

Appendix A

Scope

Syracuse Metropolitan Transportation Council

SCOPE OF WORK (10/14/2020)

MANLIUS VILLAGE CENTER PEDESTRIAN SAFETY AND MOBILITY STUDY

1. INTRODUCTION

OVERVIEW

As part of the 2020-2021 Unified Planning Work Program (UPWP), the Syracuse Metropolitan Transportation Council (SMTC) has agreed to complete the *Manlius Village Center Pedestrian Safety & Mobility Study* for the Village of Manlius (Village) and Syracuse-Onondaga County Planning Agency (SOCPA).

Like many communities that developed along a major travel corridor, the Village of Manlius faces the problem of how to safely mesh through traffic with local activity, particularly pedestrian activity, in its central business district. In addition, Manlius is somewhat unique in that it has two main streets (portions of Routes 173 and 92) serving as the heart of the village from both from a community and economic standpoint.¹ Commuter traffic “jockeying” for position in a race to the next red light, or lane reduction on Routes 173 and 92, coupled with pedestrian traffic along these village main streets results in a village center that can be congested and that presents safety issues to both pedestrians and motorists.

The specific area of focus for this study is Fayette Street (Route 92) from Kelly Drive, including the split to Fayetteville-Manlius Road (Route 257), to Seneca Street (Route 173); Seneca Street (Route 173) from Troop K Road to North Street; and Washington Street (Route 92) from Seneca Street (Route 173) to Military Drive. The high volumes of traffic, speed of vehicles, limited sidewalk capacity, and other factors along this stretch do not agree with the land uses that are increasingly desired and being established in fulfillment of zoning requirements in the Village of Manlius, which are focused on creating a walkable village environment. The orientation of recent significant development projects seeks to enable and promote walkability, but the impacts of road design and volume of traffic are impeding the impacting the attractiveness of walking in the Village. In addition, the Village is concerned that potential future businesses may locate elsewhere, or that existing businesses may move out of the Village, due to existing traffic issues, namely accessibility.

¹ Onondaga County Village Main Street Revitalization and Beautification Grant Program application, Village of Manlius, NY, January 31, 2020, p. 1.

This planning level study seeks to improve the pedestrian experience in the village by reviewing existing traffic conditions to determine potential future traffic improvements, exploring traffic calming and pedestrian- and bicycle- environmental improvements, and examining the possibility for reducing curb cuts along the two main streets. Proposed options with the goal of improving pedestrian safety and mobility within the village will be developed. Where appropriate, this study will also examine operational issues, such as intersection design and signal operations.

2 . T A S K S

Task 1: Project Initiation

STUDY ADVISORY COMMITTEE

To begin this study, the SMTC will establish a SAC to provide technical and procedural guidance for the project. The SAC will not vote on approval or disapproval of project-related products and documents. The SMTC will invite the following agencies to serve on the SAC:

- Village of Manlius;
- Town of Manlius;
- Syracuse-Onondaga County Planning Agency (SOCPA);
- Central New York Regional Planning and Development Board (CNYRPDB);
- New York State Department of Transportation (NYSDOT);
- Other agencies as deemed appropriate by the project sponsor and the SMTC.

The SMTC will confirm the project purpose, goals, objectives, study area, general project schedule, and will review the draft Public Involvement Plan (PIP) at the SAC kickoff meeting (**SAC Meeting #1**). A map of the proposed study area will be provided to the SAC, and possible refinements will be discussed. The study area consists of:

- Fayette Street (Route 92): Kelly Drive (including the split to Fayetteville-Manlius Road/Route 257) to Seneca Street (Route 73);
- Seneca Street (Route 173): Troop K Road to North Street; and
- Washington Street (Route 92): Seneca Street (Route 173) to Military Drive.

Additional ideas will be solicited and considered for incorporation into the study, particularly SAC suggestions for data collection items included in Task 2 and stakeholder groups to include in the project. If additional effort is identified, the SMTC may revisit and revise this scope as necessary before continuing.

The SMTC will work regularly with the SAC and will prepare minutes for each meeting. It is anticipated that the SMTC will hold up to five SAC meetings during this study. Due to the COVID-

19 pandemic, SAC meetings may take place by way of a virtual meeting format (such as Zoom’s online video conferencing).

PUBLIC INVOLVEMENT

The SMTC will create a project-specific PIP that will document how public input will be gathered and incorporated into the study.

The SMTC anticipates holding at least one public meeting and one meeting with business owners for this study to solicit interest, engagement and feedback on suggestions for improving pedestrian mobility in the village. The timeframe for these meetings is noted within this Scope of Work (within **Task 3** for the **Business Owner Meeting**, and **Task 4** for the **Public Meeting**), but will be discussed with the SAC, and can be changed as the study moves forward.

Traditionally, the SMTC would hold these meetings in a public forum. As of the development of this plan, the COVID-19 pandemic makes in-person meetings undesirable; the SMTC anticipates utilizing online resources to develop virtual meeting formats, in cooperation with the SAC. The possibility of an in-person public meeting and business owner meeting will be re-evaluated in 2021.

TASK 1 WORK PRODUCTS

The SMTC will document Task 1 efforts in the form of SAC meeting minutes, the final PIP, and the draft study report.

Task 2: Data Collection

SMTC staff will gather and document a variety of data for the study area.

REVIEW OF EXISTING PLANS AND STUDIES

SMTC staff will review relevant plans for pertinent information or recommendations for the study area. If deemed appropriate, recommendations may be incorporated by reference. These plans will include, at a minimum:

- Onondaga County Village Main Street Revitalization and Beautification Grant Program application, Village of Manlius, January 31, 2020 (the Village was recently awarded this grant);
- Consultant-based studies (GTS Consulting): Traffic Impact Assessment – Proposed Manlius Square Development (June 2012) and Corridor Alternatives Assessment – Routes 92, 257 & 173 (August 2012);
- NYSDOT studies/analyses:
 - Phasing changes to the Elmbrook Drive/Fayette Street (Route 92) intersection
 - Synchro files and cursory examination(s) of potential lane reductions
 - Any additional studies, plans, reviews completed in the study area;

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- SMTC’s Sustainable Streets – Pedestrian Travel Demand Model and Sidewalks, Phase I Summary Report;
- New York State Department of Transportation’s ADA Transition Plan; and
- New York State Pedestrian Safety Action Plan.

DEMOGRAPHICS AND LAND USE

SMTC will document existing demographic information for the study area. SMTC will also document current zoning, land use and the location of any anticipated developments (based on information provided by the Village and/or SOCPA) that may influence future travel patterns.

EXISTING CONDITIONS INVENTORY

SMTC will document existing conditions in the study area based on available data sets, field measurements, and observations, including:

- Review of existing turning movement and/or pedestrian/bicycle counts
 - Determine if/where newer or additional counts are needed;
- Available annual average daily traffic (AADT) data;
- Travel time and speed data available from the National Performance Management Research Data Set (NPMRDS)
- Typical lane and shoulder widths along the study corridors, including turning bays (start with NYSDOT’s Synchro analysis);
- Roadway ownership and functional classification;
- Curb cut locations and potential for reducing some of these (Village has indicated they have a list to share with SMTC);
- Location of existing pedestrian and bicycle facilities, including sidewalks, crosswalks, curb ramps, pedestrian signals and push buttons, pedestrian lighting, bicycle racks, and bicycle facilities;
- Details related to known generators of pedestrian activity;
- Parking regulations and posted speed limits;
- Qualitative observations of traffic operations, compliance with posted signage, parking activity, bicycle, pedestrian and transit activity along the corridors, with an emphasis on identifying any notable conflicts between users.
- Locations of planned and future development from the Village and SOCPA.

The SMTC will request from the Village and NYSDOT available as-built plans or other files containing right-of-way information in the study area, ideally in electronic format, and will document the typical right-of-way width along each corridor. If right-of-way information cannot be obtained from the road owner, SMTC will approximate the available right-of-way using available parcel data in GIS. This will be a planning-level assessment only; the Village of Manlius would need to obtain survey information and develop engineering documents to implement

recommendations in the future. The SMTC does not conduct site surveys nor will site surveys be conducted as part of this planning study.

CRASH ANALYSIS

The SMTC will obtain crash data for the study corridors from the NYSDOT's Accident Location Identification System (ALIS) database for the most recent five-year period available. The SMTC staff will review data on crashes. If clusters of crashes are apparent, SMTC staff may conduct a more detailed examination at those locations (for example, reviewing and documenting the contributing factors for each crash).

TASK 2 WORK PRODUCTS

The SMTC will document Task 2 efforts as maps, charts, and descriptions as appropriate in the draft report.

Task 3: Identification of Issues

Once the existing conditions have been documented, SMTC staff will review this information and identify any apparent issues to consider, including:

- Traffic volumes and speeds
 - High level of pedestrian usage but difficult to cross the street;
 - Closely-spaced traffic signals.
- Apparent safety issues based on crash analysis and field observations;
- Potential for conflicts between pedestrians/bicyclists and vehicular traffic
 - Lack of buffer between sidewalk and street;
 - Difficult and confusing merge points
- ADA compliance issues;
- Need for access management strategies;
- Need for traffic calming measures;
- Need for improved mobility between neighborhoods, businesses and parks;
- Need for additional pedestrian accommodations; and
- Need for bicycle accommodations.

TASK 3 WORK PRODUCTS

The SMTC staff will meet with business owners (**Business Owner Meeting**) to solicit feedback on issues/concerns businesses in the study area are faced with. The SMTC staff will then compile an issues assessment for the study area and review this at **SAC Meeting #2**. The identification of issues will be documented in the draft report. SAC feedback will be documented in the SAC meeting minutes.

Task 4: Proposed Improvements

Following the identification of issues, SMTC staff will formulate preliminary recommendations and strategies for the study area, including concepts that will:

- Bring pedestrian facilities into ADA compliance;
- Identify possible complete street and safety improvements within the existing Right of Way, including improved and/or expanded facilities for pedestrians, bicyclists, and transit riders;
- Identify possible traffic calming measures (potential for lane reduction(s) and/or cursory roundabout review);
- Examine current and projected projects to determine if infill opportunities exist;
- Possibly model future year build-out scenario(s);
- Offer strategies for site planning for use in local development review processes; and
- Contribute to improved mobility for both motorized and non-motorized traffic in the Village.

Where feasible, the SMTC will create planning-level illustrations of recommended typical cross sections for the study corridors. In some instances, this may include a low-cost/near-term option within the existing pavement width, as well as a high-cost/future option requiring road reconstruction (within the existing right-of-way to the extent possible). American Association of State Highway and Transportation Officials (AASHTO) and National Association of City Transportation Officials (NACTO) guidance will be referenced in the development of these illustrations. Planning-level cost estimates, based on input from member agencies, will be provided. SMTC may produce plan-view illustrations and perspective-view photo simulations for a limited number of points of concern that were identified in the previous task. The SMTC does not anticipate producing illustrations of the entire study area.

The SMTC is not able to create engineering-level designs (preliminary or final), site surveys, striping plans, or detailed cost estimates. The preliminary recommendations will be reviewed with the SAC (**SAC Meeting #3**) in preparation for a public meeting. Following the SAC meeting, a **Public Meeting** will be held to review the draft recommendations with the public and gather public feedback.

TASK 4 WORK PRODUCTS

Planning-level illustrations of typical cross-sections for the study area incorporating proposed infrastructure treatments, with additional illustrations for specific locations (to be determined), as noted previously. The development of preliminary recommendations will be documented in the draft report. SAC feedback will be documented in the SAC meeting minutes. Public feedback will be documented in the public outreach summary for incorporation into the draft report.

Task 5: Recommended Strategies

Using the feedback received from the public and the SAC, SMTC staff will update the preliminary recommendations and develop a final set of planning-level recommendations for the study area. Included with the recommendations will be a discussion of order-of-magnitude costs by recommendation and potential funding opportunities. Efforts will be documented in a draft report. A SAC meeting (**SAC Meeting #4**) will be held to review the draft report with the SAC. If necessary, SMTC staff will make final updates to the report based on the discussion at this SAC meeting before finalizing this report for SMTC committee acknowledgment.

TASK 5 WORK PRODUCTS

A final report will document the data, issues, and recommendations developed through this project. SAC feedback will be documented in the SAC meeting minutes.

3. DELIVERABLES

- Public Involvement Plan;
- SAC Meeting minutes;
- Business Owner Meeting summary;
- Public Meeting summary;
- Draft Report with maps and graphics; and
- Final Report with maps and graphics.

4. SCHEDULE

Under normal conditions, this project would be anticipated to take 18 months to complete, following acknowledgement of this scope of work. However, it should be noted that pedestrian and vehicle counts and observations under “normal” conditions may be a component of this analysis. As of this writing, New York State is experiencing a significant closure of non-essential businesses, which, in conjunction with social distancing and voluntary stay-at-home orders, have dramatically reduced both vehicle movement and pedestrian activity. It seems likely that activity levels in the Village could be lower than typical in summer 2020. If it is determined that new traffic and pedestrian counts are necessary to complete this study, the inability to undertake key data collection activities may delay delivery of a final study beyond the proposed 18-month timeline.

Appendix B

Public Involvement Plan

Manlius Village Center
Pedestrian Safety & Mobility Study

Public Involvement Plan

December 2020

Financial assistance for the preparation of this document was provided, in part, by the U.S. Department of Transportation's Federal Highway and Federal Transit Administrations and the New York State Department of Transportation. The Syracuse Metropolitan Transportation Council (SMTC) is solely responsible for its content.

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I. Introduction

Metropolitan planning organizations (MPOs) like the Syracuse Metropolitan Transportation Council (SMTC) were established by federal law with the express purpose of ensuring that transportation planning is continuing, cooperative and comprehensive. In practical terms this means that planning studies that will support future infrastructure decision-making must seek input from the people and organizations that would be affected by those decisions.

The SMTC is committed to ensuring that affected public agencies, businesses, local governments, and other interested parties have a reasonable opportunity to comment on transportation plans and programs.

Prior to the COVID-19 epidemic of 2020, the SMTC's approach to involving stakeholders and the general public in its planning studies was based primarily on in-person meetings, supplemented by electronic communications and online resources. Over the course of this study, it is possible that in-person meetings will resume (possibly with modifications, such as physical distancing and personal protective equipment such as face masks). However, this Public Involvement Plan (PIP) will proceed from the assumption that in-person meetings will either be impossible or undesirable, and that virtual meetings and electronic communications, including e-mail, online meetings, and telephone calls, will need to take the place of face-to-face/in-person discussions.

Using virtual meeting and online tools, the SMTC will engage in a public outreach process throughout this project that will gather as much input and feedback as possible. This Public Involvement Plan (PIP) is intended to supplement the Scope of Work for this project.

In the event that physical distancing restrictions/recommendations turn out to be only temporary, this Public Involvement Plan will be revisited.

II. Goals

The intent of the Public Involvement Plan (PIP) for the **Manlius Village Center Pedestrian Safety & Mobility Study** is to:

- (1) Describe the approach that will be used to ensure public awareness of the study's goals, objectives, process, and outcomes.
- (2) Describe the electronic and virtual tools that will be used to ensure effective public participation.

III. Study Advisory Committee

A Study Advisory Committee (SAC) will be established to provide technical and procedural guidance throughout the study. At a minimum the following agencies will be invited to serve on the SAC:

- Village of Manlius;
- Town of Manlius;
- Syracuse-Onondaga County Planning Agency (SOCPA);
- New York State Department of Transportation (NYSDOT).

The SAC will meet regularly with the SMTC to assist in managing the project. SAC meetings may take place by way of a virtual meeting platform (such as Zoom’s online video conferencing). The SAC’s role will be to advise the SMTC on the technical content of deliverables and to provide needed input and guidance throughout the project.

SMTC anticipates holding a minimum of four SAC meetings over the course of this study, as shown below (should an additional SAC meeting be needed, the SMTC can accommodate this).

SAC meeting no.	Anticipated purpose
1	Kickoff: confirm study purpose, goals, objectives, schedule, PIP
2	Review collected data and identify mobility issues
3	Discuss proposed improvements & prepare for public meeting
4	Review public meeting results & project recommendations

Setting up virtual SAC meetings, announcing meetings through mail/e-mail, conducting SAC meetings (including preparation of agenda, materials, presentations, etc.), and preparing the minutes from each meeting will be the responsibility of the SMTC.

IV. Public meeting

The SMTC anticipates holding a virtual public meeting for this study. The exact format for this meeting will be determined in cooperation with the SAC as the study progresses. This may include elements such as:

- A pre-recorded presentation of the study’s findings,
- Project visualizations, such as planning-level sketches of possible improvements,
- Online mapping tools, and
- Online surveys or other tools for ensuring that members of the public can provide comments and input on the study.

The virtual public meeting will be held after SMTC staff and the SAC have created a list of recommendations for the study area. This meeting will provide the public with an opportunity to identify additional issues, opportunities, and recommendations for the study area.

The SMTC will be responsible for issuing press releases, creating meeting materials, mailing meeting fliers, running the meeting, and preparing a meeting summary. The

SMTC will work with the SAC to develop a strategy for notifying the public of this meeting. This is likely to include press releases, distribution of meeting fliers at key locations within the study area, and coordination with existing community groups. The SMTC will also ask SAC members and stakeholders to assist with outreach prior to the public meeting.

The SMTC will make every effort to ensure that the virtual public meeting is accessible to individuals with disabilities in compliance with the Americans with Disabilities Act.

V. Additional public outreach

Stakeholders list

Stakeholders are those individuals that have a significant personal or professional interest in the study. Early in the study, SMTC will work with the SAC to compile an initial list of stakeholders based on staff and SAC members' knowledge of the community. Additional stakeholders will be added continuously throughout the study at the request of the SAC or any community member. The SMTC will provide stakeholders with pertinent study information, keep them apprised of significant study developments, ensure that they are notified of the public meeting, and encourage them to provide feedback and comment regarding the **Manlius Village Center Pedestrian Safety & Mobility Study**.

Social media will also be used as a way to canvass large numbers of community members, both directly and indirectly. Past comments made in public forums can indicate community members' long-standing issues with this corridor. Additionally, working with the Village, the SMTC may utilize social media to get stakeholder feedback on specific questions or issues.

Coordination with business and community groups

SMTC staff will reach out to existing business and community groups in the study area and seek their assistance in notifying their members about the study in general and specifically about the virtual public meeting. The SMTC plans to reach out specifically to the businesses in the community to obtain their feedback on vehicular and pedestrian traffic in the study area. If requested, SMTC staff will attend meetings to provide a brief overview of the project.

Distribution of study materials

If deemed necessary (at the discretion of the SAC and/or other appropriate SMTC committees), the SMTC may distribute study-specific information at sites throughout the study area (including study area businesses). This information may include one or more of the following: introductory flier, meeting notice, comment card, and a pre-addressed (or electronic) survey on a particular study issue. It is also the SMTC's intent to work with and encourage other agencies to include this information in their publications or to assist in material distribution.

Approved documents, such as the study's Final Report, may be made available at the Village of Manlius Library. News releases will be produced to announce the availability of such items and to invite written comments to be submitted to the SMTC.

Public comment

All interested individuals (especially those who are not able to attend the virtual public meeting or otherwise contact SMTC staff) are encouraged to submit comments to the SMTC at any time. This message will be publicized and made clear throughout the study, verbally and on all study material and publications. The public is also welcome to attend any of the SMTC's Executive, Planning, and Policy Committee meetings. Findings from the **Manlius Village Center Pedestrian Safety & Mobility Study** will be presented to both the Planning and Policy Committees.

VI. Press releases and media coverage

The SMTC will issue press releases announcing the details of the virtual public meeting for this project to all major and minor newspapers, television stations, and radio in advance. If necessary, the SMTC will also send additional news releases, or take the initiative to promote media coverage on pertinent developments pertaining to the **Manlius Village Center Pedestrian Safety & Mobility Study**.

All media inquiries should be directed to the SMTC staff director or project manager. However, this is not always possible. If you (e.g. SMTC committee members, SAC members, and/or interested stakeholders associated with the study) are interviewed by the media, please limit your comments to your respective agency's opinion or involvement in the study. Speaking to the media on specific issues and questions regarding the **Manlius Village Center Pedestrian Safety & Mobility Study**, including its progress and development, is the exclusive responsibility of the SMTC.

VII. SMTC publications

The SMTC publishes a newsletter, DIRECTIONS, that offers news about its activities and studies. This newsletter is distributed to over 5,000 individuals, as well as to the media, agency representatives, municipal officials, elected leaders, and community agencies.

It is anticipated that articles on the **Manlius Village Center Pedestrian Safety & Mobility Study** (e.g. study development issues or the announcement or coverage of a public meeting) will be published in future issues of DIRECTIONS. Should the need arise for the production of a separate newsletter/flier/report to convey a timely study development, the SMTC staff is prepared to perform this additional task. It is also important to note that the mailing list of the SMTC newsletter, DIRECTIONS, will be updated to include all members of the SAC, stakeholders, and others interested or involved in the **Manlius Village Center Pedestrian Safety & Mobility Study**. The SMTC web site (www.smtcmpo.org) will also serve as a resource for general information about the

SMTC, the **Manlius Village Center Pedestrian Safety & Mobility Study**, and any final approved reports.

VIII. Conclusion

It is important for the SMTC to understand public attitudes and values throughout the development of the **Manlius Village Center Pedestrian Safety & Mobility Study**. This study aims to identify opportunities to improve pedestrian safety and traffic flow in the Manlius Village Center. The participation of the people who live and work in this area is crucial to the study's success.

Appendix C




















Synchro Reports

Lanes, Volumes, Timings

AM - Existing Conditions

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

												
Lane Group	SBL	SBR	SET	SER	NWL	NWT	NWR	NWR2	NEL	NET	NER	SWT
Lane Configurations												
Traffic Volume (vph)	178	6	510	29	24	1014	260	1	6	0	4	0
Future Volume (vph)	178	6	510	29	24	1014	260	1	6	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		343	78		0		0		88	
Storage Lanes	1	0		1	1		0		0		1	
Taper Length (ft)	25				150				25			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor			1.00		1.00	1.00					0.99	
Frt	0.996		0.992			0.969					0.850	0.865
Flt Protected	0.954				0.950					0.950		
Satd. Flow (prot)	1721	0	3473	0	1770	3316	0	0	0	1770	1583	1611
Flt Permitted	0.954				0.428							
Satd. Flow (perm)	1721	0	3473	0	794	3316	0	0	0	1863	1561	1611
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)												
Link Speed (mph)	30		30			30				30		30
Link Distance (ft)	689		891			731				604		179
Travel Time (s)	15.7		20.3			16.6				13.7		4.1
Confl. Peds. (#/hr)				5	5			2			2	
Peak Hour Factor	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.87	0.71	0.71	0.71	0.25
Heavy Vehicles (%)	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%	2%
Adj. Flow (vph)	220	7	543	31	28	1166	299	1	8	0	6	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	0	574	0	28	1466	0	0	0	8	6	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left	Right	Right	Left	Left	Right	Left
Median Width(ft)	12		12			12				0		0
Link Offset(ft)	0		0			0				0		0
Crosswalk Width(ft)	16		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		9	15		9	9	15		9	
Number of Detectors	2		0		2	0			1	2	2	0
Detector Template									Left			
Leading Detector (ft)	60		0		52	0			20	60	60	0
Trailing Detector (ft)	-10		0		-10	0			0	-10	-10	0
Detector 1 Position(ft)	-10		0		-10	0			0	-10	-10	-10
Detector 1 Size(ft)	30		20		30	20			20	30	30	30
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30				22					30	30	
Detector 2 Size(ft)	30				30					30	30	
Detector 2 Type	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0				0.0					0.0	0.0	



Lane Group	SWR
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	0.25
Heavy Vehicles (%)	2%
Adj. Flow (vph)	4
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

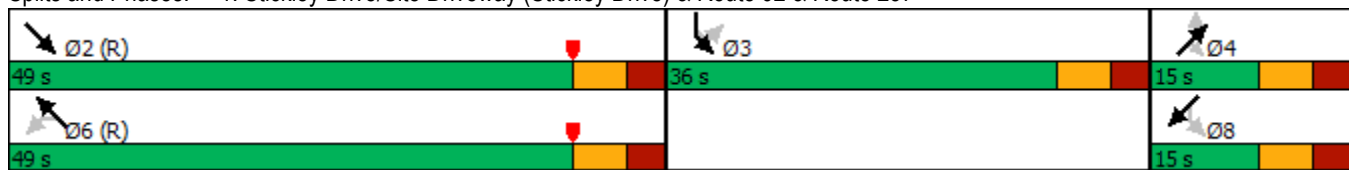


Lane Group	SBL	SBR	SET	SER	NWL	NWT	NWR	NWR2	NEL	NET	NER	SWT
Turn Type	Prot		NA		Perm	NA			Perm	NA	Perm	NA
Protected Phases	3		2			6				4		8
Permitted Phases					6				4		4	
Detector Phase	3		2		6	6			4	4	4	8
Switch Phase												
Minimum Initial (s)	4.0		8.0		6.0	6.0			4.0	4.0	4.0	4.0
Minimum Split (s)	11.0		33.0		13.0	13.0			33.0	33.0	33.0	11.0
Total Split (s)	36.0		49.0		49.0	49.0			15.0	15.0	15.0	15.0
Total Split (%)	36.0%		49.0%		49.0%	49.0%			15.0%	15.0%	15.0%	15.0%
Maximum Green (s)	29.0		42.0		42.0	42.0			8.0	8.0	8.0	8.0
Yellow Time (s)	4.0		4.0		4.0	4.0			4.0	4.0	4.0	4.0
All-Red Time (s)	3.0		3.0		3.0	3.0			3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0		7.0		7.0	7.0			7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0		2.0		2.0	2.0			1.0	1.0	1.0	2.0
Recall Mode	None		C-Max		C-Max	C-Max			None	None	None	None
Walk Time (s)			7.0						7.0	7.0	7.0	
Flash Dont Walk (s)			19.0						19.0	19.0	19.0	
Pedestrian Calls (#/hr)			0						0	0	0	
Act Effct Green (s)	16.9		64.1		64.1	64.1			4.6	4.6	4.6	4.9
Actuated g/C Ratio	0.17		0.64		0.64	0.64			0.05	0.05	0.05	0.05
v/c Ratio	0.78		0.26		0.06	0.69			0.09	0.08	0.08	0.05
Control Delay	57.4		9.9		11.5	14.8			47.5	47.5	47.5	46.0
Queue Delay	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Total Delay	57.4		9.9		11.5	14.8			47.5	47.5	47.5	46.0
LOS	E		A		B	B			D	D	D	D
Approach Delay	57.4		9.9			14.8			47.5			46.0
Approach LOS	E		A			B			D			D

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 98 (98%), Referenced to phase 2:SET and 6:NWTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 18.0
 Intersection LOS: B
 Intersection Capacity Utilization 70.2%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

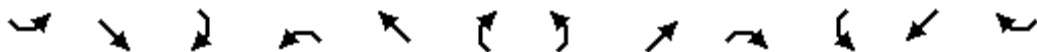




Lane Group	SWR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
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
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

AM - Existing Conditions
10/21/2022



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↕	↕		↔↔	
Traffic Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Future Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.99		0.99	
Frt		0.999							0.850		0.899	
Flt Protected		0.998						0.962			0.989	
Satd. Flow (prot)	0	3496	0	0	3439	0	0	1792	1583	0	1640	0
Flt Permitted		0.835			0.947			0.486			0.916	
Satd. Flow (perm)	0	2925	0	0	3257	0	0	905	1560	0	1518	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		1										120
Link Speed (mph)		30			30			30				30
Link Distance (ft)		731			886			331				443
Travel Time (s)		16.6			20.1			7.5				10.1
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	33	759	3	13	1380	3	20	5	15	36	5	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	795	0	0	1396	0	0	25	15	0	161	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
Number of Detectors	1	0		1	0		1	2	2	1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20	70	
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Size(ft)	20	6		20	6		20	32	30	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								33	35		40	
Detector 2 Size(ft)								32	30		30	
Detector 2 Type								Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0		0.0	

Lanes, Volumes, Timings
 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

AM - Existing Conditions
 10/21/2022

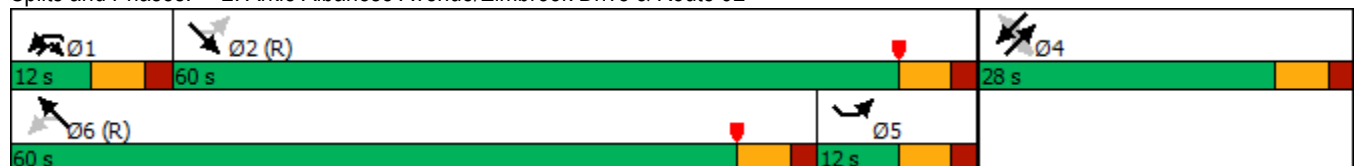


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			4	1		4	
Permitted Phases	2			6			4		4	4		
Detector Phase	5	2		1	6		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	4.0	20.0		6.0	20.0		4.0	4.0	6.0	4.0	4.0	
Minimum Split (s)	10.0	27.0		12.0	33.0		28.0	28.0	12.0	28.0	28.0	
Total Split (s)	12.0	60.0		12.0	60.0		28.0	28.0	12.0	28.0	28.0	
Total Split (%)	12.0%	60.0%		12.0%	60.0%		28.0%	28.0%	12.0%	28.0%	28.0%	
Maximum Green (s)	6.0	54.0		6.0	54.0		22.0	22.0	6.0	22.0	22.0	
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)	2.0	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		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	3.0	2.0		2.0	2.0		1.0	1.0	2.0	1.0	1.0	
Recall Mode	None	C-Max		Max	C-Max		None	None	Max	None	None	
Walk Time (s)		7.0		7.0			7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		14.0		20.0			15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0		0			0	0		0	0	
Act Effct Green (s)		68.6		80.6			7.4	13.4		7.4		
Actuated g/C Ratio		0.69		0.81			0.07	0.13		0.07		
v/c Ratio		0.40		0.53			0.37	0.07		0.72		
Control Delay		7.8		2.7			57.9	31.5		32.4		
Queue Delay		0.0		0.0			0.0	0.0		0.0		
Total Delay		7.8		2.7			57.9	31.5		32.4		
LOS		A		A			E	C		C		
Approach Delay		7.8		2.7			48.0			32.4		
Approach LOS		A		A			D			C		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 7.1
 Intersection LOS: A
 Intersection Capacity Utilization 65.6%
 ICU Level of Service C
 Analysis Period (min) 15

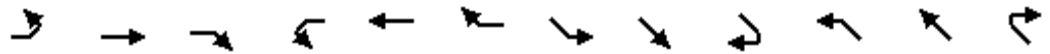
Splits and Phases: 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92



Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

AM - Existing Conditions

10/21/2022

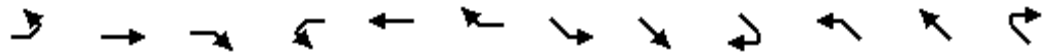


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Future Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	0		0	0		0
Storage Lanes	0		0	0		1	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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.98		1.00				1.00
Frt		0.961				0.850		0.993				0.998
Flt Protected		0.977			0.963			0.998				0.999
Satd. Flow (prot)	0	1740	0	0	1794	1583	0	3472	0	0	3430	0
Flt Permitted		0.818			0.704			0.831				0.932
Satd. Flow (perm)	0	1454	0	0	1308	1557	0	2891	0	0	3200	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				53		11				2
Link Speed (mph)		30			30			30				30
Link Distance (ft)		263			346			886				590
Travel Time (s)		6.0			7.9			20.1				13.4
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	51	25	31	47	14	104	37	712	35	23	1308	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	61	104	0	784	0	0	1351	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	1.00	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	2	1	2		1		0
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20		0
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0		0
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0		0
Detector 1 Size(ft)	20	30		20	32	30	20	30		20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

AM - Existing Conditions

10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			4	5	5	2			6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		28.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	11.0	11.0	75.0		64.0	64.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	11.0%	11.0%	75.0%		64.0%	64.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	5.0	5.0	69.0		58.0	58.0	
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)	2.0	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						Lead	Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		9.7			9.7	14.7		78.3			67.3	
Actuated g/C Ratio		0.10			0.10	0.15		0.78			0.67	
v/c Ratio		0.68			0.48	0.38		0.34			0.63	
Control Delay		56.5			54.0	20.8		2.9			8.7	
Queue Delay		0.0			0.0	0.0		0.0			0.4	
Total Delay		56.5			54.0	20.8		2.9			9.1	
LOS		E			D	C		A			A	
Approach Delay		56.5			33.1			2.9			9.1	
Approach LOS		E			C			A			A	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	99 (99%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
Natural Cycle:	75
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.68
Intersection Signal Delay:	10.8
Intersection LOS:	B
Intersection Capacity Utilization:	65.8%
ICU Level of Service:	C
Analysis Period (min):	15

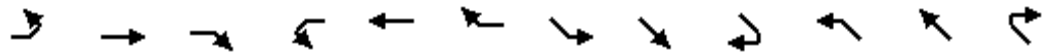
Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

AM - Existing Conditions

10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	101	261	2	0	285	1021	519	25	148	0	0	0
Future Volume (vph)	101	261	2	0	285	1021	519	25	148	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	60			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00				0.98	1.00	0.99				
Frt		0.999				0.850		0.934				
Flt Protected	0.950						0.950	0.976				
Satd. Flow (prot)	1770	3535	0	0	1863	1583	1665	1581	0	0	0	0
Flt Permitted	0.260						0.950	0.000				
Satd. Flow (perm)	483	3535	0	0	1863	1552	1664	0	0	0	0	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		1										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			788			590			231	
Travel Time (s)		10.2			17.9			13.4			5.3	
Confl. Peds. (#/hr)	6		2	2		6	1		3	3		1
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.95	0.95	0.95	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%	2%
Adj. Flow (vph)	123	318	2	0	306	1098	546	26	156	0	0	0
Shared Lane Traffic (%)							32%					
Lane Group Flow (vph)	123	320	0	0	306	1098	371	357	0	0	0	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			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	2	2			2	2	2	2				
Detector Template												
Leading Detector (ft)	60	62			65	65	60	60				
Trailing Detector (ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Position(ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Size(ft)	34	32			32	30	32	30				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)	26	30			33	35	28	30				
Detector 2 Size(ft)	34	32			32	30	32	30				
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				

Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

AM - Existing Conditions
10/21/2022

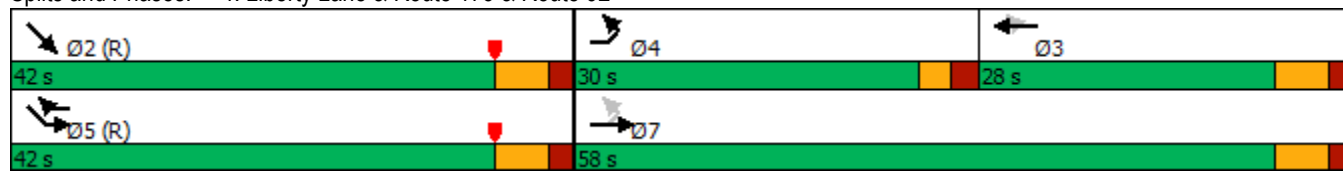


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	pm+pt	NA			NA	pm+ov	Prot	NA				
Protected Phases	4	7			3	5	5	2				
Permitted Phases	7					3		2				
Detector Phase	4	7			3	3	5	2				
Switch Phase												
Minimum Initial (s)	6.0	7.0			9.0	10.0	10.0	10.0				
Minimum Split (s)	29.5	21.0			28.0	16.0	16.0	31.0				
Total Split (s)	30.0	58.0			28.0	42.0	42.0	42.0				
Total Split (%)	30.0%	58.0%			28.0%	42.0%	42.0%	42.0%				
Maximum Green (s)	25.5	52.0			22.0	36.0	36.0	36.0				
Yellow Time (s)	2.5	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				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	6.0			6.0	6.0	6.0	6.0				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	2.0	2.0	2.0				
Recall Mode	None	None			None	C-Max	C-Max	C-Max				
Walk Time (s)	7.0	7.0			7.0			7.0				
Flash Dont Walk (s)	18.0	8.0			15.0			18.0				
Pedestrian Calls (#/hr)	0	0			0			0				
Act Effct Green (s)	38.4	36.9			22.0	73.1	51.1	51.1				
Actuated g/C Ratio	0.38	0.37			0.22	0.73	0.51	0.51				
v/c Ratio	0.39	0.25			0.75	0.95	0.44	0.44				
Control Delay	23.6	22.0			45.1	25.6	18.5	18.7				
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0				
Total Delay	23.6	22.0			45.1	25.6	18.5	18.7				
LOS	C	C			D	C	B	B				
Approach Delay		22.4			29.8			18.6				
Approach LOS		C			C			B				

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SET and 5:SEL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 25.4
 Intersection LOS: C
 Intersection Capacity Utilization 78.2%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 4: Liberty Lane & Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - Existing Conditions
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations												
Traffic Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Future Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor					1.00				1.00			
Frt			0.850		0.998				0.999			
Flt Protected									0.953			
Satd. Flow (prot)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Flt Permitted									0.953			
Satd. Flow (perm)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			564		1				120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	0	337	564	0	589	9	0	0	935	5	1	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	564	0	598	0	0	0	941	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	15	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type		NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - Existing Conditions
10/21/2022

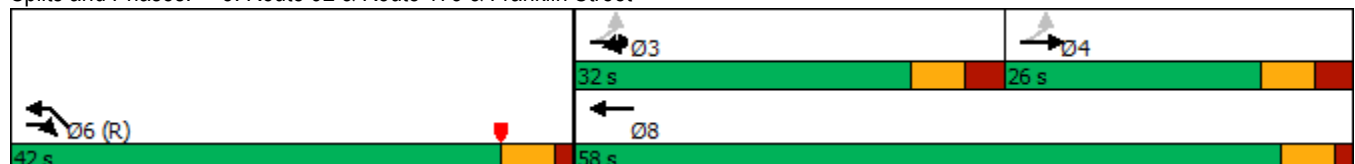


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4			8				6			
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				C-Max			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		37.4	75.5		38.9				50.1			
Actuated g/C Ratio		0.37	0.76		0.39				0.50			
v/c Ratio		0.49	0.43		0.83				1.00			
Control Delay		28.7	1.6		37.1				54.5			
Queue Delay		0.0	0.0		0.0				0.0			
Total Delay		28.7	1.6		37.1				54.5			
LOS		C	A		D				D			
Approach Delay		11.7			37.1				54.5			
Approach LOS		B			D				D			

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 13 (13%), Referenced to phase 6:NWL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 34.4
 Intersection LOS: C
 Intersection Capacity Utilization 85.5%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - Existing Conditions
10/21/2022

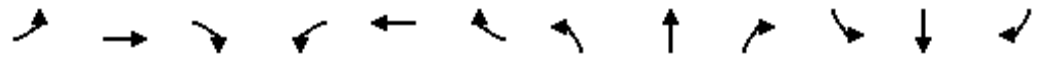


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	2	31	21	0	6	23	343	13	2	380	51
Future Volume (vph)	16	2	31	21	0	6	23	343	13	2	380	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.858			0.971			0.994			0.982	
Flt Protected	0.950				0.962		0.950			0.950		
Satd. Flow (prot)	1752	1548	0	0	1735	0	1752	3449	0	1770	1790	0
Flt Permitted							0.333			0.440		
Satd. Flow (perm)	1840	1548	0	0	1798	0	614	3449	0	817	1790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			120			5			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			315			586			447	
Travel Time (s)		3.6			7.2			13.3			10.2	
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	19	2	36	22	0	6	37	544	21	3	543	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	38	0	0	28	0	37	565	0	3	616	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - Existing Conditions

10/21/2022

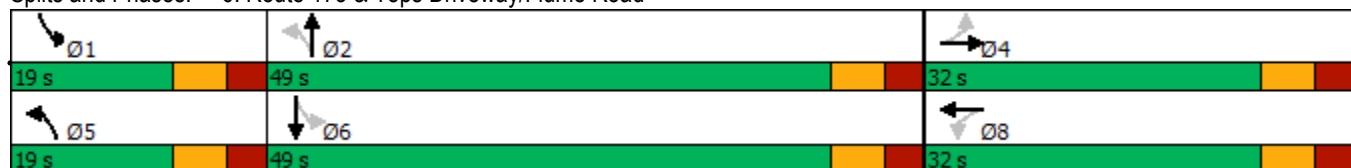


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4				8		5	2	1		6	
Permitted Phases	4		8				2		6			
Detector Phase	4	4	8		8		5	2	1		6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0		4.0	20.0	4.0		20.0	
Minimum Split (s)	32.0	32.0	29.0		29.0		11.0	30.0	11.0		29.0	
Total Split (s)	32.0	32.0	32.0		32.0		19.0	49.0	19.0		49.0	
Total Split (%)	32.0%	32.0%	32.0%		32.0%		19.0%	49.0%	19.0%		49.0%	
Maximum Green (s)	25.0	25.0	25.0		25.0		12.0	42.0	12.0		42.0	
Yellow Time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
All-Red Time (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0	7.0			7.0		7.0	7.0	7.0		7.0	
Lead/Lag							Lead	Lag	Lead		Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0	1.0		1.0		2.0	2.0	2.0		2.0	
Recall Mode	None	None	None		None		None	Min	None		Min	
Walk Time (s)	7.0	7.0	7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	18.0	18.0	15.0		15.0		16.0		16.0		15.0	
Pedestrian Calls (#/hr)	0	0	0		0		0		0		0	
Act Effct Green (s)	5.0	5.0			5.0		36.1	38.5	33.9		35.8	
Actuated g/C Ratio	0.10	0.10			0.10		0.71	0.75	0.66		0.70	
v/c Ratio	0.11	0.21			0.10		0.07	0.22	0.00		0.49	
Control Delay	27.2	14.6			0.7		3.7	4.9	4.0		10.7	
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay	27.2	14.6			0.7		3.7	4.9	4.0		10.8	
LOS	C	B			A		A	A	A		B	
Approach Delay	18.8				0.7		4.8				10.7	
Approach LOS	B				A		A				B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	51.1
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	8.1
Intersection LOS:	A
Intersection Capacity Utilization:	43.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road



Lanes, Volumes, Timings

AM - 173 WB Right Turn Bay

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

Lane Group	SBL	SBR	SET	SER	NWL	NWT	NWR	NWR2	NEL	NET	NER	SWT
Lane Configurations												
Traffic Volume (vph)	178	6	510	29	24	1014	260	1	6	0	4	0
Future Volume (vph)	178	6	510	29	24	1014	260	1	6	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		343	78		0		0		88	
Storage Lanes	1	0		1	1		0		0		1	
Taper Length (ft)	25				150				25			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor			1.00		1.00	1.00					0.99	
Frt	0.996		0.992			0.969					0.850	0.865
Flt Protected	0.954				0.950					0.950		
Satd. Flow (prot)	1721	0	3473	0	1770	3316	0	0	0	1770	1583	1611
Flt Permitted	0.954				0.428							
Satd. Flow (perm)	1721	0	3473	0	794	3316	0	0	0	1863	1561	1611
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)												
Link Speed (mph)	30		30			30				30		30
Link Distance (ft)	689		891			731				604		179
Travel Time (s)	15.7		20.3			16.6				13.7		4.1
Confl. Peds. (#/hr)				5	5			2			2	
Peak Hour Factor	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.87	0.71	0.71	0.71	0.25
Heavy Vehicles (%)	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%	2%
Adj. Flow (vph)	220	7	543	31	28	1166	299	1	8	0	6	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	0	574	0	28	1466	0	0	0	8	6	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left	Right	Right	Left	Left	Right	Left
Median Width(ft)	12		12			12				0		0
Link Offset(ft)	0		0			0				0		0
Crosswalk Width(ft)	16		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		9	15		9	9	15		9	
Number of Detectors	2		0		2	0			1	2	2	0
Detector Template									Left			
Leading Detector (ft)	60		0		52	0			20	60	60	0
Trailing Detector (ft)	-10		0		-10	0			0	-10	-10	0
Detector 1 Position(ft)	-10		0		-10	0			0	-10	-10	-10
Detector 1 Size(ft)	30		20		30	20			20	30	30	30
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30				22					30	30	
Detector 2 Size(ft)	30				30					30	30	
Detector 2 Type	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0				0.0					0.0	0.0	



Lane Group	SWR
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	0.25
Heavy Vehicles (%)	2%
Adj. Flow (vph)	4
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings

AM - 173 WB Right Turn Bay

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

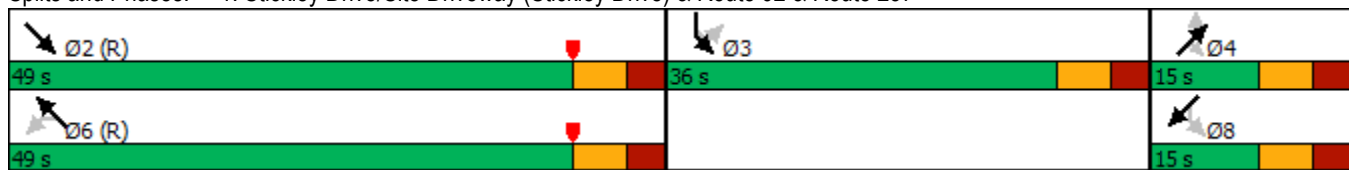


Lane Group	SBL	SBR	SET	SER	NWL	NWT	NWR	NWR2	NEL	NET	NER	SWT
Turn Type	Prot		NA		Perm	NA			Perm	NA	Perm	NA
Protected Phases	3		2			6				4		8
Permitted Phases					6				4		4	
Detector Phase	3		2		6	6			4	4	4	8
Switch Phase												
Minimum Initial (s)	4.0		8.0		6.0	6.0			4.0	4.0	4.0	4.0
Minimum Split (s)	11.0		33.0		13.0	13.0			33.0	33.0	33.0	11.0
Total Split (s)	36.0		49.0		49.0	49.0			15.0	15.0	15.0	15.0
Total Split (%)	36.0%		49.0%		49.0%	49.0%			15.0%	15.0%	15.0%	15.0%
Maximum Green (s)	29.0		42.0		42.0	42.0			8.0	8.0	8.0	8.0
Yellow Time (s)	4.0		4.0		4.0	4.0			4.0	4.0	4.0	4.0
All-Red Time (s)	3.0		3.0		3.0	3.0			3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0		7.0		7.0	7.0			7.0	7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0		2.0		2.0	2.0			1.0	1.0	1.0	2.0
Recall Mode	None		C-Max		C-Max	C-Max			None	None	None	None
Walk Time (s)			7.0						7.0	7.0	7.0	
Flash Dont Walk (s)			19.0						19.0	19.0	19.0	
Pedestrian Calls (#/hr)			0						0	0	0	
Act Effct Green (s)	16.9		64.1		64.1	64.1			4.6	4.6	4.6	4.9
Actuated g/C Ratio	0.17		0.64		0.64	0.64			0.05	0.05	0.05	0.05
v/c Ratio	0.78		0.26		0.06	0.69			0.09	0.08	0.08	0.05
Control Delay	57.4		9.9		11.5	14.8			47.5	47.5	47.5	46.0
Queue Delay	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Total Delay	57.4		9.9		11.5	14.8			47.5	47.5	47.5	46.0
LOS	E		A		B	B			D	D	D	D
Approach Delay	57.4		9.9			14.8			47.5			46.0
Approach LOS	E		A			B			D			D

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 98 (98%), Referenced to phase 2:SET and 6:NWTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 18.0
 Intersection LOS: B
 Intersection Capacity Utilization 70.2%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257





Lane Group	SWR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
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
 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

AM - 173 WB Right Turn Bay
 10/21/2022



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↕	↗		↕	
Traffic Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Future Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.99		0.99	
Frt		0.999							0.850		0.899	
Flt Protected		0.998						0.962			0.989	
Satd. Flow (prot)	0	3496	0	0	3439	0	0	1792	1583	0	1640	0
Flt Permitted		0.835			0.947			0.486			0.916	
Satd. Flow (perm)	0	2925	0	0	3257	0	0	905	1560	0	1518	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		1									120	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		731			886			331			443	
Travel Time (s)		16.6			20.1			7.5			10.1	
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	33	759	3	13	1380	3	20	5	15	36	5	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	795	0	0	1396	0	0	25	15	0	161	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
Number of Detectors	1	0		1	0		1	2	2	1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20	70	
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Size(ft)	20	6		20	6		20	32	30	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								33	35		40	
Detector 2 Size(ft)								32	30		30	
Detector 2 Type								Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0		0.0	

Lanes, Volumes, Timings
 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

AM - 173 WB Right Turn Bay
 10/21/2022

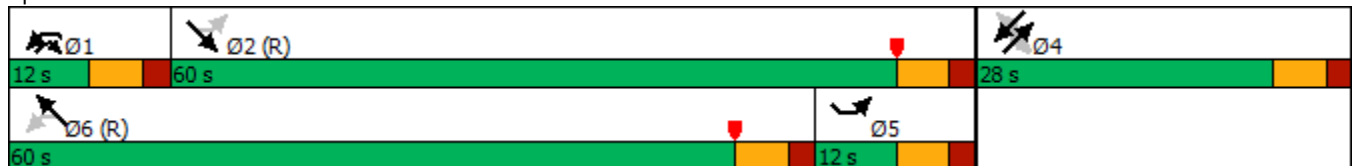


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			4	1		4	
Permitted Phases	2			6			4		4	4		
Detector Phase	5	2		1	6		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	4.0	20.0		6.0	20.0		4.0	4.0	6.0	4.0	4.0	
Minimum Split (s)	10.0	27.0		12.0	33.0		28.0	28.0	12.0	28.0	28.0	
Total Split (s)	12.0	60.0		12.0	60.0		28.0	28.0	12.0	28.0	28.0	
Total Split (%)	12.0%	60.0%		12.0%	60.0%		28.0%	28.0%	12.0%	28.0%	28.0%	
Maximum Green (s)	6.0	54.0		6.0	54.0		22.0	22.0	6.0	22.0	22.0	
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)	2.0	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		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	3.0	2.0		2.0	2.0		1.0	1.0	2.0	1.0	1.0	
Recall Mode	None	C-Max		Max	C-Max		None	None	Max	None	None	
Walk Time (s)		7.0		7.0			7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		14.0		20.0			15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0		0			0	0		0	0	
Act Effct Green (s)		68.6		80.6			7.4	13.4		7.4		
Actuated g/C Ratio		0.69		0.81			0.07	0.13		0.07		
v/c Ratio		0.40		0.53			0.37	0.07		0.72		
Control Delay		7.8		2.7			57.9	31.5		32.4		
Queue Delay		0.0		0.0			0.0	0.0		0.0		
Total Delay		7.8		2.7			57.9	31.5		32.4		
LOS		A		A			E	C		C		
Approach Delay		7.8		2.7			48.0			32.4		
Approach LOS		A		A			D			C		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 7.1
 Intersection LOS: A
 Intersection Capacity Utilization 65.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92



Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

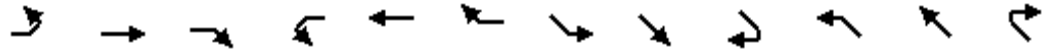
AM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Future Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	0		0	0		0
Storage Lanes	0		0	0		1	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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.98		1.00				1.00
Frt		0.961				0.850		0.993				0.998
Flt Protected		0.977			0.963			0.998				0.999
Satd. Flow (prot)	0	1740	0	0	1794	1583	0	3472	0	0	3430	0
Flt Permitted		0.818			0.704			0.831				0.932
Satd. Flow (perm)	0	1454	0	0	1308	1557	0	2891	0	0	3200	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				53		11				2
Link Speed (mph)		30			30			30				30
Link Distance (ft)		263			346			886				590
Travel Time (s)		6.0			7.9			20.1				13.4
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	51	25	31	47	14	104	37	712	35	23	1308	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	61	104	0	784	0	0	1351	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	1.00	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	2	1	2		1		0
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20		0
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0		0
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0		0
Detector 1 Size(ft)	20	30		20	32	30	20	30		20		6
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0		0.0
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

AM - 173 WB Right Turn Bay
10/21/2022

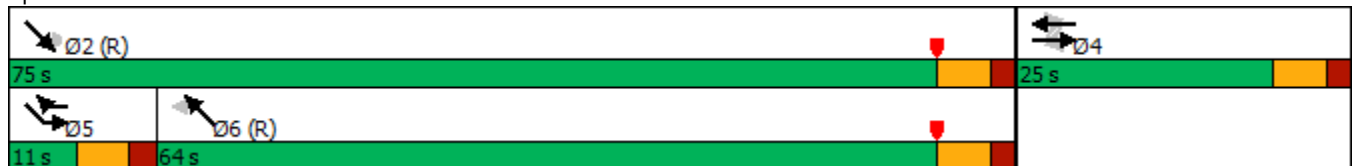


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			4	5	5	2			6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		28.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	11.0	11.0	75.0		64.0	64.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	11.0%	11.0%	75.0%		64.0%	64.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	5.0	5.0	69.0		58.0	58.0	
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)	2.0	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						Lead	Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		9.7			9.7	14.7		78.3			67.3	
Actuated g/C Ratio		0.10			0.10	0.15		0.78			0.67	
v/c Ratio		0.68			0.48	0.38		0.34			0.63	
Control Delay		56.5			54.0	20.8		2.9			8.7	
Queue Delay		0.0			0.0	0.0		0.0			0.4	
Total Delay		56.5			54.0	20.8		2.9			9.1	
LOS		E			D	C		A			A	
Approach Delay		56.5			33.1			2.9			9.1	
Approach LOS		E			C			A			A	

Intersection Summary

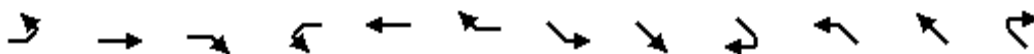
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 10.8
 Intersection Capacity Utilization 65.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

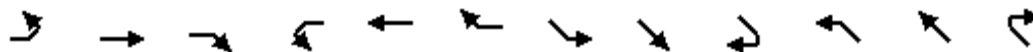
AM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	101	261	2	0	285	1021	519	25	148	0	0	0
Future Volume (vph)	101	261	2	0	285	1021	519	25	148	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	0		230	0		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	60			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00				0.98	1.00	0.99				
Fr _t		0.999				0.850		0.934				
Fl _t Protected	0.950						0.950	0.976				
Satd. Flow (prot)	1770	3535	0	0	1863	1583	1665	1581	0	0	0	0
Fl _t Permitted	0.260						0.950	0.000				
Satd. Flow (perm)	483	3535	0	0	1863	1552	1664	0	0	0	0	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		1										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			788			590			231	
Travel Time (s)		10.2			17.9			13.4			5.3	
Confl. Peds. (#/hr)	6		2	2		6	1		3	3		1
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.95	0.95	0.95	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%	2%
Adj. Flow (vph)	123	318	2	0	306	1098	546	26	156	0	0	0
Shared Lane Traffic (%)							32%					
Lane Group Flow (vph)	123	320	0	0	306	1098	371	357	0	0	0	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			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	2	2			2	2	2	2				
Detector Template												
Leading Detector (ft)	60	62			65	65	60	60				
Trailing Detector (ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Position(ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Size(ft)	34	32			32	30	32	30				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)	26	30			33	35	28	30				
Detector 2 Size(ft)	34	32			32	30	32	30				
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				

Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

AM - 173 WB Right Turn Bay
10/21/2022

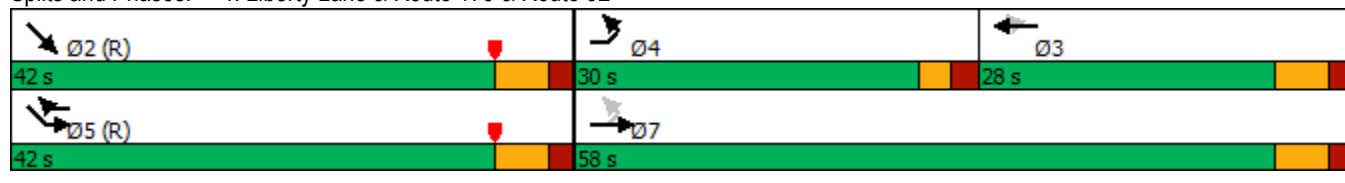


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	pm+pt	NA			NA	pm+ov	Prot	NA				
Protected Phases	4	7			3	5	5	2				
Permitted Phases	7					3		2				
Detector Phase	4	7			3	3	5	2				
Switch Phase												
Minimum Initial (s)	6.0	7.0			9.0	10.0	10.0	10.0				
Minimum Split (s)	29.5	21.0			28.0	16.0	16.0	31.0				
Total Split (s)	30.0	58.0			28.0	42.0	42.0	42.0				
Total Split (%)	30.0%	58.0%			28.0%	42.0%	42.0%	42.0%				
Maximum Green (s)	25.5	52.0			22.0	36.0	36.0	36.0				
Yellow Time (s)	2.5	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				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	6.0			6.0	6.0	6.0	6.0				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	2.0	2.0	2.0				
Recall Mode	None	None			None	C-Max	C-Max	C-Max				
Walk Time (s)	7.0	7.0			7.0			7.0				
Flash Dont Walk (s)	18.0	8.0			15.0			18.0				
Pedestrian Calls (#/hr)	0	0			0			0				
Act Effct Green (s)	38.4	36.9			22.0	73.1	51.1	51.1				
Actuated g/C Ratio	0.38	0.37			0.22	0.73	0.51	0.51				
v/c Ratio	0.39	0.25			0.75	0.95	0.44	0.44				
Control Delay	23.6	22.0			45.1	25.6	18.5	18.7				
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0				
Total Delay	23.6	22.0			45.1	25.6	18.5	18.7				
LOS	C	C			D	C	B	B				
Approach Delay		22.4			29.8			18.6				
Approach LOS		C			C			B				

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SET and 5:SEL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 25.4
 Intersection LOS: C
 Intersection Capacity Utilization 78.2%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 4: Liberty Lane & Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations		↖	↗		↖				↗			
Traffic Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Future Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor					1.00				1.00			
Frt			0.850		0.998				0.999			
Flt Protected									0.953			
Satd. Flow (prot)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Flt Permitted									0.953			
Satd. Flow (perm)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			564		1				120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	0	337	564	0	589	9	0	0	935	5	1	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	564	0	598	0	0	0	941	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	15	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type		NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - 173 WB Right Turn Bay
10/21/2022

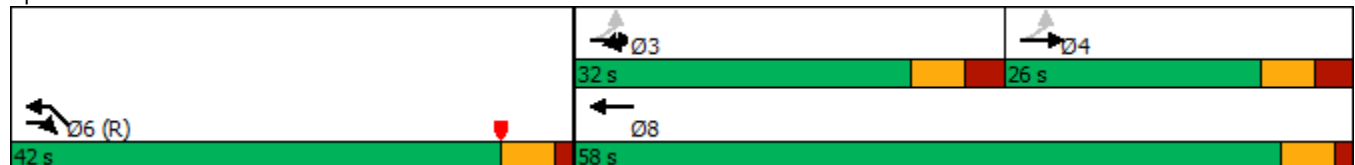


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4			8				6			
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				C-Max			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		37.4	75.5		38.9				50.1			
Actuated g/C Ratio		0.37	0.76		0.39				0.50			
v/c Ratio		0.49	0.43		0.83				1.00			
Control Delay		28.7	1.6		37.1				54.5			
Queue Delay		0.0	0.0		0.0				0.0			
Total Delay		28.7	1.6		37.1				54.5			
LOS		C	A		D				D			
Approach Delay		11.7			37.1				54.5			
Approach LOS		B			D				D			

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 13 (13%), Referenced to phase 6:NWL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 34.4
 Intersection LOS: C
 Intersection Capacity Utilization 85.5%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	2	31	21	0	6	23	343	13	2	380	51
Future Volume (vph)	16	2	31	21	0	6	23	343	13	2	380	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.858			0.971			0.994			0.982	
Flt Protected	0.950				0.962		0.950			0.950		
Satd. Flow (prot)	1752	1548	0	0	1735	0	1752	3449	0	1770	1790	0
Flt Permitted							0.333			0.440		
Satd. Flow (perm)	1840	1548	0	0	1798	0	614	3449	0	817	1790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			120			5			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			315			586			447	
Travel Time (s)		3.6			7.2			13.3			10.2	
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	19	2	36	22	0	6	37	544	21	3	543	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	38	0	0	28	0	37	565	0	3	616	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4		8		8		5	2	1		6	
Permitted Phases	4		8		8		2		6			
Detector Phase	4		4		8		8		5		2	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0		4.0	20.0	4.0		20.0	
Minimum Split (s)	32.0	32.0	29.0		29.0		11.0	30.0	11.0		29.0	
Total Split (s)	32.0	32.0	32.0		32.0		19.0	49.0	19.0		49.0	
Total Split (%)	32.0%	32.0%	32.0%		32.0%		19.0%	49.0%	19.0%		49.0%	
Maximum Green (s)	25.0	25.0	25.0		25.0		12.0	42.0	12.0		42.0	
Yellow Time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
All-Red Time (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0	7.0			7.0		7.0	7.0	7.0		7.0	
Lead/Lag							Lead	Lag			Lead	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0	1.0		1.0		2.0	2.0	2.0		2.0	
Recall Mode	None	None	None		None		None	Min	None		Min	
Walk Time (s)	7.0	7.0	7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	18.0	18.0	15.0		15.0		16.0		16.0		15.0	
Pedestrian Calls (#/hr)	0	0	0		0		0		0		0	
Act Effct Green (s)	5.0	5.0			5.0		36.1	38.5	33.9		35.8	
Actuated g/C Ratio	0.10	0.10			0.10		0.71	0.75	0.66		0.70	
v/c Ratio	0.11	0.21			0.10		0.07	0.22	0.00		0.49	
Control Delay	27.2	14.6			0.7		3.7	4.9	4.0		10.7	
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay	27.2	14.6			0.7		3.7	4.9	4.0		10.8	
LOS	C	B			A		A	A	A		B	
Approach Delay	18.8				0.7		4.8				10.7	
Approach LOS	B				A		A				B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	51.1
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	8.1
Intersection LOS:	A
Intersection Capacity Utilization:	43.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road



Lanes, Volumes, Timings

AM - Close Liberty Lane

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

Lane Group	SBL	SBR	SET	SER	NWL	NWT	NWR	NWR2	NEL	NET	NER	SWT
Lane Configurations												
Traffic Volume (vph)	178	6	510	29	24	1014	260	1	6	0	4	0
Future Volume (vph)	178	6	510	29	24	1014	260	1	6	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		343	78		0		0		88	
Storage Lanes	1	0		1	1		0		0		1	
Taper Length (ft)	25				150				25			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor			1.00		1.00	1.00					0.99	
Frt	0.996		0.992			0.969					0.850	0.865
Flt Protected	0.954				0.950					0.950		
Satd. Flow (prot)	1721	0	3473	0	1770	3316	0	0	0	1770	1583	1611
Flt Permitted	0.954				0.428							
Satd. Flow (perm)	1721	0	3473	0	794	3316	0	0	0	1863	1561	1611
Right Turn on Red				No				Yes			No	
Satd. Flow (RTOR)												
Link Speed (mph)	30		30			30				30		30
Link Distance (ft)	689		891			731				604		179
Travel Time (s)	15.7		20.3			16.6				13.7		4.1
Confl. Peds. (#/hr)				5	5			2			2	
Peak Hour Factor	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.87	0.71	0.71	0.71	0.25
Heavy Vehicles (%)	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%	2%
Adj. Flow (vph)	220	7	543	31	28	1166	299	1	8	0	6	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	0	574	0	28	1466	0	0	0	8	6	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left	Right	Right	Left	Left	Right	Left
Median Width(ft)	12		12			12				0		0
Link Offset(ft)	0		0			0				0		0
Crosswalk Width(ft)	16		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		9	15		9	9	15		9	
Number of Detectors	2		0		2	0			1	2	2	0
Detector Template									Left			
Leading Detector (ft)	60		0		52	0			20	60	60	0
Trailing Detector (ft)	-10		0		-10	0			0	-10	-10	0
Detector 1 Position(ft)	-10		0		-10	0			0	-10	-10	-10
Detector 1 Size(ft)	30		20		30	20			20	30	30	30
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0			0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30				22					30	30	
Detector 2 Size(ft)	30				30					30	30	
Detector 2 Type	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0				0.0					0.0	0.0	



Lane Group	SWR
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Flt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	0.25
Heavy Vehicles (%)	2%
Adj. Flow (vph)	4
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	



Lane Group	SWR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
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
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

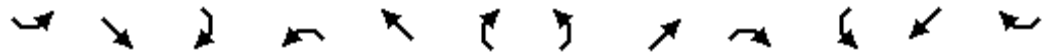
AM - Close Liberty Lane
10/21/2022



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↕	↗		↕	
Traffic Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Future Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.99		0.99	
Frt		0.999							0.850		0.899	
Flt Protected		0.998						0.962			0.989	
Satd. Flow (prot)	0	3496	0	0	3439	0	0	1792	1583	0	1640	0
Flt Permitted		0.835			0.947			0.486			0.916	
Satd. Flow (perm)	0	2925	0	0	3257	0	0	905	1560	0	1518	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		1										120
Link Speed (mph)		30			30			30				30
Link Distance (ft)		731			886			331				443
Travel Time (s)		16.6			20.1			7.5				10.1
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	33	759	3	13	1380	3	20	5	15	36	5	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	795	0	0	1396	0	0	25	15	0	161	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
Number of Detectors	1	0		1	0		1	2	2	1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20	70	
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Size(ft)	20	6		20	6		20	32	30	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								33	35		40	
Detector 2 Size(ft)								32	30		30	
Detector 2 Type								Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0		0.0	

Lanes, Volumes, Timings
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

AM - Close Liberty Lane
10/21/2022

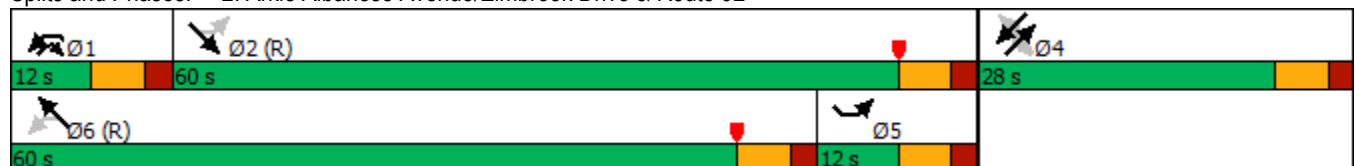


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			4	1		4	
Permitted Phases	2			6			4		4	4		
Detector Phase	5	2		1	6		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	4.0	20.0		6.0	20.0		4.0	4.0	6.0	4.0	4.0	
Minimum Split (s)	10.0	27.0		12.0	33.0		28.0	28.0	12.0	28.0	28.0	
Total Split (s)	12.0	60.0		12.0	60.0		28.0	28.0	12.0	28.0	28.0	
Total Split (%)	12.0%	60.0%		12.0%	60.0%		28.0%	28.0%	12.0%	28.0%	28.0%	
Maximum Green (s)	6.0	54.0		6.0	54.0		22.0	22.0	6.0	22.0	22.0	
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)	2.0	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		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	3.0	2.0		2.0	2.0		1.0	1.0	2.0	1.0	1.0	
Recall Mode	None	C-Max		Max	C-Max		None	None	Max	None	None	
Walk Time (s)		7.0		7.0			7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		14.0		20.0			15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0		0			0	0		0	0	
Act Effct Green (s)		68.6		80.6			7.4	13.4		7.4		
Actuated g/C Ratio		0.69		0.81			0.07	0.13		0.07		
v/c Ratio		0.40		0.53			0.37	0.07		0.72		
Control Delay		7.8		2.7			57.9	31.5		32.4		
Queue Delay		0.0		0.0			0.0	0.0		0.0		
Total Delay		7.8		2.7			57.9	31.5		32.4		
LOS		A		A			E	C		C		
Approach Delay		7.8		2.7			48.0			32.4		
Approach LOS		A		A			D			C		

Intersection Summary

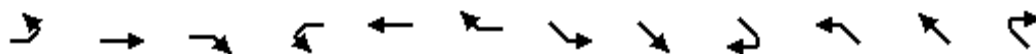
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 7.1
 Intersection LOS: A
 Intersection Capacity Utilization 65.6%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92



Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

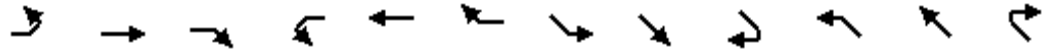
AM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Future Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	0		0	0		0
Storage Lanes	0		0	0		1	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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.98		1.00				1.00
Frt		0.961				0.850		0.993				0.998
Flt Protected		0.977			0.963			0.998				0.999
Satd. Flow (prot)	0	1740	0	0	1794	1583	0	3472	0	0	3430	0
Flt Permitted		0.818			0.704			0.831				0.932
Satd. Flow (perm)	0	1454	0	0	1308	1557	0	2891	0	0	3200	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				53		11				2
Link Speed (mph)		30			30			30				30
Link Distance (ft)		263			346			886				590
Travel Time (s)		6.0			7.9			20.1				13.4
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	51	25	31	47	14	104	37	712	35	23	1308	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	61	104	0	784	0	0	1351	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	1.00	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	2	1	2		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20	0	
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Size(ft)	20	30		20	32	30	20	30		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

AM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			4	5	5	2			6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		28.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	11.0	11.0	75.0		64.0	64.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	11.0%	11.0%	75.0%		64.0%	64.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	5.0	5.0	69.0		58.0	58.0	
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)	2.0	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						Lead	Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		9.7			9.7	14.7		78.3			67.3	
Actuated g/C Ratio		0.10			0.10	0.15		0.78			0.67	
v/c Ratio		0.68			0.48	0.38		0.34			0.63	
Control Delay		56.5			54.0	20.8		2.9			8.7	
Queue Delay		0.0			0.0	0.0		0.0			0.4	
Total Delay		56.5			54.0	20.8		2.9			9.1	
LOS		E			D	C		A			A	
Approach Delay		56.5			33.1			2.9			9.1	
Approach LOS		E			C			A			A	

Intersection Summary

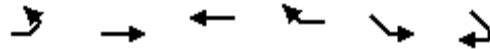
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 10.8
 Intersection Capacity Utilization 65.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Route 173 & Route 92

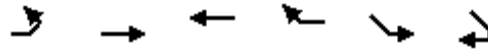
AM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	WBT	WBR	SEL	SER	Ø2
Lane Configurations							
Traffic Volume (vph)	101	263	285	1021	519	173	
Future Volume (vph)	101	263	285	1021	519	173	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	175			0	0	0	
Storage Lanes	1			1	2	0	
Taper Length (ft)	60				25		
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	0.95	
Ped Bike Factor	1.00			0.98	0.99		
Frt				0.850	0.962		
Flt Protected	0.950				0.964		
Satd. Flow (prot)	1770	3539	1863	1583	3299	0	
Flt Permitted	0.260				0.964		
Satd. Flow (perm)	483	3539	1863	1552	3298	0	
Right Turn on Red				No		No	
Satd. Flow (RTOR)							
Link Speed (mph)		30	30		30		
Link Distance (ft)		447	788		590		
Travel Time (s)		10.2	17.9		13.4		
Confl. Peds. (#/hr)	6			6	1	3	
Peak Hour Factor	0.82	0.82	0.93	0.93	0.95	0.95	
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%	
Adj. Flow (vph)	123	321	306	1098	546	182	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	123	321	306	1098	728	0	
Enter Blocked Intersection	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Right	
Median Width(ft)		12	12		24		
Link Offset(ft)		0	0		0		
Crosswalk Width(ft)		16	16		16		
Two way Left Turn Lane							
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Turning Speed (mph)	15			9	15	9	
Number of Detectors	2	2	2	2	2		
Detector Template							
Leading Detector (ft)	60	62	65	65	60		
Trailing Detector (ft)	-10	-10	-5	-5	-10		
Detector 1 Position(ft)	-10	-10	-5	-5	-10		
Detector 1 Size(ft)	34	32	32	30	32		
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel							
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		
Detector 2 Position(ft)	26	30	33	35	28		
Detector 2 Size(ft)	34	32	32	30	32		
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 2 Channel							
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0		

Lanes, Volumes, Timings
4: Route 173 & Route 92

AM - Close Liberty Lane
10/21/2022

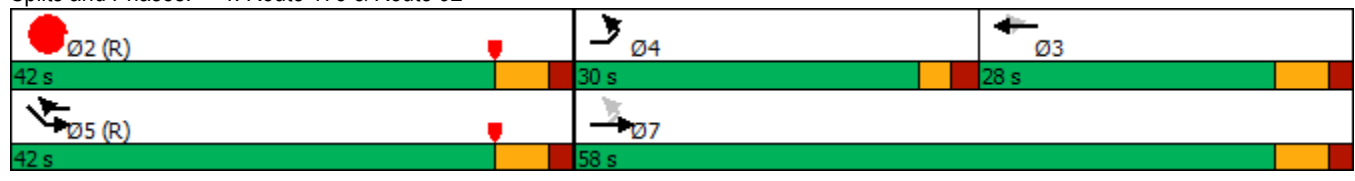


Lane Group	EBL	EBT	WBT	WBR	SEL	SER	Ø2
Turn Type	pm+pt	NA	NA	pm+ov	Prot		
Protected Phases	4	7	3	5	5		2
Permitted Phases	7			3			
Detector Phase	4	7	3	3	5		
Switch Phase							
Minimum Initial (s)	6.0	7.0	9.0	10.0	10.0		10.0
Minimum Split (s)	29.5	21.0	28.0	16.0	16.0		31.0
Total Split (s)	30.0	58.0	28.0	42.0	42.0		42.0
Total Split (%)	30.0%	58.0%	28.0%	42.0%	42.0%		42%
Maximum Green (s)	25.5	52.0	22.0	36.0	36.0		36.0
Yellow Time (s)	2.5	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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)	4.5	6.0	6.0	6.0	6.0		
Lead/Lag	Lead		Lag				
Lead-Lag Optimize?							
Vehicle Extension (s)	3.0	3.0	3.0	2.0	2.0		2.0
Recall Mode	None	None	None	C-Max	C-Max		C-Max
Walk Time (s)	7.0	7.0	7.0				7.0
Flash Dont Walk (s)	18.0	8.0	15.0				18.0
Pedestrian Calls (#/hr)	0	0	0				0
Act Effct Green (s)	38.4	36.9	22.0	73.1	51.1		
Actuated g/C Ratio	0.38	0.37	0.22	0.73	0.51		
v/c Ratio	0.39	0.25	0.75	0.95	0.43		
Control Delay	23.6	22.1	45.1	25.6	17.0		
Queue Delay	0.0	0.0	0.0	0.0	0.0		
Total Delay	23.6	22.1	45.1	25.6	17.0		
LOS	C	C	D	C	B		
Approach Delay		22.5	29.8		17.0		
Approach LOS		C	C		B		

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:Hold and 5:SEL, Start of Yellow
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 24.9
 Intersection LOS: C
 Intersection Capacity Utilization 78.2%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 4: Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations		↕	↗		↖				↘			
Traffic Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Future Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor					1.00				1.00			
Frt			0.850		0.998				0.999			
Flt Protected									0.953			
Satd. Flow (prot)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Flt Permitted									0.953			
Satd. Flow (perm)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			564		1				120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	0	337	564	0	589	9	0	0	935	5	1	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	564	0	598	0	0	0	941	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	15	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type		NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - Close Liberty Lane
10/21/2022

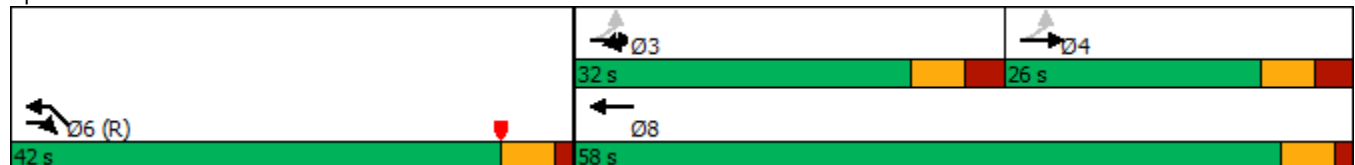


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4			8				6			
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				C-Max			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		37.4	75.5		38.9				50.1			
Actuated g/C Ratio		0.37	0.76		0.39				0.50			
v/c Ratio		0.49	0.43		0.83				1.00			
Control Delay		28.7	1.8		37.1				54.5			
Queue Delay		0.0	0.0		0.0				0.0			
Total Delay		28.7	1.8		37.1				54.5			
LOS		C	A		D				D			
Approach Delay		11.8			37.1				54.5			
Approach LOS		B			D				D			

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 13 (13%), Referenced to phase 6:NWL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 34.5
 Intersection LOS: C
 Intersection Capacity Utilization 85.5%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	2	31	21	0	6	23	343	13	27	380	51
Future Volume (vph)	16	2	31	21	0	6	23	343	13	27	380	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.858			0.971			0.994			0.982	
Flt Protected	0.950				0.962		0.950			0.950		
Satd. Flow (prot)	1752	1548	0	0	1735	0	1752	3449	0	1770	1790	0
Flt Permitted							0.356			0.431		
Satd. Flow (perm)	1840	1548	0	0	1798	0	657	3449	0	800	1790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			120			5				8
Link Speed (mph)		30			30			30				30
Link Distance (ft)		159			315			586				447
Travel Time (s)		3.6			7.2			13.3				10.2
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	19	2	36	22	0	6	37	544	21	39	543	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	38	0	0	28	0	37	565	0	39	616	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - Close Liberty Lane
10/21/2022

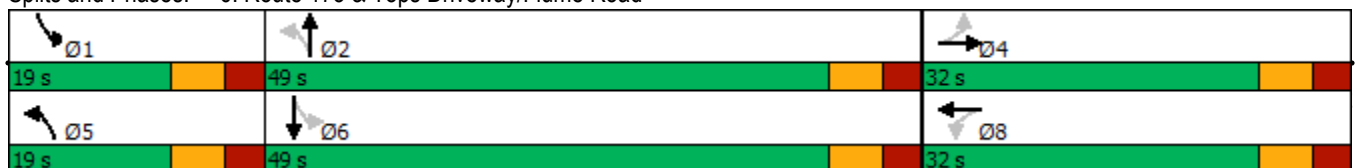


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8		2		6					
Detector Phase	4		4		8		8		5		2	
Switch Phase												
Minimum Initial (s)	4.0		4.0		4.0		20.0		4.0		20.0	
Minimum Split (s)	32.0		29.0		11.0		30.0		11.0		29.0	
Total Split (s)	32.0		32.0		19.0		49.0		19.0		49.0	
Total Split (%)	32.0%		32.0%		19.0%		49.0%		19.0%		49.0%	
Maximum Green (s)	25.0		25.0		12.0		42.0		12.0		42.0	
Yellow Time (s)	4.0		4.0		4.0		4.0		4.0		4.0	
All-Red Time (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lost Time Adjust (s)	0.0		0.0		0.0		0.0		0.0		0.0	
Total Lost Time (s)	7.0		7.0		7.0		7.0		7.0		7.0	
Lead/Lag							Lead	Lag	Lead		Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0		1.0		2.0		2.0		2.0		2.0	
Recall Mode	None		None		None		Min		None		Min	
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	18.0		18.0		15.0		16.0		15.0		15.0	
Pedestrian Calls (#/hr)	0		0		0		0		0		0	
Act Effct Green (s)	4.9		4.9		35.2		35.5		35.9		37.6	
Actuated g/C Ratio	0.09		0.09		0.67		0.68		0.69		0.72	
v/c Ratio	0.11		0.21		0.07		0.24		0.06		0.48	
Control Delay	27.9		14.8		3.7		7.9		3.8		10.4	
Queue Delay	0.0		0.0		0.0		0.0		0.0		0.0	
Total Delay	27.9		14.8		3.7		7.9		3.8		10.4	
LOS	C		B		A		A		A		B	
Approach Delay	19.2		0.7		7.7		10.0					
Approach LOS	B		A		A		B					

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	52.4
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.48
Intersection Signal Delay:	9.2
Intersection Capacity Utilization:	43.7%
Analysis Period (min):	15
Intersection LOS:	A
ICU Level of Service:	A

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road



Lanes, Volumes, Timings

AM - Lane Re-allocation

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

Lane Group	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER	SWT
Lane Configurations												
Traffic Volume (vph)	178	6	510	29	24	1014	260	7	6	0	4	0
Future Volume (vph)	178	6	510	29	24	1014	260	7	6	0	4	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		343	78		200		0		88	
Storage Lanes	1	0		1	1		1		0		1	
Taper Length (ft)	25				150				25			
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor			1.00		1.00						0.99	
Frt	0.996		0.992				0.850				0.850	0.865
Flt Protected	0.954				0.950					0.950		
Satd. Flow (prot)	1721	0	3473	0	1770	1810	1538	0	0	1770	1583	1611
Flt Permitted	0.954				0.427							
Satd. Flow (perm)	1721	0	3473	0	792	1810	1538	0	0	1863	1561	1611
Right Turn on Red				No							No	
Satd. Flow (RTOR)												
Link Speed (mph)	30		30			30				30		30
Link Distance (ft)	689		891			731				604		179
Travel Time (s)	15.7		20.3			16.6				13.7		4.1
Confl. Peds. (#/hr)				5	5							2
Peak Hour Factor	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.71	0.71	0.71	0.71	0.25
Heavy Vehicles (%)	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%	2%
Adj. Flow (vph)	220	7	543	31	28	1166	299	10	8	0	6	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	227	0	574	0	28	1166	299	0	0	18	6	4
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left	Right	Left	Left	Left	Right	Left
Median Width(ft)	12		12			12				0		0
Link Offset(ft)	0		0			0				0		0
Crosswalk Width(ft)	16		16			16				16		16
Two way Left Turn Lane						Yes						
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		9	15		9	15	15		9	
Number of Detectors	2		0		2	0	0	1	1	2	2	0
Detector Template								Left	Left			
Leading Detector (ft)	60		0		52	0	0	20	20	60	60	0
Trailing Detector (ft)	-10		0		-10	0	0	0	0	-10	-10	0
Detector 1 Position(ft)	-10		0		-10	0	0	0	0	-10	-10	-10
Detector 1 Size(ft)	30		20		30	20	6	20	20	30	30	30
Detector 1 Type	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30				22					30	30	
Detector 2 Size(ft)	30				30					30	30	
Detector 2 Type	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)	0.0				0.0					0.0	0.0	



Lane Group	SWR
Lane Configurations	
Traffic Volume (vph)	1
Future Volume (vph)	1
Ideal Flow (vphpl)	1900
Storage Length (ft)	0
Storage Lanes	0
Taper Length (ft)	
Lane Util. Factor	1.00
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	0
Flt Permitted	
Satd. Flow (perm)	0
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Peak Hour Factor	0.25
Heavy Vehicles (%)	2%
Adj. Flow (vph)	4
Shared Lane Traffic (%)	
Lane Group Flow (vph)	0
Enter Blocked Intersection	No
Lane Alignment	Right
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	1.00
Turning Speed (mph)	9
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	

Lanes, Volumes, Timings

AM - Lane Re-allocation

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

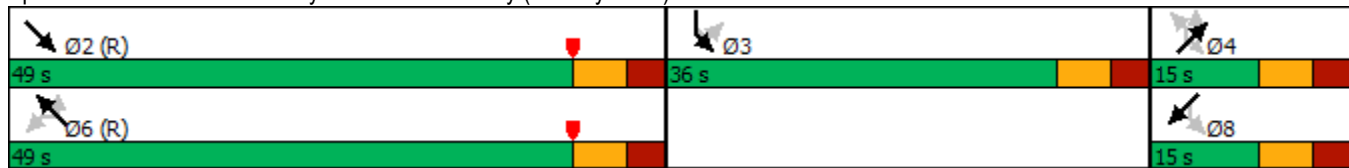


Lane Group	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER	SWT
Turn Type	Prot		NA		Perm	NA	Perm	Perm	Perm	NA	Perm	NA
Protected Phases	3		2			6				4		8
Permitted Phases					6		6	4	4		4	
Detector Phase	3		2		6	6	6	4	4	4	4	8
Switch Phase												
Minimum Initial (s)	4.0		8.0		6.0	6.0	6.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	11.0		33.0		13.0	13.0	13.0	33.0	33.0	33.0	33.0	11.0
Total Split (s)	36.0		49.0		49.0	49.0	49.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	36.0%		49.0%		49.0%	49.0%	49.0%	15.0%	15.0%	15.0%	15.0%	15.0%
Maximum Green (s)	29.0		42.0		42.0	42.0	42.0	8.0	8.0	8.0	8.0	8.0
Yellow Time (s)	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)	0.0		0.0		0.0	0.0	0.0			0.0	0.0	0.0
Total Lost Time (s)	7.0		7.0		7.0	7.0	7.0			7.0	7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0		2.0		2.0	2.0	2.0	1.0	1.0	1.0	1.0	2.0
Recall Mode	None		C-Max		C-Max	C-Max	C-Max	None	None	None	None	None
Walk Time (s)			7.0					7.0	7.0	7.0	7.0	
Flash Dont Walk (s)			19.0					19.0	19.0	19.0	19.0	
Pedestrian Calls (#/hr)			0					0	0	0	0	
Act Effct Green (s)	16.9		63.7		63.7	63.7	63.7			5.2	5.2	5.3
Actuated g/C Ratio	0.17		0.64		0.64	0.64	0.64			0.05	0.05	0.05
v/c Ratio	0.78		0.26		0.06	1.01	0.31			0.19	0.07	0.05
Control Delay	57.4		10.2		9.8	37.0	9.5			49.1	46.0	45.0
Queue Delay	0.0		0.0		0.0	0.0	0.0			0.0	0.0	0.0
Total Delay	57.4		10.2		9.8	37.0	9.5			49.1	46.0	45.0
LOS	E		B		A	D	A			D	D	D
Approach Delay	57.4		10.2			31.0				48.3		45.0
Approach LOS	E		B			C				D		D

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SET and 6:NWTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 28.6
 Intersection LOS: C
 Intersection Capacity Utilization 89.1%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

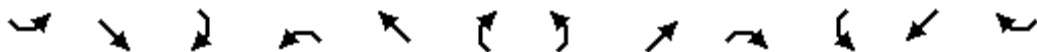




Lane Group	SWR
Turn Type	
Protected Phases	
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	
Minimum Split (s)	
Total Split (s)	
Total Split (%)	
Maximum Green (s)	
Yellow Time (s)	
All-Red Time (s)	
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	
Recall Mode	
Walk Time (s)	
Flash Dont Walk (s)	
Pedestrian Calls (#/hr)	
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
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

AM - Lane Re-allocation
10/21/2022



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Future Volume (vph)	29	660	3	11	1187	3	11	3	8	30	4	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	0		75	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00	1.00			1.00	0.99		0.98	
Frt		0.999							0.850		0.899	
Flt Protected	0.950			0.950				0.962			0.989	
Satd. Flow (prot)	1770	3501	0	1770	1810	0	0	1792	1583	0	1629	0
Flt Permitted	0.058			0.319				0.480			0.916	
Satd. Flow (perm)	108	3501	0	594	1810	0	0	893	1560	0	1508	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		1										117
Link Speed (mph)		30			30			30				30
Link Distance (ft)		731			886			331				443
Travel Time (s)		16.6			20.1			7.5				10.1
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	33	759	3	13	1380	3	20	5	15	36	5	120
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	762	0	13	1383	0	0	25	15	0	161	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		Yes			Yes							
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	0		1	0		1	2	2	1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20	70	
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Size(ft)	20	6		20	6		20	32	30	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								33	35		40	
Detector 2 Size(ft)								32	30		30	
Detector 2 Type								Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0		0.0	

Lanes, Volumes, Timings
 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

AM - Lane Re-allocation
 10/21/2022

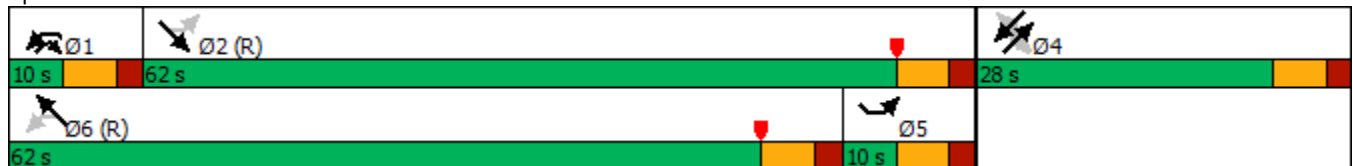


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			4	1		4	
Permitted Phases	2			6			4		4	4		
Detector Phase	5	2		1	6		4	4	1	4	4	
Switch Phase												
Minimum Initial (s)	4.0	20.0		4.0	20.0		4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	10.0	27.0		10.0	33.0		28.0	28.0	10.0	28.0	28.0	
Total Split (s)	10.0	62.0		10.0	62.0		28.0	28.0	10.0	28.0	28.0	
Total Split (%)	10.0%	62.0%		10.0%	62.0%		28.0%	28.0%	10.0%	28.0%	28.0%	
Maximum Green (s)	4.0	56.0		4.0	56.0		22.0	22.0	4.0	22.0	22.0	
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)	2.0	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	0.0		0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0	6.0		6.0	
Lead/Lag	Lag	Lag		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes			Yes	Yes				Yes			
Vehicle Extension (s)	3.0	2.0		3.0	2.0		1.0	1.0	3.0	1.0	1.0	
Recall Mode	None	C-Max		None	C-Max		None	None	None	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		14.0			20.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	73.2	73.2		74.5	74.5			7.5	13.4		7.5	
Actuated g/C Ratio	0.73	0.73		0.74	0.74			0.08	0.13		0.08	
v/c Ratio	0.23	0.30		0.03	1.03			0.38	0.07		0.73	
Control Delay	15.6	5.0		7.5	31.7			57.8	31.1		33.5	
Queue Delay	0.0	0.0		0.0	0.0			0.0	0.0		0.0	
Total Delay	15.6	5.0		7.5	31.7			57.8	31.1		33.5	
LOS	B	A		A	C			E	C		C	
Approach Delay		5.4			31.5			47.8			33.5	
Approach LOS		A			C			D			C	

Intersection Summary

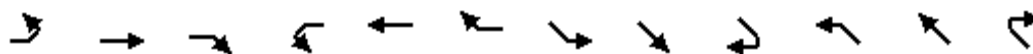
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 23.3
 Intersection LOS: C
 Intersection Capacity Utilization 87.6%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92



Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

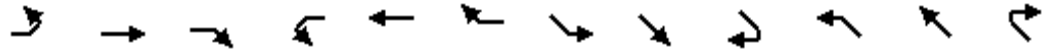
AM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↔	
Traffic Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Future Volume (vph)	38	19	23	35	10	77	33	634	31	19	1086	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	50		0	50		0
Storage Lanes	0		0	0		1	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	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.97		1.00		1.00	1.00	
Frt		0.961				0.850		0.993			0.998	
Flt Protected		0.977			0.963		0.950			0.950		
Satd. Flow (prot)	0	1740	0	0	1794	1583	1770	3477	0	1770	1806	0
Flt Permitted		0.818			0.704		0.062			0.368		
Satd. Flow (perm)	0	1452	0	0	1308	1539	115	3477	0	683	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		18				56		9			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		263			346			886			590	
Travel Time (s)		6.0			7.9			20.1			13.4	
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	51	25	31	47	14	104	37	712	35	23	1308	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	61	104	37	747	0	23	1328	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								Yes			Yes	
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	2	1	2		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20	0	
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Size(ft)	20	30		20	32	30	20	30		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

AM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4	5	5	2		1	6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		4.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		10.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	65.0		10.0	65.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	10.0%	10.0%	65.0%		10.0%	65.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	4.0	4.0	59.0		4.0	59.0	
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)	2.0	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		0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	3.0	3.0	2.0		3.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		9.7			9.7	23.0	77.2	73.4		64.8	59.0	
Actuated g/C Ratio		0.10			0.10	0.23	0.77	0.73		0.65	0.59	
v/c Ratio		0.68			0.48	0.26	0.12	0.29		0.05	1.25	
Control Delay		56.6			54.0	15.6	10.0	4.9		3.6	135.9	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.1	
Total Delay		56.6			54.0	15.6	10.0	4.9		3.6	136.0	
LOS		E			D	B	A	A		A	F	
Approach Delay		56.6			29.8			5.1			133.8	
Approach LOS		E			C			A			F	

Intersection Summary

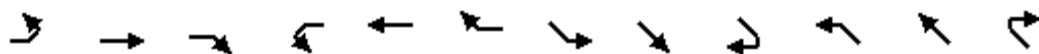
Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	99 (99%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
Natural Cycle:	140
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.25
Intersection Signal Delay:	81.3
Intersection LOS:	F
Intersection Capacity Utilization	84.0%
ICU Level of Service	E
Analysis Period (min)	15

Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

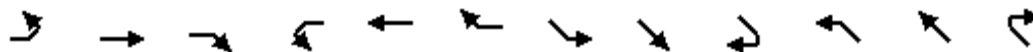
AM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	101	261	2	0	285	1021	519	25	148	0	0	0
Future Volume (vph)	101	261	2	0	285	1021	519	25	148	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	60			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00				0.97	1.00	0.99				
Frt		0.999				0.850		0.934				
Flt Protected	0.950						0.950	0.976				
Satd. Flow (prot)	1770	3535	0	0	1863	1583	1665	1581	0	0	0	0
Flt Permitted	0.260						0.950	0.000				
Satd. Flow (perm)	481	3535	0	0	1863	1531	1664	0	0	0	0	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)		1										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			788			590			231	
Travel Time (s)		10.2			17.9			13.4			5.3	
Confl. Peds. (#/hr)	6		2	2		6	1		3	3		1
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.95	0.95	0.95	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%	2%
Adj. Flow (vph)	123	318	2	0	306	1098	546	26	156	0	0	0
Shared Lane Traffic (%)							32%					
Lane Group Flow (vph)	123	320	0	0	306	1098	371	357	0	0	0	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			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
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	2	2			2	2	2	2				
Detector Template												
Leading Detector (ft)	60	62			65	65	60	60				
Trailing Detector (ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Position(ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Size(ft)	34	32			32	30	32	30				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)	26	30			33	35	28	30				
Detector 2 Size(ft)	34	32			32	30	32	30				
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				

Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

AM - Lane Re-allocation
10/21/2022

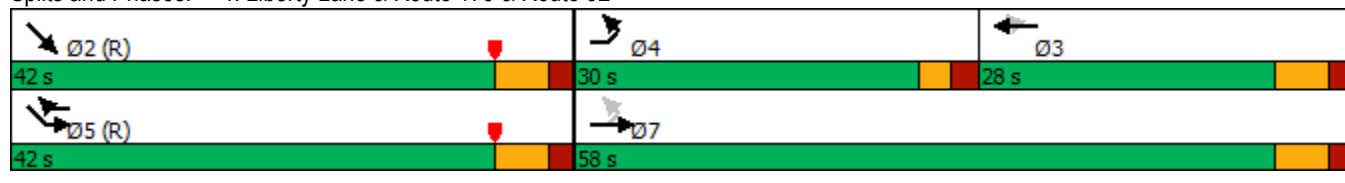


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	pm+pt	NA			NA	pm+ov	Prot	NA				
Protected Phases	4	7			3	5	5	2				
Permitted Phases	7					3		2				
Detector Phase	4	7			3	3	5	2				
Switch Phase												
Minimum Initial (s)	6.0	7.0			9.0	10.0	10.0	10.0				
Minimum Split (s)	29.5	21.0			28.0	16.0	16.0	31.0				
Total Split (s)	30.0	58.0			28.0	42.0	42.0	42.0				
Total Split (%)	30.0%	58.0%			28.0%	42.0%	42.0%	42.0%				
Maximum Green (s)	25.5	52.0			22.0	36.0	36.0	36.0				
Yellow Time (s)	2.5	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				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	6.0			6.0	6.0	6.0	6.0				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	2.0	2.0	2.0				
Recall Mode	None	None			None	C-Max	C-Max	C-Max				
Walk Time (s)	7.0	7.0			7.0			7.0				
Flash Dont Walk (s)	18.0	8.0			15.0			18.0				
Pedestrian Calls (#/hr)	0	0			0			0				
Act Effct Green (s)	38.4	36.9			22.0	73.1	51.1	51.1				
Actuated g/C Ratio	0.38	0.37			0.22	0.73	0.51	0.51				
v/c Ratio	0.39	0.25			0.75	0.96	0.44	0.44				
Control Delay	23.6	22.0			41.8	23.5	16.9	17.1				
Queue Delay	0.0	0.0			0.0	43.5	0.0	0.0				
Total Delay	23.6	22.0			41.8	67.1	16.9	17.1				
LOS	C	C			D	E	B	B				
Approach Delay		22.4			61.6			17.0				
Approach LOS		C			E			B				

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SET and 5:SEL, Start of Yellow
 Natural Cycle: 130
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 42.2
 Intersection LOS: D
 Intersection Capacity Utilization 78.2%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 4: Liberty Lane & Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations												
Traffic Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Future Volume (vph)	0	290	485	0	471	7	0	0	916	5	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor					1.00				1.00			
Frt			0.850		0.998				0.999			
Flt Protected									0.953			
Satd. Flow (prot)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Flt Permitted									0.953			
Satd. Flow (perm)	0	1845	1568	0	1858	0	0	0	1756	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			564		1				120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	0	337	564	0	589	9	0	0	935	5	1	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	337	564	0	598	0	0	0	941	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	20	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type		NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

AM - Lane Re-allocation
10/21/2022

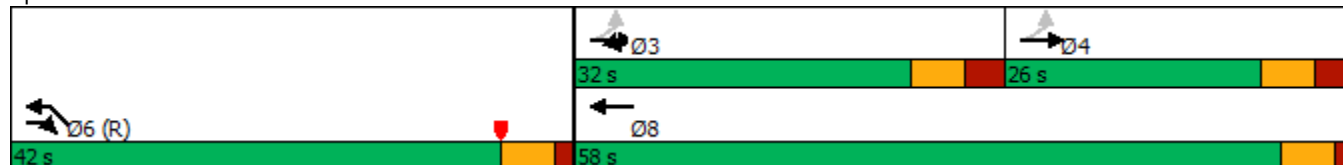


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4			8				6			
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				C-Max			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		37.4	75.5		38.9				50.1			
Actuated g/C Ratio		0.37	0.76		0.39				0.50			
v/c Ratio		0.49	0.43		0.83				1.00			
Control Delay		23.0	2.6		37.1				54.5			
Queue Delay		0.0	0.0		0.0				0.0			
Total Delay		23.0	2.6		37.1				54.5			
LOS		C	A		D				D			
Approach Delay		10.2			37.1				54.5			
Approach LOS		B			D				D			

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	0 (0%), Referenced to phase 6:NWL, Start of Yellow
Natural Cycle:	90
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	1.00
Intersection Signal Delay:	33.9
Intersection LOS:	C
Intersection Capacity Utilization:	85.5%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	2	31	21	0	6	23	343	13	2	380	51
Future Volume (vph)	16	2	31	21	0	6	23	343	13	2	380	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.858			0.971			0.994			0.982	
Flt Protected	0.950				0.962		0.950			0.950		
Satd. Flow (prot)	1752	1548	0	0	1735	0	1752	3449	0	1770	1790	0
Flt Permitted							0.333			0.440		
Satd. Flow (perm)	1840	1548	0	0	1798	0	614	3449	0	817	1790	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		36			120			5			8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			315			586			447	
Travel Time (s)		3.6			7.2			13.3			10.2	
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	19	2	36	22	0	6	37	544	21	3	543	73
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	38	0	0	28	0	37	565	0	3	616	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

AM - Lane Re-allocation
10/21/2022

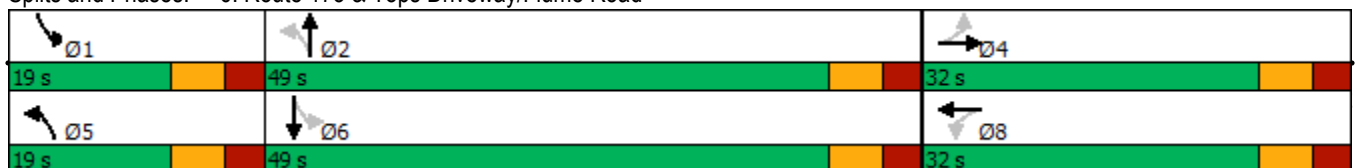


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4		8		8		5	2	1		6	
Permitted Phases	4		8		8		2		6			
Detector Phase	4	4	8		8		5	2	1		6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0		4.0	20.0	4.0		20.0	
Minimum Split (s)	32.0	32.0	29.0		29.0		11.0	30.0	11.0		29.0	
Total Split (s)	32.0	32.0	32.0		32.0		19.0	49.0	19.0		49.0	
Total Split (%)	32.0%	32.0%	32.0%		32.0%		19.0%	49.0%	19.0%		49.0%	
Maximum Green (s)	25.0	25.0	25.0		25.0		12.0	42.0	12.0		42.0	
Yellow Time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
All-Red Time (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0	7.0			7.0		7.0	7.0	7.0		7.0	
Lead/Lag							Lead	Lag	Lead		Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0	1.0		1.0		2.0	2.0	2.0		2.0	
Recall Mode	None	None	None		None		None	Min	None		Min	
Walk Time (s)	7.0	7.0	7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	18.0	18.0	15.0		15.0		16.0		16.0		15.0	
Pedestrian Calls (#/hr)	0	0	0		0		0		0		0	
Act Effct Green (s)	5.0	5.0			5.0		36.1	38.5	33.9		35.8	
Actuated g/C Ratio	0.10	0.10			0.10		0.71	0.75	0.66		0.70	
v/c Ratio	0.11	0.21			0.10		0.07	0.22	0.00		0.49	
Control Delay	27.2	14.6			0.7		3.7	4.9	4.0		10.7	
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Delay	27.2	14.6			0.7		3.7	4.9	4.0		10.8	
LOS	C	B			A		A	A	A		B	
Approach Delay	18.8				0.7		4.8				10.7	
Approach LOS	B				A		A				B	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	51.1
Natural Cycle:	80
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.49
Intersection Signal Delay:	8.1
Intersection LOS:	A
Intersection Capacity Utilization:	43.7%
ICU Level of Service:	A
Analysis Period (min):	15

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road





















Lanes, Volumes, Timings

PM - Existing Conditions

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

												
Lane Group	SBL2	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER
Lane Configurations												
Traffic Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Future Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		343	78		0		0		88
Storage Lanes		1	0		1	1		0		0		1
Taper Length (ft)		25				150				25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00		1.00						0.99
Frt		0.988		0.996			0.949					0.850
Flt Protected		0.956				0.950					0.950	
Satd. Flow (prot)	0	1713	0	3489	0	1770	3263	0	0	0	1770	1583
Flt Permitted		0.956				0.206					0.857	
Satd. Flow (perm)	0	1708	0	3489	0	383	3263	0	0	0	1596	1561
Right Turn on Red					No							No
Satd. Flow (RTOR)												
Link Speed (mph)		30		30			30				30	
Link Distance (ft)		689		891			731				604	
Travel Time (s)		15.7		20.3			16.6				13.7	
Confl. Peds. (#/hr)	2				5	5						2
Peak Hour Factor	0.81	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%
Adj. Flow (vph)	1	372	35	940	29	48	731	377	46	27	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	0	969	0	48	1108	0	0	0	73	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		12		12			12				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	15	9		9	15		9	15	15		9
Number of Detectors	2	2		0		2	0		1	1	2	2
Detector Template									Left	Left		
Leading Detector (ft)	60	60		0		52	0		20	20	60	60
Trailing Detector (ft)	-10	-10		0		-10	0		0	0	-10	-10
Detector 1 Position(ft)	-10	-10		0		-10	0		0	0	-10	-10
Detector 1 Size(ft)	30	30		20		30	20		20	20	30	30
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30	30				22					30	30
Detector 2 Size(ft)	30	30				30					30	30
Detector 2 Type	Cl+Ex	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0				0.0					0.0	0.0



Lane Group	SWL	SWT	SWR
Lane Configurations			
Traffic Volume (vph)	9	1	9
Future Volume (vph)	9	1	9
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	0		0
Storage Lanes	0		0
Taper Length (ft)	25		
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor		1.00	
Frt		0.936	
Flt Protected		0.977	
Satd. Flow (prot)	0	1703	0
Flt Permitted		0.813	
Satd. Flow (perm)	0	1416	0
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)		30	
Link Distance (ft)		179	
Travel Time (s)		4.1	
Confl. Peds. (#/hr)	2		
Peak Hour Factor	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%
Adj. Flow (vph)	36	4	36
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	76	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		0	
Link Offset(ft)		0	
Crosswalk Width(ft)		16	
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (mph)	15		9
Number of Detectors	1	0	
Detector Template	Left		
Leading Detector (ft)	20	0	
Trailing Detector (ft)	0	0	
Detector 1 Position(ft)	0	-10	
Detector 1 Size(ft)	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			

Lanes, Volumes, Timings

PM - Existing Conditions

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

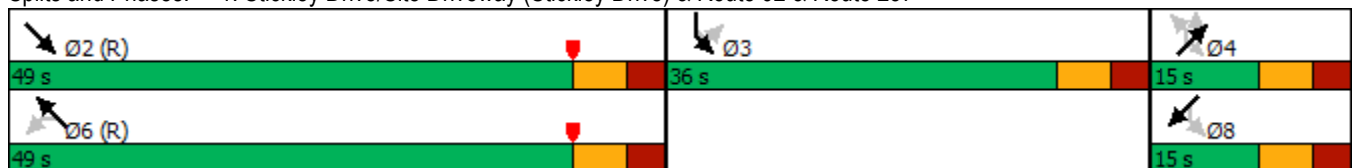
10/21/2022

Lane Group	SBL2	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER
Turn Type	Perm	Prot		NA		Perm	NA		Perm	Perm	NA	Perm
Protected Phases		3		2			6				4	
Permitted Phases	3					6			4	4		4
Detector Phase	3	3		2		6	6		4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		8.0		6.0	6.0		4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	11.0		33.0		13.0	13.0		33.0	33.0	33.0	33.0
Total Split (s)	36.0	36.0		49.0		49.0	49.0		15.0	15.0	15.0	15.0
Total Split (%)	36.0%	36.0%		49.0%		49.0%	49.0%		15.0%	15.0%	15.0%	15.0%
Maximum Green (s)	29.0	29.0		42.0		42.0	42.0		8.0	8.0	8.0	8.0
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)	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0	3.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0				0.0	0.0
Total Lost Time (s)		7.0		7.0		7.0	7.0				7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		2.0		2.0	2.0		1.0	1.0	1.0	1.0
Recall Mode	None	None		C-Max		C-Max	C-Max		None	None	None	None
Walk Time (s)				7.0					7.0	7.0	7.0	7.0
Flash Dont Walk (s)				19.0					19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)				0					0	0	0	0
Act Effct Green (s)		26.1		47.9		47.9	47.9				7.3	7.3
Actuated g/C Ratio		0.26		0.48		0.48	0.48				0.07	0.07
v/c Ratio		0.91		0.58		0.26	0.71				0.63	0.18
Control Delay		62.0		22.3		23.4	21.6				69.2	46.8
Queue Delay		0.0		0.0		0.0	0.0				0.0	0.0
Total Delay		62.0		22.3		23.4	21.6				69.2	46.8
LOS		E		C		C	C				E	D
Approach Delay		62.0		22.3			21.7				64.4	
Approach LOS		E		C			C				E	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	100
Offset:	98 (98%), Referenced to phase 2:SET and 6:NWTL, Start of Yellow
Natural Cycle:	100
Control Type:	Actuated-Coordinated
Maximum v/c Ratio:	0.91
Intersection Signal Delay:	31.1
Intersection LOS:	C
Intersection Capacity Utilization:	78.6%
ICU Level of Service:	D
Analysis Period (min):	15

Splits and Phases: 1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257





Lane Group	SWL	SWT	SWR
Turn Type	Perm	NA	
Protected Phases		8	
Permitted Phases	8		
Detector Phase	8	8	
Switch Phase			
Minimum Initial (s)	4.0	4.0	
Minimum Split (s)	11.0	11.0	
Total Split (s)	15.0	15.0	
Total Split (%)	15.0%	15.0%	
Maximum Green (s)	8.0	8.0	
Yellow Time (s)	4.0	4.0	
All-Red Time (s)	3.0	3.0	
Lost Time Adjust (s)		0.0	
Total Lost Time (s)		7.0	
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.0	2.0	
Recall Mode	None	None	
Walk Time (s)			
Flash Dont Walk (s)			
Pedestrian Calls (#/hr)			
Act Effct Green (s)		7.5	
Actuated g/C Ratio		0.08	
v/c Ratio		0.72	
Control Delay		80.2	
Queue Delay		0.0	
Total Delay		80.2	
LOS		F	
Approach Delay		80.2	
Approach LOS		F	
Intersection Summary			

Lanes, Volumes, Timings
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

PM - Existing Conditions
10/21/2022



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↕	↗		↕	
Traffic Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Future Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.99		0.99	
Frt		0.997			0.998				0.850		0.924	
Flt Protected		0.998			0.997			0.958			0.987	
Satd. Flow (prot)	0	3487	0	0	3427	0	0	1785	1583	0	1686	0
Flt Permitted		0.858			0.707			0.721			0.893	
Satd. Flow (perm)	0	2998	0	0	2430	0	0	1342	1560	0	1525	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		3			2							26
Link Speed (mph)		30			30			30				30
Link Distance (ft)		731			886			331				443
Travel Time (s)		16.6			20.1			7.5				10.1
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	45	1314	30	67	1079	13	102	15	115	12	8	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1389	0	0	1159	0	0	117	115	0	46	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
Number of Detectors	1	0		1	0		1	2	2	1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20	70	
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Size(ft)	20	6		20	6		20	32	30	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								33	35		40	
Detector 2 Size(ft)								32	30		30	
Detector 2 Type								Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0		0.0	

Lanes, Volumes, Timings
 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

PM - Existing Conditions
 10/21/2022

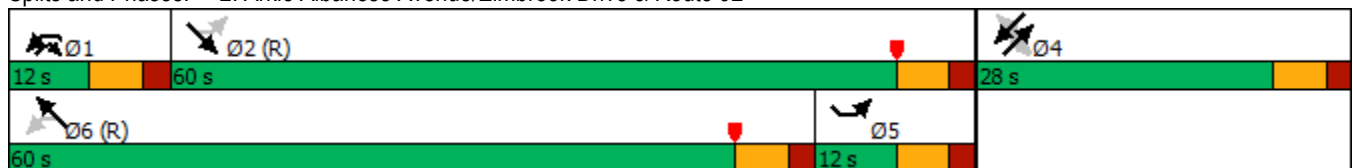


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			4	1		4	
Permitted Phases	2			6			4		4	4		
Detector Phase	5	2		1	6		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	4.0	20.0		6.0	20.0		4.0	4.0	6.0	4.0	4.0	
Minimum Split (s)	10.0	27.0		12.0	33.0		28.0	28.0	12.0	28.0	28.0	
Total Split (s)	12.0	60.0		12.0	60.0		28.0	28.0	12.0	28.0	28.0	
Total Split (%)	12.0%	60.0%		12.0%	60.0%		28.0%	28.0%	12.0%	28.0%	28.0%	
Maximum Green (s)	6.0	54.0		6.0	54.0		22.0	22.0	6.0	22.0	22.0	
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)	2.0	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		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes			Yes								
Vehicle Extension (s)	3.0	2.0		2.0	2.0		1.0	1.0	2.0	1.0	1.0	
Recall Mode	None	C-Max		Max	C-Max		None	None	Max	None	None	
Walk Time (s)		7.0		7.0			7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		14.0		20.0			15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0		0			0	0		0	0	
Act Effct Green (s)		63.8		75.8			12.2	18.2		12.2	12.2	
Actuated g/C Ratio		0.64		0.76			0.12	0.18		0.12	0.12	
v/c Ratio		0.73		0.61			0.72	0.40		0.22	0.22	
Control Delay		10.1		5.0			65.1	34.4		22.9	22.9	
Queue Delay		0.0		0.0			0.0	0.0		0.0	0.0	
Total Delay		10.1		5.0			65.1	34.4		22.9	22.9	
LOS		B		A			E	C		C	C	
Approach Delay		10.1		5.0			49.9			22.9	22.9	
Approach LOS		B		A			D			C	C	

Intersection Summary

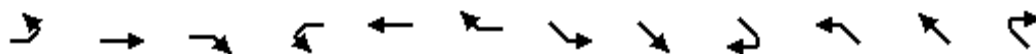
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 11.5
 Intersection LOS: B
 Intersection Capacity Utilization 86.6%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92



Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

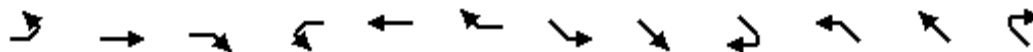
PM - Existing Conditions
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Future Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	0		0	0		0
Storage Lanes	0		0	0		1	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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.98		1.00				1.00
Frt		0.929				0.850		0.990				0.998
Flt Protected		0.980			0.966			0.998				0.999
Satd. Flow (prot)	0	1681	0	0	1799	1583	0	3459	0	0	3429	0
Flt Permitted		0.838			0.607			0.852				0.930
Satd. Flow (perm)	0	1435	0	0	1128	1557	0	2953	0	0	3192	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				64		17				3
Link Speed (mph)		30			30			30				30
Link Distance (ft)		263			346			886				590
Travel Time (s)		6.0			7.9			20.1				13.4
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	65	11	84	47	20	64	51	1226	90	13	1086	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	160	0	0	67	64	0	1367	0	0	1117	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	1.00	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	2	1	2		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20	0	
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Size(ft)	20	30		20	32	30	20	30		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

PM - Existing Conditions
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			4	5	5	2			6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		28.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	11.0	11.0	75.0		64.0	64.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	11.0%	11.0%	75.0%		64.0%	64.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	5.0	5.0	69.0		58.0	58.0	
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)	2.0	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						Lead	Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		11.5			11.5	16.5		76.5			65.5	
Actuated g/C Ratio		0.12			0.12	0.16		0.76			0.66	
v/c Ratio		0.77			0.52	0.21		0.60			0.53	
Control Delay		52.1			53.9	8.8		10.6			8.8	
Queue Delay		0.0			0.0	0.0		0.0			0.2	
Total Delay		52.1			53.9	8.8		10.6			9.0	
LOS		D			D	A		B			A	
Approach Delay		52.1			31.9			10.6			9.0	
Approach LOS		D			C			B			A	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.3
 Intersection LOS: B
 Intersection Capacity Utilization 88.8%
 ICU Level of Service E
 Analysis Period (min) 15

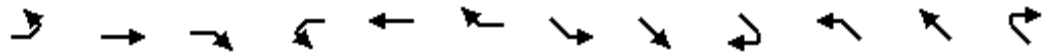
Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

PM - Existing Conditions

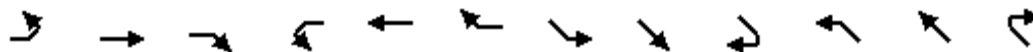
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	210	472	2	0	309	709	987	18	184	0	0	0
Future Volume (vph)	210	472	2	0	309	709	987	18	184	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	60			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00				0.98	1.00	0.99				
Fr _t		0.999				0.850		0.953				
Fl _t Protected	0.950						0.950	0.968				
Satd. Flow (prot)	1770	3535	0	0	1863	1583	1665	1604	0	0	0	0
Fl _t Permitted	0.216						0.950	0.000				
Satd. Flow (perm)	401	3535	0	0	1863	1552	1664	0	0	0	0	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			788			590			231	
Travel Time (s)		10.2			17.9			13.4			5.3	
Confl. Peds. (#/hr)	6		2	2		6	1		3	3		1
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.95	0.95	0.95	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%	2%
Adj. Flow (vph)	256	576	2	0	332	762	1039	19	194	0	0	0
Shared Lane Traffic (%)							39%					
Lane Group Flow (vph)	256	578	0	0	332	762	634	618	0	0	0	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			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	2	2			2	2	2	2				
Detector Template												
Leading Detector (ft)	60	62			65	65	60	60				
Trailing Detector (ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Position(ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Size(ft)	34	32			32	30	32	30				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)	26	30			33	35	28	30				
Detector 2 Size(ft)	34	32			32	30	32	30				
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				

Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

PM - Existing Conditions
10/21/2022

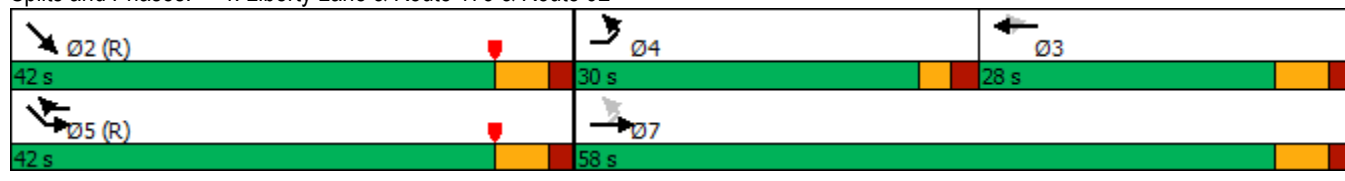


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	pm+pt	NA			NA	pm+ov	Prot	NA				
Protected Phases	4	7			3	5	5	2				
Permitted Phases	7					3		2				
Detector Phase	4	7			3	3	5	2				
Switch Phase												
Minimum Initial (s)	6.0	7.0			9.0	10.0	10.0	10.0				
Minimum Split (s)	29.5	21.0			28.0	16.0	16.0	31.0				
Total Split (s)	30.0	58.0			28.0	42.0	42.0	42.0				
Total Split (%)	30.0%	58.0%			28.0%	42.0%	42.0%	42.0%				
Maximum Green (s)	25.5	52.0			22.0	36.0	36.0	36.0				
Yellow Time (s)	2.5	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				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	6.0			6.0	6.0	6.0	6.0				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	2.0	2.0	2.0				
Recall Mode	None	None			None	C-Max	C-Max	C-Max				
Walk Time (s)	7.0	7.0			7.0			7.0				
Flash Dont Walk (s)	18.0	8.0			15.0			18.0				
Pedestrian Calls (#/hr)	0	0			0			0				
Act Effct Green (s)	43.3	41.8			21.8	67.9	46.2	46.2				
Actuated g/C Ratio	0.43	0.42			0.22	0.68	0.46	0.46				
v/c Ratio	0.66	0.39			0.82	0.71	0.83	0.84				
Control Delay	27.0	20.6			55.0	13.4	31.9	32.9				
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0				
Total Delay	27.0	20.6			55.0	13.4	31.9	32.9				
LOS	C	C			D	B	C	C				
Approach Delay		22.6			26.0			32.4				
Approach LOS		C			C			C				

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SET and 5:SEL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 27.6
 Intersection LOS: C
 Intersection Capacity Utilization 82.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 4: Liberty Lane & Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - Existing Conditions
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations		↕	↗		↖				↘			
Traffic Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Future Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor		1.00			1.00				1.00			
Frt			0.850						0.997			
Flt Protected		0.999							0.953			
Satd. Flow (prot)	0	1843	1568	0	1863	0	0	0	1752	0	0	
Flt Permitted		0.988							0.953			
Satd. Flow (perm)	0	1823	1568	0	1863	0	0	0	1752	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			1091						120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	12	535	1238	0	394	1	0	0	733	9	6	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	1238	0	395	0	0	0	748	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	15	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - Existing Conditions
10/21/2022

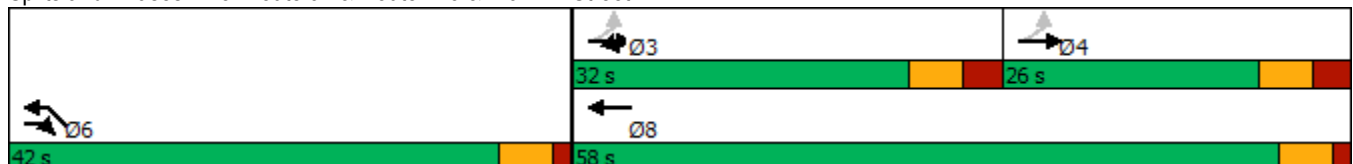


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4			8				6			
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				Min			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		39.6	65.0		41.1				36.7			
Actuated g/C Ratio		0.45	0.73		0.46				0.41			
v/c Ratio		0.67	0.86		0.46				0.94			
Control Delay		24.0	9.2		17.9				44.3			
Queue Delay		0.0	0.1		0.0				0.0			
Total Delay		24.0	9.2		17.9				44.3			
LOS		C	A		B				D			
Approach Delay		13.8			17.9				44.3			
Approach LOS		B			B				D			

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	88.9
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	22.1
Intersection LOS:	C
Intersection Capacity Utilization:	83.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - Existing Conditions
10/21/2022

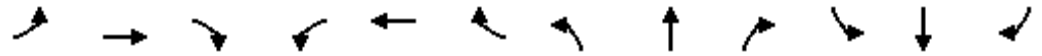


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	2	112	24	7	59	80	509	10	5	399	89
Future Volume (vph)	114	2	112	24	7	59	80	509	10	5	399	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.852			0.911			0.997			0.973	
Flt Protected	0.950				0.987		0.950			0.950		
Satd. Flow (prot)	1752	1535	0	0	1659	0	1752	3460	0	1770	1772	0
Flt Permitted	0.836				0.865		0.184			0.341		
Satd. Flow (perm)	1538	1535	0	0	1452	0	339	3460	0	634	1772	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130			61			2				14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		159			315			586				447
Travel Time (s)		3.6			7.2			13.3				10.2
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	133	2	130	25	7	61	127	808	16	7	570	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	132	0	0	93	0	127	824	0	7	697	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - Existing Conditions

10/21/2022

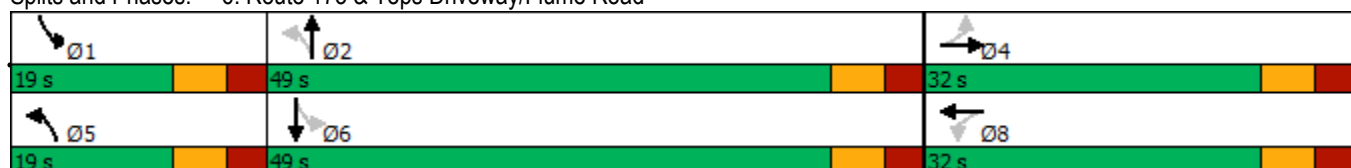


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4				8		5	2	1		6	
Permitted Phases	4		8				2		6			
Detector Phase	4	4	8		8		5	2	1		6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0		4.0	20.0	4.0		20.0	
Minimum Split (s)	32.0	32.0	29.0		29.0		11.0	30.0	11.0		29.0	
Total Split (s)	32.0	32.0	32.0		32.0		19.0	49.0	19.0		49.0	
Total Split (%)	32.0%	32.0%	32.0%		32.0%		19.0%	49.0%	19.0%		49.0%	
Maximum Green (s)	25.0	25.0	25.0		25.0		12.0	42.0	12.0		42.0	
Yellow Time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
All-Red Time (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0	7.0			7.0		7.0	7.0	7.0		7.0	
Lead/Lag							Lead	Lag	Lead		Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0	1.0		1.0		2.0	2.0	2.0		2.0	
Recall Mode	None	None	None		None		None	Min	None		Min	
Walk Time (s)	7.0	7.0	7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	18.0	18.0	15.0		15.0		16.0		15.0		15.0	
Pedestrian Calls (#/hr)	0	0	0		0		0		0		0	
Act Effct Green (s)	11.3	11.3			11.3		47.7	45.8	38.8		35.3	
Actuated g/C Ratio	0.15	0.15			0.15		0.64	0.62	0.52		0.48	
v/c Ratio	0.57	0.38			0.34		0.32	0.39	0.02		0.82	
Control Delay	43.0	10.3			18.3		7.3	8.5	6.2		28.7	
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.5	
Total Delay	43.0	10.3			18.3		7.3	8.5	6.2		29.2	
LOS	D	B			B		A	A	A		C	
Approach Delay	26.7				18.3		8.4				29.0	
Approach LOS	C				B		A				C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	74.3
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	18.5
Intersection LOS:	B
Intersection Capacity Utilization:	61.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road





















Lanes, Volumes, Timings

PM - 173 WB Right Turn Bay

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

												
Lane Group	SBL2	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER
Lane Configurations												
Traffic Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Future Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		343	78		0		0		88
Storage Lanes		1	0		1	1		0		0		1
Taper Length (ft)		25				150				25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00		1.00						0.99
Frt		0.988		0.996			0.949					0.850
Flt Protected		0.956				0.950					0.950	
Satd. Flow (prot)	0	1713	0	3489	0	1770	3263	0	0	0	1770	1583
Flt Permitted		0.956				0.206					0.857	
Satd. Flow (perm)	0	1708	0	3489	0	383	3263	0	0	0	1596	1561
Right Turn on Red					No							No
Satd. Flow (RTOR)												
Link Speed (mph)		30		30			30				30	
Link Distance (ft)		689		891			731				604	
Travel Time (s)		15.7		20.3			16.6				13.7	
Confl. Peds. (#/hr)	2				5	5						2
Peak Hour Factor	0.81	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%
Adj. Flow (vph)	1	372	35	940	29	48	731	377	46	27	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	0	969	0	48	1108	0	0	0	73	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		12		12			12				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	15	9		9	15		9	15	15		9
Number of Detectors	2	2		0		2	0		1	1	2	2
Detector Template									Left	Left		
Leading Detector (ft)	60	60		0		52	0		20	20	60	60
Trailing Detector (ft)	-10	-10		0		-10	0		0	0	-10	-10
Detector 1 Position(ft)	-10	-10		0		-10	0		0	0	-10	-10
Detector 1 Size(ft)	30	30		20		30	20		20	20	30	30
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30	30				22					30	30
Detector 2 Size(ft)	30	30				30					30	30
Detector 2 Type	Cl+Ex	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0				0.0					0.0	0.0



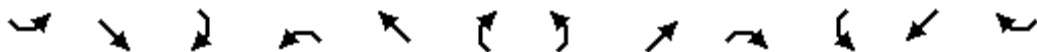
Lane Group	SWL	SWT	SWR
Lane Configurations			
Traffic Volume (vph)	9	1	9
Future Volume (vph)	9	1	9
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	0		0
Storage Lanes	0		0
Taper Length (ft)	25		
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor		1.00	
Frt		0.936	
Flt Protected		0.977	
Satd. Flow (prot)	0	1703	0
Flt Permitted		0.813	
Satd. Flow (perm)	0	1416	0
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)		30	
Link Distance (ft)		179	
Travel Time (s)		4.1	
Confl. Peds. (#/hr)	2		
Peak Hour Factor	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%
Adj. Flow (vph)	36	4	36
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	76	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		0	
Link Offset(ft)		0	
Crosswalk Width(ft)		16	
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (mph)	15		9
Number of Detectors	1	0	
Detector Template	Left		
Leading Detector (ft)	20	0	
Trailing Detector (ft)	0	0	
Detector 1 Position(ft)	0	-10	
Detector 1 Size(ft)	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			



Lane Group	SWL	SWT	SWR
Turn Type	Perm	NA	
Protected Phases		8	
Permitted Phases	8		
Detector Phase	8	8	
Switch Phase			
Minimum Initial (s)	4.0	4.0	
Minimum Split (s)	11.0	11.0	
Total Split (s)	15.0	15.0	
Total Split (%)	15.0%	15.0%	
Maximum Green (s)	8.0	8.0	
Yellow Time (s)	4.0	4.0	
All-Red Time (s)	3.0	3.0	
Lost Time Adjust (s)		0.0	
Total Lost Time (s)		7.0	
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.0	2.0	
Recall Mode	None	None	
Walk Time (s)			
Flash Dont Walk (s)			
Pedestrian Calls (#/hr)			
Act Effct Green (s)		7.5	
Actuated g/C Ratio		0.08	
v/c Ratio		0.72	
Control Delay		80.2	
Queue Delay		0.0	
Total Delay		80.2	
LOS		F	
Approach Delay		80.2	
Approach LOS		F	
Intersection Summary			

Lanes, Volumes, Timings
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

PM - 173 WB Right Turn Bay
10/21/2022



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↕	↗		↕	
Traffic Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Future Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.99		0.99	
Frt		0.997			0.998				0.850		0.924	
Flt Protected		0.998			0.997			0.958			0.987	
Satd. Flow (prot)	0	3487	0	0	3427	0	0	1785	1583	0	1686	0
Flt Permitted		0.858			0.707			0.721			0.893	
Satd. Flow (perm)	0	2998	0	0	2430	0	0	1342	1560	0	1525	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		3			2							26
Link Speed (mph)		30			30			30				30
Link Distance (ft)		731			886			331				443
Travel Time (s)		16.6			20.1			7.5				10.1
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	45	1314	30	67	1079	13	102	15	115	12	8	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1389	0	0	1159	0	0	117	115	0	46	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
Number of Detectors	1	0		1	0		1	2	2	1		2
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20		70
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0		0
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0		0
Detector 1 Size(ft)	20	6		20	6		20	32	30	20		30
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Detector 2 Position(ft)								33	35			40
Detector 2 Size(ft)								32	30			30
Detector 2 Type								Cl+Ex	Cl+Ex			Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0			0.0

Lanes, Volumes, Timings
 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

PM - 173 WB Right Turn Bay
 10/21/2022

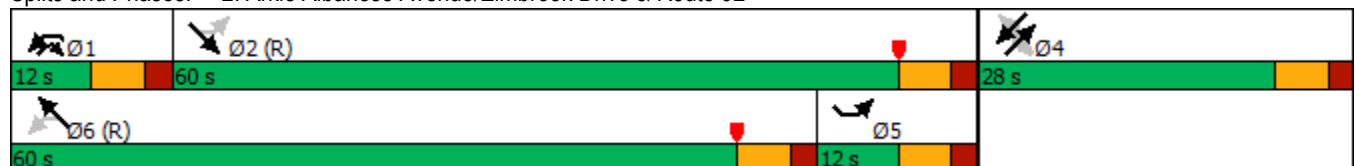


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			4	1			4
Permitted Phases	2			6			4		4	4		
Detector Phase	5	2		1	6		4	4	4	4		4
Switch Phase												
Minimum Initial (s)	4.0	20.0		6.0	20.0		4.0	4.0	6.0	4.0		4.0
Minimum Split (s)	10.0	27.0		12.0	33.0		28.0	28.0	12.0	28.0		28.0
Total Split (s)	12.0	60.0		12.0	60.0		28.0	28.0	12.0	28.0		28.0
Total Split (%)	12.0%	60.0%		12.0%	60.0%		28.0%	28.0%	12.0%	28.0%		28.0%
Maximum Green (s)	6.0	54.0		6.0	54.0		22.0	22.0	6.0	22.0		22.0
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)	2.0	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		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	3.0	2.0		2.0	2.0		1.0	1.0	2.0	1.0		1.0
Recall Mode	None	C-Max		Max	C-Max		None	None	Max	None		None
Walk Time (s)		7.0			7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		14.0			20.0		15.0	15.0		15.0		15.0
Pedestrian Calls (#/hr)		0			0		0	0		0		0
Act Effct Green (s)		63.8			75.8			12.2	18.2			12.2
Actuated g/C Ratio		0.64			0.76			0.12	0.18			0.12
v/c Ratio		0.73			0.61			0.72	0.40			0.22
Control Delay		10.1			5.0			65.1	34.4			22.9
Queue Delay		0.0			0.0			0.0	0.0			0.0
Total Delay		10.1			5.0			65.1	34.4			22.9
LOS		B			A			E	C			C
Approach Delay		10.1			5.0			49.9				22.9
Approach LOS		B			A			D				C

Intersection Summary

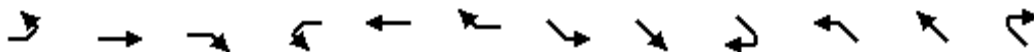
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 11.5
 Intersection LOS: B
 Intersection Capacity Utilization 86.6%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92



Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

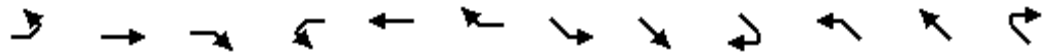
PM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Future Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	0		0	0		0
Storage Lanes	0		0	0		1	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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.98		1.00				1.00
Frt		0.929				0.850		0.990				0.998
Flt Protected		0.980			0.966			0.998				0.999
Satd. Flow (prot)	0	1681	0	0	1799	1583	0	3459	0	0	3429	0
Flt Permitted		0.838			0.607			0.852				0.930
Satd. Flow (perm)	0	1435	0	0	1128	1557	0	2953	0	0	3192	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				64		17				3
Link Speed (mph)		30			30			30				30
Link Distance (ft)		263			346			886				590
Travel Time (s)		6.0			7.9			20.1				13.4
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	65	11	84	47	20	64	51	1226	90	13	1086	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	160	0	0	67	64	0	1367	0	0	1117	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	1.00	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	2	1	2		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20	0	
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Size(ft)	20	30		20	32	30	20	30		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

PM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			4	5	5	2			6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		28.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	11.0	11.0	75.0		64.0	64.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	11.0%	11.0%	75.0%		64.0%	64.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	5.0	5.0	69.0		58.0	58.0	
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)	2.0	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						Lead	Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		11.5			11.5	16.5		76.5			65.5	
Actuated g/C Ratio		0.12			0.12	0.16		0.76			0.66	
v/c Ratio		0.77			0.52	0.21		0.60			0.53	
Control Delay		52.1			53.9	8.8		10.6			8.8	
Queue Delay		0.0			0.0	0.0		0.0			0.2	
Total Delay		52.1			53.9	8.8		10.6			9.0	
LOS		D			D	A		B			A	
Approach Delay		52.1			31.9			10.6			9.0	
Approach LOS		D			C			B			A	

Intersection Summary

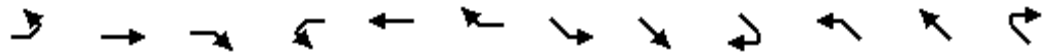
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.3
 Intersection LOS: B
 Intersection Capacity Utilization 88.8%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

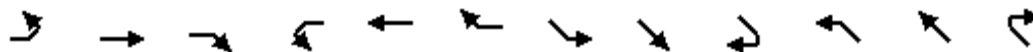
PM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	210	472	2	0	309	709	987	18	184	0	0	0
Future Volume (vph)	210	472	2	0	309	709	987	18	184	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	0		230	0		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	60			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	1.00	1.00				0.98	1.00	0.99				
Frt		0.999				0.850		0.953				
Flt Protected	0.950						0.950	0.968				
Satd. Flow (prot)	1770	3535	0	0	1863	1583	1665	1604	0	0	0	0
Flt Permitted	0.216						0.950	0.000				
Satd. Flow (perm)	401	3535	0	0	1863	1552	1664	0	0	0	0	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			788			590			231	
Travel Time (s)		10.2			17.9			13.4			5.3	
Confl. Peds. (#/hr)	6		2	2		6	1		3	3		1
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.95	0.95	0.95	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%	2%
Adj. Flow (vph)	256	576	2	0	332	762	1039	19	194	0	0	0
Shared Lane Traffic (%)							39%					
Lane Group Flow (vph)	256	578	0	0	332	762	634	618	0	0	0	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			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	2	2			2	2	2	2				
Detector Template												
Leading Detector (ft)	60	62			65	65	60	60				
Trailing Detector (ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Position(ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Size(ft)	34	32			32	30	32	30				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)	26	30			33	35	28	30				
Detector 2 Size(ft)	34	32			32	30	32	30				
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				

Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

PM - 173 WB Right Turn Bay
10/21/2022

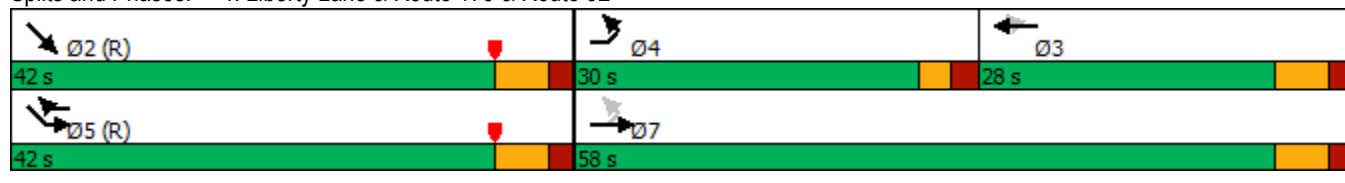


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	pm+pt	NA			NA	pm+ov	Prot	NA				
Protected Phases	4	7			3	5	5	2				
Permitted Phases	7					3		2				
Detector Phase	4	7			3	3	5	2				
Switch Phase												
Minimum Initial (s)	6.0	7.0			9.0	10.0	10.0	10.0				
Minimum Split (s)	29.5	21.0			28.0	16.0	16.0	31.0				
Total Split (s)	30.0	58.0			28.0	42.0	42.0	42.0				
Total Split (%)	30.0%	58.0%			28.0%	42.0%	42.0%	42.0%				
Maximum Green (s)	25.5	52.0			22.0	36.0	36.0	36.0				
Yellow Time (s)	2.5	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				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	6.0			6.0	6.0	6.0	6.0				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	2.0	2.0	2.0				
Recall Mode	None	None			None	C-Max	C-Max	C-Max				
Walk Time (s)	7.0	7.0			7.0			7.0				
Flash Dont Walk (s)	18.0	8.0			15.0			18.0				
Pedestrian Calls (#/hr)	0	0			0			0				
Act Effct Green (s)	43.3	41.8			21.8	67.9	46.2	46.2				
Actuated g/C Ratio	0.43	0.42			0.22	0.68	0.46	0.46				
v/c Ratio	0.66	0.39			0.82	0.71	0.83	0.84				
Control Delay	27.0	20.6			55.0	13.4	31.9	32.9				
Queue Delay	0.0	0.0			0.0	0.0	0.0	0.0				
Total Delay	27.0	20.6			55.0	13.4	31.9	32.9				
LOS	C	C			D	B	C	C				
Approach Delay		22.6			26.0			32.4				
Approach LOS		C			C			C				

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SET and 5:SEL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 27.6
 Intersection LOS: C
 Intersection Capacity Utilization 82.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 4: Liberty Lane & Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations												
Traffic Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Future Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor		1.00			1.00				1.00			
Frt			0.850						0.997			
Flt Protected		0.999							0.953			
Satd. Flow (prot)	0	1843	1568	0	1863	0	0	0	1752	0	0	
Flt Permitted		0.988							0.953			
Satd. Flow (perm)	0	1823	1568	0	1863	0	0	0	1752	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			1091						120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	12	535	1238	0	394	1	0	0	733	9	6	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	1238	0	395	0	0	0	748	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	15	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - 173 WB Right Turn Bay
10/21/2022

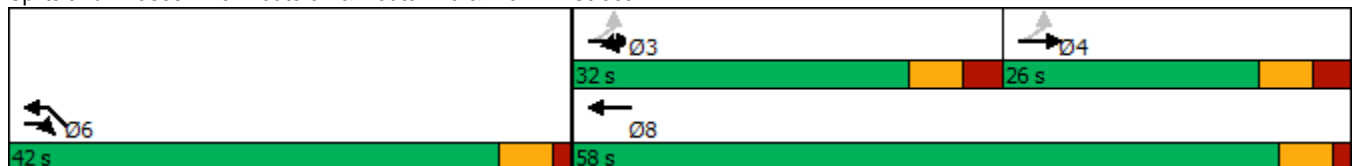


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4			8				6			
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				Min			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		39.6	65.0		41.1				36.7			
Actuated g/C Ratio		0.45	0.73		0.46				0.41			
v/c Ratio		0.67	0.86		0.46				0.94			
Control Delay		24.0	9.2		17.9				44.3			
Queue Delay		0.0	0.1		0.0				0.0			
Total Delay		24.0	9.2		17.9				44.3			
LOS		C	A		B				D			
Approach Delay		13.8			17.9				44.3			
Approach LOS		B			B				D			

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	88.9
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	22.1
Intersection LOS:	C
Intersection Capacity Utilization:	83.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	2	112	24	7	59	80	509	10	5	399	89
Future Volume (vph)	114	2	112	24	7	59	80	509	10	5	399	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.852			0.911			0.997			0.973	
Flt Protected	0.950				0.987		0.950			0.950		
Satd. Flow (prot)	1752	1535	0	0	1659	0	1752	3460	0	1770	1772	0
Flt Permitted	0.836				0.865		0.184			0.341		
Satd. Flow (perm)	1538	1535	0	0	1452	0	339	3460	0	634	1772	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130			61			2			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			315			586			447	
Travel Time (s)		3.6			7.2			13.3			10.2	
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	133	2	130	25	7	61	127	808	16	7	570	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	132	0	0	93	0	127	824	0	7	697	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - 173 WB Right Turn Bay
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8		2		6					
Detector Phase	4		8		8		5		2		1	
Switch Phase												
Minimum Initial (s)	4.0		4.0		4.0		20.0		4.0		20.0	
Minimum Split (s)	32.0		29.0		29.0		30.0		11.0		29.0	
Total Split (s)	32.0		32.0		32.0		49.0		19.0		49.0	
Total Split (%)	32.0%		32.0%		32.0%		49.0%		19.0%		49.0%	
Maximum Green (s)	25.0		25.0		25.0		42.0		12.0		42.0	
Yellow Time (s)	4.0		4.0		4.0		4.0		4.0		4.0	
All-Red Time (s)	3.0		3.0		3.0		3.0		3.0		3.0	
Lost Time Adjust (s)	0.0		0.0		0.0		0.0		0.0		0.0	
Total Lost Time (s)	7.0		7.0		7.0		7.0		7.0		7.0	
Lead/Lag							Lead	Lag	Lead		Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0		1.0		1.0		2.0		2.0		2.0	
Recall Mode	None		None		None		Min		None		Min	
Walk Time (s)	7.0		7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	18.0		18.0		15.0		16.0		15.0		15.0	
Pedestrian Calls (#/hr)	0		0		0		0		0		0	
Act Effct Green (s)	11.3		11.3		11.3		45.8		38.8		35.3	
Actuated g/C Ratio	0.15		0.15		0.15		0.62		0.52		0.48	
v/c Ratio	0.57		0.38		0.34		0.39		0.02		0.82	
Control Delay	43.0		10.3		18.3		8.5		6.2		28.7	
Queue Delay	0.0		0.0		0.0		0.0		0.0		0.5	
Total Delay	43.0		10.3		18.3		8.5		6.2		29.2	
LOS	D		B		B		A		A		C	
Approach Delay	26.7		18.3		8.4		29.0					
Approach LOS	C		B		A		C					

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	74.3
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	18.5
Intersection LOS:	B
Intersection Capacity Utilization:	61.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road



Lanes, Volumes, Timings

PM - Close Liberty Lane

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

Lane Group	SBL2	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER
Lane Configurations												
Traffic Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Future Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		343	78		0		0		88
Storage Lanes		1	0		1	1		0		0		1
Taper Length (ft)		25				150				25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00		1.00						0.99
Fr _t		0.988		0.996			0.949					0.850
Fl _t Protected		0.956				0.950					0.950	
Satd. Flow (prot)	0	1713	0	3489	0	1770	3263	0	0	0	1770	1583
Fl _t Permitted		0.956				0.206					0.857	
Satd. Flow (perm)	0	1708	0	3489	0	383	3263	0	0	0	1596	1561
Right Turn on Red					No							No
Satd. Flow (RTOR)												
Link Speed (mph)		30		30			30				30	
Link Distance (ft)		689		891			731				604	
Travel Time (s)		15.7		20.3			16.6				13.7	
Confl. Peds. (#/hr)	2				5	5						2
Peak Hour Factor	0.81	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%
Adj. Flow (vph)	1	372	35	940	29	48	731	377	46	27	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	0	969	0	48	1108	0	0	0	73	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		12		12			12				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	15	9		9	15		9	15	15		9
Number of Detectors	2	2		0		2	0		1	1	2	2
Detector Template									Left	Left		
Leading Detector (ft)	60	60		0		52	0		20	20	60	60
Trailing Detector (ft)	-10	-10		0		-10	0		0	0	-10	-10
Detector 1 Position(ft)	-10	-10		0		-10	0		0	0	-10	-10
Detector 1 Size(ft)	30	30		20		30	20		20	20	30	30
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0		0.0	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30	30				22					30	30
Detector 2 Size(ft)	30	30				30					30	30
Detector 2 Type	Cl+Ex	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0				0.0					0.0	0.0



Lane Group	SWL	SWT	SWR
Lane Configurations			
Traffic Volume (vph)	9	1	9
Future Volume (vph)	9	1	9
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	0		0
Storage Lanes	0		0
Taper Length (ft)	25		
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor		1.00	
Frt		0.936	
Flt Protected		0.977	
Satd. Flow (prot)	0	1703	0
Flt Permitted		0.813	
Satd. Flow (perm)	0	1416	0
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)		30	
Link Distance (ft)		179	
Travel Time (s)		4.1	
Confl. Peds. (#/hr)	2		
Peak Hour Factor	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%
Adj. Flow (vph)	36	4	36
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	76	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		0	
Link Offset(ft)		0	
Crosswalk Width(ft)		16	
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (mph)	15		9
Number of Detectors	1	0	
Detector Template	Left		
Leading Detector (ft)	20	0	
Trailing Detector (ft)	0	0	
Detector 1 Position(ft)	0	-10	
Detector 1 Size(ft)	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			

Lanes, Volumes, Timings

PM - Close Liberty Lane

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

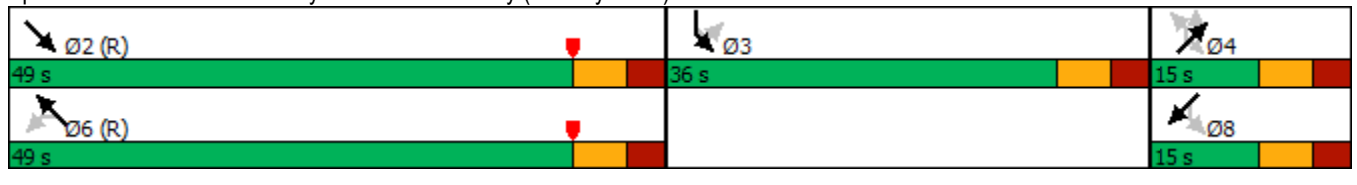
10/21/2022

Lane Group	SBL2	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER
Turn Type	Perm	Prot		NA		Perm	NA		Perm	Perm	NA	Perm
Protected Phases		3		2			6				4	
Permitted Phases	3					6			4	4		4
Detector Phase	3	3		2		6	6		4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		8.0		6.0	6.0		4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	11.0		33.0		13.0	13.0		33.0	33.0	33.0	33.0
Total Split (s)	36.0	36.0		49.0		49.0	49.0		15.0	15.0	15.0	15.0
Total Split (%)	36.0%	36.0%		49.0%		49.0%	49.0%		15.0%	15.0%	15.0%	15.0%
Maximum Green (s)	29.0	29.0		42.0		42.0	42.0		8.0	8.0	8.0	8.0
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)	3.0	3.0		3.0		3.0	3.0		3.0	3.0	3.0	3.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0				0.0	0.0
Total Lost Time (s)		7.0		7.0		7.0	7.0				7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		2.0		2.0	2.0		1.0	1.0	1.0	1.0
Recall Mode	None	None		C-Max		C-Max	C-Max		None	None	None	None
Walk Time (s)				7.0					7.0	7.0	7.0	7.0
Flash Dont Walk (s)				19.0					19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)				0					0	0	0	0
Act Effct Green (s)		26.1		47.9		47.9	47.9				7.3	7.3
Actuated g/C Ratio		0.26		0.48		0.48	0.48				0.07	0.07
v/c Ratio		0.91		0.58		0.26	0.71				0.63	0.18
Control Delay		62.0		22.3		23.4	21.6				69.2	46.8
Queue Delay		0.0		0.0		0.0	0.0				0.0	0.0
Total Delay		62.0		22.3		23.4	21.6				69.2	46.8
LOS		E		C		C	C				E	D
Approach Delay		62.0		22.3			21.7				64.4	
Approach LOS		E		C			C				E	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 98 (98%), Referenced to phase 2:SET and 6:NWTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 31.1 Intersection LOS: C
 Intersection Capacity Utilization 78.6% ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257





Lane Group	SWL	SWT	SWR
Turn Type	Perm	NA	
Protected Phases		8	
Permitted Phases	8		
Detector Phase	8	8	
Switch Phase			
Minimum Initial (s)	4.0	4.0	
Minimum Split (s)	11.0	11.0	
Total Split (s)	15.0	15.0	
Total Split (%)	15.0%	15.0%	
Maximum Green (s)	8.0	8.0	
Yellow Time (s)	4.0	4.0	
All-Red Time (s)	3.0	3.0	
Lost Time Adjust (s)		0.0	
Total Lost Time (s)		7.0	
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.0	2.0	
Recall Mode	None	None	
Walk Time (s)			
Flash Dont Walk (s)			
Pedestrian Calls (#/hr)			
Act Effct Green (s)		7.5	
Actuated g/C Ratio		0.08	
v/c Ratio		0.72	
Control Delay		80.2	
Queue Delay		0.0	
Total Delay		80.2	
LOS		F	
Approach Delay		80.2	
Approach LOS		F	
Intersection Summary			

Lanes, Volumes, Timings
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

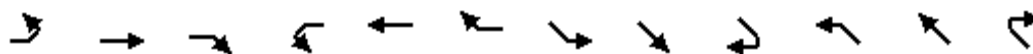
PM - Close Liberty Lane
10/21/2022



Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔			↔↔			↕	↗		↕	
Traffic Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Future Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		75	0		0
Storage Lanes	0		0	0		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.99		0.99	
Frt		0.997			0.998				0.850		0.924	
Flt Protected		0.998			0.997			0.958			0.987	
Satd. Flow (prot)	0	3487	0	0	3427	0	0	1785	1583	0	1686	0
Flt Permitted		0.858			0.707			0.721			0.893	
Satd. Flow (perm)	0	2998	0	0	2430	0	0	1342	1560	0	1525	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		3			2							26
Link Speed (mph)		30			30			30				30
Link Distance (ft)		731			886			331				443
Travel Time (s)		16.6			20.1			7.5				10.1
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	45	1314	30	67	1079	13	102	15	115	12	8	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1389	0	0	1159	0	0	117	115	0	46	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
Number of Detectors	1	0		1	0		1	2	2	1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20	70	
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Size(ft)	20	6		20	6		20	32	30	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								33	35		40	
Detector 2 Size(ft)								32	30		30	
Detector 2 Type								Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0		0.0	

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

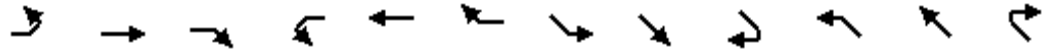
PM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕		↕			↕	
Traffic Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Future Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	0		0	0		0
Storage Lanes	0		0	0		1	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	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor		0.99			1.00	0.98		1.00				1.00
Frt		0.929				0.850		0.990				0.998
Flt Protected		0.980			0.966			0.998				0.999
Satd. Flow (prot)	0	1681	0	0	1799	1583	0	3459	0	0	3429	0
Flt Permitted		0.838			0.607			0.852				0.930
Satd. Flow (perm)	0	1435	0	0	1128	1557	0	2953	0	0	3192	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				64		17				3
Link Speed (mph)		30			30			30				30
Link Distance (ft)		263			346			886				590
Travel Time (s)		6.0			7.9			20.1				13.4
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	65	11	84	47	20	64	51	1226	90	13	1086	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	160	0	0	67	64	0	1367	0	0	1117	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	1.00	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	2	1	2		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20	0	
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Size(ft)	20	30		20	32	30	20	30		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

PM - Close Liberty Lane
10/21/2022

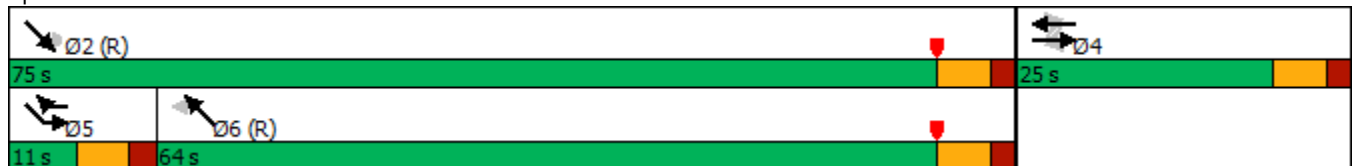


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			4	5	5	2			6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		28.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	11.0	11.0	75.0		64.0	64.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	11.0%	11.0%	75.0%		64.0%	64.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	5.0	5.0	69.0		58.0	58.0	
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)	2.0	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						Lead	Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effct Green (s)		11.5			11.5	16.5		76.5			65.5	
Actuated g/C Ratio		0.12			0.12	0.16		0.76			0.66	
v/c Ratio		0.77			0.52	0.21		0.60			0.53	
Control Delay		52.1			53.9	8.8		10.6			8.8	
Queue Delay		0.0			0.0	0.0		0.0			0.2	
Total Delay		52.1			53.9	8.8		10.6			9.0	
LOS		D			D	A		B			A	
Approach Delay		52.1			31.9			10.6			9.0	
Approach LOS		D			C			B			A	

Intersection Summary

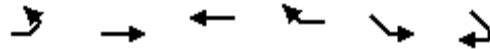
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.77
 Intersection Signal Delay: 13.3 Intersection LOS: B
 Intersection Capacity Utilization 88.8% ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Route 173 & Route 92

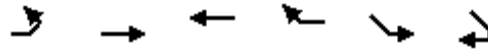
PM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	210	474	309	709	987	202
Future Volume (vph)	210	474	309	709	987	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175			0	0	0
Storage Lanes	1			1	2	0
Taper Length (ft)	60				25	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.97	0.95
Ped Bike Factor	1.00			0.98	1.00	
Frt				0.850	0.974	
Flt Protected	0.950				0.960	
Satd. Flow (prot)	1770	3539	1863	1583	3332	0
Flt Permitted	0.216				0.960	
Satd. Flow (perm)	401	3539	1863	1552	3330	0
Right Turn on Red				No		No
Satd. Flow (RTOR)						
Link Speed (mph)		30	30		30	
Link Distance (ft)		447	788		590	
Travel Time (s)		10.2	17.9		13.4	
Confl. Peds. (#/hr)	6			6	1	3
Peak Hour Factor	0.82	0.82	0.93	0.93	0.95	0.95
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Adj. Flow (vph)	256	578	332	762	1039	213
Shared Lane Traffic (%)						
Lane Group Flow (vph)	256	578	332	762	1252	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	2	2	2	2	2	
Detector Template						
Leading Detector (ft)	60	62	65	65	60	
Trailing Detector (ft)	-10	-10	-5	-5	-10	
Detector 1 Position(ft)	-10	-10	-5	-5	-10	
Detector 1 Size(ft)	34	32	32	30	32	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)	26	30	33	35	28	
Detector 2 Size(ft)	34	32	32	30	32	
Detector 2 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)	0.0	0.0	0.0	0.0	0.0	

Lanes, Volumes, Timings
4: Route 173 & Route 92

PM - Close Liberty Lane
10/21/2022

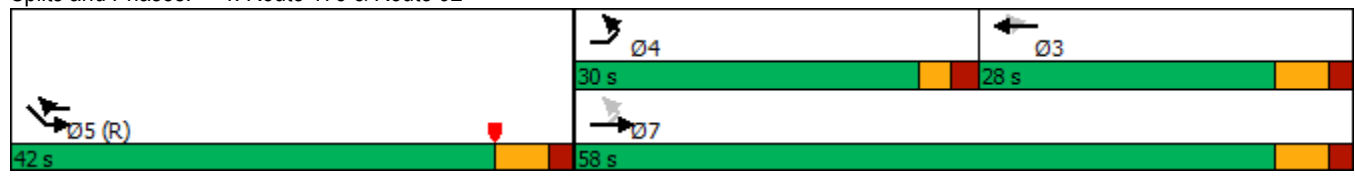


Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Turn Type	pm+pt	NA	NA	pm+ov	Prot	
Protected Phases	4	7	3	5	5	
Permitted Phases	7			3		
Detector Phase	4	7	3	3	5	
Switch Phase						
Minimum Initial (s)	6.0	7.0	9.0	10.0	10.0	
Minimum Split (s)	29.5	21.0	28.0	16.0	16.0	
Total Split (s)	30.0	58.0	28.0	42.0	42.0	
Total Split (%)	30.0%	58.0%	28.0%	42.0%	42.0%	
Maximum Green (s)	25.5	52.0	22.0	36.0	36.0	
Yellow Time (s)	2.5	4.0	4.0	4.0	4.0	
All-Red Time (s)	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)	4.5	6.0	6.0	6.0	6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0	3.0	3.0	2.0	2.0	
Recall Mode	None	None	None	C-Max	C-Max	
Walk Time (s)	7.0	7.0	7.0			
Flash Dont Walk (s)	18.0	8.0	15.0			
Pedestrian Calls (#/hr)	0	0	0			
Act Effct Green (s)	43.3	41.8	21.8	67.9	46.2	
Actuated g/C Ratio	0.43	0.42	0.22	0.68	0.46	
v/c Ratio	0.66	0.39	0.82	0.71	0.81	
Control Delay	27.0	20.6	55.0	13.4	26.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	27.0	20.6	55.0	13.4	26.6	
LOS	C	C	D	B	C	
Approach Delay		22.6	26.0		26.6	
Approach LOS		C	C		C	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 99 (99%), Referenced to phase 2: and 5:SEL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.82
 Intersection Signal Delay: 25.3
 Intersection LOS: C
 Intersection Capacity Utilization 76.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 4: Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations		↕	↗		↖				↘			
Traffic Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Future Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor		1.00			1.00				1.00			
Frt			0.850						0.997			
Flt Protected		0.999							0.953			
Satd. Flow (prot)	0	1843	1568	0	1863	0	0	0	1752	0	0	
Flt Permitted		0.988							0.953			
Satd. Flow (perm)	0	1823	1568	0	1863	0	0	0	1752	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			1091						120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	12	535	1238	0	394	1	0	0	733	9	6	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	1238	0	395	0	0	0	748	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	15	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - Close Liberty Lane
10/21/2022

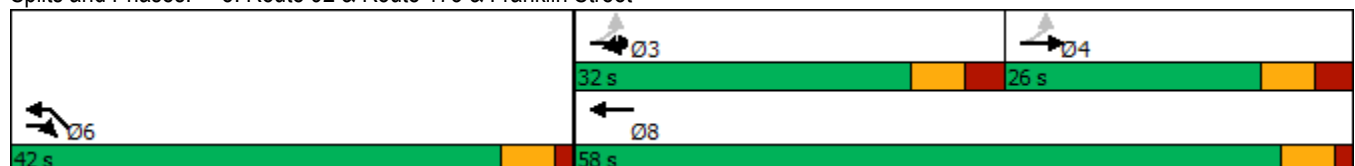


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4			8				6			
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				Min			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		39.6	65.0		41.1				36.7			
Actuated g/C Ratio		0.45	0.73		0.46				0.41			
v/c Ratio		0.67	0.86		0.46				0.94			
Control Delay		24.0	9.2		17.9				44.3			
Queue Delay		0.0	0.1		0.0				0.0			
Total Delay		24.0	9.2		17.9				44.3			
LOS		C	A		B				D			
Approach Delay		13.8			17.9				44.3			
Approach LOS		B			B				D			

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	88.9
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	22.1
Intersection LOS:	C
Intersection Capacity Utilization:	83.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - Close Liberty Lane
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	2	112	24	7	59	80	509	10	23	399	89
Future Volume (vph)	114	2	112	24	7	59	80	509	10	23	399	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.852			0.911			0.997			0.973	
Flt Protected	0.950				0.987		0.950			0.950		
Satd. Flow (prot)	1752	1535	0	0	1659	0	1752	3460	0	1770	1772	0
Flt Permitted	0.697				0.865		0.186			0.341		
Satd. Flow (perm)	1283	1535	0	0	1452	0	343	3460	0	634	1772	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130			61			2			14	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		159			315			586			447	
Travel Time (s)		3.6			7.2			13.3			10.2	
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	133	2	130	25	7	61	127	808	16	33	570	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	132	0	0	93	0	127	824	0	33	697	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - Close Liberty Lane
10/21/2022

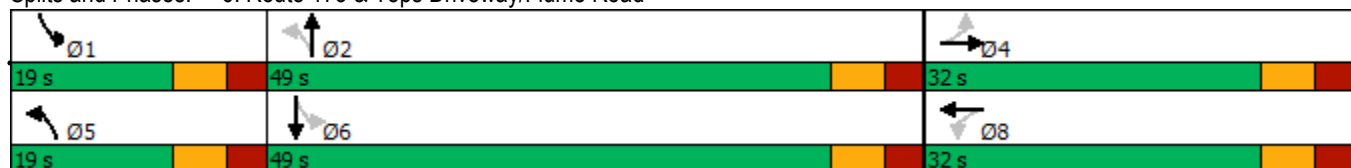


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4				8		5	2	1		6	
Permitted Phases	4		8				2		6			
Detector Phase	4	4	8		8		5	2	1		6	
Switch Phase												
Minimum Initial (s)	4.0	4.0	4.0		4.0		4.0	20.0	4.0		20.0	
Minimum Split (s)	32.0	32.0	29.0		29.0		11.0	30.0	11.0		29.0	
Total Split (s)	32.0	32.0	32.0		32.0		19.0	49.0	19.0		49.0	
Total Split (%)	32.0%	32.0%	32.0%		32.0%		19.0%	49.0%	19.0%		49.0%	
Maximum Green (s)	25.0	25.0	25.0		25.0		12.0	42.0	12.0		42.0	
Yellow Time (s)	4.0	4.0	4.0		4.0		4.0	4.0	4.0		4.0	
All-Red Time (s)	3.0	3.0	3.0		3.0		3.0	3.0	3.0		3.0	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	7.0	7.0			7.0		7.0	7.0	7.0		7.0	
Lead/Lag							Lead	Lag			Lead	Lag
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0	1.0		1.0		2.0	2.0	2.0		2.0	
Recall Mode	None	None	None		None		None	Min	None		Min	
Walk Time (s)	7.0	7.0	7.0		7.0		7.0		7.0		7.0	
Flash Dont Walk (s)	18.0	18.0	15.0		15.0		16.0		16.0		15.0	
Pedestrian Calls (#/hr)	0	0	0		0		0		0		0	
Act Effct Green (s)	11.3	11.3			11.3		46.2	40.9	39.2		35.3	
Actuated g/C Ratio	0.15	0.15			0.15		0.63	0.55	0.53		0.48	
v/c Ratio	0.68	0.38			0.34		0.33	0.43	0.08		0.82	
Control Delay	51.1	10.3			18.2		7.5	11.7	6.3		28.1	
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0		0.5	
Total Delay	51.1	10.3			18.2		7.5	11.7	6.3		28.7	
LOS	D	B			B		A	B	A		C	
Approach Delay	30.8				18.2		11.2				27.6	
Approach LOS	C				B		B				C	

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	73.9
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	19.9
Intersection LOS:	B
Intersection Capacity Utilization:	61.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road






















Lanes, Volumes, Timings

PM - Lane Re-allocation

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

10/21/2022

												
Lane Group	SBL2	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER
Lane Configurations												
Traffic Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Future Volume (vph)	1	301	28	884	27	42	636	328	33	19	0	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	0		343	78		200		0		88
Storage Lanes		1	0		1	1		1		0		1
Taper Length (ft)		25				150				25		
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00		1.00		1.00						0.99
Frt		0.988		0.996				0.850				0.850
Flt Protected		0.956				0.950					0.950	
Satd. Flow (prot)	0	1713	0	3489	0	1770	1810	1538	0	0	1770	1583
Flt Permitted		0.999				0.209					0.857	
Satd. Flow (perm)	0	1787	0	3489	0	389	1810	1538	0	0	1596	1561
Right Turn on Red					No							No
Satd. Flow (RTOR)												
Link Speed (mph)		30		30			30				30	
Link Distance (ft)		689		891			731				604	
Travel Time (s)		15.7		20.3			16.6				13.7	
Confl. Peds. (#/hr)	2				5	5						2
Peak Hour Factor	0.81	0.81	0.81	0.94	0.94	0.87	0.87	0.87	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	2%	5%	2%	3%	2%	2%	5%	5%	2%	2%	2%	2%
Adj. Flow (vph)	1	372	35	940	29	48	731	377	46	27	0	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	408	0	969	0	48	731	377	0	0	73	20
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Right	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		12		12			12				0	
Link Offset(ft)		0		0			0				0	
Crosswalk Width(ft)		16		16			16				16	
Two way Left Turn Lane							Yes					
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	15	9		9	15		9	15	15		9
Number of Detectors	2	2		0		2	0	0	1	1	2	2
Detector Template									Left	Left		
Leading Detector (ft)	60	60		0		52	0	0	20	20	60	60
Trailing Detector (ft)	-10	-10		0		-10	0	0	0	0	-10	-10
Detector 1 Position(ft)	-10	-10		0		-10	0	0	0	0	-10	-10
Detector 1 Size(ft)	30	30		20		30	20	6	20	20	30	30
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)	30	30				22					30	30
Detector 2 Size(ft)	30	30				30					30	30
Detector 2 Type	Cl+Ex	Cl+Ex				Cl+Ex					Cl+Ex	Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0				0.0					0.0	0.0



Lane Group	SWL	SWT	SWR
Lane Configurations			
Traffic Volume (vph)	9	1	9
Future Volume (vph)	9	1	9
Ideal Flow (vphpl)	1900	1900	1900
Storage Length (ft)	0		0
Storage Lanes	0		0
Taper Length (ft)	25		
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor		1.00	
Frt		0.936	
Flt Protected		0.977	
Satd. Flow (prot)	0	1703	0
Flt Permitted		0.813	
Satd. Flow (perm)	0	1416	0
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)		30	
Link Distance (ft)		179	
Travel Time (s)		4.1	
Confl. Peds. (#/hr)	2		
Peak Hour Factor	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%
Adj. Flow (vph)	36	4	36
Shared Lane Traffic (%)			
Lane Group Flow (vph)	0	76	0
Enter Blocked Intersection	No	No	No
Lane Alignment	Left	Left	Right
Median Width(ft)		0	
Link Offset(ft)		0	
Crosswalk Width(ft)		16	
Two way Left Turn Lane			
Headway Factor	1.00	1.00	1.00
Turning Speed (mph)	15		9
Number of Detectors	1	0	
Detector Template	Left		
Leading Detector (ft)	20	0	
Trailing Detector (ft)	0	0	
Detector 1 Position(ft)	0	-10	
Detector 1 Size(ft)	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex	
Detector 1 Channel			
Detector 1 Extend (s)	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			

Lanes, Volumes, Timings

PM - Lane Re-allocation

1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

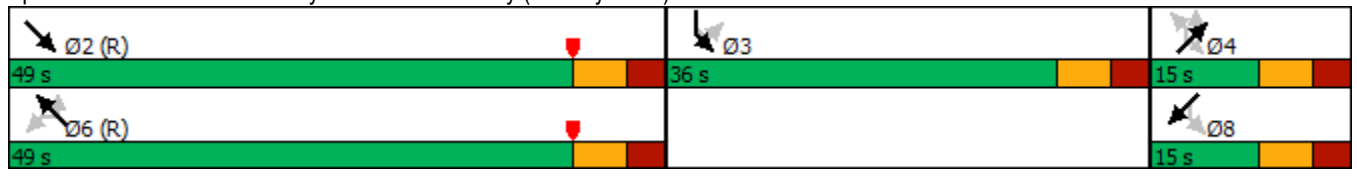
10/21/2022

Lane Group	SBL2	SBL	SBR	SET	SER	NWL	NWT	NWR	NEL2	NEL	NET	NER
Turn Type	Perm	Prot		NA		Perm	NA	Perm	Perm	Perm	NA	Perm
Protected Phases		3		2			6				4	
Permitted Phases	3					6		6	4	4		4
Detector Phase	3	3		2		6	6	6	4	4	4	4
Switch Phase												
Minimum Initial (s)	4.0	4.0		8.0		6.0	6.0	6.0	4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	11.0		33.0		13.0	13.0	13.0	33.0	33.0	33.0	33.0
Total Split (s)	36.0	36.0		49.0		49.0	49.0	49.0	15.0	15.0	15.0	15.0
Total Split (%)	36.0%	36.0%		49.0%		49.0%	49.0%	49.0%	15.0%	15.0%	15.0%	15.0%
Maximum Green (s)	29.0	29.0		42.0		42.0	42.0	42.0	8.0	8.0	8.0	8.0
Yellow Time (s)	4.0	4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	3.0	3.0		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0			0.0	0.0
Total Lost Time (s)		7.0		7.0		7.0	7.0	7.0			7.0	7.0
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		2.0		2.0	2.0	2.0	1.0	1.0	1.0	1.0
Recall Mode	None	None		C-Max		C-Max	C-Max	C-Max	None	None	None	None
Walk Time (s)				7.0					7.0	7.0	7.0	7.0
Flash Dont Walk (s)				19.0					19.0	19.0	19.0	19.0
Pedestrian Calls (#/hr)				0					0	0	0	0
Act Effct Green (s)		25.4		48.6		48.6	48.6	48.6			7.3	7.3
Actuated g/C Ratio		0.25		0.49		0.49	0.49	0.49			0.07	0.07
v/c Ratio		0.90		0.57		0.25	0.83	0.51			0.63	0.18
Control Delay		59.2		21.8		17.9	26.5	17.4			69.2	46.8
Queue Delay		0.0		0.0		0.0	0.0	0.0			0.0	0.0
Total Delay		59.2		21.8		17.9	26.5	17.4			69.2	46.8
LOS		E		C		B	C	B			E	D
Approach Delay		59.2		21.8			23.2				64.4	
Approach LOS		E		C			C				E	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SET and 6:NWTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 31.2 Intersection LOS: C
 Intersection Capacity Utilization 78.6% ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 1: Stickley Drive/Site Driveway (Stickley Drive) & Route 92 & Route 257

























Lane Group	SWL	SWT	SWR
Turn Type	Perm	NA	
Protected Phases		8	
Permitted Phases	8		
Detector Phase	8	8	
Switch Phase			
Minimum Initial (s)	4.0	4.0	
Minimum Split (s)	11.0	11.0	
Total Split (s)	15.0	15.0	
Total Split (%)	15.0%	15.0%	
Maximum Green (s)	8.0	8.0	
Yellow Time (s)	4.0	4.0	
All-Red Time (s)	3.0	3.0	
Lost Time Adjust (s)		0.0	
Total Lost Time (s)		7.0	
Lead/Lag			
Lead-Lag Optimize?			
Vehicle Extension (s)	2.0	2.0	
Recall Mode	None	None	
Walk Time (s)			
Flash Dont Walk (s)			
Pedestrian Calls (#/hr)			
Act Effct Green (s)		7.5	
Actuated g/C Ratio		0.08	
v/c Ratio		0.72	
Control Delay		80.2	
Queue Delay		0.0	
Total Delay		80.2	
LOS		F	
Approach Delay		80.2	
Approach LOS		F	
Intersection Summary			

Lanes, Volumes, Timings
 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

PM - Lane Re-allocation
 10/21/2022

												
Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Future Volume (vph)	39	1143	26	58	928	11	56	8	63	10	7	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	0		75	0		0
Storage Lanes	1		0	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			1.00	0.99		0.99	
Frt		0.997			0.998				0.850		0.924	
Flt Protected	0.950			0.950				0.958			0.987	
Satd. Flow (prot)	1770	3493	0	1770	1806	0	0	1785	1583	0	1677	0
Flt Permitted	0.131			0.126				0.721			0.893	
Satd. Flow (perm)	244	3493	0	235	1806	0	0	1341	1560	0	1517	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		3			1							26
Link Speed (mph)		30			30			30				30
Link Distance (ft)		731			886			331				443
Travel Time (s)		16.6			20.1			7.5				10.1
Confl. Peds. (#/hr)	1		2	2		1	1		2	2		1
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.55	0.55	0.55	0.84	0.84	0.84
Heavy Vehicles (%)	2%	3%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	45	1314	30	67	1079	13	102	15	115	12	8	26
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	1344	0	67	1092	0	0	117	115	0	46	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		Yes			Yes							
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	0		1	0		1	2	2	1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	0		20	0		20	65	65	20	70	
Trailing Detector (ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Position(ft)	0	0		0	0		0	-5	-5	0	0	
Detector 1 Size(ft)	20	6		20	6		20	32	30	20	30	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)								33	35		40	
Detector 2 Size(ft)								32	30		30	
Detector 2 Type								Cl+Ex	Cl+Ex		Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)								0.0	0.0		0.0	

Lanes, Volumes, Timings
2: Arkie Albanese Avenue/Elmbrook Drive & Route 92

PM - Lane Re-allocation
10/21/2022

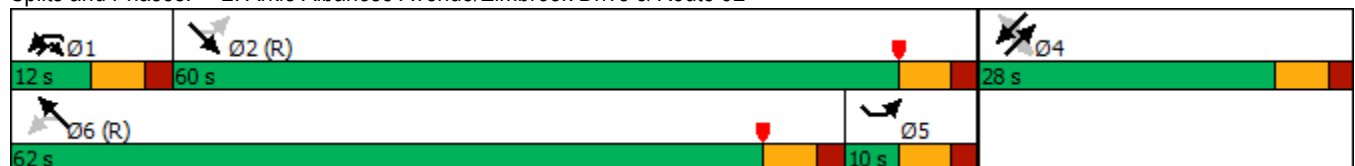


Lane Group	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	pm+ov	Perm	NA	
Protected Phases	5	2		1	6			4	1		4	
Permitted Phases	2			6			4		4	4		
Detector Phase	5	2		1	6		4	4	4	4	4	
Switch Phase												
Minimum Initial (s)	4.0	20.0		6.0	20.0		4.0	4.0	6.0	4.0	4.0	
Minimum Split (s)	10.0	27.0		12.0	33.0		28.0	28.0	12.0	28.0	28.0	
Total Split (s)	10.0	60.0		12.0	62.0		28.0	28.0	12.0	28.0	28.0	
Total Split (%)	10.0%	60.0%		12.0%	62.0%		28.0%	28.0%	12.0%	28.0%	28.0%	
Maximum Green (s)	4.0	54.0		6.0	56.0		22.0	22.0	6.0	22.0	22.0	
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)	2.0	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	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		6.0	6.0	6.0	6.0	6.0	
Lead/Lag	Lag	Lag		Lead	Lead				Lead			
Lead-Lag Optimize?	Yes				Yes							
Vehicle Extension (s)	3.0	2.0		2.0	2.0		1.0	1.0	2.0	1.0	1.0	
Recall Mode	None	C-Max		Max	C-Max		None	None	Max	None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		14.0			20.0		15.0	15.0		15.0	15.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	63.8	63.8		69.8	69.8		12.2	18.2		12.2	12.2	
Actuated g/C Ratio	0.64	0.64		0.70	0.70		0.12	0.18		0.12	0.12	
v/c Ratio	0.21	0.60		0.26	0.87		0.72	0.40		0.22	0.22	
Control Delay	8.4	7.8		9.2	15.8		65.1	34.4		23.0	23.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	8.4	7.8		9.2	15.8		65.1	34.4		23.0	23.0	
LOS	A	A		A	B		E	C		C	C	
Approach Delay		7.8			15.4		49.9				23.0	
Approach LOS		A			B		D				C	

Intersection Summary

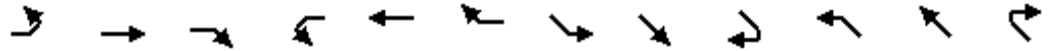
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 14.6
 Intersection LOS: B
 Intersection Capacity Utilization 69.9%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 2: Arkie Albanese Avenue/Elmbrook Drive & Route 92



Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

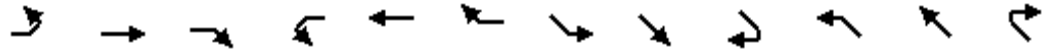
PM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations		↕			↕	↕	↕	↕↔		↕	↔	
Traffic Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Future Volume (vph)	49	8	63	35	15	47	45	1091	80	11	901	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		120	50		0	50		0
Storage Lanes	0		0	0		1	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	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor		0.99			1.00	0.97		1.00		1.00	1.00	
Frt		0.929				0.850		0.990			0.998	
Flt Protected		0.980			0.966		0.950			0.950		
Satd. Flow (prot)	0	1681	0	0	1799	1583	1770	3465	0	1770	1806	0
Flt Permitted		0.838			0.607		0.076			0.178		
Satd. Flow (perm)	0	1433	0	0	1128	1539	142	3465	0	331	1806	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49				64		13			1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		608			346			886			590	
Travel Time (s)		13.8			7.9			20.1			13.4	
Confl. Peds. (#/hr)	3		3	3		3	1		5	5		1
Peak Hour Factor	0.75	0.75	0.75	0.74	0.74	0.74	0.89	0.89	0.89	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%	5%	2%
Adj. Flow (vph)	65	11	84	47	20	64	51	1226	90	13	1086	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	160	0	0	67	64	51	1316	0	13	1104	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								Yes			Yes	
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	2	1	2		1	0	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	64		20	62	67	20	58		20	0	
Trailing Detector (ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Position(ft)	0	-6		0	-6	-3	0	-10		0	0	
Detector 1 Size(ft)	20	30		20	32	30	20	30		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		34			30	37		28				
Detector 2 Size(ft)		30			32	30		30				
Detector 2 Type		Cl+Ex			Cl+Ex	Cl+Ex		Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0	0.0		0.0				

Lanes, Volumes, Timings
3: Route 92 & Pleasant Street

PM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			4	5	5	2		1	6	
Permitted Phases	4			4		4	2			6		
Detector Phase	4	4		4	4	5	5	2 5		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	5.0		4.0	5.0	
Minimum Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	27.0		10.0	28.0	
Total Split (s)	25.0	25.0		25.0	25.0	10.0	10.0	65.0		10.0	65.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%	10.0%	10.0%	65.0%		10.0%	65.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0	4.0	4.0	59.0		4.0	59.0	
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)	2.0	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		0.0	0.0	
Total Lost Time (s)		6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lead/Lag						Lead	Lead	Lag		Lead	Lag	
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	1.0	1.0		1.0	1.0	1.0	1.0	2.0		3.0	2.0	
Recall Mode	None	None		None	None	None	None	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			14.0			15.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		11.5			11.5	15.5	75.2	74.4		71.9	66.5	
Actuated g/C Ratio		0.12			0.12	0.16	0.75	0.74		0.72	0.66	
v/c Ratio		0.77			0.52	0.22	0.30	0.51		0.04	0.92	
Control Delay		52.1			53.9	9.2	12.6	11.0		3.7	26.5	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	2.1	
Total Delay		52.1			53.9	9.2	12.6	11.0		3.7	28.7	
LOS		D			D	A	B	B		A	C	
Approach Delay		52.1			32.0			11.0			28.4	
Approach LOS		D			C			B			C	

Intersection Summary

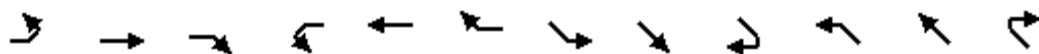
Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SETL and 6:NWTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 21.4
 Intersection LOS: C
 Intersection Capacity Utilization 74.7%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: Route 92 & Pleasant Street



Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

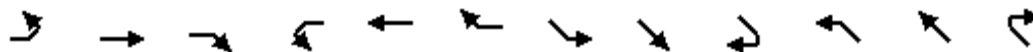
PM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	210	472	2	0	309	709	987	18	184	0	0	0
Future Volume (vph)	210	472	2	0	309	709	987	18	184	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	0		0	0		0	0		0
Storage Lanes	1		0	0		1	1		0	0		0
Taper Length (ft)	60			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00
Ped Bike Factor	0.99	1.00				0.97	1.00	0.99				
Frt		0.999				0.850		0.953				
Flt Protected	0.950						0.950	0.968				
Satd. Flow (prot)	1770	3535	0	0	1863	1583	1665	1604	0	0	0	0
Flt Permitted	0.217						0.950	0.000				
Satd. Flow (perm)	402	3535	0	0	1863	1531	1664	0	0	0	0	0
Right Turn on Red			Yes			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		447			788			590			231	
Travel Time (s)		10.2			17.9			13.4			5.3	
Confl. Peds. (#/hr)	6		2	2		6	1		3	3		1
Peak Hour Factor	0.82	0.82	0.82	0.93	0.93	0.93	0.95	0.95	0.95	0.25	0.25	0.25
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%	2%
Adj. Flow (vph)	256	576	2	0	332	762	1039	19	194	0	0	0
Shared Lane Traffic (%)							39%					
Lane Group Flow (vph)	256	578	0	0	332	762	634	618	0	0	0	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			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
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		15	15		9	15		9
Number of Detectors	2	2			2	2	2	2				
Detector Template												
Leading Detector (ft)	60	62			65	65	60	60				
Trailing Detector (ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Position(ft)	-10	-10			-5	-5	-10	-10				
Detector 1 Size(ft)	34	32			32	30	32	30				
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Detector 2 Position(ft)	26	30			33	35	28	30				
Detector 2 Size(ft)	34	32			32	30	32	30				
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0				

Lanes, Volumes, Timings
4: Liberty Lane & Route 173 & Route 92

PM - Lane Re-allocation
10/21/2022

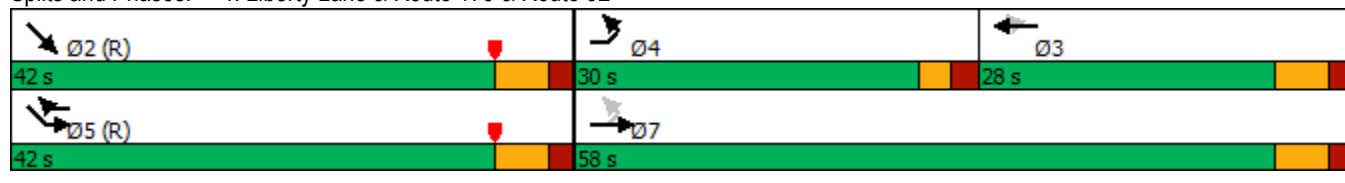


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Turn Type	pm+pt	NA			NA	pm+ov	Prot	NA				
Protected Phases	4	7			3	5	5	2				
Permitted Phases	7					3		2				
Detector Phase	4	7			3	3	5	2				
Switch Phase												
Minimum Initial (s)	6.0	7.0			9.0	10.0	10.0	10.0				
Minimum Split (s)	29.5	21.0			28.0	16.0	16.0	31.0				
Total Split (s)	30.0	58.0			28.0	42.0	42.0	42.0				
Total Split (%)	30.0%	58.0%			28.0%	42.0%	42.0%	42.0%				
Maximum Green (s)	25.5	52.0			22.0	36.0	36.0	36.0				
Yellow Time (s)	2.5	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				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	0.0	0.0				
Total Lost Time (s)	4.5	6.0			6.0	6.0	6.0	6.0				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0			3.0	2.0	2.0	2.0				
Recall Mode	None	None			None	C-Max	C-Max	C-Max				
Walk Time (s)	7.0	7.0			7.0			7.0				
Flash Dont Walk (s)	18.0	8.0			15.0			18.0				
Pedestrian Calls (#/hr)	0	0			0			0				
Act Effct Green (s)	43.4	41.9			21.9	67.9	46.1	46.1				
Actuated g/C Ratio	0.43	0.42			0.22	0.68	0.46	0.46				
v/c Ratio	0.66	0.39			0.82	0.72	0.83	0.84				
Control Delay	26.9	20.6			54.7	13.6	30.1	31.2				
Queue Delay	0.1	0.0			0.0	1.9	0.0	0.0				
Total Delay	27.0	20.6			54.7	15.5	30.1	31.2				
LOS	C	C			D	B	C	C				
Approach Delay		22.6			27.4			30.7				
Approach LOS		C			C			C				

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:SET and 5:SEL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 27.4
 Intersection LOS: C
 Intersection Capacity Utilization 82.2%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 4: Liberty Lane & Route 173 & Route 92



Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Lane Configurations		↕	↗		↖				↘			
Traffic Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Future Volume (vph)	10	460	1065	0	315	1	0	0	718	9	6	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
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	
Ped Bike Factor		1.00			1.00				1.00			
Frt			0.850						0.997			
Flt Protected		0.999							0.953			
Satd. Flow (prot)	0	1843	1568	0	1863	0	0	0	1752	0	0	
Flt Permitted		0.988							0.953			
Satd. Flow (perm)	0	1823	1568	0	1863	0	0	0	1752	0	0	
Right Turn on Red			Yes			Yes		Yes			Yes	
Satd. Flow (RTOR)			1091						120			
Link Speed (mph)		30			30		30		30			
Link Distance (ft)		788			1815		249		2779			
Travel Time (s)		17.9			41.3		5.7		63.2			
Confl. Peds. (#/hr)	5		1	1		5						2
Peak Hour Factor	0.86	0.86	0.86	0.80	0.80	0.80	0.92	0.92	0.98	0.98	0.98	
Heavy Vehicles (%)	2%	3%	3%	2%	2%	2%	2%	2%	3%	2%	2%	
Adj. Flow (vph)	12	535	1238	0	394	1	0	0	733	9	6	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	547	1238	0	395	0	0	0	748	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	Left	Right	Right	
Median Width(ft)		0			0		0		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	
Turning Speed (mph)	15		9	15		9	15	9	15	9	9	
Number of Detectors	1	2	0		2				2			
Detector Template	Left											
Leading Detector (ft)	20	60	0		60				60			
Trailing Detector (ft)	0	-10	0		-10				-10			
Detector 1 Position(ft)	0	-10	-10		-10				-10			
Detector 1 Size(ft)	20	30	30		30				30			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex				Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0				0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0				0.0			
Detector 2 Position(ft)		30			30				30			
Detector 2 Size(ft)		30			30				30			
Detector 2 Type		Cl+Ex			Cl+Ex				Cl+Ex			
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0				0.0			
Turn Type	Perm	NA	custom		NA				Prot			
Protected Phases		3 4	3 6		8				6			3
Permitted Phases	3 4											

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
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)	
Peak Hour Factor	
Heavy Vehicles (%)	
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)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4
Permitted Phases	

Lanes, Volumes, Timings
5: Route 92 & Route 173 & Franklin Street

PM - Lane Re-allocation
10/21/2022

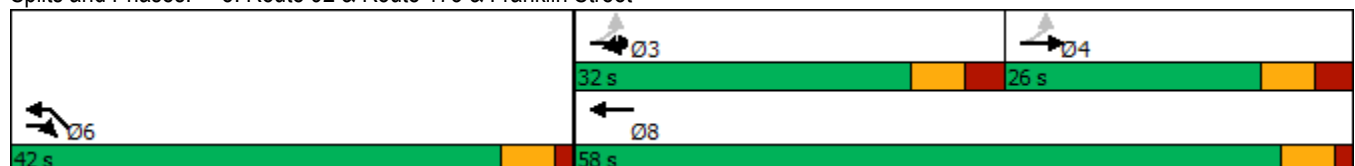


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	NWL	NWR	NWR2	Ø3
Detector Phase	3 4	3 4				8						6
Switch Phase												
Minimum Initial (s)					10.0				10.0			10.0
Minimum Split (s)					15.5				29.5			17.0
Total Split (s)					58.0				42.0			32.0
Total Split (%)					58.0%				42.0%			32%
Maximum Green (s)					52.5				36.5			25.0
Yellow Time (s)					4.0				4.0			4.0
All-Red Time (s)					1.5				1.5			3.0
Lost Time Adjust (s)					0.0				0.0			
Total Lost Time (s)					5.5				5.5			
Lead/Lag												Lead
Lead-Lag Optimize?												Yes
Vehicle Extension (s)					2.0				2.0			2.0
Recall Mode					None				Min			None
Walk Time (s)									7.0			
Flash Dont Walk (s)									17.0			
Pedestrian Calls (#/hr)									0			
Act Effct Green (s)		39.6	65.0		41.1				36.7			
Actuated g/C Ratio		0.45	0.73		0.46				0.41			
v/c Ratio		0.67	0.86		0.46				0.94			
Control Delay		24.0	9.2		17.9				44.3			
Queue Delay		0.0	0.1		0.0				0.0			
Total Delay		24.0	9.2		17.9				44.3			
LOS		C	A		B				D			
Approach Delay		13.8			17.9				44.3			
Approach LOS		B			B				D			

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	88.9
Natural Cycle:	80
Control Type:	Actuated-Uncoordinated
Maximum v/c Ratio:	0.94
Intersection Signal Delay:	22.1
Intersection LOS:	C
Intersection Capacity Utilization:	83.3%
ICU Level of Service:	E
Analysis Period (min):	15

Splits and Phases: 5: Route 92 & Route 173 & Franklin Street



Lane Group	Ø4
Detector Phase	
Switch Phase	
Minimum Initial (s)	7.0
Minimum Split (s)	26.0
Total Split (s)	26.0
Total Split (%)	26%
Maximum Green (s)	19.0
Yellow Time (s)	4.0
All-Red Time (s)	3.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	
Vehicle Extension (s)	2.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	12.0
Pedestrian Calls (#/hr)	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	

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - Lane Re-allocation
10/21/2022



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	2	112	24	7	59	80	509	10	5	399	89
Future Volume (vph)	114	2	112	24	7	59	80	509	10	5	399	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	90		0	80		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			46		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor	1.00	0.98			0.99			1.00		1.00	1.00	
Frt		0.852			0.911			0.997			0.973	
Flt Protected	0.950				0.987		0.950			0.950		
Satd. Flow (prot)	1752	1535	0	0	1659	0	1752	3460	0	1770	1772	0
Flt Permitted	0.836				0.865		0.184			0.341		
Satd. Flow (perm)	1538	1535	0	0	1452	0	339	3460	0	634	1772	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		130			61			2				14
Link Speed (mph)		30			30			30				30
Link Distance (ft)		159			315			586				447
Travel Time (s)		3.6			7.2			13.3				10.2
Confl. Peds. (#/hr)	2		2	2		2	3		4	4		3
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.63	0.63	0.63	0.70	0.70	0.70
Heavy Vehicles (%)	3%	2%	3%	2%	2%	2%	3%	4%	2%	2%	4%	3%
Adj. Flow (vph)	133	2	130	25	7	61	127	808	16	7	570	127
Shared Lane Traffic (%)												
Lane Group Flow (vph)	133	132	0	0	93	0	127	824	0	7	697	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			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	2	2		1	2		3	0		2	0	
Detector Template				Left								
Leading Detector (ft)	40	40		20	60		54	0		60	0	
Trailing Detector (ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Position(ft)	-10	-10		0	-10		-10	0		-10	0	
Detector 1 Size(ft)	22	20		20	30		15	6		30	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)	18	20			30		7			30		
Detector 2 Size(ft)	22	20			30		15			30		
Detector 2 Type	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex			Cl+Ex		
Detector 2 Channel												
Detector 2 Extend (s)	0.0	0.0			0.0		0.0			0.0		

Lanes, Volumes, Timings
6: Route 173 & Tops Driveway/Flume Road

PM - Lane Re-allocation
10/21/2022

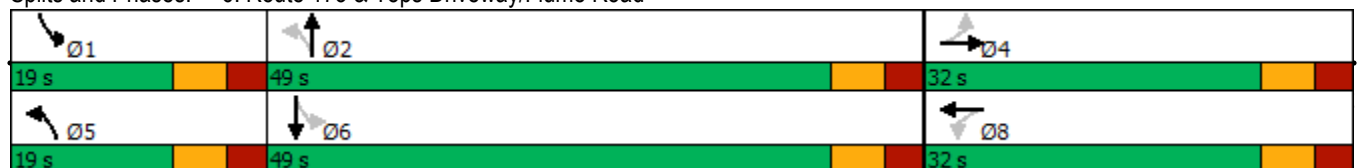


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 3 Position(ft)							24					
Detector 3 Size(ft)							30					
Detector 3 Type							Cl+Ex					
Detector 3 Channel												
Detector 3 Extend (s)							0.0					
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	4		8		5		2		1		6	
Permitted Phases	4		8		2		6					
Detector Phase	4	4		8	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	20.0		4.0	20.0	
Minimum Split (s)	32.0	32.0		29.0	29.0		11.0	30.0		11.0	29.0	
Total Split (s)	32.0	32.0		32.0	32.0		19.0	49.0		19.0	49.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		19.0%	49.0%		19.0%	49.0%	
Maximum Green (s)	25.0	25.0		25.0	25.0		12.0	42.0		12.0	42.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)	1.0	1.0		1.0	1.0		2.0	2.0		2.0	2.0	
Recall Mode	None	None		None	None		None	Min		None	Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	18.0	18.0		15.0	15.0		16.0	16.0		15.0	15.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)	11.3	11.3		11.3	11.3		47.7	45.8		38.8	35.3	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.64	0.62		0.52	0.48	
v/c Ratio	0.57	0.38		0.34	0.34		0.32	0.39		0.02	0.82	
Control Delay	43.0	10.3		18.3	18.3		7.3	8.5		6.2	28.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.5	
Total Delay	43.0	10.3		18.3	18.3		7.3	8.5		6.2	29.2	
LOS	D	B		B	B		A	A		A	C	
Approach Delay	26.7		18.3		8.4		29.0					
Approach LOS	C		B		A		C					

Intersection Summary

Area Type:	Other
Cycle Length:	100
Actuated Cycle Length:	74.3
Natural Cycle:	90
Control Type:	Semi Act-Uncoord
Maximum v/c Ratio:	0.82
Intersection Signal Delay:	18.5
Intersection LOS:	B
Intersection Capacity Utilization:	61.9%
ICU Level of Service:	B
Analysis Period (min):	15

Splits and Phases: 6: Route 173 & Tops Driveway/Flume Road



Appendix D

Public Notices and Public Comments

Appendix D

Public Notices and Public Comments

Manlius Village Center Transportation Study
Draft Review Period
January 13, 2023 to January 31, 2023

On January 13, 2023, SMTC posted the draft Manlius Village Center Transportation Study report for public review on the SMTC's webpage: <https://smtcmpo.org/news/>. SMTC emailed the link to the webpage to the Study Advisory Committee and to community members who previously submitted comments or provided contact information. SMTC also posted an announcement to its Facebook page. SMTC requested that comments be submitted to contactus@smtcmpo.org by 5:00 p.m. on Tuesday, January 31, 2023.



The screenshot shows the website for the Syracuse Metropolitan Transportation Council. The header includes the organization's logo and name, along with the tagline "The Metropolitan Planning Organization for the Greater Syracuse area." Below the header is a navigation menu with links for "About Us", "Public Participation", "Publications", "Planning Activities", "Data", and "News/Announcements", along with a search icon. The main content area displays a news announcement dated January 13, 2023, regarding the public review of the draft Manlius Village Center Transportation Study. The announcement text states that the study is available for public review through January 31, 2023, and provides the email address contactus@smtcmpo.org for submitting comments. A sidebar on the right is titled "News/Announcements" and lists "RFPs" as a sub-category. Below the announcement text, there are two bullet points: "Draft Manlius Study" and "Draft Appendices", both with red underlines.

Public Review of Draft Manlius Village Center Transportation Study

Intro

SMTC is the state-designated Metropolitan Planning Organization (MPO) for the Syracuse Metropolitan

Page · Public & Government Service

Syracuse, NY, United States, New York

(315) 422-5716

contactus@smtcmpo.org

smtcmpo.org

Not yet rated (1 Review)

Photos

See all photos



Syracuse Metropolitan Transportation Council

January 13 at 11:01 AM · 🌐

The SMTC's draft Manlius Village Center Transportation Study is now available for public review and comment. You can access the draft report on our website at <https://smtcmpo.org/news/>

Please submit all comments on this draft report via email to contactus@smtcmpo.org by January 31.



1 comment

Like

Comment

Most relevant ▾



Author

Syracuse Metropolitan Transportation Council
Village of Manlius, NY

2w



Syracuse Metropolitan Transportation Council

January 13 at 8:11 AM · 🌐

Interested in learning more about BPT? Check out SMTC's SMART 1

Connect with Syracuse Metropolitan Transportation Council on Facebook

Log In

or

Create new account

Public Review of Draft Manlius Village Center Transportation Study

Public Review - DRAFT Manlius Study - Available Online - Comments due 1/31/23 - Message (HTML)

File Message Help Acrobat

Delete Archive Reply Reply All Forward Move Mark Unread Categorize Follow Up Read Aloud Immersive Reader Translate Zoom

Public Review - DRAFT Manlius Study - Available Online - Comments due 1/31/23

Michael Alexander

To: LisaB@manliusvillage.org; Julie.Baldwin@dot.ny.gov; scott.bates@dot.ny.gov; hchapman@manliusvillage.org; MeganCosta@ongov.net; mdygert@manliusvillage.org; Kevin Kosakowski; kkriesel@townofmanlius.org; Danielle Krol; DanielKwasnowski@ongov.net; Amanda.Mazzoni@cnyrpd.org; Maranda.Roth@dot.ny.gov; Chriss@manliusvillage.org

Fri 1/13/2023 10:29 AM

Hello SAC members,

The draft Manlius Study Report is now available online for public review.

[News/Announcements – SMTC \(smtcmpo.org\)](https://www.smtcmpo.org/News/Announcements)

Please help us spread the word. The webpage directs people to submit comments via email until 1/31/23.

Happy to chat if helpful.

Thank you all for your participation.

Best, -Mike

Michael D. Alexander, AICP
Senior Transportation Planner

Think Green - Please consider the environment before you print this email.

Syracuse Metropolitan Transportation Council
100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, NY 13202

malexander@smtcmpo.org
(P) 315-422-5716 x1305
(F) 315-422-7753

Public Review of Draft Manlius Village Center Transportation Study

The screenshot shows an email client window with the following content:

File Message Help Acrobat

Delete Archive Reply Reply All Forward Move Mark Unread Categorize Follow Up Read Aloud Immersive Reader Translate Zoom

DRAFT Manlius Transportation Study - Available online for Public Review until 1/31/23

MA Michael Alexander
To [Redacted]
Bcc [Redacted]

Fri 1/13/2023 10:42 AM

Reply Reply All Forward

Hello everyone,

We (SMTC) are pleased to announce that the *DRAFT Manlius Village Center Transportation Study* is now available online for public review.

Please click the following link to review the draft study:
[News/Announcements – SMTC \(smtcmpo.org\)](https://www.smtcmpo.org/News/Announcements)

As indicated on the webpage, you may submit comments via email until 1/31/23.

We appreciate your interest and we welcome your comments and feedback.

(I am sending you this message because you've indicated an interest in the study.)

Thank you,
-Mike

Michael D. Alexander, AICP
Senior Transportation Planner

Think Green - Please consider the environment before you print this email.

Syracuse Metropolitan Transportation Council
100 Clinton Square
126 N. Salina Street, Suite 100
Syracuse, NY 13202

malexander@smtcmpo.org
(P) 315-422-5716 x1305
(F) 315-422-7753

The following summarizes the feedback received during the public review period:

RE: DRAFT Manlius Transportation Study - Available online for Public Review until 1/31/23

To: Michael Alexander
Cc: mdecker@manliusvillage.org; Paul Whorrall

Fr 1/13/2023 2:01 PM

Forward
Reply All
Reply

NOTE: This message came from outside of the organization. Use caution with all attachments and links in this message.

Michael,

Thank you for a copy of the DRAFT report for the Village of Manlius. My interest is the fact that I with my wife are the property owners of 110 Fayette Street (immediately north of the Burger King and directly across the street from the SEFCU bank on Fayette Street). As well we run our civil engineering business out of this office.

Our comments with regards to the report are relative to Figure 44 on page 59. This graphic is included in the report without (to my review) thorough and thoughtful discussion. This graphic should be deleted from the report. If not, then a whole section of this report should be prepared discussing this graphic and the benefits (pros) and impacts (cons) to all of the businesses (and properties) from which this affects. I understand this is just a concept, but in my opinion a poorly conceived and impossible to achieve concept. As such this concept should either be better thought out or just delete this common parking concept from this traffic report altogether.

My detailed comments to this include the following:

- Concerns regarding 110 Fayette Street based on Figure 44 Parking Lot Access Concept
 - 110 Fayette Street is the Only property in which Fayette Street Access is Eliminated- This greatly impacts and de-values the property at 110 Fayette St, at a minimum right in / right out access has to be provided.
 - With this configuration how and by what means are property lines reconfigured? Preparing this graphic without incorporating ownership limits and ownership rights is reckless. Is the intent of this graphic that the Village / County / State take these properties by eminent domain? What is the intent?
 - Why is Burger King (BK) allowed to have left turn access onto Fayette St. so close to the Fayette / Seneca St signal?
 - This is a dangerous movement and often the cause of accidents on Fayette St. AS traffic planners you know this movement is not safe, yet in this graphic you allow this movement to the benefit of BK.
 - You are protecting the free movement access rights to BK while ignoring the impact of the free movement of other property owners.
 - If the left turn movement is bad for others, then it is bad for BK as well. If you allow left movements for BK then you cannot restrict that movement for other properties.
 - It appears as though the BK property is valued greater and higher than other properties in the corridor, why?
 - This graphic was prepared without looking at grades. Some of these movements will be impossible or very costly due to grade.
 - There is 4 to 6 foot grade difference between the BK property and 110 Fayette St. The parking configuration shown is not constructable.
 - If this graphic is to remain in the report, topographic conditions must be applied (with a 1 ft contour interval -5' /10' lidar is not sufficient).
 - It appears with this graphic you are reducing the parking for BK? Are you intending that BK patrons are now allowed to park at 110 Fayette? 17 parking spaces for a 4000 sf fast food restaurant is not sufficient. This is not Acceptable.
 - Who pays for the implementation of this configuration? Again is the Village / County / State paying for this. Or is someone going to force the owners to pay for this ill conceived plan.

Concept plans like this are dangerous.

As the owners of 110 Fayette Street, we are strongly opposed to this concept as presented in this 'DRAFT' report.

Respectfully,

Fwd: DRAFT Manlius Transportation Study - Available online for Public Review until 1/31/23

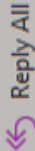
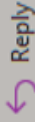


Hank Chapman <hchapman@manliusvillage.org>

To

Cc

Paul Whorrall; Michael Alexander; Meghan Vitale



Tue 1/17/2023 12:01 PM

NOTE: This message came from outside of the organization. Use caution with all attachments and links in this message.

Mike Alexander forwarded your email to me. I'm sure the Mayor will respond if he has not already, but I wanted to respond directly to you as well.

The report the SMTC provided results in recommendations to the village for some conceptual and sometimes specific ideas. The village may use some of them but others are just not feasible or necessary.

The specific concept you are referring to is something we viewed as attempting solve a problem that existed when the study began but that we have now solved. The Village negotiated for a lot off Keith Morgan Way that basically solves the parking concerns behind East Seneca Street and businesses seem satisfied.

Whether the SMTC modifies their report or not is up to them, but this is a recommendation I don't see us acting on.

Thanks for your comments

Hank

Sent from my iPhone

Begin forwarded message:

From: Paul Whorrall <paulw@manliusvillage.org>
Date: January 17, 2023 at 11:41:16 AM EST
To: Michael Alexander <malexander@smtcmpo.org>, Hank Chapman <hchapman@manliusvillage.org>
Cc: Meghan Vitale <mvitale@smtcmpo.org>
Subject: RE: DRAFT Manlius Transportation Study - Available online for Public Review until 1/31/23

Thanks Mike,

I know that Hank and I discussed the parking lot situation before, so we can meet with [redacted] and clarify the issue with him.

Paul

From: Michael Alexander <malexander@smtcmpo.org>
Sent: Tuesday, January 17, 2023 10:59 AM
To: Paul Whorrall <paulw@ManliusVillage.org>; Hank Chapman <hchapman@manliusvillage.org>
Cc: Meghan Vitale <mvitale@smtcmpo.org>
Subject: FW: DRAFT Manlius Transportation Study - Available online for Public Review until 1/31/23

Hello Paul and Hank,

Paul, I saw that you were copied on the following email but noticed that Hank was not included. As a courtesy, I am forwarding it.

As discussed at the recent SAC and VB meetings, we recognize issues with this concept and can update it to with pros and cons.

If you have any other opinions as to how to address comments, please let us know. Thank you.

-Mike

FW: Post Road / Glencliffe Traffic Study



Paul Whorrall <paulw@ManliusVillage.org>
To: Michael Alexander

Reply Reply All Forward

Fri 1/27/2023 10:02 AM

You forwarded this message on 1/27/2023 10:49 AM.

NOTE: This message came from outside of the organization. Use caution with all attachments and links in this message.

Mike,

I'm sending you this email I received from a resident that lives on Post Rd. in Manlius. I believe he spoke to you briefly on the situation in their neighborhood when you were here at our Board Meeting.

If this is something that SMTC can do, the Village would like to make the request for a study of the Post Rd./Glencliffe Neighborhood.

Thank you.

Paul

-----Original Message-----

From: [REDACTED]
Sent: Thursday, January 26, 2023 8:23 PM
To: Paul Whorrall <paulw@ManliusVillage.org>
Subject: Post Road / Glencliffe Traffic Study

Hi Mayor Whorrall,

I am just following up on our last quick conversation at the last board meeting. I think you said you would be able to follow up with the Syracuse Metropolitan Transportation Council about doing a traffic study for the Post Road / Glencliffe Neighborhood. When they were here for the Public information meeting on the village traffic study, they said if the village requested it, they could do a study of the neighborhood and it would only take a few days.

I hope this is could happen. I think traffic a study could provide some valuable ideas especially after seeing their recommendations for the village.

Finally I am in support of their proposed recommendations for the village. When I saw their recommendations, I especially like their proposed ideas around the Tops / Coffee Shop and Diner. I remember the former bike shop owner being frustrated with dangerous cut through traffic so it be not only good for the local businesses but also during big events like the Fireworks on 4th of July.

Thank you for continuing to review possible traffic solutions for our neighborhood, Let me know if their is any way I can be assistance,

[REDACTED]

ATTACHMENTS

(Community / Business Owner Outreach)



MEMORANDUM

TO: Mayor Paul Whorral, Village of Manlius

FROM: Danielle Krol, Senior Transportation Planner, SMTC

DATE: May 14, 2021

RE: Manlius Village Center Pedestrian Safety & Mobility Study – letters for upcoming Business Owner/Business Property Owner Zoom meetings

CC: James D'Agostino – Director, SMTC

Enclosed please find 150 copies of the jointly signed letter to Village of Manlius Business Owners and/or Business Property Owners announcing the upcoming SMTC *Manlius Village Center Pedestrian Safety & Mobility Study* virtual meetings and survey. The letters are ready for you to deliver by hand to Village of Manlius business owners and/or business property owners.

The information included in the letter has been posted to the SMTC website (www.smtcmpo.org/news) as well.

As a reminder, if you can get us a listing of business addresses, we will certainly mail letters from our office too.

In addition to the hand-delivered letters, perhaps posting this information on the Village website and/or Facebook page will help get the word out. I have included a few sentences below to use if you would like (or feel free to use your own wording). And/or you could post the letter itself with the announcement below (we have also posted the letter to our website).

For Village Website/Facebook Page, etc.:

Attention Manlius Business Owners/Business Property Owners!

The Syracuse Metropolitan Transportation Council (SMTC), the local transportation planning agency, is working with the Village of Manlius on the *Manlius Village Center Pedestrian Safety & Mobility Study*. As part of this study, we are looking for input on how village traffic affects your business. Join us at one of two upcoming virtual meetings and/or complete a survey! Details here: <https://smtcmpo.org/news/>. A public meeting for all village residents will be scheduled in the near future.

Please let me know if there is anything that we have forgotten. Thank you!

2/24/22, 1:55 PM

Manlius Village Center Pedestrian Safety & Mobility Study - Business Owner Survey (Edit) Microsoft Forms

Forms(<https://www.office.com/launch/forms?auth=2&from=FormsDomain>)



Manlius Village Center Pedestrian Safety & Mobility Study - Business Owner Survey

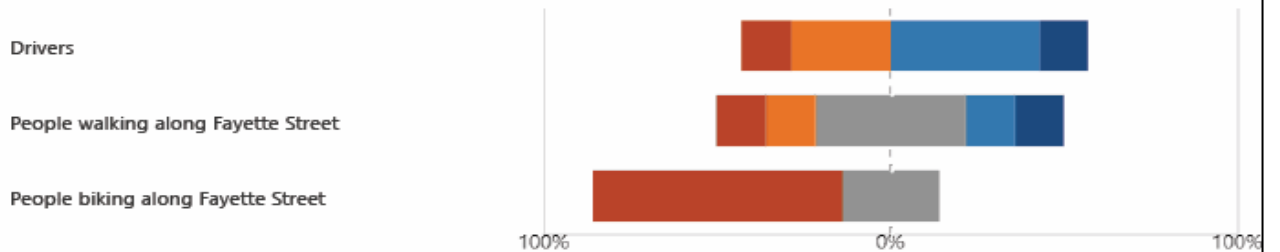
7
Responses

23:10
Average time to complete

Closed
Status

1. How would you rate FAYETTE Street's (Route 92) safety for drivers and people walking or biking on Fayette Street (1 is "not safe" and 5 is "perfectly safe")?

1 (not safe) 2 3 4 5 (perfectly safe)



2. What safety issues have you noticed on Fayette Street for drivers, pedestrians and/or bicyclists?

5
Responses

Latest Responses

"Vehicles without right of way pulling out into traffic, speeding vehicles"

"Excessive traffic, speed, dangerous to cross, to many curb cuts"

"Speeding, changing lanes to get around people waiting to turn"

Public Review of Draft Manlius Village Center Transportation Study

2/24/22, 1:55 PM Manlius Village Center Pedestrian Safety & Mobility Study - Business Owner Survey (Edit) Microsoft Forms

3. How would you rate SENECA Street's (Route 173) safety for drivers and people walking or biking on Seneca Street (1 is "not safe" and 5 is "perfectly safe")?

1 (not safe) 2 3 4 5 (perfectly safe)

Category	1 (not safe)	2	3	4	5 (perfectly safe)
Drivers	~25%	0%	~50%	~25%	0%
People walking along Seneca Street	~15%	~25%	~30%	~30%	0%
People biking along Seneca Street	~75%	~25%	0%	0%	0%

4. What safety issues have you noticed on Seneca Street for drivers, pedestrians, and/or bicyclists?

Latest Responses

7 Responses

"Vehicles speeding to beat lights/pass other vehicles, vehicles not yieldi..."

"Same issues as Fayette St."

"Speeding, people changing lanes shortly after the two lane turn onto ..."

5. Which of the following traffic issues are specific to the property where your business is located? (Choose all that apply)

Issue	Count
Traffic blocks my driveway. Cu...	3
There are no places for custo...	3
The parking lot is confusing.	4
There is no sidewalk for pedes...	0
There are no bike racks.	3
Other	2

6. What other traffic-related issues or concerns do you have?

Latest Responses

6 Responses

"Our first priority is to make the village approachable to pedestrians, a..."

"People racing and jockeying for position to beat traffic signals"

"More on street parking"

https://forms.office.com/Pages/DesignPage.aspx?auth_pvr=OrgId&auth_upn=mvitale%40smtcmpo.org&lang=en-US&origin=OfficeDotCom&rout... 2/4

Public Review of Draft Manlius Village Center Transportation Study

2/24/22, 1:55 PM

Manlius Village Center Pedestrian Safety & Mobility Study - Business Owner Survey (Edit) Microsoft Forms

7. How often do you see people walk to your business?

<input type="radio"/> I don't know	0
<input type="radio"/> Never	2
<input type="radio"/> Monthly	1
<input type="radio"/> Weekly	0
<input type="radio"/> Daily	3



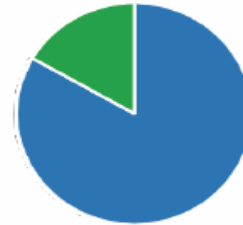
8. How often do you see people ride a bike to your business?

<input type="radio"/> I don't know	0
<input type="radio"/> Never	3
<input type="radio"/> Monthly	1
<input type="radio"/> Weekly	2
<input type="radio"/> Daily	0



9. I would like bicyclists to be able to access my business.

<input type="radio"/> Yes	5
<input type="radio"/> No	0
<input type="radio"/> It doesn't matter	1
<input type="radio"/> I don't know	0



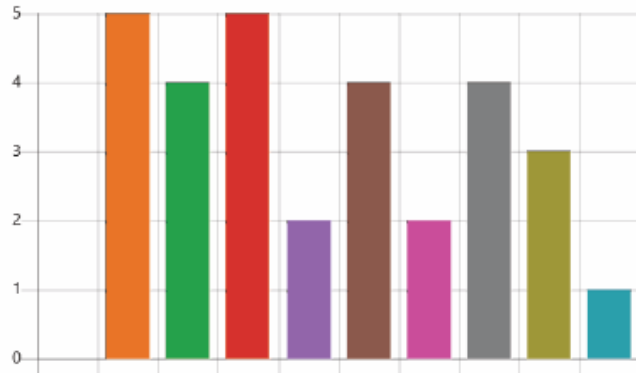
Public Review of Draft Manlius Village Center Transportation Study

2/24/22, 1:55 PM

Manlius Village Center Pedestrian Safety & Mobility Study - Business Owner Survey (Edit) Microsoft Forms

10. What improvements would you like to see in the Village along Fayette and/or Seneca Streets? (choose all that apply)

- Improved sidewalks 0
- Improved crosswalks 5
- Bicycle lanes (for example, see... 4
- Planting street trees (for exam... 5
- Lighting 2
- Street amenities (benches, tras... 4
- Consolidate driveways betwee... 2
- On-street parking 4
- Off-street parking 3
- Other 1



11. Do you have any other ideas or suggestions for improving Fayette Street and Seneca Street in the Village?

6
Responses

Latest Responses

"I'm not sure how it would affect traffic through the neighborhood, but..."
"reduce the number of lanes, possibly a center turn lane"

12. If you would like to be notified of future SMTC activities or to receive the SMTC's newsletter, please provide your email address (optional):

3
Responses

Latest Responses

"letstalk@wanderhere.com"
"Hchapman@manliusvillage.org"



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MANLIUS VILLAGE CENTER PEDESTRIAN SAFETY & MOBILITY STUDY

Business Owner Meeting Summary

Zoom

June 2, 2021

10:00 a.m.

Attendees

Scott Bates, NYSDOT

Hank Chapman, V/Manlius Trustee

Danielle Krol, SMTC

Matthew Napierala, Napierala Consulting*

Doug St. Laurent, St. Laurent Framing, Ltd.*

Meghan Vitale, SMTC

Paul Whorrall, V/Manlius Mayor

*Business owners

Ms. Krol started the Zoom meeting with introductions, a brief overview of the Syracuse Metropolitan Transportation Council (SMTC) and began to share PowerPoint slides specific to the *Manlius Village Center Pedestrian Safety & Mobility Study*.

Mr. Chapman asked about the traffic flow slide that showed destinations (PM traffic) for trips on Route 173 between Route 92 and Mill Street. He was specifically asking about the area where 40% of the traffic has an origin/destination on either side of Enders Road (the slide notes that about 20% of traffic has a destination within the Village boundary - west of Enders Road, and about 20% has a destination east of Enders Rd)

Mr. Chapman was asking if this is showing non-village traffic. He noted that Academy Hill is a big neighborhood and wanted to know if that was included in the numbers shown. Ms. Vitale stated that this graphic only shows the destination of trips on a small piece of the overlap (between Route 92 and Mill Street) that it appears that approximately 20% of what is shown in the area near Enders Road is headed to inside the village boundary. Ms. Vitale stated that the Academy neighborhood would be included if it is part of the same zone. SMTC will look at this to see if it did make it as part of the analysis.

Mr. St. Laurent spoke to the traffic pattern he sees. He mentioned the four lanes of traffic on East Seneca Street as you travel east from Fayette Street. When pedestrians are crossing mid-block, sometimes the vehicle on the inside lane does not see the pedestrian, causing vehicles to slam on their brakes. He noted how he hears screeching tires from his business. Ms. Krol stated that SMTC will have to do some additional observations here now that the flashing beacon is installed. She noted that whether the flashing beacon will take care of that is questionable.

Manlius Pedestrian Study

Business Owner Meeting – June 2, 2021

Whorrall noted that it's hard for motorists to see why vehicles are stopping -- the curb lane vehicles will stop but the inside lane of vehicles will keep moving. He stated that at Seneca and Fayette there is a lot of pedestrian traffic, and it is tough to cross four lanes of vehicular traffic.

Ms. Krol stated that there are specific requirements needed for a beacon to be installed. Mr. Bates stated that they cannot be installed at a signalized intersection. Mr. Bates noted that NYSDOT has a PSAP document that notes when RRFBs should be considered. Speed, number of lanes, AADT and pedestrian crashes are considered. If there are some uncontrolled crosswalks as part of this study that meet the requirements, they can be looked at. Regarding signage blocking the RRFB, Mr. Bates said he will investigate that.

Mayor Whorrall noted that when senior pedestrians are crossing the street, it takes them a bit longer. He said they get into the middle and are scooting quick to get out of the way from turning traffic. Mr. Bates stated that NYSDOT can look at using a leading pedestrian interval (LPI) to help pedestrians get out into the crosswalk where motorists can see them. The negative is that you are now stopping vehicles at all approaches. Usually, LPI is for the right turners but sometimes also for the left turners.

Mayor Whorrall said the Village center and Burger King/Sunoco are the two intersections he is referring to. The latter is a tough intersection as some pedestrians stop mid-way. The mayor said he is looking at potentially closing Liberty Lane between Seneca and Flume Road, putting a sidewalk down and grassing this area. Motorists are taking left turns and holding up traffic, and then motorists coming down Fayette also fly through this area.

Mr. Bates noted that the less conflicting movements the better. He also stated that NYSDOT would not want to affect another intersection by doing this. Ms. Krol stated that SMTC can assess whether modeling is a possibility here. Mayor Whorrall noted that sometimes motorists head north out of Liberty Lane even though it's a one-way street. Ms. Vitale and Mr. Bates discussed the signal plan at the Sunoco intersection (Seneca St/Fayette St/Liberty Lane). Mr. Bates stated his concern over whether the intersection at Tops (Seneca St/Flume Road), particularly the left turn would be affected. He said SMTC could examine this by moving the left turn volume from Liberty to the Tops intersection and see if this affects it.

Ms. Krol stated that the next steps in the project are to summarize the business owner meeting findings/discussions and summarize the overall issues and concerns in the study area. SMTC will then look at developing draft recommendations and holding a public meeting to share the issues and recommendations.

Ms. Krol thanked everyone for participating and ended the meeting.



Syracuse Metropolitan Transportation Council

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MANLIUS VILLAGE CENTER PEDESTRIAN SAFETY & MOBILITY STUDY

Business Owner Meeting Summary

Zoom

June 3, 2021

7:00 p.m.

Attendees

Dan Chapman, A.W. Wander*

Danielle Krol, SMTC

Meghan Vitale, SMTC

Paul Whorrall, V/Manlius Mayor

*Business owner

Ms. Krol started the Zoom meeting with introductions, a brief overview of the Syracuse Metropolitan Transportation Council (SMTC) and began to share PowerPoint slides specific to the *Manlius Village Center Pedestrian Safety & Mobility Study*. The same presentation was shared during the June 2, 2021, Business Owner Meeting.

Mr. Dan Chapman, owner of A.W. Wander bar, asked about pass-through traffic, and if this was typical. Mr. Chapman stated that noise from “racing” cars and motorcycles trying to beat the traffic lights is frustrating for his patrons when sitting outside. He said that noise from trucks is also disruptive and asked if air brakes can somehow be restricted. Mr. Chapman shared the following comments/concerns:

- It is difficult for his customers to cross the street (E Seneca St), so they do not want to park on the opposite side of the street. Four lanes are an issue – motorists cannot see people crossing the street.
 - Mr. Chapman does not know what to tell his customers about where to park – communication is difficult.
- Merging is an issue. It is “high pressure.” One-way streets are confusing and force traffic onto the main streets in the village.
- Sidewalks, sidewalk furniture and maintenance are all good in the village.
- After the morning rush, on-street parking is allowed in front of his business on E Seneca St, but no one wants to be the first one to park.
 - Mr. Chapman stated that this is not an effective lane anyway and asked if that lane could be closed.
 - He asked if vehicles parallel parking here would impede traffic.
- Mr. Chapman’s employees park behind Burger King to free up spaces for customers on Wesley St.

Public Review of Draft Manlius Village Center Transportation Study

*Manlius Pedestrian Study
Business Owner Meeting – June 2, 2021*

Mayor Whorrall stated that a couple of signs were left up where the beacon is, and they are now blocking the beacon. He stated that the one pointing down to the crosswalk may not be necessary now.

Mayor Whorrall also stated that parking continues to be an issue. The businesses that at one point were owned by Manlius residents would allow free parking in their parking lots and/or would have an agreement with the Village to use these lots at costs the Village could afford. But now there are more out of Village lot owners making parking less available, because these owners now charge significantly more for Village use. The mayor noted that he has been working with Burger King to obtain public parking rights. He also agrees that parking on Wesley Street is an issue.

Mayor Whorrall also noted the following:

- Cars tend to jump back and forth between lanes on Seneca Street
- Need to sit down and look at some of the curb cuts particularly the extended curb cuts (near Brueggers, Pavones etc.). Drivers are doing illegal left turns out of the businesses.
- Beat Street Music on Seneca between Wesley and Fayette there are curb cuts where the owner has expressed a desire to cut it down to one curb cut because drivers tend to use the parking lot as a turn around. He is working with the business owners on what can be done and may be able to utilize a grant to make some changes.

Ms. Vitale referenced the Dunkin Donuts issue Whorrall brought up. She expressed that these types of studies can look at that type of an issue.

Mayor Whorrall also noted that motorists making right hand turns into CVS are driving beyond and then doing a U-turn and coming back. He feels it would be more beneficial to take a left turn at the light and enter in the back.

Mr. Napierala noted that traffic coming from the east has a significant uptick during the school year. He noted that as far as pedestrian use is concerned, he feels the village is in pretty good shape and well taken care of, with a large number of sidewalks. He did note that when walking his dog, he avoids crossing at Seneca and Fayette Streets. One of his concerns as a small business owner is whether the Village businesses will have to take on the cost of any improvements. Certainly, there is a traffic volume issue coming thru the village. He stated that several of his employees must take a right turn when leaving his business.

The group discussed one-way streets within the Village. Mayor Whorrall mentioned that some roads used to be two-way many years ago. He feels that too many of them were changed to one-way in the same direction, and that motorists must go out of their way to get where they want/need to go. The mayor would like to change one or two of those streets back to two-way. He realizes that many of those side streets are narrow and if parking is allowed it affects the ability to plow in the winter. He stated that the Village could eliminate parking, but that it would limit parking for Village businesses. Mayor Whorrall has met with property owners to possibly purchase one of the lots for public parking, but the price of the lot increased when word got out that the Village was interested in purchasing the land for parking.

The mayor also asked about the possibility of getting more rectangular flashing beacons. He stated that the Village has two intersections that people do not dare cross because of the line of sight, etc. Mayor

*Manlius Pedestrian Study
Business Owner Meeting – June 3, 2021*

Mayor Paul Whorrall spoke about the lot behind Pavone's noting that it used to be a village-utilized lot (the mayor had been the previous owner of the lot). He stated that the current owners do not allow parking and have increased the price to sell the lot, which the village cannot presently afford. Ms. Vitale asked about the lot on Keith Morgan. The mayor said that this is a municipal lot. Mr. Chapman noted that a streetlight is needed here. Ms. Vitale suggested that the post office lot could be utilized as a municipal parking lot. Mayor Whorrall shared that the Methodist Church parking lot will be a municipal lot (except for Sunday mornings) that the Village will pave and maintain.

Ms. Krol stated that the next steps in the project are to summarize the business owner meeting findings/discussions and summarize the overall issues and concerns in the study area. SMTC will then look at developing draft recommendations and holding a public meeting to share the issues and recommendations.

Ms. Krol thanked Mr. Chapman for participating and ended the meeting.

Public Review of Draft Manlius Village Center Transportation Study

Excerpt from: VILLAGE OF MANLIUS BOARD OF TRUSTEES MEETING MINUTES

December 13, 2022
Regular Meeting
Manlius Village Hall

Village Board Meeting Minutes available online:
<https://www.manliusvillage.org/AgendaCenter>

PRESENT: Mayor Whorrall, Trustee Chapman, Trustee McGrew, Trustee Abdo-Rott ABSENT: Trustee Pilewski OTHERS: Lisa Baker, Clerk/Deputy Treasurer; Brad Hunt, Village Attorney; Chris Sherwood, DPW Superintendent; Mike Decker, Codes Enforcement Officer; Jansen Casscles, Fire Chief; Christine Roet, Recreation Director; James D'Agostino, SMTC; Judy & Jerry Dardzinski, Residents; Steve Weiter, Village Resident; Ann Smith, MSAC; Don Gates, Village Resident; Jerry Menter, Susan & David Carwell, Resident; Mike Alexander, SMTC; Katlyn Kriesel, Town Counselor; Alissa Italiano, Town Counselor; Dan Chapman + 1, AW Wonder; Rob Oley, Village Resident; James Vanderson and Rebecca Girourad, Rolling Rust Room; Mike McCracken, Taco Bell.

SMTC- Mike Alexander (Transportation Planner) presented the Manlius Village Mobility Study. Stated this is informational only, not a proposal. They develop a plan and make suggestions which can be used as a reference and resource. They would also like to collect public feedback. They will develop a report for the public. They had a set up in the auditorium for the public to see the plans and ask questions. Mayor Whorrall reiterated they have been working with us and the DOT for several years and have great ideas.

Public Engagement Open House Notes

12/13/22 Manlius Village Board Meeting

The Village of Manlius invited the SMTC staff to present the purpose of the project and “big-picture” recommendations as an informational item at a Village Board meeting on December 13, 2022. At this meeting, SMTC staff also set up a series of graphics in a separate room for the public to provide feedback on. In total, approximately 25 people attended the village board meeting, and approximately 10 participated and provided comments on the SMTC’s concepts.

The SMTC received the following comments during community outreach efforts:

- General support of roundabouts at either end of the village, and some participants mentioned that village residents who are opposed to the idea may be unfamiliar with how to maneuver a roundabout as a driver.
 - SMTC staff noted that these concepts were just to determine if roundabouts could geometrically fit at the two intersections, but a separate study would likely be required to recommend them. Staff also provided the locations of other single-lane roundabouts that had been recently installed in the region.
 - One participant asked if the intersection of Routes 92, 257, and Stickley drive was considered for a potential roundabout. SMTC staff indicated that the intersection was considered in a preliminary screening but was ruled out due to having five legs, several of which are very close to each other.
- Concern was brought up surrounding W Seneca St’s bridge over the west branch of Limestone Creek. Narrow shoulders and the lack of sidewalk were mentioned as being pedestrian concerns, while the overall narrowness of the bridge acts as a physical constraint to connecting the areas immediately to the east and west. One participant noted creek flooding issues.
 - SMTC staff noted that the bridge had recently been reconstructed (year?) and acknowledged the physical constraints that a narrow bridge can create.
- It was mentioned that the Village occasionally puts on firework shows and parades, which generate lots of pedestrian activity in the Tops Plaza and Willowbrook Apartments area.
 - Positive feedback was given for a more formalized road and pedestrian/bike network through this area to facilitate safer movements.
 - It was also noted that a children’s toy store has recently opened in the Tops Plaza, which could also bring more pedestrians, especially younger ones, into the area.
 - One resident brought up that the neighborhood to the west of the village has many younger families and sees daily speeding/cut-through issues, speeding/cut through traffic on neighborhood streets – drivers using Post Road and Glencliffe Road to connect between Troop K Road and East Seneca Street. There was interest in traffic calming and/or speed cushions/humps. SMTC staff noted that the City of Syracuse recently started a speed humps/cushions pilot program on some residential streets.
- Support for closure of Pleasant St and the shared-use path to Fayetteville-Manlius High School.