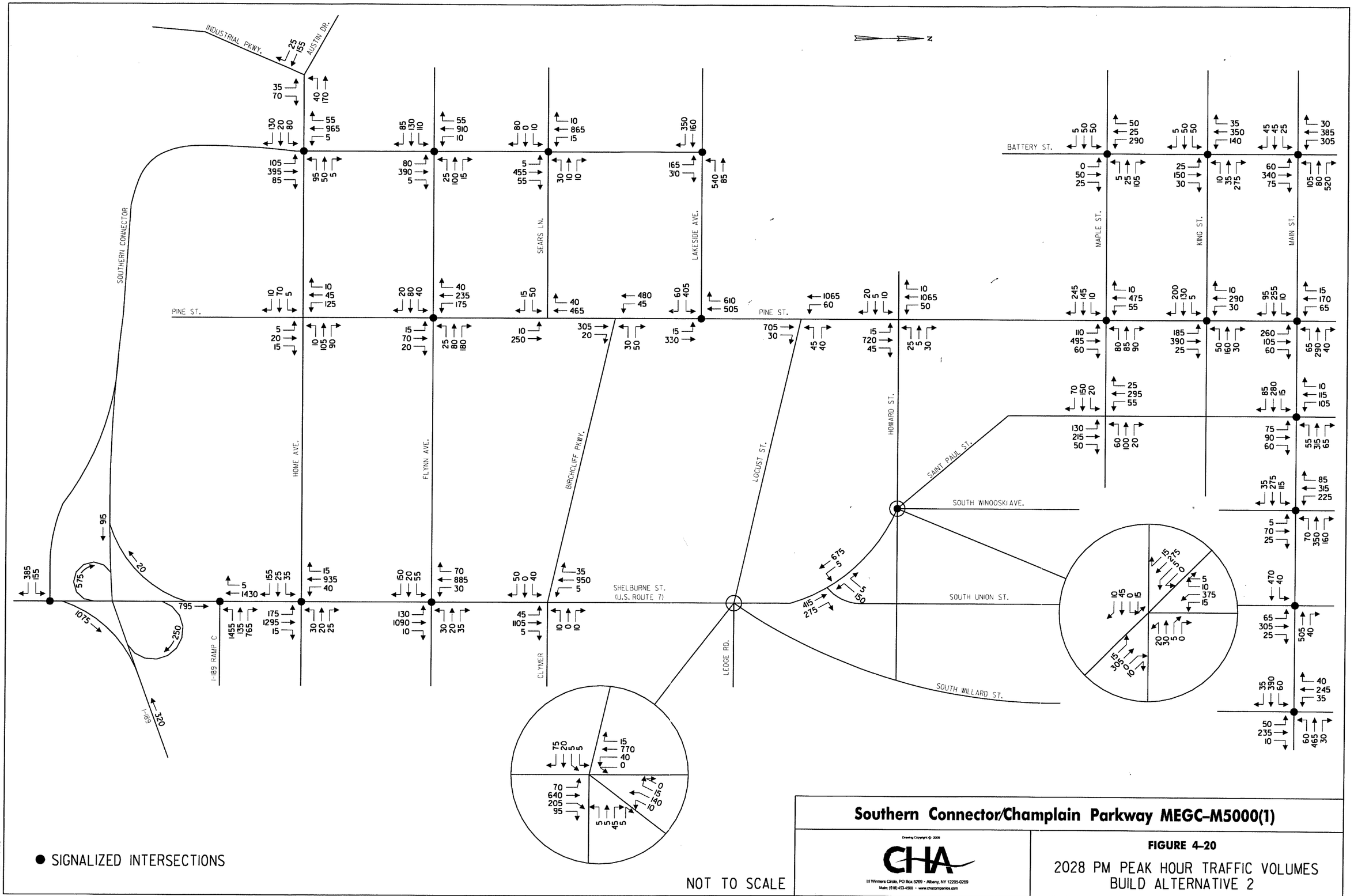
CHA

III Winners Circle, PO Box 5269 • Albany, NY 12205-0269
Main: (518) 453-4500 • www.chacompanies.com

**FIGURE 4-19**

2028 AM PEAK HOUR TRAFFIC VOLUMES
BUILD ALTERNATIVE 2

FILE NAME =U:\B659\RPTS\FSEIS\Displays\traffic\traffic2004\2028am_SHIFTalt=2.dgn
DATE/TIME =8/18/2009
USER =4953




## Southern Connector/Champlain Parkway MEGC-M5000(1)

Drawing Copyright © 2009

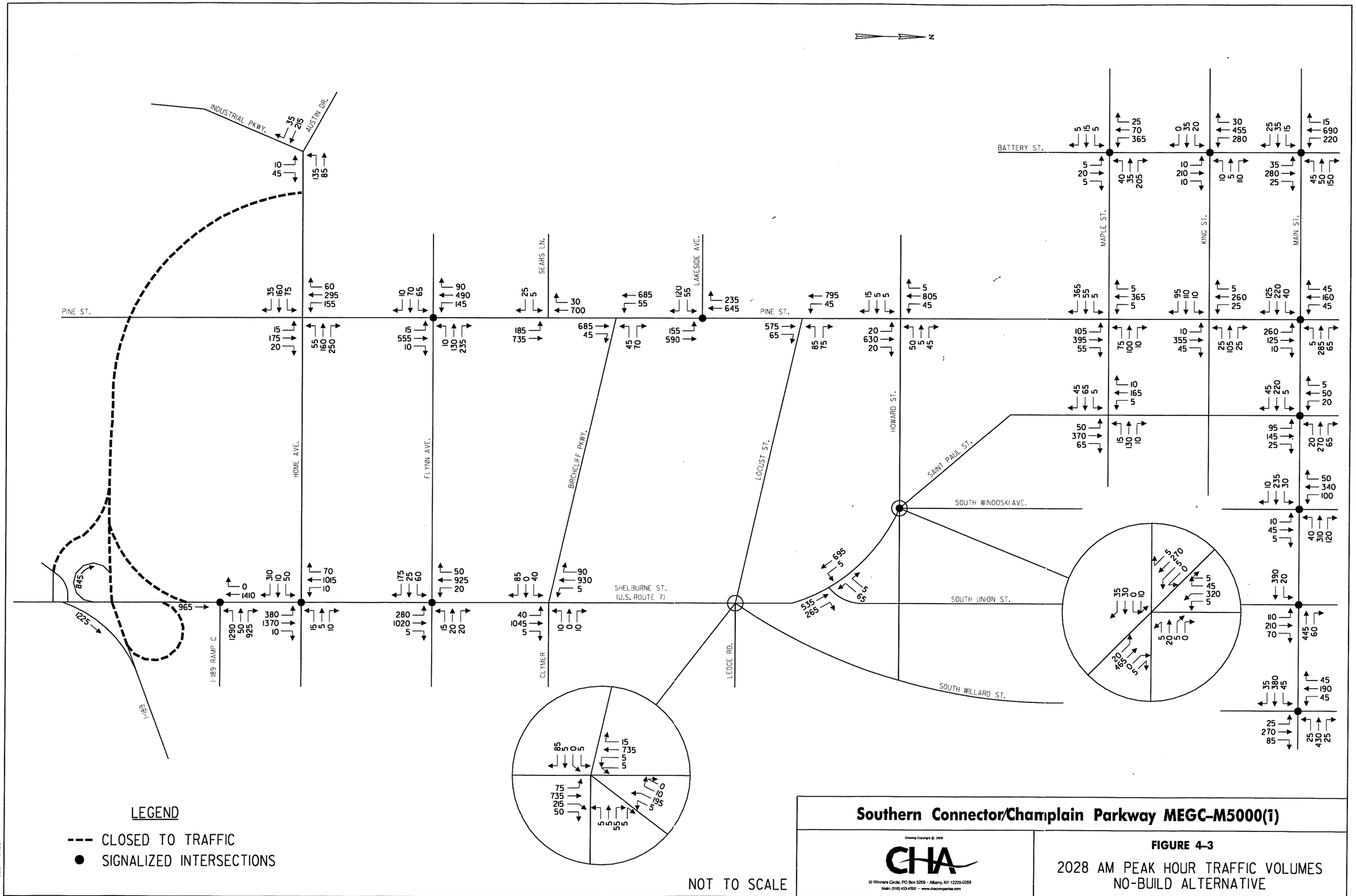
CHA

III Winners Circle, PO Box 5269 • Albany, NY 12205-0269
Main: (518) 453-4500 • www.chacompanies.com

**FIGURE 4-20**

2028 PM PEAK HOUR TRAFFIC VOLUMES
BUILD ALTERNATIVE 2

FILE NAME = U:\8659\RPTS\FSEIS\Displays\traffic\traffic2004\2028pm_SHIFTalt-c2.dgn
DATE/TIME = 8/18/2009
USER = 1933




**Southern Connector/Champlain Parkway MEGC-M5000(1)**

Drawing Copyright © 2009

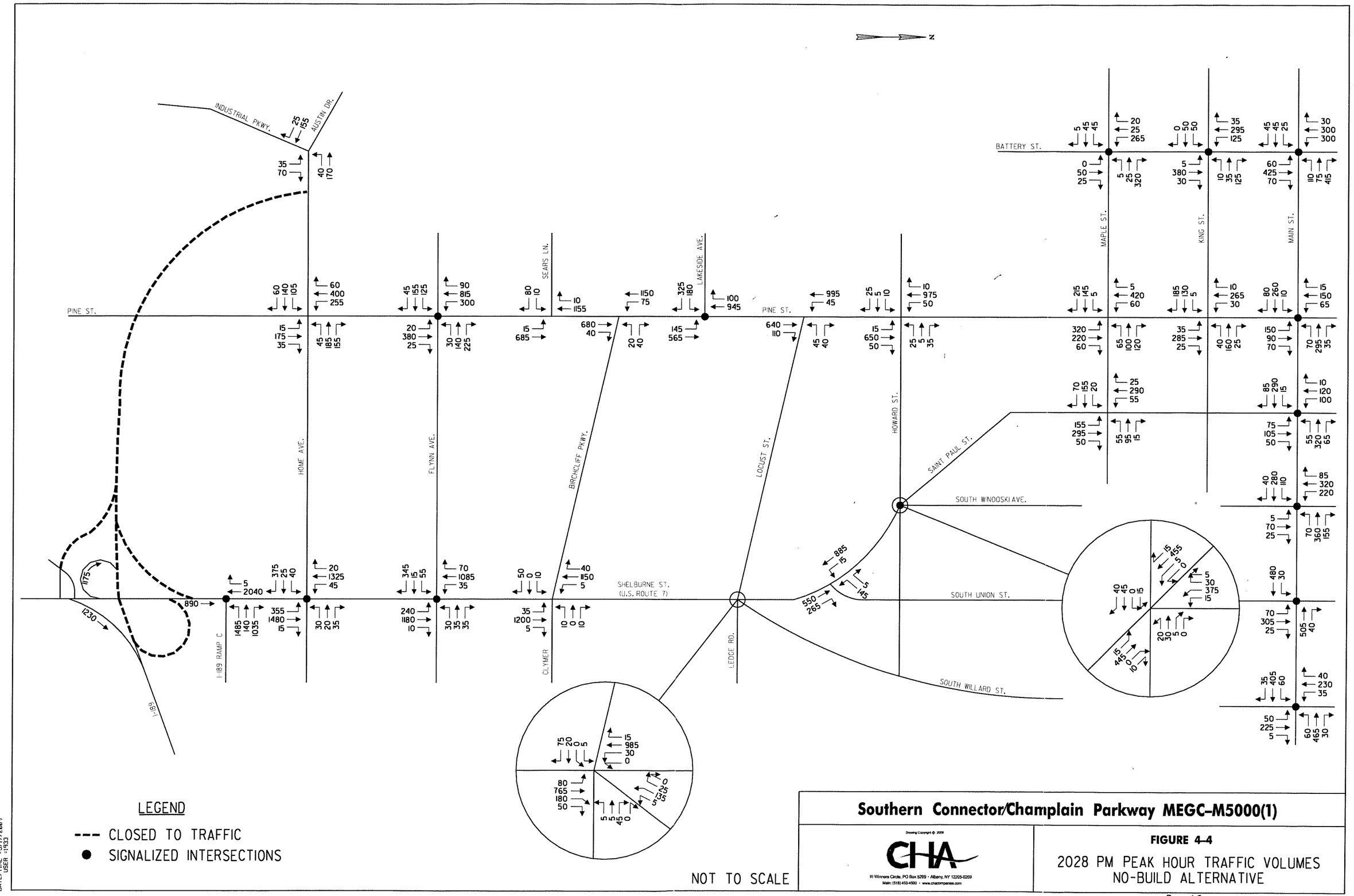
CHA

III Winners Circle, PO Box 5269 • Albany, NY 12205-0269
Main: (518) 453-4500 • www.chacompanies.com

**FIGURE 4-3**

2028 AM PEAK HOUR TRAFFIC VOLUMES
NO-BUILD ALTERNATIVE

FILE NAME =U:\B659\W*'S\FSEIS\Displays\traffic\traffic2004\NET28.00AM.dgn
DATE/TIME = 8/17/2009
USER = 11433




**Southern Connector/Champlain Parkway MEGC-M5000(1)**

Drawing Copyright © 2009

CHA

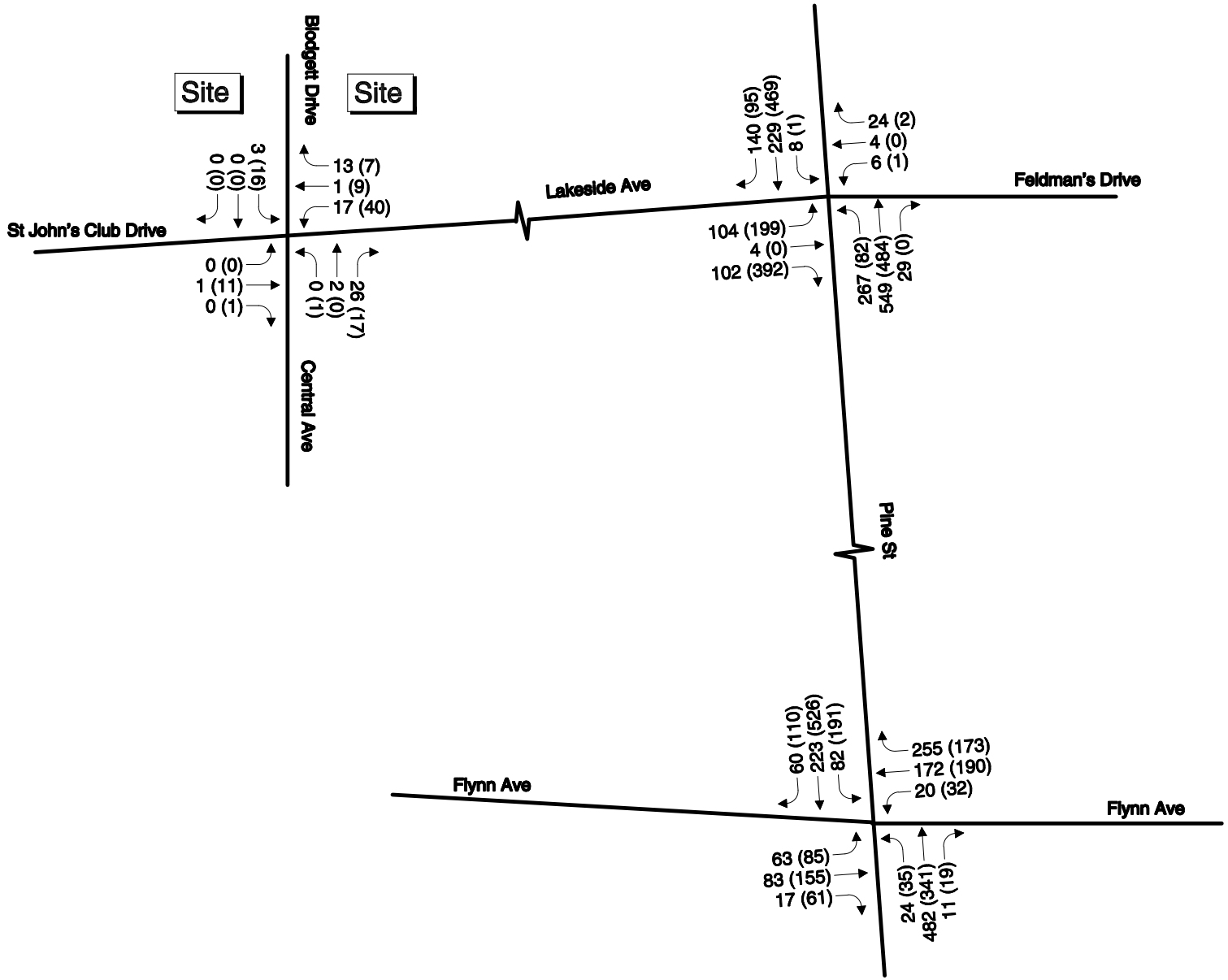
III Winners Circle, PO Box 5269 • Albany, NY 12205-0269
Main: (518) 453-4500 • www.chacompanies.com

**FIGURE 4-4**

2028 PM PEAK HOUR TRAFFIC VOLUMES
NO-BUILD ALTERNATIVE

FILE NAME =U:\8659\RPTS\FSEIS\Displays\traffic\traffic2004\NET28.00pM.dgn
DATE/TIME = 8/7/2009
USER = 19933

# Traffic Networks




Not to Scale

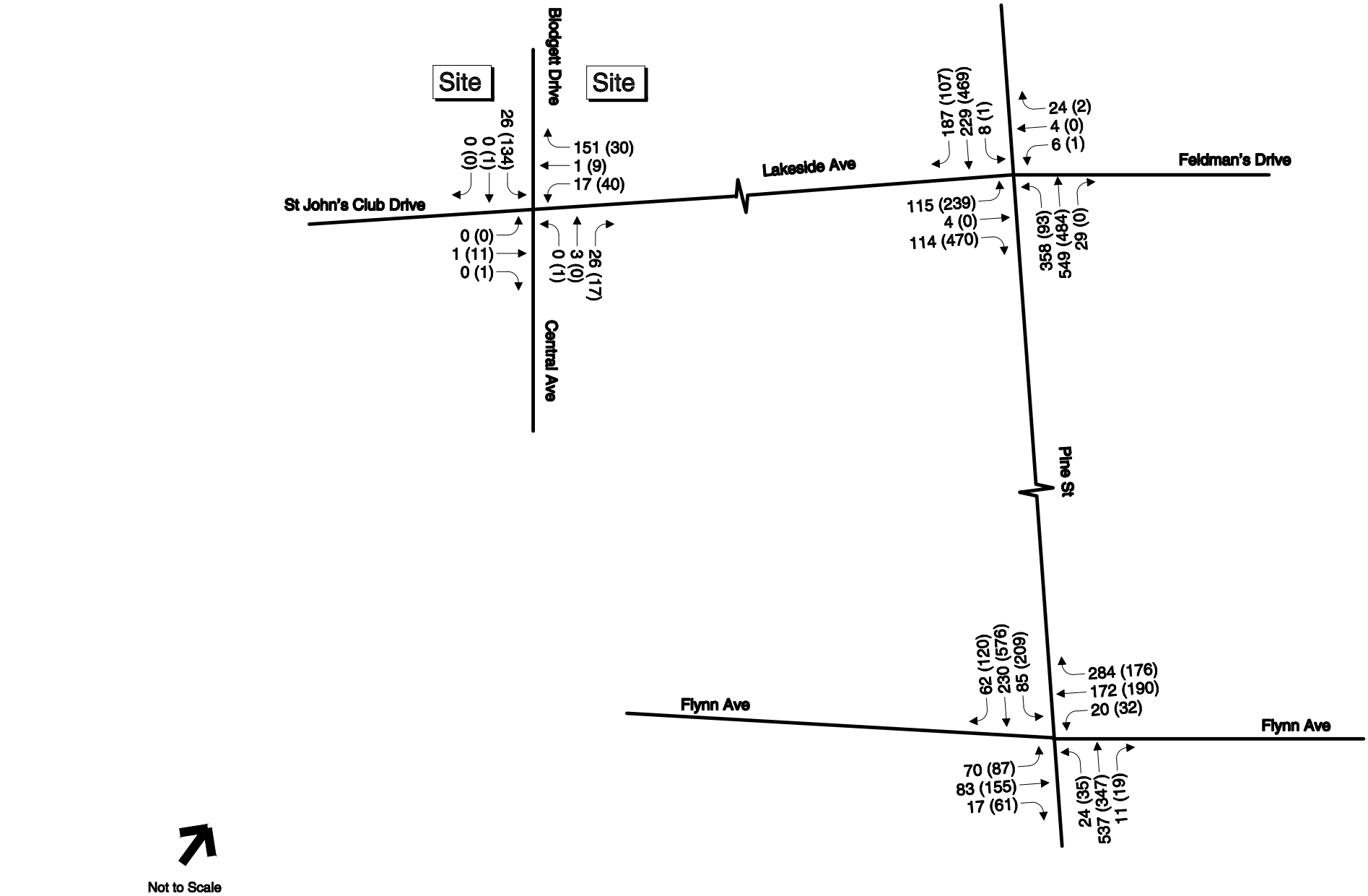
Legend

AM Peak Hour
(PM Peak Hour)

Figure 5

2019 No Build Weekday
Peak Hour Traffic Volumes

\\vhb\gbl\proj\SBurlington\58083.00 LandPlan Blodgett\cad\te\planmisc\Complete TraffNet.dwg

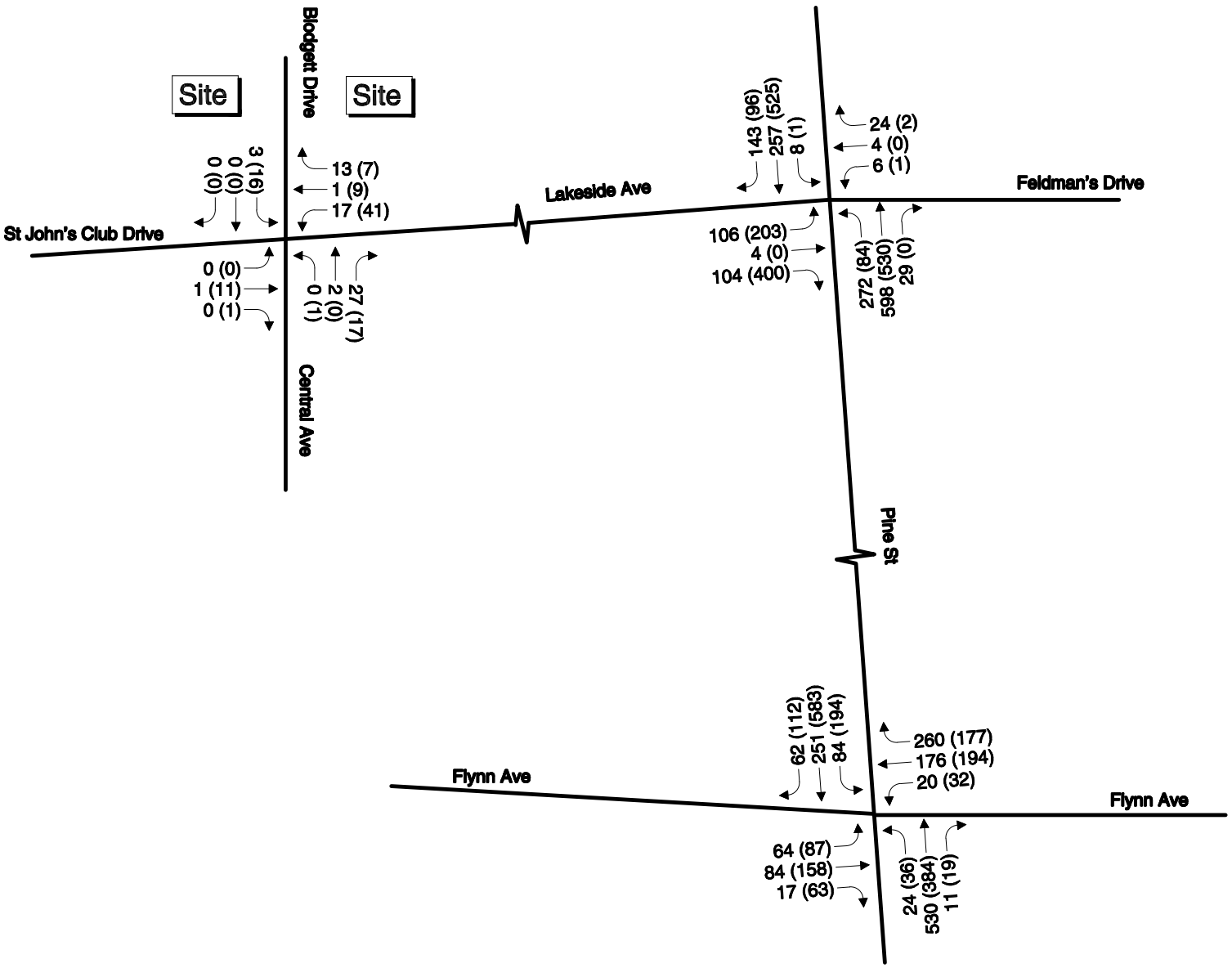



Legend

AM Peak Hour
(PM Peak Hour)

Figure 6

2019 Build Weekday
Peak Hour Traffic Volumes



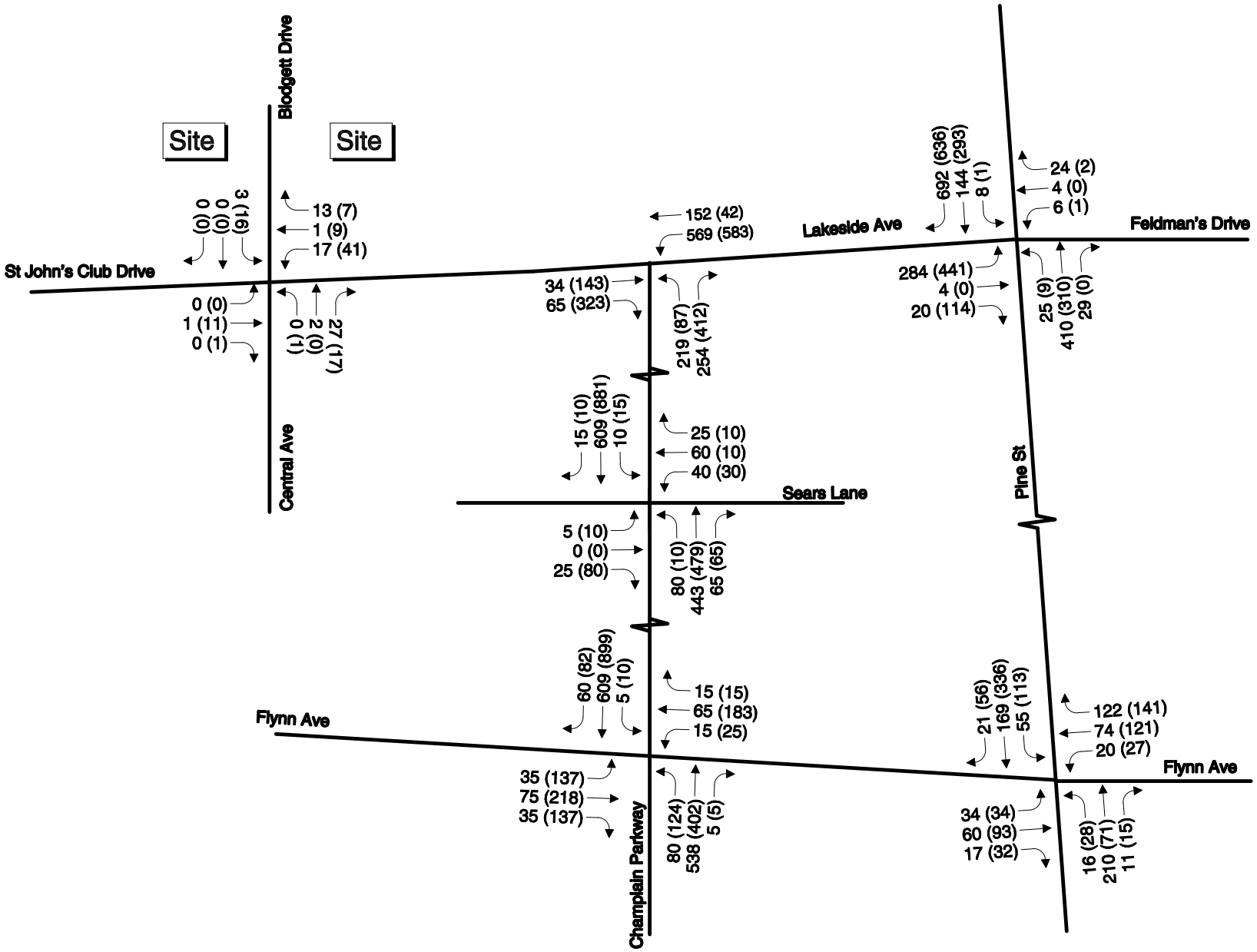

Not to Scale

Legend

AM Peak Hour
(PM Peak Hour)

Figure 7

2024 No Build & BCP Weekday
Peak Hour Traffic Volumes



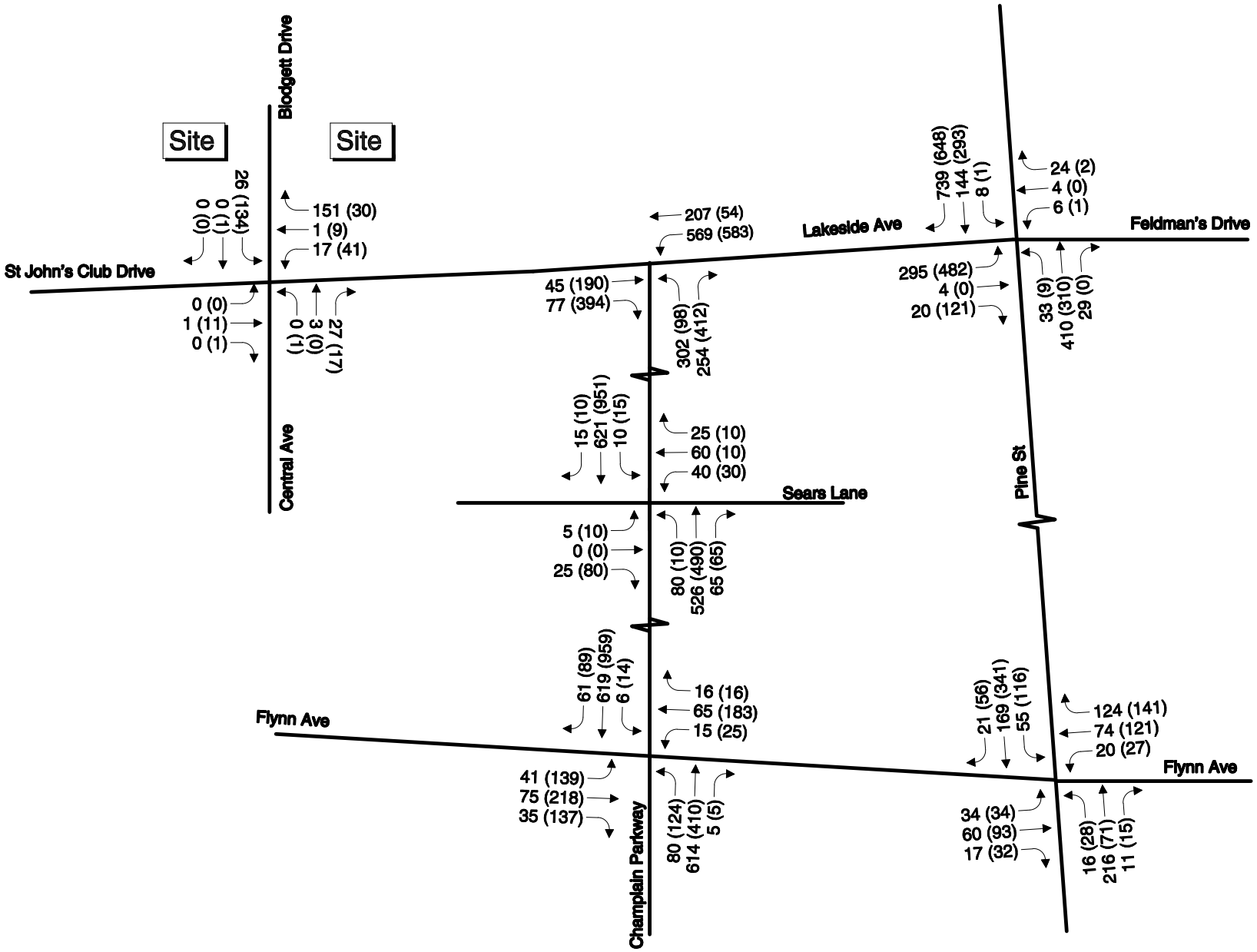

Legend

AM Peak Hour
(PM Peak Hour)

Figure 8

2024 No Build, BCP & CP Weel
Peak Hour Traffic Volumes

\\vhb\gbl\proj\SBurlington\58083.00 LandPlan Blodgett\cad\te\planmisc\Complete TraffNet.dwg




Legend

AM Peak Hour
(PM Peak Hour)

Figure 9

2024 Build, BCP & CP Weekday
Peak Hour Traffic Volumes

# Unsignalized & Signalized Intersection Capacity Analysis

# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 3 | 26 | 26 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 3 | 26 | 26 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | | | 0.879 | | | 0.879 | | | | |
| Flt Protected | | | | | 0.995 | | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1520 | 0 | 0 | 1511 | 0 | 0 | 1670 | 0 | 0 | 1504 | 0 |
| Flt Permitted | | | | | 0.995 | | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1520 | 0 | 0 | 1511 | 0 | 0 | 1670 | 0 | 0 | 1504 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 1630 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 44.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 3 | | | | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 25% | 0% | 10% | 2% | 10% | 0% | 0% | 0% | 20% | 0% | 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% | |
| Adj. Flow (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 3 | 26 | 26 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1 | 0 | 0 | 169 | 0 | 0 | 29 | 0 | 0 | 26 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 32.4% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 3 | 26 | 26 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 3 | 26 | 26 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 3 | 26 | 26 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 1 | 169 | 29 | 26 |
| Volume Left (vph) | 0 | 17 | 0 | 26 |
| Volume Right (vph) | 0 | 151 | 26 | 0 |
| Hadj (s) | 0.42 | -0.35 | -0.54 | 0.54 |
| Departure Headway (s) | 4.6 | 3.7 | 3.7 | 4.8 |
| Degree Utilization, x | 0.00 | 0.17 | 0.03 | 0.03 |
| Capacity (veh/h) | 763 | 962 | 913 | 711 |
| Control Delay (s) | 7.6 | 7.4 | 6.8 | 8.0 |
| Approach Delay (s) | 7.6 | 7.4 | 6.8 | 8.0 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.4 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 32.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 115 | 4 | 114 | 6 | 4 | 24 | 358 | 549 | 29 | 8 | 229 | 187 |
| Future Volume (vph) | 115 | 4 | 114 | 6 | 4 | 24 | 358 | 549 | 29 | 8 | 229 | 187 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 80 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.99 | 0.96 | | | 0.91 | | 0.98 | 1.00 | | | 1.00 | 0.96 |
| Frt | | 0.855 | | | 0.905 | | | 0.992 | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.991 | | 0.950 | | | | 0.998 | |
| Satd. Flow (prot) | 1656 | 1439 | 0 | 0 | 1562 | 0 | 1770 | 1846 | 0 | 0 | 1744 | 1482 |
| Flt Permitted | 0.735 | | | | 0.910 | | 0.569 | | | | 0.977 | |
| Satd. Flow (perm) | 1267 | 1439 | 0 | 0 | 1431 | 0 | 1043 | 1846 | 0 | 0 | 1707 | 1417 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 114 | | | 24 | | | 4 | | | | 190 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1630 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 44.5 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 4 | | 6 | 6 | | 4 | 12 | | 19 | 19 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 18 | | | 2 | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 0% | 9% | 0% | 0% | 0% | 2% | 2% | 0% | 0% | 9% | 9% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 115 | 4 | 114 | 6 | 4 | 24 | 358 | 549 | 29 | 8 | 229 | 187 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 115 | 118 | 0 | 0 | 34 | 0 | 358 | 578 | 0 | 0 | 237 | 187 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

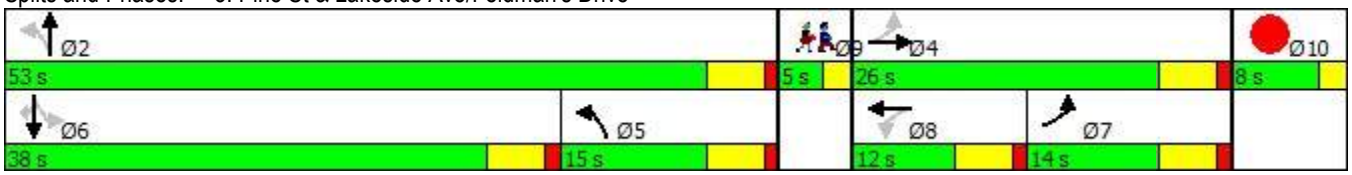
| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 9 | 10 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 8.0 | | 6.0 | 6.0 | | 5.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Minimum Split (s) | 10.0 | 13.0 | | 11.0 | 11.0 | | 10.0 | 20.0 | | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 14.0 | 26.0 | | 12.0 | 12.0 | | 15.0 | 53.0 | | 38.0 | 38.0 | 38.0 |
| Total Split (%) | 15.2% | 28.3% | | 13.0% | 13.0% | | 16.3% | 57.6% | | 41.3% | 41.3% | 41.3% |
| Maximum Green (s) | 9.0 | 21.0 | | 7.0 | 7.0 | | 10.0 | 48.0 | | 33.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | Lag | | | Lead | Lead | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | None | None | | None | Min | | Min | Min | Min |
| Walk Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Flash Dont Walk (s) | | 14.0 | | 14.0 | 14.0 | | | | | 21.0 | 21.0 | 21.0 |
| Pedestrian Calls (#/hr) | | 5 | | 5 | 5 | | | | | 5 | 5 | 5 |
| Act Effct Green (s) | 12.8 | 13.5 | | | 8.2 | | 33.3 | 35.1 | | | 19.0 | 19.0 |
| Actuated g/C Ratio | 0.23 | 0.24 | | | 0.15 | | 0.60 | 0.63 | | | 0.34 | 0.34 |
| v/c Ratio | 0.33 | 0.27 | | | 0.15 | | 0.49 | 0.50 | | | 0.41 | 0.31 |
| Control Delay | 24.2 | 7.6 | | | 18.2 | | 15.3 | 12.8 | | | 22.2 | 5.7 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 24.2 | 7.6 | | | 18.2 | | 15.3 | 12.8 | | | 22.2 | 5.7 |
| LOS | C | A | | | B | | B | B | | | C | A |
| Approach Delay | | 15.8 | | | 18.2 | | | 13.8 | | | 14.9 | |
| Approach LOS | | B | | | B | | | B | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 92
Actuated Cycle Length: 55.7
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.50
Intersection Signal Delay: 14.4 Intersection LOS: B
Intersection Capacity Utilization 71.0% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 8.0 |
| Total Split (%) | 5% | 9% |
| Maximum Green (s) | 3.0 | 6.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 5.0 | 8.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 70 | 83 | 17 | 20 | 172 | 284 | 24 | 537 | 11 | 85 | 230 | 62 |
| Future Volume (vph) | 70 | 83 | 17 | 20 | 172 | 284 | 24 | 537 | 11 | 85 | 230 | 62 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | 0.91 | | | 1.00 | | | 0.99 | |
| Frt | | 0.986 | | | 0.919 | | | 0.997 | | | 0.968 | |
| Flt Protected | | 0.980 | | | 0.998 | | | 0.998 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1790 | 0 | 0 | 1668 | 0 | 0 | 1990 | 0 | 1703 | 1834 | 0 |
| Flt Permitted | | 0.507 | | | 0.982 | | | 0.976 | | 0.204 | | |
| Satd. Flow (perm) | 0 | 926 | 0 | 0 | 1641 | 0 | 0 | 1945 | 0 | 366 | 1834 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 7 | | | 97 | | | 1 | | | 25 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 2703 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 73.7 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | 36 | | 5 | 5 | | 36 | 9 | | 54 | 54 | | 9 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 9% | 9% | 2% | 2% | 2% | 1% | 1% | 1% | 6% | 6% | 6% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 70 | 83 | 17 | 20 | 172 | 284 | 24 | 537 | 11 | 85 | 230 | 62 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 170 | 0 | 0 | 476 | 0 | 0 | 572 | 0 | 85 | 292 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

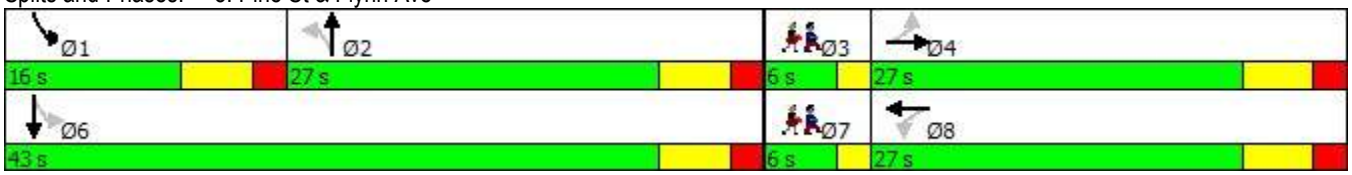
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 19.7 | | | 19.7 | | | 21.6 | | 32.4 | 32.4 | |
| Actuated g/C Ratio | | 0.30 | | | 0.30 | | | 0.33 | | 0.49 | 0.49 | |
| v/c Ratio | | 0.60 | | | 0.85 | | | 0.90 | | 0.24 | 0.32 | |
| Control Delay | | 32.4 | | | 35.7 | | | 43.9 | | 11.4 | 10.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 32.4 | | | 35.7 | | | 43.9 | | 11.4 | 10.8 | |
| LOS | | C | | | D | | | D | | B | B | |
| Approach Delay | | 32.4 | | | 35.7 | | | 43.9 | | | 10.9 | |
| Approach LOS | | C | | | D | | | D | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 65.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 32.4 Intersection LOS: C
Intersection Capacity Utilization 97.4% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 26 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 26 | 3 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | | | 0.943 | | | 0.875 | | | | |
| Flt Protected | | | | | 0.973 | | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1520 | 0 | 0 | 1589 | 0 | 0 | 1662 | 0 | 0 | 1504 | 0 |
| Flt Permitted | | | | | 0.973 | | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1520 | 0 | 0 | 1589 | 0 | 0 | 1662 | 0 | 0 | 1504 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 1630 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 44.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 3 | | | | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 25% | 0% | 10% | 2% | 10% | 0% | 0% | 0% | 20% | 0% | 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% | |
| Adj. Flow (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 26 | 3 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1 | 0 | 0 | 31 | 0 | 0 | 28 | 0 | 0 | 3 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 19.6% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 26 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 26 | 3 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 26 | 3 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 1 | 31 | 28 | 3 |
| Volume Left (vph) | 0 | 17 | 0 | 3 |
| Volume Right (vph) | 0 | 13 | 26 | 0 |
| Hadj (s) | 0.42 | 0.02 | -0.56 | 0.54 |
| Departure Headway (s) | 4.4 | 4.0 | 3.4 | 4.5 |
| Degree Utilization, x | 0.00 | 0.03 | 0.03 | 0.00 |
| Capacity (veh/h) | 803 | 892 | 1041 | 784 |
| Control Delay (s) | 7.4 | 7.1 | 6.5 | 7.5 |
| Approach Delay (s) | 7.4 | 7.1 | 6.5 | 7.5 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 19.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

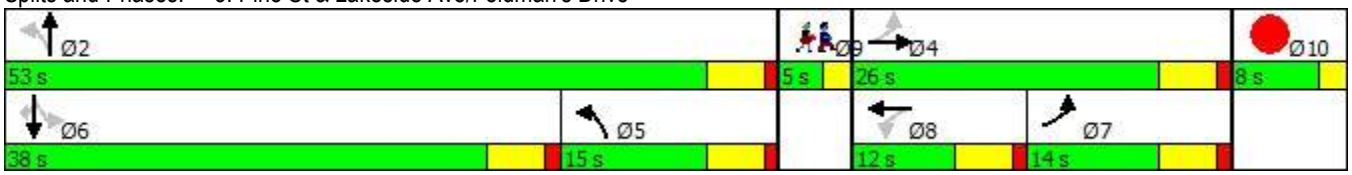
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 104 | 4 | 102 | 6 | 4 | 24 | 267 | 549 | 29 | 8 | 229 | 140 |
| Future Volume (vph) | 104 | 4 | 102 | 6 | 4 | 24 | 267 | 549 | 29 | 8 | 229 | 140 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 80 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.99 | 0.96 | | | 0.91 | | 0.98 | 1.00 | | | 1.00 | 0.96 |
| Frt | | 0.856 | | | 0.905 | | | 0.992 | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.991 | | 0.950 | | | | 0.998 | |
| Satd. Flow (prot) | 1656 | 1441 | 0 | 0 | 1562 | 0 | 1770 | 1846 | 0 | 0 | 1744 | 1482 |
| Flt Permitted | 0.735 | | | | 0.913 | | 0.572 | | | | 0.977 | |
| Satd. Flow (perm) | 1267 | 1441 | 0 | 0 | 1435 | 0 | 1049 | 1846 | 0 | 0 | 1707 | 1417 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 102 | | | 24 | | | 4 | | | | 190 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1630 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 44.5 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 4 | | 6 | 6 | | 4 | 12 | | 19 | 19 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 18 | | | 2 | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 0% | 9% | 0% | 0% | 0% | 2% | 2% | 0% | 0% | 9% | 9% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 104 | 4 | 102 | 6 | 4 | 24 | 267 | 549 | 29 | 8 | 229 | 140 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 104 | 106 | 0 | 0 | 34 | 0 | 267 | 578 | 0 | 0 | 237 | 140 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 9 | 10 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 8.0 | | 6.0 | 6.0 | | 5.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Minimum Split (s) | 10.0 | 13.0 | | 11.0 | 11.0 | | 10.0 | 20.0 | | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 14.0 | 26.0 | | 12.0 | 12.0 | | 15.0 | 53.0 | | 38.0 | 38.0 | 38.0 |
| Total Split (%) | 15.2% | 28.3% | | 13.0% | 13.0% | | 16.3% | 57.6% | | 41.3% | 41.3% | 41.3% |
| Maximum Green (s) | 9.0 | 21.0 | | 7.0 | 7.0 | | 10.0 | 48.0 | | 33.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | Lag | | | Lead | Lead | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | None | None | | None | Min | | Min | Min | Min |
| Walk Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Flash Dont Walk (s) | | 14.0 | | 14.0 | 14.0 | | | | | 21.0 | 21.0 | 21.0 |
| Pedestrian Calls (#/hr) | | 5 | | 5 | 5 | | | | | 5 | 5 | 5 |
| Act Effct Green (s) | 12.7 | 13.5 | | | 8.2 | | 32.7 | 34.5 | | | 19.0 | 19.0 |
| Actuated g/C Ratio | 0.23 | 0.25 | | | 0.15 | | 0.59 | 0.63 | | | 0.34 | 0.34 |
| v/c Ratio | 0.30 | 0.25 | | | 0.15 | | 0.37 | 0.50 | | | 0.40 | 0.23 |
| Control Delay | 23.3 | 7.5 | | | 18.0 | | 13.2 | 12.9 | | | 21.7 | 2.6 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 23.3 | 7.5 | | | 18.0 | | 13.2 | 12.9 | | | 21.7 | 2.6 |
| LOS | C | A | | | B | | B | B | | | C | A |
| Approach Delay | | 15.3 | | | 18.0 | | | 13.0 | | | 14.7 | |
| Approach LOS | | B | | | B | | | B | | | B | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 92 | |
| Actuated Cycle Length: 55.1 | |
| Natural Cycle: 65 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.50 | |
| Intersection Signal Delay: 13.9 | Intersection LOS: B |
| Intersection Capacity Utilization 70.5% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 8.0 |
| Total Split (%) | 5% | 9% |
| Maximum Green (s) | 3.0 | 6.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 5.0 | 8.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 63 | 83 | 17 | 20 | 172 | 255 | 24 | 482 | 11 | 82 | 223 | 60 |
| Future Volume (vph) | 63 | 83 | 17 | 20 | 172 | 255 | 24 | 482 | 11 | 82 | 223 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | 0.92 | | | 1.00 | | | 0.99 | |
| Frt | | 0.986 | | | 0.923 | | | 0.997 | | | 0.968 | |
| Flt Protected | | 0.981 | | | 0.998 | | | 0.998 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1792 | 0 | 0 | 1682 | 0 | 0 | 1990 | 0 | 1703 | 1834 | 0 |
| Flt Permitted | | 0.561 | | | 0.981 | | | 0.974 | | 0.234 | | |
| Satd. Flow (perm) | 0 | 1025 | 0 | 0 | 1653 | 0 | 0 | 1940 | 0 | 419 | 1834 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 8 | | | 87 | | | 1 | | | 25 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 2703 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 73.7 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | 36 | | 5 | 5 | | 36 | 9 | | 54 | 54 | | 9 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 9% | 9% | 2% | 2% | 2% | 1% | 1% | 1% | 6% | 6% | 6% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 63 | 83 | 17 | 20 | 172 | 255 | 24 | 482 | 11 | 82 | 223 | 60 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 163 | 0 | 0 | 447 | 0 | 0 | 517 | 0 | 82 | 283 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

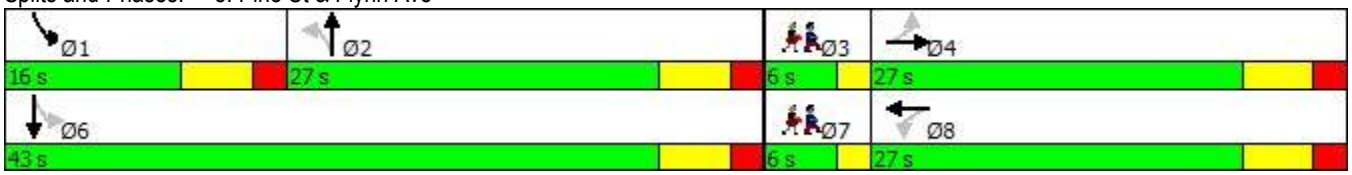
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 18.8 | | | 18.8 | | | 20.8 | | 31.4 | 31.4 | |
| Actuated g/C Ratio | | 0.29 | | | 0.29 | | | 0.32 | | 0.49 | 0.49 | |
| v/c Ratio | | 0.53 | | | 0.82 | | | 0.82 | | 0.22 | 0.31 | |
| Control Delay | | 28.0 | | | 33.1 | | | 36.4 | | 11.0 | 10.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 28.0 | | | 33.1 | | | 36.4 | | 11.0 | 10.6 | |
| LOS | | C | | | C | | | D | | B | B | |
| Approach Delay | | 28.0 | | | 33.1 | | | 36.4 | | | 10.7 | |
| Approach LOS | | C | | | C | | | D | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 64.1
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 28.2 Intersection LOS: C
Intersection Capacity Utilization 90.1% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: Central Ave & St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 11 | 1 | 40 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 40 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.989 | | | 0.949 | | | 0.872 | | | | |
| Flt Protected | | | | | 0.975 | | | 0.997 | | | 0.953 | |
| Satd. Flow (prot) | 0 | 1879 | 0 | 0 | 1758 | 0 | 0 | 1652 | 0 | 0 | 1811 | 0 |
| Flt Permitted | | | | | 0.975 | | | 0.997 | | | 0.953 | |
| Satd. Flow (perm) | 0 | 1879 | 0 | 0 | 1758 | 0 | 0 | 1652 | 0 | 0 | 1811 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 1630 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 44.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 16 | | 8 | 8 | | 16 | 2 | | 6 | 6 | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 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% | |
| Adj. Flow (vph) | 0 | 11 | 1 | 40 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 79 | 0 | 0 | 18 | 0 | 0 | 135 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.2% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 11 | 1 | 40 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 40 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 11 | 1 | 40 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 79 | 18 | 135 |
| Volume Left (vph) | 0 | 40 | 1 | 134 |
| Volume Right (vph) | 1 | 30 | 17 | 0 |
| Hadj (s) | -0.05 | -0.13 | -0.56 | 0.20 |
| Departure Headway (s) | 4.3 | 4.1 | 3.7 | 4.3 |
| Degree Utilization, x | 0.01 | 0.09 | 0.02 | 0.16 |
| Capacity (veh/h) | 804 | 838 | 934 | 815 |
| Control Delay (s) | 7.3 | 7.5 | 6.7 | 8.1 |
| Approach Delay (s) | 7.3 | 7.5 | 6.7 | 8.1 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.8 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 33.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 239 | 0 | 470 | 1 | 0 | 2 | 93 | 484 | 0 | 1 | 469 | 107 |
| Future Volume (vph) | 239 | 0 | 470 | 1 | 0 | 2 | 93 | 484 | 0 | 1 | 469 | 107 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 80 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.98 | 0.95 | | | 0.97 | | 1.00 | | | | 1.00 | 0.97 |
| Frt | | 0.850 | | | 0.910 | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.984 | | 0.950 | | | | | |
| Satd. Flow (prot) | 1787 | 1526 | 0 | 0 | 1656 | 0 | 1770 | 1863 | 0 | 0 | 1863 | 1583 |
| Flt Permitted | 0.756 | | | | | | 0.307 | | | | 0.999 | |
| Satd. Flow (perm) | 1394 | 1526 | 0 | 0 | 1677 | 0 | 569 | 1863 | 0 | 0 | 1861 | 1530 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 517 | | | 190 | | | | | | | 190 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1630 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 44.5 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 7 | | 9 | 9 | | 7 | 7 | | 38 | 38 | | 7 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 0% | 1% | 0% | 0% | 0% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 239 | 0 | 470 | 1 | 0 | 2 | 93 | 484 | 0 | 1 | 469 | 107 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 239 | 470 | 0 | 0 | 3 | 0 | 93 | 484 | 0 | 0 | 470 | 107 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

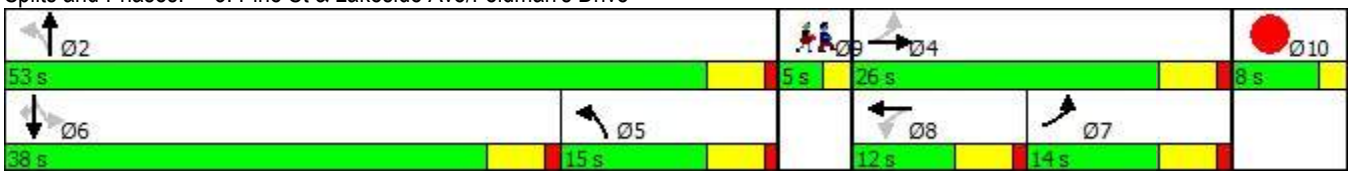
| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 9 | 10 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 8.0 | | 6.0 | 6.0 | | 5.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Minimum Split (s) | 10.0 | 13.0 | | 11.0 | 11.0 | | 10.0 | 20.0 | | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 14.0 | 26.0 | | 12.0 | 12.0 | | 15.0 | 53.0 | | 38.0 | 38.0 | 38.0 |
| Total Split (%) | 15.2% | 28.3% | | 13.0% | 13.0% | | 16.3% | 57.6% | | 41.3% | 41.3% | 41.3% |
| Maximum Green (s) | 9.0 | 21.0 | | 7.0 | 7.0 | | 10.0 | 48.0 | | 33.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | Lag | | | Lead | Lead | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | Yes | | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | None | None | | None | Min | | Min | Min | Min |
| Walk Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Flash Dont Walk (s) | | 14.0 | | 14.0 | 14.0 | | | | | 21.0 | 21.0 | 21.0 |
| Pedestrian Calls (#/hr) | | 5 | | 5 | 5 | | | | | 5 | 5 | 5 |
| Act Effct Green (s) | 12.3 | 12.3 | | | 8.0 | | 31.6 | 29.7 | | | 21.0 | 21.0 |
| Actuated g/C Ratio | 0.22 | 0.22 | | | 0.14 | | 0.57 | 0.54 | | | 0.38 | 0.38 |
| v/c Ratio | 0.63 | 0.64 | | | 0.01 | | 0.20 | 0.48 | | | 0.67 | 0.15 |
| Control Delay | 30.6 | 6.0 | | | 0.0 | | 12.4 | 12.4 | | | 23.2 | 0.5 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 30.6 | 6.0 | | | 0.0 | | 12.4 | 12.4 | | | 23.2 | 0.5 |
| LOS | C | A | | | A | | B | B | | | C | A |
| Approach Delay | | 14.3 | | | | | | 12.4 | | | 19.0 | |
| Approach LOS | | B | | | | | | B | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 92
Actuated Cycle Length: 55.3
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.67
Intersection Signal Delay: 15.1 Intersection LOS: B
Intersection Capacity Utilization 92.8% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 8.0 |
| Total Split (%) | 5% | 9% |
| Maximum Green (s) | 3.0 | 6.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 5.0 | 8.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 87 | 155 | 61 | 32 | 190 | 176 | 35 | 347 | 19 | 209 | 576 | 120 |
| Future Volume (vph) | 87 | 155 | 61 | 32 | 190 | 176 | 35 | 347 | 19 | 209 | 576 | 120 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.99 | | | 0.96 | | | 1.00 | | | 0.99 | |
| Frt | | 0.973 | | | 0.940 | | | 0.994 | | | 0.974 | |
| Flt Protected | | 0.986 | | | 0.996 | | | 0.996 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1906 | 0 | 0 | 1783 | 0 | 0 | 1960 | 0 | 1787 | 1939 | 0 |
| Flt Permitted | | 0.637 | | | 0.955 | | | 0.891 | | 0.284 | | |
| Satd. Flow (perm) | 0 | 1231 | 0 | 0 | 1707 | 0 | 0 | 1752 | 0 | 534 | 1939 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 16 | | | 52 | | | 3 | | | 19 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 2703 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 73.7 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | 22 | | 9 | 9 | | 22 | 10 | | 23 | 23 | | 10 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 87 | 155 | 61 | 32 | 190 | 176 | 35 | 347 | 19 | 209 | 576 | 120 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 303 | 0 | 0 | 398 | 0 | 0 | 401 | 0 | 209 | 696 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

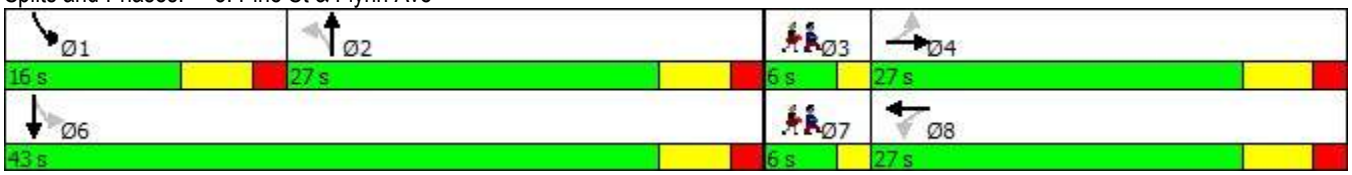
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 20.0 | | | 20.0 | | | 18.9 | | 34.2 | 34.2 | |
| Actuated g/C Ratio | | 0.29 | | | 0.29 | | | 0.28 | | 0.50 | 0.50 | |
| v/c Ratio | | 0.81 | | | 0.74 | | | 0.82 | | 0.47 | 0.70 | |
| Control Delay | | 41.7 | | | 29.8 | | | 39.4 | | 13.9 | 17.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 41.7 | | | 29.8 | | | 39.4 | | 13.9 | 17.9 | |
| LOS | | D | | | C | | | D | | B | B | |
| Approach Delay | | 41.7 | | | 29.8 | | | 39.4 | | | 17.0 | |
| Approach LOS | | D | | | C | | | D | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 67.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 27.8 Intersection LOS: C
Intersection Capacity Utilization 113.7% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: Central Ave & St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 11 | 1 | 40 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 40 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.989 | | | 0.983 | | | 0.872 | | | | |
| Flt Protected | | | | | 0.966 | | | 0.997 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1842 | 0 | 0 | 1769 | 0 | 0 | 1619 | 0 | 0 | 1770 | 0 |
| Flt Permitted | | | | | 0.966 | | | 0.997 | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1842 | 0 | 0 | 1769 | 0 | 0 | 1619 | 0 | 0 | 1770 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 1630 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 44.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 16 | | 8 | 8 | | 16 | 2 | | 6 | 6 | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 11 | 1 | 40 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 56 | 0 | 0 | 18 | 0 | 0 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 25.7% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 11 | 1 | 40 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 40 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 11 | 1 | 40 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 56 | 18 | 16 |
| Volume Left (vph) | 0 | 40 | 1 | 16 |
| Volume Right (vph) | 1 | 7 | 17 | 0 |
| Hadj (s) | -0.02 | 0.10 | -0.52 | 0.23 |
| Departure Headway (s) | 4.0 | 4.1 | 3.5 | 4.3 |
| Degree Utilization, x | 0.01 | 0.06 | 0.02 | 0.02 |
| Capacity (veh/h) | 882 | 869 | 984 | 820 |
| Control Delay (s) | 7.1 | 7.4 | 6.6 | 7.4 |
| Approach Delay (s) | 7.1 | 7.4 | 6.6 | 7.4 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.2 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 199 | 0 | 392 | 1 | 0 | 2 | 82 | 484 | 0 | 1 | 469 | 95 |
| Future Volume (vph) | 199 | 0 | 392 | 1 | 0 | 2 | 82 | 484 | 0 | 1 | 469 | 95 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 80 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.98 | 0.95 | | | 0.97 | | 1.00 | | | | 1.00 | 0.97 |
| Frt | | 0.850 | | | 0.910 | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.984 | | 0.950 | | | | | |
| Satd. Flow (prot) | 1770 | 1512 | 0 | 0 | 1624 | 0 | 1770 | 1863 | 0 | 0 | 1863 | 1583 |
| Flt Permitted | 0.756 | | | | 0.620 | | 0.319 | | | | 0.999 | |
| Satd. Flow (perm) | 1380 | 1512 | 0 | 0 | 1019 | 0 | 591 | 1863 | 0 | 0 | 1861 | 1530 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 517 | | | 190 | | | | | | | 190 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1630 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 44.5 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 7 | | 9 | 9 | | 7 | 7 | | 38 | 38 | | 7 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 199 | 0 | 392 | 1 | 0 | 2 | 82 | 484 | 0 | 1 | 469 | 95 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 199 | 392 | 0 | 0 | 3 | 0 | 82 | 484 | 0 | 0 | 470 | 95 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

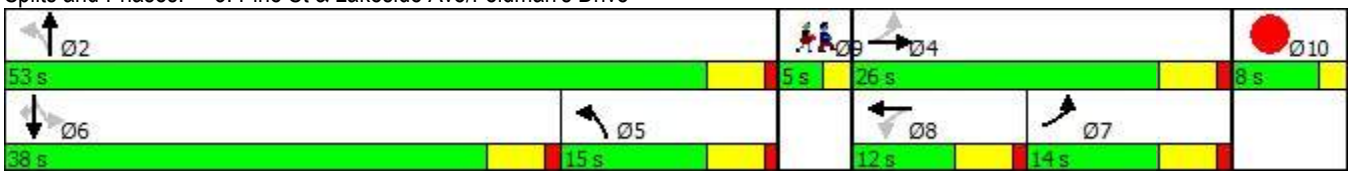
| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 9 | 10 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 8.0 | | 6.0 | 6.0 | | 5.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Minimum Split (s) | 10.0 | 13.0 | | 11.0 | 11.0 | | 10.0 | 20.0 | | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 14.0 | 26.0 | | 12.0 | 12.0 | | 15.0 | 53.0 | | 38.0 | 38.0 | 38.0 |
| Total Split (%) | 15.2% | 28.3% | | 13.0% | 13.0% | | 16.3% | 57.6% | | 41.3% | 41.3% | 41.3% |
| Maximum Green (s) | 9.0 | 21.0 | | 7.0 | 7.0 | | 10.0 | 48.0 | | 33.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | Lag | | | Lead | Lead | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | Yes | | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | None | None | | None | Min | | Min | Min | Min |
| Walk Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Flash Dont Walk (s) | | 14.0 | | 14.0 | 14.0 | | | | | 21.0 | 21.0 | 21.0 |
| Pedestrian Calls (#/hr) | | 5 | | 5 | 5 | | | | | 5 | 5 | 5 |
| Act Effct Green (s) | 12.5 | 12.5 | | | 8.7 | | 30.6 | 27.1 | | | 21.3 | 21.3 |
| Actuated g/C Ratio | 0.24 | 0.24 | | | 0.16 | | 0.58 | 0.51 | | | 0.40 | 0.40 |
| v/c Ratio | 0.50 | 0.52 | | | 0.01 | | 0.17 | 0.51 | | | 0.63 | 0.13 |
| Control Delay | 26.2 | 3.0 | | | 0.0 | | 11.6 | 13.0 | | | 21.4 | 0.4 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 26.2 | 3.0 | | | 0.0 | | 11.6 | 13.0 | | | 21.4 | 0.4 |
| LOS | C | A | | | A | | B | B | | | C | A |
| Approach Delay | | 10.8 | | | | | | 12.7 | | | 17.8 | |
| Approach LOS | | B | | | | | | B | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 92
Actuated Cycle Length: 53.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 13.7 Intersection LOS: B
Intersection Capacity Utilization 87.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 8.0 |
| Total Split (%) | 5% | 9% |
| Maximum Green (s) | 3.0 | 6.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 5.0 | 8.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 85 | 155 | 61 | 32 | 190 | 173 | 35 | 341 | 19 | 191 | 526 | 110 |
| Future Volume (vph) | 85 | 155 | 61 | 32 | 190 | 173 | 35 | 341 | 19 | 191 | 526 | 110 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.99 | | | 0.96 | | | 1.00 | | | 0.99 | |
| Frt | | 0.973 | | | 0.941 | | | 0.994 | | | 0.974 | |
| Flt Protected | | 0.986 | | | 0.996 | | | 0.996 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1887 | 0 | 0 | 1785 | 0 | 0 | 1959 | 0 | 1770 | 1920 | 0 |
| Flt Permitted | | 0.651 | | | 0.955 | | | 0.898 | | 0.286 | | |
| Satd. Flow (perm) | 0 | 1246 | 0 | 0 | 1710 | 0 | 0 | 1765 | 0 | 533 | 1920 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 17 | | | 51 | | | 3 | | | 19 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 2703 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 73.7 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | 22 | | 9 | 9 | | 22 | 10 | | 23 | 23 | | 10 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 85 | 155 | 61 | 32 | 190 | 173 | 35 | 341 | 19 | 191 | 526 | 110 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 301 | 0 | 0 | 395 | 0 | 0 | 395 | 0 | 191 | 636 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

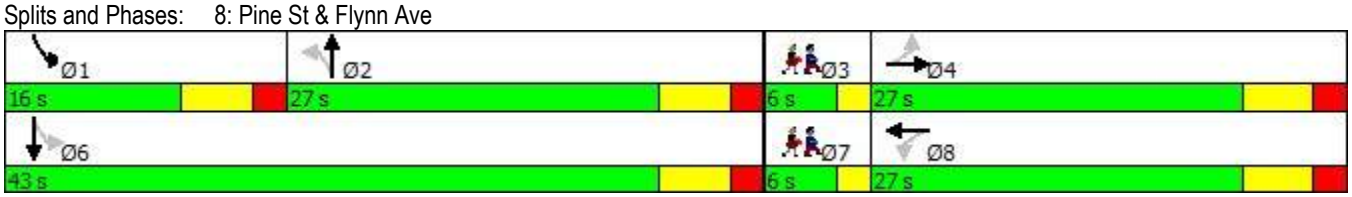
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 19.9 | | | 19.9 | | | 18.6 | | 33.9 | 33.9 | |
| Actuated g/C Ratio | | 0.30 | | | 0.30 | | | 0.28 | | 0.50 | 0.50 | |
| v/c Ratio | | 0.79 | | | 0.73 | | | 0.81 | | 0.44 | 0.65 | |
| Control Delay | | 39.9 | | | 29.4 | | | 38.3 | | 13.4 | 16.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 39.9 | | | 29.4 | | | 38.3 | | 13.4 | 16.5 | |
| LOS | | D | | | C | | | D | | B | B | |
| Approach Delay | | 39.9 | | | 29.4 | | | 38.3 | | | 15.8 | |
| Approach LOS | | D | | | C | | | D | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 67.3
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 27.0 Intersection LOS: C
Intersection Capacity Utilization 109.3% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 26 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 26 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | | | 0.879 | | | 0.874 | | | | |
| Flt Protected | | | | | 0.995 | | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1469 | 0 | 0 | 1460 | 0 | 0 | 1605 | 0 | 0 | 1454 | 0 |
| Flt Permitted | | | | | 0.995 | | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1469 | 0 | 0 | 1460 | 0 | 0 | 1605 | 0 | 0 | 1454 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 861 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 23.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 3 | | | | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 25% | 0% | 10% | 10% | 10% | 0% | 0% | 0% | 20% | 20% | 20% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 26 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1 | 0 | 0 | 169 | 0 | 0 | 29 | 0 | 0 | 26 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 32.4% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 26 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 26 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 26 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 1 | 169 | 29 | 26 |
| Volume Left (vph) | 0 | 17 | 0 | 26 |
| Volume Right (vph) | 0 | 151 | 27 | 0 |
| Hadj (s) | 0.42 | -0.35 | -0.56 | 0.54 |
| Departure Headway (s) | 4.6 | 3.7 | 3.7 | 4.8 |
| Degree Utilization, x | 0.00 | 0.17 | 0.03 | 0.03 |
| Capacity (veh/h) | 763 | 962 | 918 | 711 |
| Control Delay (s) | 7.6 | 7.4 | 6.8 | 8.0 |
| Approach Delay (s) | 7.6 | 7.4 | 6.8 | 8.0 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.4 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 32.4% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

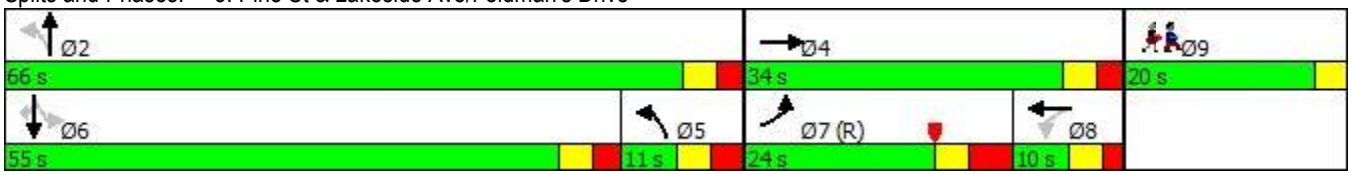
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 295 | 4 | 20 | 6 | 4 | 24 | 33 | 410 | 29 | 8 | 144 | 739 |
| Future Volume (vph) | 295 | 4 | 20 | 6 | 4 | 24 | 33 | 410 | 29 | 8 | 144 | 739 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.99 | 0.97 | | | 0.94 | | 0.99 | 1.00 | | | 1.00 | 0.97 |
| Frt | | 0.875 | | | 0.905 | | | 0.990 | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.991 | | 0.950 | | | | 0.997 | |
| Satd. Flow (prot) | 1601 | 1455 | 0 | 0 | 1539 | 0 | 1711 | 1778 | 0 | 0 | 1687 | 1432 |
| Flt Permitted | 0.950 | | | | 0.932 | | 0.660 | | | | 0.977 | |
| Satd. Flow (perm) | 1579 | 1455 | 0 | 0 | 1429 | 0 | 1177 | 1778 | 0 | 0 | 1653 | 1383 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 589 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 16.1 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 4 | | 6 | 6 | | 4 | 12 | | 19 | 19 | | 12 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 0% | 9% | 2% | 2% | 2% | 2% | 2% | 2% | 0% | 9% | 9% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 295 | 4 | 20 | 6 | 4 | 24 | 33 | 410 | 29 | 8 | 144 | 739 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 295 | 24 | 0 | 0 | 34 | 0 | 33 | 439 | 0 | 0 | 152 | 739 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | Prot | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 10.5 | | 10.0 | 10.0 | | 11.0 | 13.5 | | 13.5 | 13.5 | 13.5 |
| Total Split (s) | 24.0 | 34.0 | | 10.0 | 10.0 | | 11.0 | 66.0 | | 55.0 | 55.0 | 55.0 |
| Total Split (%) | 20.0% | 28.3% | | 8.3% | 8.3% | | 9.2% | 55.0% | | 45.8% | 45.8% | 45.8% |
| Maximum Green (s) | 17.0 | 28.5 | | 5.0 | 5.0 | | 5.0 | 60.5 | | 49.5 | 49.5 | 49.5 |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 4.0 | 2.5 | | 2.0 | 2.0 | | 3.0 | 2.5 | | 2.5 | 2.5 | 2.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 5.5 | | | 5.0 | | 6.0 | 5.5 | | | 5.5 | 5.5 |
| Lead/Lag | Lead | | | Lag | Lag | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | C-Min | None | | None | None | | None | None | | None | None | None |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | 21.4 | 28.9 | | | 5.0 | | 77.6 | 76.1 | | | 69.5 | 69.5 |
| Actuated g/C Ratio | 0.18 | 0.24 | | | 0.04 | | 0.65 | 0.63 | | | 0.58 | 0.58 |
| v/c Ratio | 1.04 | 0.07 | | | 0.58 | | 0.04 | 0.39 | | | 0.16 | 0.92 |
| Control Delay | 111.1 | 41.4 | | | 92.3 | | 10.6 | 13.3 | | | 15.0 | 43.4 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 111.1 | 41.4 | | | 92.3 | | 10.6 | 13.3 | | | 15.0 | 43.4 |
| LOS | F | D | | | F | | B | B | | | B | D |
| Approach Delay | | 105.9 | | | 92.3 | | | 13.1 | | | 38.6 | |
| Approach LOS | | F | | | F | | | B | | | D | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 7:EBL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.04 | |
| Intersection Signal Delay: 45.1 | Intersection LOS: D |
| Intersection Capacity Utilization 87.9% | ICU Level of Service E |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 20.0 |
| Total Split (s) | 20.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 17.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 10.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 60 | 17 | 20 | 74 | 124 | 16 | 216 | 11 | 55 | 169 | 21 |
| Future Volume (vph) | 34 | 60 | 17 | 20 | 74 | 124 | 16 | 216 | 11 | 55 | 169 | 21 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 14 | 11 | 11 | 14 | 11 | 11 | 14 | 11 | 11 | 14 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | 0.92 | | | 0.99 | | 0.94 | | |
| Frt | | 0.979 | | | 0.923 | | | 0.994 | | | 0.983 | |
| Flt Protected | | 0.985 | | | 0.995 | | | 0.997 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1793 | 0 | 0 | 1678 | 0 | 0 | 1974 | 0 | 1646 | 1879 | 0 |
| Flt Permitted | | 0.861 | | | 0.959 | | | 0.969 | | 0.460 | | |
| Satd. Flow (perm) | 0 | 1567 | 0 | 0 | 1615 | 0 | 0 | 1918 | 0 | 750 | 1879 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 86 | | | 3 | | | 11 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 798 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 21.8 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | | | | 5 | | 36 | | | 54 | 54 | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 9% | 9% | 2% | 2% | 2% | 1% | 1% | 1% | 6% | 6% | 6% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 34 | 60 | 17 | 20 | 74 | 124 | 16 | 216 | 11 | 55 | 169 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 111 | 0 | 0 | 218 | 0 | 0 | 243 | 0 | 55 | 190 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

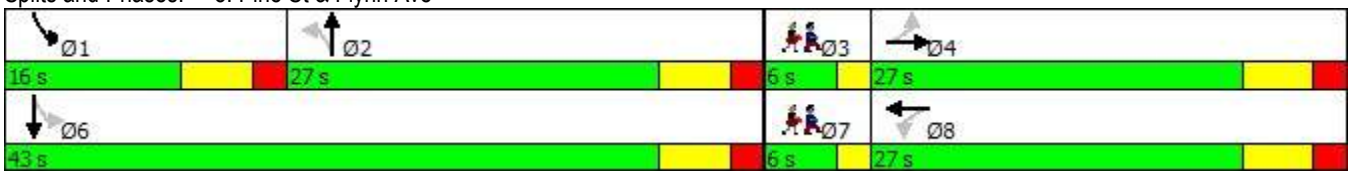
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 11.0 | | | 11.0 | | | 13.6 | | 17.8 | 17.8 | |
| Actuated g/C Ratio | | 0.25 | | | 0.25 | | | 0.31 | | 0.41 | 0.41 | |
| v/c Ratio | | 0.27 | | | 0.46 | | | 0.40 | | 0.11 | 0.24 | |
| Control Delay | | 16.8 | | | 14.3 | | | 17.2 | | 8.7 | 8.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 16.8 | | | 14.3 | | | 17.2 | | 8.7 | 8.9 | |
| LOS | | B | | | B | | | B | | A | A | |
| Approach Delay | | 16.8 | | | 14.3 | | | 17.2 | | | 8.9 | |
| Approach LOS | | B | | | B | | | B | | | A | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 43.2
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 13.9 Intersection LOS: B
Intersection Capacity Utilization 50.6% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

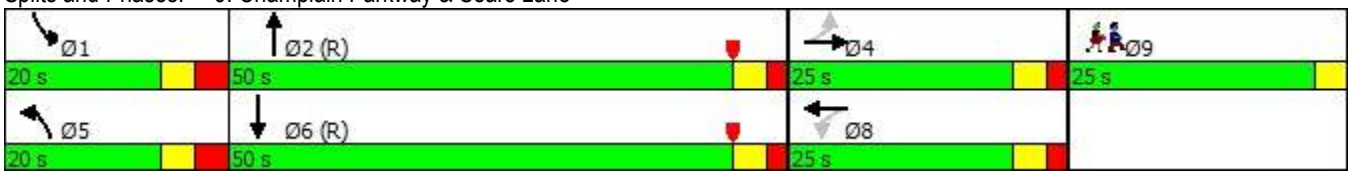
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 0 | 25 | 40 | 60 | 25 | 80 | 526 | 65 | 10 | 621 | 15 |
| Future Volume (vph) | 5 | 0 | 25 | 40 | 60 | 25 | 80 | 526 | 65 | 10 | 621 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.887 | | | 0.973 | | | 0.984 | | | 0.996 | |
| Flt Protected | | 0.992 | | | 0.984 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1584 | 0 | 0 | 1724 | 0 | 1711 | 1772 | 0 | 1711 | 1793 | 0 |
| Flt Permitted | | 0.961 | | | 0.883 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1535 | 0 | 0 | 1547 | 0 | 1711 | 1772 | 0 | 1711 | 1793 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 100 | | | 9 | | | 6 | | | 1 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 938 | | | 543 | | | 1149 | | | 1003 | |
| Travel Time (s) | | 25.6 | | | 14.8 | | | 31.3 | | | 27.4 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 5 | 0 | 25 | 40 | 60 | 25 | 80 | 526 | 65 | 10 | 621 | 15 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 30 | 0 | 0 | 125 | 0 | 80 | 591 | 0 | 10 | 636 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 25.0 | 25.0 | | 25.0 | 25.0 | | 20.0 | 50.0 | | 20.0 | 50.0 | |
| Total Split (%) | 20.8% | 20.8% | | 20.8% | 20.8% | | 16.7% | 41.7% | | 16.7% | 41.7% | |
| Maximum Green (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 14.0 | 45.0 | | 14.0 | 45.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 14.5 | | | 14.5 | | 10.7 | 87.8 | | 6.3 | 76.3 | |
| Actuated g/C Ratio | | 0.12 | | | 0.12 | | 0.09 | 0.73 | | 0.05 | 0.64 | |
| v/c Ratio | | 0.11 | | | 0.64 | | 0.53 | 0.46 | | 0.11 | 0.56 | |
| Control Delay | | 0.8 | | | 61.1 | | 65.2 | 14.0 | | 57.1 | 13.5 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 0.8 | | | 61.1 | | 65.2 | 14.0 | | 57.1 | 13.5 | |
| LOS | | A | | | E | | E | B | | E | B | |
| Approach Delay | | 0.8 | | | 61.1 | | | 20.1 | | | 14.1 | |
| Approach LOS | | A | | | E | | | C | | | B | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 17 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.64 | |
| Intersection Signal Delay: 20.6 | Intersection LOS: C |
| Intersection Capacity Utilization 63.6% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 9: Champlain Parkway & Sears Lane



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

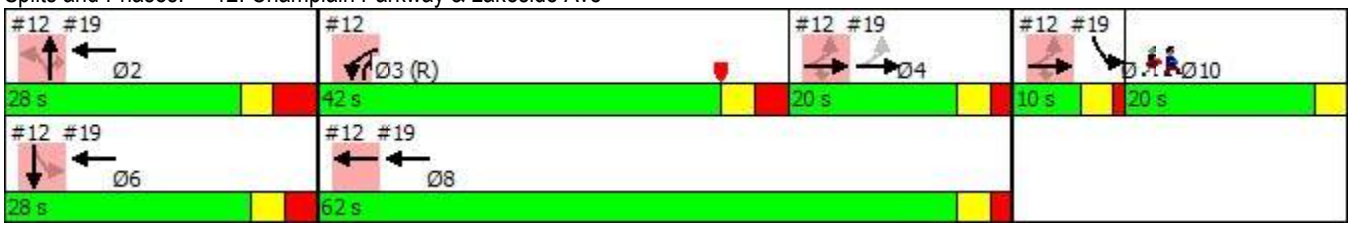
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 45 | 77 | 569 | 207 | 0 | 302 | 0 | 254 | 20 | 0 | 0 |
| Future Volume (vph) | 0 | 45 | 77 | 569 | 207 | 0 | 302 | 0 | 254 | 20 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 150 | | 0 | 0 | | 250 | 0 | | 0 |
| Storage Lanes | 0 | | 1 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | 0.950 | | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1711 | 1531 | 0 | 1711 | 0 |
| Flt Permitted | | | | 0.950 | | | | 0.744 | | | 0.457 | |
| Satd. Flow (perm) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1340 | 1531 | 0 | 823 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 589 | | | 1003 | | | 158 | |
| Travel Time (s) | | 4.9 | | | 16.1 | | | 27.4 | | | 4.3 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 45 | 77 | 569 | 207 | 0 | 302 | 0 | 254 | 20 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 45 | 77 | 569 | 207 | 0 | 0 | 302 | 254 | 0 | 20 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Turn Type | | NA | Perm | Prot | NA | | Perm | NA | pm+ov | Perm | NA | |
| Protected Phases | | 4 9 | | 3 | 8 | | | 2 | 3 | | 6 | |
| Permitted Phases | 4 9 | | 4 9 | | | | 2 | | 2 | 6 | | |
| Detector Phase | 4 9 | 4 9 | 4 9 | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 4 | 9 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | | | | 8.0 | 5.0 | | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | |
| Minimum Split (s) | | | | 21.0 | 15.0 | | 17.0 | 17.0 | 21.0 | 11.0 | 11.0 | |
| Total Split (s) | | | | 42.0 | 62.0 | | 28.0 | 28.0 | 42.0 | 28.0 | 28.0 | |
| Total Split (%) | | | | 35.0% | 51.7% | | 23.3% | 23.3% | 35.0% | 23.3% | 23.3% | |
| Maximum Green (s) | | | | 36.0 | 57.0 | | 21.0 | 21.0 | 36.0 | 22.0 | 22.0 | |
| Yellow Time (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | | | | 3.0 | 2.0 | | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 5.0 | | | 7.0 | 6.0 | | 6.0 | |
| Lead/Lag | | | | Lead | | | | | Lead | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Gap (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Time Before Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Time To Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Recall Mode | | | | C-Min | None | | None | None | C-Min | None | None | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 21.5 | 21.5 | 36.8 | 53.5 | | | 41.6 | 85.4 | | 42.6 | |
| Actuated g/C Ratio | | 0.18 | 0.18 | 0.31 | 0.45 | | | 0.35 | 0.71 | | 0.36 | |
| v/c Ratio | | 0.14 | 0.28 | 1.09 | 0.26 | | | 0.65 | 0.23 | | 0.07 | |
| Control Delay | | 11.4 | 13.3 | 78.9 | 14.1 | | | 45.9 | 15.7 | | 33.7 | |
| Queue Delay | | 1.8 | 2.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 13.2 | 15.3 | 78.9 | 14.1 | | | 45.9 | 15.7 | | 33.7 | |
| LOS | | B | B | E | B | | | D | B | | C | |
| Approach Delay | | 14.5 | | | 61.6 | | | 32.1 | | | 33.7 | |
| Approach LOS | | B | | | E | | | C | | | C | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 107 (89%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 130 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.09 | |
| Intersection Signal Delay: 46.2 | Intersection LOS: D |
| Intersection Capacity Utilization 63.9% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 12: Champlain Parkway & Lakeside Ave



| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 20.0 | 9.0 | 20.0 |
| Total Split (s) | 20.0 | 10.0 | 20.0 |
| Total Split (%) | 17% | 8% | 17% |
| Maximum Green (s) | 15.0 | 6.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 1.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | | | 7.0 |
| Flash Dont Walk (s) | | | 10.0 |
| Pedestrian Calls (#/hr) | | | 5 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 41 | 75 | 35 | 15 | 65 | 16 | 80 | 614 | 5 | 6 | 619 | 61 |
| Future Volume (vph) | 41 | 75 | 35 | 15 | 65 | 16 | 80 | 614 | 5 | 6 | 619 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.969 | | | 0.977 | | | 0.999 | | | 0.987 | |
| Flt Protected | | 0.987 | | | 0.992 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1722 | 0 | 0 | 1745 | 0 | 1711 | 1799 | 0 | 1711 | 1777 | 0 |
| Flt Permitted | | 0.843 | | | 0.910 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1471 | 0 | 0 | 1601 | 0 | 1711 | 1799 | 0 | 1711 | 1777 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | 7 | | | | | | 5 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1255 | | | 798 | | | 921 | | | 1149 | |
| Travel Time (s) | | 34.2 | | | 21.8 | | | 25.1 | | | 31.3 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 41 | 75 | 35 | 15 | 65 | 16 | 80 | 614 | 5 | 6 | 619 | 61 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 151 | 0 | 0 | 96 | 0 | 80 | 619 | 0 | 6 | 680 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

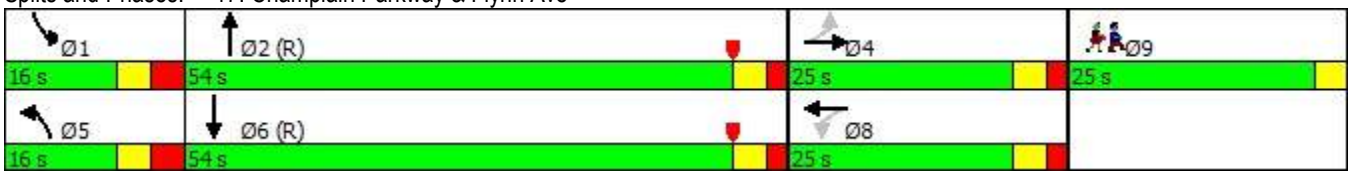
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 25.0 | 25.0 | | 25.0 | 25.0 | | 16.0 | 54.0 | | 16.0 | 54.0 | |
| Total Split (%) | 20.8% | 20.8% | | 20.8% | 20.8% | | 13.3% | 45.0% | | 13.3% | 45.0% | |
| Maximum Green (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 10.0 | 49.0 | | 10.0 | 49.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 15.6 | | | 15.6 | | 9.9 | 86.8 | | 6.0 | 76.0 | |
| Actuated g/C Ratio | | 0.13 | | | 0.13 | | 0.08 | 0.72 | | 0.05 | 0.63 | |
| v/c Ratio | | 0.75 | | | 0.45 | | 0.57 | 0.48 | | 0.07 | 0.60 | |
| Control Delay | | 68.7 | | | 50.3 | | 68.7 | 13.1 | | 43.7 | 31.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 68.7 | | | 50.3 | | 68.7 | 13.1 | | 43.7 | 31.6 | |
| LOS | | E | | | D | | E | B | | D | C | |
| Approach Delay | | 68.7 | | | 50.3 | | | 19.5 | | | 31.7 | |
| Approach LOS | | E | | | D | | | B | | | C | |

## Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 17 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 31.0 Intersection LOS: C
Intersection Capacity Utilization 68.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 17: Champlain Parkway & Flynn Ave



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

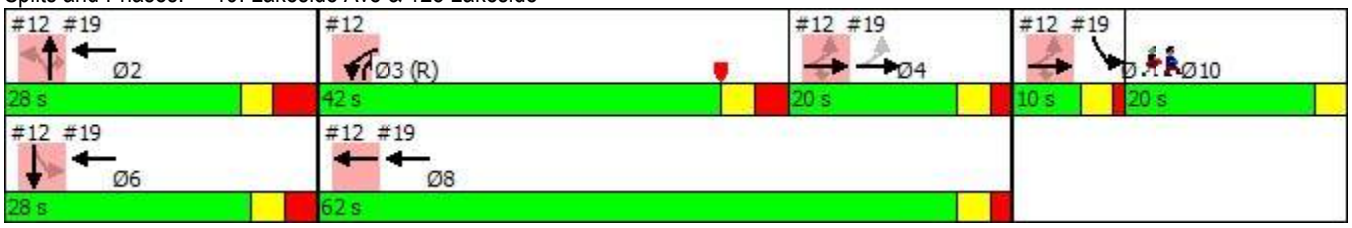
| Intersection Summary |
|---|

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 97 | 259 | 250 | 25 | 5 | | | | | |
| Future Volume (vph) | 5 | 97 | 259 | 250 | 25 | 5 | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | | | | | |
| Grade (%) | | 0% | 0% | | 0% | | | | | | |
| Storage Length (ft) | 0 | | | 0 | 0 | 0 | | | | | |
| Storage Lanes | 0 | | | 0 | 1 | 0 | | | | | |
| Taper Length (ft) | 25 | | | | 25 | | | | | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Ped Bike Factor | | | | | | | | | | | |
| Frt | | | 0.934 | | 0.977 | | | | | | |
| Flt Protected | | 0.998 | | | 0.960 | | | | | | |
| Satd. Flow (prot) | 0 | 3414 | 1682 | 0 | 1689 | 0 | | | | | |
| Flt Permitted | | 0.916 | | | 0.960 | | | | | | |
| Satd. Flow (perm) | 0 | 3134 | 1682 | 0 | 1689 | 0 | | | | | |
| Right Turn on Red | | | | No | | No | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (mph) | | 25 | 25 | | 25 | | | | | | |
| Link Distance (ft) | | 861 | 180 | | 241 | | | | | | |
| Travel Time (s) | | 23.5 | 4.9 | | 6.6 | | | | | | |
| Confl. Peds. (#/hr) | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | | | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Parking (#/hr) | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | 0% | | 0% | | | | | | |
| Adj. Flow (vph) | 5 | 97 | 259 | 250 | 25 | 5 | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 102 | 509 | 0 | 30 | 0 | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | |
| Lane Alignment | Left | Left | Left | Right | Left | Right | | | | | |
| Median Width(ft) | | 0 | 0 | | 11 | | | | | | |
| Link Offset(ft) | | 0 | 0 | | 0 | | | | | | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | | | | | |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 | | | | | |
| Number of Detectors | 1 | 2 | 2 | | 1 | | | | | | |
| Detector Template | Left | Thru | Thru | | Left | | | | | | |
| Leading Detector (ft) | 20 | 100 | 100 | | 20 | | | | | | |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | | | | | | |
| Turn Type | Perm | NA | NA | | Prot | | | | | | |
| Protected Phases | | 4 | 2 6 8 | | 9 | | 2 | 3 | 6 | 8 | 10 |
| Permitted Phases | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | 2 6 8 | | 9 | | | | | | |
| Switch Phase | | | | | | | | | | | |

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | | | 5.0 | | 8.0 | 8.0 | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 20.0 | 20.0 | | | 9.0 | | 17.0 | 21.0 | 11.0 | 15.0 | 20.0 |
| Total Split (s) | 20.0 | 20.0 | | | 10.0 | | 28.0 | 42.0 | 28.0 | 62.0 | 20.0 |
| Total Split (%) | 16.7% | 16.7% | | | 8.3% | | 23% | 35% | 23% | 52% | 17% |
| Maximum Green (s) | 15.0 | 15.0 | | | 6.0 | | 21.0 | 36.0 | 22.0 | 57.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | | | 1.0 | | 4.0 | 3.0 | 3.0 | 2.0 | 0.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | | |
| Lead/Lag | Lag | Lag | | | Lead | | | Lead | | | Lag |
| Lead-Lag Optimize? | Yes | Yes | | | Yes | | | | | | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | | None | | None | C-Min | None | None | None |
| Walk Time (s) | | | | | | | | | | | 7.0 |
| Flash Dont Walk (s) | | | | | | | | | | | 10.0 |
| Pedestrian Calls (#/hr) | | | | | | | | | | | 5 |
| Act Effct Green (s) | | 10.7 | 101.5 | | 6.8 | | | | | | |
| Actuated g/C Ratio | | 0.09 | 0.85 | | 0.06 | | | | | | |
| v/c Ratio | | 0.37 | 0.36 | | 0.31 | | | | | | |
| Control Delay | | 54.3 | 1.3 | | 63.1 | | | | | | |
| Queue Delay | | 0.0 | 0.5 | | 0.0 | | | | | | |
| Total Delay | | 54.3 | 1.8 | | 63.1 | | | | | | |
| LOS | | D | A | | E | | | | | | |
| Approach Delay | | 54.3 | 1.8 | | 63.1 | | | | | | |
| Approach LOS | | D | A | | E | | | | | | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 107 (89%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 130 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.09 | |
| Intersection Signal Delay: 13.0 | Intersection LOS: B |
| Intersection Capacity Utilization 42.3% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 19: Lakeside Ave & 128 Lakeside



# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 3 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | | | 0.879 | | | 0.874 | | | | |
| Flt Protected | | | | | 0.995 | | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1801 | 0 | 0 | 1575 | 0 | 0 | 1574 | 0 | 0 | 1711 | 0 |
| Flt Permitted | | | | | 0.995 | | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1801 | 0 | 0 | 1575 | 0 | 0 | 1574 | 0 | 0 | 1711 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 861 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 23.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 3 | | | | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 3 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1 | 0 | 0 | 169 | 0 | 0 | 29 | 0 | 0 | 3 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 28.0% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 3 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 1 | 0 | 17 | 1 | 151 | 0 | 2 | 27 | 3 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 1 | 169 | 29 | 3 |
| Volume Left (vph) | 0 | 17 | 0 | 3 |
| Volume Right (vph) | 0 | 151 | 27 | 0 |
| Hadj (s) | 0.03 | -0.48 | -0.52 | 0.23 |
| Departure Headway (s) | 4.1 | 3.5 | 3.7 | 4.5 |
| Degree Utilization, x | 0.00 | 0.16 | 0.03 | 0.00 |
| Capacity (veh/h) | 851 | 1020 | 924 | 769 |
| Control Delay (s) | 7.1 | 7.2 | 6.8 | 7.5 |
| Approach Delay (s) | 7.1 | 7.2 | 6.8 | 7.5 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.1 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 28.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 281 | 4 | 4 | 6 | 4 | 24 | 140 | 398 | 29 | 8 | 134 | 670 |
| Future Volume (vph) | 281 | 4 | 4 | 6 | 4 | 24 | 140 | 398 | 29 | 8 | 134 | 670 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.98 | 0.98 | | | 0.97 | | 0.95 | 0.99 | | | | 0.92 |
| Frt | | 0.925 | | | 0.905 | | | 0.990 | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.991 | | 0.950 | | | | 0.997 | |
| Satd. Flow (prot) | 1711 | 1624 | 0 | 0 | 1570 | 0 | 1711 | 1769 | 0 | 0 | 1795 | 1531 |
| Flt Permitted | 0.950 | | | | 0.936 | | 0.666 | | | | 0.976 | |
| Satd. Flow (perm) | 1678 | 1624 | 0 | 0 | 1475 | 0 | 1141 | 1769 | 0 | 0 | 1757 | 1410 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 589 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 16.1 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 4 | | 6 | 6 | | 4 | 12 | | 19 | 19 | | 12 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 281 | 4 | 4 | 6 | 4 | 24 | 140 | 398 | 29 | 8 | 134 | 670 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 281 | 8 | 0 | 0 | 34 | 0 | 140 | 427 | 0 | 0 | 142 | 670 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | Prot | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 8 | | | 4 | | 5 | 2 | | | 6 | |
| Permitted Phases | | | | 4 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 8 | | 4 | 4 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

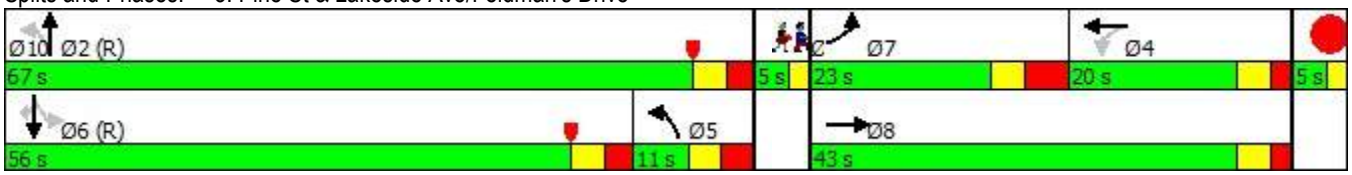
| Lane Group | Ø3 | Ø10 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 10 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 20.0 | | 20.0 | 20.0 | | 11.0 | 23.5 | | 29.5 | 29.5 | 29.5 |
| Total Split (s) | 23.0 | 43.0 | | 20.0 | 20.0 | | 11.0 | 67.0 | | 56.0 | 56.0 | 56.0 |
| Total Split (%) | 19.2% | 35.8% | | 16.7% | 16.7% | | 9.2% | 55.8% | | 46.7% | 46.7% | 46.7% |
| Maximum Green (s) | 16.0 | 38.0 | | 15.0 | 15.0 | | 5.0 | 61.5 | | 50.5 | 50.5 | 50.5 |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 4.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.5 | | 2.5 | 2.5 | 2.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 5.0 | | | 5.0 | | 6.0 | 5.5 | | | 5.5 | 5.5 |
| Lead/Lag | Lead | | | Lag | Lag | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | Min | None | | None | None | | None | C-Max | | C-Max | C-Max | C-Max |
| Walk Time (s) | | 2.0 | | 2.0 | 2.0 | | | 2.0 | | 2.0 | 2.0 | 2.0 |
| Flash Dont Walk (s) | | 10.0 | | 10.0 | 10.0 | | | 10.0 | | 10.0 | 10.0 | 10.0 |
| Pedestrian Calls (#/hr) | | 5 | | 5 | 5 | | | 5 | | 5 | 5 | 5 |
| Act Effct Green (s) | 20.0 | 30.9 | | | 8.4 | | 75.6 | 76.1 | | | 65.1 | 65.1 |
| Actuated g/C Ratio | 0.17 | 0.26 | | | 0.07 | | 0.63 | 0.63 | | | 0.54 | 0.54 |
| v/c Ratio | 0.99 | 0.02 | | | 0.33 | | 0.19 | 0.38 | | | 0.15 | 0.88 |
| Control Delay | 97.0 | 31.8 | | | 60.9 | | 12.4 | 13.7 | | | 16.6 | 40.5 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 97.0 | 31.8 | | | 60.9 | | 12.4 | 13.7 | | | 16.6 | 40.5 |
| LOS | F | C | | | E | | B | B | | | B | D |
| Approach Delay | | 95.2 | | | 60.9 | | | 13.4 | | | 36.4 | |
| Approach LOS | | F | | | E | | | B | | | D | |

## Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 81.5 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 39.2 Intersection LOS: D
Intersection Capacity Utilization 83.8% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø3 | Ø10 |
|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 5.0 |
| Total Split (%) | 4% | 4% |
| Maximum Green (s) | 3.0 | 3.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 5.0 | 5.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 46 | 64 | 7 | 20 | 101 | 184 | 19 | 269 | 11 | 34 | 85 | 2 |
| Future Volume (vph) | 46 | 64 | 7 | 20 | 101 | 184 | 19 | 269 | 11 | 34 | 85 | 2 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 14 | 11 | 11 | 14 | 11 | 11 | 14 | 11 | 11 | 14 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | 0.90 | | | 0.99 | | | | |
| Frt | | 0.992 | | | 0.919 | | | 0.995 | | | 0.997 | |
| Flt Protected | | 0.981 | | | 0.997 | | | 0.997 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1934 | 0 | 0 | 1637 | 0 | 0 | 1957 | 0 | 1711 | 1981 | 0 |
| Flt Permitted | | 0.763 | | | 0.974 | | | 0.977 | | 0.375 | | |
| Satd. Flow (perm) | 0 | 1504 | 0 | 0 | 1597 | 0 | 0 | 1918 | 0 | 675 | 1981 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 3 | | | 77 | | | 2 | | | 2 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 798 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 21.8 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | | | | 5 | | 36 | | | 54 | 54 | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 46 | 64 | 7 | 20 | 101 | 184 | 19 | 269 | 11 | 34 | 85 | 2 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 117 | 0 | 0 | 305 | 0 | 0 | 299 | 0 | 34 | 87 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 29.3% | 29.3% | | 29.3% | 29.3% | | 29.3% | 29.3% | | 17.4% | 46.7% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 14.3 | | | 14.3 | | | 14.2 | | 18.1 | 18.1 | |
| Actuated g/C Ratio | | 0.30 | | | 0.30 | | | 0.30 | | 0.38 | 0.38 | |
| v/c Ratio | | 0.26 | | | 0.57 | | | 0.52 | | 0.07 | 0.12 | |
| Control Delay | | 18.1 | | | 18.0 | | | 20.7 | | 10.3 | 10.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 18.1 | | | 18.0 | | | 20.7 | | 10.3 | 10.1 | |
| LOS | | B | | | B | | | C | | B | B | |
| Approach Delay | | 18.1 | | | 18.0 | | | 20.7 | | | 10.2 | |
| Approach LOS | | B | | | B | | | C | | | B | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 92 | |
| Actuated Cycle Length: 47.5 | |
| Natural Cycle: 80 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.57 | |
| Intersection Signal Delay: 17.9 | Intersection LOS: B |
| Intersection Capacity Utilization 53.6% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 8: Pine St & Flynn Ave

| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 22.0 | 22.0 |
| Total Split (s) | 22.0 | 22.0 |
| Total Split (%) | 24% | 24% |
| Maximum Green (s) | 18.0 | 18.0 |
| Yellow Time (s) | 4.0 | 4.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

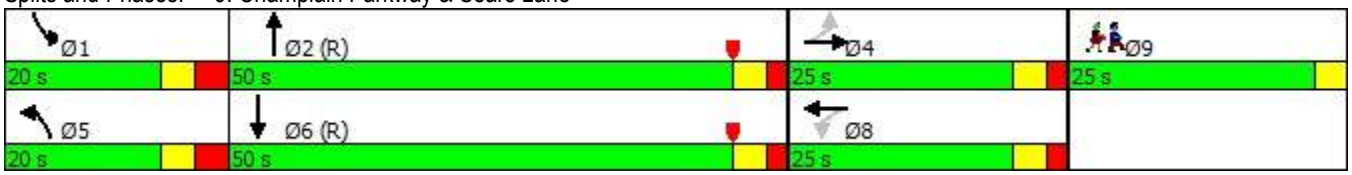
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 4 | 0 | 25 | 40 | 56 | 20 | 80 | 421 | 60 | 11 | 592 | 15 |
| Future Volume (vph) | 4 | 0 | 25 | 40 | 56 | 20 | 80 | 421 | 60 | 11 | 592 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.884 | | | 0.977 | | | 0.981 | | | 0.996 | |
| Flt Protected | | 0.993 | | | 0.983 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1581 | 0 | 0 | 1729 | 0 | 1711 | 1766 | 0 | 1711 | 1793 | 0 |
| Flt Permitted | | 0.970 | | | 0.874 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1544 | 0 | 0 | 1538 | 0 | 1711 | 1766 | 0 | 1711 | 1793 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 100 | | | 8 | | | 7 | | | 1 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 938 | | | 543 | | | 1149 | | | 1003 | |
| Travel Time (s) | | 25.6 | | | 14.8 | | | 31.3 | | | 27.4 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 4 | 0 | 25 | 40 | 56 | 20 | 80 | 421 | 60 | 11 | 592 | 15 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 29 | 0 | 0 | 116 | 0 | 80 | 481 | 0 | 11 | 607 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 25.0 | 25.0 | | 25.0 | 25.0 | | 20.0 | 50.0 | | 20.0 | 50.0 | |
| Total Split (%) | 20.8% | 20.8% | | 20.8% | 20.8% | | 16.7% | 41.7% | | 16.7% | 41.7% | |
| Maximum Green (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 14.0 | 45.0 | | 14.0 | 45.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 14.0 | | | 14.0 | | 10.8 | 88.2 | | 6.4 | 76.7 | |
| Actuated g/C Ratio | | 0.12 | | | 0.12 | | 0.09 | 0.74 | | 0.05 | 0.64 | |
| v/c Ratio | | 0.11 | | | 0.62 | | 0.52 | 0.37 | | 0.12 | 0.53 | |
| Control Delay | | 0.8 | | | 60.8 | | 85.3 | 5.5 | | 64.7 | 8.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 0.8 | | | 60.8 | | 85.3 | 5.5 | | 64.7 | 8.1 | |
| LOS | | A | | | E | | F | A | | E | A | |
| Approach Delay | | 0.8 | | | 60.8 | | | 16.9 | | | 9.1 | |
| Approach LOS | | A | | | E | | | B | | | A | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 17 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.62 | |
| Intersection Signal Delay: 16.8 | Intersection LOS: B |
| Intersection Capacity Utilization 62.9% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 9: Champlain Parkway & Sears Lane



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

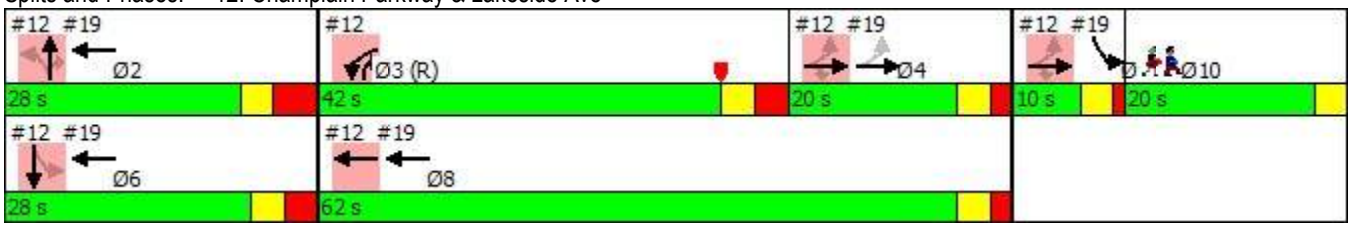
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 31 | 43 | 570 | 194 | 0 | 225 | 0 | 220 | 20 | 5 | 0 |
| Future Volume (vph) | 0 | 31 | 43 | 570 | 194 | 0 | 225 | 0 | 220 | 20 | 5 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 150 | | 0 | 0 | | 250 | 0 | | 0 |
| Storage Lanes | 0 | | 1 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | 0.950 | | | | 0.950 | | | 0.962 | |
| Satd. Flow (prot) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1711 | 1531 | 0 | 1732 | 0 |
| Flt Permitted | | | | 0.950 | | | | 0.741 | | | 0.739 | |
| Satd. Flow (perm) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1334 | 1531 | 0 | 1331 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 589 | | | 1003 | | | 158 | |
| Travel Time (s) | | 4.9 | | | 16.1 | | | 27.4 | | | 4.3 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 31 | 43 | 570 | 194 | 0 | 225 | 0 | 220 | 20 | 5 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 31 | 43 | 570 | 194 | 0 | 0 | 225 | 220 | 0 | 25 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Turn Type | | NA | Perm | Prot | NA | | Perm | NA | pm+ov | Perm | NA | |
| Protected Phases | | 4 9 | | 3 | 8 | | | 2 | 3 | | 6 | |
| Permitted Phases | 4 9 | | 4 9 | | | | 2 | | 2 | 6 | | |
| Detector Phase | 4 9 | 4 9 | 4 9 | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 4 | 9 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | | | | 8.0 | 5.0 | | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | |
| Minimum Split (s) | | | | 21.0 | 15.0 | | 17.0 | 17.0 | 21.0 | 11.0 | 11.0 | |
| Total Split (s) | | | | 42.0 | 62.0 | | 28.0 | 28.0 | 42.0 | 28.0 | 28.0 | |
| Total Split (%) | | | | 35.0% | 51.7% | | 23.3% | 23.3% | 35.0% | 23.3% | 23.3% | |
| Maximum Green (s) | | | | 36.0 | 57.0 | | 21.0 | 21.0 | 36.0 | 22.0 | 22.0 | |
| Yellow Time (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | | | | 3.0 | 2.0 | | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 5.0 | | | 7.0 | 6.0 | | 6.0 | |
| Lead/Lag | | | | Lead | | | | | Lead | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Gap (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Time Before Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Time To Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Recall Mode | | | | C-Min | None | | None | None | C-Min | None | None | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 18.0 | 18.0 | 55.2 | 67.5 | | | 26.9 | 90.3 | | 27.9 | |
| Actuated g/C Ratio | | 0.15 | 0.15 | 0.46 | 0.56 | | | 0.22 | 0.75 | | 0.23 | |
| v/c Ratio | | 0.11 | 0.19 | 0.72 | 0.19 | | | 0.76 | 0.19 | | 0.08 | |
| Control Delay | | 8.4 | 9.7 | 21.1 | 8.0 | | | 62.5 | 14.6 | | 37.4 | |
| Queue Delay | | 0.0 | 0.0 | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 8.4 | 9.7 | 21.1 | 8.0 | | | 62.5 | 14.6 | | 37.4 | |
| LOS | | A | A | C | A | | | E | B | | D | |
| Approach Delay | | 9.1 | | | 17.8 | | | 38.8 | | | 37.4 | |
| Approach LOS | | A | | | B | | | D | | | D | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 107 (89%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 120 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.76 | |
| Intersection Signal Delay: 24.8 | Intersection LOS: C |
| Intersection Capacity Utilization 62.6% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 12: Champlain Parkway & Lakeside Ave



| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 20.0 | 9.0 | 20.0 |
| Total Split (s) | 20.0 | 10.0 | 20.0 |
| Total Split (%) | 17% | 8% | 17% |
| Maximum Green (s) | 15.0 | 6.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 1.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | | | 7.0 |
| Flash Dont Walk (s) | | | 10.0 |
| Pedestrian Calls (#/hr) | | | 5 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 41 | 75 | 35 | 15 | 65 | 16 | 80 | 614 | 5 | 6 | 619 | 61 |
| Future Volume (vph) | 41 | 75 | 35 | 15 | 65 | 16 | 80 | 614 | 5 | 6 | 619 | 61 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 100 | 0 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | 0.977 | | | 0.999 | | | 0.987 | |
| Flt Protected | | 0.983 | | | 0.992 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1770 | 1531 | 0 | 1745 | 0 | 1711 | 1799 | 0 | 1711 | 1777 | 0 |
| Flt Permitted | | 0.777 | | | 0.938 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1399 | 1531 | 0 | 1650 | 0 | 1711 | 1799 | 0 | 1711 | 1777 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 109 | | 7 | | | 1 | | | 7 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1255 | | | 798 | | | 921 | | | 1149 | |
| Travel Time (s) | | 34.2 | | | 21.8 | | | 25.1 | | | 31.3 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 41 | 75 | 35 | 15 | 65 | 16 | 80 | 614 | 5 | 6 | 619 | 61 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 116 | 35 | 0 | 96 | 0 | 80 | 619 | 0 | 6 | 680 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | Perm | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | 4 | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

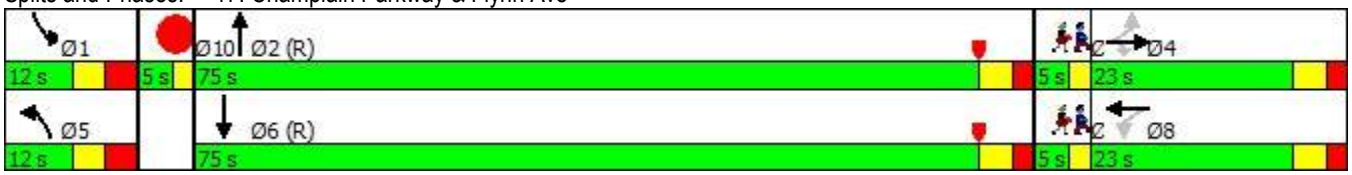
| Lane Group | Ø3 | Ø7 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 3 | 7 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | 10.0 | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | | 11.0 | 24.0 | | 11.0 | 23.0 | |
| Total Split (s) | 23.0 | 23.0 | 23.0 | 23.0 | 23.0 | | 12.0 | 75.0 | | 12.0 | 75.0 | |
| Total Split (%) | 19.2% | 19.2% | 19.2% | 19.2% | 19.2% | | 10.0% | 62.5% | | 10.0% | 62.5% | |
| Maximum Green (s) | 18.0 | 18.0 | 18.0 | 18.0 | 18.0 | | 6.0 | 70.0 | | 6.0 | 70.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | 5.0 | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | Lag | Lag | Lag | Lag | Lag | | | | | | | |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | None | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | 2.0 | 2.0 | 2.0 | 2.0 | 2.0 | | | 2.0 | | | 2.0 | |
| Flash Dont Walk (s) | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | | | 15.0 | | | 15.0 | |
| Pedestrian Calls (#/hr) | 5 | 5 | 5 | 5 | 5 | | | 5 | | | 5 | |
| Act Effct Green (s) | | 14.2 | 14.2 | | 14.2 | | 10.8 | 76.9 | | 5.8 | 76.9 | |
| Actuated g/C Ratio | | 0.12 | 0.12 | | 0.12 | | 0.09 | 0.64 | | 0.05 | 0.64 | |
| v/c Ratio | | 0.70 | 0.13 | | 0.48 | | 0.52 | 0.54 | | 0.07 | 0.60 | |
| Control Delay | | 72.5 | 0.9 | | 52.9 | | 65.4 | 15.0 | | 55.3 | 25.1 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 72.5 | 0.9 | | 52.9 | | 65.4 | 15.0 | | 55.3 | 25.1 | |
| LOS | | E | A | | D | | E | B | | E | C | |
| Approach Delay | | 55.9 | | | 52.9 | | | 20.8 | | | 25.4 | |
| Approach LOS | | E | | | D | | | C | | | C | |

## Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.70
Intersection Signal Delay: 27.9 Intersection LOS: C
Intersection Capacity Utilization 66.2% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 17: Champlain Parkway & Flynn Ave



| Lane Group | Ø3 | Ø7 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 5.0 | 5.0 |
| Total Split (%) | 4% | 4% | 4% |
| Maximum Green (s) | 3.0 | 3.0 | 3.0 |
| Yellow Time (s) | 2.0 | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lead | Lead | |
| Lead-Lag Optimize? | Yes | Yes | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 | 5 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

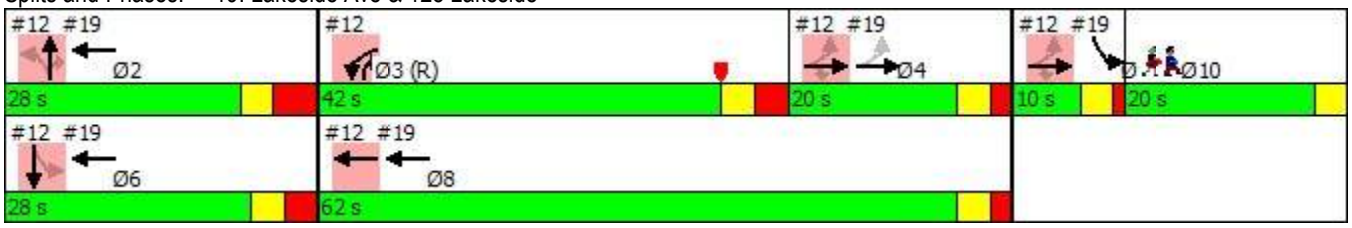
| Intersection Summary |
|---|

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 49 | 164 | 255 | 25 | 5 | | | | | |
| Future Volume (vph) | 5 | 49 | 164 | 255 | 25 | 5 | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | | | | | |
| Grade (%) | | 0% | 0% | | 0% | | | | | | |
| Storage Length (ft) | 0 | | | 0 | 0 | 0 | | | | | |
| Storage Lanes | 0 | | | 0 | 1 | 0 | | | | | |
| Taper Length (ft) | 25 | | | | 25 | | | | | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Ped Bike Factor | | | | | | | | | | | |
| Frt | | | 0.918 | | 0.977 | | | | | | |
| Flt Protected | | 0.995 | | | 0.960 | | | | | | |
| Satd. Flow (prot) | 0 | 3404 | 1653 | 0 | 1689 | 0 | | | | | |
| Flt Permitted | | 0.881 | | | 0.960 | | | | | | |
| Satd. Flow (perm) | 0 | 3014 | 1653 | 0 | 1689 | 0 | | | | | |
| Right Turn on Red | | | | No | | No | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (mph) | | 25 | 25 | | 25 | | | | | | |
| Link Distance (ft) | | 861 | 180 | | 241 | | | | | | |
| Travel Time (s) | | 23.5 | 4.9 | | 6.6 | | | | | | |
| Confl. Peds. (#/hr) | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | | | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Parking (#/hr) | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | 0% | | 0% | | | | | | |
| Adj. Flow (vph) | 5 | 49 | 164 | 255 | 25 | 5 | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 54 | 419 | 0 | 30 | 0 | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | |
| Lane Alignment | Left | Left | Left | Right | Left | Right | | | | | |
| Median Width(ft) | | 0 | 0 | | 11 | | | | | | |
| Link Offset(ft) | | 0 | 0 | | 0 | | | | | | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | | | | | |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 | | | | | |
| Number of Detectors | 1 | 2 | 2 | | 1 | | | | | | |
| Detector Template | Left | Thru | Thru | | Left | | | | | | |
| Leading Detector (ft) | 20 | 100 | 100 | | 20 | | | | | | |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | | | | | | |
| Turn Type | Perm | NA | NA | | Prot | | | | | | |
| Protected Phases | | 4 | 2 6 8 | | 9 | | 2 | 3 | 6 | 8 | 10 |
| Permitted Phases | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | 2 6 8 | | 9 | | | | | | |
| Switch Phase | | | | | | | | | | | |

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | | | 5.0 | | 8.0 | 8.0 | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 20.0 | 20.0 | | | 9.0 | | 17.0 | 21.0 | 11.0 | 15.0 | 20.0 |
| Total Split (s) | 20.0 | 20.0 | | | 10.0 | | 28.0 | 42.0 | 28.0 | 62.0 | 20.0 |
| Total Split (%) | 16.7% | 16.7% | | | 8.3% | | 23% | 35% | 23% | 52% | 17% |
| Maximum Green (s) | 15.0 | 15.0 | | | 6.0 | | 21.0 | 36.0 | 22.0 | 57.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | | | 1.0 | | 4.0 | 3.0 | 3.0 | 2.0 | 0.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | | |
| Lead/Lag | Lag | Lag | | | Lead | | | Lead | | | Lag |
| Lead-Lag Optimize? | Yes | Yes | | | Yes | | | | | | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | | None | | None | C-Min | None | None | None |
| Walk Time (s) | | | | | | | | | | | 7.0 |
| Flash Dont Walk (s) | | | | | | | | | | | 10.0 |
| Pedestrian Calls (#/hr) | | | | | | | | | | | 5 |
| Act Effct Green (s) | | 8.4 | 100.8 | | 7.5 | | | | | | |
| Actuated g/C Ratio | | 0.07 | 0.84 | | 0.06 | | | | | | |
| v/c Ratio | | 0.26 | 0.30 | | 0.28 | | | | | | |
| Control Delay | | 55.0 | 0.6 | | 59.8 | | | | | | |
| Queue Delay | | 0.0 | 0.5 | | 0.0 | | | | | | |
| Total Delay | | 55.0 | 1.2 | | 59.8 | | | | | | |
| LOS | | D | A | | E | | | | | | |
| Approach Delay | | 55.0 | 1.2 | | 59.8 | | | | | | |
| Approach LOS | | D | A | | E | | | | | | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 107 (89%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 120 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.76 | |
| Intersection Signal Delay: 10.4 | Intersection LOS: B |
| Intersection Capacity Utilization 37.6% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 19: Lakeside Ave & 128 Lakeside



# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | | | 0.943 | | | 0.874 | | | | |
| Flt Protected | | | | | 0.973 | | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1520 | 0 | 0 | 1589 | 0 | 0 | 1661 | 0 | 0 | 1504 | 0 |
| Flt Permitted | | | | | 0.973 | | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1520 | 0 | 0 | 1589 | 0 | 0 | 1661 | 0 | 0 | 1504 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 1630 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 44.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 3 | | | | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 25% | 0% | 10% | 2% | 10% | 0% | 0% | 0% | 20% | 0% | 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% | |
| Adj. Flow (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1 | 0 | 0 | 31 | 0 | 0 | 29 | 0 | 0 | 3 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 19.6% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 1 | 31 | 29 | 3 |
| Volume Left (vph) | 0 | 17 | 0 | 3 |
| Volume Right (vph) | 0 | 13 | 27 | 0 |
| Hadj (s) | 0.42 | 0.02 | -0.56 | 0.54 |
| Departure Headway (s) | 4.4 | 4.0 | 3.4 | 4.5 |
| Degree Utilization, x | 0.00 | 0.03 | 0.03 | 0.00 |
| Capacity (veh/h) | 803 | 891 | 1041 | 783 |
| Control Delay (s) | 7.4 | 7.1 | 6.5 | 7.5 |
| Approach Delay (s) | 7.4 | 7.1 | 6.5 | 7.5 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 19.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 106 | 4 | 104 | 6 | 4 | 24 | 272 | 598 | 29 | 8 | 257 | 143 |
| Future Volume (vph) | 106 | 4 | 104 | 6 | 4 | 24 | 272 | 598 | 29 | 8 | 257 | 143 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 80 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.99 | 0.96 | | | 0.91 | | 0.99 | 1.00 | | | 1.00 | 0.96 |
| Frt | | 0.856 | | | 0.905 | | | 0.993 | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.991 | | 0.950 | | | | 0.998 | |
| Satd. Flow (prot) | 1656 | 1441 | 0 | 0 | 1562 | 0 | 1770 | 1848 | 0 | 0 | 1744 | 1482 |
| Flt Permitted | 0.735 | | | | 0.913 | | 0.538 | | | | 0.960 | |
| Satd. Flow (perm) | 1267 | 1441 | 0 | 0 | 1436 | 0 | 987 | 1848 | 0 | 0 | 1677 | 1417 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 104 | | | 24 | | | 4 | | | | 190 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1630 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 44.5 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 4 | | 6 | 6 | | 4 | 12 | | 19 | 19 | | 12 |
| Confl. Bikes (#/hr) | | | 1 | | | 18 | | | 2 | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 0% | 9% | 0% | 0% | 0% | 2% | 2% | 0% | 0% | 9% | 9% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 106 | 4 | 104 | 6 | 4 | 24 | 272 | 598 | 29 | 8 | 257 | 143 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 106 | 108 | 0 | 0 | 34 | 0 | 272 | 627 | 0 | 0 | 265 | 143 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

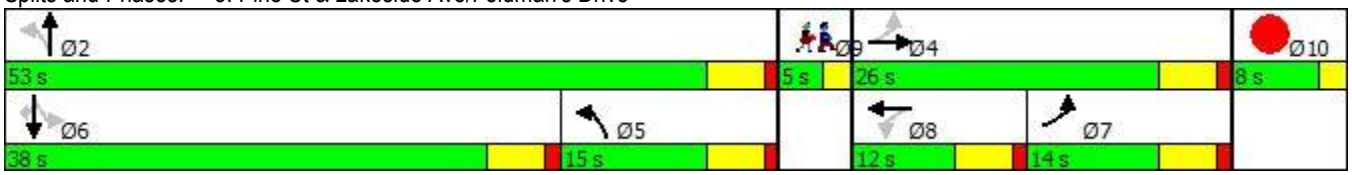
| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 9 | 10 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 8.0 | | 6.0 | 6.0 | | 5.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Minimum Split (s) | 10.0 | 13.0 | | 11.0 | 11.0 | | 10.0 | 20.0 | | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 14.0 | 26.0 | | 12.0 | 12.0 | | 15.0 | 53.0 | | 38.0 | 38.0 | 38.0 |
| Total Split (%) | 15.2% | 28.3% | | 13.0% | 13.0% | | 16.3% | 57.6% | | 41.3% | 41.3% | 41.3% |
| Maximum Green (s) | 9.0 | 21.0 | | 7.0 | 7.0 | | 10.0 | 48.0 | | 33.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | Lag | | | Lead | Lead | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | None | None | | None | Min | | Min | Min | Min |
| Walk Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Flash Dont Walk (s) | | 14.0 | | 14.0 | 14.0 | | | | | 21.0 | 21.0 | 21.0 |
| Pedestrian Calls (#/hr) | | 5 | | 5 | 5 | | | | | 5 | 5 | 5 |
| Act Effct Green (s) | 12.8 | 13.6 | | | 8.3 | | 33.1 | 34.9 | | | 19.8 | 19.8 |
| Actuated g/C Ratio | 0.23 | 0.25 | | | 0.15 | | 0.60 | 0.63 | | | 0.36 | 0.36 |
| v/c Ratio | 0.30 | 0.25 | | | 0.15 | | 0.39 | 0.54 | | | 0.44 | 0.23 |
| Control Delay | 23.6 | 7.6 | | | 18.1 | | 13.9 | 13.6 | | | 21.3 | 2.6 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 23.6 | 7.6 | | | 18.1 | | 13.9 | 13.6 | | | 21.3 | 2.6 |
| LOS | C | A | | | B | | B | B | | | C | A |
| Approach Delay | | 15.5 | | | 18.1 | | | 13.7 | | | 14.7 | |
| Approach LOS | | B | | | B | | | B | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 92
Actuated Cycle Length: 55.5
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 14.3 Intersection LOS: B
Intersection Capacity Utilization 74.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 8.0 |
| Total Split (%) | 5% | 9% |
| Maximum Green (s) | 3.0 | 6.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 5.0 | 8.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 64 | 84 | 17 | 20 | 176 | 260 | 24 | 530 | 11 | 84 | 251 | 62 |
| Future Volume (vph) | 64 | 84 | 17 | 20 | 176 | 260 | 24 | 530 | 11 | 84 | 251 | 62 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 1.00 | | | 0.92 | | | 1.00 | | | 0.99 | |
| Frt | | 0.986 | | | 0.923 | | | 0.997 | | | 0.970 | |
| Flt Protected | | 0.981 | | | 0.998 | | | 0.998 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1792 | 0 | 0 | 1682 | 0 | 0 | 1990 | 0 | 1703 | 1838 | 0 |
| Flt Permitted | | 0.541 | | | 0.981 | | | 0.975 | | 0.213 | | |
| Satd. Flow (perm) | 0 | 988 | 0 | 0 | 1653 | 0 | 0 | 1943 | 0 | 382 | 1838 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 8 | | | 87 | | | 1 | | | 23 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 2703 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 73.7 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | 36 | | 5 | 5 | | 36 | 9 | | 54 | 54 | | 9 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 9% | 9% | 2% | 2% | 2% | 1% | 1% | 1% | 6% | 6% | 6% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 64 | 84 | 17 | 20 | 176 | 260 | 24 | 530 | 11 | 84 | 251 | 62 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 165 | 0 | 0 | 456 | 0 | 0 | 565 | 0 | 84 | 313 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

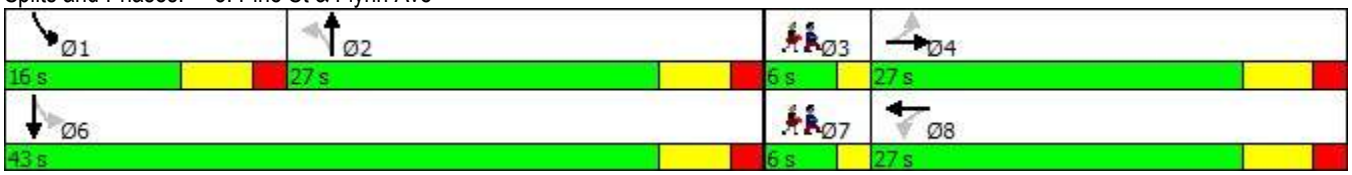
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 19.0 | | | 19.0 | | | 21.7 | | 32.5 | 32.5 | |
| Actuated g/C Ratio | | 0.29 | | | 0.29 | | | 0.33 | | 0.50 | 0.50 | |
| v/c Ratio | | 0.56 | | | 0.84 | | | 0.87 | | 0.23 | 0.34 | |
| Control Delay | | 29.4 | | | 35.0 | | | 41.3 | | 11.2 | 11.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 29.4 | | | 35.0 | | | 41.3 | | 11.2 | 11.0 | |
| LOS | | C | | | C | | | D | | B | B | |
| Approach Delay | | 29.4 | | | 35.0 | | | 41.3 | | | 11.0 | |
| Approach LOS | | C | | | C | | | D | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 65.2
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 30.6 Intersection LOS: C
Intersection Capacity Utilization 93.4% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | | | 0.943 | | | 0.874 | | | | |
| Flt Protected | | | | | 0.973 | | | | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1469 | 0 | 0 | 1532 | 0 | 0 | 1605 | 0 | 0 | 1454 | 0 |
| Flt Permitted | | | | | 0.973 | | | | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1469 | 0 | 0 | 1532 | 0 | 0 | 1605 | 0 | 0 | 1454 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 861 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 23.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 3 | | | | | 3 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 25% | 0% | 10% | 10% | 10% | 0% | 0% | 0% | 20% | 20% | 20% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 1 | 0 | 0 | 31 | 0 | 0 | 29 | 0 | 0 | 3 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 19.6% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Future Volume (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 1 | 0 | 17 | 1 | 13 | 0 | 2 | 27 | 3 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 1 | 31 | 29 | 3 |
| Volume Left (vph) | 0 | 17 | 0 | 3 |
| Volume Right (vph) | 0 | 13 | 27 | 0 |
| Hadj (s) | 0.42 | 0.03 | -0.56 | 0.54 |
| Departure Headway (s) | 4.4 | 4.0 | 3.4 | 4.5 |
| Degree Utilization, x | 0.00 | 0.03 | 0.03 | 0.00 |
| Capacity (veh/h) | 803 | 890 | 1041 | 783 |
| Control Delay (s) | 7.4 | 7.1 | 6.5 | 7.5 |
| Approach Delay (s) | 7.4 | 7.1 | 6.5 | 7.5 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 6.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 19.6% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

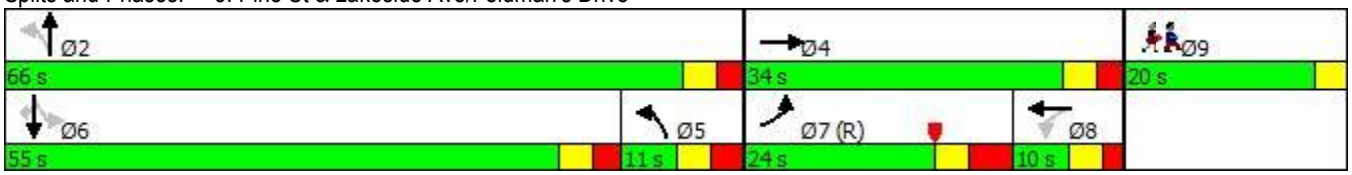
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 284 | 4 | 20 | 6 | 4 | 24 | 25 | 410 | 29 | 8 | 144 | 692 |
| Future Volume (vph) | 284 | 4 | 20 | 6 | 4 | 24 | 25 | 410 | 29 | 8 | 144 | 692 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.99 | 0.97 | | | 0.94 | | 0.99 | 1.00 | | | 1.00 | 0.97 |
| Frt | | 0.875 | | | 0.905 | | | 0.990 | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.991 | | 0.950 | | | | 0.997 | |
| Satd. Flow (prot) | 1601 | 1455 | 0 | 0 | 1539 | 0 | 1711 | 1778 | 0 | 0 | 1687 | 1432 |
| Flt Permitted | 0.950 | | | | 0.932 | | 0.660 | | | | 0.977 | |
| Satd. Flow (perm) | 1579 | 1455 | 0 | 0 | 1429 | 0 | 1177 | 1778 | 0 | 0 | 1653 | 1383 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 589 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 16.1 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 4 | | 6 | 6 | | 4 | 12 | | 19 | 19 | | 12 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 0% | 9% | 2% | 2% | 2% | 2% | 2% | 2% | 0% | 9% | 9% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 284 | 4 | 20 | 6 | 4 | 24 | 25 | 410 | 29 | 8 | 144 | 692 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 284 | 24 | 0 | 0 | 34 | 0 | 25 | 439 | 0 | 0 | 152 | 692 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | Prot | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 10.5 | | 10.0 | 10.0 | | 11.0 | 13.5 | | 13.5 | 13.5 | 13.5 |
| Total Split (s) | 24.0 | 34.0 | | 10.0 | 10.0 | | 11.0 | 66.0 | | 55.0 | 55.0 | 55.0 |
| Total Split (%) | 20.0% | 28.3% | | 8.3% | 8.3% | | 9.2% | 55.0% | | 45.8% | 45.8% | 45.8% |
| Maximum Green (s) | 17.0 | 28.5 | | 5.0 | 5.0 | | 5.0 | 60.5 | | 49.5 | 49.5 | 49.5 |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 4.0 | 2.5 | | 2.0 | 2.0 | | 3.0 | 2.5 | | 2.5 | 2.5 | 2.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 5.5 | | | 5.0 | | 6.0 | 5.5 | | | 5.5 | 5.5 |
| Lead/Lag | Lead | | | Lag | Lag | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | C-Min | None | | None | None | | None | None | | None | None | None |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | 21.4 | 28.9 | | | 5.0 | | 77.6 | 76.1 | | | 69.5 | 69.5 |
| Actuated g/C Ratio | 0.18 | 0.24 | | | 0.04 | | 0.65 | 0.63 | | | 0.58 | 0.58 |
| v/c Ratio | 1.00 | 0.07 | | | 0.58 | | 0.03 | 0.39 | | | 0.16 | 0.86 |
| Control Delay | 101.1 | 39.6 | | | 92.3 | | 10.7 | 13.3 | | | 15.0 | 36.4 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 101.1 | 39.6 | | | 92.3 | | 10.7 | 13.3 | | | 15.0 | 36.4 |
| LOS | F | D | | | F | | B | B | | | B | D |
| Approach Delay | | 96.3 | | | 92.3 | | | 13.1 | | | 32.6 | |
| Approach LOS | | F | | | F | | | B | | | C | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 0 (0%), Referenced to phase 7:EBL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.00 | |
| Intersection Signal Delay: 40.2 | Intersection LOS: D |
| Intersection Capacity Utilization 85.0% | ICU Level of Service E |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 20.0 |
| Total Split (s) | 20.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 17.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 10.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 60 | 17 | 20 | 74 | 122 | 16 | 210 | 11 | 55 | 169 | 21 |
| Future Volume (vph) | 34 | 60 | 17 | 20 | 74 | 122 | 16 | 210 | 11 | 55 | 169 | 21 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 14 | 11 | 11 | 14 | 11 | 11 | 14 | 11 | 11 | 14 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | 0.92 | | | 0.99 | | 0.94 | | |
| Frt | | 0.979 | | | 0.924 | | | 0.994 | | | 0.983 | |
| Flt Protected | | 0.985 | | | 0.995 | | | 0.997 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1793 | 0 | 0 | 1680 | 0 | 0 | 1973 | 0 | 1646 | 1879 | 0 |
| Flt Permitted | | 0.862 | | | 0.959 | | | 0.968 | | 0.467 | | |
| Satd. Flow (perm) | 0 | 1569 | 0 | 0 | 1617 | 0 | 0 | 1916 | 0 | 760 | 1879 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 85 | | | 3 | | | 11 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 798 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 21.8 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | | | | 5 | | 36 | | | 54 | 54 | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 9% | 9% | 9% | 2% | 2% | 2% | 1% | 1% | 1% | 6% | 6% | 6% |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Parking (#/hr) | | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Adj. Flow (vph) | 34 | 60 | 17 | 20 | 74 | 122 | 16 | 210 | 11 | 55 | 169 | 21 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 111 | 0 | 0 | 216 | 0 | 0 | 237 | 0 | 55 | 190 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 | 1.04 | 0.92 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

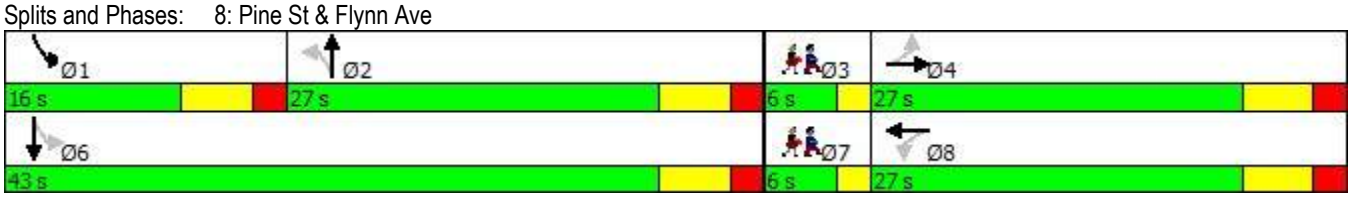
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 11.0 | | | 11.0 | | | 13.6 | | 17.8 | 17.8 | |
| Actuated g/C Ratio | | 0.26 | | | 0.26 | | | 0.32 | | 0.41 | 0.41 | |
| v/c Ratio | | 0.27 | | | 0.46 | | | 0.39 | | 0.11 | 0.24 | |
| Control Delay | | 16.8 | | | 14.2 | | | 17.1 | | 8.7 | 8.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 16.8 | | | 14.2 | | | 17.1 | | 8.7 | 8.9 | |
| LOS | | B | | | B | | | B | | A | A | |
| Approach Delay | | 16.8 | | | 14.2 | | | 17.1 | | | 8.8 | |
| Approach LOS | | B | | | B | | | B | | | A | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 43.1
Natural Cycle: 65
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.46
Intersection Signal Delay: 13.8 Intersection LOS: B
Intersection Capacity Utilization 50.2% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

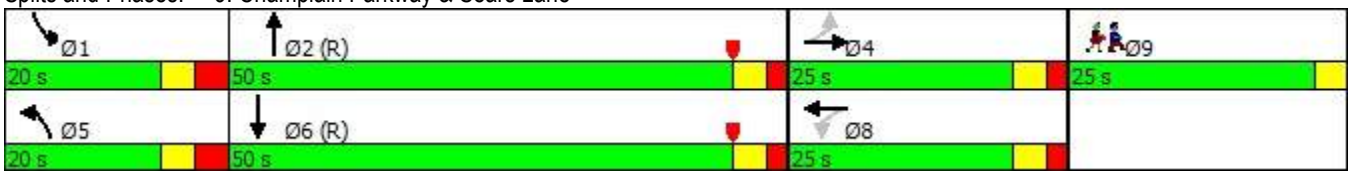
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 0 | 25 | 40 | 60 | 25 | 80 | 443 | 65 | 10 | 609 | 15 |
| Future Volume (vph) | 5 | 0 | 25 | 40 | 60 | 25 | 80 | 443 | 65 | 10 | 609 | 15 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 100 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.887 | | | 0.973 | | | 0.981 | | | 0.996 | |
| Flt Protected | | 0.992 | | | 0.984 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1584 | 0 | 0 | 1724 | 0 | 1711 | 1766 | 0 | 1711 | 1793 | 0 |
| Flt Permitted | | 0.961 | | | 0.883 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1535 | 0 | 0 | 1547 | 0 | 1711 | 1766 | 0 | 1711 | 1793 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 100 | | | 9 | | | 7 | | | 1 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 938 | | | 543 | | | 1149 | | | 1003 | |
| Travel Time (s) | | 25.6 | | | 14.8 | | | 31.3 | | | 27.4 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 5 | 0 | 25 | 40 | 60 | 25 | 80 | 443 | 65 | 10 | 609 | 15 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 30 | 0 | 0 | 125 | 0 | 80 | 508 | 0 | 10 | 624 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 25.0 | 25.0 | | 25.0 | 25.0 | | 20.0 | 50.0 | | 20.0 | 50.0 | |
| Total Split (%) | 20.8% | 20.8% | | 20.8% | 20.8% | | 16.7% | 41.7% | | 16.7% | 41.7% | |
| Maximum Green (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 14.0 | 45.0 | | 14.0 | 45.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 14.5 | | | 14.5 | | 10.7 | 87.8 | | 6.3 | 76.3 | |
| Actuated g/C Ratio | | 0.12 | | | 0.12 | | 0.09 | 0.73 | | 0.05 | 0.64 | |
| v/c Ratio | | 0.11 | | | 0.64 | | 0.53 | 0.39 | | 0.11 | 0.55 | |
| Control Delay | | 0.8 | | | 61.1 | | 66.7 | 12.9 | | 62.1 | 8.6 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 0.8 | | | 61.1 | | 66.7 | 12.9 | | 62.1 | 8.6 | |
| LOS | | A | | | E | | E | B | | E | A | |
| Approach Delay | | 0.8 | | | 61.1 | | | 20.2 | | | 9.4 | |
| Approach LOS | | A | | | E | | | C | | | A | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 17 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.64 | |
| Intersection Signal Delay: 18.5 | Intersection LOS: B |
| Intersection Capacity Utilization 63.0% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 9: Champlain Parkway & Sears Lane



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

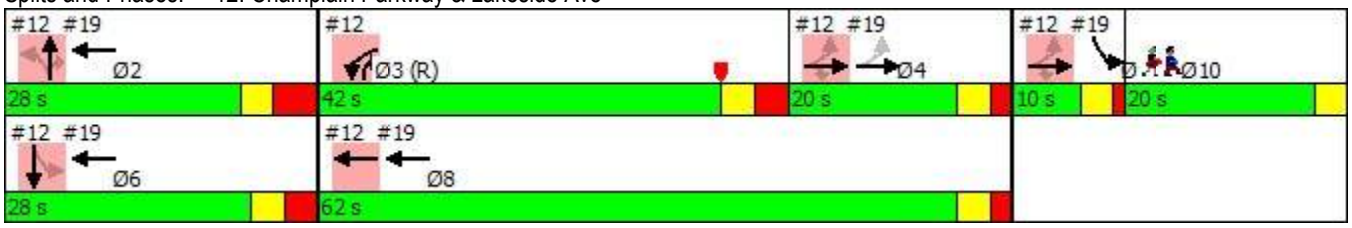
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 34 | 65 | 569 | 152 | 0 | 219 | 0 | 254 | 20 | 0 | 0 |
| Future Volume (vph) | 0 | 34 | 65 | 569 | 152 | 0 | 219 | 0 | 254 | 20 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 150 | | 0 | 0 | | 250 | 0 | | 0 |
| Storage Lanes | 0 | | 1 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | 0.950 | | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1711 | 1531 | 0 | 1711 | 0 |
| Flt Permitted | | | | 0.950 | | | | 0.744 | | | 0.479 | |
| Satd. Flow (perm) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1340 | 1531 | 0 | 863 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 180 | | | 589 | | | 1003 | | | 158 | |
| Travel Time (s) | | 4.9 | | | 16.1 | | | 27.4 | | | 4.3 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 34 | 65 | 569 | 152 | 0 | 219 | 0 | 254 | 20 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 34 | 65 | 569 | 152 | 0 | 0 | 219 | 254 | 0 | 20 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Turn Type | | NA | Perm | Prot | NA | | Perm | NA | pm+ov | Perm | NA | |
| Protected Phases | | 4 9 | | 3 | 8 | | | 2 | 3 | | 6 | |
| Permitted Phases | 4 9 | | 4 9 | | | | 2 | | 2 | 6 | | |
| Detector Phase | 4 9 | 4 9 | 4 9 | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 4 | 9 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | | | | 8.0 | 5.0 | | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | |
| Minimum Split (s) | | | | 21.0 | 15.0 | | 17.0 | 17.0 | 21.0 | 11.0 | 11.0 | |
| Total Split (s) | | | | 42.0 | 62.0 | | 28.0 | 28.0 | 42.0 | 28.0 | 28.0 | |
| Total Split (%) | | | | 35.0% | 51.7% | | 23.3% | 23.3% | 35.0% | 23.3% | 23.3% | |
| Maximum Green (s) | | | | 36.0 | 57.0 | | 21.0 | 21.0 | 36.0 | 22.0 | 22.0 | |
| Yellow Time (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | | | | 3.0 | 2.0 | | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 5.0 | | | 7.0 | 6.0 | | 6.0 | |
| Lead/Lag | | | | Lead | | | | | Lead | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Gap (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Time Before Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Time To Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Recall Mode | | | | C-Min | None | | None | None | C-Min | None | None | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 20.9 | 20.9 | 53.4 | 69.3 | | | 25.6 | 86.0 | | 26.6 | |
| Actuated g/C Ratio | | 0.17 | 0.17 | 0.44 | 0.58 | | | 0.21 | 0.72 | | 0.22 | |
| v/c Ratio | | 0.11 | 0.24 | 0.75 | 0.15 | | | 0.77 | 0.23 | | 0.10 | |
| Control Delay | | 11.4 | 13.1 | 19.6 | 5.9 | | | 62.3 | 15.3 | | 39.0 | |
| Queue Delay | | 0.0 | 1.9 | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 11.4 | 15.0 | 19.6 | 5.9 | | | 62.3 | 15.3 | | 39.0 | |
| LOS | | B | B | B | A | | | E | B | | D | |
| Approach Delay | | 13.8 | | | 16.7 | | | 37.1 | | | 39.0 | |
| Approach LOS | | B | | | B | | | D | | | D | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 107 (89%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 120 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.77 | |
| Intersection Signal Delay: 24.2 | Intersection LOS: C |
| Intersection Capacity Utilization 59.6% | ICU Level of Service B |
| Analysis Period (min) 15 | |

Splits and Phases: 12: Champlain Parkway & Lakeside Ave



| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 20.0 | 9.0 | 20.0 |
| Total Split (s) | 20.0 | 10.0 | 20.0 |
| Total Split (%) | 17% | 8% | 17% |
| Maximum Green (s) | 15.0 | 6.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 1.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | | | 7.0 |
| Flash Dont Walk (s) | | | 10.0 |
| Pedestrian Calls (#/hr) | | | 5 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

| Intersection Summary |
|---|

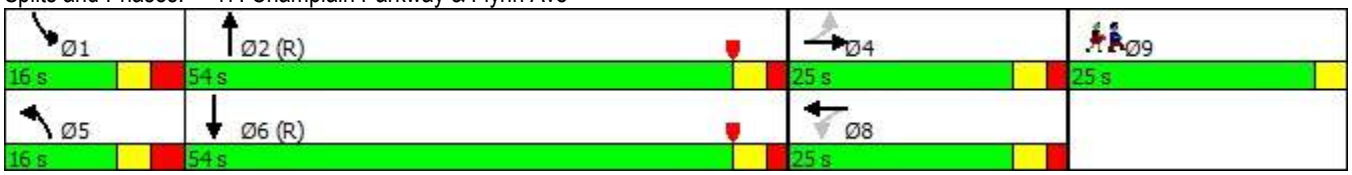
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 35 | 75 | 35 | 15 | 65 | 15 | 80 | 538 | 5 | 5 | 609 | 60 |
| Future Volume (vph) | 35 | 75 | 35 | 15 | 65 | 15 | 80 | 538 | 5 | 5 | 609 | 60 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 100 | | 0 | 100 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.967 | | | 0.979 | | | 0.999 | | | 0.987 | |
| Flt Protected | | 0.988 | | | 0.992 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1720 | 0 | 0 | 1749 | 0 | 1711 | 1799 | 0 | 1711 | 1777 | 0 |
| Flt Permitted | | 0.871 | | | 0.908 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1517 | 0 | 0 | 1601 | 0 | 1711 | 1799 | 0 | 1711 | 1777 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | 7 | | | | | | 5 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1255 | | | 798 | | | 921 | | | 1149 | |
| Travel Time (s) | | 34.2 | | | 21.8 | | | 25.1 | | | 31.3 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 35 | 75 | 35 | 15 | 65 | 15 | 80 | 538 | 5 | 5 | 609 | 60 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 145 | 0 | 0 | 95 | 0 | 80 | 543 | 0 | 5 | 669 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 25.0 | 25.0 | | 25.0 | 25.0 | | 16.0 | 54.0 | | 16.0 | 54.0 | |
| Total Split (%) | 20.8% | 20.8% | | 20.8% | 20.8% | | 13.3% | 45.0% | | 13.3% | 45.0% | |
| Maximum Green (s) | 20.0 | 20.0 | | 20.0 | 20.0 | | 10.0 | 49.0 | | 10.0 | 49.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 15.2 | | | 15.2 | | 9.9 | 87.2 | | 6.0 | 76.4 | |
| Actuated g/C Ratio | | 0.13 | | | 0.13 | | 0.08 | 0.73 | | 0.05 | 0.64 | |
| v/c Ratio | | 0.72 | | | 0.45 | | 0.57 | 0.42 | | 0.06 | 0.59 | |
| Control Delay | | 65.6 | | | 50.9 | | 68.7 | 11.9 | | 42.4 | 29.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 65.6 | | | 50.9 | | 68.7 | 11.9 | | 42.4 | 29.3 | |
| LOS | | E | | | D | | E | B | | D | C | |
| Approach Delay | | 65.6 | | | 50.9 | | | 19.2 | | | 29.4 | |
| Approach LOS | | E | | | D | | | B | | | C | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 17 (14%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 90 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.72 | |
| Intersection Signal Delay: 30.0 | Intersection LOS: C |
| Intersection Capacity Utilization 66.1% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 17: Champlain Parkway & Flynn Ave



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 21% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

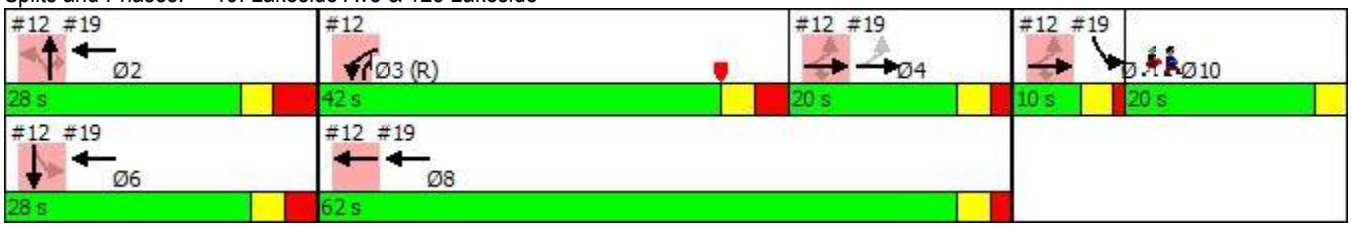
| Intersection Summary |
|---|

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 74 | 121 | 250 | 25 | 5 | | | | | |
| Future Volume (vph) | 5 | 74 | 121 | 250 | 25 | 5 | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | | | | | |
| Grade (%) | | 0% | 0% | | 0% | | | | | | |
| Storage Length (ft) | 0 | | | 0 | 0 | 0 | | | | | |
| Storage Lanes | 0 | | | 0 | 1 | 0 | | | | | |
| Taper Length (ft) | 25 | | | | 25 | | | | | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Ped Bike Factor | | | | | | | | | | | |
| Frt | | | 0.909 | | 0.977 | | | | | | |
| Flt Protected | | 0.997 | | | 0.960 | | | | | | |
| Satd. Flow (prot) | 0 | 3411 | 1637 | 0 | 1689 | 0 | | | | | |
| Flt Permitted | | 0.915 | | | 0.960 | | | | | | |
| Satd. Flow (perm) | 0 | 3130 | 1637 | 0 | 1689 | 0 | | | | | |
| Right Turn on Red | | | | No | | No | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (mph) | | 25 | 25 | | 25 | | | | | | |
| Link Distance (ft) | | 861 | 180 | | 241 | | | | | | |
| Travel Time (s) | | 23.5 | 4.9 | | 6.6 | | | | | | |
| Confl. Peds. (#/hr) | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | | | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Parking (#/hr) | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | 0% | | 0% | | | | | | |
| Adj. Flow (vph) | 5 | 74 | 121 | 250 | 25 | 5 | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 79 | 371 | 0 | 30 | 0 | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | |
| Lane Alignment | Left | Left | Left | Right | Left | Right | | | | | |
| Median Width(ft) | | 0 | 0 | | 11 | | | | | | |
| Link Offset(ft) | | 0 | 0 | | 0 | | | | | | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | | | | | |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 | | | | | |
| Number of Detectors | 1 | 2 | 2 | | 1 | | | | | | |
| Detector Template | Left | Thru | Thru | | Left | | | | | | |
| Leading Detector (ft) | 20 | 100 | 100 | | 20 | | | | | | |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | | | | | | |
| Turn Type | Perm | NA | NA | | Prot | | | | | | |
| Protected Phases | | 4 | 2 6 8 | | 9 | | 2 | 3 | 6 | 8 | 10 |
| Permitted Phases | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | 2 6 8 | | 9 | | | | | | |
| Switch Phase | | | | | | | | | | | |

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | | | 5.0 | | 8.0 | 8.0 | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 20.0 | 20.0 | | | 9.0 | | 17.0 | 21.0 | 11.0 | 15.0 | 20.0 |
| Total Split (s) | 20.0 | 20.0 | | | 10.0 | | 28.0 | 42.0 | 28.0 | 62.0 | 20.0 |
| Total Split (%) | 16.7% | 16.7% | | | 8.3% | | 23% | 35% | 23% | 52% | 17% |
| Maximum Green (s) | 15.0 | 15.0 | | | 6.0 | | 21.0 | 36.0 | 22.0 | 57.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | | | 1.0 | | 4.0 | 3.0 | 3.0 | 2.0 | 0.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | | |
| Lead/Lag | Lag | Lag | | | Lead | | | Lead | | | Lag |
| Lead-Lag Optimize? | Yes | Yes | | | Yes | | | | | | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | | None | | None | C-Min | None | None | None |
| Walk Time (s) | | | | | | | | | | | 7.0 |
| Flash Dont Walk (s) | | | | | | | | | | | 10.0 |
| Pedestrian Calls (#/hr) | | | | | | | | | | | 5 |
| Act Effct Green (s) | | 9.8 | 101.2 | | 7.1 | | | | | | |
| Actuated g/C Ratio | | 0.08 | 0.84 | | 0.06 | | | | | | |
| v/c Ratio | | 0.31 | 0.27 | | 0.30 | | | | | | |
| Control Delay | | 54.0 | 0.5 | | 61.9 | | | | | | |
| Queue Delay | | 0.0 | 0.7 | | 0.0 | | | | | | |
| Total Delay | | 54.0 | 1.3 | | 61.9 | | | | | | |
| LOS | | D | A | | E | | | | | | |
| Approach Delay | | 54.0 | 1.3 | | 61.9 | | | | | | |
| Approach LOS | | D | A | | E | | | | | | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 120 | |
| Actuated Cycle Length: 120 | |
| Offset: 107 (89%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 120 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.77 | |
| Intersection Signal Delay: 13.7 | Intersection LOS: B |
| Intersection Capacity Utilization 35.1% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 19: Lakeside Ave & 128 Lakeside



# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/02/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.989 | | | 0.949 | | | 0.872 | | | | |
| Flt Protected | | | | | 0.975 | | | 0.997 | | | 0.953 | |
| Satd. Flow (prot) | 0 | 1816 | 0 | 0 | 1699 | 0 | 0 | 1597 | 0 | 0 | 1750 | 0 |
| Flt Permitted | | | | | 0.975 | | | 0.997 | | | 0.953 | |
| Satd. Flow (perm) | 0 | 1816 | 0 | 0 | 1699 | 0 | 0 | 1597 | 0 | 0 | 1750 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 851 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 23.2 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 16 | | 8 | 8 | | 16 | 2 | | 6 | 6 | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 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% | |
| Adj. Flow (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 80 | 0 | 0 | 18 | 0 | 0 | 135 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.3% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 80 | 18 | 135 |
| Volume Left (vph) | 0 | 41 | 1 | 134 |
| Volume Right (vph) | 1 | 30 | 17 | 0 |
| Hadj (s) | -0.05 | -0.12 | -0.56 | 0.20 |
| Departure Headway (s) | 4.3 | 4.1 | 3.7 | 4.3 |
| Degree Utilization, x | 0.01 | 0.09 | 0.02 | 0.16 |
| Capacity (veh/h) | 803 | 837 | 933 | 815 |
| Control Delay (s) | 7.3 | 7.6 | 6.8 | 8.1 |
| Approach Delay (s) | 7.3 | 7.6 | 6.8 | 8.1 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.8 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 33.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

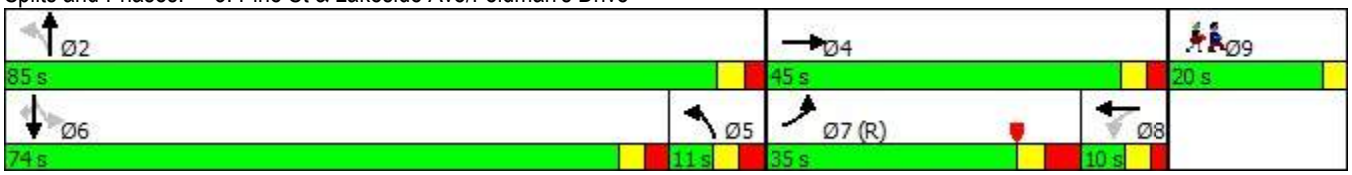
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 482 | 0 | 121 | 1 | 0 | 2 | 9 | 310 | 0 | 1 | 293 | 648 |
| Future Volume (vph) | 482 | 0 | 121 | 1 | 0 | 2 | 9 | 310 | 0 | 1 | 293 | 648 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.98 | 0.96 | | | 0.88 | | 1.00 | | | | 1.00 | 0.97 |
| Frt | | 0.850 | | | 0.910 | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.984 | | 0.950 | | | | | |
| Satd. Flow (prot) | 1728 | 1489 | 0 | 0 | 1510 | 0 | 1711 | 1801 | 0 | 0 | 1801 | 1531 |
| Flt Permitted | 0.950 | | | | | | 0.503 | | | | 0.999 | |
| Satd. Flow (perm) | 1695 | 1489 | 0 | 0 | 1476 | 0 | 902 | 1801 | 0 | 0 | 1799 | 1488 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 589 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 16.1 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 7 | | 9 | 9 | | 7 | 7 | | 38 | 38 | | 7 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 0% | 1% | 0% | 0% | 0% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 482 | 0 | 121 | 1 | 0 | 2 | 9 | 310 | 0 | 1 | 293 | 648 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 482 | 121 | 0 | 0 | 3 | 0 | 9 | 310 | 0 | 0 | 294 | 648 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | Prot | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 10.5 | | 10.0 | 10.0 | | 11.0 | 13.5 | | 13.5 | 13.5 | 13.5 |
| Total Split (s) | 35.0 | 45.0 | | 10.0 | 10.0 | | 11.0 | 85.0 | | 74.0 | 74.0 | 74.0 |
| Total Split (%) | 23.3% | 30.0% | | 6.7% | 6.7% | | 7.3% | 56.7% | | 49.3% | 49.3% | 49.3% |
| Maximum Green (s) | 28.0 | 39.5 | | 5.0 | 5.0 | | 5.0 | 79.5 | | 68.5 | 68.5 | 68.5 |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 4.0 | 2.5 | | 2.0 | 2.0 | | 3.0 | 2.5 | | 2.5 | 2.5 | 2.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 5.5 | | | 5.0 | | 6.0 | 5.5 | | | 5.5 | 5.5 |
| Lead/Lag | Lead | | | Lag | Lag | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | C-Min | None | | None | None | | None | None | | None | None | None |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | 59.2 | 62.7 | | | 5.0 | | 76.4 | 72.3 | | | 70.1 | 70.1 |
| Actuated g/C Ratio | 0.39 | 0.42 | | | 0.03 | | 0.51 | 0.48 | | | 0.47 | 0.47 |
| v/c Ratio | 0.71 | 0.19 | | | 0.06 | | 0.02 | 0.36 | | | 0.35 | 0.93 |
| Control Delay | 36.9 | 28.1 | | | 73.0 | | 15.8 | 24.9 | | | 26.6 | 58.6 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 36.9 | 28.1 | | | 73.0 | | 15.8 | 24.9 | | | 26.6 | 58.6 |
| LOS | D | C | | | E | | B | C | | | C | E |
| Approach Delay | | 35.2 | | | 73.0 | | | 24.6 | | | 48.6 | |
| Approach LOS | | D | | | E | | | C | | | D | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 0 (0%), Referenced to phase 7:EBL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.93 | |
| Intersection Signal Delay: 40.2 | Intersection LOS: D |
| Intersection Capacity Utilization 74.7% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 20.0 |
| Total Split (s) | 20.0 |
| Total Split (%) | 13% |
| Maximum Green (s) | 17.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 10.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 93 | 32 | 27 | 121 | 141 | 28 | 71 | 15 | 116 | 341 | 56 |
| Future Volume (vph) | 34 | 93 | 32 | 27 | 121 | 141 | 28 | 71 | 15 | 116 | 341 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | 0.95 | | | 0.99 | | 0.96 | | |
| Frt | | 0.973 | | | 0.934 | | | 0.982 | | | 0.979 | |
| Flt Protected | | 0.989 | | | 0.995 | | | 0.988 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1931 | 0 | 0 | 1779 | 0 | 0 | 1907 | 0 | 1770 | 1945 | 0 |
| Flt Permitted | | 0.878 | | | 0.953 | | | 0.797 | | 0.589 | | |
| Satd. Flow (perm) | 0 | 1714 | 0 | 0 | 1700 | 0 | 0 | 1538 | 0 | 1053 | 1945 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 16 | | | 62 | | | 10 | | | 15 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 728 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 19.9 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | | | | 9 | | 22 | | | 23 | 23 | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 34 | 93 | 32 | 27 | 121 | 141 | 28 | 71 | 15 | 116 | 341 | 56 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 159 | 0 | 0 | 289 | 0 | 0 | 114 | 0 | 116 | 397 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

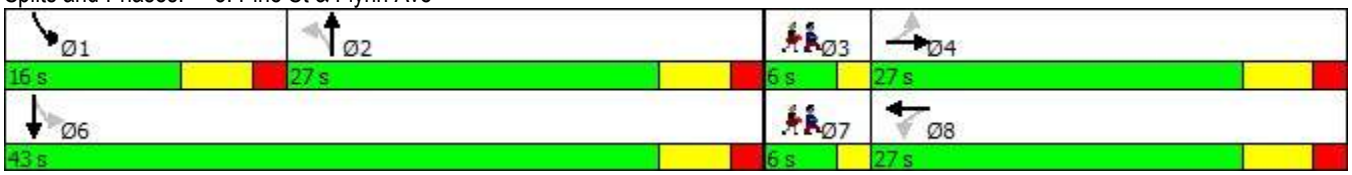
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 24.0 | 24.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 12.7 | | | 12.7 | | | 10.1 | | 20.9 | 20.9 | |
| Actuated g/C Ratio | | 0.27 | | | 0.27 | | | 0.21 | | 0.44 | 0.44 | |
| v/c Ratio | | 0.34 | | | 0.58 | | | 0.34 | | 0.19 | 0.46 | |
| Control Delay | | 17.2 | | | 18.8 | | | 22.0 | | 10.0 | 11.9 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 17.2 | | | 18.8 | | | 22.0 | | 10.0 | 11.9 | |
| LOS | | B | | | B | | | C | | B | B | |
| Approach Delay | | 17.2 | | | 18.8 | | | 22.0 | | | 11.5 | |
| Approach LOS | | B | | | B | | | C | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 47.8
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 59.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

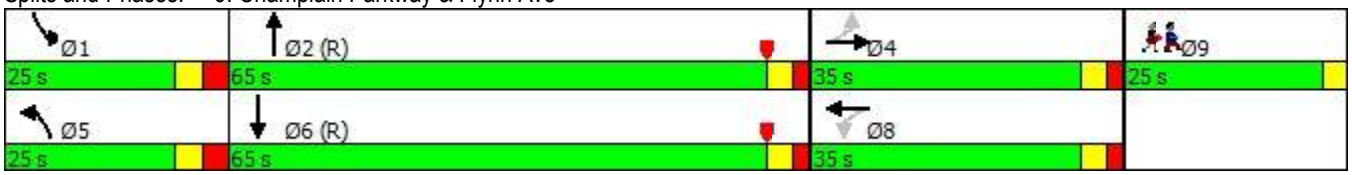
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 139 | 218 | 137 | 25 | 183 | 16 | 124 | 410 | 5 | 14 | 959 | 88 |
| Future Volume (vph) | 139 | 218 | 137 | 25 | 183 | 16 | 124 | 410 | 5 | 14 | 959 | 88 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 200 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.963 | | | 0.990 | | | 0.998 | | | 0.987 | |
| Flt Protected | | 0.986 | | | 0.994 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1710 | 0 | 0 | 1772 | 0 | 1711 | 1797 | 0 | 1711 | 1777 | 0 |
| Flt Permitted | | 0.615 | | | 0.837 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1066 | 0 | 0 | 1492 | 0 | 1711 | 1797 | 0 | 1711 | 1777 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 2 | | | | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1398 | | | 728 | | | 878 | | | 993 | |
| Travel Time (s) | | 38.1 | | | 19.9 | | | 23.9 | | | 27.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 139 | 218 | 137 | 25 | 183 | 16 | 124 | 410 | 5 | 14 | 959 | 88 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 494 | 0 | 0 | 224 | 0 | 124 | 415 | 0 | 14 | 1047 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 15.0 | | 4.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 10.0 | 21.0 | | 10.0 | 20.0 | |
| Total Split (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 25.0 | 65.0 | | 25.0 | 65.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 16.7% | 43.3% | | 16.7% | 43.3% | |
| Maximum Green (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 19.0 | 60.0 | | 19.0 | 60.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 30.0 | | | 30.0 | | 15.5 | 99.4 | | 6.8 | 83.5 | |
| Actuated g/C Ratio | | 0.20 | | | 0.20 | | 0.10 | 0.66 | | 0.05 | 0.56 | |
| v/c Ratio | | 2.23 | | | 0.75 | | 0.70 | 0.35 | | 0.18 | 1.06 | |
| Control Delay | | 592.0 | | | 72.2 | | 85.5 | 15.1 | | 94.1 | 76.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 592.0 | | | 72.2 | | 85.5 | 15.1 | | 94.1 | 76.4 | |
| LOS | | F | | | E | | F | B | | F | E | |
| Approach Delay | | 592.0 | | | 72.2 | | | 31.3 | | | 76.6 | |
| Approach LOS | | F | | | E | | | C | | | E | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 10.9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 2.23 | |
| Intersection Signal Delay: 175.5 | Intersection LOS: F |
| Intersection Capacity Utilization 119.7% | ICU Level of Service H |
| Analysis Period (min) 15 | |

Splits and Phases: 9: Champlain Parkway & Flynn Ave



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

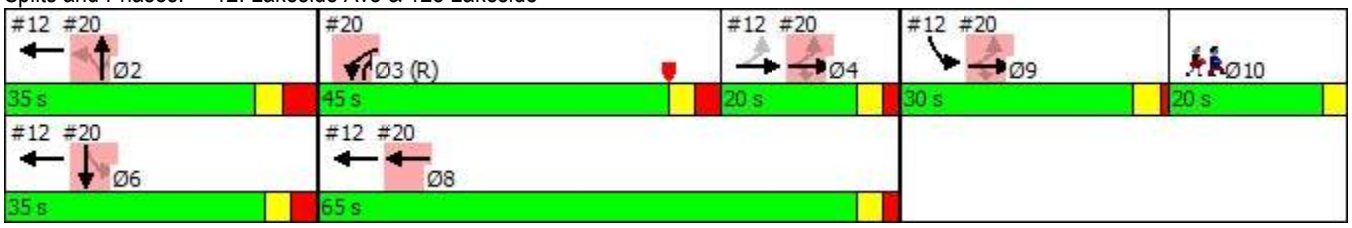
| Intersection Summary |
|---|

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 344 | 127 | 25 | 240 | 5 | | | | | |
| Future Volume (vph) | 5 | 344 | 127 | 25 | 240 | 5 | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | | | | | |
| Grade (%) | | 0% | 0% | | 0% | | | | | | |
| Storage Length (ft) | 0 | | | 0 | 0 | 0 | | | | | |
| Storage Lanes | 0 | | | 0 | 1 | 0 | | | | | |
| Taper Length (ft) | 25 | | | | 25 | | | | | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Ped Bike Factor | | | | | | | | | | | |
| Frt | | | 0.978 | | 0.997 | | | | | | |
| Flt Protected | | 0.999 | | | 0.953 | | | | | | |
| Satd. Flow (prot) | 0 | 3418 | 1761 | 0 | 1711 | 0 | | | | | |
| Flt Permitted | | 0.950 | | | 0.953 | | | | | | |
| Satd. Flow (perm) | 0 | 3250 | 1761 | 0 | 1711 | 0 | | | | | |
| Right Turn on Red | | | | No | | No | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (mph) | | 25 | 25 | | 25 | | | | | | |
| Link Distance (ft) | | 851 | 190 | | 197 | | | | | | |
| Travel Time (s) | | 23.2 | 5.2 | | 5.4 | | | | | | |
| Confl. Peds. (#/hr) | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | | | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Parking (#/hr) | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | 0% | | 0% | | | | | | |
| Adj. Flow (vph) | 5 | 344 | 127 | 25 | 240 | 5 | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 349 | 152 | 0 | 245 | 0 | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | |
| Lane Alignment | Left | Left | Left | Right | Left | Right | | | | | |
| Median Width(ft) | | 0 | 0 | | 11 | | | | | | |
| Link Offset(ft) | | 0 | 0 | | 0 | | | | | | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | | | | | |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 | | | | | |
| Number of Detectors | 1 | 2 | 2 | | 1 | | | | | | |
| Detector Template | Left | Thru | Thru | | Left | | | | | | |
| Leading Detector (ft) | 20 | 100 | 100 | | 20 | | | | | | |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | | | | | | |
| Turn Type | Perm | NA | NA | | Prot | | | | | | |
| Protected Phases | | 4 | 2 6 8 | | 9 | | 2 | 3 | 6 | 8 | 10 |
| Permitted Phases | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | 2 6 8 | | 9 | | | | | | |
| Switch Phase | | | | | | | | | | | |

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | | | 5.0 | | 8.0 | 8.0 | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 15.0 | 15.0 | | | 9.5 | | 22.5 | 21.0 | 22.5 | 22.5 | 20.0 |
| Total Split (s) | 20.0 | 20.0 | | | 30.0 | | 35.0 | 45.0 | 35.0 | 65.0 | 20.0 |
| Total Split (%) | 13.3% | 13.3% | | | 20.0% | | 23% | 30% | 23% | 43% | 13% |
| Maximum Green (s) | 15.0 | 15.0 | | | 26.0 | | 28.0 | 39.0 | 29.0 | 60.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | | | 1.0 | | 4.0 | 3.0 | 3.0 | 2.0 | 0.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | | |
| Lead/Lag | Lag | Lag | | | Lead | | | Lead | | | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | | None | | None | C-Min | None | None | None |
| Walk Time (s) | | | | | | | | | | | 7.0 |
| Flash Dont Walk (s) | | | | | | | | | | | 10.0 |
| Pedestrian Calls (#/hr) | | | | | | | | | | | 5 |
| Act Effct Green (s) | | 15.0 | 110.2 | | 24.8 | | | | | | |
| Actuated g/C Ratio | | 0.10 | 0.73 | | 0.17 | | | | | | |
| v/c Ratio | | 1.07 | 0.12 | | 0.87 | | | | | | |
| Control Delay | | 132.5 | 1.2 | | 88.9 | | | | | | |
| Queue Delay | | 10.1 | 1.0 | | 3.9 | | | | | | |
| Total Delay | | 142.6 | 2.2 | | 92.7 | | | | | | |
| LOS | | F | A | | F | | | | | | |
| Approach Delay | | 142.6 | 2.2 | | 92.7 | | | | | | |
| Approach LOS | | F | A | | F | | | | | | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 24 (16%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 140 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.07 | |
| Intersection Signal Delay: 97.6 | Intersection LOS: F |
| Intersection Capacity Utilization 34.1% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 12: Lakeside Ave & 128 Lakeside



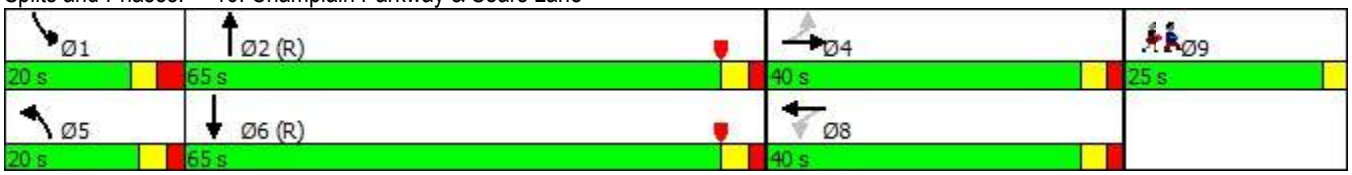
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 10 | 0 | 80 | 30 | 10 | 10 | 10 | 490 | 65 | 16 | 951 | 10 |
| Future Volume (vph) | 10 | 0 | 80 | 30 | 10 | 10 | 10 | 490 | 65 | 16 | 951 | 10 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 220 | | 0 | 125 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.880 | | | 0.973 | | | 0.982 | | | 0.998 | |
| Flt Protected | | 0.994 | | | 0.971 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1575 | 0 | 0 | 1701 | 0 | 1711 | 1768 | 0 | 1711 | 1797 | 0 |
| Flt Permitted | | 0.969 | | | 0.542 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1535 | 0 | 0 | 950 | 0 | 1711 | 1768 | 0 | 1711 | 1797 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 80 | | | 8 | | | 5 | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1020 | | | 573 | | | 993 | | | 1129 | |
| Travel Time (s) | | 27.8 | | | 15.6 | | | 27.1 | | | 30.8 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 10 | 0 | 80 | 30 | 10 | 10 | 10 | 490 | 65 | 16 | 951 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 90 | 0 | 0 | 50 | 0 | 10 | 555 | 0 | 16 | 961 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 40.0 | 40.0 | | 40.0 | 40.0 | | 20.0 | 65.0 | | 20.0 | 65.0 | |
| Total Split (%) | 26.7% | 26.7% | | 26.7% | 26.7% | | 13.3% | 43.3% | | 13.3% | 43.3% | |
| Maximum Green (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 15.0 | 60.0 | | 14.0 | 60.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 11.2 | | | 11.2 | | 6.5 | 118.0 | | 7.0 | 118.8 | |
| Actuated g/C Ratio | | 0.07 | | | 0.07 | | 0.04 | 0.79 | | 0.05 | 0.79 | |
| v/c Ratio | | 0.48 | | | 0.64 | | 0.14 | 0.40 | | 0.20 | 0.68 | |
| Control Delay | | 24.8 | | | 91.8 | | 72.4 | 6.7 | | 62.2 | 21.4 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 24.8 | | | 91.8 | | 72.4 | 6.7 | | 62.2 | 21.4 | |
| LOS | | C | | | F | | E | A | | E | C | |
| Approach Delay | | 24.8 | | | 91.8 | | | 7.9 | | | 22.0 | |
| Approach LOS | | C | | | F | | | A | | | C | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 149.5 (100%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 110 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.68 | |
| Intersection Signal Delay: 19.5 | Intersection LOS: B |
| Intersection Capacity Utilization 68.5% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 16: Champlain Parkway & Sears Lane



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 190 | 394 | 583 | 54 | 0 | 98 | 0 | 412 | 5 | 0 | 0 |
| Future Volume (vph) | 0 | 190 | 394 | 583 | 54 | 0 | 98 | 0 | 412 | 5 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 150 | | 200 | 0 | | 200 | 0 | | 0 |
| Storage Lanes | 0 | | 1 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | 0.950 | | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1711 | 1531 | 0 | 1711 | 0 |
| Flt Permitted | | | | 0.950 | | | | 0.754 | | | 0.665 | |
| Satd. Flow (perm) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1358 | 1531 | 0 | 1197 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 190 | | | 589 | | | 1129 | | | 97 | |
| Travel Time (s) | | 5.2 | | | 16.1 | | | 30.8 | | | 2.6 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 190 | 394 | 583 | 54 | 0 | 98 | 0 | 412 | 5 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 190 | 394 | 583 | 54 | 0 | 0 | 98 | 412 | 0 | 5 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Turn Type | | NA | Perm | Prot | NA | | Perm | NA | pm+ov | Perm | NA | |
| Protected Phases | | 4 9 | | 3 | 8 | | | 2 | 3 | | 6 | |
| Permitted Phases | 4 9 | | 4 9 | | | | 2 | | 2 | 6 | | |
| Detector Phase | 4 9 | 4 9 | 4 9 | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |

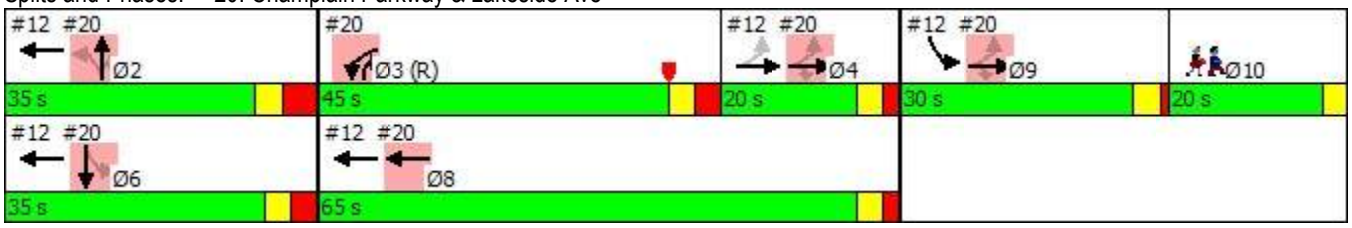
| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 4 | 9 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | | | | 8.0 | 5.0 | | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | |
| Minimum Split (s) | | | | 21.0 | 22.5 | | 22.5 | 22.5 | 21.0 | 22.5 | 22.5 | |
| Total Split (s) | | | | 45.0 | 65.0 | | 35.0 | 35.0 | 45.0 | 35.0 | 35.0 | |
| Total Split (%) | | | | 30.0% | 43.3% | | 23.3% | 23.3% | 30.0% | 23.3% | 23.3% | |
| Maximum Green (s) | | | | 39.0 | 60.0 | | 28.0 | 28.0 | 39.0 | 29.0 | 29.0 | |
| Yellow Time (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | | | | 3.0 | 2.0 | | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 5.0 | | | 7.0 | 6.0 | | 6.0 | |
| Lead/Lag | | | | Lead | | | | | Lead | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Gap (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Time Before Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Time To Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Recall Mode | | | | C-Min | None | | None | None | C-Min | None | None | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 43.8 | 43.8 | 68.0 | 89.0 | | | 16.1 | 91.2 | | 17.1 | |
| Actuated g/C Ratio | | 0.29 | 0.29 | 0.45 | 0.59 | | | 0.11 | 0.61 | | 0.11 | |
| v/c Ratio | | 0.36 | 0.88 | 0.75 | 0.05 | | | 0.67 | 0.44 | | 0.04 | |
| Control Delay | | 6.7 | 18.3 | 69.7 | 33.4 | | | 83.0 | 11.4 | | 56.0 | |
| Queue Delay | | 5.2 | 51.6 | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 11.9 | 69.9 | 69.7 | 33.4 | | | 83.0 | 11.4 | | 56.0 | |
| LOS | | B | E | E | C | | | F | B | | E | |
| Approach Delay | | 51.1 | | | 66.7 | | | 25.1 | | | 56.0 | |
| Approach LOS | | D | | | E | | | C | | | E | |

## Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 24 (16%), Referenced to phase 3:WBL, Start of Yellow
Natural Cycle: 140
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 49.2 Intersection LOS: D
Intersection Capacity Utilization 74.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 20: Champlain Parkway & Lakeside Ave



| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 15.0 | 9.5 | 20.0 |
| Total Split (s) | 20.0 | 30.0 | 20.0 |
| Total Split (%) | 13% | 20% | 13% |
| Maximum Green (s) | 15.0 | 26.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 1.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | | | 7.0 |
| Flash Dont Walk (s) | | | 10.0 |
| Pedestrian Calls (#/hr) | | | 5 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/02/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.989 | | | 0.949 | | | 0.872 | | | | |
| Flt Protected | | | | | 0.975 | | | 0.997 | | | 0.953 | |
| Satd. Flow (prot) | 0 | 1781 | 0 | 0 | 1666 | 0 | 0 | 1565 | 0 | 0 | 1716 | 0 |
| Flt Permitted | | | | | 0.975 | | | 0.997 | | | 0.953 | |
| Satd. Flow (perm) | 0 | 1781 | 0 | 0 | 1666 | 0 | 0 | 1565 | 0 | 0 | 1716 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 851 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 23.2 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 16 | | 8 | 8 | | 16 | 2 | | 6 | 6 | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 80 | 0 | 0 | 18 | 0 | 0 | 135 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 33.3% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

# HCM Unsignalized Intersection Capacity Analysis
## 1: St John's Club Drive/Lakeside Ave

11/02/2018

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 11 | 1 | 41 | 9 | 30 | 1 | 0 | 17 | 134 | 1 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 80 | 18 | 135 |
| Volume Left (vph) | 0 | 41 | 1 | 134 |
| Volume Right (vph) | 1 | 30 | 17 | 0 |
| Hadj (s) | -0.02 | -0.09 | -0.52 | 0.23 |
| Departure Headway (s) | 4.3 | 4.2 | 3.7 | 4.4 |
| Degree Utilization, x | 0.01 | 0.09 | 0.02 | 0.16 |
| Capacity (veh/h) | 797 | 830 | 924 | 808 |
| Control Delay (s) | 7.4 | 7.6 | 6.8 | 8.2 |
| Approach Delay (s) | 7.4 | 7.6 | 6.8 | 8.2 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.9 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 33.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

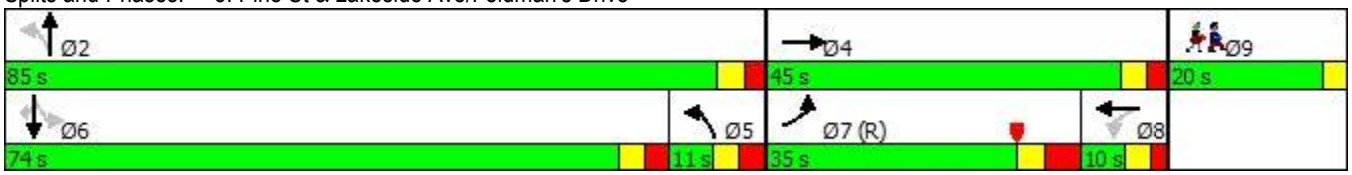
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 388 | 0 | 114 | 1 | 0 | 2 | 19 | 295 | 0 | 1 | 85 | 614 |
| Future Volume (vph) | 388 | 0 | 114 | 1 | 0 | 2 | 19 | 295 | 0 | 1 | 85 | 614 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.98 | 0.96 | | | 0.88 | | 0.99 | | | | 1.00 | 0.97 |
| Frt | | 0.850 | | | 0.910 | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.984 | | 0.950 | | | | 0.999 | |
| Satd. Flow (prot) | 1711 | 1474 | 0 | 0 | 1480 | 0 | 1711 | 1801 | 0 | 0 | 1799 | 1531 |
| Flt Permitted | 0.950 | | | | | | 0.701 | | | | 0.998 | |
| Satd. Flow (perm) | 1679 | 1474 | 0 | 0 | 1447 | 0 | 1255 | 1801 | 0 | 0 | 1797 | 1488 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 589 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 16.1 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 7 | | 9 | 9 | | 7 | 7 | | 38 | 38 | | 7 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 388 | 0 | 114 | 1 | 0 | 2 | 19 | 295 | 0 | 1 | 85 | 614 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 388 | 114 | 0 | 0 | 3 | 0 | 19 | 295 | 0 | 0 | 86 | 614 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | Prot | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 10.5 | | 10.0 | 10.0 | | 11.0 | 13.5 | | 13.5 | 13.5 | 13.5 |
| Total Split (s) | 35.0 | 45.0 | | 10.0 | 10.0 | | 11.0 | 85.0 | | 74.0 | 74.0 | 74.0 |
| Total Split (%) | 23.3% | 30.0% | | 6.7% | 6.7% | | 7.3% | 56.7% | | 49.3% | 49.3% | 49.3% |
| Maximum Green (s) | 28.0 | 39.5 | | 5.0 | 5.0 | | 5.0 | 79.5 | | 68.5 | 68.5 | 68.5 |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 4.0 | 2.5 | | 2.0 | 2.0 | | 3.0 | 2.5 | | 2.5 | 2.5 | 2.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 5.5 | | | 5.0 | | 6.0 | 5.5 | | | 5.5 | 5.5 |
| Lead/Lag | Lead | | | Lag | Lag | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | C-Min | None | | None | None | | None | None | | None | None | None |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | 58.1 | 61.6 | | | 5.0 | | 75.2 | 73.4 | | | 66.3 | 66.3 |
| Actuated g/C Ratio | 0.39 | 0.41 | | | 0.03 | | 0.50 | 0.49 | | | 0.44 | 0.44 |
| v/c Ratio | 0.59 | 0.19 | | | 0.06 | | 0.03 | 0.33 | | | 0.11 | 0.93 |
| Control Delay | 47.1 | 34.6 | | | 73.0 | | 16.7 | 23.5 | | | 24.0 | 61.8 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 47.1 | 34.6 | | | 73.0 | | 16.7 | 23.5 | | | 24.0 | 61.8 |
| LOS | D | C | | | E | | B | C | | | C | E |
| Approach Delay | | 44.3 | | | 73.0 | | | 23.1 | | | 57.1 | |
| Approach LOS | | D | | | E | | | C | | | E | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 0 (0%), Referenced to phase 7:EBL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.93 | |
| Intersection Signal Delay: 45.9 | Intersection LOS: D |
| Intersection Capacity Utilization 71.8% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 20.0 |
| Total Split (s) | 20.0 |
| Total Split (%) | 13% |
| Maximum Green (s) | 17.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 10.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 80 | 20 | 25 | 80 | 180 | 15 | 107 | 20 | 80 | 130 | 40 |
| Future Volume (vph) | 40 | 80 | 20 | 25 | 80 | 180 | 15 | 107 | 20 | 80 | 130 | 40 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | 0.96 | | | 0.99 | | 0.96 | | |
| Frt | | 0.981 | | | 0.915 | | | 0.981 | | | 0.965 | |
| Flt Protected | | 0.986 | | | 0.996 | | | 0.995 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1922 | 0 | 0 | 1736 | 0 | 0 | 1917 | 0 | 1770 | 1917 | 0 |
| Flt Permitted | | 0.828 | | | 0.957 | | | 0.945 | | 0.554 | | |
| Satd. Flow (perm) | 0 | 1614 | 0 | 0 | 1664 | 0 | 0 | 1821 | 0 | 994 | 1917 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 11 | | | 112 | | | 11 | | | 28 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 728 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 19.9 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | | | | 9 | | 22 | | | 23 | 23 | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 40 | 80 | 20 | 25 | 80 | 180 | 15 | 107 | 20 | 80 | 130 | 40 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 140 | 0 | 0 | 285 | 0 | 0 | 142 | 0 | 80 | 170 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

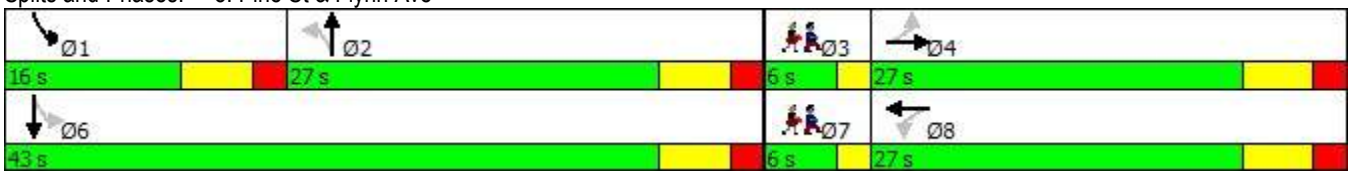
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 24.0 | 24.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 7.0 | 7.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 11.0 | 11.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 11.7 | | | 11.7 | | | 10.2 | | 17.4 | 17.4 | |
| Actuated g/C Ratio | | 0.27 | | | 0.27 | | | 0.23 | | 0.40 | 0.40 | |
| v/c Ratio | | 0.32 | | | 0.54 | | | 0.33 | | 0.14 | 0.22 | |
| Control Delay | | 17.2 | | | 14.7 | | | 19.4 | | 9.3 | 8.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 17.2 | | | 14.7 | | | 19.4 | | 9.3 | 8.3 | |
| LOS | | B | | | B | | | B | | A | A | |
| Approach Delay | | 17.2 | | | 14.7 | | | 19.4 | | | 8.6 | |
| Approach LOS | | B | | | B | | | B | | | A | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 43.6
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 14.1 Intersection LOS: B
Intersection Capacity Utilization 53.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

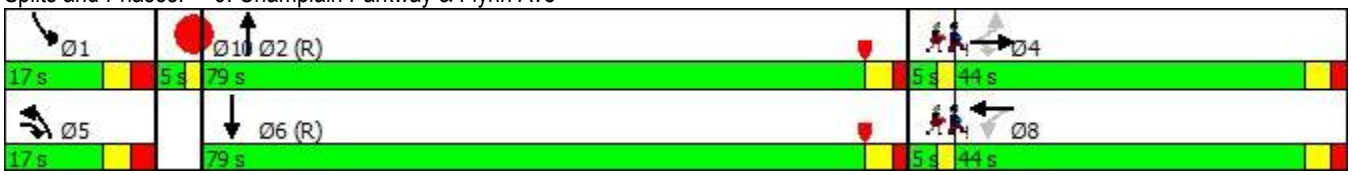
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 139 | 218 | 137 | 25 | 183 | 16 | 124 | 410 | 5 | 14 | 959 | 89 |
| Future Volume (vph) | 139 | 218 | 137 | 25 | 183 | 16 | 124 | 410 | 5 | 14 | 959 | 89 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 100 | 0 | | 0 | 200 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 1 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | 0.990 | | | 0.998 | | | 0.987 | |
| Flt Protected | | 0.981 | | | 0.994 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1766 | 1531 | 0 | 1772 | 0 | 1711 | 1797 | 0 | 1711 | 1777 | 0 |
| Flt Permitted | | 0.651 | | | 0.748 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1172 | 1531 | 0 | 1333 | 0 | 1711 | 1797 | 0 | 1711 | 1777 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | | 73 | | 2 | | | 1 | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1398 | | | 728 | | | 878 | | | 993 | |
| Travel Time (s) | | 38.1 | | | 19.9 | | | 23.9 | | | 27.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 139 | 218 | 137 | 25 | 183 | 16 | 124 | 410 | 5 | 14 | 959 | 89 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 357 | 137 | 0 | 224 | 0 | 124 | 415 | 0 | 14 | 1048 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | pm+ov | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | 5 | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | 4 | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | 5 | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø3 | Ø7 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 3 | 7 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | 4.0 | 10.0 | 10.0 | | 4.0 | 15.0 | | 4.0 | 15.0 | |
| Minimum Split (s) | 23.0 | 23.0 | 24.0 | 27.0 | 27.0 | | 24.0 | 24.0 | | 10.0 | 20.0 | |
| Total Split (s) | 44.0 | 44.0 | 17.0 | 44.0 | 44.0 | | 17.0 | 79.0 | | 17.0 | 79.0 | |
| Total Split (%) | 29.3% | 29.3% | 11.3% | 29.3% | 29.3% | | 11.3% | 52.7% | | 11.3% | 52.7% | |
| Maximum Green (s) | 39.0 | 39.0 | 11.0 | 39.0 | 39.0 | | 11.0 | 74.0 | | 11.0 | 74.0 | |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | 3.0 | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | 6.0 | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | | | | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | None | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | 2.0 | 2.0 | 2.0 | 7.0 | 7.0 | | 2.0 | 2.0 | | | | |
| Flash Dont Walk (s) | 15.0 | 15.0 | 15.0 | 15.0 | 15.0 | | 15.0 | 15.0 | | | | |
| Pedestrian Calls (#/hr) | 5 | 5 | 5 | 5 | 5 | | 5 | 5 | | | | |
| Act Effct Green (s) | | 43.0 | 59.0 | | 43.0 | | 11.0 | 79.0 | | 8.0 | 79.0 | |
| Actuated g/C Ratio | | 0.29 | 0.39 | | 0.29 | | 0.07 | 0.53 | | 0.05 | 0.53 | |
| v/c Ratio | | 1.07 | 0.21 | | 0.58 | | 0.99 | 0.44 | | 0.15 | 1.12 | |
| Control Delay | | 117.4 | 15.4 | | 53.2 | | 145.9 | 23.6 | | 67.0 | 107.7 | |
| Queue Delay | | 0.0 | 0.0 | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 117.4 | 15.4 | | 53.2 | | 145.9 | 23.6 | | 67.0 | 107.7 | |
| LOS | | F | B | | D | | F | C | | E | F | |
| Approach Delay | | 89.1 | | | 53.2 | | | 51.8 | | | 107.2 | |
| Approach LOS | | F | | | D | | | D | | | F | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 145 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 1.12 | |
| Intersection Signal Delay: 85.2 | Intersection LOS: F |
| Intersection Capacity Utilization 111.4% | ICU Level of Service H |
| Analysis Period (min) 15 | |

Splits and Phases: 9: Champlain Parkway & Flynn Ave



| Lane Group | Ø3 | Ø7 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 5.0 | 5.0 |
| Total Split (%) | 3% | 3% | 3% |
| Maximum Green (s) | 3.0 | 3.0 | 3.0 |
| Yellow Time (s) | 2.0 | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lead | Lead | |
| Lead-Lag Optimize? | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | 5.0 | 5.0 | 5.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 | 0 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

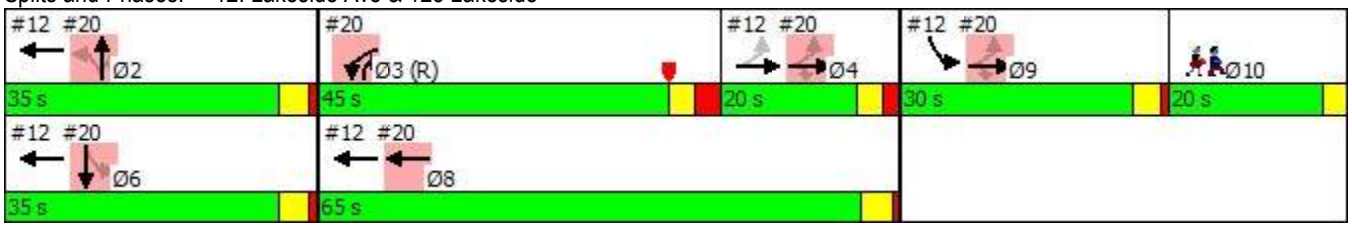
| Intersection Summary |
|---|

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 157 | 75 | 30 | 240 | 5 | | | | | |
| Future Volume (vph) | 5 | 157 | 75 | 30 | 240 | 5 | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | | | | | |
| Grade (%) | | 0% | 0% | | 0% | | | | | | |
| Storage Length (ft) | 0 | | | 0 | 0 | 0 | | | | | |
| Storage Lanes | 0 | | | 0 | 1 | 0 | | | | | |
| Taper Length (ft) | 25 | | | | 25 | | | | | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Ped Bike Factor | | | | | | | | | | | |
| Frt | | | 0.961 | | 0.997 | | | | | | |
| Flt Protected | | 0.998 | | | 0.953 | | | | | | |
| Satd. Flow (prot) | 0 | 3414 | 1730 | 0 | 1711 | 0 | | | | | |
| Flt Permitted | | 0.946 | | | 0.953 | | | | | | |
| Satd. Flow (perm) | 0 | 3236 | 1730 | 0 | 1711 | 0 | | | | | |
| Right Turn on Red | | | | No | | No | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (mph) | | 25 | 25 | | 25 | | | | | | |
| Link Distance (ft) | | 851 | 190 | | 197 | | | | | | |
| Travel Time (s) | | 23.2 | 5.2 | | 5.4 | | | | | | |
| Confl. Peds. (#/hr) | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | | | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Parking (#/hr) | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | 0% | | 0% | | | | | | |
| Adj. Flow (vph) | 5 | 157 | 75 | 30 | 240 | 5 | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 162 | 105 | 0 | 245 | 0 | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | |
| Lane Alignment | Left | Left | Left | Right | Left | Right | | | | | |
| Median Width(ft) | | 0 | 0 | | 11 | | | | | | |
| Link Offset(ft) | | 0 | 0 | | 0 | | | | | | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | | | | | |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 | | | | | |
| Number of Detectors | 1 | 2 | 2 | | 1 | | | | | | |
| Detector Template | Left | Thru | Thru | | Left | | | | | | |
| Leading Detector (ft) | 20 | 100 | 100 | | 20 | | | | | | |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | | | | | | |
| Turn Type | Perm | NA | NA | | Prot | | | | | | |
| Protected Phases | | 4 | 2 6 8 | | 9 | | 2 | 3 | 6 | 8 | 10 |
| Permitted Phases | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | 2 6 8 | | 9 | | | | | | |
| Switch Phase | | | | | | | | | | | |

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | | | 5.0 | | 8.0 | 8.0 | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 15.0 | 15.0 | | | 9.5 | | 22.5 | 21.0 | 22.5 | 22.5 | 20.0 |
| Total Split (s) | 20.0 | 20.0 | | | 30.0 | | 35.0 | 45.0 | 35.0 | 65.0 | 20.0 |
| Total Split (%) | 13.3% | 13.3% | | | 20.0% | | 23% | 30% | 23% | 43% | 13% |
| Maximum Green (s) | 15.0 | 15.0 | | | 26.0 | | 30.5 | 39.0 | 30.5 | 60.5 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | | 3.5 | 3.0 | 3.5 | 3.5 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | | | 1.0 | | 1.0 | 3.0 | 1.0 | 1.0 | 0.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | | |
| Lead/Lag | Lag | Lag | | | Lead | | | Lead | | | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | | None | | None | C-Min | None | None | None |
| Walk Time (s) | | | | | | | | | | | 7.0 |
| Flash Dont Walk (s) | | | | | | | | | | | 10.0 |
| Pedestrian Calls (#/hr) | | | | | | | | | | | 5 |
| Act Effct Green (s) | | 15.0 | 113.1 | | 24.4 | | | | | | |
| Actuated g/C Ratio | | 0.10 | 0.75 | | 0.16 | | | | | | |
| v/c Ratio | | 0.50 | 0.08 | | 0.88 | | | | | | |
| Control Delay | | 69.8 | 0.7 | | 91.3 | | | | | | |
| Queue Delay | | 0.0 | 0.9 | | 0.0 | | | | | | |
| Total Delay | | 69.8 | 1.6 | | 91.3 | | | | | | |
| LOS | | E | A | | F | | | | | | |
| Approach Delay | | 69.8 | 1.6 | | 91.3 | | | | | | |
| Approach LOS | | E | A | | F | | | | | | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 24 (16%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 120 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.88 | |
| Intersection Signal Delay: 66.1 | Intersection LOS: E |
| Intersection Capacity Utilization 28.9% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 12: Lakeside Ave & 128 Lakeside



| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 8 | 0 | 80 | 30 | 6 | 8 | 5 | 379 | 55 | 15 | 739 | 10 |
| Future Volume (vph) | 8 | 0 | 80 | 30 | 6 | 8 | 5 | 379 | 55 | 15 | 739 | 10 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 220 | | 0 | 125 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.877 | | | 0.975 | | | 0.981 | | | 0.998 | |
| Flt Protected | | 0.995 | | | 0.967 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1571 | 0 | 0 | 1698 | 0 | 1711 | 1766 | 0 | 1711 | 1797 | 0 |
| Flt Permitted | | 0.973 | | | 0.600 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1537 | 0 | 0 | 1053 | 0 | 1711 | 1766 | 0 | 1711 | 1797 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1020 | | | 573 | | | 993 | | | 1129 | |
| Travel Time (s) | | 27.8 | | | 15.6 | | | 27.1 | | | 30.8 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 8 | 0 | 80 | 30 | 6 | 8 | 5 | 379 | 55 | 15 | 739 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 88 | 0 | 0 | 44 | 0 | 5 | 434 | 0 | 15 | 749 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

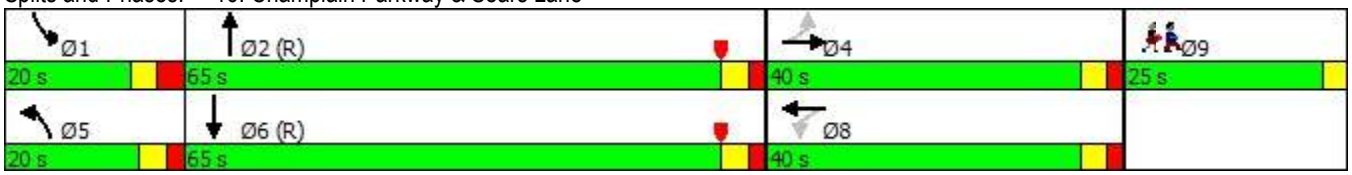
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 40.0 | 40.0 | | 40.0 | 40.0 | | 20.0 | 65.0 | | 20.0 | 65.0 | |
| Total Split (%) | 26.7% | 26.7% | | 26.7% | 26.7% | | 13.3% | 43.3% | | 13.3% | 43.3% | |
| Maximum Green (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 15.0 | 60.0 | | 14.0 | 60.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 14.3 | | | 14.3 | | 6.1 | 115.1 | | 6.9 | 118.3 | |
| Actuated g/C Ratio | | 0.10 | | | 0.10 | | 0.04 | 0.77 | | 0.05 | 0.79 | |
| v/c Ratio | | 0.61 | | | 0.44 | | 0.07 | 0.32 | | 0.19 | 0.53 | |
| Control Delay | | 81.8 | | | 76.8 | | 71.4 | 6.2 | | 60.3 | 25.0 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 1.1 | |
| Total Delay | | 81.8 | | | 76.8 | | 71.4 | 6.2 | | 60.3 | 26.1 | |
| LOS | | F | | | E | | E | A | | E | C | |
| Approach Delay | | 81.8 | | | 76.8 | | | 6.9 | | | 26.8 | |
| Approach LOS | | F | | | E | | | A | | | C | |

## Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 149.5 (100%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 25.5 Intersection LOS: C
Intersection Capacity Utilization 57.0% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 16: Champlain Parkway & Sears Lane



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 181 | 216 | 548 | 33 | 0 | 72 | 0 | 323 | 5 | 0 | 0 |
| Future Volume (vph) | 0 | 181 | 216 | 548 | 33 | 0 | 72 | 0 | 323 | 5 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 150 | | 200 | 0 | | 200 | 0 | | 0 |
| Storage Lanes | 0 | | 1 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | 0.950 | | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1711 | 1531 | 0 | 1711 | 0 |
| Flt Permitted | | | | 0.950 | | | | 0.754 | | | 0.648 | |
| Satd. Flow (perm) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1358 | 1531 | 0 | 1167 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 190 | | | 589 | | | 1129 | | | 97 | |
| Travel Time (s) | | 5.2 | | | 16.1 | | | 30.8 | | | 2.6 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 181 | 216 | 548 | 33 | 0 | 72 | 0 | 323 | 5 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 181 | 216 | 548 | 33 | 0 | 0 | 72 | 323 | 0 | 5 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Turn Type | | NA | Perm | Prot | NA | | Perm | NA | pm+ov | Perm | NA | |
| Protected Phases | | 4 9 | | 3 | 8 | | | 2 | 3 | | 6 | |
| Permitted Phases | 4 9 | | 4 9 | | | | 2 | | 2 | 6 | | |
| Detector Phase | 4 9 | 4 9 | 4 9 | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |

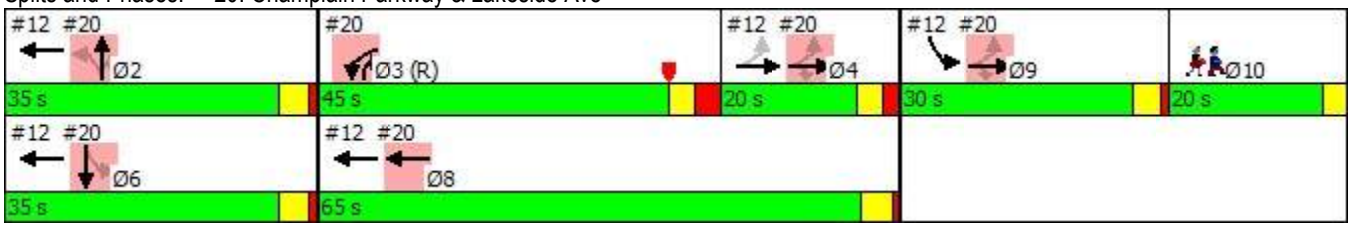
| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 4 | 9 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | | | | 8.0 | 5.0 | | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | |
| Minimum Split (s) | | | | 21.0 | 22.5 | | 22.5 | 22.5 | 21.0 | 22.5 | 22.5 | |
| Total Split (s) | | | | 45.0 | 65.0 | | 35.0 | 35.0 | 45.0 | 35.0 | 35.0 | |
| Total Split (%) | | | | 30.0% | 43.3% | | 23.3% | 23.3% | 30.0% | 23.3% | 23.3% | |
| Maximum Green (s) | | | | 39.0 | 60.5 | | 30.5 | 30.5 | 39.0 | 30.5 | 30.5 | |
| Yellow Time (s) | | | | 3.0 | 3.5 | | 3.5 | 3.5 | 3.0 | 3.5 | 3.5 | |
| All-Red Time (s) | | | | 3.0 | 1.0 | | 1.0 | 1.0 | 3.0 | 1.0 | 1.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 4.5 | | | 4.5 | 6.0 | | 4.5 | |
| Lead/Lag | | | | Lead | | | | | Lead | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Gap (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Time Before Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Time To Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Recall Mode | | | | C-Min | None | | None | None | C-Min | None | None | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 43.4 | 43.4 | 73.5 | 95.0 | | | 13.6 | 91.6 | | 13.6 | |
| Actuated g/C Ratio | | 0.29 | 0.29 | 0.49 | 0.63 | | | 0.09 | 0.61 | | 0.09 | |
| v/c Ratio | | 0.35 | 0.49 | 0.65 | 0.03 | | | 0.59 | 0.35 | | 0.05 | |
| Control Delay | | 10.4 | 11.9 | 64.7 | 28.7 | | | 83.3 | 9.7 | | 60.4 | |
| Queue Delay | | 1.8 | 2.1 | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 12.2 | 14.0 | 64.7 | 28.7 | | | 83.3 | 9.7 | | 60.4 | |
| LOS | | B | B | E | C | | | F | A | | E | |
| Approach Delay | | 13.2 | | | 62.7 | | | 23.1 | | | 60.4 | |
| Approach LOS | | B | | | E | | | C | | | E | |

## Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 24 (16%), Referenced to phase 3:WBL, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 37.1 Intersection LOS: D
Intersection Capacity Utilization 59.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 20: Champlain Parkway & Lakeside Ave



| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 15.0 | 9.5 | 20.0 |
| Total Split (s) | 20.0 | 30.0 | 20.0 |
| Total Split (%) | 13% | 20% | 13% |
| Maximum Green (s) | 15.0 | 26.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 1.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | | | 7.0 |
| Flash Dont Walk (s) | | | 10.0 |
| Pedestrian Calls (#/hr) | | | 5 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: Central Ave & St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.989 | | | 0.983 | | | 0.872 | | | | |
| Flt Protected | | | | | 0.965 | | | 0.997 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1879 | 0 | 0 | 1802 | 0 | 0 | 1652 | 0 | 0 | 1805 | 0 |
| Flt Permitted | | | | | 0.965 | | | 0.997 | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1879 | 0 | 0 | 1802 | 0 | 0 | 1652 | 0 | 0 | 1805 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 1630 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 44.5 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 16 | | 8 | 8 | | 16 | 2 | | 6 | 6 | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 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% | |
| Adj. Flow (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 57 | 0 | 0 | 18 | 0 | 0 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 25.7% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 57 | 18 | 16 |
| Volume Left (vph) | 0 | 41 | 1 | 16 |
| Volume Right (vph) | 1 | 7 | 17 | 0 |
| Hadj (s) | -0.05 | 0.07 | -0.56 | 0.20 |
| Departure Headway (s) | 4.0 | 4.1 | 3.5 | 4.3 |
| Degree Utilization, x | 0.01 | 0.06 | 0.02 | 0.02 |
| Capacity (veh/h) | 889 | 876 | 993 | 826 |
| Control Delay (s) | 7.0 | 7.3 | 6.6 | 7.3 |
| Approach Delay (s) | 7.0 | 7.3 | 6.6 | 7.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.2 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

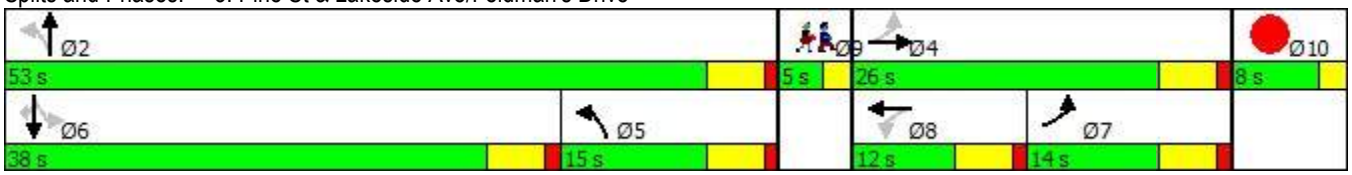
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 203 | 0 | 400 | 1 | 0 | 2 | 84 | 530 | 0 | 1 | 525 | 96 |
| Future Volume (vph) | 203 | 0 | 400 | 1 | 0 | 2 | 84 | 530 | 0 | 1 | 525 | 96 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 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) | 80 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.98 | 0.95 | | | 0.97 | | 1.00 | | | | 1.00 | 0.97 |
| Frt | | 0.850 | | | 0.910 | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.984 | | 0.950 | | | | | |
| Satd. Flow (prot) | 1787 | 1526 | 0 | 0 | 1656 | 0 | 1770 | 1863 | 0 | 0 | 1863 | 1583 |
| Flt Permitted | 0.756 | | | | | | 0.263 | | | | 0.999 | |
| Satd. Flow (perm) | 1394 | 1526 | 0 | 0 | 1677 | 0 | 488 | 1863 | 0 | 0 | 1861 | 1530 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 494 | | | 190 | | | | | | | 190 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1630 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 44.5 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 7 | | 9 | 9 | | 7 | 7 | | 38 | 38 | | 7 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 0% | 1% | 0% | 0% | 0% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 203 | 0 | 400 | 1 | 0 | 2 | 84 | 530 | 0 | 1 | 525 | 96 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 203 | 400 | 0 | 0 | 3 | 0 | 84 | 530 | 0 | 0 | 526 | 96 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 12 | | | 12 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | pm+pt | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 9 | 10 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 8.0 | | 6.0 | 6.0 | | 5.0 | 15.0 | | 15.0 | 15.0 | 15.0 |
| Minimum Split (s) | 10.0 | 13.0 | | 11.0 | 11.0 | | 10.0 | 20.0 | | 20.0 | 20.0 | 20.0 |
| Total Split (s) | 14.0 | 26.0 | | 12.0 | 12.0 | | 15.0 | 53.0 | | 38.0 | 38.0 | 38.0 |
| Total Split (%) | 15.2% | 28.3% | | 13.0% | 13.0% | | 16.3% | 57.6% | | 41.3% | 41.3% | 41.3% |
| Maximum Green (s) | 9.0 | 21.0 | | 7.0 | 7.0 | | 10.0 | 48.0 | | 33.0 | 33.0 | 33.0 |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | 4.0 |
| All-Red Time (s) | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | | 1.0 | 1.0 | 1.0 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 5.0 | 5.0 | | | 5.0 | | 5.0 | 5.0 | | | 5.0 | 5.0 |
| Lead/Lag | Lag | | | Lead | Lead | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | Yes | | | Yes | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | None | None | | None | Min | | Min | Min | Min |
| Walk Time (s) | | 2.0 | | 2.0 | 2.0 | | | | | 2.0 | 2.0 | 2.0 |
| Flash Dont Walk (s) | | 14.0 | | 14.0 | 14.0 | | | | | 21.0 | 21.0 | 21.0 |
| Pedestrian Calls (#/hr) | | 5 | | 5 | 5 | | | | | 5 | 5 | 5 |
| Act Effct Green (s) | 12.3 | 12.3 | | | 8.0 | | 33.5 | 31.6 | | | 23.0 | 23.0 |
| Actuated g/C Ratio | 0.22 | 0.22 | | | 0.14 | | 0.59 | 0.55 | | | 0.40 | 0.40 |
| v/c Ratio | 0.55 | 0.56 | | | 0.01 | | 0.19 | 0.52 | | | 0.70 | 0.13 |
| Control Delay | 29.5 | 4.0 | | | 0.0 | | 12.7 | 12.7 | | | 24.1 | 0.4 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 29.5 | 4.0 | | | 0.0 | | 12.7 | 12.7 | | | 24.1 | 0.4 |
| LOS | C | A | | | A | | B | B | | | C | A |
| Approach Delay | | 12.6 | | | | | | 12.7 | | | 20.4 | |
| Approach LOS | | B | | | | | | B | | | C | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 92 | |
| Actuated Cycle Length: 57.2 | |
| Natural Cycle: 65 | |
| Control Type: Actuated-Uncoordinated | |
| Maximum v/c Ratio: 0.70 | |
| Intersection Signal Delay: 15.3 | Intersection LOS: B |
| Intersection Capacity Utilization 93.8% | ICU Level of Service F |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 | Ø10 |
|---|---|---|
| Minimum Initial (s) | 1.0 | 1.0 |
| Minimum Split (s) | 5.0 | 5.0 |
| Total Split (s) | 5.0 | 8.0 |
| Total Split (%) | 5% | 9% |
| Maximum Green (s) | 3.0 | 6.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | | |
| Lead-Lag Optimize? | | |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 5.0 | 8.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 5 | 5 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 87 | 158 | 63 | 32 | 194 | 177 | 36 | 384 | 19 | 194 | 583 | 112 |
| Future Volume (vph) | 87 | 158 | 63 | 32 | 194 | 177 | 36 | 384 | 19 | 194 | 583 | 112 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | 0.99 | | | 0.96 | | | 1.00 | | | 0.99 | |
| Frt | | 0.972 | | | 0.941 | | | 0.994 | | | 0.976 | |
| Flt Protected | | 0.986 | | | 0.996 | | | 0.996 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1903 | 0 | 0 | 1785 | 0 | 0 | 1960 | 0 | 1787 | 1944 | 0 |
| Flt Permitted | | 0.631 | | | 0.954 | | | 0.898 | | 0.264 | | |
| Satd. Flow (perm) | 0 | 1218 | 0 | 0 | 1708 | 0 | 0 | 1766 | 0 | 497 | 1944 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 17 | | | 51 | | | 3 | | | 18 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 2703 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 73.7 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | 22 | | 9 | 9 | | 22 | 10 | | 23 | 23 | | 10 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 87 | 158 | 63 | 32 | 194 | 177 | 36 | 384 | 19 | 194 | 583 | 112 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 308 | 0 | 0 | 403 | 0 | 0 | 439 | 0 | 194 | 695 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

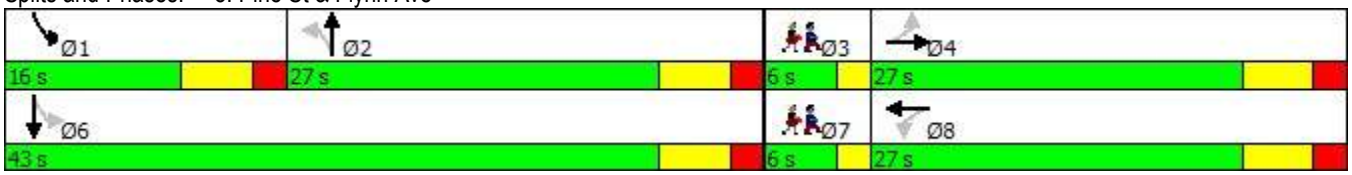
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 18.0 | 18.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 20.3 | | | 20.3 | | | 20.0 | | 35.2 | 35.2 | |
| Actuated g/C Ratio | | 0.29 | | | 0.29 | | | 0.29 | | 0.51 | 0.51 | |
| v/c Ratio | | 0.83 | | | 0.75 | | | 0.86 | | 0.46 | 0.69 | |
| Control Delay | | 44.5 | | | 30.8 | | | 42.3 | | 13.7 | 17.7 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 44.5 | | | 30.8 | | | 42.3 | | 13.7 | 17.7 | |
| LOS | | D | | | C | | | D | | B | B | |
| Approach Delay | | 44.5 | | | 30.8 | | | 42.3 | | | 16.8 | |
| Approach LOS | | D | | | C | | | D | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 69
Natural Cycle: 75
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 29.2 Intersection LOS: C
Intersection Capacity Utilization 116.0% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

# Lanes, Volumes, Timings
## 1: St John's Club Drive/Lakeside Ave

11/01/2018

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.989 | | | 0.983 | | | 0.872 | | | | |
| Flt Protected | | | | | 0.965 | | | 0.997 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1816 | 0 | 0 | 1742 | 0 | 0 | 1597 | 0 | 0 | 1745 | 0 |
| Flt Permitted | | | | | 0.965 | | | 0.997 | | | 0.950 | |
| Satd. Flow (perm) | 0 | 1816 | 0 | 0 | 1742 | 0 | 0 | 1597 | 0 | 0 | 1745 | 0 |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 140 | | | 851 | | | 869 | | | 215 | |
| Travel Time (s) | | 3.8 | | | 23.2 | | | 23.7 | | | 5.9 | |
| Confl. Peds. (#/hr) | 16 | | 8 | 8 | | 16 | 2 | | 6 | 6 | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 0% | 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% | |
| Adj. Flow (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 12 | 0 | 0 | 57 | 0 | 0 | 18 | 0 | 0 | 16 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |

### Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 25.7% ICU Level of Service A
Analysis Period (min) 15
Description: Lakeside Ave and Central Avenue

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Future Volume (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Hourly flow rate (vph) | 0 | 11 | 1 | 41 | 9 | 7 | 1 | 0 | 17 | 16 | 0 | 0 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 12 | 57 | 18 | 16 |
| Volume Left (vph) | 0 | 41 | 1 | 16 |
| Volume Right (vph) | 1 | 7 | 17 | 0 |
| Hadj (s) | -0.05 | 0.07 | -0.56 | 0.20 |
| Departure Headway (s) | 4.0 | 4.1 | 3.5 | 4.3 |
| Degree Utilization, x | 0.01 | 0.06 | 0.02 | 0.02 |
| Capacity (veh/h) | 889 | 876 | 993 | 826 |
| Control Delay (s) | 7.0 | 7.3 | 6.6 | 7.3 |
| Approach Delay (s) | 7.0 | 7.3 | 6.6 | 7.3 |
| Approach LOS | A | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 7.2 | | |
| Level of Service | A | | |
| Intersection Capacity Utilization | 25.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| Description: Lakeside Ave and Central Avenue | | | |

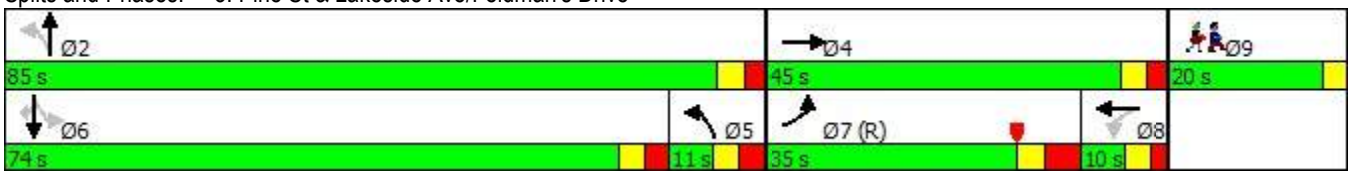
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 441 | 0 | 114 | 1 | 0 | 2 | 9 | 310 | 0 | 1 | 293 | 636 |
| Future Volume (vph) | 441 | 0 | 114 | 1 | 0 | 2 | 9 | 310 | 0 | 1 | 293 | 636 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 150 | | 0 | 0 | | 0 | 120 | | 0 | 0 | | 130 |
| Storage Lanes | 1 | | 0 | 0 | | 0 | 1 | | 0 | 0 | | 1 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | 0.98 | 0.96 | | | 0.88 | | 1.00 | | | | 1.00 | 0.97 |
| Frt | | 0.850 | | | 0.910 | | | | | | | 0.850 |
| Flt Protected | 0.950 | | | | 0.984 | | 0.950 | | | | | |
| Satd. Flow (prot) | 1728 | 1489 | 0 | 0 | 1510 | 0 | 1711 | 1801 | 0 | 0 | 1801 | 1531 |
| Flt Permitted | 0.950 | | | | | | 0.499 | | | | 0.999 | |
| Satd. Flow (perm) | 1695 | 1489 | 0 | 0 | 1475 | 0 | 895 | 1801 | 0 | 0 | 1799 | 1488 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 589 | | | 262 | | | 2150 | | | 922 | |
| Travel Time (s) | | 16.1 | | | 7.1 | | | 58.6 | | | 25.1 | |
| Confl. Peds. (#/hr) | 7 | | 9 | 9 | | 7 | 7 | | 38 | 38 | | 7 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 0% | 1% | 0% | 0% | 0% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 441 | 0 | 114 | 1 | 0 | 2 | 9 | 310 | 0 | 1 | 293 | 636 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 441 | 114 | 0 | 0 | 3 | 0 | 9 | 310 | 0 | 0 | 294 | 636 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | 1 |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | Right |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | 20 |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | 0 |
| Turn Type | Prot | NA | | Perm | NA | | pm+pt | NA | | Perm | NA | Perm |
| Protected Phases | 7 | 4 | | | 8 | | 5 | 2 | | | 6 | |
| Permitted Phases | | | | 8 | | | 2 | | | 6 | | 6 |
| Detector Phase | 7 | 4 | | 8 | 8 | | 5 | 2 | | 6 | 6 | 6 |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 8.0 | | 8.0 | 8.0 | 8.0 |
| Minimum Split (s) | 15.0 | 10.5 | | 10.0 | 10.0 | | 11.0 | 13.5 | | 13.5 | 13.5 | 13.5 |
| Total Split (s) | 35.0 | 45.0 | | 10.0 | 10.0 | | 11.0 | 85.0 | | 74.0 | 74.0 | 74.0 |
| Total Split (%) | 23.3% | 30.0% | | 6.7% | 6.7% | | 7.3% | 56.7% | | 49.3% | 49.3% | 49.3% |
| Maximum Green (s) | 28.0 | 39.5 | | 5.0 | 5.0 | | 5.0 | 79.5 | | 68.5 | 68.5 | 68.5 |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 4.0 | 2.5 | | 2.0 | 2.0 | | 3.0 | 2.5 | | 2.5 | 2.5 | 2.5 |
| Lost Time Adjust (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Lost Time (s) | 7.0 | 5.5 | | | 5.0 | | 6.0 | 5.5 | | | 5.5 | 5.5 |
| Lead/Lag | Lead | | | Lag | Lag | | Lag | | | Lead | Lead | Lead |
| Lead-Lag Optimize? | Yes | | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 |
| Recall Mode | C-Min | None | | None | None | | None | None | | None | None | None |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | 60.7 | 64.2 | | | 5.0 | | 74.9 | 70.8 | | | 68.6 | 68.6 |
| Actuated g/C Ratio | 0.40 | 0.43 | | | 0.03 | | 0.50 | 0.47 | | | 0.46 | 0.46 |
| v/c Ratio | 0.63 | 0.18 | | | 0.06 | | 0.02 | 0.36 | | | 0.36 | 0.93 |
| Control Delay | 32.5 | 26.6 | | | 73.0 | | 16.1 | 25.8 | | | 27.5 | 60.1 |
| Queue Delay | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | | | 0.0 | 0.0 |
| Total Delay | 32.5 | 26.6 | | | 73.0 | | 16.1 | 25.8 | | | 27.5 | 60.1 |
| LOS | C | C | | | E | | B | C | | | C | E |
| Approach Delay | | 31.3 | | | 73.0 | | | 25.5 | | | 49.8 | |
| Approach LOS | | C | | | E | | | C | | | D | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 0 (0%), Referenced to phase 7:EBL, Start of Yellow | |
| Natural Cycle: 150 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.93 | |
| Intersection Signal Delay: 39.9 | Intersection LOS: D |
| Intersection Capacity Utilization 73.9% | ICU Level of Service D |
| Analysis Period (min) 15 | |

Splits and Phases: 3: Pine St & Lakeside Ave/Feldman's Drive



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 20.0 |
| Total Split (s) | 20.0 |
| Total Split (%) | 13% |
| Maximum Green (s) | 17.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 10.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 34 | 93 | 32 | 27 | 121 | 141 | 28 | 71 | 15 | 113 | 336 | 56 |
| Future Volume (vph) | 34 | 93 | 32 | 27 | 121 | 141 | 28 | 71 | 15 | 113 | 336 | 56 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 | 12 | 14 | 12 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 0 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 0 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | 0.95 | | | 0.99 | | 0.96 | | |
| Frt | | 0.973 | | | 0.934 | | | 0.982 | | | 0.979 | |
| Flt Protected | | 0.989 | | | 0.995 | | | 0.988 | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1931 | 0 | 0 | 1779 | 0 | 0 | 1907 | 0 | 1770 | 1945 | 0 |
| Flt Permitted | | 0.878 | | | 0.953 | | | 0.797 | | 0.589 | | |
| Satd. Flow (perm) | 0 | 1714 | 0 | 0 | 1700 | 0 | 0 | 1538 | 0 | 1053 | 1945 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 16 | | | 62 | | | 10 | | | 15 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 728 | | | 1013 | | | 787 | | | 2150 | |
| Travel Time (s) | | 19.9 | | | 27.6 | | | 21.5 | | | 58.6 | |
| Confl. Peds. (#/hr) | | | | 9 | | 22 | | | 23 | 23 | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 1% | 1% | 1% | 1% | 1% | 1% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 34 | 93 | 32 | 27 | 121 | 141 | 28 | 71 | 15 | 113 | 336 | 56 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 159 | 0 | 0 | 289 | 0 | 0 | 114 | 0 | 113 | 392 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 12 | | | 12 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 | 1.00 | 0.92 | 1.00 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Perm | NA | | pm+pt | NA | |
| Protected Phases | | 4 | | | 8 | | | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 2 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

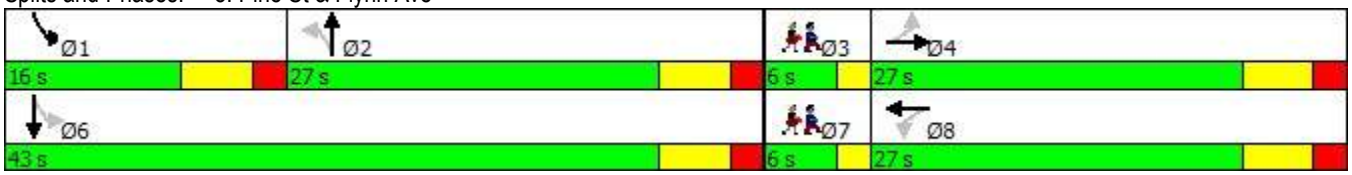
| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Lane Configurations | | |
| Traffic Volume (vph) | | |
| Future Volume (vph) | | |
| Ideal Flow (vphpl) | | |
| Lane Width (ft) | | |
| Grade (%) | | |
| Storage Length (ft) | | |
| Storage Lanes | | |
| Taper Length (ft) | | |
| Lane Util. Factor | | |
| Ped Bike Factor | | |
| Frt | | |
| Flt Protected | | |
| Satd. Flow (prot) | | |
| Flt Permitted | | |
| Satd. Flow (perm) | | |
| Right Turn on Red | | |
| Satd. Flow (RTOR) | | |
| Link Speed (mph) | | |
| Link Distance (ft) | | |
| Travel Time (s) | | |
| Confl. Peds. (#/hr) | | |
| Confl. Bikes (#/hr) | | |
| Peak Hour Factor | | |
| Growth Factor | | |
| Heavy Vehicles (%) | | |
| Bus Blockages (#/hr) | | |
| Parking (#/hr) | | |
| Mid-Block Traffic (%) | | |
| Adj. Flow (vph) | | |
| Shared Lane Traffic (%) | | |
| Lane Group Flow (vph) | | |
| Enter Blocked Intersection | | |
| Lane Alignment | | |
| Median Width(ft) | | |
| Link Offset(ft) | | |
| Crosswalk Width(ft) | | |
| Two way Left Turn Lane | | |
| Headway Factor | | |
| Turning Speed (mph) | | |
| Number of Detectors | | |
| Detector Template | | |
| Leading Detector (ft) | | |
| Trailing Detector (ft) | | |
| Turn Type | | |
| Protected Phases | 3 | 7 |
| Permitted Phases | | |
| Detector Phase | | |
| Switch Phase | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | | 8.0 | 8.0 | |
| Minimum Split (s) | 18.0 | 18.0 | | 24.0 | 24.0 | | 23.0 | 23.0 | | 14.0 | 23.0 | |
| Total Split (s) | 27.0 | 27.0 | | 27.0 | 27.0 | | 27.0 | 27.0 | | 16.0 | 43.0 | |
| Total Split (%) | 35.5% | 35.5% | | 35.5% | 35.5% | | 35.5% | 35.5% | | 21.1% | 56.6% | |
| Maximum Green (s) | 21.0 | 21.0 | | 21.0 | 21.0 | | 21.0 | 21.0 | | 10.0 | 37.0 | |
| Yellow Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 6.0 | | | 6.0 | | | 6.0 | | 6.0 | 6.0 | |
| Lead/Lag | Lag | Lag | | Lag | Lag | | Lag | Lag | | Lead | | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | Min | Min | | None | Min | |
| Walk Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 7.0 | 7.0 | | | 7.0 | |
| Flash Dont Walk (s) | 9.0 | 9.0 | | 9.0 | 9.0 | | 7.0 | 7.0 | | | 7.0 | |
| Pedestrian Calls (#/hr) | 10 | 10 | | 10 | 10 | | 10 | 10 | | | 10 | |
| Act Effct Green (s) | | 12.7 | | | 12.7 | | | 10.0 | | 20.9 | 20.9 | |
| Actuated g/C Ratio | | 0.27 | | | 0.27 | | | 0.21 | | 0.44 | 0.44 | |
| v/c Ratio | | 0.34 | | | 0.58 | | | 0.34 | | 0.19 | 0.46 | |
| Control Delay | | 17.2 | | | 18.8 | | | 21.9 | | 10.0 | 11.8 | |
| Queue Delay | | 0.0 | | | 0.0 | | | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 17.2 | | | 18.8 | | | 21.9 | | 10.0 | 11.8 | |
| LOS | | B | | | B | | | C | | A | B | |
| Approach Delay | | 17.2 | | | 18.8 | | | 21.9 | | | 11.4 | |
| Approach LOS | | B | | | B | | | C | | | B | |

## Intersection Summary

Area Type: Other
Cycle Length: 76
Actuated Cycle Length: 47.7
Natural Cycle: 70
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.58
Intersection Signal Delay: 15.4 Intersection LOS: B
Intersection Capacity Utilization 59.3% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 8: Pine St & Flynn Ave



| Lane Group | Ø3 | Ø7 |
|---|---|---|
| Minimum Initial (s) | 2.0 | 2.0 |
| Minimum Split (s) | 6.0 | 6.0 |
| Total Split (s) | 6.0 | 6.0 |
| Total Split (%) | 8% | 8% |
| Maximum Green (s) | 4.0 | 4.0 |
| Yellow Time (s) | 2.0 | 2.0 |
| All-Red Time (s) | 0.0 | 0.0 |
| Lost Time Adjust (s) | | |
| Total Lost Time (s) | | |
| Lead/Lag | Lead | Lead |
| Lead-Lag Optimize? | Yes | Yes |
| Vehicle Extension (s) | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 |
| Recall Mode | None | None |
| Walk Time (s) | 6.0 | 6.0 |
| Flash Dont Walk (s) | 0.0 | 0.0 |
| Pedestrian Calls (#/hr) | 10 | 10 |
| Act Effct Green (s) | | |
| Actuated g/C Ratio | | |
| v/c Ratio | | |
| Control Delay | | |
| Queue Delay | | |
| Total Delay | | |
| LOS | | |
| Approach Delay | | |
| Approach LOS | | |

| Intersection Summary |
|---|

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 137 | 218 | 137 | 25 | 183 | 15 | 124 | 402 | 5 | 10 | 899 | 82 |
| Future Volume (vph) | 137 | 218 | 137 | 25 | 183 | 15 | 124 | 402 | 5 | 10 | 899 | 82 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 200 | | 0 | 150 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.962 | | | 0.991 | | | 0.998 | | | 0.987 | |
| Flt Protected | | 0.986 | | | 0.994 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1708 | 0 | 0 | 1774 | 0 | 1711 | 1797 | 0 | 1711 | 1777 | 0 |
| Flt Permitted | | 0.618 | | | 0.835 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1071 | 0 | 0 | 1490 | 0 | 1711 | 1797 | 0 | 1711 | 1777 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 12 | | | 2 | | | | | | 4 | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1398 | | | 728 | | | 878 | | | 993 | |
| Travel Time (s) | | 38.1 | | | 19.9 | | | 23.9 | | | 27.1 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 137 | 218 | 137 | 25 | 183 | 15 | 124 | 402 | 5 | 10 | 899 | 82 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 492 | 0 | 0 | 223 | 0 | 124 | 407 | 0 | 10 | 981 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

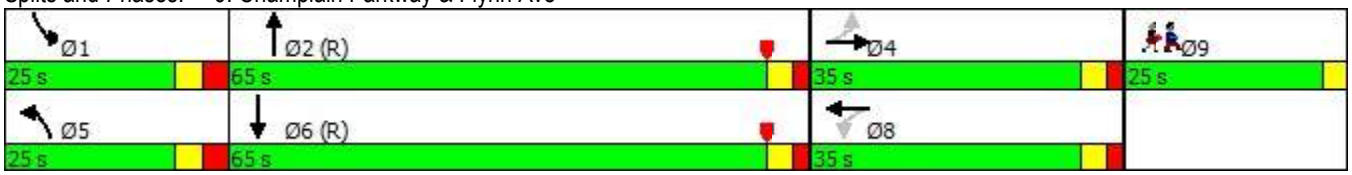
| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 4.0 | 15.0 | | 4.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 10.0 | 21.0 | | 10.0 | 20.0 | |
| Total Split (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 25.0 | 65.0 | | 25.0 | 65.0 | |
| Total Split (%) | 23.3% | 23.3% | | 23.3% | 23.3% | | 16.7% | 43.3% | | 16.7% | 43.3% | |
| Maximum Green (s) | 30.0 | 30.0 | | 30.0 | 30.0 | | 19.0 | 60.0 | | 19.0 | 60.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 6.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 30.0 | | | 30.0 | | 15.5 | 99.6 | | 6.5 | 83.5 | |
| Actuated g/C Ratio | | 0.20 | | | 0.20 | | 0.10 | 0.66 | | 0.04 | 0.56 | |
| v/c Ratio | | 2.21 | | | 0.75 | | 0.70 | 0.34 | | 0.14 | 0.99 | |
| Control Delay | | 583.7 | | | 72.1 | | 85.5 | 14.8 | | 93.5 | 60.1 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 583.7 | | | 72.1 | | 85.5 | 14.8 | | 93.5 | 60.1 | |
| LOS | | F | | | E | | F | B | | F | E | |
| Approach Delay | | 583.7 | | | 72.1 | | | 31.3 | | | 60.4 | |
| Approach LOS | | F | | | E | | | C | | | E | |

## Intersection Summary

Area Type: Other
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 10.9 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 150
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 2.21
Intersection Signal Delay: 169.8 Intersection LOS: F
Intersection Capacity Utilization 116.0% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 9: Champlain Parkway & Flynn Ave



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

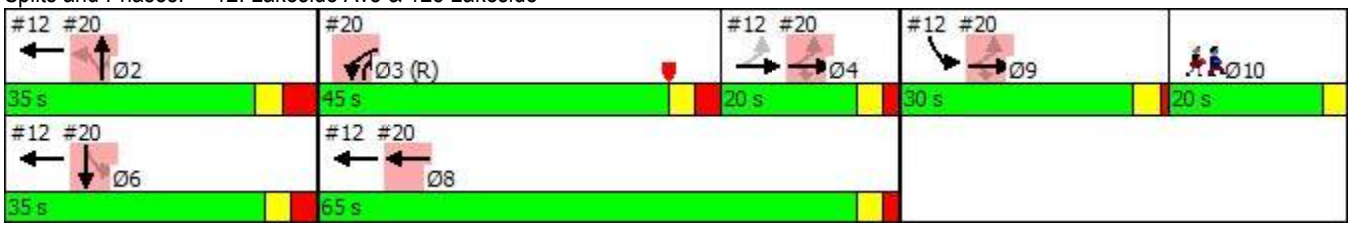
| Intersection Summary |
|---|

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | |
| Traffic Volume (vph) | 5 | 226 | 104 | 25 | 240 | 5 | | | | | |
| Future Volume (vph) | 5 | 226 | 104 | 25 | 240 | 5 | | | | | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | | | | | |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | | | | | |
| Grade (%) | | 0% | 0% | | 0% | | | | | | |
| Storage Length (ft) | 0 | | | 0 | 0 | 0 | | | | | |
| Storage Lanes | 0 | | | 0 | 1 | 0 | | | | | |
| Taper Length (ft) | 25 | | | | 25 | | | | | | |
| Lane Util. Factor | 0.95 | 0.95 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Ped Bike Factor | | | | | | | | | | | |
| Frt | | | 0.974 | | 0.997 | | | | | | |
| Flt Protected | | 0.999 | | | 0.953 | | | | | | |
| Satd. Flow (prot) | 0 | 3418 | 1754 | 0 | 1711 | 0 | | | | | |
| Flt Permitted | | 0.948 | | | 0.953 | | | | | | |
| Satd. Flow (perm) | 0 | 3243 | 1754 | 0 | 1711 | 0 | | | | | |
| Right Turn on Red | | | | No | | No | | | | | |
| Satd. Flow (RTOR) | | | | | | | | | | | |
| Link Speed (mph) | | 25 | 25 | | 25 | | | | | | |
| Link Distance (ft) | | 851 | 190 | | 197 | | | | | | |
| Travel Time (s) | | 23.2 | 5.2 | | 5.4 | | | | | | |
| Confl. Peds. (#/hr) | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | | | | | |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | | | | | |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | | | | | |
| Bus Blockages (#/hr) | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| Parking (#/hr) | | | | | | | | | | | |
| Mid-Block Traffic (%) | | 0% | 0% | | 0% | | | | | | |
| Adj. Flow (vph) | 5 | 226 | 104 | 25 | 240 | 5 | | | | | |
| Shared Lane Traffic (%) | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 231 | 129 | 0 | 245 | 0 | | | | | |
| Enter Blocked Intersection | No | No | No | No | No | No | | | | | |
| Lane Alignment | Left | Left | Left | Right | Left | Right | | | | | |
| Median Width(ft) | | 0 | 0 | | 11 | | | | | | |
| Link Offset(ft) | | 0 | 0 | | 0 | | | | | | |
| Crosswalk Width(ft) | | 16 | 16 | | 16 | | | | | | |
| Two way Left Turn Lane | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | | | | | |
| Turning Speed (mph) | 15 | | | 9 | 15 | 9 | | | | | |
| Number of Detectors | 1 | 2 | 2 | | 1 | | | | | | |
| Detector Template | Left | Thru | Thru | | Left | | | | | | |
| Leading Detector (ft) | 20 | 100 | 100 | | 20 | | | | | | |
| Trailing Detector (ft) | 0 | 0 | 0 | | 0 | | | | | | |
| Turn Type | Perm | NA | NA | | Prot | | | | | | |
| Protected Phases | | 4 | 2 6 8 | | 9 | | 2 | 3 | 6 | 8 | 10 |
| Permitted Phases | 4 | | | | | | | | | | |
| Detector Phase | 4 | 4 | 2 6 8 | | 9 | | | | | | |
| Switch Phase | | | | | | | | | | | |

| Lane Group | EBL | EBT | WBT | WBR | SBL | SBR | Ø2 | Ø3 | Ø6 | Ø8 | Ø10 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | | | 5.0 | | 8.0 | 8.0 | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 15.0 | 15.0 | | | 9.5 | | 22.5 | 21.0 | 22.5 | 22.5 | 20.0 |
| Total Split (s) | 20.0 | 20.0 | | | 30.0 | | 35.0 | 45.0 | 35.0 | 65.0 | 20.0 |
| Total Split (%) | 13.3% | 13.3% | | | 20.0% | | 23% | 30% | 23% | 43% | 13% |
| Maximum Green (s) | 15.0 | 15.0 | | | 26.0 | | 28.0 | 39.0 | 29.0 | 60.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 2.0 | | | 1.0 | | 4.0 | 3.0 | 3.0 | 2.0 | 0.0 |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | | | | | |
| Total Lost Time (s) | | 5.0 | | | 4.0 | | | | | | |
| Lead/Lag | Lag | Lag | | | Lead | | | Lead | | | Lag |
| Lead-Lag Optimize? | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | | | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | | | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | | | None | | None | C-Min | None | None | None |
| Walk Time (s) | | | | | | | | | | | 7.0 |
| Flash Dont Walk (s) | | | | | | | | | | | 10.0 |
| Pedestrian Calls (#/hr) | | | | | | | | | | | 5 |
| Act Effct Green (s) | | 15.0 | 110.4 | | 24.6 | | | | | | |
| Actuated g/C Ratio | | 0.10 | 0.74 | | 0.16 | | | | | | |
| v/c Ratio | | 0.71 | 0.10 | | 0.88 | | | | | | |
| Control Delay | | 78.4 | 1.0 | | 90.1 | | | | | | |
| Queue Delay | | 0.2 | 1.0 | | 0.0 | | | | | | |
| Total Delay | | 78.6 | 2.0 | | 90.1 | | | | | | |
| LOS | | E | A | | F | | | | | | |
| Approach Delay | | 78.6 | 2.0 | | 90.1 | | | | | | |
| Approach LOS | | E | A | | F | | | | | | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 24 (16%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 130 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.88 | |
| Intersection Signal Delay: 66.9 | Intersection LOS: E |
| Intersection Capacity Utilization 30.9% | ICU Level of Service A |
| Analysis Period (min) 15 | |

Splits and Phases: 12: Lakeside Ave & 128 Lakeside



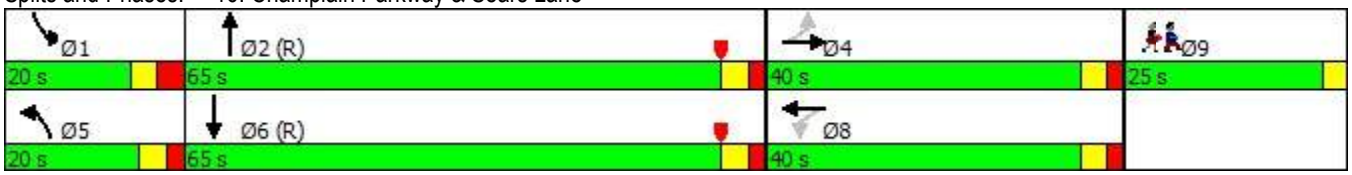
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 10 | 0 | 80 | 30 | 10 | 10 | 10 | 479 | 65 | 15 | 881 | 10 |
| Future Volume (vph) | 10 | 0 | 80 | 30 | 10 | 10 | 10 | 479 | 65 | 15 | 881 | 10 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 0 | | 0 | 220 | | 0 | 125 | | 0 |
| Storage Lanes | 0 | | 0 | 0 | | 0 | 1 | | 0 | 1 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | 0.880 | | | 0.973 | | | 0.982 | | | 0.998 | |
| Flt Protected | | 0.994 | | | 0.971 | | 0.950 | | | 0.950 | | |
| Satd. Flow (prot) | 0 | 1575 | 0 | 0 | 1701 | 0 | 1711 | 1768 | 0 | 1711 | 1797 | 0 |
| Flt Permitted | | 0.969 | | | 0.542 | | 0.950 | | | 0.950 | | |
| Satd. Flow (perm) | 0 | 1535 | 0 | 0 | 950 | 0 | 1711 | 1768 | 0 | 1711 | 1797 | 0 |
| Right Turn on Red | | | Yes | | | Yes | | | Yes | | | Yes |
| Satd. Flow (RTOR) | | 80 | | | 8 | | | 5 | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 1020 | | | 573 | | | 993 | | | 1129 | |
| Travel Time (s) | | 27.8 | | | 15.6 | | | 27.1 | | | 30.8 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 10 | 0 | 80 | 30 | 10 | 10 | 10 | 479 | 65 | 15 | 881 | 10 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 90 | 0 | 0 | 50 | 0 | 10 | 544 | 0 | 15 | 891 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 0 | | | 0 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | | 1 | 2 | | 1 | 2 | | 1 | 2 | |
| Detector Template | Left | Thru | | Left | Thru | | Left | Thru | | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | | 20 | 100 | | 20 | 100 | | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | | 0 | 0 | | 0 | 0 | | 0 | 0 | |
| Turn Type | Perm | NA | | Perm | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | | 4 | | | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | | | | | | |
| Detector Phase | 4 | 4 | | 8 | 8 | | 5 | 2 | | 1 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø9 |
|---|---|
| Lane Configurations | |
| Traffic Volume (vph) | |
| Future Volume (vph) | |
| Ideal Flow (vphpl) | |
| Lane Width (ft) | |
| Grade (%) | |
| Storage Length (ft) | |
| Storage Lanes | |
| Taper Length (ft) | |
| Lane Util. Factor | |
| Ped Bike Factor | |
| Frt | |
| Flt Protected | |
| Satd. Flow (prot) | |
| Flt Permitted | |
| Satd. Flow (perm) | |
| Right Turn on Red | |
| Satd. Flow (RTOR) | |
| Link Speed (mph) | |
| Link Distance (ft) | |
| Travel Time (s) | |
| Confl. Peds. (#/hr) | |
| Confl. Bikes (#/hr) | |
| Peak Hour Factor | |
| Growth Factor | |
| Heavy Vehicles (%) | |
| Bus Blockages (#/hr) | |
| Parking (#/hr) | |
| Mid-Block Traffic (%) | |
| Adj. Flow (vph) | |
| Shared Lane Traffic (%) | |
| Lane Group Flow (vph) | |
| Enter Blocked Intersection | |
| Lane Alignment | |
| Median Width(ft) | |
| Link Offset(ft) | |
| Crosswalk Width(ft) | |
| Two way Left Turn Lane | |
| Headway Factor | |
| Turning Speed (mph) | |
| Number of Detectors | |
| Detector Template | |
| Leading Detector (ft) | |
| Trailing Detector (ft) | |
| Turn Type | |
| Protected Phases | 9 |
| Permitted Phases | |
| Detector Phase | |
| Switch Phase | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | 10.0 | 10.0 | | 10.0 | 10.0 | | 5.0 | 15.0 | | 5.0 | 15.0 | |
| Minimum Split (s) | 15.0 | 15.0 | | 15.0 | 15.0 | | 11.0 | 20.0 | | 11.0 | 20.0 | |
| Total Split (s) | 40.0 | 40.0 | | 40.0 | 40.0 | | 20.0 | 65.0 | | 20.0 | 65.0 | |
| Total Split (%) | 26.7% | 26.7% | | 26.7% | 26.7% | | 13.3% | 43.3% | | 13.3% | 43.3% | |
| Maximum Green (s) | 35.0 | 35.0 | | 35.0 | 35.0 | | 15.0 | 60.0 | | 14.0 | 60.0 | |
| Yellow Time (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| All-Red Time (s) | 2.0 | 2.0 | | 2.0 | 2.0 | | 2.0 | 2.0 | | 3.0 | 2.0 | |
| Lost Time Adjust (s) | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Lost Time (s) | | 5.0 | | | 5.0 | | 5.0 | 5.0 | | 6.0 | 5.0 | |
| Lead/Lag | | | | | | | Lead | Lag | | Lead | Lag | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Minimum Gap (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Time Before Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Time To Reduce (s) | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Recall Mode | None | None | | None | None | | None | C-Min | | None | C-Min | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 11.2 | | | 11.2 | | 6.5 | 118.1 | | 6.9 | 118.8 | |
| Actuated g/C Ratio | | 0.07 | | | 0.07 | | 0.04 | 0.79 | | 0.05 | 0.79 | |
| v/c Ratio | | 0.48 | | | 0.64 | | 0.14 | 0.39 | | 0.19 | 0.63 | |
| Control Delay | | 24.8 | | | 91.8 | | 72.5 | 6.3 | | 60.8 | 22.3 | |
| Queue Delay | | 0.0 | | | 0.0 | | 0.0 | 0.0 | | 0.0 | 0.0 | |
| Total Delay | | 24.8 | | | 91.8 | | 72.5 | 6.3 | | 60.8 | 22.3 | |
| LOS | | C | | | F | | E | A | | E | C | |
| Approach Delay | | 24.8 | | | 91.8 | | | 7.5 | | | 23.0 | |
| Approach LOS | | C | | | F | | | A | | | C | |

| Intersection Summary | |
|---|---|
| Area Type: | Other |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 149.5 (100%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow | |
| Natural Cycle: 100 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.64 | |
| Intersection Signal Delay: 19.9 | Intersection LOS: B |
| Intersection Capacity Utilization 64.8% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 16: Champlain Parkway & Sears Lane



| Lane Group | Ø9 |
|---|---|
| Minimum Initial (s) | 1.0 |
| Minimum Split (s) | 25.0 |
| Total Split (s) | 25.0 |
| Total Split (%) | 17% |
| Maximum Green (s) | 22.0 |
| Yellow Time (s) | 3.0 |
| All-Red Time (s) | 0.0 |
| Lost Time Adjust (s) | |
| Total Lost Time (s) | |
| Lead/Lag | |
| Lead-Lag Optimize? | |
| Vehicle Extension (s) | 3.0 |
| Minimum Gap (s) | 3.0 |
| Time Before Reduce (s) | 0.0 |
| Time To Reduce (s) | 0.0 |
| Recall Mode | None |
| Walk Time (s) | 7.0 |
| Flash Dont Walk (s) | 15.0 |
| Pedestrian Calls (#/hr) | 5 |
| Act Effct Green (s) | |
| Actuated g/C Ratio | |
| v/c Ratio | |
| Control Delay | |
| Queue Delay | |
| Total Delay | |
| LOS | |
| Approach Delay | |
| Approach LOS | |

| Intersection Summary |
|---|

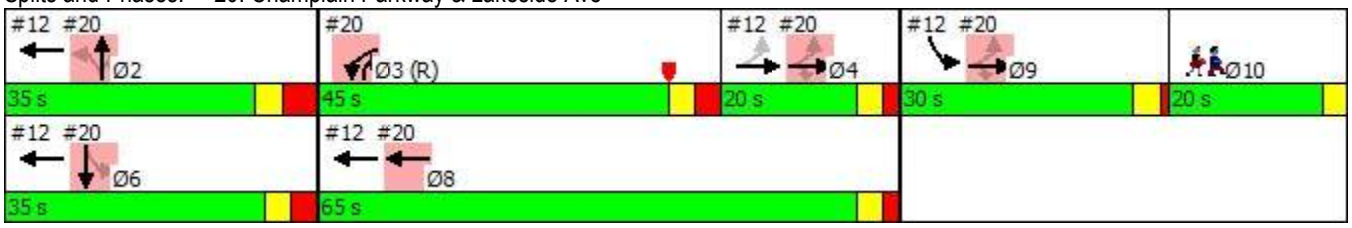
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 0 | 143 | 323 | 583 | 42 | 0 | 87 | 0 | 412 | 5 | 0 | 0 |
| Future Volume (vph) | 0 | 143 | 323 | 583 | 42 | 0 | 87 | 0 | 412 | 5 | 0 | 0 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Lane Width (ft) | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| Grade (%) | | 0% | | | 0% | | | 0% | | | 0% | |
| Storage Length (ft) | 0 | | 0 | 150 | | 200 | 0 | | 200 | 0 | | 0 |
| Storage Lanes | 0 | | 1 | 1 | | 0 | 0 | | 1 | 0 | | 0 |
| Taper Length (ft) | 25 | | | 25 | | | 25 | | | 25 | | |
| Lane Util. Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Ped Bike Factor | | | | | | | | | | | | |
| Frt | | | 0.850 | | | | | | 0.850 | | | |
| Flt Protected | | | | 0.950 | | | | 0.950 | | | 0.950 | |
| Satd. Flow (prot) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1711 | 1531 | 0 | 1711 | 0 |
| Flt Permitted | | | | 0.950 | | | | 0.754 | | | 0.701 | |
| Satd. Flow (perm) | 0 | 1801 | 1531 | 1711 | 1801 | 0 | 0 | 1358 | 1531 | 0 | 1262 | 0 |
| Right Turn on Red | | | No | | | No | | | No | | | No |
| Satd. Flow (RTOR) | | | | | | | | | | | | |
| Link Speed (mph) | | 25 | | | 25 | | | 25 | | | 25 | |
| Link Distance (ft) | | 190 | | | 589 | | | 1129 | | | 97 | |
| Travel Time (s) | | 5.2 | | | 16.1 | | | 30.8 | | | 2.6 | |
| Confl. Peds. (#/hr) | | | | | | | | | | | | |
| Confl. Bikes (#/hr) | | | | | | | | | | | | |
| Peak Hour Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Growth Factor | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% | 100% |
| Heavy Vehicles (%) | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 2% | 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% | |
| Adj. Flow (vph) | 0 | 143 | 323 | 583 | 42 | 0 | 87 | 0 | 412 | 5 | 0 | 0 |
| Shared Lane Traffic (%) | | | | | | | | | | | | |
| Lane Group Flow (vph) | 0 | 143 | 323 | 583 | 42 | 0 | 0 | 87 | 412 | 0 | 5 | 0 |
| Enter Blocked Intersection | No | No | No | No | No | No | No | No | No | No | No | No |
| Lane Alignment | Left | Left | Right | Left | Left | Right | Left | Left | Right | Left | Left | Right |
| Median Width(ft) | | 11 | | | 11 | | | 11 | | | 11 | |
| Link Offset(ft) | | 0 | | | 0 | | | 0 | | | 0 | |
| Crosswalk Width(ft) | | 16 | | | 16 | | | 16 | | | 16 | |
| Two way Left Turn Lane | | | | | | | | | | | | |
| Headway Factor | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 | 1.04 |
| Turning Speed (mph) | 15 | | 9 | 15 | | 9 | 15 | | 9 | 15 | | 9 |
| Number of Detectors | 1 | 2 | 1 | 1 | 2 | | 1 | 2 | 1 | 1 | 2 | |
| Detector Template | Left | Thru | Right | Left | Thru | | Left | Thru | Right | Left | Thru | |
| Leading Detector (ft) | 20 | 100 | 20 | 20 | 100 | | 20 | 100 | 20 | 20 | 100 | |
| Trailing Detector (ft) | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Turn Type | | NA | Perm | Prot | NA | | Perm | NA | pm+ov | Perm | NA | |
| Protected Phases | | 4 9 | | 3 | 8 | | | 2 | 3 | | 6 | |
| Permitted Phases | 4 9 | | 4 9 | | | | 2 | | 2 | 6 | | |
| Detector Phase | 4 9 | 4 9 | 4 9 | 3 | 8 | | 2 | 2 | 3 | 6 | 6 | |
| Switch Phase | | | | | | | | | | | | |

| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Lane Configurations | | | |
| Traffic Volume (vph) | | | |
| Future Volume (vph) | | | |
| Ideal Flow (vphpl) | | | |
| Lane Width (ft) | | | |
| Grade (%) | | | |
| Storage Length (ft) | | | |
| Storage Lanes | | | |
| Taper Length (ft) | | | |
| Lane Util. Factor | | | |
| Ped Bike Factor | | | |
| Frt | | | |
| Flt Protected | | | |
| Satd. Flow (prot) | | | |
| Flt Permitted | | | |
| Satd. Flow (perm) | | | |
| Right Turn on Red | | | |
| Satd. Flow (RTOR) | | | |
| Link Speed (mph) | | | |
| Link Distance (ft) | | | |
| Travel Time (s) | | | |
| Confl. Peds. (#/hr) | | | |
| Confl. Bikes (#/hr) | | | |
| Peak Hour Factor | | | |
| Growth Factor | | | |
| Heavy Vehicles (%) | | | |
| Bus Blockages (#/hr) | | | |
| Parking (#/hr) | | | |
| Mid-Block Traffic (%) | | | |
| Adj. Flow (vph) | | | |
| Shared Lane Traffic (%) | | | |
| Lane Group Flow (vph) | | | |
| Enter Blocked Intersection | | | |
| Lane Alignment | | | |
| Median Width(ft) | | | |
| Link Offset(ft) | | | |
| Crosswalk Width(ft) | | | |
| Two way Left Turn Lane | | | |
| Headway Factor | | | |
| Turning Speed (mph) | | | |
| Number of Detectors | | | |
| Detector Template | | | |
| Leading Detector (ft) | | | |
| Trailing Detector (ft) | | | |
| Turn Type | | | |
| Protected Phases | 4 | 9 | 10 |
| Permitted Phases | | | |
| Detector Phase | | | |
| Switch Phase | | | |

| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Minimum Initial (s) | | | | 8.0 | 5.0 | | 8.0 | 8.0 | 8.0 | 5.0 | 5.0 | |
| Minimum Split (s) | | | | 21.0 | 22.5 | | 22.5 | 22.5 | 21.0 | 22.5 | 22.5 | |
| Total Split (s) | | | | 45.0 | 65.0 | | 35.0 | 35.0 | 45.0 | 35.0 | 35.0 | |
| Total Split (%) | | | | 30.0% | 43.3% | | 23.3% | 23.3% | 30.0% | 23.3% | 23.3% | |
| Maximum Green (s) | | | | 39.0 | 60.0 | | 28.0 | 28.0 | 39.0 | 29.0 | 29.0 | |
| Yellow Time (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| All-Red Time (s) | | | | 3.0 | 2.0 | | 4.0 | 4.0 | 3.0 | 3.0 | 3.0 | |
| Lost Time Adjust (s) | | | | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Lost Time (s) | | | | 6.0 | 5.0 | | | 7.0 | 6.0 | | 6.0 | |
| Lead/Lag | | | | Lead | | | | | Lead | | | |
| Lead-Lag Optimize? | | | | | | | | | | | | |
| Vehicle Extension (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Minimum Gap (s) | | | | 3.0 | 3.0 | | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | |
| Time Before Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Time To Reduce (s) | | | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Recall Mode | | | | C-Min | None | | None | None | C-Min | None | None | |
| Walk Time (s) | | | | | | | | | | | | |
| Flash Dont Walk (s) | | | | | | | | | | | | |
| Pedestrian Calls (#/hr) | | | | | | | | | | | | |
| Act Effct Green (s) | | 43.6 | 43.6 | 69.4 | 90.4 | | | 14.9 | 91.4 | | 15.9 | |
| Actuated g/C Ratio | | 0.29 | 0.29 | 0.46 | 0.60 | | | 0.10 | 0.61 | | 0.11 | |
| v/c Ratio | | 0.27 | 0.73 | 0.74 | 0.04 | | | 0.64 | 0.44 | | 0.04 | |
| Control Delay | | 8.7 | 15.0 | 68.9 | 32.7 | | | 83.3 | 11.4 | | 57.2 | |
| Queue Delay | | 2.6 | 8.4 | 0.0 | 0.0 | | | 0.0 | 0.0 | | 0.0 | |
| Total Delay | | 11.3 | 23.3 | 68.9 | 32.7 | | | 83.3 | 11.4 | | 57.2 | |
| LOS | | B | C | E | C | | | F | B | | E | |
| Approach Delay | | 19.6 | | | 66.5 | | | 24.0 | | | 57.2 | |
| Approach LOS | | B | | | E | | | C | | | E | |

| Intersection Summary | |
|---|---|
| Area Type: Other | |
| Cycle Length: 150 | |
| Actuated Cycle Length: 150 | |
| Offset: 24 (16%), Referenced to phase 3:WBL, Start of Yellow | |
| Natural Cycle: 130 | |
| Control Type: Actuated-Coordinated | |
| Maximum v/c Ratio: 0.88 | |
| Intersection Signal Delay: 39.5 | Intersection LOS: D |
| Intersection Capacity Utilization 69.8% | ICU Level of Service C |
| Analysis Period (min) 15 | |

Splits and Phases: 20: Champlain Parkway & Lakeside Ave



| Lane Group | Ø4 | Ø9 | Ø10 |
|---|---|---|---|
| Minimum Initial (s) | 5.0 | 5.0 | 1.0 |
| Minimum Split (s) | 15.0 | 9.5 | 20.0 |
| Total Split (s) | 20.0 | 30.0 | 20.0 |
| Total Split (%) | 13% | 20% | 13% |
| Maximum Green (s) | 15.0 | 26.0 | 17.0 |
| Yellow Time (s) | 3.0 | 3.0 | 3.0 |
| All-Red Time (s) | 2.0 | 1.0 | 0.0 |
| Lost Time Adjust (s) | | | |
| Total Lost Time (s) | | | |
| Lead/Lag | Lag | Lead | Lag |
| Lead-Lag Optimize? | | | |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 |
| Minimum Gap (s) | 3.0 | 3.0 | 3.0 |
| Time Before Reduce (s) | 0.0 | 0.0 | 0.0 |
| Time To Reduce (s) | 0.0 | 0.0 | 0.0 |
| Recall Mode | None | None | None |
| Walk Time (s) | | | 7.0 |
| Flash Dont Walk (s) | | | 10.0 |
| Pedestrian Calls (#/hr) | | | 5 |
| Act Effct Green (s) | | | |
| Actuated g/C Ratio | | | |
| v/c Ratio | | | |
| Control Delay | | | |
| Queue Delay | | | |
| Total Delay | | | |
| LOS | | | |
| Approach Delay | | | |
| Approach LOS | | | |

| Intersection Summary |
|---|

**Burlington Development Review Board**
149 Church Street, City Hall
Burlington, VT 05401
www.burlingtonvt.gov/pz/DRB
Telephone: (802) 865-7188
Fax (802) 865-7195

*Brad Rabinowitz*
*AJ LaRosa*
*Austin Hart*
*Springer Harris*
*Geoff Hand*
*Alexandra Zipparo*
*Samantha Tilton*
*Jim Drummond, (Alternate)*
*Zoraya Hightower, (Alternate)*

**BURLINGTON DEVELOPMENT REVIEW BOARD**
**Wednesday November 7th, 2018, 5:00 PM**
**Contois Auditorium, City Hall, 149 Church St, Burlington, VT**
**Minutes**

**Board Members Present:** B. Rabinowitz, A. LaRosa, A. Hart, S. Harris, G. Hand, A. Zipparo, S. Tilton,
**Board Members Absent:** J. Drummond (Alt.), Z. Hightower (Alt.)
**Staff Present:** Scott Gustin, Ryan Morrison, Layne Darfler

## I. Agenda

B. Rabinowitz: No changes to the agenda

## II. Communications

B. Rabinowitz: Communications have been submitted for 44 Lakeside Ave and 147 South Cove Road; both have will be reviewed upon discussion.

## III. Minutes

B. Rabinowitz: Minutes from October 16th 2018 will be discussed at deliberation.

## IV. Consent

1. **19-0305CA; 147 South Cove Rd (RL-W, Ward 5S) William and Lara Calfee**
   Installation of temporary modular home. (Project Manager: Scott Gustin)

   B. Rabinowitz: Have the applicant's received staff comments?
   Yes
   B. Rabinowitz: Do you have and questions or concerns?
   None
   B. Rabinowitz: Do any members of the Board object to this item being on the consent agenda?
   None
   B. Rabinowitz: Are there any members of the public hear to speak about this project?
   Yes
   B. Rabinowitz: Open the review to public hearing
   A. Hart: Temporary home, what do you plan to do with it when you're done with it?
   W. Calfee: Plan to sell it
   B. Rabinowitz: Conservation Board reviewed this?
   S. Gustin: Yes, recommended approval
   South Cove Road Association President: does not like the proposal as it does not fit into the neighborhood, main concern is the temporary nature and how the Board plans to see that.
   B. Rabinowitz: permitted for 2 years and he can ask to have it renewed
   W. Calfee: the home will be removed within two years, to clarify the South Cove Association's purview is the Beach and the Beach area not the property which this is

located. Received a lot of positive comments and support for the project from neighbors. The building will be as close to net zero as possible.
B. Rabinowitz: We will accept the supplemental communications into the record and close the public hearing.

2. **19-0299CA; 1 King St (DW-PT, Ward 5S) The Spot LLC**
After the fact paving of gravel parking areas. Also, installation of stormwater improvements. (Project Manager: Scott Gustin)

A. Hart recused
B. Rabinowitz: Have the applicants received the staff comments and recommendations? Do you have any questions?
Staff report received and no questions.
B. Rabinowitz: Does the Board have any objections to this project remaining on the consent agenda?
None
B. Rabinowitz: is there any members of the public here to speak regarding this project?
None
A. LaRosa: Motion to approve and adopt staff findings and recommendations
A. Zipparo: Seconds the motion
6-0-0

3. **19-0303CU; 196 South Willard St (I, Ward 6S) Ellen Wark**
Permit existing 3-unit use. No site or exterior building changes. (Project Manager: Scott Gustin)

B. Rabinowitz: Have the applicant's received staff comments?
Yes
B. Rabinowitz: Do you have and questions or concerns?
None
B. Rabinowitz: Do any members of the Board object to this item being on the consent agenda?
None
B. Rabinowitz: Are there any members of the public hear to speak about this project?
None
A. Hart: Motion to approve and adopt staff findings and recommendations
G. Hand: Seconds the motion
7-0-0

4. **19-0295SD; 45 Grey Meadow Rd (RL, Ward 4N) Joshua and Shanta Karson**
Subdivide existing lot into 2 lots. (Project Manager: Ryan Morrison)

B. Rabinowitz: Have the applicant's received staff comments?
Yes
B. Rabinowitz: Do you have and questions or concerns?
None
B. Rabinowitz: Do any members of the Board object to this item being on the consent agenda?
None
B. Rabinowitz: Are there any members of the public hear to speak about this project?
Yes
B. Rabinowitz: Open the review to public hearing
A. Bergeron: This is a very congested area and to subdivide the property proposes

W. Cross: Would like to see the proposal for the new building
B. Rabinowitz: only here reviewing the subdivision, as of now there is no plans for building
A. Zipparo: the building on the lot will have to comply with the Ordinance so if you want to know what could happen on that lot you can do some research with the Ordinance or talk to Planning and Zoning Staff.
W. Cross: If they propose to build will they come before the Board
R. Morrison: it would be an administrative review and would therefor not come before the Board, but when you see the Red Z Card displayed on the property that is your notice and you can come into the office to look at their proposed plans.
B. Rabinowitz: Board questions?
None
B. Rabinowitz: Close the public hearing

5. **19-0211CU; 449 South Prospect St (RL, Ward 6S) Chris Khamnei**
Establish duplex and expand driveway. (Project Manager: Scott Gustin)

B. Rabinowitz: Have the applicant's received staff comments?
Yes
B. Rabinowitz: Do you have and questions or concerns?
None
B. Rabinowitz: Do any members of the Board object to this item being on the consent agenda?
None
B. Rabinowitz: Are there any members of the public hear to speak about this project?
Yes
B. Rabinowitz: Open the review to public hearing
B. Ward: reviewed issues that Code Enforcement has with the property; the project was approved in 2017 to become a duplex, since then no new construction has taken place and no building permit has been issued. Owner reports it as a duplex and occupied by more than four unrelated adults. It is over occupied and becomes a life safety issue for the tenants residing there. Asking the DRB to shorten the 2 year time frame to speed up this process. Submitted supporting documentation to the Board. Important from rental housing perspective as over occupancy could lead to tragic incidents. It can't be occupied as a duplex unless it has a CO as a duplex. If the time limit were reduced from 2 years, it would be more efficient to move the process along. Want to guarantee something happens quickly. Similar issues with parking since the original parking has been issued. Has asked the owner to put up a barrier as soon as possible.
G. Hand: Was there a previous violation?
B. Ward: There was a warning notice and the property owner came in for a zoning permit
G. Hand: has your office issued any other notice of violation
B. Ward: a parking complaint came in and that is how we learned that the permit was no longer valid so he responded in a timely manner to address the expired permit.
C. Khamnei: want to bring the property into compliance but we initiated obtaining a zoning permit on our own accord because it is a historic duplex which predates zoning. Thought he picked up permit but did not, safety is of utmost importance. A shorter deadline is fine.
A. Hart: so 90 days
C. Khamnei: 90 days is fine
A. Zipparo: 60 days for interior and 6 months for site work?
C. Khamnei: agree

## V. Public Hearing

**6. 19-0202CA/MA; 44 Lakeside Ave (ELM, Ward 5S) Cloverleaf Properties**
Re-open Public Hearing; Renovate buildings for assembly, office, and seasonal recreational use. Rework parking and circulation. (Project Manager: Scott Gustin)

G. Hand Recused
B. Rabinowitz: Following up on traffic issues
A. Hart: There is a proposed condition for working in good faith effort with the City regarding the relocation of the bike path; the City wants to move the bike path closer to the water
J. Calo: We do not plan to change the location of the bike path but have improved access to the site. The condition language should be changed.
S. Gustin: The condition is a recommendation from the Conservation Board; the Board can accept it, reject it, or modify it.
L. Wheelock: Gave overview on supportive memo from Department of Public Works. Would like the Board to consider incorporating two conditions for approval: ensure the traffic study is fully updated, there are very minor differences in the findings submitted by the applicant and the City's report; second is to note the traffic demand management strategies to be more focused around reduction of vehicle traffic. Note that the bike path access at lakeside is a significant grade separation.
S. Molzon: Provided overview on proposed condition of the applicants providing/creating pedestrian crosswalk at Lakeside and Central Ave.
A. Zipparo: the connectivity with pedestrian is good; is the city concerned about pedestrian and bike safety some areas get messy and congested, are you concerned about the increased congestion in that specific area regarding safety risks?
L. Wheelock: Dave (VHB representative) may be able to address that, but with a good design those concerns could be worked out as well as both designs be worked out together would be helpful.
B. Rabinowitz: Close Public Hearing

## VI. Other Business

B. Rabinowitz: would like to bring it to the Boards attention that Samantha Tilton will be stepping away from the Board and that will leave us with a vacancy.

## VII. Adjournment

Meeting adjourned at 6:02 PM

Bradford L. Rabinowitz, Chair of Development Review Board — Date: 12.4.18

Layne Darfler, Planning Technician — Date: 12-4-2018

Plans may be viewed in the Planning and Zoning Office, (City Hall, 149 Church Street, Burlington), between the hours of 8:00 a.m. and 4:30 p.m.
Participation in the DRB proceeding is a prerequisite to the right to take any subsequent appeal. Please note that ANYTHING submitted to the Planning and Zoning office is considered public and cannot be kept confidential. This may not be the final order in which items will be heard. Please view final Agenda, at www.burlingtonvt.gov/pz/drb/agendas