

Traffic Impact Study

3660 N. Lake Shore Drive

Chicago, Illinois



Prepared For:



December 6, 2018

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I. Executive Summary

This report summarizes the results of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed City Club development to be located in the southwest quadrant of the intersection of inner Lake Shore Drive and Waveland Avenue just east of The New York condominiums in Chicago, Illinois. The objectives of the traffic study are as follows:

- Determine the existing vehicular, pedestrian, bicycle, and public transportation conditions in the study area to establish a base condition.
- Assess the impact that the proposed development will have on transportation conditions in the area.
- Determine any street, access, bicycle, and pedestrian modifications and/or improvements that will be necessary to effectively accommodate and mitigate future conditions.

Vehicle, pedestrian, and bicycle counts were conducted during the weekday morning and weekday evening (on Cubs game day and non-game day) at 10 intersections in the vicinity of the site in order to determine the general peak hour of traffic activity during these time periods.

As proposed, the site will be developed with an apartment building containing 332 units and a 5,000 square foot restaurant. The proposed development will provide a total of 151 parking spaces and as many as 192 with tandem spaces in a parking garage for the future residents of the development. Parking for the patrons and employees of the proposed restaurant was assumed to be accommodated at The New York parking garage. Access to the proposed development will be provided via the existing full ingress/egress access drive off Waveland Avenue and via a new full ingress/egress access drive off inner Lake Shore Drive (eliminating the existing inbound only access drive).

Based on the analyses and recommendations within the study, the following conclusions were made:

- The studied intersections are operating at acceptable levels of service during all three peak hours.
- The existing street system can sufficiently accommodate the traffic to be generated by the proposed development as well as the addition of traffic from other developments with modest increases in the delay experienced.

- In conjunction with the proposed development and in order to reduce delays, consideration should be given to the following intersection improvements:
 - Extending the existing northbound lead phase for northbound Lake Shore Drive at its intersection with Addison Street.
 - Provide a northbound lead phase for North Broadway at its intersection with Addison Street.
- The shared access drive with The New York off Waveland Avenue will be adequate in accommodating the traffic projected to be generated by the proposed development.
- The relocation and conversion of the access drive off Lake Shore Drive to two-way traffic will increase site access flexibility and will ensure efficient access is provided for both the proposed development and The New York. This access drive will be adequate in accommodating the traffic generated by The New York and the traffic projected to be generated by the proposed development.
- Valet for the proposed restaurant customer parking should be provided on Waveland Avenue. Valet vehicles parking in the parking garage serving The New York will promote clockwise circulation around the site and reduce unnecessary maneuvers to take and bring back vehicles.

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the proposed development to be located in the southwest quadrant of the intersection of inner Lake Shore Drive with Waveland Avenue just east of The New York condominium building in Chicago, Illinois. The site is comprised of vacant land and an inbound only access drive into The New York residential complex.

As proposed, the site will be developed with an apartment building containing 332 units and a 5,000 square foot restaurant. The proposed development will provide a total of 151 parking spaces and as many as 192 with tandem spaces in a parking garage for the future residents of the development. Parking for the patrons and employees of the proposed restaurant was assumed to be accommodated at The New York parking garage. Access to the proposed development will be provided via the existing full ingress/egress access drive off Waveland Avenue and via a new full ingress/egress access drive off inner Lake Shore Drive that will replace the existing inbound only access drive.

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

The sections of this report present the following:

- Existing street conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Evaluation and recommendations with respect to adequacy of the site access, adjacent street system, and drop-off/pick-up activities

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

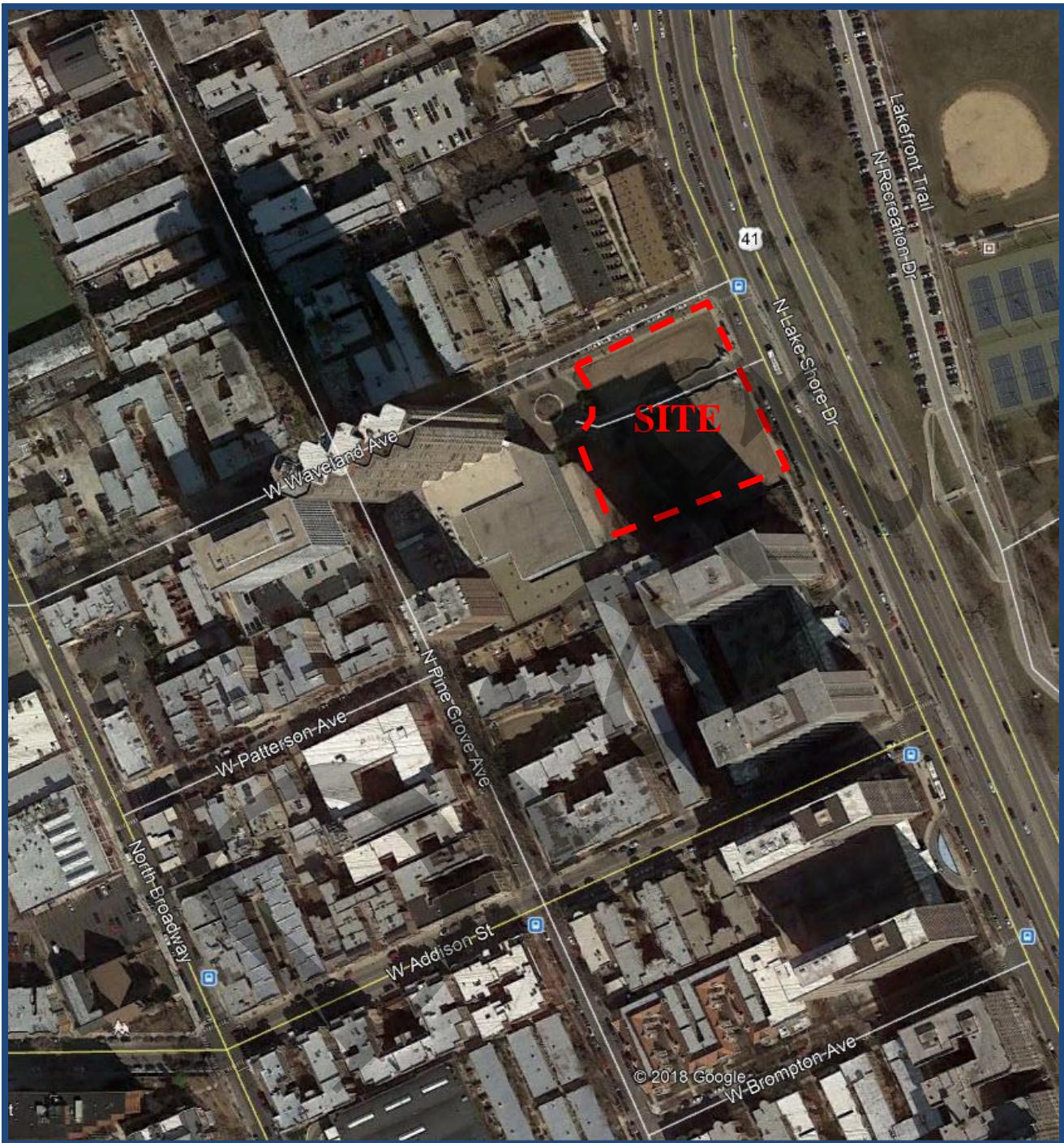
1. Existing Conditions - Analyzes the capacity of the existing street system using existing peak hour traffic volumes in the surrounding area.
2. Projected Conditions – Analyzes the capacity of the future street system using the projected traffic volumes that include the existing traffic volumes, background traffic growth, and the traffic estimated to be generated by the full buildout of the proposed development.



Site Location

Figure 1

*3660 N. Lake Shore Drive
Chicago, Illinois*



Aerial View of Site

Figure 2

3660 N. Lake Shore Drive
Chicago, Illinois

2. Existing Conditions

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

Site Location

The site is located in the Lakeview neighborhood of Chicago in the southwest quadrant of the intersection of inner Lake Shore Drive with Waveland Avenue. The area land uses are multi-family residential to the north, south, and west of the site. To the east, the site is bordered by Lake Shore Drive and Lincoln Park.

Existing Street System Characteristics

The characteristics of the existing streets near the development are described below.

Inner Lake Shore Drive is a two-way street in the vicinity of the site that generally provides one lane in each direction. On-street parking is generally allowed on both sides of the street. At its signalized intersection with Grace Street/Sheridan Road, inner Lake Shore Drive is widened to provide two northbound lanes striped for a combined through/left-turn lane and a through lane and two southbound lanes. Inner Lake Shore Drive is under the jurisdiction of the Chicago Department of Transportation (CDOT).

North Broadway is a northwest-southeast street in the vicinity of the site that generally provides one travel lane in each direction. No exclusive turn lanes are provided at its signalized intersections with Addison Street, Grace Street/Halsted Street or at its all-way stop control intersection with Waveland Avenue. On-street paybox parking is allowed on both sides of the street. Three northwest-bound and one southeast-bound CTA bus stops (Bus Route 36) are located along the stretch of North Broadway between Addison Street and Grace Street/Halsted Street. Broadway Street is under CDOT's jurisdiction.

Halsted Street is a north-south street that generally provides one lane in each direction with designated bicycle lanes on both sides of the street. At its signalized intersection with Waveland Avenue, Halsted street is widened to provide a shared left-turn/through lane and an exclusive right-turn lane in the northbound approach. At its signalized intersections with Broadway Street/Grace Street and with Sheridan Street, Halsted Street is widened on both approaches to provide an exclusive left-turn lane and a shared through/right-turn lane. On-street paybox parking is allowed on both sides of the street. Halsted Street is under CDOT's jurisdiction.

Addison Street is an east-west street generally providing one lane in each direction with on-street parking provided on both sides of the street. No exclusive turn lanes are provided at its signalized intersection with Rush Street/State Street or at its unsignalized intersection with Lake Shore Drive. On-street parking is permitted on both sides of the street and is restricted to permit parking except west of the alley where metered parking spaces (one handicapped parking spaces) are provided on the south side. Cedar Street has a posted speed limit of 20 mph enforced via two speed humps and is under the Illinois Department of Transportation (IDOT) jurisdiction.

Waveland Avenue is a two-way east-west street that becomes one-way eastbound street east of North Broadway. On-street parking is provided on both sides of the street between North Broadway and Lake Shore Drive. Waveland Avenue is under CDOT's jurisdiction.

Grace Street is a two-way east-west street that becomes one-way westbound for a short segment just east of Halsted Street. Grace Street is under CDOT's jurisdiction

Public Transportation

The following summarizes the availability of alternative modes of transportation other than the personal automobile that are available in the area. As a result of the proximity to multiple CTA Rapid Transit train service and bus routes, pedestrian and bicycle infrastructure improvements, and mode-sharing, the area has an AllTransit Performance Score of 9.6 out of 10.0. The AllTransit Performance Score, developed by the Center for Neighborhood Technology (CNT), is a comprehensive tool that includes metrics such as connectivity, access to jobs, and frequency of service within a specific area. Therefore, an area with a score greater than 9.0 allows for a significant number of trips to be completed without the need of a personal automobile. The public transportation serving the area is summarized below.

CTA Rapid Transit. The area is served by the Chicago Transit Authority (CTA) rapid transit via the Red Line with the Addison station located approximately one-half mile from the site. The CTA Red Line operates 24 hours a day, seven days a week between Howard Street and the 95th/Dan Ryan station located along the Dan Ryan Expressway at 95th Street. Additional service is provided via connections to the Brown and Purple Line at the Belmont station.

CTA Bus Routes. The area is also served by the following bus routes, all of which have bus stops within a few blocks of the site:

Route 135, Route 146, Route 151, Route 152, Route 8 and Route 36 (Broadway).

Route 135 – Clarendon/LaSalle Express generally operates along Lake Shore Drive and Inner Lake Shore Drive from Franklin/Jackson to the Weiss Memorial Hospital. Service is provided Monday through Friday.

Route 146 – Inner Drive/Michigan Express generally operates along Inner Lake Shore Drive from Museum Campus north to the Red Line Berwyn Station. Notable stops include Museum Campus, Illinois Center, Roosevelt Road Orange/Red/Green Line Station, and Wrigley/Tribune Building. Service is provided seven days a week, including holidays.

Route 151 – Sheridan provides north-south service along Lake Shore Drive and Sheridan Road from Union Station to Devon/Clark. Notable stops include Union Station, Millennium Park, Lincoln Park Zoo and Loyola University. Service is provided seven days a week, including holidays.

Route 152 – Addison provides north-south service along Addison Street from Cumberland to Lake Shore/Waveland. Notable stops include Cark Schurz High School, The Blue Line Addison Station, the Brown Line Addison Station and Wrigley Field. Service is provided seven days a week, including holidays.

Route 8 – Halsted provides north-south service along Halsted Street from 79th Street/Halsted Street to Waveland/Broadway. Notable stops include the Green Line Halsted Station, the Orange Line Halsted Station and the Blue Line/O’Hare Grand Station. Service is provided seven days a week, including holidays.

Route 36 (Broadway) generally operates along State Street, North Broadway, and Clark Street from Loyola University to Congress Parkway. Notable stops include Lincoln Park Zoo, the Chicago History Museum, and the Main Post Office. Service is provided seven days a week, including holidays.

Alternative Modes of Transportation

The alternate modes of transportation serving the area are summarized below:

Pedestrian Accommodations. Sidewalks are located on both sides of all streets and high-visibility crosswalks are generally provided at all intersections within the study area. Within the study area, pedestrian countdown timers are provided at the intersections of Halsted Street with Waveland Avenue and Halsted with North Broadway and Grace Street.

Mode-Sharing Transportation Availability. A number of Divvy bike sharing stations are located within the area with the closest stations located near the following intersections:

- Waveland Avenue with Pine Grove Avenue (17 docks)
- Waveland Avenue with North Broadway (7 docks)

Parking

Public parking in the vicinity of the site is provided from both on-street and off-street locations.

On-street Parking. Pay box parking is generally provided on both sides of the study area streets.

Off-Street Parking. Public parking in the area is provided via the following public parking garages/lots within close proximity to the site:

- 3660 Lake Shore Drive (Adjacent to the site and providing 57 spaces)
- 3600 Lake Shore Drive (South of the site and providing approximately 160 spaces)

Existing Traffic Volumes

In order to determine current vehicle, pedestrian, and bicycle conditions within the study area, KLOA, Inc. conducted peak period traffic, pedestrian, and bicycle counts utilizing Miovision Scout Collection Units for the following intersections:

- Lake Shore Drive with Addison Street
- Lake Shore Drive with Waveland Avenue
- Lake Shore Drive with Grace Street
- Lake Shore Drive with Sheridan Road
- North Broadway with Addison Street
- North Broadway with Waveland Avenue
- North Broadway with Halsted Street/Grace Street
- Halsted Street with Waveland Avenue
- Waveland Avenue with New York Residences Access Drive
- Lake Shore Drive with New York Residences Access Drive

The counts were conducted on Tuesday June 19, 2018 (game day when the cubs had a double header at 12:00 P.M. and at 7:05 P.M.) and on Thursday June 21, 2018 (non-game day) during the weekday morning (7:00 A.M. to 9:00 A.M.) and evening (4:00 P.M. to 7:00 P.M.) peak periods. The results of the traffic counts show that the system peak hours generally occur from 8:00 A.M. to 9:00 A.M. during the morning peak hour and from 6:00 P.M. to 7:00 P.M. during the evening peak hour. On the day of the double header, the evening peak hour also occurred from 6:00 P.M. to 7:00 P.M. **Figure 3** illustrates the existing peak hour vehicle traffic volumes. **Figure 4** illustrates the existing pedestrian and bicycle volumes, showing the direction of travel.

Based on the traffic counts, **Table 1** shows a trip generation breakdown during the peak hours per vehicle type of the New York Residences access drive. It should be noted that although no delivery vehicles were observed to utilize the New York Residences access drive during the peak hours, KLOA, Inc. observed and collected the number of delivery vehicles an hour before and an hour after the peak hours. Based on these additional observations, the following was found:

Thursday June 21, 2018

- One FedEx vehicle during the 7:00 to 8:00 A.M. hour was stopped in the turnaround area for five minutes
- One U-Haul truck during the 4:00 to 5:00 P.M. hour was stopped in the turnaround area for 11 minutes
- One DHL truck during the 5:00 to 6:00 P.M. hour was stopped for three minutes

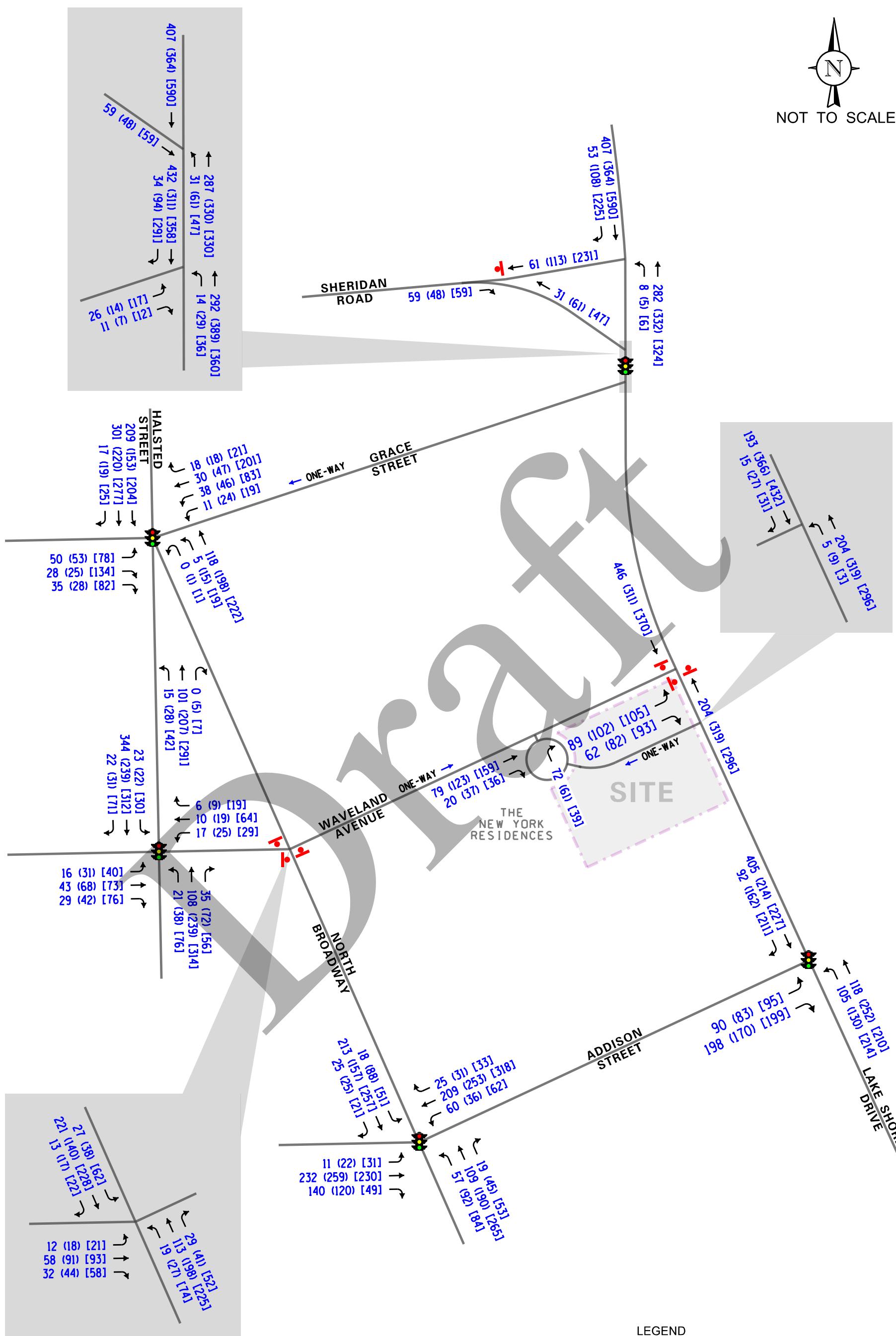
No delivery trucks were observed utilizing the turnaround on Tuesday June 19, 2018. Furthermore, none of the delivery vehicles utilizing the turnaround were observed to block the passage and/or movement of other vehicles on the turnaround.

Table 1
THE NEW YORK GENERATED TRAFFIC VOLUMES

Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Weekday Evening Peak Hour (Game Day)		
	In	Out	Total	In	Out	Total	In	Out	Total
Apartments (594 Units plus public parking garage)									
Garage (Passenger Vehicles)	16	48	64	47	35	82	54	23	77
Drop-off/Pick-up	19	19	38	22	22	44	14	14	28
Taxis	5	5	10	4	4	8	2	2	4
Delivery (FedEx, UPS, etc.)	0	0	0	0	0	0	0	0	0
Total	40	72	112	73	61	134	70	39	109

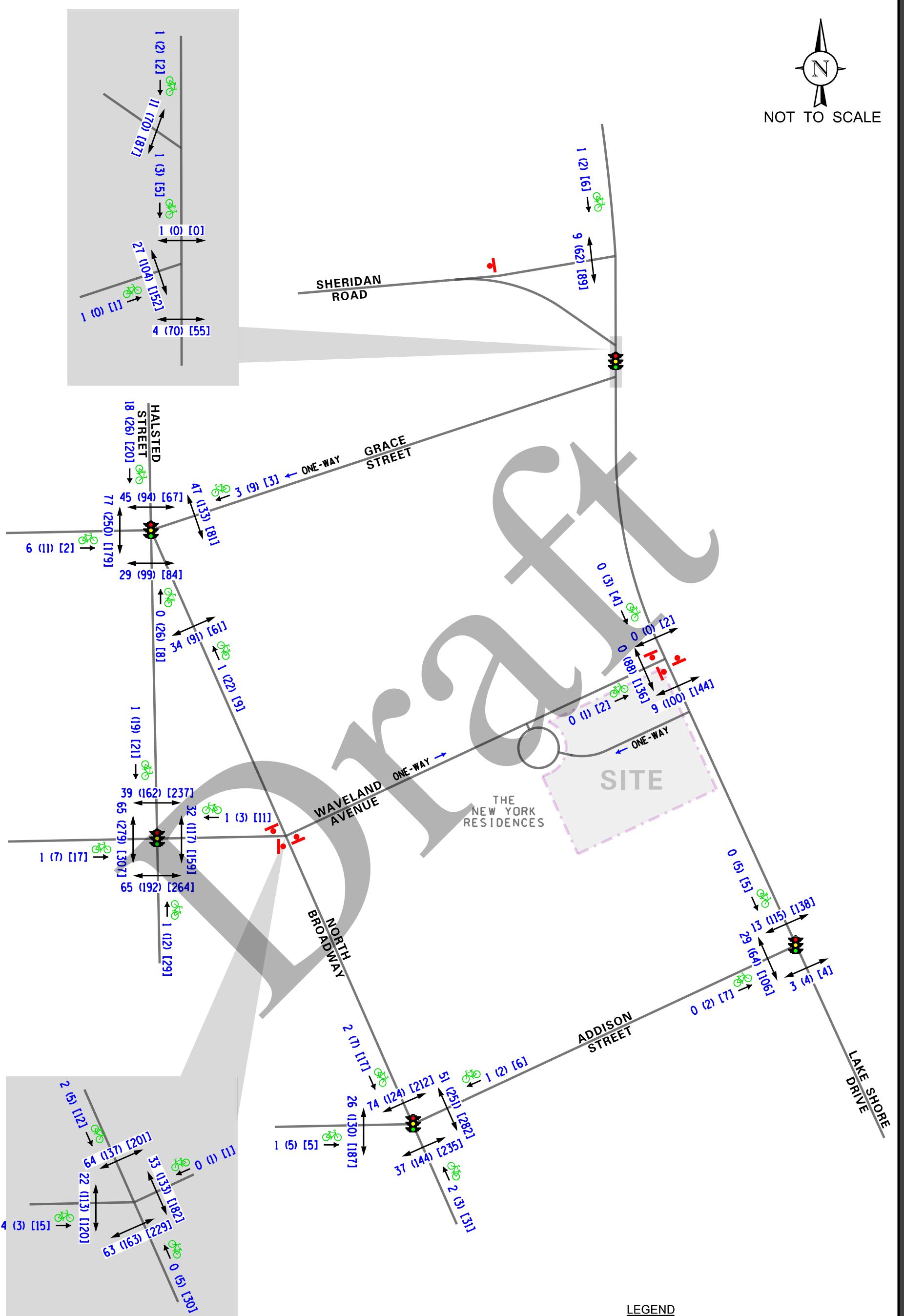


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LEGEND

00 - AM PEAK HOUR (8:00-9:00 AM)

(00) - PM PEAK HOUR (6:00-7:00 PM)

[00] - PM PEAK HOUR GAME DAY (6:00-7:00 PM)

3. Traffic Characteristics of the Proposed Development

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

Site Location and Existing Use

The site is located in the Lakeview neighborhood of Chicago on the southwest quadrant of the intersection of inner Lake Shore Drive with Waveland Avenue and is currently vacant land.

Proposed Development Plan

As proposed, the site will be developed with an apartment building containing 332 units and a 5,000 square foot restaurant. The proposed development will provide a total of 151 parking spaces and as many as 192 with tandem spaces in a parking garage for the future residents of the development. 248 parking spaces in a parking garage for the residents of the development. Parking for the patrons and employees of the proposed restaurant was assumed to be accommodated at The New York parking garage. Access to the proposed development will be provided via the existing full ingress/egress access drive off Waveland Avenue and via a new full ingress/egress access drive off inner Lake Shore Drive that will replace the existing inbound only access drive.

Truck Loading

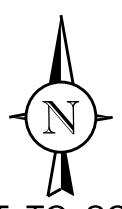
Loading for the development (residential and restaurant use) will be provided internally in a double berth loading dock to be accessed via the new proposed two-way drive connecting to inner Lake Shore Drive. Loading will be limited to single-unit trucks to/from inner Lake Shore Drive. No trucks will use the New York entrance and turnaround other than delivery vans (i.e. FedEx, UPS, etc.).

Drop-Off/Pick-Up Loading

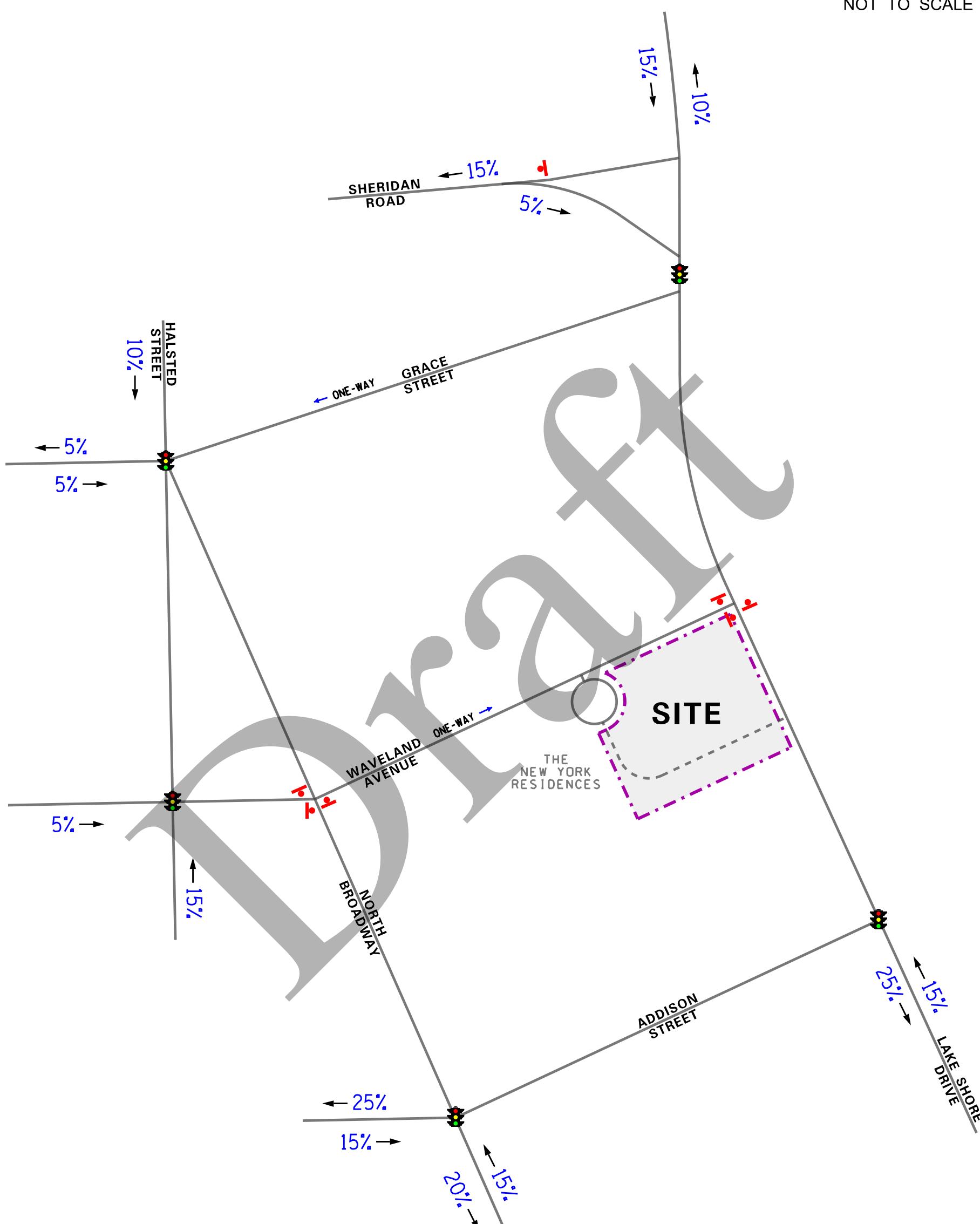
All drop-off/pick-up activity will occur internally via the existing circular turnaround serving The New York Residences. "No Parking" signs should be provided on the east side of the existing turnaround. Auto-Turn exhibits depicting traffic maneuvers on-site of the garage access, drop-off/pick-up and trucks loading are included in the Appendix.

Directional Distribution

The directions from which residents, employees, and patrons will approach and depart the site were estimated based on existing travel patterns (as determined from the traffic counts), one-way restrictions, and the available access to the area. **Figure 5** illustrates the general directional distribution of traffic to and from the site.



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Estimated Peak Hour Traffic Volumes

The number of peak hour vehicle trips estimated to be generated by the proposed development was based on trip generation rates published by the Institute of Transportation Engineers (ITE) in the *Trip Generation Manual*, 9th Edition. The estimated trip generation for the development is shown in **Table 2**. It should be noted that the surveys conducted by ITE are generally based on suburban areas where the primary mode of transportation is a personal automobile. Based on Census Tract 609 data, approximately 60 percent of the residents in the area take public transportation or walked.

Table 2
PROJECTED SITE-GENERATED TRAFFIC VOLUMES

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Two-Way Traffic
		In	Out	Total	In	Out	Total	
220	Apartments (330 Units)	33	132	165	129	70	199	2,124
	Personal Automobile	6	46	52	26	2	28	425
	Walk/Transit (60%)	-20	-79	-99	-77	-42	-119	-1,274
	Ride-Share Trips (20%)	7	7	14	26	26	52	425
932	Restaurant (5,380 s.f.)	5	5	10	33	20	53	604
	Personal Automobile	5	5	10	6	1	7	122
	Walk/Transit (60%)	--	--	--	-20	-12	-32	-362
	Ride-Share Trips (20%)	--	--	--	7	7	14	120
Total New Trips¹		18	58	76	65	36	101	1,092

1 – Sum of personal automobile and ride share trips

4. Projected Traffic Conditions

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

Development Traffic Assignment

The estimated weekday morning and evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of the new passenger vehicle trips for the development.

Background Traffic

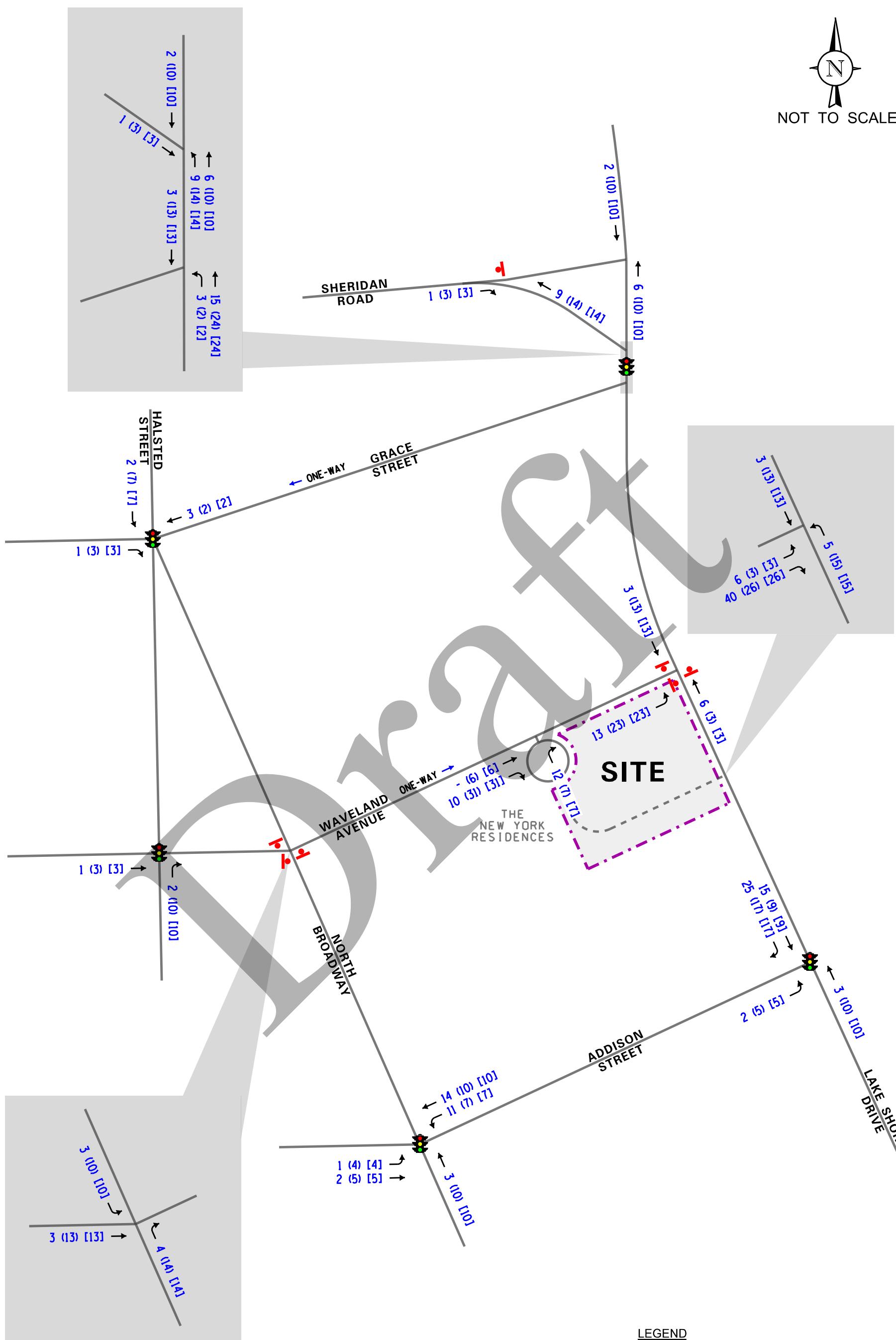
To account for the traffic to be generated by other future developments in the area, the existing traffic volumes were increased by 0.5 percent per year for six years to reflect Year 2024 traffic conditions. In addition and given the proposed plans to provide a full ingress/egress access drive off inner Lake Shore Drive replacing the existing inbound only access drive, The New York Residences traffic volumes were reassigned to reflect the new configuration.

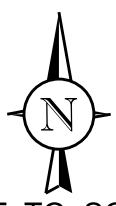
Total Projected Traffic Volumes

The Year 2024 No Build traffic volumes were combined with the new peak hour traffic volumes generated by the proposed development to determine the Year 2024 total projected traffic volumes, shown in **Figure 7**.

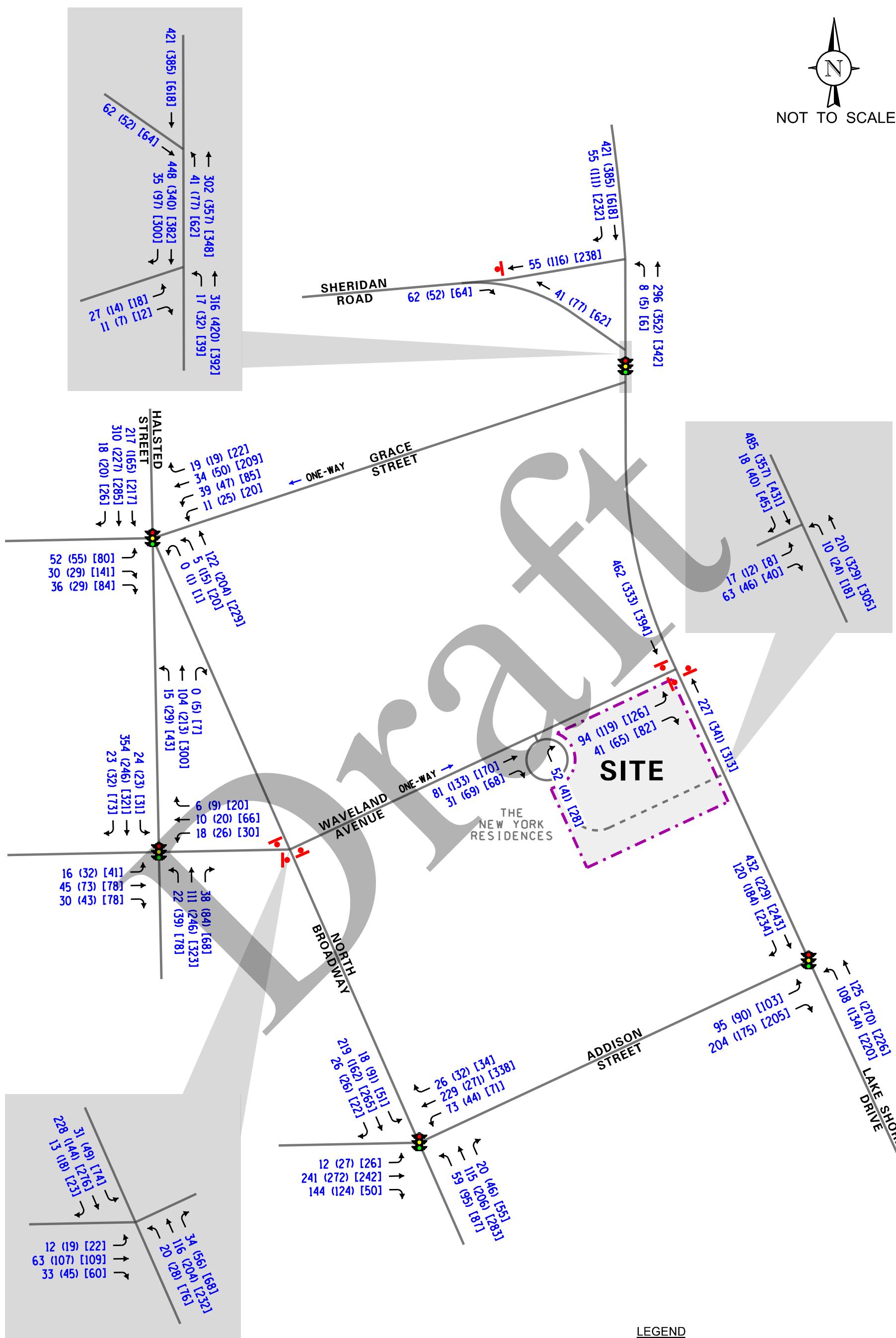


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5. Traffic Analysis and Recommendations

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

Traffic Analyses

Intersection analyses were performed for the weekday morning and weekday evening peak hours for the existing and future projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM)*, 6th Edition and analyzed using the Synchro/SimTraffic 10 software. The analysis for the traffic-signal controlled intersections were accomplished using existing cycle lengths and phasings to determine the average overall vehicle delay and levels of service.

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

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

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing and future projected conditions are presented in **Table 3** for signalized intersections and **Table 4** for unsignalized intersections. A discussion of the intersections follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 3
CAPACITY ANALYSIS RESULTS – SIGNALIZED INTERSECTION

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour (Non-Game Day)		Weekday Evening Peak Hour (Game Day)	
	LOS	Delay	LOS	Delay	LOS	Delay
Existing Conditions						
Lake Shore Drive with Addison Street	C	31.1	E	63.5	F	153.5
Lake Shore Drive with Sheridan Road	B	12.5	A	9.9	C	20.8
Lake Shore Drive with Grace Street	A	4.8	A	4.1	A	7.3
North Broadway with Grace Street/Halsted Street	C	21.4	C	25.7	C	34.3
North Broadway with Addison Street	B	17.2	B	19.8	C	23.9
Waveland Avenue with Halsted Street	A	9.9	B	10.4	B	14.4
Projected Conditions						
Lake Shore Drive with Addison Street ¹	D (C)	38.0 (26.8)	E (C)	76.1 (34.6)	F (D)	185.4 (47.4)
Lake Shore Drive with Sheridan Road	B	12.5	A	10.0	C	23.9
Lake Shore Drive with Grace Street	A	4.9	A	4.2	A	8.1
North Broadway with Grace Street/Halsted Street	C	22.4	C	26.1	D	36.3
North Broadway with Addison Street ²	B (C)	17.5 (20.6)	C (C)	21.1 (22.4)	C (C)	27.4 (28.4)
Waveland Avenue with Halsted Street	B	10.0	B	10.6	B	15.0
LOS = Level of Service Delay is measured in seconds. 1 – With extension of northbound lead phase 2 – With provision of a northbound lead phase () – Level of Service and Delay with Recommended Improvements						

Table 4
CAPACITY ANALYSIS RESULTS – UNSIGNALIZED INTERSECTION

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Weekday Evening Peak Hour (Cubs Event)	
	LOS	Delay	LOS	Delay	LOS	Delay
Existing Conditions						
Lake Shore Drive with Waveland Avenue	B	12.8	B	11.9	B	13.1
Waveland Avenue with North Broadway	A	9.5	A	9.7	B	13.0
Lake Shore Drive with Access Drive	A	0.1	A	0.1	A	0.1
Waveland Avenue with Access Drives	A	4.3	A	3.0	A	1.8
Projected Conditions						
Lake Shore Drive with Waveland Avenue	B	13.3	B	12.7	B	14.2
Waveland Avenue with North Broadway	A	9.8	B	10.2	B	14.3
Lake Shore Drive with Access Drive	A	12.2	B	11.7	B	11.6
Waveland Avenue with Access Drives	A	8.9	A	9.2	A	9.4
LOS = Level of Service						
Delay is measured in seconds.						

Discussion and Recommendations

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

Lake Shore Drive with Waveland Avenue

The results of the capacity analysis show that this intersection currently operates at an overall acceptable Level of Service (LOS) B during the weekday morning, weekday evening, and weekday evening game event peak hours. Under future condition, the intersection will continue operating at the same LOS with minimal increases in the overall delay experienced. Observations of the traffic simulations indicate that traffic will continue to flow efficiently with eastbound and northbound queues that will not extend to the existing and proposed access drive, respectively. As such, no geometric or traffic control improvements will be necessary in conjunction with the proposed development.

Lake Shore Drive with Addison Street

The results of the capacity analyses indicate that this intersection is operating at an acceptable LOS during the weekday morning peak hour. However, during the no game and game event weekday evening peak hour, the intersection operates at a LOS E and F, respectively. This is due to the heavy northbound to westbound left-turn movement and the minimal amount of green lead phase provided to this movement.

Under projected conditions, the intersection will continue operating at an acceptable LOS during the weekday morning peak hour and at a LOS E and F during the no game and game event weekday evening peak hour, respectively. In order to improve the overall operation of the intersection, consideration should be given to extending the northbound lead phase for inner Lake Shore Drive by approximately 11 seconds. When the intersection is analyzed assuming this improvement, the overall LOS is improved to C and D during the no game and game event weekday evening peak hour, respectively. No additional geometric or traffic control improvements will be necessary in conjunction with the proposed development.

Lake Shore Drive with Sheridan Road

The results of the capacity analysis show that this intersection currently operates at an overall acceptable Level of Service (LOS) C or better during the weekday morning, weekday evening, and weekday evening game event peak hours and will continue to do so in the future with minimal increases in the overall delay. As such, no geometric or traffic control improvements will be necessary in conjunction with the proposed development.

Lake Shore Drive with Grace Street

The results of the capacity analysis show that this intersection currently operates at an overall acceptable Level of Service (LOS) A during the weekday morning, weekday evening, and weekday evening game event peak hours and will continue to do so in the future with minimal increases in the overall delay. As such, no geometric or traffic control improvements will be necessary in conjunction with the proposed development.

Waveland Avenue with North Broadway

The results of the capacity analysis show that this intersection currently operates at an overall acceptable Level of Service (LOS) B or better during the weekday morning, weekday evening, and weekday evening game event peak hours and will continue to do so in the future with minimal increases in the overall delay. As such, no geometric or traffic control improvements will be necessary in conjunction with the proposed development.

North Broadway with Grace Street/Halsted Street

The results of the capacity analysis show that this intersection currently operates at an overall acceptable Level of Service (LOS) C during the weekday morning, weekday evening, and weekday evening game event peak hours. Under future conditions, the intersection will operate at an overall LOS D or better with minimal increases in the overall delay. As such, no geometric or traffic control improvements will be necessary in conjunction with the proposed development.

North Broadway with Addison Street

The results of the capacity analysis show that this intersection currently operates at an overall acceptable Level of Service (LOS) C or better during the weekday morning, weekday evening, and weekday evening game event peak hours and will continue to do so in the future with minimal increases in the overall delay. Although the intersection will operate at an acceptable LOS, based on the projected traffic volumes and a review of the simulation runs, consideration should be given to providing a northbound lead phase for North Broadway. This will improve the traffic flow and reduce the northbound queues. No other geometric or traffic control improvements will be necessary in conjunction with the proposed development.

Waveland Avenue with Halsted Street

The results of the capacity analysis show that this intersection currently operates at an overall acceptable Level of Service (LOS) B or better during the weekday morning, weekday evening, and weekday evening game event peak hours. Under future conditions, the intersection will operate at an overall LOS B during all three studied peak hours with minimal increases in the overall delay. As such, no geometric or traffic control improvements will be necessary in conjunction with the proposed development.

Lake Shore Drive with Proposed Access Drive

This proposed access drive will replace the existing inbound only access drive on inner Lake Shore Drive and will allow full ingress/egress movements. Based on the projected traffic volumes, the access drive should provide one inbound lane and one outbound lane with outbound movements under stop sign control. Based on the results of the capacity analyses, the outbound movements from the proposed access drive will operate at a LOS A with very low delays.

Waveland Avenue with Access Drive

The results of the capacity analyses indicate that this intersection currently operates at an overall acceptable Level of Service (LOS) A during the weekday morning, weekday evening, and weekday evening game event peak hours and will continue to do so in the future. As such, no geometric or traffic control improvements will be necessary in conjunction with the proposed development.

Restaurant Drop-Off/Pick-Up Operation

Given the proposed restaurant use in the southwest corner of the intersection of inner Lake Shore Drive with Waveland Avenue, it is recommended that valet for the proposed restaurant customer parking be provided on Waveland Avenue. Valet vehicles parking in the parking garage serving The New York will promote clockwise circulation around the site thus reducing unnecessary maneuvers to take and bring back vehicles. Based on KLOA, Inc. experience and observations of other valet services for restaurant, it is recommended that two to three on-street parking spaces be striped for valet/loading zone thus ensuring that traffic utilizing the valet service do not block Waveland Avenue.

Turnaround Operation Evaluation

As previously mentioned and based on the traffic counts, The New York garage generates approximately 64 total (in/out) trips during the weekday morning peak hour and approximately 82 total trips during the evening peak hour. In addition, the turnaround experiences approximately 50 total trips during the morning and evening peak hours. Given the proposed plans to provide a full ingress/egress access drive off inner Lake Shore Drive, it is anticipated that approximately 45 percent of the outbound trips from The New York Garage will be diverted to the new proposed full ingress/egress access drive. This translates to a reduction of approximately 30 to 35 vehicles. As such, the net increase in traffic experienced within the turnaround as a result of the proposed development will be between 10 and 20 additional vehicles during the peak hours. This small increase in traffic volumes (one additional trip every three minutes) can be accommodated by the turnaround with minimal conflicts and/or increases in delays. Furthermore, it is important to note that the provision of a full ingress/egress access drive off inner Lake Shore Drive will provide additional access flexibility that the New York Residences currently do not have.

Transportation Sustainability Conclusions and Recommendations

The following summarizes measures to be implemented by the proposed development and/or recommendations to further minimize the impact of the development, foster alternative modes of transportation other than the automobile, and to enhance pedestrian/bicycle safety:

- Indoor bike storage space should be provided for residents of the apartment building and for employees of the restaurant.
- Bike racks should be provided near the restaurant and apartment lobby entrances.
- Consideration should be given to providing parking spaces for car-sharing vehicles within the parking garage.
- Consideration should be given to providing electric vehicle charging stations within the parking garage.
- Consideration should be given to providing a CTA transit information kiosk within the lobby in order to further encourage public transit use.

6. Conclusion

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

- The traffic that will be generated by the proposed development will be reduced due to the availability of alternative modes of transportation.
- The adjacent street network has sufficient reserve capacity to accommodate the traffic projected to be generated by the proposed development
- The shared access drive with The New York off Waveland Avenue and the internal turnaround will be adequate in accommodating the traffic projected to be generated by the proposed development.
- The relocation and conversion of the access drive off Lake Shore Drive to two-way traffic will increase site access flexibility and will ensure efficient access is provided. This access drive will be adequate in accommodating the traffic generated by The New York and the traffic projected to be generated by the proposed development.
- Valet for the proposed restaurant customer parking should be provided on Waveland Avenue. Valet vehicles parking in the parking garage serving The New York will promote clockwise circulation around the site and reduce unnecessary maneuvers to take and bring back vehicles.
- Based on the results of the capacity analyses and a review of the traffic simulations, in order to improve the traffic flow and operation of the intersections, consideration should be given to the following intersection improvements:
 - Extending the existing northbound lead phase for northbound Lake Shore Drive at its intersection with Addison Street.
 - Provide a northbound lead phase for North Broadway at its intersection with Addison Street.
- Loading for both land uses of the development will occur internally thus not having an impact on the traffic flow along Waveland Avenue and inner Lake Shore Drive

Appendix

Traffic Count Summary Sheets

Auto-Turn Diagrams

Census Tract Data

Level of Service Criteria

Capacity Analysis Summary Sheets

Traffic Count Summary Sheets



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Broadway/Addison
Site Code:
Start Date: 06/19/2018
Page No: 1

Turning Movement Data

Start Time	Addison Street Eastbound						Addison Street Westbound						Broadway Northbound				Broadway Southbound				Int. Total				
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right			
7:00 AM	0	2	65	16	10	83	0	15	51	5	19	71	0	16	21	4	10	41	0	5	22	9	17	36	231
7:15 AM	0	1	75	26	15	102	0	6	49	1	8	56	0	18	14	4	16	36	0	6	33	7	16	46	240
7:30 AM	0	2	63	34	7	99	0	8	55	3	25	66	0	17	17	10	13	44	0	4	49	4	16	57	266
7:45 AM	0	2	66	24	14	92	0	16	52	4	21	72	0	16	23	4	22	43	0	6	65	1	22	72	279
Hourly Total	0	7	269	100	46	376	0	45	207	13	73	265	0	67	75	22	61	164	0	21	169	21	71	211	1016
8:00 AM	0	5	65	32	6	102	0	11	49	2	28	62	0	14	20	6	17	40	0	1	44	4	34	49	253
8:15 AM	0	5	60	28	10	93	0	9	34	1	29	44	0	16	28	8	11	52	0	7	55	5	35	67	256
8:30 AM	0	11	60	16	11	87	0	19	62	6	12	87	0	10	20	8	13	38	0	3	47	1	18	51	263
8:45 AM	0	3	55	22	8	80	0	13	55	2	14	70	0	10	26	4	12	40	0	6	43	8	14	57	247
Hourly Total	0	24	240	98	35	362	0	52	200	11	83	263	0	50	94	26	53	170	0	17	189	18	101	224	1019
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4:00 PM	0	10	93	15	33	118	0	18	85	9	76	112	0	7	45	11	74	63	0	10	49	4	59	63	356
4:15 PM	0	12	75	23	34	110	0	14	82	5	46	101	0	9	52	14	47	75	0	22	63	2	32	87	373
4:30 PM	0	9	62	24	24	95	0	21	82	10	49	113	0	19	41	26	29	86	0	7	67	6	22	80	374
4:45 PM	0	9	55	22	24	86	0	18	64	11	49	93	0	18	59	11	39	88	0	10	61	7	25	78	345
Hourly Total	0	40	285	84	115	409	0	71	313	35	220	419	0	53	197	62	189	312	0	49	240	19	138	308	1448
5:00 PM	0	15	55	7	28	77	0	17	82	8	42	107	0	16	66	16	31	98	0	8	65	6	32	79	361
5:15 PM	0	9	69	26	40	104	0	17	86	12	60	115	0	25	49	14	62	88	0	11	55	5	41	71	378
5:30 PM	0	8	70	23	29	101	0	18	106	9	55	133	0	21	52	10	61	83	0	13	71	1	40	85	402
5:45 PM	0	5	59	14	29	78	0	11	99	9	60	119	0	19	55	10	57	84	0	16	55	4	38	75	356
Hourly Total	0	37	253	70	126	360	0	63	373	38	217	474	0	81	222	50	211	353	0	48	246	16	151	310	1497
6:00 PM	0	11	63	12	37	86	0	10	104	6	73	120	0	16	82	7	64	105	0	9	73	4	65	86	397
6:15 PM	1	5	54	16	49	76	0	14	84	7	64	105	0	21	69	8	62	98	0	13	56	8	46	77	356
6:30 PM	0	9	50	15	49	74	0	16	73	11	79	100	0	27	68	20	54	115	0	13	81	4	52	98	387
6:45 PM	0	6	66	8	52	80	0	22	62	10	66	94	0	21	76	18	55	115	0	16	63	6	49	85	374
Hourly Total	1	31	233	51	187	316	0	62	323	34	282	419	0	85	295	53	235	433	0	51	273	22	212	346	1514
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
7:00 AM	0	3	77	34	11	114	0	12	58	5	20	75	0	13	15	7	7	35	0	5	26	5	15	36	260
7:15 AM	0	2	70	28	4	100	0	6	39	0	10	45	0	16	24	14	2	54	0	2	28	3	9	33	232
7:30 AM	0	4	74	38	12	116	0	10	41	3	19	54	0	14	21	6	11	41	0	3	37	4	16	44	255
7:45 AM	0	2	60	37	11	99	0	16	37	3	20	56	0	13	16	7	13	36	0	16	60	6	25	82	273
Hourly Total	0	11	281	137	38	429	0	44	175	11	69	230	0	56	76	34	33	166	0	26	151	18	65	195	1020
8:00 AM	0	0	51	32	7	83	0	6	63	5	9	74	0	16	28	6	10	50	0	4	50	6	15	60	267
8:15 AM	0	5	65	35	6	105	0	15	43	8	18	66	0	12	29	6	12	47	0	5	46	7	28	58	276
8:30 AM	0	1	62	36	9	99	0	19	53	2	15	74	0	17	27	2	9	46	0	4	52	3	20	59	278
8:45 AM	0	5	55	37	4	97	0	20	51	10	9	81	0	12	27	5	6	44	0	5	67	9	11	81	303
Hourly Total	0	11	233	140	26	384	0	60	210	25	51	295	0	57	111	19	37	187	0	18	215	25	74	258	1124

*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
4:00 PM	0	6	61	27	14	94	0	11	81	6	34	98	0	24	49	15	22	88	0	5	26	3	8	34	314
4:15 PM	0	7	76	29	14	112	0	9	78	8	35	95	0	17	47	15	20	79	0	12	34	6	12	52	338
4:30 PM	0	3	61	19	26	83	0	13	72	6	29	91	0	28	49	9	25	86	0	5	46	6	21	57	317
4:45 PM	0	3	73	26	28	102	0	9	89	12	39	110	0	23	47	8	18	78	0	8	40	10	21	58	348
Hourly Total	0	19	271	101	82	391	0	42	320	32	137	394	0	92	192	47	85	331	0	30	146	25	62	201	1317
5:00 PM	0	1	60	24	22	85	0	17	72	17	47	106	0	16	35	11	34	62	0	6	44	5	26	55	308
5:15 PM	0	7	62	22	21	91	0	8	64	8	40	80	0	30	47	12	42	89	0	8	44	10	42	62	322
5:30 PM	0	10	63	24	26	97	0	18	75	10	60	103	0	20	53	10	42	83	0	8	31	4	35	43	326
5:45 PM	0	4	63	26	30	93	0	18	55	8	55	81	0	20	54	16	51	90	1	7	36	12	22	56	320
Hourly Total	0	22	248	96	99	366	0	61	266	43	202	370	0	86	189	49	169	324	1	29	155	31	125	216	1276
6:00 PM	0	4	66	31	32	101	0	8	54	6	65	68	0	21	48	6	42	75	0	5	36	4	34	45	289
6:15 PM	0	6	70	35	21	111	0	11	64	6	58	81	0	21	45	10	30	76	0	11	37	8	34	56	324
6:30 PM	0	8	67	31	37	106	0	6	59	6	57	71	0	22	46	21	44	89	0	9	47	7	31	63	329
6:45 PM	0	4	61	23	40	88	0	11	78	13	71	102	0	28	54	8	28	90	0	3	44	6	25	53	333
Hourly Total	0	22	264	120	130	406	0	36	255	31	251	322	0	92	193	45	144	330	0	28	164	25	124	217	1275
Grand Total	1	224	2577	997	884	3799	0	536	2642	273	1585	3451	0	719	1644	407	1217	2770	1	317	1948	220	1123	2486	12506
Approach %	0.0	5.9	67.8	26.2	-	-	0.0	15.5	76.6	7.9	-	-	0.0	26.0	59.4	14.7	-	-	0.0	12.8	78.4	8.8	-	-	-
Total %	0.0	1.8	20.6	8.0	-	30.4	0.0	4.3	21.1	2.2	-	27.6	0.0	5.7	13.1	3.3	-	22.1	0.0	2.5	15.6	1.8	-	19.9	-
Lights	1	217	2454	957	-	3629	0	529	2520	264	-	3313	0	690	1491	396	-	2577	1	307	1768	206	-	2282	11801
% Lights	100.0	96.9	95.2	96.0	-	95.5	-	98.7	95.4	96.7	-	96.0	-	96.0	90.7	97.3	-	93.0	100.0	96.8	90.8	93.6	-	91.8	94.4
Buses	0	2	66	1	-	69	0	0	75	1	-	76	0	1	51	0	-	52	0	4	58	4	-	66	263
% Buses	0.0	0.9	2.6	0.1	-	1.8	-	0.0	2.8	0.4	-	2.2	-	0.1	3.1	0.0	-	1.9	0.0	1.3	3.0	1.8	-	2.7	2.1
Single-Unit Trucks	0	5	21	18	-	44	0	1	17	7	-	25	0	12	14	4	-	30	0	5	20	2	-	27	126
% Single-Unit Trucks	0.0	2.2	0.8	1.8	-	1.2	-	0.2	0.6	2.6	-	0.7	-	1.7	0.9	1.0	-	1.1	0.0	1.6	1.0	0.9	-	1.1	1.0
Articulated Trucks	0	0	1	8	-	9	0	0	2	0	-	2	0	10	4	0	-	14	0	0	5	1	-	6	31
% Articulated Trucks	0.0	0.0	0.0	0.8	-	0.2	-	0.0	0.1	0.0	-	0.1	-	1.4	0.2	0.0	-	0.5	0.0	0.0	0.3	0.5	-	0.2	0.2
Bicycles on Road	0	0	35	13	-	48	0	6	28	1	-	35	0	6	84	7	-	97	0	1	97	7	-	105	285
% Bicycles on Road	0.0	0.0	1.4	1.3	-	1.3	-	1.1	1.1	0.4	-	1.0	-	0.8	5.1	1.7	-	3.5	0.0	0.3	5.0	3.2	-	4.2	2.3
Pedestrians	-	-	-	-	-	884	-	-	-	-	-	1585	-	-	-	-	-	1217	-	-	-	-	-	1123	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Broadway/Addison
Site Code:
Start Date: 06/19/2018
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Addison Street Eastbound						Addison Street Westbound						Broadway Northbound						Broadway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	5	65	32	6	102	0	11	49	2	28	62	0	14	20	6	17	40	0	1	44	4	34	49	253
8:15 AM	0	5	60	28	10	93	0	9	34	1	29	44	0	16	28	8	11	52	0	7	55	5	35	67	256
8:30 AM	0	11	60	16	11	87	0	19	62	6	12	87	0	10	20	8	13	38	0	3	47	1	18	51	263
8:45 AM	0	3	55	22	8	80	0	13	55	2	14	70	0	10	26	4	12	40	0	6	43	8	14	57	247
Total	0	24	240	98	35	362	0	52	200	11	83	263	0	50	94	26	53	170	0	17	189	18	101	224	1019
Approach %	0.0	6.6	66.3	27.1	-	-	0.0	19.8	76.0	4.2	-	-	0.0	29.4	55.3	15.3	-	-	0.0	7.6	84.4	8.0	-	-	-
Total %	0.0	2.4	23.6	9.6	-	35.5	0.0	5.1	19.6	1.1	-	25.8	0.0	4.9	9.2	2.6	-	16.7	0.0	1.7	18.5	1.8	-	22.0	-
PHF	0.000	0.545	0.923	0.766	-	0.887	0.000	0.684	0.806	0.458	-	0.756	0.000	0.781	0.839	0.813	-	0.817	0.000	0.607	0.859	0.563	-	0.836	0.969
Lights	0	20	225	92	-	337	0	51	191	10	-	252	0	47	82	26	-	155	0	17	172	17	-	206	950
% Lights	-	83.3	93.8	93.9	-	93.1	-	98.1	95.5	90.9	-	95.8	-	94.0	87.2	100.0	-	91.2	-	100.0	91.0	94.4	-	92.0	93.2
Buses	0	1	8	0	-	9	0	0	5	0	-	5	0	0	5	0	-	5	0	0	5	0	-	5	24
% Buses	-	4.2	3.3	0.0	-	2.5	-	0.0	2.5	0.0	-	1.9	-	0.0	5.3	0.0	-	2.9	-	0.0	2.6	0.0	-	2.2	2.4
Single-Unit Trucks	0	3	2	4	-	9	0	0	0	1	-	1	0	2	2	0	-	4	0	0	2	0	-	2	16
% Single-Unit Trucks	-	12.5	0.8	4.1	-	2.5	-	0.0	0.0	9.1	-	0.4	-	4.0	2.1	0.0	-	2.4	-	0.0	1.1	0.0	-	0.9	1.6
Articulated Trucks	0	0	0	1	-	1	0	0	1	0	-	1	0	1	1	0	-	2	0	0	0	1	-	1	5
% Articulated Trucks	-	0.0	0.0	1.0	-	0.3	-	0.0	0.5	0.0	-	0.4	-	2.0	1.1	0.0	-	1.2	-	0.0	0.0	5.6	-	0.4	0.5
Bicycles on Road	0	0	5	1	-	6	0	1	3	0	-	4	0	0	4	0	-	4	0	0	10	0	-	10	24
% Bicycles on Road	-	0.0	2.1	1.0	-	1.7	-	1.9	1.5	0.0	-	1.5	-	0.0	4.3	0.0	-	2.4	-	0.0	5.3	0.0	-	4.5	2.4
Pedestrians	-	-	-	-	-	35	-	-	-	-	-	83	-	-	-	-	-	53	-	-	-	-	-	101	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Broadway/Addison
Site Code:
Start Date: 06/19/2018
Page No: 4

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Addison Street Eastbound						Addison Street Westbound						Broadway Northbound						Broadway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 PM	0	11	63	12	37	86	0	10	104	6	73	120	0	16	82	7	64	105	0	9	73	4	65	86	397
6:15 PM	1	5	54	16	49	76	0	14	84	7	64	105	0	21	69	8	62	98	0	13	56	8	46	77	356
6:30 PM	0	9	50	15	49	74	0	16	73	11	79	100	0	27	68	20	54	115	0	13	81	4	52	98	387
6:45 PM	0	6	66	8	52	80	0	22	62	10	66	94	0	21	76	18	55	115	0	16	63	6	49	85	374
Total	1	31	233	51	187	316	0	62	323	34	282	419	0	85	295	53	235	433	0	51	273	22	212	346	1514
Approach %	0.3	9.8	73.7	16.1	-	-	0.0	14.8	77.1	8.1	-	-	0.0	19.6	68.1	12.2	-	-	0.0	14.7	78.9	6.4	-	-	-
Total %	0.1	2.0	15.4	3.4	-	20.9	0.0	4.1	21.3	2.2	-	27.7	0.0	5.6	19.5	3.5	-	28.6	0.0	3.4	18.0	1.5	-	22.9	-
PHF	0.250	0.705	0.883	0.797	-	0.919	0.000	0.705	0.776	0.773	-	0.873	0.000	0.787	0.899	0.663	-	0.941	0.000	0.797	0.843	0.688	-	0.883	0.953
Lights	1	30	215	48	-	294	0	62	306	32	-	400	0	83	255	53	-	391	0	50	248	20	-	318	1403
% Lights	100.0	96.8	92.3	94.1	-	93.0	-	100.0	94.7	94.1	-	95.5	-	97.6	86.4	100.0	-	90.3	-	98.0	90.8	90.9	-	91.9	92.7
Buses	0	1	9	1	-	11	0	0	11	0	-	11	0	0	9	0	-	9	0	0	8	1	-	9	40
% Buses	0.0	3.2	3.9	2.0	-	3.5	-	0.0	3.4	0.0	-	2.6	-	0.0	3.1	0.0	-	2.1	-	0.0	2.9	4.5	-	2.6	2.6
Single-Unit Trucks	0	0	6	0	-	6	0	0	1	1	-	2	0	1	1	0	-	2	0	1	0	0	-	1	11
% Single-Unit Trucks	0.0	0.0	2.6	0.0	-	1.9	-	0.0	0.3	2.9	-	0.5	-	1.2	0.3	0.0	-	0.5	-	2.0	0.0	0.0	-	0.3	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	0.3	0.1
Bicycles on Road	0	0	3	2	-	5	0	0	5	1	-	6	0	1	30	0	-	31	0	0	16	1	-	17	59
% Bicycles on Road	0.0	0.0	1.3	3.9	-	1.6	-	0.0	1.5	2.9	-	1.4	-	1.2	10.2	0.0	-	7.2	-	0.0	5.9	4.5	-	4.9	3.9
Pedestrians	-	-	-	-	-	187	-	-	-	-	-	282	-	-	-	-	-	235	-	-	-	-	-	212	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Broadway/Addison
Site Code:
Start Date: 06/19/2018
Page No: 5

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Addison Street Eastbound						Addison Street Westbound						Broadway Northbound						Broadway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	0	51	32	7	83	0	6	63	5	9	74	0	16	28	6	10	50	0	4	50	6	15	60	267
8:15 AM	0	5	65	35	6	105	0	15	43	8	18	66	0	12	29	6	12	47	0	5	46	7	28	58	276
8:30 AM	0	1	62	36	9	99	0	19	53	2	15	74	0	17	27	2	9	46	0	4	52	3	20	59	278
8:45 AM	0	5	55	37	4	97	0	20	51	10	9	81	0	12	27	5	6	44	0	5	67	9	11	81	303
Total	0	11	233	140	26	384	0	60	210	25	51	295	0	57	111	19	37	187	0	18	215	25	74	258	1124
Approach %	0.0	2.9	60.7	36.5	-	-	0.0	20.3	71.2	8.5	-	-	0.0	30.5	59.4	10.2	-	-	0.0	7.0	83.3	9.7	-	-	-
Total %	0.0	1.0	20.7	12.5	-	34.2	0.0	5.3	18.7	2.2	-	26.2	0.0	5.1	9.9	1.7	-	16.6	0.0	1.6	19.1	2.2	-	23.0	-
PHF	0.000	0.550	0.896	0.946	-	0.914	0.000	0.750	0.833	0.625	-	0.910	0.000	0.838	0.957	0.792	-	0.935	0.000	0.900	0.802	0.694	-	0.796	0.927
Lights	0	11	222	133	-	366	0	60	199	22	-	281	0	52	105	18	-	175	0	17	202	24	-	243	1065
% Lights	-	100.0	95.3	95.0	-	95.3	-	100.0	94.8	88.0	-	95.3	-	91.2	94.6	94.7	-	93.6	-	94.4	94.0	96.0	-	94.2	94.8
Buses	0	0	7	0	-	7	0	0	7	0	-	7	0	0	3	0	-	3	0	0	5	0	-	5	22
% Buses	-	0.0	3.0	0.0	-	1.8	-	0.0	3.3	0.0	-	2.4	-	0.0	2.7	0.0	-	1.6	-	0.0	2.3	0.0	-	1.9	2.0
Single-Unit Trucks	0	0	3	7	-	10	0	0	2	3	-	5	0	2	1	1	-	4	0	1	6	1	-	8	27
% Single-Unit Trucks	-	0.0	1.3	5.0	-	2.6	-	0.0	1.0	12.0	-	1.7	-	3.5	0.9	5.3	-	2.1	-	5.6	2.8	4.0	-	3.1	2.4
Articulated Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	3	0	0	-	3	0	0	0	0	-	0	4
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.5	0.0	-	0.3	-	5.3	0.0	0.0	-	1.6	-	0.0	0.0	0.0	-	0.0	0.4
Bicycles on Road	0	0	1	0	-	1	0	0	1	0	-	1	0	0	2	0	-	2	0	0	2	0	-	2	6
% Bicycles on Road	-	0.0	0.4	0.0	-	0.3	-	0.0	0.5	0.0	-	0.3	-	0.0	1.8	0.0	-	1.1	-	0.0	0.9	0.0	-	0.8	0.5
Pedestrians	-	-	-	-	-	26	-	-	-	-	-	51	-	-	-	-	-	37	-	-	-	-	-	74	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: Broadway/Addison
Site Code:
Start Date: 06/19/2018
Page No: 6

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Addison Street Eastbound						Addison Street Westbound						Broadway Northbound						Broadway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 PM	0	4	66	31	32	101	0	8	54	6	65	68	0	21	48	6	42	75	0	5	36	4	34	45	289
6:15 PM	0	6	70	35	21	111	0	11	64	6	58	81	0	21	45	10	30	76	0	11	37	8	34	56	324
6:30 PM	0	8	67	31	37	106	0	6	59	6	57	71	0	22	46	21	44	89	0	9	47	7	31	63	329
6:45 PM	0	4	61	23	40	88	0	11	78	13	71	102	0	28	54	8	28	90	0	3	44	6	25	53	333
Total	0	22	264	120	130	406	0	36	255	31	251	322	0	92	193	45	144	330	0	28	164	25	124	217	1275
Approach %	0.0	5.4	65.0	29.6	-	-	0.0	11.2	79.2	9.6	-	-	0.0	27.9	58.5	13.6	-	-	0.0	12.9	75.6	11.5	-	-	-
Total %	0.0	1.7	20.7	9.4	-	31.8	0.0	2.8	20.0	2.4	-	25.3	0.0	7.2	15.1	3.5	-	25.9	0.0	2.2	12.9	2.0	-	17.0	-
PHF	0.000	0.688	0.943	0.857	-	0.914	0.000	0.818	0.817	0.596	-	0.789	0.000	0.821	0.894	0.536	-	0.917	0.000	0.636	0.872	0.781	-	0.861	0.957
Lights	0	22	254	120	-	396	0	36	246	31	-	313	0	92	182	45	-	319	0	26	150	25	-	201	1229
% Lights	-	100.0	96.2	100.0	-	97.5	-	100.0	96.5	100.0	-	97.2	-	100.0	94.3	100.0	-	96.7	-	92.9	91.5	100.0	-	92.6	96.4
Buses	0	0	5	0	-	5	0	0	5	0	-	5	0	0	7	0	-	7	0	1	6	0	-	7	24
% Buses	-	0.0	1.9	0.0	-	1.2	-	0.0	2.0	0.0	-	1.6	-	0.0	3.6	0.0	-	2.1	-	3.6	3.7	0.0	-	3.2	1.9
Single-Unit Trucks	0	0	0	0	-	0	0	0	2	0	-	2	0	0	1	0	-	1	0	1	1	0	-	2	5
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.8	0.0	-	0.6	-	0.0	0.5	0.0	-	0.3	-	3.6	0.6	0.0	-	0.9	0.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	5	0	-	5	0	0	2	0	-	2	0	0	3	0	-	3	0	0	7	0	-	7	17
% Bicycles on Road	-	0.0	1.9	0.0	-	1.2	-	0.0	0.8	0.0	-	0.6	-	0.0	1.6	0.0	-	0.9	-	0.0	4.3	0.0	-	3.2	1.3
Pedestrians	-	-	-	-	-	130	-	-	-	-	-	251	-	-	-	-	-	144	-	-	-	-	-	124	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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Count Name: Broadway/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 1

Turning Movement Data

Start Time	Waveland Avenue Eastbound						Waveland Avenue Westbound						Broadway Northbound				Broadway Southbound				Int. Total				
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right			
7:00 AM	0	4	11	8	17	23	0	0	0	0	8	0	0	1	17	9	13	27	0	7	29	4	40	90	
7:15 AM	0	1	17	3	8	21	0	0	1	0	13	1	0	5	13	2	17	20	0	9	42	5	19	98	
7:30 AM	0	1	16	5	9	22	0	0	1	0	18	1	0	2	20	5	21	27	0	10	52	5	27	117	
7:45 AM	0	2	26	7	18	35	0	0	1	0	17	1	0	6	25	1	24	32	0	5	59	7	37	139	
Hourly Total	0	8	70	23	52	101	0	0	3	0	56	3	0	14	75	17	75	106	0	31	182	21	111	234	444
8:00 AM	0	5	13	7	21	25	0	0	2	0	17	2	0	3	20	6	27	29	0	10	40	6	33	56	112
8:15 AM	0	3	20	7	12	30	0	0	1	0	14	1	0	5	25	1	13	31	0	9	49	7	26	65	127
8:30 AM	0	5	15	7	9	27	0	0	0	0	16	0	0	4	26	5	21	35	0	8	42	2	26	52	114
8:45 AM	0	2	24	11	9	37	0	0	1	0	11	1	0	4	25	3	27	32	0	9	40	5	19	54	124
Hourly Total	0	15	72	32	51	119	0	0	4	0	58	4	0	16	96	15	88	127	0	36	171	20	104	227	477
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4:00 PM	0	5	36	9	26	50	0	0	0	0	38	0	0	15	50	6	54	71	0	17	44	2	31	63	184
4:15 PM	0	7	29	28	27	64	0	0	0	0	86	0	0	5	56	11	26	72	0	18	56	9	27	83	219
4:30 PM	0	8	27	21	40	56	0	0	1	0	31	1	0	6	44	17	33	67	0	15	54	7	29	76	200
4:45 PM	0	8	16	15	30	39	0	0	1	0	30	1	0	14	60	10	26	84	0	9	60	5	34	74	198
Hourly Total	0	28	108	73	123	209	0	0	2	0	135	2	0	40	210	44	139	294	0	59	214	23	121	296	801
5:00 PM	0	7	29	15	35	51	0	0	3	0	36	3	0	10	68	22	48	100	0	8	60	6	34	74	228
5:15 PM	0	4	20	12	33	36	0	0	2	0	24	2	0	12	54	10	40	76	0	17	57	4	36	78	192
5:30 PM	0	5	28	12	27	45	0	0	2	0	48	2	0	8	57	16	36	81	0	12	65	4	56	81	209
5:45 PM	0	3	19	14	31	36	0	0	2	1	35	3	0	11	53	5	62	69	0	7	48	3	51	58	166
Hourly Total	0	19	96	53	126	168	0	0	9	1	143	10	0	41	232	53	186	326	0	44	230	17	177	291	795
6:00 PM	0	5	33	9	26	47	0	0	0	0	46	0	0	11	69	11	42	91	0	18	62	7	52	87	225
6:15 PM	0	5	27	14	30	46	0	0	0	0	40	0	0	24	54	12	57	90	0	9	68	8	44	85	221
6:30 PM	0	6	21	18	28	45	0	0	1	0	44	1	0	15	62	17	64	94	0	14	75	5	55	94	234
6:45 PM	0	7	23	19	36	49	0	0	0	0	52	0	0	25	68	13	66	106	0	22	74	2	50	98	253
Hourly Total	0	23	104	60	120	187	0	0	1	0	182	1	0	75	253	53	229	381	0	63	279	22	201	364	933
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
7:00 AM	0	3	21	8	7	32	0	0	0	0	12	0	0	3	18	5	10	26	0	3	22	5	16	30	88
7:15 AM	0	2	15	3	6	20	0	0	0	0	11	0	0	6	23	2	14	31	0	5	25	4	17	34	85
7:30 AM	0	3	20	11	9	34	0	0	0	0	10	0	0	2	23	3	13	28	0	9	40	7	16	56	118
7:45 AM	0	4	19	10	8	33	0	0	0	0	12	0	0	1	20	3	16	24	0	6	46	6	16	58	115
Hourly Total	0	12	75	32	30	119	0	0	0	0	45	0	0	12	84	13	53	109	0	23	133	22	65	178	406
8:00 AM	0	1	18	10	6	29	0	0	0	0	13	0	0	5	21	10	18	36	0	7	41	3	23	51	116
8:15 AM	1	4	13	10	3	28	0	0	0	0	10	0	0	2	34	7	16	43	0	4	44	5	22	53	124
8:30 AM	0	5	14	5	6	24	0	0	0	0	4	0	0	4	28	4	16	36	0	10	56	2	11	68	128
8:45 AM	0	2	17	7	7	26	0	0	0	0	6	0	0	8	30	8	13	46	0	6	72	3	8	81	153
Hourly Total	1	12	62	32	22	107	0	0	0	0	33	0	0	19	113	29	63	161	0	27	213	13	64	253	521

*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	5	15	8	20	28	0	0	0	0	13	0	0	6	47	8	13	61	0	11	21	4
4:15 PM	1	2	23	7	17	33	0	0	2	0	37	2	0	9	50	6	27	65	0	12	48	3
4:30 PM	0	6	12	9	21	27	0	0	0	0	18	0	0	7	54	7	20	68	0	5	43	6
4:45 PM	0	6	17	11	24	34	0	0	0	0	23	0	0	3	50	11	26	64	0	10	32	5
Hourly Total	1	19	67	35	82	122	0	0	2	0	91	2	0	25	201	32	86	258	0	38	144	18
5:00 PM	0	1	18	12	33	31	0	0	0	1	35	1	0	6	43	8	37	57	0	9	40	4
5:15 PM	0	1	20	8	34	29	0	0	0	1	15	1	0	6	46	12	33	64	1	12	50	3
5:30 PM	0	3	24	11	25	38	0	0	0	0	33	0	0	7	56	20	33	83	0	12	36	10
5:45 PM	0	8	19	8	29	35	0	0	0	0	40	0	0	8	54	12	48	74	0	7	43	9
Hourly Total	0	13	81	39	121	133	0	0	0	2	123	2	0	27	199	52	151	278	1	40	169	26
6:00 PM	0	5	25	6	26	36	0	0	0	0	36	0	0	10	54	9	50	73	1	12	30	3
6:15 PM	0	2	27	10	15	39	0	0	0	0	29	0	0	3	47	11	44	61	0	10	37	4
6:30 PM	0	4	23	16	38	43	0	0	0	0	35	0	0	5	54	10	40	69	0	10	45	5
6:45 PM	0	7	19	12	34	38	0	0	0	1	33	1	0	9	48	11	29	68	0	6	33	5
Hourly Total	0	18	94	44	113	156	0	0	0	1	133	1	0	27	203	41	163	271	1	38	145	17
Grand Total	2	167	829	423	840	1421	0	0	21	4	999	25	0	296	1666	349	1233	2311	2	399	1880	199
Approach %	0.1	11.8	58.3	29.8	-	-	0.0	0.0	84.0	16.0	-	-	0.0	12.8	72.1	15.1	-	-	0.1	16.1	75.8	8.0
Total %	0.0	2.7	13.3	6.8	-	22.8	0.0	0.0	0.3	0.1	-	0.4	0.0	4.7	26.7	5.6	-	37.1	0.0	6.4	30.1	3.2
Lights	2	156	749	401	-	1308	0	0	0	0	-	0	0	286	1512	336	-	2134	2	388	1721	95
% Lights	100.0	93.4	90.3	94.8	-	92.0	-	-	0.0	0.0	-	0.0	-	96.6	90.8	96.3	-	92.3	100.0	97.2	91.5	47.7
Buses	0	0	5	3	-	8	0	0	0	1	-	1	0	1	51	1	-	53	0	0	61	91
% Buses	0.0	0.0	0.6	0.7	-	0.6	-	-	0.0	25.0	-	4.0	-	0.3	3.1	0.3	-	2.3	0.0	0.0	3.2	45.7
Single-Unit Trucks	0	7	4	4	-	15	0	0	0	0	-	0	0	3	20	4	-	27	0	2	24	7
% Single-Unit Trucks	0.0	4.2	0.5	0.9	-	1.1	-	-	0.0	0.0	-	0.0	-	1.0	1.2	1.1	-	1.2	0.0	0.5	1.3	3.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	4	0	-	4	0	0	5	2
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.2	0.0	-	0.2	0.0	0.0	0.3	1.0
Bicycles on Road	0	4	71	15	-	90	0	0	21	3	-	24	0	6	79	8	-	93	0	9	69	4
% Bicycles on Road	0.0	2.4	8.6	3.5	-	6.3	-	-	100.0	75.0	-	96.0	-	2.0	4.7	2.3	-	4.0	0.0	2.3	3.7	2.0
Pedestrians	-	-	-	-	-	840	-	-	-	-	-	999	-	-	-	-	-	1233	-	-	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Broadway/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Waveland Avenue Eastbound						Waveland Avenue Westbound						Broadway Northbound						Broadway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	5	13	7	21	25	0	0	2	0	17	2	0	3	20	6	27	29	0	10	40	6	33	56	112
8:15 AM	0	3	20	7	12	30	0	0	1	0	14	1	0	5	25	1	13	31	0	9	49	7	26	65	127
8:30 AM	0	5	15	7	9	27	0	0	0	0	16	0	0	4	26	5	21	35	0	8	42	2	26	52	114
8:45 AM	0	2	24	11	9	37	0	0	1	0	11	1	0	4	25	3	27	32	0	9	40	5	19	54	124
Total	0	15	72	32	51	119	0	0	4	0	58	4	0	16	96	15	88	127	0	36	171	20	104	227	477
Approach %	0.0	12.6	60.5	26.9	-	-	0.0	0.0	100.0	0.0	-	-	0.0	12.6	75.6	11.8	-	-	0.0	15.9	75.3	8.8	-	-	-
Total %	0.0	3.1	15.1	6.7	-	24.9	0.0	0.0	0.8	0.0	-	0.8	0.0	3.4	20.1	3.1	-	26.6	0.0	7.5	35.8	4.2	-	47.6	-
PHF	0.000	0.750	0.750	0.727	-	0.804	0.000	0.000	0.500	0.000	-	0.500	0.000	0.800	0.923	0.625	-	0.907	0.000	0.900	0.872	0.714	-	0.873	0.939
Lights	0	14	59	26	-	99	0	0	0	0	-	0	0	15	83	14	-	112	0	33	159	9	-	201	412
% Lights	-	93.3	81.9	81.3	-	83.2	-	-	0.0	-	-	0.0	-	93.8	86.5	93.3	-	88.2	-	91.7	93.0	45.0	-	88.5	86.4
Buses	0	0	2	2	-	4	0	0	0	0	-	0	0	1	6	0	-	7	0	0	4	10	-	14	25
% Buses	-	0.0	2.8	6.3	-	3.4	-	-	0.0	-	-	0.0	-	6.3	6.3	0.0	-	5.5	-	0.0	2.3	50.0	-	6.2	5.2
Single-Unit Trucks	0	1	1	0	-	2	0	0	0	0	-	0	0	0	6	0	-	6	0	0	2	0	-	2	10
% Single-Unit Trucks	-	6.7	1.4	0.0	-	1.7	-	-	0.0	-	-	0.0	-	0.0	6.3	0.0	-	4.7	-	0.0	1.2	0.0	-	0.9	2.1
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	1	-	1	2	
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	1.0	0.0	-	0.8	-	0.0	0.0	5.0	-	0.4	0.4
Bicycles on Road	0	0	10	4	-	14	0	0	4	0	-	4	0	0	0	1	-	1	0	3	6	0	-	9	28
% Bicycles on Road	-	0.0	13.9	12.5	-	11.8	-	-	100.0	-	-	100.0	-	0.0	0.0	6.7	-	0.8	-	8.3	3.5	0.0	-	4.0	5.9
Pedestrians	-	-	-	-	-	51	-	-	-	-	58	-	-	-	-	-	88	-	-	-	-	-	104	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Broadway/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 4

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Waveland Avenue Eastbound						Waveland Avenue Westbound						Broadway Northbound						Broadway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 PM	0	5	33	9	26	47	0	0	0	0	46	0	0	11	69	11	42	91	0	18	62	7	52	87	225
6:15 PM	0	5	27	14	30	46	0	0	0	0	40	0	0	24	54	12	57	90	0	9	68	8	44	85	221
6:30 PM	0	6	21	18	28	45	0	0	1	0	44	1	0	15	62	17	64	94	0	14	75	5	55	94	234
6:45 PM	0	7	23	19	36	49	0	0	0	0	52	0	0	25	68	13	66	106	0	22	74	2	50	98	253
Total	0	23	104	60	120	187	0	0	1	0	182	1	0	75	253	53	229	381	0	63	279	22	201	364	933
Approach %	0.0	12.3	55.6	32.1	-	-	0.0	0.0	100.0	0.0	-	-	0.0	19.7	66.4	13.9	-	-	0.0	17.3	76.6	6.0	-	-	-
Total %	0.0	2.5	11.1	6.4	-	20.0	0.0	0.0	0.1	0.0	-	0.1	0.0	8.0	27.1	5.7	-	40.8	0.0	6.8	29.9	2.4	-	39.0	-
PHF	0.000	0.821	0.788	0.789	-	0.954	0.000	0.000	0.250	0.000	-	0.250	0.000	0.750	0.917	0.779	-	0.899	0.000	0.716	0.930	0.688	-	0.929	0.922
Lights	0	21	92	57	-	170	0	0	0	0	-	0	0	74	214	52	-	340	0	62	257	15	-	334	844
% Lights	-	91.3	88.5	95.0	-	90.9	-	-	0.0	-	-	0.0	-	98.7	84.6	98.1	-	89.2	-	98.4	92.1	68.2	-	91.8	90.5
Buses	0	0	1	0	-	1	0	0	0	0	-	0	0	0	9	0	-	9	0	0	10	7	-	17	27
% Buses	-	0.0	1.0	0.0	-	0.5	-	-	0.0	-	-	0.0	-	0.0	3.6	0.0	-	2.4	-	0.0	3.6	31.8	-	4.7	2.9
Single-Unit Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	2	0	-	2	0	0	0	0	-	0	3
% Single-Unit Trucks	-	0.0	0.0	1.7	-	0.5	-	-	0.0	-	-	0.0	-	0.0	0.8	0.0	-	0.5	-	0.0	0.0	0.0	-	0.0	0.3
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	0.3	0.1
Bicycles on Road	0	2	11	2	-	15	0	0	1	0	-	1	0	1	28	1	-	30	0	1	11	0	-	12	58
% Bicycles on Road	-	8.7	10.6	3.3	-	8.0	-	-	100.0	-	-	100.0	-	1.3	11.1	1.9	-	7.9	-	1.6	3.9	0.0	-	3.3	6.2
Pedestrians	-	-	-	-	-	120	-	-	-	-	182	-	-	-	-	-	-	229	-	-	-	-	-	-	
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-	-	-	-	-	



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Broadway/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 5

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Waveland Avenue Eastbound						Waveland Avenue Westbound						Broadway Northbound						Broadway Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	1	18	10	6	29	0	0	0	0	13	0	0	5	21	10	18	36	0	7	41	3	23	51	116
8:15 AM	1	4	13	10	3	28	0	0	0	0	10	0	0	2	34	7	16	43	0	4	44	5	22	53	124
8:30 AM	0	5	14	5	6	24	0	0	0	0	4	0	0	4	28	4	16	36	0	10	56	2	11	68	128
8:45 AM	0	2	17	7	7	26	0	0	0	0	6	0	0	8	30	8	13	46	0	6	72	3	8	81	153
Total	1	12	62	32	22	107	0	0	0	0	33	0	0	19	113	29	63	161	0	27	213	13	64	253	521
Approach %	0.9	11.2	57.9	29.9	-	-	0.0	0.0	0.0	0.0	-	-	0.0	11.8	70.2	18.0	-	-	0.0	10.7	84.2	5.1	-	-	-
Total %	0.2	2.3	11.9	6.1	-	20.5	0.0	0.0	0.0	0.0	-	0.0	0.0	3.6	21.7	5.6	-	30.9	0.0	5.2	40.9	2.5	-	48.6	-
PHF	0.250	0.600	0.861	0.800	-	0.922	0.000	0.000	0.000	0.000	-	0.000	0.000	0.594	0.831	0.725	-	0.875	0.000	0.675	0.740	0.650	-	0.781	0.851
Lights	1	11	55	30	-	97	0	0	0	0	-	0	0	18	108	28	-	154	0	27	200	3	-	230	481
% Lights	100.0	91.7	88.7	93.8	-	90.7	-	-	-	-	-	-	-	94.7	95.6	96.6	-	95.7	-	100.0	93.9	23.1	-	90.9	92.3
Buses	0	0	1	1	-	2	0	0	0	0	-	0	0	0	3	0	-	3	0	0	4	10	-	14	19
% Buses	0.0	0.0	1.6	3.1	-	1.9	-	-	-	-	-	-	-	0.0	2.7	0.0	-	1.9	-	0.0	1.9	76.9	-	5.5	3.6
Single-Unit Trucks	0	1	2	1	-	4	0	0	0	0	-	0	0	1	2	1	-	4	0	0	7	0	-	7	15
% Single-Unit Trucks	0.0	8.3	3.2	3.1	-	3.7	-	-	-	-	-	-	-	5.3	1.8	3.4	-	2.5	-	0.0	3.3	0.0	-	2.8	2.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	-	0	0	0	0	0	0	-	0	0	0	0	-	0	0	
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	-	-	-	-	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	
Bicycles on Road	0	0	4	0	-	4	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	6
% Bicycles on Road	0.0	0.0	6.5	0.0	-	3.7	-	-	-	-	-	-	-	0.0	0.0	0.0	-	0.0	-	0.0	0.9	0.0	-	0.8	1.2
Pedestrians	-	-	-	-	-	22	-	-	-	-	-	-	-	33	-	-	-	63	-	-	-	-	-	64	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Halsted/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 1

Turning Movement Data

Start Time	Waveland Avenue						Waveland Avenue						Halsted Street				Halsted Street				Int. Total				
	Eastbound			Westbound			Northbound			Southbound			U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right			
	U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total		U-Turn	Left	Thru	Right	Peds	App. Total					
7:00 AM	0	1	14	1	11	16	0	4	4	0	5	8	0	5	33	7	23	45	0	5	54	2	12	61	130
7:15 AM	0	2	12	7	18	21	0	10	4	1	11	15	0	7	45	4	15	56	0	2	76	1	12	79	171
7:30 AM	0	2	15	3	19	20	0	6	5	0	7	11	0	3	41	3	22	47	0	3	71	4	16	78	156
7:45 AM	0	6	18	12	19	36	0	7	7	0	13	14	0	3	34	9	33	46	0	6	77	2	15	85	181
Hourly Total	0	11	59	23	67	93	0	27	20	1	36	48	0	18	153	23	93	194	0	16	278	9	55	303	638
8:00 AM	0	2	18	18	20	38	0	6	5	2	12	13	0	4	43	6	39	53	0	5	77	3	16	85	189
8:15 AM	0	1	17	12	27	30	0	5	8	4	9	17	1	4	45	10	30	60	0	3	72	5	20	80	187
8:30 AM	0	6	12	16	17	34	0	4	6	3	10	13	0	5	37	11	28	53	0	6	72	0	11	78	178
8:45 AM	0	8	23	28	24	59	0	5	3	3	12	11	0	12	40	6	38	58	0	7	90	4	11	101	229
Hourly Total	0	17	70	74	88	161	0	20	22	12	43	54	1	25	165	33	135	224	0	21	311	12	58	344	783
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4:00 PM	0	19	24	23	70	66	0	11	3	8	23	22	0	27	91	13	65	131	0	8	73	12	43	93	312
4:15 PM	0	17	28	13	57	58	0	10	4	6	19	20	0	21	66	27	37	114	0	11	85	10	24	106	298
4:30 PM	0	5	28	10	71	43	0	7	6	6	21	19	0	13	71	15	33	99	0	5	77	9	36	91	252
4:45 PM	0	8	24	22	42	54	0	5	9	5	32	19	0	21	76	11	27	108	0	5	88	15	31	108	289
Hourly Total	0	49	104	68	240	221	0	33	22	25	95	80	0	82	304	66	162	452	0	29	323	46	134	398	1151
5:00 PM	0	8	27	12	70	47	0	9	11	6	34	26	0	11	74	15	49	100	0	5	90	13	54	108	281
5:15 PM	0	7	23	16	92	46	0	3	14	1	33	18	0	12	82	10	47	104	1	4	77	7	44	89	257
5:30 PM	0	8	23	12	78	43	0	6	6	2	29	14	1	13	68	7	56	89	0	8	92	14	31	114	260
5:45 PM	0	11	18	8	112	37	0	7	13	7	29	27	0	16	89	15	79	120	0	4	69	23	57	96	280
Hourly Total	0	34	91	48	352	173	0	25	44	16	125	85	1	52	313	47	231	413	1	21	328	57	186	407	1078
6:00 PM	0	9	23	24	87	56	0	10	12	5	50	27	0	12	77	16	54	105	0	6	87	20	82	113	301
6:15 PM	0	12	19	15	73	46	0	7	24	3	38	34	0	13	82	15	63	110	0	6	74	19	49	99	289
6:30 PM	0	8	19	18	71	45	0	11	13	5	36	29	0	28	75	14	64	117	0	10	80	20	62	110	301
6:45 PM	0	13	22	24	76	59	0	5	22	6	35	33	0	28	103	12	83	143	0	10	89	13	44	112	347
Hourly Total	0	42	83	81	307	206	0	33	71	19	159	123	0	81	337	57	264	475	0	32	330	72	237	434	1238
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
7:00 AM	0	4	17	3	14	24	0	5	3	1	7	9	0	3	26	6	15	35	0	7	57	1	13	65	133
7:15 AM	0	0	11	4	15	15	0	6	2	2	8	10	0	4	37	3	12	44	0	4	55	3	18	62	131
7:30 AM	0	5	12	6	14	23	0	6	2	3	8	11	0	3	31	10	13	44	0	7	77	3	10	87	165
7:45 AM	0	1	16	6	10	23	0	8	1	0	8	9	0	3	33	7	19	43	0	10	76	5	10	91	166
Hourly Total	0	10	56	19	53	85	0	25	8	6	31	39	0	13	127	26	59	166	0	28	265	12	51	305	595
8:00 AM	0	4	9	3	18	16	0	4	4	2	15	10	0	6	22	11	23	39	0	7	67	8	16	82	147
8:15 AM	0	6	13	9	15	28	0	4	3	2	7	9	0	1	33	7	14	41	0	7	90	2	8	99	177
8:30 AM	0	2	12	7	15	21	0	6	1	0	9	7	0	7	23	8	14	38	0	4	85	6	12	95	161
8:45 AM	0	4	10	10	17	24	0	3	3	2	1	8	0	7	31	9	14	47	0	5	103	6	3	114	193
Hourly Total	0	16	44	29	65	89	0	17	11	6	32	34	0	21	109	35	65	165	0	23	345	22	39	390	678

*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	4	11	7	26	22	0	7	4	1	29	12	0	5	59	16	19	80	0	9	69	4
4:15 PM	0	7	11	8	38	26	0	7	7	5	15	19	0	12	50	9	22	71	0	4	63	4
4:30 PM	0	6	12	6	24	24	0	7	2	4	18	13	0	9	56	16	29	81	0	3	74	6
4:45 PM	0	4	11	6	29	21	0	5	2	8	18	15	0	8	63	12	25	83	0	6	65	6
Hourly Total	0	21	45	27	117	93	0	26	15	18	80	59	0	34	228	53	95	315	0	22	271	20
5:00 PM	0	8	15	9	54	32	0	7	7	4	16	18	0	8	63	12	44	83	0	6	75	8
5:15 PM	0	8	14	9	78	31	0	7	6	4	18	17	0	4	51	10	52	65	0	7	65	8
5:30 PM	0	2	20	6	46	28	0	6	2	9	25	17	0	10	62	12	42	84	0	7	61	9
5:45 PM	0	7	16	12	75	35	0	5	9	4	38	18	0	7	53	8	61	68	0	8	70	7
Hourly Total	0	25	65	36	253	126	0	25	24	21	97	70	0	29	229	42	199	300	0	28	271	32
6:00 PM	0	5	20	11	76	36	0	11	8	1	34	20	0	9	64	20	48	93	0	3	66	9
6:15 PM	0	10	18	12	65	40	0	4	2	4	22	10	0	8	57	18	44	83	0	6	49	10
6:30 PM	0	10	20	12	70	42	0	5	7	2	26	14	0	12	56	18	50	86	0	9	70	8
6:45 PM	0	6	14	11	68	31	0	5	5	2	35	12	0	10	72	17	50	99	0	4	72	5
Hourly Total	0	31	72	46	279	149	0	25	22	9	117	56	0	39	249	73	192	361	0	22	257	32
Grand Total	0	256	689	451	1821	1396	0	256	259	133	815	648	2	394	2214	455	1495	3065	1	242	2979	314
Approach %	0.0	18.3	49.4	32.3	-	-	0.0	39.5	40.0	20.5	-	-	0.1	12.9	72.2	14.8	-	-	0.0	6.8	84.2	8.9
Total %	0.0	3.0	8.0	5.2	-	16.1	0.0	3.0	3.0	1.5	-	7.5	0.0	4.6	25.6	5.3	-	35.5	0.0	2.8	34.5	3.6
Lights	0	250	615	411	-	1276	0	147	218	125	-	490	2	376	1915	437	-	2730	1	231	2737	308
% Lights	-	97.7	89.3	91.1	-	91.4	-	57.4	84.2	94.0	-	75.6	100.0	95.4	86.5	96.0	-	89.1	100.0	95.5	91.9	98.1
Buses	0	1	7	4	-	12	0	89	0	2	-	91	0	1	106	1	-	108	0	0	36	1
% Buses	-	0.4	1.0	0.9	-	0.9	-	34.8	0.0	1.5	-	14.0	0.0	0.3	4.8	0.2	-	3.5	0.0	0.0	1.2	0.3
Single-Unit Trucks	0	3	7	6	-	16	0	8	0	3	-	11	0	6	70	7	-	83	0	2	40	1
% Single-Unit Trucks	-	1.2	1.0	1.3	-	1.1	-	3.1	0.0	2.3	-	1.7	0.0	1.5	3.2	1.5	-	2.7	0.0	0.8	1.3	0.3
Articulated Trucks	0	0	2	1	-	3	0	1	1	0	-	2	0	0	9	0	-	9	0	0	9	0
% Articulated Trucks	-	0.0	0.3	0.2	-	0.2	-	0.4	0.4	0.0	-	0.3	0.0	0.0	0.4	0.0	-	0.3	0.0	0.0	0.3	0.3
Bicycles on Road	0	2	58	29	-	89	0	11	40	3	-	54	0	11	114	10	-	135	0	9	157	4
% Bicycles on Road	-	0.8	8.4	6.4	-	6.4	-	4.3	15.4	2.3	-	8.3	0.0	2.8	5.1	2.2	-	4.4	0.0	3.7	5.3	1.3
Pedestrians	-	-	-	-	-	1821	-	-	-	-	-	815	-	-	-	-	-	1495	-	-	-	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Halsted/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 3

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Waveland Avenue Eastbound						Waveland Avenue Westbound						Halsted Street Northbound						Halsted Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	2	18	18	20	38	0	6	5	2	12	13	0	4	43	6	39	53	0	5	77	3	16	85	189
8:15 AM	0	1	17	12	27	30	0	5	8	4	9	17	1	4	45	10	30	60	0	3	72	5	20	80	187
8:30 AM	0	6	12	16	17	34	0	4	6	3	10	13	0	5	37	11	28	53	0	6	72	0	11	78	178
8:45 AM	0	8	23	28	24	59	0	5	3	3	12	11	0	12	40	6	38	58	0	7	90	4	11	101	229
Total	0	17	70	74	88	161	0	20	22	12	43	54	1	25	165	33	135	224	0	21	311	12	58	344	783
Approach %	0.0	10.6	43.5	46.0	-	-	0.0	37.0	40.7	22.2	-	-	0.4	11.2	73.7	14.7	-	-	0.0	6.1	90.4	3.5	-	-	-
Total %	0.0	2.2	8.9	9.5	-	20.6	0.0	2.6	2.8	1.5	-	6.9	0.1	3.2	21.1	4.2	-	28.6	0.0	2.7	39.7	1.5	-	43.9	-
PHF	0.000	0.531	0.761	0.661	-	0.682	0.000	0.833	0.688	0.750	-	0.794	0.250	0.521	0.917	0.750	-	0.933	0.000	0.750	0.864	0.600	-	0.851	0.855
Lights	0	17	52	64	-	133	0	8	15	10	-	33	1	25	135	31	-	192	0	19	284	12	-	315	673
% Lights	-	100.0	74.3	86.5	-	82.6	-	40.0	68.2	83.3	-	61.1	100.0	100.0	81.8	93.9	-	85.7	-	90.5	91.3	100.0	-	91.6	86.0
Buses	0	0	4	2	-	6	0	11	0	0	-	11	0	0	13	0	-	13	0	0	2	0	-	2	32
% Buses	-	0.0	5.7	2.7	-	3.7	-	55.0	0.0	0.0	-	20.4	0.0	0.0	7.9	0.0	-	5.8	-	0.0	0.6	0.0	-	0.6	4.1
Single-Unit Trucks	0	0	1	3	-	4	0	0	0	1	-	1	0	0	11	1	-	12	0	1	3	0	-	4	21
% Single-Unit Trucks	-	0.0	1.4	4.1	-	2.5	-	0.0	0.0	8.3	-	1.9	0.0	0.0	6.7	3.0	-	5.4	-	4.8	1.0	0.0	-	1.2	2.7
Articulated Trucks	0	0	1	1	-	2	0	0	1	0	-	1	0	0	1	0	-	1	0	0	4	0	-	4	8
% Articulated Trucks	-	0.0	1.4	1.4	-	1.2	-	0.0	4.5	0.0	-	1.9	0.0	0.0	0.6	0.0	-	0.4	-	0.0	1.3	0.0	-	1.2	1.0
Bicycles on Road	0	0	12	4	-	16	0	1	6	1	-	8	0	0	5	1	-	6	0	1	18	0	-	19	49
% Bicycles on Road	-	0.0	17.1	5.4	-	9.9	-	5.0	27.3	8.3	-	14.8	0.0	0.0	3.0	3.0	-	2.7	-	4.8	5.8	0.0	-	5.5	6.3
Pedestrians	-	-	-	-	-	88	-	-	-	-	-	43	-	-	-	-	-	135	-	-	-	-	-	58	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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(847)518-9990

Count Name: Halsted/Waveland
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Start Date: 06/19/2018
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Turning Movement Peak Hour Data (6:00 PM)



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: Halsted/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 5

Turning Movement Peak Hour Data (8:00 AM)

Start Time	Waveland Avenue Eastbound						Waveland Avenue Westbound						Halsted Street Northbound						Halsted Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
8:00 AM	0	4	9	3	18	16	0	4	4	2	15	10	0	6	22	11	23	39	0	7	67	8	16	82	147
8:15 AM	0	6	13	9	15	28	0	4	3	2	7	9	0	1	33	7	14	41	0	7	90	2	8	99	177
8:30 AM	0	2	12	7	15	21	0	6	1	0	9	7	0	7	23	8	14	38	0	4	85	6	12	95	161
8:45 AM	0	4	10	10	17	24	0	3	3	2	1	8	0	7	31	9	14	47	0	5	103	6	3	114	193
Total	0	16	44	29	65	89	0	17	11	6	32	34	0	21	109	35	65	165	0	23	345	22	39	390	678
Approach %	0.0	18.0	49.4	32.6	-	-	0.0	50.0	32.4	17.6	-	-	0.0	12.7	66.1	21.2	-	-	0.0	5.9	88.5	5.6	-	-	-
Total %	0.0	2.4	6.5	4.3	-	13.1	0.0	2.5	1.6	0.9	-	5.0	0.0	3.1	16.1	5.2	-	24.3	0.0	3.4	50.9	3.2	-	57.5	-
PHF	0.000	0.667	0.846	0.725	-	0.795	0.000	0.708	0.688	0.750	-	0.850	0.000	0.750	0.826	0.795	-	0.878	0.000	0.821	0.837	0.688	-	0.855	0.878
Lights	0	14	40	27	-	81	0	5	10	5	-	20	0	20	87	32	-	139	0	23	334	22	-	379	619
% Lights	-	87.5	90.9	93.1	-	91.0	-	29.4	90.9	83.3	-	58.8	-	95.2	79.8	91.4	-	84.2	-	100.0	96.8	100.0	-	97.2	91.3
Buses	0	0	2	0	-	2	0	11	0	0	-	11	0	0	7	0	-	7	0	0	1	0	-	1	21
% Buses	-	0.0	4.5	0.0	-	2.2	-	64.7	0.0	0.0	-	32.4	-	0.0	6.4	0.0	-	4.2	-	0.0	0.3	0.0	-	0.3	3.1
Single-Unit Trucks	0	2	1	2	-	5	0	1	0	1	-	2	0	1	13	3	-	17	0	0	7	0	-	7	31
% Single-Unit Trucks	-	12.5	2.3	6.9	-	5.6	-	5.9	0.0	16.7	-	5.9	-	4.8	11.9	8.6	-	10.3	-	0.0	2.0	0.0	-	1.8	4.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	2	0	-	2	3
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.9	0.0	-	0.6	-	0.0	0.6	0.0	-	0.5	0.4
Bicycles on Road	0	0	1	0	-	1	0	0	1	0	-	1	0	0	1	0	-	1	0	0	1	0	-	1	4
% Bicycles on Road	-	0.0	2.3	0.0	-	1.1	-	0.0	9.1	0.0	-	2.9	-	0.0	0.9	0.0	-	0.6	-	0.0	0.3	0.0	-	0.3	0.6
Pedestrians	-	-	-	-	-	65	-	-	-	-	-	32	-	-	-	-	-	65	-	-	-	-	-	39	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



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Rosemont, Illinois, United States 60018
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Count Name: Halsted/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 6

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Waveland Avenue Eastbound						Waveland Avenue Westbound						Halsted Street Northbound						Halsted Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
6:00 PM	0	5	20	11	76	36	0	11	8	1	34	20	0	9	64	20	48	93	0	3	66	9	41	78	227
6:15 PM	0	10	18	12	65	40	0	4	2	4	22	10	0	8	57	18	44	83	0	6	49	10	30	65	198
6:30 PM	0	10	20	12	70	42	0	5	7	2	26	14	0	12	56	18	50	86	0	9	70	8	49	87	229
6:45 PM	0	6	14	11	68	31	0	5	5	2	35	12	0	10	72	17	50	99	0	4	72	5	42	81	223
Total	0	31	72	46	279	149	0	25	22	9	117	56	0	39	249	73	192	361	0	22	257	32	162	311	877
Approach %	0.0	20.8	48.3	30.9	-	-	0.0	44.6	39.3	16.1	-	-	0.0	10.8	69.0	20.2	-	-	0.0	7.1	82.6	10.3	-	-	-
Total %	0.0	3.5	8.2	5.2	-	17.0	0.0	2.9	2.5	1.0	-	6.4	0.0	4.4	28.4	8.3	-	41.2	0.0	2.5	29.3	3.6	-	35.5	-
PHF	0.000	0.775	0.900	0.958	-	0.887	0.000	0.568	0.688	0.563	-	0.700	0.000	0.813	0.865	0.913	-	0.912	0.000	0.611	0.892	0.800	-	0.894	0.957
Lights	0	31	69	42	-	142	0	18	19	9	-	46	0	38	225	72	-	335	0	22	237	30	-	289	812
% Lights	-	100.0	95.8	91.3	-	95.3	-	72.0	86.4	100.0	-	82.1	-	97.4	90.4	98.6	-	92.8	-	100.0	92.2	93.8	-	92.9	92.6
Buses	0	0	0	0	-	0	0	5	0	0	-	5	0	0	11	0	-	11	0	0	0	1	-	1	17
% Buses	-	0.0	0.0	0.0	-	0.0	-	20.0	0.0	0.0	-	8.9	-	0.0	4.4	0.0	-	3.0	-	0.0	0.0	3.1	-	0.3	1.9
Single-Unit Trucks	0	0	0	0	-	0	0	2	0	0	-	2	0	0	3	0	-	3	0	0	1	0	-	1	6
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	8.0	0.0	0.0	-	3.6	-	0.0	1.2	0.0	-	0.8	-	0.0	0.4	0.0	-	0.3	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.4	0.0	-	0.3	0.1
Bicycles on Road	0	0	3	4	-	7	0	0	3	0	-	3	0	1	10	1	-	12	0	0	18	1	-	19	41
% Bicycles on Road	-	0.0	4.2	8.7	-	4.7	-	0.0	13.6	0.0	-	5.4	-	2.6	4.0	1.4	-	3.3	-	0.0	7.0	3.1	-	6.1	4.7
Pedestrians	-	-	-	-	-	279	-	-	-	-	-	117	-	-	-	-	-	192	-	-	-	-	-	162	-
% Pedestrians	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-



Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: LSD/Access
Site Code:
Start Date: 06/19/2018
Page No: 1

Direction (Westbound)

Start Time	Lights	Buses	Single-Unit Trucks	Articulated Trucks	Bicycles on Road	Total
06/19/2018 12:00 AM	1	0	0	0	0	1
12:15 AM	2	0	0	0	0	2
12:30 AM	0	0	0	0	0	0
12:45 AM	1	0	0	0	0	1
1:00 AM	0	0	0	0	0	0
1:15 AM	1	0	0	0	0	1
1:30 AM	0	0	0	0	0	0
1:45 AM	0	0	0	0	0	0
2:00 AM	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0
4:15 AM	1	0	0	0	0	1
4:30 AM	0	0	0	0	0	0
4:45 AM	2	0	0	0	0	2
5:00 AM	0	0	0	0	0	0
5:15 AM	4	0	0	0	0	4
5:30 AM	3	0	0	0	0	3
5:45 AM	7	0	0	0	0	7
6:00 AM	0	0	0	0	0	0
6:15 AM	2	0	0	0	0	2
6:30 AM	0	0	0	0	0	0
6:45 AM	4	0	0	0	0	4
7:00 AM	1	0	0	0	0	1
7:15 AM	4	0	0	0	0	4
7:30 AM	3	0	0	0	0	3
7:45 AM	0	0	0	0	0	0
8:00 AM	2	0	0	0	0	2
8:15 AM	3	0	0	0	0	3
8:30 AM	2	0	0	0	0	2
8:45 AM	6	0	0	0	0	6
9:00 AM	7	0	0	0	0	7
9:15 AM	4	0	0	0	0	4
9:30 AM	3	0	0	0	0	3

9:45 AM	4	0	0	0	0	4
10:00 AM	3	0	0	0	0	3
10:15 AM	4	0	0	0	0	4
10:30 AM	1	0	0	0	0	1
10:45 AM	4	0	0	0	0	4
11:00 AM	2	0	0	0	0	2
11:15 AM	2	0	0	0	0	2
11:30 AM	5	0	0	0	0	5
11:45 AM	6	0	0	0	0	6
12:00 PM	3	0	0	0	2	5
12:15 PM	4	0	1	0	1	6
12:30 PM	0	0	0	0	0	0
12:45 PM	4	0	0	0	0	4
1:00 PM	3	0	0	0	0	3
1:15 PM	1	0	0	0	0	1
1:30 PM	8	0	0	0	0	8
1:45 PM	8	0	0	0	0	8
2:00 PM	2	0	0	0	0	2
2:15 PM	3	0	0	0	0	3
2:30 PM	4	0	0	0	1	5
2:45 PM	5	0	0	0	0	5
3:00 PM	2	0	0	0	0	2
3:15 PM	4	0	0	0	0	4
3:30 PM	4	0	0	0	0	4
3:45 PM	7	0	0	0	0	7
4:00 PM	7	0	0	0	0	7
4:15 PM	10	0	0	0	0	10
4:30 PM	8	0	0	0	0	8
4:45 PM	8	0	0	0	0	8
5:00 PM	12	0	0	0	0	12
5:15 PM	9	0	0	0	0	9
5:30 PM	9	0	0	0	0	9
5:45 PM	11	0	0	0	0	11
6:00 PM	8	0	0	0	1	9
6:15 PM	4	0	0	0	0	4
6:30 PM	13	0	0	0	0	13
6:45 PM	9	0	0	0	0	9
7:00 PM	10	0	0	0	0	10
7:15 PM	8	0	0	0	1	9
7:30 PM	13	0	0	0	0	13
7:45 PM	8	0	0	0	0	8
8:00 PM	9	0	0	0	0	9
8:15 PM	5	0	0	0	0	5
8:30 PM	5	0	0	0	0	5
8:45 PM	11	0	0	0	0	11
9:00 PM	4	0	0	0	0	4
9:15 PM	7	0	0	0	0	7
9:30 PM	7	0	0	0	0	7
9:45 PM	6	0	0	0	0	6
10:00 PM	7	0	0	0	0	7
10:15 PM	2	0	0	0	0	2
10:30 PM	4	0	0	0	0	4

10:45 PM	9	0	0	0	0	9
11:00 PM	6	0	0	0	0	6
11:15 PM	3	0	0	0	0	3
11:30 PM	4	0	0	0	0	4
11:45 PM	1	0	0	0	0	1
06/20/2018 12:00 AM	0	0	0	0	0	0
12:15 AM	3	0	0	0	0	3
12:30 AM	0	0	0	0	0	0
12:45 AM	1	0	0	0	0	1
1:00 AM	1	0	0	0	0	1
1:15 AM	1	0	0	0	0	1
1:30 AM	1	0	0	0	0	1
1:45 AM	1	0	0	0	0	1
2:00 AM	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0
4:30 AM	1	0	0	0	0	1
4:45 AM	0	0	0	0	0	0
5:00 AM	1	0	0	0	0	1
5:15 AM	2	0	0	0	0	2
5:30 AM	2	0	0	0	0	2
5:45 AM	3	0	0	0	0	3
6:00 AM	4	0	0	0	0	4
6:15 AM	4	0	0	0	0	4
6:30 AM	1	0	0	0	0	1
6:45 AM	3	0	0	0	0	3
7:00 AM	2	0	0	0	0	2
7:15 AM	2	0	0	0	0	2
7:30 AM	1	0	0	0	0	1
7:45 AM	3	0	0	0	0	3
8:00 AM	2	0	0	0	0	2
8:15 AM	2	0	0	0	0	2
8:30 AM	6	0	0	0	0	6
8:45 AM	8	0	0	0	0	8
9:00 AM	2	0	0	0	0	2
9:15 AM	3	0	0	0	0	3
9:30 AM	3	0	0	0	0	3
9:45 AM	3	0	0	0	0	3
10:00 AM	2	0	0	0	0	2
10:15 AM	3	0	0	0	0	3
10:30 AM	2	0	0	0	0	2
10:45 AM	1	0	0	0	0	1
11:00 AM	0	0	0	0	0	0
11:15 AM	3	0	0	0	0	3
11:30 AM	3	0	0	0	0	3

11:45 AM	5	0	0	0	0	5
12:00 PM	4	0	0	0	0	4
12:15 PM	0	0	0	0	0	0
12:30 PM	5	0	0	0	0	5
12:45 PM	5	0	0	0	0	5
1:00 PM	3	0	0	0	0	3
1:15 PM	7	0	0	0	0	7
1:30 PM	5	0	0	0	0	5
1:45 PM	4	0	0	0	0	4
2:00 PM	11	0	0	0	0	11
2:15 PM	5	0	0	0	0	5
2:30 PM	3	0	0	0	0	3
2:45 PM	7	0	0	0	0	7
3:00 PM	1	0	0	0	0	1
3:15 PM	3	0	0	0	1	4
3:30 PM	6	0	0	0	0	6
3:45 PM	4	0	0	0	0	4
4:00 PM	5	0	0	0	0	5
4:15 PM	4	0	0	0	0	4
4:30 PM	6	0	0	0	0	6
4:45 PM	10	0	0	0	0	10
5:00 PM	12	0	0	0	0	12
5:15 PM	18	0	0	0	0	18
5:30 PM	11	0	0	0	0	11
5:45 PM	8	0	0	0	0	8
6:00 PM	13	0	0	0	0	13
6:15 PM	7	0	0	0	0	7
6:30 PM	7	0	0	0	0	7
6:45 PM	1	0	0	0	0	1
7:00 PM	11	0	0	0	0	11
7:15 PM	13	0	0	0	0	13
7:30 PM	16	0	0	0	0	16
7:45 PM	4	0	0	0	0	4
8:00 PM	7	0	0	0	0	7
8:15 PM	6	0	0	0	0	6
8:30 PM	4	0	0	0	0	4
8:45 PM	10	0	0	0	0	10
9:00 PM	5	0	0	0	0	5
9:15 PM	7	0	0	0	0	7
9:30 PM	6	0	0	0	0	6
9:45 PM	5	0	0	0	0	5
10:00 PM	8	0	0	0	0	8
10:15 PM	5	0	0	0	0	5
10:30 PM	1	0	0	0	0	1
10:45 PM	3	0	0	0	0	3
11:00 PM	2	0	0	0	0	2
11:15 PM	2	0	0	0	0	2
11:30 PM	4	0	0	0	0	4
11:45 PM	2	0	0	0	0	2
06/21/2018 12:00 AM	1	0	0	0	0	1
12:15 AM	0	0	0	0	0	0
12:30 AM	1	0	0	0	0	1

12:45 AM	2	0	0	0	0	2
1:00 AM	1	0	0	0	0	1
1:15 AM	4	0	0	0	0	4
1:30 AM	1	0	0	0	0	1
1:45 AM	3	0	0	0	0	3
2:00 AM	0	0	0	0	0	0
2:15 AM	1	0	0	0	0	1
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0
3:45 AM	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0
4:15 AM	1	0	0	0	0	1
4:30 AM	0	0	0	0	0	0
4:45 AM	1	0	0	0	0	1
5:00 AM	0	0	0	0	0	0
5:15 AM	2	0	0	0	0	2
5:30 AM	0	0	0	0	0	0
5:45 AM	1	0	0	0	0	1
6:00 AM	5	0	0	0	0	5
6:15 AM	3	0	0	0	0	3
6:30 AM	0	0	0	0	0	0
6:45 AM	1	0	0	0	0	1
7:00 AM	2	0	0	0	0	2
7:15 AM	5	0	0	0	0	5
7:30 AM	1	0	0	0	0	1
7:45 AM	0	0	0	0	0	0
8:00 AM	5	0	0	0	0	5
8:15 AM	2	0	0	0	0	2
8:30 AM	8	0	0	0	0	8
8:45 AM	6	0	0	0	0	6
9:00 AM	3	0	0	0	0	3
9:15 AM	2	0	0	0	0	2
9:30 AM	3	0	0	0	0	3
9:45 AM	3	0	0	0	0	3
10:00 AM	2	0	0	0	0	2
10:15 AM	1	0	0	0	0	1
10:30 AM	4	0	0	0	0	4
10:45 AM	2	0	0	0	0	2
11:00 AM	5	0	0	0	0	5
11:15 AM	7	0	0	0	0	7
11:30 AM	3	0	0	0	0	3
11:45 AM	6	0	0	0	0	6
12:00 PM	2	0	0	0	0	2
12:15 PM	2	0	0	0	0	2
12:30 PM	3	0	0	0	0	3
12:45 PM	3	0	0	0	0	3
1:00 PM	1	0	2	0	0	3
1:15 PM	2	0	0	0	0	2
1:30 PM	2	0	0	0	0	2

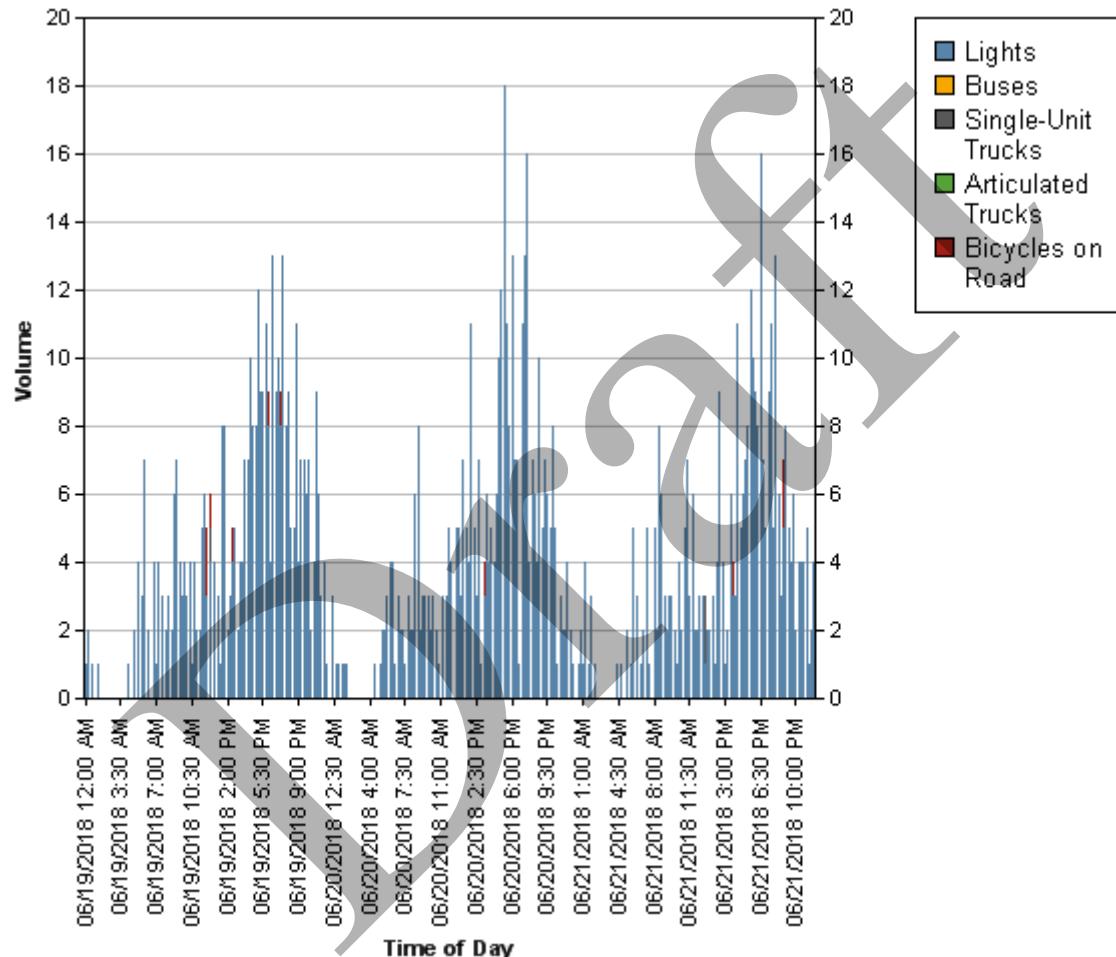
1:45 PM	3	0	0	0	0	3
2:00 PM	1	0	0	0	0	1
2:15 PM	4	0	0	0	0	4
2:30 PM	9	0	0	0	0	9
2:45 PM	4	0	0	0	0	4
3:00 PM	1	0	0	0	0	1
3:15 PM	2	0	0	0	0	2
3:30 PM	6	0	0	0	0	6
3:45 PM	3	0	0	0	1	4
4:00 PM	3	0	0	0	0	3
4:15 PM	11	0	0	0	0	11
4:30 PM	5	0	0	0	0	5
4:45 PM	6	0	0	0	0	6
5:00 PM	7	0	0	0	0	7
5:15 PM	8	0	0	0	0	8
5:30 PM	12	0	0	0	0	12
5:45 PM	10	0	0	0	0	10
6:00 PM	9	0	0	0	0	9
6:15 PM	8	0	0	0	0	8
6:30 PM	16	0	0	0	0	16
6:45 PM	7	0	0	0	0	7
7:00 PM	5	0	0	0	0	5
7:15 PM	9	0	0	0	0	9
7:30 PM	11	0	0	0	0	11
7:45 PM	5	0	0	0	0	5
8:00 PM	13	0	0	0	0	13
8:15 PM	6	0	0	0	0	6
8:30 PM	3	0	0	0	0	3
8:45 PM	5	0	0	0	2	7
9:00 PM	8	0	0	0	0	8
9:15 PM	5	0	0	0	0	5
9:30 PM	4	0	0	0	0	4
9:45 PM	6	0	0	0	0	6
10:00 PM	2	0	0	0	0	2
10:15 PM	4	0	0	0	0	4
10:30 PM	4	0	0	0	0	4
10:45 PM	4	0	0	0	0	4
11:00 PM	5	0	0	0	0	5
11:15 PM	1	0	0	0	0	1
11:30 PM	2	0	0	0	0	2
11:45 PM	4	0	0	0	0	4
Total	1128	0	3	0	10	1141
Total %	98.9	0.0	0.3	0.0	0.9	100.0
AM Times	8:00 AM	12:00 AM	12:00 AM	12:00 AM	12:00 AM	8:00 AM
AM Peaks	21	0	0	0	0	21
PM Times	4:45 PM	12:00 PM	12:15 PM	12:00 PM	12:00 PM	4:45 PM
PM Peaks	51	0	2	0	3	51



Kenig Lindgren O'Hara Aboona, Inc.
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Site Code:
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Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: LSD/Addison
Site Code:
Start Date: 06/19/2018
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Turning Movement Data

Start Time	Addison Street					Lake Shore Drive					Lake Shore Drive							
	Eastbound					Northbound					Southbound							
	U-Turn	Left	Right	Peds	App. Total		U-Turn	Left	Thru	Peds	App. Total		U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	18	64	24	82	0	21	22	0	43	0	61	30	9	91	216		
7:15 AM	0	26	72	23	98	0	17	18	0	35	0	53	13	8	66	199		
7:30 AM	0	12	64	31	76	0	23	16	0	39	0	73	18	15	91	206		
7:45 AM	0	23	69	36	92	0	23	27	1	50	0	86	27	8	113	255		
Hourly Total	0	79	269	114	348	0	84	83	1	167	0	273	88	40	361	876		
8:00 AM	0	28	53	21	81	0	22	31	0	53	0	86	19	9	105	239		
8:15 AM	0	27	59	16	86	0	29	31	0	60	0	89	16	8	105	251		
8:30 AM	0	23	55	21	78	0	33	18	0	51	0	101	29	5	130	259		
8:45 AM	0	26	41	15	67	0	23	32	0	55	0	104	36	12	140	262		
Hourly Total	0	104	208	73	312	0	107	112	0	219	0	380	100	34	480	1011		
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
4:00 PM	0	26	82	22	108	0	40	40	0	80	0	50	52	24	102	290		
4:15 PM	0	37	70	32	107	0	48	42	0	90	0	55	44	22	99	296		
4:30 PM	0	35	55	21	90	0	40	41	0	81	0	64	54	30	118	289		
4:45 PM	0	23	43	17	66	0	44	35	0	79	0	60	40	22	100	245		
Hourly Total	0	121	250	92	371	0	172	158	0	330	0	229	190	98	419	1120		
5:00 PM	0	17	47	16	64	0	47	49	0	96	0	47	50	37	97	257		
5:15 PM	0	23	54	21	77	0	56	42	0	98	0	62	53	32	115	290		
5:30 PM	0	30	61	28	91	0	70	26	0	96	0	52	62	17	114	301		
5:45 PM	0	24	51	20	75	0	69	39	1	108	0	61	47	37	108	291		
Hourly Total	0	94	213	85	307	0	242	156	1	398	0	222	212	123	434	1139		
6:00 PM	0	33	36	25	69	0	65	44	0	109	0	60	53	35	113	291		
6:15 PM	0	25	52	25	77	0	42	50	0	92	0	53	51	40	104	273		
6:30 PM	0	17	46	31	63	0	53	53	1	106	0	55	61	27	116	285		
6:45 PM	0	24	68	25	92	0	54	69	3	123	0	64	46	36	110	325		
Hourly Total	0	99	202	106	301	0	214	216	4	430	0	232	211	138	443	1174		
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
7:00 AM	0	21	72	21	93	0	24	28	0	52	0	66	21	6	87	232		
7:15 AM	0	25	65	11	90	0	14	23	0	37	0	61	19	5	80	207		
7:30 AM	0	20	74	28	94	0	18	14	0	32	0	68	22	13	90	216		
7:45 AM	0	26	61	24	87	0	19	22	0	41	0	72	22	5	94	222		
Hourly Total	0	92	272	84	364	0	75	87	0	162	0	267	84	29	351	877		
8:00 AM	0	20	54	14	74	0	25	33	0	58	0	95	28	5	123	255		
8:15 AM	0	20	55	8	75	0	27	38	1	65	0	97	26	6	123	263		
8:30 AM	0	25	46	3	71	0	26	22	2	48	0	96	23	1	119	238		
8:45 AM	0	25	43	4	68	0	27	25	0	52	0	117	15	1	132	252		
Hourly Total	0	90	198	29	288	0	105	118	3	223	0	405	92	13	497	1008		

*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	23	48	4	71	0	40	27	0	67	0	43	41	13	84	222
4:15 PM	0	23	61	9	84	0	37	19	0	56	0	43	49	9	92	232
4:30 PM	0	22	54	6	76	0	36	33	0	69	0	37	45	5	82	227
4:45 PM	0	16	59	7	75	0	46	38	0	84	0	53	56	25	109	268
Hourly Total	0	84	222	26	306	0	159	117	0	276	0	176	191	52	367	949
5:00 PM	0	22	44	6	66	0	28	35	0	63	0	53	52	10	105	234
5:15 PM	0	12	46	8	58	0	40	33	0	73	0	44	37	33	81	212
5:30 PM	0	19	34	14	53	0	35	22	0	57	0	60	63	22	123	233
5:45 PM	0	22	40	12	62	0	30	47	0	77	0	48	42	16	90	229
Hourly Total	0	75	164	40	239	0	133	137	0	270	0	205	194	81	399	908
6:00 PM	0	12	47	18	59	0	30	64	2	94	0	49	33	33	82	235
6:15 PM	0	27	38	21	65	0	37	60	0	97	0	57	34	12	91	253
6:30 PM	0	27	45	11	72	0	26	66	0	92	0	61	42	43	103	267
6:45 PM	0	19	40	14	59	0	38	63	2	101	0	51	54	27	105	265
Hourly Total	0	85	170	64	255	0	131	253	4	384	0	218	163	115	381	1020
Grand Total	0	923	2168	713	3091	0	1422	1437	13	2859	0	2607	1525	723	4132	10082
Approach %	0.0	29.9	70.1	-	-	0.0	49.7	50.3	-	-	0.0	63.1	36.9	-	-	-
Total %	0.0	9.2	21.5	-	30.7	0.0	14.1	14.3	-	28.4	0.0	25.9	15.1	-	41.0	-
Lights	0	845	2131	-	2976	0	1407	1255	-	2662	0	2382	1432	-	3814	9452
% Lights	-	91.5	98.3	-	96.3	-	98.9	87.3	-	93.1	-	91.4	93.9	-	92.3	93.8
Buses	0	62	7	-	69	0	7	140	-	147	0	187	67	-	254	470
% Buses	-	6.7	0.3	-	2.2	-	0.5	9.7	-	5.1	-	7.2	4.4	-	6.1	4.7
Single-Unit Trucks	0	5	18	-	23	0	5	19	-	24	0	14	14	-	28	75
% Single-Unit Trucks	-	0.5	0.8	-	0.7	-	0.4	1.3	-	0.8	-	0.5	0.9	-	0.7	0.7
Articulated Trucks	0	0	0	-	0	0	0	2	-	2	0	1	1	-	2	4
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.1	-	0.1	-	0.0	0.1	-	0.0	0.0
Bicycles on Road	0	11	12	-	23	0	3	21	-	24	0	23	11	-	34	81
% Bicycles on Road	-	1.2	0.6	-	0.7	-	0.2	1.5	-	0.8	-	0.9	0.7	-	0.8	0.8
Pedestrians	-	-	-	713	-	-	-	-	13	-	-	-	-	723	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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Count Name: LSD/Addison
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Turning Movement Peak Hour Data (8:00 AM)

Start Time	Addison Street Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
8:00 AM	0	28	53	21	81	0	22	31	0	53	0	86	19	9	105	239
8:15 AM	0	27	59	16	86	0	29	31	0	60	0	89	16	8	105	251
8:30 AM	0	23	55	21	78	0	33	18	0	51	0	101	29	5	130	259
8:45 AM	0	26	41	15	67	0	23	32	0	55	0	104	36	12	140	262
Total	0	104	208	73	312	0	107	112	0	219	0	380	100	34	480	1011
Approach %	0.0	33.3	66.7	-	-	0.0	48.9	51.1	-	-	0.0	79.2	20.8	-	-	-
Total %	0.0	10.3	20.6	-	30.9	0.0	10.6	11.1	-	21.7	0.0	37.6	9.9	-	47.5	-
PHF	0.000	0.929	0.881	-	0.907	0.000	0.811	0.875	-	0.913	0.000	0.913	0.694	-	0.857	0.965
Lights	0	96	204	-	300	0	107	99	-	206	0	342	90	-	432	938
% Lights	-	92.3	98.1	-	96.2	-	100.0	88.4	-	94.1	-	90.0	90.0	-	90.0	92.8
Buses	0	8	1	-	9	0	0	7	-	7	0	33	6	-	39	55
% Buses	-	7.7	0.5	-	2.9	-	0.0	6.3	-	3.2	-	8.7	6.0	-	8.1	5.4
Single-Unit Trucks	0	0	1	-	1	0	0	3	-	3	0	3	2	-	5	9
% Single-Unit Trucks	-	0.0	0.5	-	0.3	-	0.0	2.7	-	1.4	-	0.8	2.0	-	1.0	0.9
Articulated Trucks	0	0	0	-	0	0	0	1	-	1	0	0	1	-	1	2
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.9	-	0.5	-	0.0	1.0	-	0.2	0.2
Bicycles on Road	0	0	2	-	2	0	0	2	-	2	0	2	1	-	3	7
% Bicycles on Road	-	0.0	1.0	-	0.6	-	0.0	1.8	-	0.9	-	0.5	1.0	-	0.6	0.7
Pedestrians	-	-	-	73	-	-	-	-	0	-	-	-	-	34	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-



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Count Name: LSD/Addison
Site Code:
Start Date: 06/19/2018
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Turning Movement Peak Hour Data (6:00 PM)

Start Time	Addison Street Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 PM	0	33	36	25	69	0	65	44	0	109	0	60	53	35	113	291
6:15 PM	0	25	52	25	77	0	42	50	0	92	0	53	51	40	104	273
6:30 PM	0	17	46	31	63	0	53	53	1	106	0	55	61	27	116	285
6:45 PM	0	24	68	25	92	0	54	69	3	123	0	64	46	36	110	325
Total	0	99	202	106	301	0	214	216	4	430	0	232	211	138	443	1174
Approach %	0.0	32.9	67.1	-	-	0.0	49.8	50.2	-	-	0.0	52.4	47.6	-	-	-
Total %	0.0	8.4	17.2	-	25.6	0.0	18.2	18.4	-	36.6	0.0	19.8	18.0	-	37.7	-
PHF	0.000	0.750	0.743	-	0.818	0.000	0.823	0.783	-	0.874	0.000	0.906	0.865	-	0.955	0.903
Lights	0	87	194	-	281	0	210	179	-	389	0	213	203	-	416	1086
% Lights	-	87.9	96.0	-	93.4	-	98.1	82.9	-	90.5	-	91.8	96.2	-	93.9	92.5
Buses	0	8	1	-	9	0	3	31	-	34	0	8	8	-	16	59
% Buses	-	8.1	0.5	-	3.0	-	1.4	14.4	-	7.9	-	3.4	3.8	-	3.6	5.0
Single-Unit Trucks	0	0	4	-	4	0	1	0	-	1	0	6	0	-	6	11
% Single-Unit Trucks	-	0.0	2.0	-	1.3	-	0.5	0.0	-	0.2	-	2.6	0.0	-	1.4	0.9
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	4	3	-	7	0	0	6	-	6	0	5	0	-	5	18
% Bicycles on Road	-	4.0	1.5	-	2.3	-	0.0	2.8	-	1.4	-	2.2	0.0	-	1.1	1.5
Pedestrians	-	-	-	106	-	-	-	-	4	-	-	-	-	138	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: LSD/Addison
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Turning Movement Peak Hour Data (8:00 AM)

Start Time	Addison Street Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
8:00 AM	0	20	54	14	74	0	25	33	0	58	0	95	28	5	123	255
8:15 AM	0	20	55	8	75	0	27	38	1	65	0	97	26	6	123	263
8:30 AM	0	25	46	3	71	0	26	22	2	48	0	96	23	1	119	238
8:45 AM	0	25	43	4	68	0	27	25	0	52	0	117	15	1	132	252
Total	0	90	198	29	288	0	105	118	3	223	0	405	92	13	497	1008
Approach %	0.0	31.3	68.8	-	-	0.0	47.1	52.9	-	-	0.0	81.5	18.5	-	-	-
Total %	0.0	8.9	19.6	-	28.6	0.0	10.4	11.7	-	22.1	0.0	40.2	9.1	-	49.3	-
PHF	0.000	0.900	0.900	-	0.960	0.000	0.972	0.776	-	0.858	0.000	0.865	0.821	-	0.941	0.958
Lights	0	83	194	-	277	0	104	109	-	213	0	369	83	-	452	942
% Lights	-	92.2	98.0	-	96.2	-	99.0	92.4	-	95.5	-	91.1	90.2	-	90.9	93.5
Buses	0	6	0	-	6	0	0	4	-	4	0	33	6	-	39	49
% Buses	-	6.7	0.0	-	2.1	-	0.0	3.4	-	1.8	-	8.1	6.5	-	7.8	4.9
Single-Unit Trucks	0	1	4	-	5	0	1	5	-	6	0	3	3	-	6	17
% Single-Unit Trucks	-	1.1	2.0	-	1.7	-	1.0	4.2	-	2.7	-	0.7	3.3	-	1.2	1.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	29	-	-	-	-	3	-	-	-	-	13	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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Turning Movement Peak Hour Data (6:00 PM)

Start Time	Addison Street Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 PM	0	12	47	18	59	0	30	64	2	94	0	49	33	33	82	235
6:15 PM	0	27	38	21	65	0	37	60	0	97	0	57	34	12	91	253
6:30 PM	0	27	45	11	72	0	26	66	0	92	0	61	42	43	103	267
6:45 PM	0	19	40	14	59	0	38	63	2	101	0	51	54	27	105	265
Total	0	85	170	64	255	0	131	253	4	384	0	218	163	115	381	1020
Approach %	0.0	33.3	66.7	-	-	0.0	34.1	65.9	-	-	0.0	57.2	42.8	-	-	-
Total %	0.0	8.3	16.7	-	25.0	0.0	12.8	24.8	-	37.6	0.0	21.4	16.0	-	37.4	-
PHF	0.000	0.787	0.904	-	0.885	0.000	0.862	0.958	-	0.950	0.000	0.893	0.755	-	0.907	0.955
Lights	0	79	168	-	247	0	130	225	-	355	0	207	157	-	364	966
% Lights	-	92.9	98.8	-	96.9	-	99.2	88.9	-	92.4	-	95.0	96.3	-	95.5	94.7
Buses	0	4	1	-	5	0	0	27	-	27	0	6	5	-	11	43
% Buses	-	4.7	0.6	-	2.0	-	0.0	10.7	-	7.0	-	2.8	3.1	-	2.9	4.2
Single-Unit Trucks	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.6	-	0.4	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.1
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.5	0.0	-	0.3	0.1
Bicycles on Road	0	2	0	-	2	0	1	1	-	2	0	4	1	-	5	9
% Bicycles on Road	-	2.4	0.0	-	0.8	-	0.8	0.4	-	0.5	-	1.8	0.6	-	1.3	0.9
Pedestrians	-	-	-	64	-	-	-	-	4	-	-	-	-	115	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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Turning Movement Data

Start Time	Grace Street					Lake Shore Drive				Lake Shore Drive						
	Eastbound		Northbound		Southbound											
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	10	2	11	12	0	1	68	0	69	0	80	10	0	90	171
7:15 AM	0	10	3	22	13	0	4	59	1	63	0	60	11	0	71	147
7:30 AM	0	11	5	18	16	0	2	52	2	54	0	80	10	0	90	160
7:45 AM	0	9	2	13	11	0	2	92	1	94	0	95	11	0	106	211
Hourly Total	0	40	12	64	52	0	9	271	4	280	0	315	42	0	357	689
8:00 AM	0	7	1	15	8	0	1	88	0	89	0	95	15	0	110	207
8:15 AM	0	3	4	7	7	0	2	84	0	86	0	92	11	0	103	196
8:30 AM	0	9	1	14	10	0	0	70	2	70	0	120	14	0	134	214
8:45 AM	0	10	7	9	17	0	4	65	2	69	0	115	9	0	124	210
Hourly Total	0	29	13	45	42	0	7	307	4	314	0	422	49	0	471	827
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	4	2	10	6	0	10	84	10	94	0	87	35	0	122	222
4:15 PM	0	8	0	17	8	0	5	110	1	115	0	83	42	0	125	248
4:30 PM	0	6	5	23	11	0	10	93	12	103	0	92	38	0	130	244
4:45 PM	0	4	4	25	8	0	2	73	9	75	0	92	55	0	147	230
Hourly Total	0	22	11	75	33	0	27	360	32	387	0	354	170	0	524	944
5:00 PM	0	3	4	34	7	0	3	92	25	95	0	88	55	0	143	245
5:15 PM	0	2	6	28	8	1	6	87	14	94	0	100	41	0	141	243
5:30 PM	0	3	2	32	5	0	8	68	4	76	0	90	54	0	144	225
5:45 PM	0	8	7	38	15	0	12	65	24	77	0	96	68	0	164	256
Hourly Total	0	16	19	132	35	1	29	312	67	342	0	374	218	0	592	969
6:00 PM	0	2	2	44	4	0	10	90	12	100	0	94	65	0	159	263
6:15 PM	0	7	4	49	11	0	8	76	22	84	0	98	75	0	173	268
6:30 PM	0	3	2	26	5	0	11	94	6	105	0	103	80	0	183	293
6:45 PM	0	6	4	33	10	0	11	106	15	117	0	87	72	0	159	286
Hourly Total	0	18	12	152	30	0	40	366	55	406	0	382	292	0	674	1110
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7:00 AM	0	9	2	14	11	0	3	79	1	82	0	80	7	0	87	180
7:15 AM	0	9	0	14	9	0	9	63	0	72	0	84	16	0	100	181
7:30 AM	0	11	1	14	12	0	3	69	2	72	0	89	8	0	97	181
7:45 AM	0	2	0	14	2	0	6	69	0	75	0	93	12	0	105	182
Hourly Total	0	31	3	56	34	0	21	280	3	301	0	346	43	0	389	724
8:00 AM	0	8	4	5	12	0	0	82	1	82	0	122	11	0	133	227
8:15 AM	0	7	1	8	8	0	5	75	2	80	1	92	8	0	101	189
8:30 AM	0	2	2	7	4	0	3	72	1	75	0	105	9	0	114	193
8:45 AM	0	9	5	4	14	0	6	63	0	69	0	113	7	0	120	203
Hourly Total	0	26	12	24	38	0	14	292	4	306	1	432	35	0	468	812

*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	2	2	12	4	0	3	65	4	68	0	80	28	0	108	180
4:15 PM	0	6	2	13	8	0	1	50	7	51	0	84	23	0	107	166
4:30 PM	0	5	1	16	6	0	8	64	3	72	0	73	27	0	100	178
4:45 PM	0	3	1	19	4	0	4	56	16	60	0	94	19	0	113	177
Hourly Total	0	16	6	60	22	0	16	235	30	251	0	331	97	0	428	701
5:00 PM	0	6	3	25	9	0	2	63	13	65	0	88	32	0	120	194
5:15 PM	0	9	0	32	9	0	4	75	23	79	0	88	40	0	128	216
5:30 PM	0	7	6	26	13	0	13	51	10	64	1	97	37	0	135	212
5:45 PM	0	6	3	28	9	0	4	70	9	74	0	77	29	0	106	189
Hourly Total	0	28	12	111	40	0	23	259	55	282	1	350	138	0	489	811
6:00 PM	0	5	0	24	5	0	10	94	18	104	0	76	18	0	94	203
6:15 PM	0	4	2	29	6	0	4	104	3	108	0	71	28	0	99	213
6:30 PM	0	5	1	28	6	0	7	98	31	105	0	79	21	0	100	211
6:45 PM	0	0	4	23	4	0	8	95	18	103	0	88	27	0	115	222
Hourly Total	0	14	7	104	21	0	29	391	70	420	0	314	94	0	408	849
Grand Total	0	240	107	823	347	1	215	3073	324	3289	2	3620	1178	0	4800	8436
Approach %	0.0	69.2	30.8	-	-	0.0	6.5	93.4	-	-	0.0	75.4	24.5	-	-	-
Total %	0.0	2.8	1.3	-	4.1	0.0	2.5	36.4	-	39.0	0.0	42.9	14.0	-	56.9	-
Lights	0	236	100	-	336	1	197	2810	-	3008	2	3340	1167	-	4509	7853
% Lights	-	98.3	93.5	-	96.8	100.0	91.6	91.4	-	91.5	100.0	92.3	99.1	-	93.9	93.1
Buses	0	0	1	-	1	0	1	209	-	210	0	240	3	-	243	454
% Buses	-	0.0	0.9	-	0.3	0.0	0.5	6.8	-	6.4	0.0	6.6	0.3	-	5.1	5.4
Single-Unit Trucks	0	0	0	-	0	0	5	25	-	30	0	18	1	-	19	49
% Single-Unit Trucks	-	0.0	0.0	-	0.0	0.0	2.3	0.8	-	0.9	0.0	0.5	0.1	-	0.4	0.6
Articulated Trucks	0	0	0	-	0	0	0	1	-	1	0	2	0	-	2	3
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0	0.1	0.0	-	0.0	0.0
Bicycles on Road	0	4	6	-	10	0	12	28	-	40	0	20	7	-	27	77
% Bicycles on Road	-	1.7	5.6	-	2.9	0.0	5.6	0.9	-	1.2	0.0	0.6	0.6	-	0.6	0.9
Pedestrians	-	-	-	823	-	-	-	-	324	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-



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Turning Movement Peak Hour Data (8:00 AM)

Start Time	Grace Street Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
8:00 AM	0	7	1	15	8	0	1	88	0	89	0	95	15	0	110	207
8:15 AM	0	3	4	7	7	0	2	84	0	86	0	92	11	0	103	196
8:30 AM	0	9	1	14	10	0	0	70	2	70	0	120	14	0	134	214
8:45 AM	0	10	7	9	17	0	4	65	2	69	0	115	9	0	124	210
Total	0	29	13	45	42	0	7	307	4	314	0	422	49	0	471	827
Approach %	0.0	69.0	31.0	-	-	0.0	2.2	97.8	-	-	0.0	89.6	10.4	-	-	-
Total %	0.0	3.5	1.6	-	5.1	0.0	0.8	37.1	-	38.0	0.0	51.0	5.9	-	57.0	-
PHF	0.000	0.725	0.464	-	0.618	0.000	0.438	0.872	-	0.882	0.000	0.879	0.817	-	0.879	0.966
Lights	0	29	10	-	39	0	7	288	-	295	0	380	48	-	428	762
% Lights	-	100.0	76.9	-	92.9	-	100.0	93.8	-	93.9	-	90.0	98.0	-	90.9	92.1
Buses	0	0	0	-	0	0	0	13	-	13	0	34	0	-	34	47
% Buses	-	0.0	0.0	-	0.0	-	0.0	4.2	-	4.1	-	8.1	0.0	-	7.2	5.7
Single-Unit Trucks	0	0	0	-	0	0	0	3	-	3	0	4	0	-	4	7
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	1.0	-	1.0	-	0.9	0.0	-	0.8	0.8
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.2	0.0	-	0.2	0.1
Bicycles on Road	0	0	3	-	3	0	0	3	-	3	0	3	1	-	4	10
% Bicycles on Road	-	0.0	23.1	-	7.1	-	0.0	1.0	-	1.0	-	0.7	2.0	-	0.8	1.2
Pedestrians	-	-	-	45	-	-	-	-	4	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-



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Turning Movement Peak Hour Data (6:00 PM)

Start Time	Grace Street Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 PM	0	2	2	44	4	0	10	90	12	100	0	94	65	0	159	263
6:15 PM	0	7	4	49	11	0	8	76	22	84	0	98	75	0	173	268
6:30 PM	0	3	2	26	5	0	11	94	6	105	0	103	80	0	183	293
6:45 PM	0	6	4	33	10	0	11	106	15	117	0	87	72	0	159	286
Total	0	18	12	152	30	0	40	366	55	406	0	382	292	0	674	1110
Approach %	0.0	60.0	40.0	-	-	0.0	9.9	90.1	-	-	0.0	56.7	43.3	-	-	-
Total %	0.0	1.6	1.1	-	2.7	0.0	3.6	33.0	-	36.6	0.0	34.4	26.3	-	60.7	-
PHF	0.000	0.643	0.750	-	0.682	0.000	0.909	0.863	-	0.868	0.000	0.927	0.913	-	0.921	0.947
Lights	0	17	12	-	29	0	36	322	-	358	0	359	291	-	650	1037
% Lights	-	94.4	100.0	-	96.7	-	90.0	88.0	-	88.2	-	94.0	99.7	-	96.4	93.4
Buses	0	0	0	-	0	0	0	38	-	38	0	15	0	-	15	53
% Buses	-	0.0	0.0	-	0.0	-	0.0	10.4	-	9.4	-	3.9	0.0	-	2.2	4.8
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	4	0	-	4	4
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	1.0	0.0	-	0.6	0.4
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	1	0	-	1	0	4	6	-	10	0	4	1	-	5	16
% Bicycles on Road	-	5.6	0.0	-	3.3	-	10.0	1.6	-	2.5	-	1.0	0.3	-	0.7	1.4
Pedestrians	-	-	-	152	-	-	-	-	55	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-



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Turning Movement Peak Hour Data (8:00 AM)

Start Time	Grace Street Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
8:00 AM	0	8	4	5	12	0	0	82	1	82	0	122	11	0	133	227
8:15 AM	0	7	1	8	8	0	5	75	2	80	1	92	8	0	101	189
8:30 AM	0	2	2	7	4	0	3	72	1	75	0	105	9	0	114	193
8:45 AM	0	9	5	4	14	0	6	63	0	69	0	113	7	0	120	203
Total	0	26	12	24	38	0	14	292	4	306	1	432	35	0	468	812
Approach %	0.0	68.4	31.6	-	-	0.0	4.6	95.4	-	-	0.2	92.3	7.5	-	-	-
Total %	0.0	3.2	1.5	-	4.7	0.0	1.7	36.0	-	37.7	0.1	53.2	4.3	-	57.6	-
PHF	0.000	0.722	0.600	-	0.679	0.000	0.583	0.890	-	0.933	0.250	0.885	0.795	-	0.880	0.894
Lights	0	26	11	-	37	0	13	274	-	287	1	393	33	-	427	751
% Lights	-	100.0	91.7	-	97.4	-	92.9	93.8	-	93.8	100.0	91.0	94.3	-	91.2	92.5
Buses	0	0	0	-	0	0	0	11	-	11	0	33	0	-	33	44
% Buses	-	0.0	0.0	-	0.0	-	0.0	3.8	-	3.6	0.0	7.6	0.0	-	7.1	5.4
Single-Unit Trucks	0	0	0	-	0	0	1	6	-	7	0	6	1	-	7	14
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	7.1	2.1	-	2.3	0.0	1.4	2.9	-	1.5	1.7
Articulated Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.3	-	0.3	0.0	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	1	-	1	0	0	0	-	0	0	0	1	-	1	2
% Bicycles on Road	-	0.0	8.3	-	2.6	-	0.0	0.0	-	0.0	0.0	0.0	2.9	-	0.2	0.2
Pedestrians	-	-	-	24	-	-	-	-	4	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	-	-	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: LSD/Grace/Sheridan
Site Code:
Start Date: 06/19/2018
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Turning Movement Peak Hour Data (6:00 PM)



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

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Count Name: LSD/Sheridan
Site Code:
Start Date: 06/19/2018
Page No: 1

Turning Movement Data

Start Time	Sheridan Road					Lake Shore Drive					Lake Shore Drive							
	Eastbound					Northbound					Southbound							
	U-Turn	Left	Right	Peds	App. Total		U-Turn	Left	Thru	Peds	App. Total		U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	12	0	0	0	2	72	0	74	0	0	71	15	0	86	160
7:15 AM	0	0	0	7	0	0	0	2	66	0	68	1	1	56	19	0	76	144
7:30 AM	0	0	0	7	0	0	0	1	58	0	59	0	0	76	16	0	92	151
7:45 AM	0	0	0	13	0	0	0	2	90	0	92	0	0	92	22	0	114	206
Hourly Total	0	0	0	39	0	0	0	7	286	0	293	1	1	295	72	0	368	661
8:00 AM	0	0	0	7	0	0	0	3	85	0	88	0	0	98	14	0	112	200
8:15 AM	0	0	0	4	0	0	0	1	79	0	80	0	0	82	16	0	98	178
8:30 AM	0	1	0	8	1	0	0	3	69	0	72	0	0	120	21	0	141	214
8:45 AM	0	0	1	6	1	0	0	1	64	0	65	0	0	112	28	0	140	206
Hourly Total	0	1	1	25	2	0	0	8	297	0	305	0	0	412	79	0	491	798
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	0	0	8	0	0	0	3	72	0	75	0	0	117	62	5	179	254
4:15 PM	0	0	0	17	0	0	0	2	106	0	108	0	0	114	62	0	176	284
4:30 PM	0	0	0	20	0	0	0	1	81	0	82	0	0	117	54	1	171	253
4:45 PM	0	0	0	12	0	0	0	3	59	0	62	0	0	137	50	0	187	249
Hourly Total	0	0	0	57	0	0	0	9	318	0	327	0	0	485	228	6	713	1040
5:00 PM	0	0	0	20	0	0	0	3	75	1	78	0	0	130	62	0	192	270
5:15 PM	0	0	0	21	0	0	0	2	78	0	80	0	0	131	60	5	191	271
5:30 PM	0	0	0	29	0	0	0	3	57	0	60	0	0	136	86	1	222	282
5:45 PM	0	0	0	25	0	0	0	1	62	0	63	0	0	145	71	2	216	279
Hourly Total	0	0	0	95	0	0	0	9	272	1	281	0	0	542	279	8	821	1102
6:00 PM	0	0	0	34	0	0	0	3	84	0	87	0	0	146	57	3	203	290
6:15 PM	0	0	0	24	0	0	0	1	68	1	69	0	0	158	58	1	216	285
6:30 PM	0	0	0	13	0	0	0	1	79	0	80	0	0	159	57	2	216	296
6:45 PM	0	0	0	18	0	0	0	2	94	0	96	0	0	133	53	2	186	282
Hourly Total	0	0	0	89	0	0	0	7	325	1	332	0	0	596	225	8	821	1153
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7:00 AM	0	0	0	10	0	0	0	2	77	0	79	0	0	73	19	0	92	171
7:15 AM	0	1	0	2	1	0	0	3	66	0	69	0	0	78	11	0	89	159
7:30 AM	0	0	0	8	0	0	0	2	68	0	70	0	0	86	21	0	107	177
7:45 AM	0	0	0	9	0	0	0	2	60	0	62	0	0	94	19	0	113	175
Hourly Total	0	1	0	29	1	0	0	9	271	0	280	0	0	331	70	0	401	682
8:00 AM	0	0	0	3	0	0	0	2	81	0	83	0	0	116	14	2	130	213
8:15 AM	0	0	0	1	0	0	0	2	72	0	74	0	0	84	12	0	96	170
8:30 AM	0	0	0	3	0	0	0	3	65	0	68	0	0	102	12	0	114	182
8:45 AM	0	0	0	2	0	0	0	1	64	0	65	0	0	106	15	0	121	186
Hourly Total	0	0	0	9	0	0	0	8	282	0	290	0	0	408	53	2	461	751

*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	1	0	8	1	0	2	56	1	58	0	102	17	0	119	178
4:15 PM	0	0	0	6	0	0	2	49	0	51	0	96	26	0	122	173
4:30 PM	0	0	0	9	0	0	1	59	0	60	0	91	30	0	121	181
4:45 PM	0	0	0	11	0	0	3	43	1	46	0	107	33	0	140	186
Hourly Total	0	1	0	34	1	0	8	207	2	215	0	396	106	0	502	718
5:00 PM	0	0	0	10	0	0	3	57	0	60	0	109	37	2	146	206
5:15 PM	0	0	0	13	0	0	2	62	0	64	0	102	52	4	154	218
5:30 PM	0	0	0	19	0	0	2	43	0	45	0	112	37	0	149	194
5:45 PM	0	1	0	19	1	0	3	61	0	64	0	95	26	6	121	186
Hourly Total	0	1	0	61	1	0	10	223	0	233	0	418	152	12	570	804
6:00 PM	0	0	0	15	0	0	1	80	0	81	0	86	30	0	116	197
6:15 PM	0	0	1	21	1	0	2	86	0	88	0	91	24	0	115	204
6:30 PM	0	0	1	12	1	0	1	88	1	89	0	87	19	2	106	196
6:45 PM	0	0	0	14	0	0	1	79	0	80	0	102	35	1	137	217
Hourly Total	0	0	2	62	2	0	5	333	1	338	0	366	108	3	474	814
Grand Total	0	4	3	500	7	0	80	2814	5	2894	1	4249	1372	39	5622	8523
Approach %	0.0	57.1	42.9	-	-	0.0	2.8	97.2	-	-	0.0	75.6	24.4	-	-	-
Total %	0.0	0.0	0.0	-	0.1	0.0	0.9	33.0	-	34.0	0.0	49.9	16.1	-	66.0	-
Lights	0	3	3	-	6	0	18	2692	-	2710	1	4080	1292	-	5373	8089
% Lights	-	75.0	100.0	-	85.7	-	22.5	95.7	-	93.6	100.0	96.0	94.2	-	95.6	94.9
Buses	0	0	0	-	0	0	60	84	-	144	0	134	68	-	202	346
% Buses	-	0.0	0.0	-	0.0	-	75.0	3.0	-	5.0	0.0	3.2	5.0	-	3.6	4.1
Single-Unit Trucks	0	0	0	-	0	0	1	20	-	21	0	13	8	-	21	42
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	1.3	0.7	-	0.7	0.0	0.3	0.6	-	0.4	0.5
Articulated Trucks	0	0	0	-	0	0	0	1	-	1	0	1	0	-	1	2
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	1	0	-	1	0	1	17	-	18	0	21	4	-	25	44
% Bicycles on Road	-	25.0	0.0	-	14.3	-	1.3	0.6	-	0.6	0.0	0.5	0.3	-	0.4	0.5
Pedestrians	-	-	-	500	-	-	-	-	5	-	-	-	-	39	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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Count Name: LSD/Sheridan
Site Code:
Start Date: 06/19/2018
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Turning Movement Peak Hour Data (8:00 AM)



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

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Count Name: LSD/Sheridan
Site Code:
Start Date: 06/19/2018
Page No: 4

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Sheridan Road Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 PM	0	0	0	34	0	0	3	84	0	87	0	146	57	3	203	290
6:15 PM	0	0	0	24	0	0	1	68	1	69	0	158	58	1	216	285
6:30 PM	0	0	0	13	0	0	1	79	0	80	0	159	57	2	216	296
6:45 PM	0	0	0	18	0	0	2	94	0	96	0	133	53	2	186	282
Total	0	0	0	89	0	0	7	325	1	332	0	596	225	8	821	1153
Approach %	0.0	0.0	0.0	-	-	0.0	2.1	97.9	-	-	0.0	72.6	27.4	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	0.6	28.2	-	28.8	0.0	51.7	19.5	-	71.2	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.583	0.864	-	0.865	0.000	0.937	0.970	-	0.950	0.974
Lights	0	0	0	-	0	0	1	300	-	301	0	580	221	-	801	1102
% Lights	-	-	-	-	-	-	14.3	92.3	-	90.7	-	97.3	98.2	-	97.6	95.6
Buses	0	0	0	-	0	0	5	22	-	27	0	6	4	-	10	37
% Buses	-	-	-	-	-	-	71.4	6.8	-	8.1	-	1.0	1.8	-	1.2	3.2
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	4	0	-	4	4
% Single-Unit Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.7	0.0	-	0.5	0.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	1	3	-	4	0	6	0	-	6	10
% Bicycles on Road	-	-	-	-	-	-	14.3	0.9	-	1.2	-	1.0	0.0	-	0.7	0.9
Pedestrians	-	-	-	89	-	-	-	-	1	-	-	-	-	8	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	100.0	-	-	-	-	100.0	-	-



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Count Name: LSD/Sheridan
Site Code:
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Turning Movement Peak Hour Data (8:00 AM)

Start Time	Sheridan Road Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
8:00 AM	0	0	0	3	0	0	2	81	0	83	0	116	14	2	130	213
8:15 AM	0	0	0	1	0	0	2	72	0	74	0	84	12	0	96	170
8:30 AM	0	0	0	3	0	0	3	65	0	68	0	102	12	0	114	182
8:45 AM	0	0	0	2	0	0	1	64	0	65	0	106	15	0	121	186
Total	0	0	0	9	0	0	8	282	0	290	0	408	53	2	461	751
Approach %	0.0	0.0	0.0	-	-	0.0	2.8	97.2	-	-	0.0	88.5	11.5	-	-	-
Total %	0.0	0.0	0.0	-	0.0	0.0	1.1	37.5	-	38.6	0.0	54.3	7.1	-	61.4	-
PHF	0.000	0.000	0.000	-	0.000	0.000	0.667	0.870	-	0.873	0.000	0.879	0.883	-	0.887	0.881
Lights	0	0	0	-	0	0	2	274	-	276	0	382	46	-	428	704
% Lights	-	-	-	-	-	-	25.0	97.2	-	95.2	-	93.6	86.8	-	92.8	93.7
Buses	0	0	0	-	0	0	6	3	-	9	0	23	7	-	30	39
% Buses	-	-	-	-	-	-	75.0	1.1	-	3.1	-	5.6	13.2	-	6.5	5.2
Single-Unit Trucks	0	0	0	-	0	0	0	4	-	4	0	2	0	-	2	6
% Single-Unit Trucks	-	-	-	-	-	-	0.0	1.4	-	1.4	-	0.5	0.0	-	0.4	0.8
Articulated Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Articulated Trucks	-	-	-	-	-	-	0.0	0.4	-	0.3	-	0.0	0.0	-	0.0	0.1
Bicycles on Road	0	0	0	-	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	-	-	-	-	-	0.0	0.0	-	0.0	-	0.2	0.0	-	0.2	0.1
Pedestrians	-	-	-	9	-	-	-	-	0	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	100.0	-	-



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Count Name: LSD/Sheridan
Site Code:
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Page No: 6

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Sheridan Road Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 PM	0	0	0	15	0	0	1	80	0	81	0	86	30	0	116	197
6:15 PM	0	0	1	21	1	0	2	86	0	88	0	91	24	0	115	204
6:30 PM	0	0	1	12	1	0	1	88	1	89	0	87	19	2	106	196
6:45 PM	0	0	0	14	0	0	1	79	0	80	0	102	35	1	137	217
Total	0	0	2	62	2	0	5	333	1	338	0	366	108	3	474	814
Approach %	0.0	0.0	100.0	-	-	0.0	1.5	98.5	-	-	0.0	77.2	22.8	-	-	-
Total %	0.0	0.0	0.2	-	0.2	0.0	0.6	40.9	-	41.5	0.0	45.0	13.3	-	58.2	-
PHF	0.000	0.000	0.500	-	0.500	0.000	0.625	0.946	-	0.949	0.000	0.897	0.771	-	0.865	0.938
Lights	0	0	2	-	2	0	1	316	-	317	0	361	103	-	464	783
% Lights	-	-	100.0	-	100.0	-	20.0	94.9	-	93.8	-	98.6	95.4	-	97.9	96.2
Buses	0	0	0	-	0	0	4	16	-	20	0	2	5	-	7	27
% Buses	-	-	0.0	-	0.0	-	80.0	4.8	-	5.9	-	0.5	4.6	-	1.5	3.3
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Articulated Trucks	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.3	0.0	-	0.2	0.1
Bicycles on Road	0	0	0	-	0	0	0	1	-	1	0	2	0	-	2	3
% Bicycles on Road	-	-	0.0	-	0.0	-	0.0	0.3	-	0.3	-	0.5	0.0	-	0.4	0.4
Pedestrians	-	-	-	62	-	-	-	1	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: LSD/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 1

Turning Movement Data

Start Time	Waveland Avenue					Lake Shore Drive					Lake Shore Drive							
	Eastbound					Northbound					Southbound							
	U-Turn	Left	Right	Peds	App. Total		U-Turn	Left	Thru	Peds	App. Total		U-Turn	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	25	8	13	33	0	0	40	9	40	0	78	0	0	0	78	151	
7:15 AM	0	18	14	13	32	0	0	44	6	44	0	65	0	0	0	65	141	
7:30 AM	0	22	19	20	41	0	1	28	9	29	0	89	0	0	0	89	159	
7:45 AM	0	36	9	19	45	0	0	54	7	54	0	89	0	0	0	89	188	
Hourly Total	0	101	50	65	151	0	1	166	31	167	0	321	0	0	0	321	639	
8:00 AM	0	25	12	13	37	0	0	58	10	58	0	99	0	0	0	99	194	
8:15 AM	0	26	14	14	40	0	0	53	4	53	0	98	0	0	0	98	191	
8:30 AM	0	26	22	16	48	0	0	39	7	39	0	116	0	0	0	116	203	
8:45 AM	0	14	22	23	36	0	0	59	12	59	0	117	0	0	0	117	212	
Hourly Total	0	91	70	66	161	0	0	209	33	209	0	430	0	0	0	430	800	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
4:00 PM	0	26	25	15	51	0	0	61	31	61	0	91	0	0	0	91	203	
4:15 PM	0	40	16	17	56	0	0	78	12	78	0	87	0	0	0	87	221	
4:30 PM	0	24	21	25	45	0	2	75	25	77	0	99	0	0	0	99	221	
4:45 PM	0	18	18	31	36	0	1	55	17	56	0	96	1	0	0	97	189	
Hourly Total	0	108	80	88	188	0	3	269	85	272	0	373	1	0	0	374	834	
5:00 PM	0	21	28	25	49	0	1	74	32	75	0	81	0	0	0	81	205	
5:15 PM	0	26	21	34	47	0	2	63	27	65	0	104	0	0	0	104	216	
5:30 PM	0	25	28	30	53	0	0	61	14	61	0	90	0	0	0	90	204	
5:45 PM	0	22	25	29	47	0	1	55	40	56	0	95	0	0	0	95	198	
Hourly Total	0	94	102	118	196	0	4	253	113	257	0	370	0	0	0	370	823	
6:00 PM	0	31	25	21	56	0	0	75	26	75	1	91	0	1	1	92	223	
6:15 PM	0	20	20	31	40	0	0	64	38	64	0	94	0	0	0	94	198	
6:30 PM	0	33	21	49	54	0	0	77	42	77	0	102	0	1	1	102	233	
6:45 PM	0	22	28	35	50	0	0	88	38	88	0	87	0	0	0	87	225	
Hourly Total	0	106	94	136	200	0	0	304	144	304	1	374	0	2	2	375	879	
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
7:00 AM	0	27	13	14	40	0	0	50	8	50	1	81	0	0	0	82	172	
7:15 AM	0	21	10	19	31	0	0	45	10	45	0	79	1	0	0	80	156	
7:30 AM	0	31	11	24	42	0	0	35	10	35	0	92	0	0	0	92	169	
7:45 AM	0	35	16	24	51	0	0	44	7	44	0	95	0	0	0	95	190	
Hourly Total	0	114	50	81	164	0	0	174	35	174	1	347	1	0	0	349	687	
8:00 AM	0	22	12	11	34	0	0	53	3	53	0	123	0	0	0	123	210	
8:15 AM	0	20	13	7	33	0	0	57	1	57	0	97	0	0	0	97	187	
8:30 AM	0	25	18	5	43	0	0	44	3	44	0	108	0	0	0	108	195	
8:45 AM	0	22	19	4	41	0	0	50	2	50	0	119	0	0	0	119	210	
Hourly Total	0	89	62	27	151	0	0	204	9	204	0	447	0	0	0	447	802	

*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	18	13	10	31	1	0	46	5	47	0	80	0	0
4:15 PM	0	8	13	9	21	0	1	45	11	46	0	87	0	0
4:30 PM	0	15	14	9	29	0	0	57	8	57	0	74	0	0
4:45 PM	0	11	17	12	28	0	0	52	18	52	0	93	0	0
Hourly Total	0	52	57	40	109	1	1	200	42	202	0	334	0	0
5:00 PM	0	19	18	16	37	0	0	55	9	55	0	92	0	0
5:15 PM	0	26	14	10	40	0	1	45	18	46	1	84	0	0
5:30 PM	0	30	27	22	57	0	1	39	21	40	0	104	0	0
5:45 PM	0	26	21	29	47	0	0	60	23	60	0	79	0	0
Hourly Total	0	101	80	77	181	0	2	199	71	201	1	359	0	0
6:00 PM	0	26	16	22	42	0	0	79	26	79	0	71	0	0
6:15 PM	0	26	19	21	45	0	1	79	19	80	0	77	0	0
6:30 PM	0	21	27	21	48	0	0	87	29	87	0	82	0	0
6:45 PM	0	29	21	24	50	0	1	77	26	78	0	84	0	0
Hourly Total	0	102	83	88	185	0	2	322	100	324	0	314	0	0
Grand Total	0	958	728	786	1686	1	13	2300	663	2314	3	3669	2	2
Approach %	0.0	56.8	43.2	-	-	0.0	0.6	99.4	-	-	0.1	99.9	0.1	-
Total %	0.0	12.5	9.5	-	22.0	0.0	0.2	30.0	-	30.2	0.0	47.8	0.0	-
Lights	0	949	708	-	1657	1	0	2043	-	2044	3	3379	1	-
% Lights	-	99.1	97.3	-	98.3	100.0	0.0	88.8	-	88.3	100.0	92.1	50.0	-
Buses	0	2	3	-	5	0	0	208	-	208	0	247	0	-
% Buses	-	0.2	0.4	-	0.3	0.0	0.0	9.0	-	9.0	0.0	6.7	0.0	-
Single-Unit Trucks	0	3	6	-	9	0	0	17	-	17	0	22	0	-
% Single-Unit Trucks	-	0.3	0.8	-	0.5	0.0	0.0	0.7	-	0.7	0.0	0.6	0.0	-
Articulated Trucks	0	0	0	-	0	0	0	2	-	2	0	1	0	-
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.1	-	0.1	0.0	0.0	0.0	-
Bicycles on Road	0	4	11	-	15	0	13	30	-	43	0	20	1	-
% Bicycles on Road	-	0.4	1.5	-	0.9	0.0	100.0	1.3	-	1.9	0.0	0.5	50.0	-
Pedestrians	-	-	-	786	-	-	-	663	-	-	-	-	2	-
% Pedestrians	-	-	-	100.0	-	-	-	100.0	-	-	-	-	100.0	-



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

Rosemont, Illinois, United States 60018
(847)518-9990

Count Name: LSD/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 4

Turning Movement Peak Hour Data (6:00 PM)

Start Time	Waveland Avenue Eastbound					Lake Shore Drive Northbound					Lake Shore Drive Southbound					Int. Total
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	
6:00 PM	0	31	25	21	56	0	0	75	26	75	1	91	0	1	92	223
6:15 PM	0	20	20	31	40	0	0	64	38	64	0	94	0	0	94	198
6:30 PM	0	33	21	49	54	0	0	77	42	77	0	102	0	1	102	233
6:45 PM	0	22	28	35	50	0	0	88	38	88	0	87	0	0	87	225
Total	0	106	94	136	200	0	0	304	144	304	1	374	0	2	375	879
Approach %	0.0	53.0	47.0	-	-	0.0	0.0	100.0	-	-	0.3	99.7	0.0	-	-	-
Total %	0.0	12.1	10.7	-	22.8	0.0	0.0	34.6	-	34.6	0.1	42.5	0.0	-	42.7	-
PHF	0.000	0.803	0.839	-	0.893	0.000	0.000	0.864	-	0.864	0.250	0.917	0.000	-	0.919	0.943
Lights	0	105	92	-	197	0	0	258	-	258	1	350	0	-	351	806
% Lights	-	99.1	97.9	-	98.5	-	-	84.9	-	84.9	100.0	93.6	-	-	93.6	91.7
Buses	0	0	1	-	1	0	0	38	-	38	0	15	0	-	15	54
% Buses	-	0.0	1.1	-	0.5	-	-	12.5	-	12.5	0.0	4.0	-	-	4.0	6.1
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	5	0	-	5	5
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0	1.3	-	-	1.3	0.6
Articulated Trucks	0	0	0	-	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	1	1	-	2	0	0	8	-	8	0	4	0	-	4	14
% Bicycles on Road	-	0.9	1.1	-	1.0	-	-	2.6	-	2.6	0.0	1.1	-	-	1.1	1.6
Pedestrians	-	-	-	136	-	-	-	144	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	100.0	-	-	-	100.0	-	-	-	-	-	100.0	-	-



Kenig Lindgren O'Hara Aboona, Inc.
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Count Name: LSD/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 5

Turning Movement Peak Hour Data (8:00 AM)



Kenig Lindgren O'Hara Aboona, Inc.
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(847)518-9990

Count Name: LSD/Waveland
Site Code:
Start Date: 06/19/2018
Page No: 6

Turning Movement Peak Hour Data (6:00 PM)



Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, Illinois, United States 60018
(847)518-9990 bmay@kloainc.com

Count Name: Waveland/Access
Site Code:
Start Date: 06/19/2018
Page No: 1

Direction (Southbound)

Start Time	Lights	Buses	Single-Unit Trucks	Articulated Trucks	Bicycles on Road	Total
06/19/2018 12:00 AM	2	0	0	0	0	2
12:15 AM	2	0	0	0	0	2
12:30 AM	0	0	0	0	0	0
12:45 AM	1	0	0	0	0	1
1:00 AM	0	0	0	0	0	0
1:15 AM	0	0	0	0	0	0
1:30 AM	0	0	0	0	0	0
1:45 AM	1	0	0	0	0	1
2:00 AM	1	0	0	0	0	1
2:15 AM	1	0	0	0	0	1
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	1	0	0	0	0	1
3:30 AM	1	0	0	0	0	1
3:45 AM	1	0	0	0	0	1
4:00 AM	0	0	0	0	0	0
4:15 AM	1	0	0	0	0	1
4:30 AM	0	0	0	0	0	0
4:45 AM	1	0	0	0	0	1
5:00 AM	1	0	0	0	0	1
5:15 AM	2	0	0	0	0	2
5:30 AM	2	0	0	0	0	2
5:45 AM	5	0	0	0	0	5
6:00 AM	3	0	0	0	0	3
6:15 AM	1	0	0	0	0	1
6:30 AM	2	0	0	0	0	2
6:45 AM	5	0	0	0	0	5
7:00 AM	2	0	0	0	0	2
7:15 AM	2	0	0	0	0	2
7:30 AM	3	0	0	0	0	3
7:45 AM	1	0	0	0	0	1
8:00 AM	4	0	0	0	0	4
8:15 AM	3	0	0	0	0	3
8:30 AM	7	0	0	0	0	7
8:45 AM	5	0	0	0	0	5
9:00 AM	6	0	0	0	0	6
9:15 AM	1	0	0	0	0	1
9:30 AM	3	0	0	0	0	3

9:45 AM	3	0	0	0	0	3
10:00 AM	5	0	0	0	0	5
10:15 AM	4	0	0	0	0	4
10:30 AM	2	0	0	0	0	2
10:45 AM	1	0	0	0	0	1
11:00 AM	0	0	0	0	0	0
11:15 AM	6	0	0	0	0	6
11:30 AM	2	0	0	0	0	2
11:45 AM	4	0	0	0	0	4
12:00 PM	2	0	0	0	0	2
12:15 PM	5	0	0	0	0	5
12:30 PM	3	0	0	0	0	3
12:45 PM	0	0	0	0	0	0
1:00 PM	2	0	0	0	0	2
1:15 PM	5	0	0	0	0	5
1:30 PM	4	0	0	0	0	4
1:45 PM	7	0	0	0	0	7
2:00 PM	2	0	0	0	0	2
2:15 PM	4	0	0	0	0	4
2:30 PM	5	0	0	0	0	5
2:45 PM	0	0	0	0	0	0
3:00 PM	1	0	0	0	0	1
3:15 PM	2	0	0	0	0	2
3:30 PM	4	0	0	0	0	4
3:45 PM	4	0	0	0	0	4
4:00 PM	6	0	0	0	1	7
4:15 PM	7	0	0	0	0	7
4:30 PM	9	0	0	0	0	9
4:45 PM	9	0	0	0	0	9
5:00 PM	6	0	0	0	0	6
5:15 PM	6	0	0	0	0	6
5:30 PM	6	0	0	0	0	6
5:45 PM	5	0	0	0	0	5
6:00 PM	10	0	0	0	0	10
6:15 PM	7	0	0	0	0	7
6:30 PM	10	0	0	0	0	10
6:45 PM	9	0	0	0	0	9
7:00 PM	6	0	0	0	0	6
7:15 PM	8	0	0	0	0	8
7:30 PM	4	0	0	0	0	4
7:45 PM	9	0	0	0	0	9
8:00 PM	10	0	0	0	0	10
8:15 PM	7	0	0	0	0	7
8:30 PM	7	0	0	0	0	7
8:45 PM	4	0	0	0	0	4
9:00 PM	8	0	0	0	0	8
9:15 PM	6	0	0	0	0	6
9:30 PM	0	0	0	0	0	0
9:45 PM	5	0	0	0	0	5
10:00 PM	5	0	0	0	0	5
10:15 PM	3	0	0	0	0	3
10:30 PM	1	0	0	0	0	1

10:45 PM	1	0	0	0	0	1
11:00 PM	4	0	0	0	0	4
11:15 PM	2	0	0	0	0	2
11:30 PM	0	0	0	0	0	0
11:45 PM	1	0	0	0	0	1
06/20/2018 12:00 AM	0	0	0	0	0	0
12:15 AM	1	0	0	0	0	1
12:30 AM	1	0	0	0	0	1
12:45 AM	0	0	0	0	0	0
1:00 AM	0	0	0	0	0	0
1:15 AM	2	0	0	0	0	2
1:30 AM	0	0	0	0	0	0
1:45 AM	1	0	0	0	0	1
2:00 AM	0	0	0	0	0	0
2:15 AM	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	1	0	0	0	0	1
3:30 AM	1	0	0	0	0	1
3:45 AM	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0
4:30 AM	1	0	0	0	0	1
4:45 AM	0	0	0	0	0	0
5:00 AM	1	0	0	0	0	1
5:15 AM	1	0	0	0	0	1
5:30 AM	2	0	0	0	0	2
5:45 AM	7	0	0	0	0	7
6:00 AM	0	0	0	0	0	0
6:15 AM	3	0	0	0	0	3
6:30 AM	1	0	0	0	0	1
6:45 AM	0	0	0	0	0	0
7:00 AM	2	0	0	0	0	2
7:15 AM	3	0	0	0	0	3
7:30 AM	2	0	0	0	0	2
7:45 AM	2	0	0	0	0	2
8:00 AM	1	0	0	0	0	1
8:15 AM	0	0	0	0	0	0
8:30 AM	6	0	0	0	0	6
8:45 AM	12	0	0	0	0	12
9:00 AM	5	0	0	0	0	5
9:15 AM	0	0	0	0	0	0
9:30 AM	1	0	0	0	0	1
9:45 AM	3	0	1	0	0	4
10:00 AM	8	0	0	0	0	8
10:15 AM	4	0	0	0	0	4
10:30 AM	7	0	0	0	0	7
10:45 AM	3	0	0	0	0	3
11:00 AM	2	0	0	0	0	2
11:15 AM	1	0	0	0	0	1
11:30 AM	3	0	0	0	0	3

11:45 AM	3	0	0	0	0	3
12:00 PM	4	0	0	0	0	4
12:15 PM	3	0	0	0	0	3
12:30 PM	2	0	0	0	0	2
12:45 PM	1	0	0	0	1	2
1:00 PM	9	0	0	0	1	10
1:15 PM	2	0	0	0	0	2
1:30 PM	0	0	0	0	0	0
1:45 PM	6	0	0	0	0	6
2:00 PM	4	0	0	0	0	4
2:15 PM	4	0	0	0	0	4
2:30 PM	7	0	0	0	0	7
2:45 PM	9	0	0	0	0	9
3:00 PM	5	0	0	0	0	5
3:15 PM	2	0	0	0	0	2
3:30 PM	1	0	0	0	0	1
3:45 PM	7	0	0	0	0	7
4:00 PM	3	0	0	0	0	3
4:15 PM	4	0	0	0	0	4
4:30 PM	6	0	0	0	0	6
4:45 PM	3	0	0	0	1	4
5:00 PM	10	0	0	0	0	10
5:15 PM	5	0	0	0	0	5
5:30 PM	8	0	0	0	0	8
5:45 PM	10	0	0	0	0	10
6:00 PM	4	0	0	0	0	4
6:15 PM	8	0	0	0	0	8
6:30 PM	11	0	0	0	0	11
6:45 PM	6	0	0	0	0	6
7:00 PM	7	0	0	0	0	7
7:15 PM	6	0	0	0	0	6
7:30 PM	5	0	0	0	0	5
7:45 PM	8	0	0	0	0	8
8:00 PM	4	0	0	0	0	4
8:15 PM	3	0	0	0	2	5
8:30 PM	7	0	0	0	0	7
8:45 PM	4	0	0	0	0	4
9:00 PM	3	0	0	0	0	3
9:15 PM	5	0	0	0	0	5
9:30 PM	2	0	0	0	0	2
9:45 PM	4	0	0	0	0	4
10:00 PM	8	0	0	0	0	8
10:15 PM	2	0	0	0	0	2
10:30 PM	2	0	0	0	0	2
10:45 PM	3	0	0	0	0	3
11:00 PM	2	0	0	0	0	2
11:15 PM	4	0	0	0	0	4
11:30 PM	2	0	0	0	0	2
11:45 PM	1	0	0	0	0	1
06/21/2018 12:00 AM	1	0	0	0	0	1
12:15 AM	0	0	0	0	0	0
12:30 AM	0	0	0	0	0	0

12:45 AM	1	0	0	0	0	1
1:00 AM	2	0	0	0	0	2
1:15 AM	1	0	0	0	0	1
1:30 AM	1	0	0	0	0	1
1:45 AM	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	1
2:15 AM	1	0	0	0	0	1
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	1	0	0	0	0	1
3:30 AM	2	0	0	0	0	2
3:45 AM	0	0	0	0	0	0
4:00 AM	0	0	0	0	0	0
4:15 AM	0	0	0	0	0	0
4:30 AM	2	0	0	0	0	2
4:45 AM	0	0	0	0	0	0
5:00 AM	3	0	0	0	0	3
5:15 AM	1	0	0	0	0	1
5:30 AM	0	0	0	0	0	0
5:45 AM	2	0	0	0	0	2
6:00 AM	2	0	0	0	0	2
6:15 AM	2	0	0	0	0	2
6:30 AM	5	0	0	0	0	5
6:45 AM	3	0	0	0	0	3
7:00 AM	2	0	0	0	0	2
7:15 AM	1	0	0	0	0	1
7:30 AM	4	0	0	0	0	4
7:45 AM	1	0	0	0	0	1
8:00 AM	3	0	0	0	0	3
8:15 AM	2	0	0	0	0	2
8:30 AM	8	0	0	0	0	8
8:45 AM	7	0	0	0	0	7
9:00 AM	2	0	0	0	0	2
9:15 AM	6	0	0	0	0	6
9:30 AM	5	0	0	0	0	5
9:45 AM	1	0	0	0	0	1
10:00 AM	5	0	0	0	0	5
10:15 AM	6	0	0	0	0	6
10:30 AM	7	0	0	0	0	7
10:45 AM	6	0	0	0	0	6
11:00 AM	1	0	0	0	0	1
11:15 AM	2	0	0	0	0	2
11:30 AM	4	0	0	0	0	4
11:45 AM	5	0	0	0	0	5
12:00 PM	0	0	0	0	0	0
12:15 PM	7	0	0	0	0	7
12:30 PM	5	0	0	0	0	5
12:45 PM	7	0	0	0	0	7
1:00 PM	4	0	0	0	0	4
1:15 PM	2	0	0	0	0	2
1:30 PM	8	0	0	0	0	8

1:45 PM	4	0	0	0	0	4
2:00 PM	5	0	0	0	0	5
2:15 PM	3	0	0	0	0	3
2:30 PM	5	0	0	0	0	5
2:45 PM	5	0	0	0	0	5
3:00 PM	9	0	0	0	0	9
3:15 PM	7	0	0	0	0	7
3:30 PM	8	0	0	0	0	8
3:45 PM	11	0	1	0	0	12
4:00 PM	4	0	0	0	0	4
4:15 PM	4	0	0	0	0	4
4:30 PM	5	0	0	0	0	5
4:45 PM	7	0	0	0	0	7
5:00 PM	10	0	0	0	0	10
5:15 PM	7	0	0	0	0	7
5:30 PM	11	0	0	0	0	11
5:45 PM	9	0	0	0	0	9
6:00 PM	11	0	0	0	0	11
6:15 PM	10	0	0	0	0	10
6:30 PM	8	0	0	0	0	8
6:45 PM	8	0	0	0	0	8
7:00 PM	6	0	0	0	0	6
7:15 PM	4	0	0	0	1	5
7:30 PM	5	0	0	0	1	6
7:45 PM	15	0	0	0	1	16
8:00 PM	8	0	0	0	0	8
8:15 PM	8	0	0	0	0	8
8:30 PM	7	0	0	0	0	7
8:45 PM	5	0	0	0	0	5
9:00 PM	8	0	0	0	0	8
9:15 PM	4	0	0	0	0	4
9:30 PM	5	0	0	0	0	5
9:45 PM	4	0	0	0	0	4
10:00 PM	2	0	0	0	0	2
10:15 PM	6	0	0	0	0	6
10:30 PM	5	0	0	0	0	5
10:45 PM	8	0	0	0	0	8
11:00 PM	6	0	0	0	0	6
11:15 PM	7	0	0	0	0	7
11:30 PM	2	0	0	0	0	2
11:45 PM	2	0	0	0	0	2
Total	1056	0	2	0	9	1067
Total %	99.0	0.0	0.2	0.0	0.8	100.0
AM Times	8:00 AM	12:00 AM	9:00 AM	12:00 AM	12:00 AM	8:00 AM
AM Peaks	20	0	1	0	0	20
PM Times	6:00 PM	12:00 PM	3:15 PM	12:00 PM	4:00 PM	6:00 PM
PM Peaks	37	0	1	0	1	37



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(847)518-9990 bmay@kloainc.com

Count Name: Waveland/Access
Site Code:
Start Date: 06/19/2018
Page No: 7

Direction (Northbound)

Start Time	Lights	Buses	Single-Unit Trucks	Articulated Trucks	Bicycles on Road	Total
06/19/2018 12:00 AM	4	0	0	0	0	4
12:15 AM	2	0	0	0	0	2
12:30 AM	1	0	0	0	0	1
12:45 AM	1	0	0	0	0	1
1:00 AM	1	0	0	0	0	1
1:15 AM	0	0	0	0	0	0
1:30 AM	1	0	0	0	0	1
1:45 AM	1	0	0	0	0	1
2:00 AM	0	0	0	0	0	0
2:15 AM	2	0	0	0	0	2
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0
3:45 AM	2	0	0	0	0	2
4:00 AM	0	0	0	0	0	0
4:15 AM	1	0	0	0	0	1
4:30 AM	4	0	0	0	0	4
4:45 AM	1	0	0	0	0	1
5:00 AM	1	0	0	0	0	1
5:15 AM	2	0	0	0	0	2
5:30 AM	5	0	0	0	0	5
5:45 AM	5	0	0	0	0	5
6:00 AM	5	0	0	0	0	5
6:15 AM	8	0	0	0	0	8
6:30 AM	15	0	0	0	0	15
6:45 AM	16	0	0	0	0	16
7:00 AM	14	0	0	0	0	14
7:15 AM	13	0	0	0	0	13
7:30 AM	17	0	0	0	0	17
7:45 AM	16	0	0	0	0	16
8:00 AM	19	0	0	0	0	19
8:15 AM	13	0	0	0	0	13
8:30 AM	20	0	0	0	0	20
8:45 AM	10	0	0	0	0	10
9:00 AM	11	0	0	0	0	11
9:15 AM	13	0	0	0	0	13
9:30 AM	12	0	0	0	0	12

9:45 AM	11	0	0	0	0	11
10:00 AM	11	0	0	0	0	11
10:15 AM	10	0	0	0	0	10
10:30 AM	3	0	0	0	0	3
10:45 AM	5	0	0	0	0	5
11:00 AM	10	0	0	0	0	10
11:15 AM	10	0	0	0	0	10
11:30 AM	12	0	0	0	0	12
11:45 AM	8	0	0	0	0	8
12:00 PM	6	0	0	0	0	6
12:15 PM	6	0	0	0	0	6
12:30 PM	6	0	0	0	0	6
12:45 PM	8	0	0	0	0	8
1:00 PM	11	0	0	0	0	11
1:15 PM	8	0	0	0	0	8
1:30 PM	10	0	0	0	0	10
1:45 PM	7	0	0	0	0	7
2:00 PM	7	0	0	0	0	7
2:15 PM	5	0	1	0	0	6
2:30 PM	7	0	0	0	0	7
2:45 PM	4	0	0	0	0	4
3:00 PM	2	0	0	0	0	2
3:15 PM	6	0	0	0	0	6
3:30 PM	10	0	0	0	0	10
3:45 PM	4	0	0	0	0	4
4:00 PM	15	0	0	0	2	17
4:15 PM	8	0	0	0	1	9
4:30 PM	14	0	0	0	0	14
4:45 PM	12	0	0	0	1	13
5:00 PM	8	0	0	0	0	8
5:15 PM	11	0	0	0	0	11
5:30 PM	12	0	0	0	0	12
5:45 PM	12	0	0	0	0	12
6:00 PM	13	0	0	0	1	14
6:15 PM	8	0	0	0	0	8
6:30 PM	11	0	0	0	0	11
6:45 PM	6	0	0	0	0	6
7:00 PM	17	0	0	0	0	17
7:15 PM	11	0	0	0	0	11
7:30 PM	15	0	0	0	0	15
7:45 PM	13	0	0	0	0	13
8:00 PM	12	0	0	0	0	12
8:15 PM	9	0	0	0	1	10
8:30 PM	10	0	0	0	0	10
8:45 PM	11	0	0	0	0	11
9:00 PM	9	0	0	0	0	9
9:15 PM	10	0	0	0	0	10
9:30 PM	7	0	0	0	0	7
9:45 PM	6	0	0	0	0	6
10:00 PM	7	0	0	0	0	7
10:15 PM	8	0	0	0	0	8
10:30 PM	7	0	0	0	0	7

10:45 PM	12	0	0	0	0	12
11:00 PM	7	0	0	0	0	7
11:15 PM	4	0	0	0	0	4
11:30 PM	1	0	0	0	0	1
11:45 PM	2	0	0	0	0	2
06/20/2018 12:00 AM	1	0	0	0	0	1
12:15 AM	5	0	0	0	0	5
12:30 AM	2	0	0	0	0	2
12:45 AM	0	0	0	0	0	0
1:00 AM	1	0	0	0	0	1
1:15 AM	0	0	0	0	0	0
1:30 AM	1	0	0	0	0	1
1:45 AM	0	0	0	0	0	0
2:00 AM	1	0	0	0	0	1
2:15 AM	0	0	0	0	0	0
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0
3:30 AM	0	0	0	0	0	0
3:45 AM	1	0	0	0	0	1
4:00 AM	0	0	0	0	0	0
4:15 AM	1	0	0	0	0	1
4:30 AM	3	0	0	0	0	3
4:45 AM	0	0	0	0	0	0
5:00 AM	0	0	0	0	0	0
5:15 AM	3	0	0	0	0	3
5:30 AM	3	0	0	0	0	3
5:45 AM	5	0	0	0	0	5
6:00 AM	7	0	0	0	0	7
6:15 AM	13	0	0	0	0	13
6:30 AM	8	0	0	0	0	8
6:45 AM	10	0	0	0	0	10
7:00 AM	14	0	0	0	0	14
7:15 AM	16	0	0	0	0	16
7:30 AM	16	0	0	0	0	16
7:45 AM	22	0	0	0	0	22
8:00 AM	11	0	0	0	0	11
8:15 AM	19	0	0	0	0	19
8:30 AM	15	0	0	0	0	15
8:45 AM	12	0	0	0	0	12
9:00 AM	7	0	0	0	0	7
9:15 AM	13	0	0	0	0	13
9:30 AM	14	0	0	0	0	14
9:45 AM	11	0	1	0	0	12
10:00 AM	15	0	0	0	0	15
10:15 AM	11	0	0	0	0	11
10:30 AM	9	0	0	0	0	9
10:45 AM	5	0	0	0	0	5
11:00 AM	7	0	0	0	0	7
11:15 AM	9	0	0	0	0	9
11:30 AM	5	0	0	0	0	5

11:45 AM	8	0	0	0	0	8
12:00 PM	8	0	0	0	0	8
12:15 PM	3	0	0	0	0	3
12:30 PM	7	0	0	0	0	7
12:45 PM	7	0	0	0	0	7
1:00 PM	12	0	0	0	0	12
1:15 PM	10	0	0	0	1	11
1:30 PM	7	0	0	0	0	7
1:45 PM	10	0	0	0	0	10
2:00 PM	6	0	0	0	0	6
2:15 PM	6	0	0	0	1	7
2:30 PM	2	0	0	0	0	2
2:45 PM	10	0	0	0	0	10
3:00 PM	4	0	0	0	0	4
3:15 PM	10	0	0	0	2	12
3:30 PM	6	0	0	0	0	6
3:45 PM	5	0	0	0	0	5
4:00 PM	7	0	0	0	0	7
4:15 PM	8	0	0	0	0	8
4:30 PM	5	0	0	0	0	5
4:45 PM	11	0	0	0	2	13
5:00 PM	13	0	0	0	0	13
5:15 PM	15	0	0	0	0	15
5:30 PM	18	0	0	0	0	18
5:45 PM	11	0	0	0	1	12
6:00 PM	12	0	0	0	0	12
6:15 PM	12	0	0	0	0	12
6:30 PM	12	0	0	0	0	12
6:45 PM	9	0	0	0	0	9
7:00 PM	11	0	0	0	0	11
7:15 PM	15	0	0	0	0	15
7:30 PM	5	0	0	0	0	5
7:45 PM	10	0	0	0	0	10
8:00 PM	12	0	0	0	0	12
8:15 PM	6	0	0	0	0	6
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11:15 PM	1	0	0	0	0	1
11:30 PM	4	0	0	0	0	4
11:45 PM	3	0	0	0	0	3
06/21/2018 12:00 AM	6	0	0	0	0	6
12:15 AM	1	0	0	0	1	2
12:30 AM	0	0	0	0	0	0

12:45 AM	1	0	0	0	0	1
1:00 AM	2	0	0	0	0	2
1:15 AM	2	0	0	0	0	2
1:30 AM	0	0	0	0	0	0
1:45 AM	1	0	0	0	0	1
2:00 AM	1	0	0	0	0	1
2:15 AM	2	0	0	0	0	2
2:30 AM	0	0	0	0	0	0
2:45 AM	0	0	0	0	0	0
3:00 AM	0	0	0	0	0	0
3:15 AM	0	0	0	0	0	0
3:30 AM	1	0	0	0	0	1
3:45 AM	1	0	0	0	0	1
4:00 AM	0	0	0	0	0	0
4:15 AM	1	0	0	0	0	1
4:30 AM	1	0	0	0	0	1
4:45 AM	1	0	0	0	0	1
5:00 AM	4	0	0	0	0	4
5:15 AM	5	0	0	0	0	5
5:30 AM	3	0	0	0	0	3
5:45 AM	2	0	0	0	0	2
6:00 AM	7	0	0	0	0	7
6:15 AM	7	0	0	0	0	7
6:30 AM	9	0	0	0	0	9
6:45 AM	11	0	0	0	0	11
7:00 AM	11	0	0	0	0	11
7:15 AM	11	0	0	0	0	11
7:30 AM	17	0	0	0	0	17
7:45 AM	16	0	0	0	0	16
8:00 AM	15	0	0	0	0	15
8:15 AM	11	0	0	0	0	11
8:30 AM	27	0	0	0	0	27
8:45 AM	19	0	0	0	0	19
9:00 AM	8	0	0	0	0	8
9:15 AM	6	0	0	0	0	6
9:30 AM	13	0	0	0	0	13
9:45 AM	11	0	0	0	0	11
10:00 AM	12	0	0	0	0	12
10:15 AM	14	0	0	0	0	14
10:30 AM	14	0	0	0	0	14
10:45 AM	7	0	0	0	0	7
11:00 AM	5	0	0	0	0	5
11:15 AM	10	0	0	0	0	10
11:30 AM	8	0	0	0	0	8
11:45 AM	8	0	0	0	0	8
12:00 PM	13	0	0	0	0	13
12:15 PM	11	0	0	0	0	11
12:30 PM	6	0	0	0	0	6
12:45 PM	10	0	0	0	0	10
1:00 PM	15	0	0	0	0	15
1:15 PM	9	0	0	0	0	9
1:30 PM	11	0	0	0	0	11

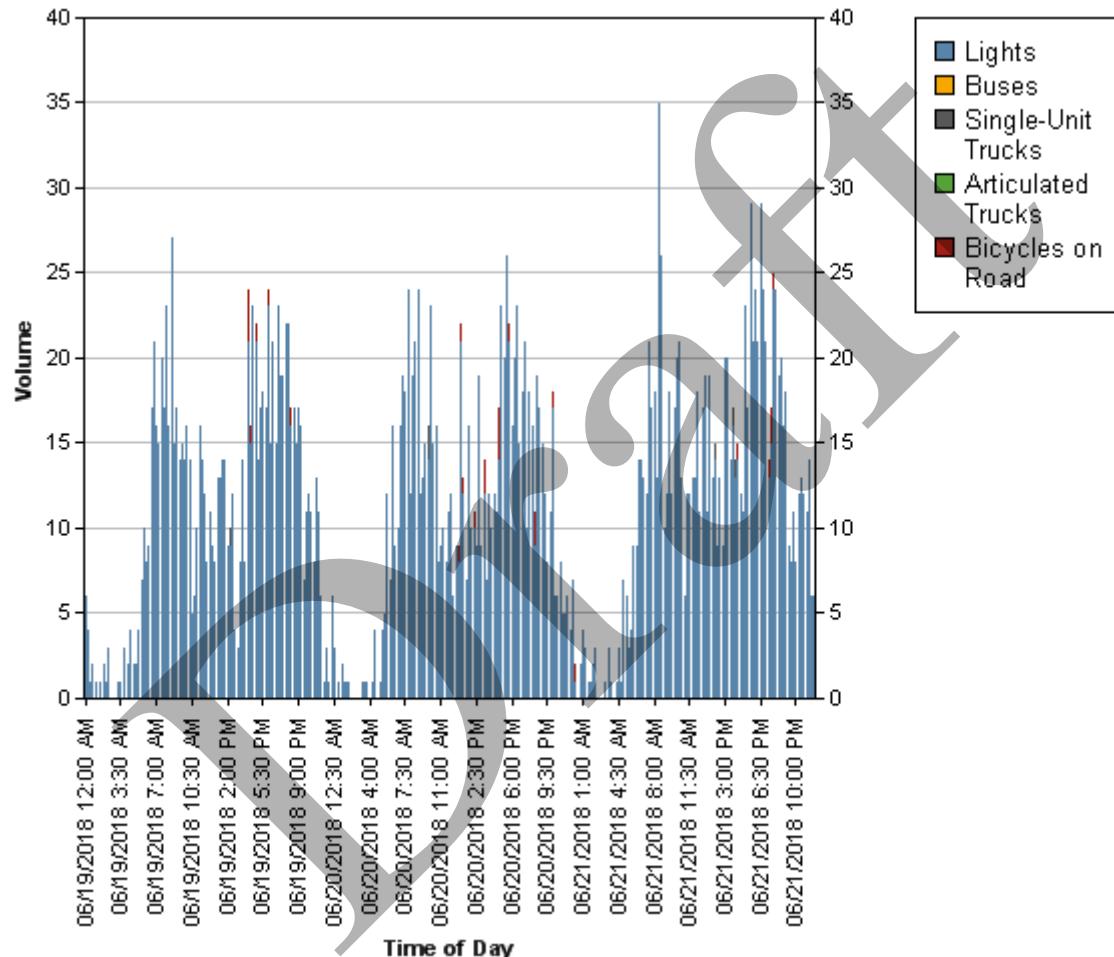
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2:00 PM	9	0	1	0	0	10
2:15 PM	6	0	0	0	0	6
2:30 PM	8	0	0	0	0	8
2:45 PM	4	0	0	0	0	4
3:00 PM	11	0	0	0	0	11
3:15 PM	13	0	0	0	0	13
3:30 PM	6	0	0	0	0	6
3:45 PM	5	0	0	0	0	5
4:00 PM	9	0	1	0	0	10
4:15 PM	10	0	0	0	1	11
4:30 PM	7	0	0	0	0	7
4:45 PM	4	0	0	0	0	4
5:00 PM	13	0	0	0	0	13
5:15 PM	10	0	0	0	0	10
5:30 PM	18	0	0	0	0	18
5:45 PM	12	0	0	0	0	12
6:00 PM	13	0	0	0	0	13
6:15 PM	11	0	0	0	0	11
6:30 PM	21	0	0	0	0	21
6:45 PM	16	0	0	0	0	16
7:00 PM	15	0	0	0	0	15
7:15 PM	9	0	0	0	0	9
7:30 PM	10	0	0	0	1	11
7:45 PM	9	0	0	0	0	9
8:00 PM	16	0	0	0	0	16
8:15 PM	11	0	0	0	0	11
8:30 PM	13	0	0	0	0	13
8:45 PM	11	0	0	0	0	11
9:00 PM	10	0	0	0	0	10
9:15 PM	5	0	0	0	0	5
9:30 PM	3	0	0	0	0	3
9:45 PM	7	0	0	0	0	7
10:00 PM	6	0	0	0	0	6
10:15 PM	6	0	0	0	0	6
10:30 PM	8	0	0	0	0	8
10:45 PM	4	0	0	0	0	4
11:00 PM	5	0	0	0	0	5
11:15 PM	7	0	0	0	0	7
11:30 PM	4	0	0	0	0	4
11:45 PM	4	0	0	0	0	4
Total	2195	0	4	0	17	2216
Total %	99.1	0.0	0.2	0.0	0.8	100.0
AM Times	8:00 AM	12:00 AM	9:00 AM	12:00 AM	12:00 AM	8:00 AM
AM Peaks	72	0	1	0	1	72
PM Times	6:00 PM	12:00 PM	3:15 PM	12:00 PM	4:00 PM	6:00 PM
PM Peaks	61	0	1	0	4	61



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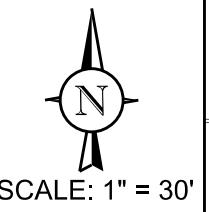
Rosemont, Illinois, United States 60018
(847)518-9990 bmay@kloainc.com

Count Name: Waveland/Access
Site Code:
Start Date: 06/19/2018
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Draft

Auto-Turn Diagrams



EXISTING FIRE HYDRANT

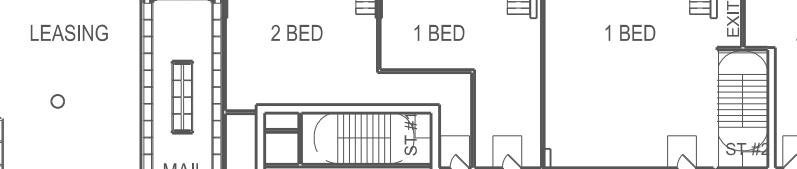
W. WAVELAND AVE.

ONE-WAY TRAFFIC

BUILDING C.

(3) DROP OFF SPACES

MAIN RESIDENTIAL ENTRY
+4'-0"



LOBBY / AMENITY

DOG PARK
+4'-0"

COURTYARD
+4'-0"

5-STORY PARKING GARAGE N.I.C.

PEDESTRIAN WALKWAY

GARAGE ENTRY BELOW
+6'-6"

MECH

FITNESS

TRASH ROOM

CNVRT CNVRT

1 BED CNVRT

1 BED

2 BED STUDIO

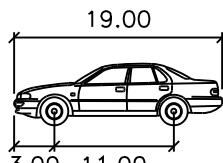
1 BED

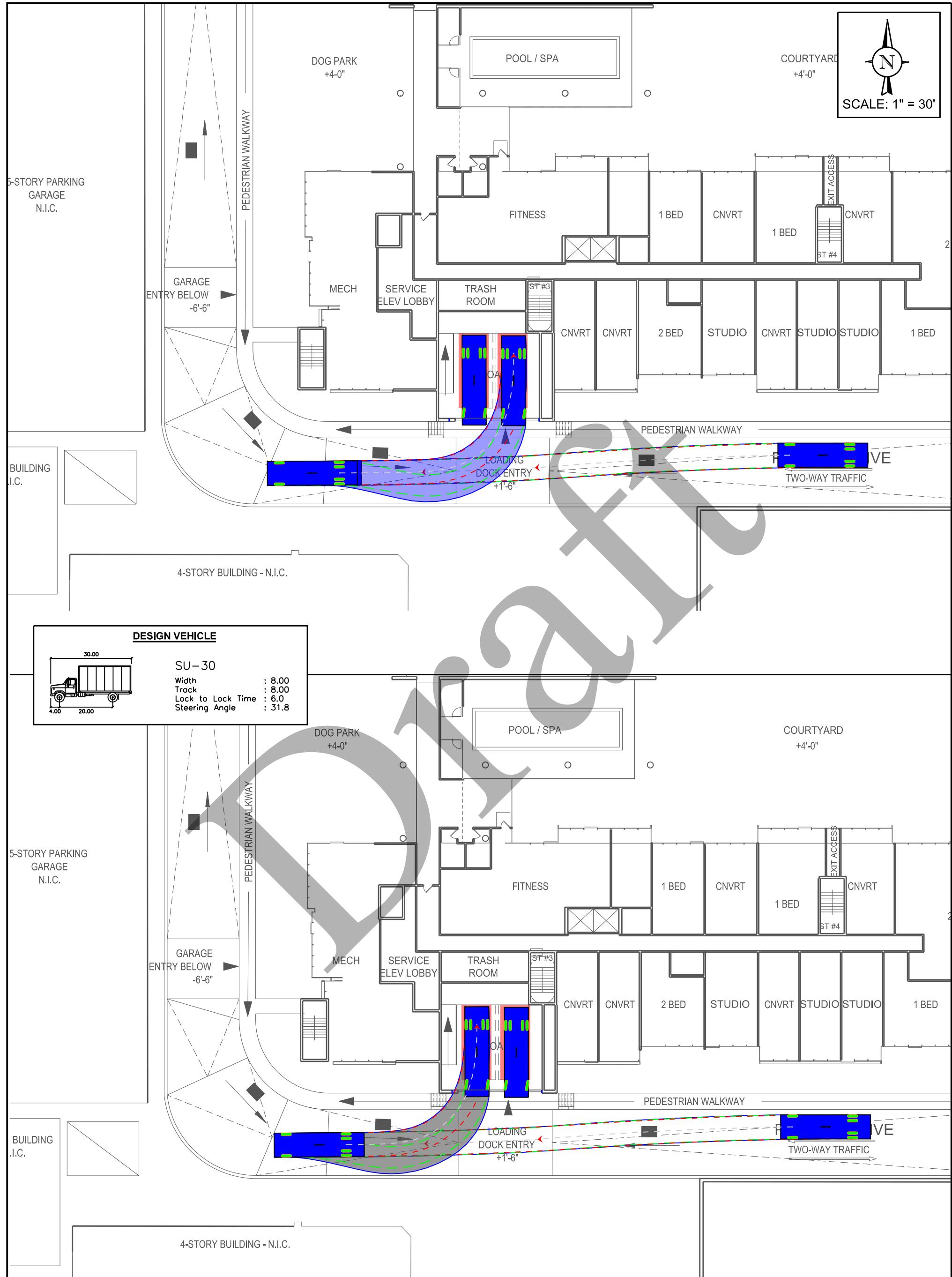
PEDESTRIAN WALKWAY

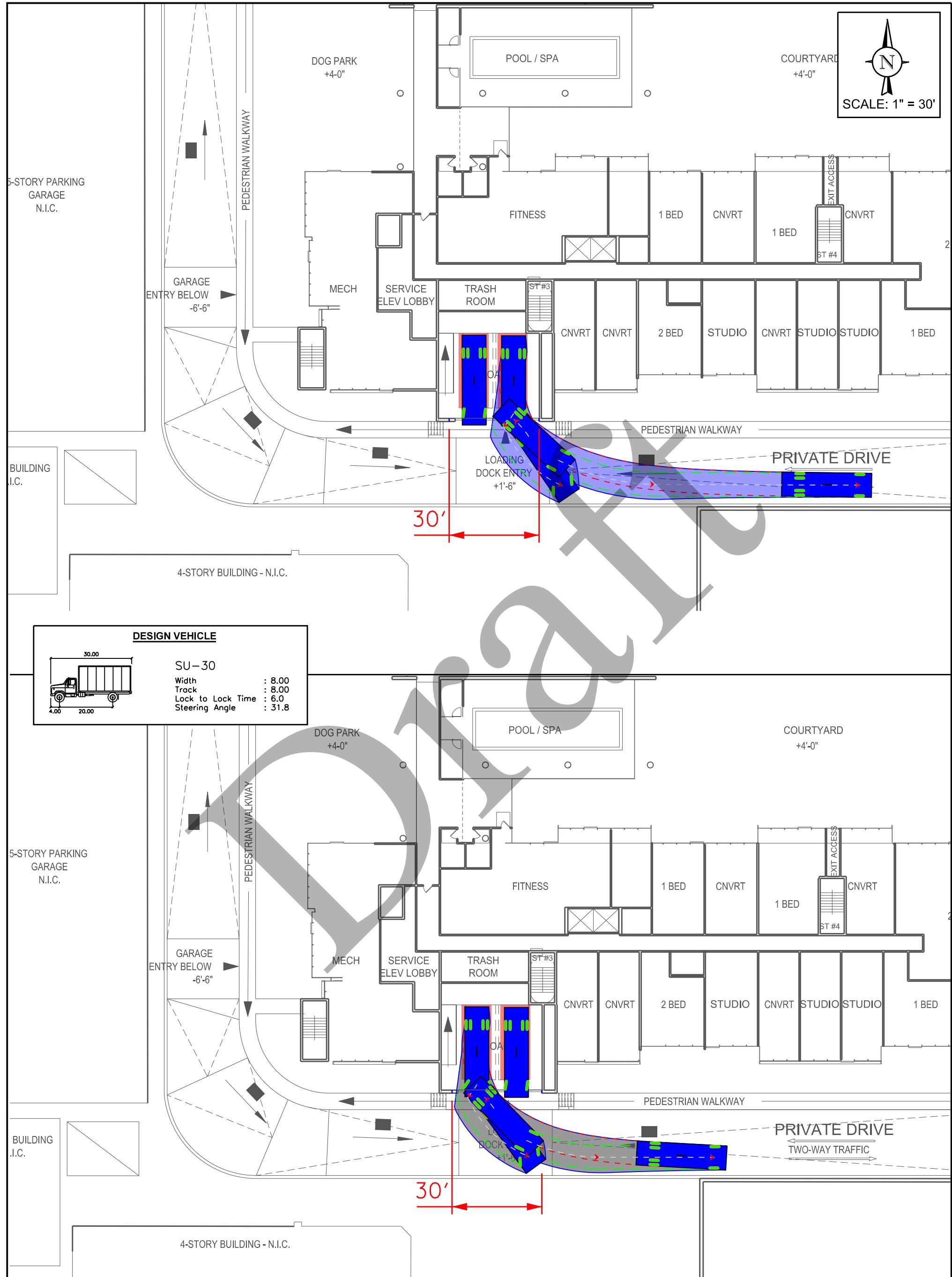
1-STORY BUILDING N.I.C.

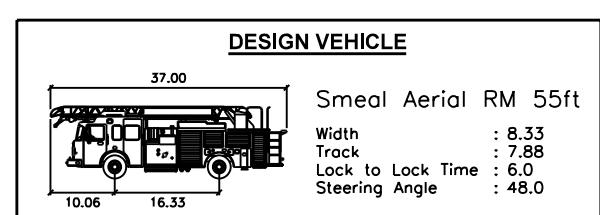
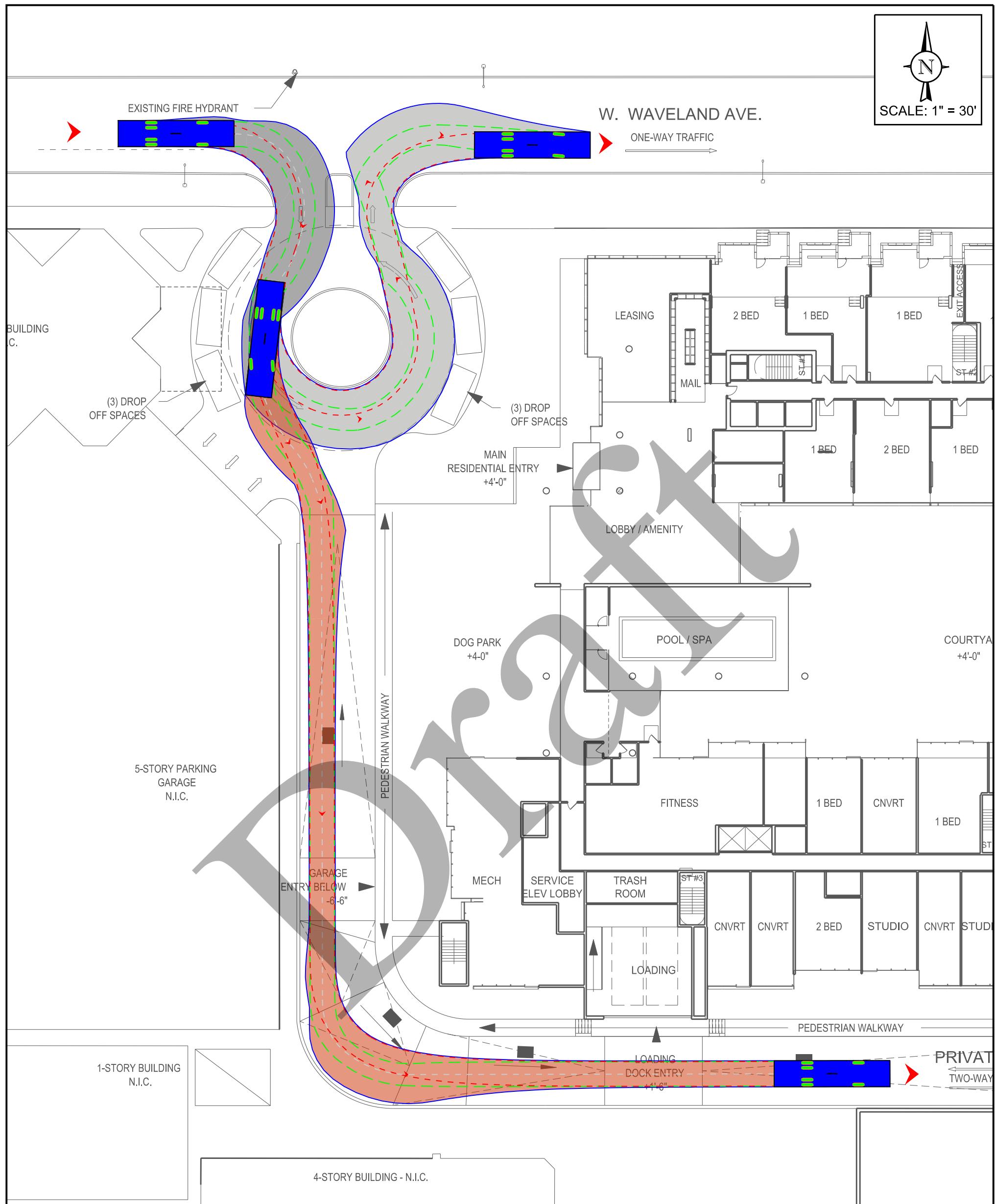
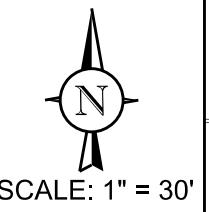
4-STORY BUILDING - N.I.C.

DESIGN VEHICLE
Passenger Vehicle
Width : 7.00
Track : 6.00
Lock to Lock Time : 6.0
Steering Angle : 31.6









Draft

Census Tract Data

B08301

MEANS OF TRANSPORTATION TO WORK

Universe: Workers 16 years and over

2012-2016 American Community Survey 5-Year Estimates

Supporting documentation on code lists, subject definitions, data accuracy, and statistical testing can be found on the American Community Survey website in the Data and Documentation section.

Sample size and data quality measures (including coverage rates, allocation rates, and response rates) can be found on the American Community Survey website in the Methodology section.

Tell us what you think. Provide feedback to help make American Community Survey data more useful for you.

Although the American Community Survey (ACS) produces population, demographic and housing unit estimates, it is the Census Bureau's Population Estimates Program that produces and disseminates the official estimates of the population for the nation, states, counties, cities and towns and estimates of housing units for states and counties.

	Census Tract 609, Cook County, Illinois	
	Estimate	Margin of Error
Total:	4,843	+/-569
Car, truck, or van:	1,502	+/-396
Drove alone	1,368	+/-396
Carpooled:	134	+/-103
In 2-person carpool	111	+/-92
In 3-person carpool	23	+/-41
In 4-person carpool	0	+/-15
In 5- or 6-person carpool	0	+/-15
In 7-or-more-person carpool	0	+/-15
Public transportation (excluding taxicab):	2,672	+/-413
Bus or trolley bus	2,130	+/-373
Streetcar or trolley car (carro publico in Puerto Rico)	0	+/-15
Subway or elevated	515	+/-213
Railroad	27	+/-45
Ferryboat	0	+/-15
Taxicab	57	+/-67
Motorcycle	31	+/-46
Bicycle	107	+/-89
Walked	263	+/-182
Other means	25	+/-34
Worked at home	186	+/-102

Data are based on a sample and are subject to sampling variability. The degree of uncertainty for an estimate arising from sampling variability is represented through the use of a margin of error. The value shown here is the 90 percent margin of error. The margin of error can be interpreted roughly as providing a 90 percent probability that the interval defined by the estimate minus the margin of error and the estimate plus the margin of error (the lower and upper confidence bounds) contains the true value. In addition to sampling variability, the ACS estimates are subject to nonsampling error (for a discussion of nonsampling variability, see Accuracy of the Data). The effect of nonsampling error is not represented in these tables.

Workers include members of the Armed Forces and civilians who were at work last week.

While the 2012-2016 American Community Survey (ACS) data generally reflect the February 2013 Office of Management and Budget (OMB) definitions of metropolitan and micropolitan statistical areas; in certain instances the names, codes, and boundaries of the principal cities shown in ACS tables may differ from the OMB definitions due to differences in the effective dates of the geographic entities.

Estimates of urban and rural population, housing units, and characteristics reflect boundaries of urban areas defined based on Census 2010 data. As a result, data for urban and rural areas from the ACS do not necessarily reflect the results of ongoing urbanization.

Source: U.S. Census Bureau, 2012-2016 American Community Survey 5-Year Estimates

Explanation of Symbols:

1. An '***' entry in the margin of error column indicates that either no sample observations or too few sample observations were available to compute a standard error and thus the margin of error. A statistical test is not appropriate.
2. An 'L' entry in the estimate column indicates that either no sample observations or too few sample observations were available to compute an estimate, or a ratio of medians cannot be calculated because one or both of the median estimates falls in the lowest interval or upper interval of an open-ended distribution.
3. An 'L' following a median estimate means the median falls in the lowest interval of an open-ended distribution.
4. An '+' following a median estimate means the median falls in the upper interval of an open-ended distribution.
5. An '****' entry in the margin of error column indicates that the median falls in the lowest interval or upper interval of an open-ended distribution. A statistical test is not appropriate.
6. An '*****' entry in the margin of error column indicates that the estimate is controlled. A statistical test for sampling variability is not appropriate.
7. An 'N' entry in the estimate and margin of error columns indicates that data for this geographic area cannot be displayed because the number of sample cases is too small.
8. An '(X)' means that the estimate is not applicable or not available.

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Level of Service Criteria

LEVEL OF SERVICE CRITERIA

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

Source: *Highway Capacity Manual*, 2010.

Capacity Analysis Summary Reports

Morning Peak Hour – Existing Conditions

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	50	28	35	11	38	30	18	15	101	0	209	301
Future Volume (vph)	50	28	35	11	38	30	18	15	101	0	209	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	10	13
Storage Length (ft)	0	25			25		0	50			50	
Storage Lanes	1	1			0		0	1			1	
Taper Length (ft)	25				25			80			90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94	0.87				0.93		0.90			0.95	
Frt		0.850				0.975						
Flt Protected		0.950				0.975		0.950			0.950	
Satd. Flow (prot)	1736	1306	0	0	0	1368	0	1805	1605	1870	1560	1584
Flt Permitted	0.710					0.975		0.561			0.950	
Satd. Flow (perm)	1219	1134	0	0	0	1298	0	955	1605	1870	1477	1584
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		109				13						
Link Speed (mph)						30		30			30	
Link Distance (ft)						173		774			546	
Travel Time (s)						3.9		17.6			12.4	
Confl. Peds. (#/hr)	45	34	29	29	34		45	77		29	29	
Confl. Bikes (#/hr)		6	6			3						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	0%	7%	0%	0%	6%	0%	0%	3%	0%	8%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	4	0	0
Parking (#/hr)		12				23		6			9	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	69	0	0	0	107	0	16	111	0	230	331
Turn Type	Perm	Perm		Perm	Perm	NA		Perm	NA	Perm	custom	NA
Protected Phases						8			2		6	26
Permitted Phases	4	4		8	8			2		2	6	
Detector Phase	4	4		8	8	8		2	2	2	6	26
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		9.0	9.0	9.0	17.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%	36.7%		30.0%	30.0%	30.0%	33.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		3.0	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)	5.0	5.0				5.0		6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max	Max		Max	Max	Max	C-Max	
Act Effct Green (s)	28.0	28.0				28.0		21.0	21.0		24.0	51.0
Actuated g/C Ratio	0.31	0.31				0.31		0.23	0.23		0.27	0.57
v/c Ratio	0.15	0.16				0.26		0.07	0.30		0.55	0.37
Control Delay	23.7	2.5			15.0		28.1	31.0		34.4	12.2	
Queue Delay	0.0	0.0			0.0		0.0	0.0		0.0	0.0	

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

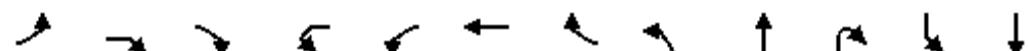


Lane Group	SBR	NWL	NWR
Lane Configurations	ST	LT	RT
Traffic Volume (vph)	17	5	118
Future Volume (vph)	17	5	118
Ideal Flow (vphpl)	1900	1900	1900
Lane Width (ft)	8	9	10
Storage Length (ft)	25	115	0
Storage Lanes	1	1	1
Taper Length (ft)		25	
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor	0.81	0.90	
Fr _t	0.850		0.850
Flt Protected		0.950	
Satd. Flow (prot)	1400	1624	1396
Flt Permitted		0.521	
Satd. Flow (perm)	1132	805	1396
Right Turn on Red	Yes		
Satd. Flow (RTOR)	24		
Link Speed (mph)		30	
Link Distance (ft)		844	
Travel Time (s)		19.2	
Confl. Peds. (#/hr)	77	77	45
Confl. Bikes (#/hr)	18		1
Peak Hour Factor	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	8%
Bus Blockages (#/hr)	0	0	0
Parking (#/hr)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)	19	5	130
Turn Type	Perm	Perm	Prot
Protected Phases			10
Permitted Phases	2	6	10
Detector Phase	2	6	10
Switch Phase			
Minimum Initial (s)		17.0	17.0
Minimum Split (s)		30.0	30.0
Total Split (s)		30.0	30.0
Total Split (%)		33.3%	33.3%
Yellow Time (s)		3.0	3.0
All-Red Time (s)		3.0	3.0
Lost Time Adjust (s)		0.0	0.0
Total Lost Time (s)		6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	
Act Effct Green (s)	51.0	24.0	24.0
Actuated g/C Ratio	0.57	0.27	0.27
v/c Ratio	0.03	0.02	0.35
Control Delay	3.1	25.0	29.9
Queue Delay	0.0	0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Total Delay	23.7	2.5				15.0		28.1	31.0		34.4	12.2
LOS	C	A				B		C	C		C	B
Approach Delay						15.0			30.7			20.7
Approach LOS						B			C			C
Queue Length 50th (ft)	22	0				31		7	52		113	96
Queue Length 95th (ft)	51	12				65		24	99		188	152
Internal Link Dist (ft)						93			694			466
Turn Bay Length (ft)		25						50				50
Base Capacity (vph)	379	427				412		222	374		416	897
Starvation Cap Reductn	0	0				0		0	0		0	0
Spillback Cap Reductn	0	0				0		0	0		0	0
Storage Cap Reductn	0	0				0		0	0		0	0
Reduced v/c Ratio	0.15	0.16				0.26		0.07	0.30		0.55	0.37

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 69 (77%), Referenced to phase 6:SBTL and 10:NWL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 21.4

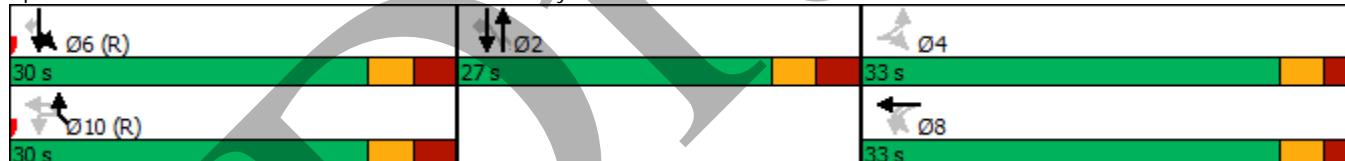
Intersection LOS: C

Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Halsted Street & North Broadway & Grace Street





Lane Group	SBR	NWL	NWR
Total Delay	3.1	25.0	29.9
LOS	A	C	C
Approach Delay	29.8		
Approach LOS		C	
Queue Length 50th (ft)	0	2	60
Queue Length 95th (ft)	8	11	111
Internal Link Dist (ft)	764		
Turn Bay Length (ft)	25	115	
Base Capacity (vph)	651	214	372
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.03	0.02	0.35
Intersection Summary			

Draft

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018

Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Lane Configurations							
Traffic Volume (vph)	31	287	407	0	0	59	
Future Volume (vph)	31	287	407	0	0	59	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			0	0	65	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	
Ped Bike Factor	0.98						
Fr _t					0.850		
Flt Protected	0.950						
Satd. Flow (prot)	1543	1776	1881	0	0	2369	
Flt Permitted							
Satd. Flow (perm)	1598	1776	1881	0	0	2369	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						896	
Link Speed (mph)		30	30		30		
Link Distance (ft)		112	148		213		
Travel Time (s)		2.5	3.4		4.8		
Confl. Peds. (#/hr)	11			11			
Confl. Bikes (#/hr)				1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	
Heavy Vehicles (%)	17%	7%	1%	0%	0%	20%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	35	322	457	0	0	66	
Turn Type	custom	NA	NA			Over	
Protected Phases	2	2 4 6	6		2	4	
Permitted Phases	4 6						
Minimum Split (s)	21.0		41.0		21.0	22.0	
Total Split (s)	27.0		41.0		27.0	22.0	
Total Split (%)	30.0%		45.6%		30.0%	24%	
Yellow Time (s)	3.0		2.0		3.0	3.0	
All-Red Time (s)	2.0		1.0		2.0	2.0	
Lost Time Adjust (s)	0.0		0.0		0.0		
Total Lost Time (s)	5.0		3.0		5.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	80.0	90.0	38.0		22.0		
Actuated g/C Ratio	0.89	1.00	0.42		0.24		
v/c Ratio	0.02	0.18	0.58		0.05		
Control Delay	0.3	0.5	23.4		0.1		
Queue Delay	1.1	0.0	0.2		0.0		
Total Delay	1.3	0.5	23.6		0.1		
LOS	A	A	C		A		
Approach Delay		0.6	23.6		0.1		
Approach LOS		A	C		A		
Queue Length 50th (ft)	1	0	193		0		
Queue Length 95th (ft)	0	0	284		0		
Internal Link Dist (ft)		32	68		133		



Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Turn Bay Length (ft)							65
Base Capacity (vph)	1407	1776	794				1256
Starvation Cap Reductn	1255	0	0				0
Spillback Cap Reductn	0	0	46				21
Storage Cap Reductn	0	0	0				0
Reduced v/c Ratio	0.23	0.18	0.61				0.05

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Pretimed

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 12.5

Intersection LOS: B

Intersection Capacity Utilization 42.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 16: Lake Shore Drive & Sheridan Road



Lanes, Volumes, Timings
17: Lake Shore Drive & Grace Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Lane Configurations								
Traffic Volume (vph)	26	11	14	292	432	34		
Future Volume (vph)	26	11	14	292	432	34		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	10	10	12	10		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00		
Ped Bike Factor	0.99				1.00	1.00		
Frt	0.960				0.990			
Flt Protected	0.966				0.998			
Satd. Flow (prot)	1366	0	0	2982	1724	0		
Flt Permitted	0.966				0.929			
Satd. Flow (perm)	1366	0	0	2775	1724	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	12				11			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1129			149	112			
Travel Time (s)	25.7				3.4	2.5		
Confl. Peds. (#/hr)		4	27			27		
Confl. Bikes (#/hr)		1				1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Heavy Vehicles (%)	0%	8%	7%	6%	9%	6%		
Bus Blockages (#/hr)	0	0	0	5	0	0		
Parking (#/hr)	9	9		0				
Shared Lane Traffic (%)								
Lane Group Flow (vph)	41	0	0	340	518	0		
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2 6	2 6		2	6
Permitted Phases			2 6					
Minimum Split (s)	22.0					21.0	41.0	
Total Split (s)	22.0					27.0	41.0	
Total Split (%)	24.4%					30%	46%	
Yellow Time (s)	3.0					3.0	2.0	
All-Red Time (s)	2.0					2.0	1.0	
Lost Time Adjust (s)	0.0							
Total Lost Time (s)	5.0							
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	17.0			63.0	63.0			
Actuated g/C Ratio	0.19			0.70	0.70			
v/c Ratio	0.15			0.18	0.43			
Control Delay	25.3			4.9	2.3			
Queue Delay	0.0			0.0	0.8			
Total Delay	25.3			4.9	3.1			
LOS	C			A	A			
Approach Delay	25.3			4.9	3.1			
Approach LOS	C			A	A			
Queue Length 50th (ft)	14			30	18			
Queue Length 95th (ft)	42			44	22			
Internal Link Dist (ft)	1049			69	32			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Turn Bay Length (ft)								
Base Capacity (vph)	267			1942	1210			
Starvation Cap Reductn	0			0	387			
Spillback Cap Reductn	0			10	0			
Storage Cap Reductn	0			0	0			
Reduced v/c Ratio	0.15			0.18	0.63			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Prettimed

Maximum v/c Ratio: 0.58

Intersection Signal Delay: 4.8

Intersection LOS: A

Intersection Capacity Utilization 47.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 17: Lake Shore Drive & Grace Street



Lanes, Volumes, Timings
21: Halsted Street & Waveland Avenue

12/04/2018

	→	→	→	←	←	↑	↑	↓	↓	←	→	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	43	29	17	10	6	21	108	35	23	344	22
Future Volume (vph)	16	43	29	17	10	6	21	108	35	23	344	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	10	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.94			1.00	0.95		0.99	
Frt		0.955			0.974				0.850		0.992	
Flt Protected		0.991			0.975			0.992			0.997	
Satd. Flow (prot)	0	1528	0	0	1210	0	0	1496	1196	0	1762	0
Flt Permitted		0.960			0.880			0.917			0.982	
Satd. Flow (perm)	0	1464	0	0	1040	0	0	1377	1140	0	1733	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	33			7				40			7	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	559			320			111			774		
Travel Time (s)	12.7			7.3			2.5			17.6		
Confl. Peds. (#/hr)	39	65	65		39	65		32	32		65	
Confl. Bikes (#/hr)		1			1			1			1	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	12%	9%	7%	70%	9%	17%	5%	20%	9%	0%	3%	0%
Parking (#/hr)		7			7			7			7	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	100	0	0	37	0	0	147	40	0	442	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		65.3%	65.3%	65.3%	65.3%	65.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	22.0			22.0			45.0	45.0		45.0		
Actuated g/C Ratio	0.29			0.29			0.60	0.60		0.60		
v/c Ratio	0.22			0.12			0.18	0.06		0.42		
Control Delay	15.6			17.9			7.4	2.5		9.5		
Queue Delay	0.0			0.0			0.0	0.0		0.0		
Total Delay	15.6			17.9			7.4	2.5		9.5		
LOS	B			B			A	A		A		
Approach Delay	15.6			17.9			6.4			9.5		
Approach LOS	B			B			A			A		
Queue Length 50th (ft)	23			10			27	0		97		
Queue Length 95th (ft)	57			31			51	10		151		
Internal Link Dist (ft)	479			240			31			694		
Turn Bay Length (ft)												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	452			310			826	700		1042		
Starvation Cap Reductn	0			0			0	0		0		
Spillback Cap Reductn	0			0			0	0		0		
Storage Cap Reductn	0			0			0	0		0		
Reduced v/c Ratio	0.22				0.12			0.18	0.06		0.42	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 50 (67%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.42

Intersection Signal Delay: 9.9

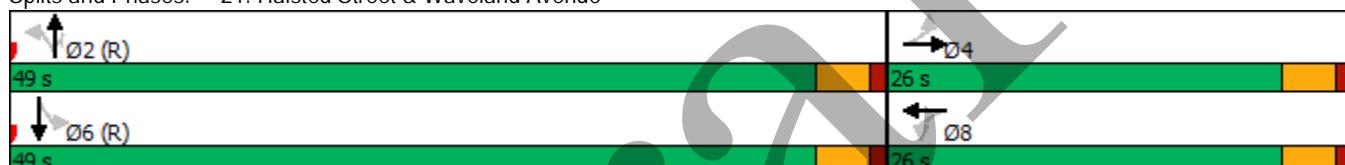
Intersection LOS: A

Intersection Capacity Utilization 103.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 21: Halsted Street & Waveland Avenue



Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations												
Traffic Volume (vph)	11	232	140	60	209	25	57	109	19	18	213	25
Future Volume (vph)	11	232	140	60	209	25	57	109	19	18	213	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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												
Frt												
Flt Protected												
Satd. Flow (prot)	0	3071	0	0	1705	0	0	1670	0	0	1699	0
Flt Permitted												
Satd. Flow (perm)	0	2892	0	0	1431	0	0	1392	0	0	1649	0
Right Turn on Red							No		No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	74		37	37		74	26		51	51		26
Confl. Bikes (#/hr)			1			1			2			2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	5%	0%	5%	12%	9%	5%	5%	6%	6%	4%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	412	0	0	317	0	0	198	0	0	275	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	47.0	47.0		47.0	47.0		40.0	40.0		40.0	40.0	
Total Split (s)	47.0	47.0		47.0	47.0		43.0	43.0		43.0	43.0	
Total Split (%)	52.2%	52.2%		52.2%	52.2%		47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		7.0			7.0			8.0			8.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		40.0			40.0			35.0			35.0	
Actuated g/C Ratio		0.44			0.44			0.39			0.39	
v/c Ratio		0.32			0.50			0.37			0.43	
Control Delay		17.1			9.5			22.1			22.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.1			9.5			22.1			22.8	
LOS	B		A		C			C			C	
Approach Delay		17.1			9.5			22.1			22.8	
Approach LOS		B			A			C			C	
Queue Length 50th (ft)		77			37			79			112	
Queue Length 95th (ft)		112			m51			136			182	
Internal Link Dist (ft)		60			1075			193			654	

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1285			636			541			641		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.32			0.50			0.37			0.43		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 17.2

Intersection LOS: B

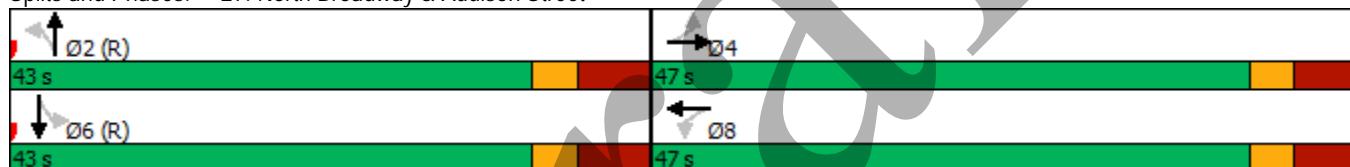
Intersection Capacity Utilization 104.8%

ICU Level of Service G

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	90	198	105	118	405	92	
Future Volume (vph)	90	198	105	118	405	92	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	12	11	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	
Ped Bike Factor	0.98	0.99		0.99	0.99		
Frt		0.850			0.972		
Flt Protected	0.950			0.977			
Satd. Flow (prot)	1616	1332	0	1551	3068	0	
Flt Permitted	0.950			0.575			
Satd. Flow (perm)	1591	1313	0	903	3068	0	
Right Turn on Red		No			No		
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	1155			396	503		
Travel Time (s)	26.3			9.0	11.4		
Confl. Peds. (#/hr)	13	3	29		29		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	8%	2%	1%	8%	9%	10%	
Parking (#/hr)		6		5		5	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	94	206	0	232	518	0	
Turn Type	Prot	Perm	custom	NA	NA		
Protected Phases	4			5	25	6	2
Permitted Phases		4	2				
Minimum Split (s)	43.0	43.0	10.0		37.0	37.0	
Total Split (s)	43.0	43.0	10.0		37.0	37.0	
Total Split (%)	47.8%	47.8%	11.1%		41.1%	41%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	0.0		7.0	7.0	
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	4.0	4.0			10.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	39.0	39.0		27.0	27.0		
Actuated g/C Ratio	0.43	0.43		0.30	0.30		
v/c Ratio	0.13	0.36		0.86	0.56		
Control Delay	10.0	11.8		60.5	29.4		
Queue Delay	0.0	0.0		0.0	0.0		
Total Delay	10.0	11.8		60.5	29.4		
LOS	B	B		E	C		
Approach Delay	11.2			60.5	29.4		
Approach LOS	B			E	C		
Queue Length 50th (ft)	17	37		124	130		
Queue Length 95th (ft)	32	59		#258	182		
Internal Link Dist (ft)	1075			316	423		
Turn Bay Length (ft)							
Base Capacity (vph)	700	568		270	920		

Lanes, Volumes, Timings

28: Lake Shore Drive & Addison Street

12/04/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Starvation Cap Reductn	0	0		0	0		
Spillback Cap Reductn	0	0		0	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.13	0.36		0.86	0.56		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 31.1

Intersection LOS: C

Intersection Capacity Utilization 87.0%

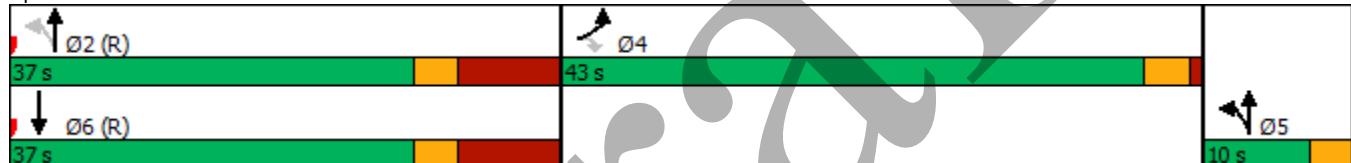
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 28: Lake Shore Drive & Addison Street



Intersection

Intersection Delay, s/veh 9.5

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	58	32	0	0	0	19	113	29	27	221	13
Future Vol, veh/h	12	58	32	0	0	0	19	113	29	27	221	13
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	8	11	6	2	2	2	5	4	3	0	6	77
Mvmt Flow	14	68	38	0	0	0	22	133	34	32	260	15
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0
Approach												
Opposing Approach							NB			SB		
Opposing Lanes	0						1			1		
Conflicting Approach Left	SB						EB					
Conflicting Lanes Left	1						1			0		
Conflicting Approach Right	NB									EB		
Conflicting Lanes Right	1							0		1		
HCM Control Delay	9							9			10.1	
HCM LOS	A						A			B		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	12%	10%
Vol Thru, %	70%	57%	85%
Vol Right, %	18%	31%	5%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	161	102	261
LT Vol	19	12	27
Through Vol	113	58	221
RT Vol	29	32	13
Lane Flow Rate	189	120	307
Geometry Grp	1	1	1
Degree of Util (X)	0.239	0.166	0.376
Departure Headway (Hd)	4.536	4.969	4.406
Convergence, Y/N	Yes	Yes	Yes
Cap	792	720	817
Service Time	2.568	3.011	2.434
HCM Lane V/C Ratio	0.239	0.167	0.376
HCM Control Delay	9	9	10.1
HCM Lane LOS	A	A	B
HCM 95th-tile Q	0.9	0.6	1.8

Intersection

Intersection Delay, s/veh 12.8

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	
Traffic Vol, veh/h	89	62	0	204	446	0
Future Vol, veh/h	89	62	0	204	446	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	1	0	0	7	9	0
Mvmt Flow	93	65	0	213	465	0
Number of Lanes	1	0	0	1	1	0
Approach	EB			NB	SB	
Opposing Approach				SB	NB	
Opposing Lanes	0			1	1	
Conflicting Approach Left	SB			EB		
Conflicting Lanes Left	1			1	0	
Conflicting Approach Right	NB				EB	
Conflicting Lanes Right	1			0	1	
HCM Control Delay	10.1			10.1	15	
HCM LOS	B			B	B	

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	59%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	41%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	204	151	446
LT Vol	0	89	0
Through Vol	204	0	446
RT Vol	0	62	0
Lane Flow Rate	212	157	465
Geometry Grp	1	1	1
Degree of Util (X)	0.294	0.234	0.611
Departure Headway (Hd)	4.98	5.348	4.732
Convergence, Y/N	Yes	Yes	Yes
Cap	716	665	757
Service Time	3.051	3.432	2.79
HCM Lane V/C Ratio	0.296	0.236	0.614
HCM Control Delay	10.1	10.1	15
HCM Lane LOS	B	B	B
HCM 95th-tile Q	1.2	0.9	4.2

Intersection

Int Delay, s/veh 4.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑				↗	
Traffic Vol, veh/h	79	0	0	0	0	72
Future Vol, veh/h	79	0	0	0	0	72
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	16983	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	86	0	0	0	0	78

Major/Minor Major1 Minor1

Conflicting Flow All	0	-	-	86
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.318
Pot Cap-1 Maneuver	-	0	0	973
Stage 1	-	0	0	-
Stage 2	-	0	0	-
Platoon blocked, %	-			
Mov Cap-1 Maneuver	-	-	-	973
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB NB

HCM Control Delay, s	0	9
HCM LOS		A

Minor Lane/Major Mvmt NBLn1 EBT

Capacity (veh/h)	973	-
HCM Lane V/C Ratio	0.08	-
HCM Control Delay (s)	9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.3	-

Capacity Analysis Summary Reports

Evening Peak Hour – Existing Conditions

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (vph)	53	25	28	24	46	47	18	28	207	5	153	220
Future Volume (vph)	53	25	28	24	46	47	18	28	207	5	153	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	10	12	10	10	10	10	13
Storage Length (ft)	0	25			25		0	50			50	
Storage Lanes	1	1			0		0	1			1	
Taper Length (ft)	25				25			80			90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.88	0.66				0.82		0.63		0.76	0.85	
Fr _t		0.850				0.982				0.850		
Flt Protected	0.950					0.975		0.950			0.950	
Satd. Flow (prot)	1620	1221	0	0	0	1274	0	1685	1498	1483	1560	1584
Flt Permitted	0.673					0.975		0.617			0.950	
Satd. Flow (perm)	1014	809	0	0	0	1073	0	689	1498	1121	1334	1584
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		109				9				97		
Link Speed (mph)						30		30			30	
Link Distance (ft)						173		774			546	
Travel Time (s)						3.9		17.6			12.4	
Confl. Peds. (#/hr)	94	91	99	91	99		94	250		91	91	
Confl. Bikes (#/hr)		11	11				9			26		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	0%	7%	0%	0%	6%	0%	0%	3%	0%	8%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	4	0	0
Parking (#/hr)		12				23			6			9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	55	55	0	0	0	139	0	29	213	5	158	227
Turn Type	Perm	Perm		Perm	Perm	NA		Perm	NA	Perm	custom	NA
Protected Phases						8			2		6	26
Permitted Phases	4	4		8	8			2		2	6	
Detector Phase	4	4		8	8	8		2	2	2	6	26
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		9.0	9.0	9.0	17.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%	36.7%		30.0%	30.0%	30.0%	33.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		3.0	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)	5.0	5.0				5.0		6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max	Max		Max	Max	Max	C-Max	
Act Effct Green (s)	28.0	28.0				28.0		21.0	21.0	21.0	24.0	51.0
Actuated g/C Ratio	0.31	0.31				0.31		0.23	0.23	0.23	0.27	0.57
v/c Ratio	0.17	0.17				0.41		0.18	0.61	0.01	0.38	0.25
Control Delay	24.5	1.6				23.1		31.1	39.4	0.0	30.2	10.8
Queue Delay	0.0	0.0				0.0		0.0	0.0	0.0	0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

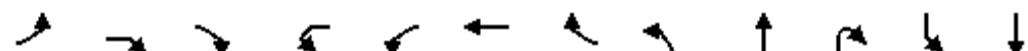
12/04/2018

Lane Group	SBR	NWL2	NWL	NWR
Lane Configurations	↑	↑	↑	↑
Traffic Volume (vph)	19	1	15	198
Future Volume (vph)	19	1	15	198
Ideal Flow (vphpl)	1900	1900	1900	1900
Lane Width (ft)	8	12	9	10
Storage Length (ft)	25		115	0
Storage Lanes	1		1	1
Taper Length (ft)			25	
Lane Util. Factor	1.00	1.00	1.00	1.00
Ped Bike Factor	0.47		0.58	
Fr _t	0.850			0.850
Flt Protected			0.950	
Satd. Flow (prot)	1400	0	1624	1396
Flt Permitted			0.647	
Satd. Flow (perm)	664	0	638	1396
Right Turn on Red	Yes			
Satd. Flow (RTOR)	24			
Link Speed (mph)			30	
Link Distance (ft)			844	
Travel Time (s)			19.2	
Confl. Peds. (#/hr)	250	99	250	94
Confl. Bikes (#/hr)	26			22
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	8%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)	20	0	16	204
Turn Type	Perm	Perm	Perm	Prot
Protected Phases				10
Permitted Phases	2	6	10	10
Detector Phase	2	6	10	10
Switch Phase				
Minimum Initial (s)		17.0	17.0	17.0
Minimum Split (s)		30.0	30.0	30.0
Total Split (s)		30.0	30.0	30.0
Total Split (%)		33.3%	33.3%	33.3%
Yellow Time (s)		3.0	3.0	3.0
All-Red Time (s)		3.0	3.0	3.0
Lost Time Adjust (s)			0.0	0.0
Total Lost Time (s)			6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	C-Max	
Act Effct Green (s)	51.0		24.0	24.0
Actuated g/C Ratio	0.57		0.27	0.27
v/c Ratio	0.05		0.09	0.55
Control Delay	3.5		26.8	34.9
Queue Delay	0.0		0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Total Delay	24.5	1.6				23.1		31.1	39.4	0.0	30.2	10.8
LOS	C	A				C		C	D	A	C	B
Approach Delay						23.1			37.6			18.0
Approach LOS						C			D			B
Queue Length 50th (ft)	23	0				55		13	109	0	73	61
Queue Length 95th (ft)	52	4				107		38	185	0	130	102
Internal Link Dist (ft)						93			694			466
Turn Bay Length (ft)		25						50		75		50
Base Capacity (vph)	315	326				340		160	349	335	416	897
Starvation Cap Reductn	0	0				0		0	0	0	0	0
Spillback Cap Reductn	0	0				0		0	0	0	0	0
Storage Cap Reductn	0	0				0		0	0	0	0	0
Reduced v/c Ratio	0.17	0.17				0.41		0.18	0.61	0.01	0.38	0.25

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 69 (77%), Referenced to phase 6:SBTL and 10:NWL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 25.7

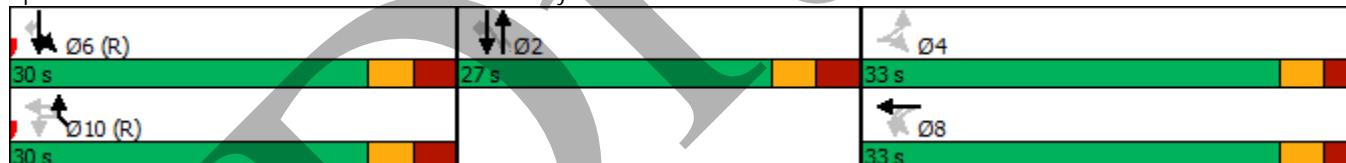
Intersection LOS: C

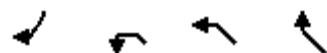
Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Halsted Street & North Broadway & Grace Street





Lane Group	SBR	NWL2	NWL	NWR
Total Delay	3.5	26.8	34.9	
LOS	A	C	C	
Approach Delay		34.3		
Approach LOS		C		
Queue Length 50th (ft)	0	7	100	
Queue Length 95th (ft)	9	24	172	
Internal Link Dist (ft)		764		
Turn Bay Length (ft)	25	115		
Base Capacity (vph)	386	170	372	
Starvation Cap Reductn	0	0	0	
Spillback Cap Reductn	0	0	0	
Storage Cap Reductn	0	0	0	
Reduced v/c Ratio	0.05	0.09	0.55	
Intersection Summary				

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	61	330	362	0	0	48
Future Volume (vph)	61	330	362	0	0	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	65
Storage Lanes	1			0	0	1
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88
Ped Bike Factor	0.90					
Fr _t						0.850
Flt Protected	0.950					
Satd. Flow (prot)	1543	1776	1881	0	0	2369
Flt Permitted						
Satd. Flow (perm)	1455	1776	1881	0	0	2369
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						864
Link Speed (mph)	30	30		30		
Link Distance (ft)	112	148		213		
Travel Time (s)	2.5	3.4		4.8		
Confl. Peds. (#/hr)	70		70			
Confl. Bikes (#/hr)			2			1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	17%	7%	1%	0%	0%	20%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	63	340	373	0	0	49
Turn Type	custom	NA	NA			Over
Protected Phases	2	2 4 6	6		2	4
Permitted Phases	4 6					
Minimum Split (s)	21.0		41.0		21.0	22.0
Total Split (s)	27.0		41.0		27.0	22.0
Total Split (%)	30.0%		45.6%		30.0%	24%
Yellow Time (s)	3.0		2.0		3.0	3.0
All-Red Time (s)	2.0		1.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	5.0		3.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	80.0	90.0	38.0		22.0	
Actuated g/C Ratio	0.89	1.00	0.42		0.24	
v/c Ratio	0.05	0.19	0.47		0.04	
Control Delay	0.3	0.4	21.2		0.1	
Queue Delay	1.2	0.0	0.0		0.0	
Total Delay	1.5	0.4	21.2		0.1	
LOS	A	A	C		A	
Approach Delay		0.6	21.2		0.1	
Approach LOS		A	C		A	
Queue Length 50th (ft)	0	0	149		0	
Queue Length 95th (ft)	0	4	228		0	
Internal Link Dist (ft)		32	68		133	



Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Turn Bay Length (ft)							65
Base Capacity (vph)	1314	1776	794				1231
Starvation Cap Reductn	1112	0	0				0
Spillback Cap Reductn	0	0	14				6
Storage Cap Reductn	0	0	0				0
Reduced v/c Ratio	0.31	0.19	0.48				0.04

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Pretimed

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 9.9

Intersection LOS: A

Intersection Capacity Utilization 42.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 16: Lake Shore Drive & Sheridan Road



Lanes, Volumes, Timings

17: Lake Shore Drive & Grace Street

12/04/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Lane Configurations								
Traffic Volume (vph)	14	7	29	389	311	94		
Future Volume (vph)	14	7	29	389	311	94		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	10	10	12	10		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00		
Ped Bike Factor	0.96				1.00	0.98		
Frt	0.957					0.969		
Flt Protected	0.967				0.997			
Satd. Flow (prot)	1349	0	0	2940	1746	0		
Flt Permitted	0.967				0.912			
Satd. Flow (perm)	1349	0	0	2682	1746	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	7				40			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1129			149	112			
Travel Time (s)	25.7			3.4	2.5			
Confl. Peds. (#/hr)		70	104			104		
Confl. Bikes (#/hr)						3		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Heavy Vehicles (%)	0%	0%	0%	8%	4%	0%		
Bus Blockages (#/hr)	0	0	0	5	0	0		
Parking (#/hr)	9	9		0				
Shared Lane Traffic (%)								
Lane Group Flow (vph)	22	0	0	435	422	0		
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2 6	2 6		2	6
Permitted Phases			2 6					
Minimum Split (s)	22.0					21.0	41.0	
Total Split (s)	22.0					27.0	41.0	
Total Split (%)	24.4%					30%	46%	
Yellow Time (s)	3.0					3.0	2.0	
All-Red Time (s)	2.0					2.0	1.0	
Lost Time Adjust (s)	0.0							
Total Lost Time (s)	5.0							
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	17.0			63.0	63.0			
Actuated g/C Ratio	0.19			0.70	0.70			
v/c Ratio	0.08			0.23	0.34			
Control Delay	24.6			5.2	1.4			
Queue Delay	0.0			0.0	0.4			
Total Delay	24.6			5.2	1.8			
LOS	C			A	A			
Approach Delay	24.6			5.2	1.8			
Approach LOS	C			A	A			
Queue Length 50th (ft)	7			40	10			
Queue Length 95th (ft)	28			57	13			
Internal Link Dist (ft)	1049			69	32			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Turn Bay Length (ft)								
Base Capacity (vph)	260			1877	1234			
Starvation Cap Reductn	0			0	406			
Spillback Cap Reductn	0			0	0			
Storage Cap Reductn	0			0	0			
Reduced v/c Ratio	0.08			0.23	0.51			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Prettimed

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 4.1

Intersection LOS: A

Intersection Capacity Utilization 55.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 17: Lake Shore Drive & Grace Street

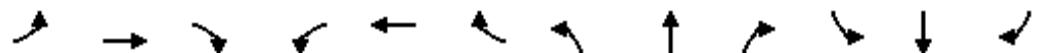


Lanes, Volumes, Timings
21: Halsted Street & Waveland Avenue

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	68	42	25	19	9	38	239	72	22	239	31
Future Volume (vph)	31	68	42	25	19	9	38	239	72	22	239	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	10	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.85				0.84			0.98	0.88		0.97	
Frt		0.960				0.978			0.850		0.986	
Flt Protected		0.989				0.977			0.993		0.996	
Satd. Flow (prot)	0	1494	0	0	1471	0	0	1615	1291	0	1637	0
Flt Permitted		0.939				0.861			0.932		0.969	
Satd. Flow (perm)	0	1339	0	0	1148	0	0	1485	1133	0	1585	0
Right Turn on Red			Yes			Yes			Yes		Yes	
Satd. Flow (RTOR)	29				9				75		14	
Link Speed (mph)	30				30			30			30	
Link Distance (ft)	559				320			111			774	
Travel Time (s)	12.7				7.3			2.5			17.6	
Confl. Peds. (#/hr)	162		192	192		162	279		117	117		279
Confl. Bikes (#/hr)		7				3			12			19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	4%	9%	18%	14%	0%	3%	10%	1%	0%	8%	6%
Parking (#/hr)		7				7			7			7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	147	0	0	55	0	0	289	75	0	304	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	4				8			2			6	
Permitted Phases	4				8			2		2	6	
Minimum Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		65.3%	65.3%	65.3%	65.3%	65.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0				0.0			0.0	0.0		0.0	
Total Lost Time (s)	4.0				4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	22.0			22.0			45.0	45.0		45.0		
Actuated g/C Ratio	0.29			0.29			0.60	0.60		0.60		
v/c Ratio	0.36			0.16			0.32	0.11		0.32		
Control Delay	19.6			18.6			8.7	2.1		8.1		
Queue Delay	0.0			0.0			0.0	0.0		0.0		
Total Delay	19.6			18.6			8.7	2.1		8.1		
LOS	B			B			A	A		A		
Approach Delay	19.6			18.6			7.3			8.1		
Approach LOS	B			B			A			A		
Queue Length 50th (ft)	42			16			60	0		59		
Queue Length 95th (ft)	91			43			103	15		102		
Internal Link Dist (ft)	479			240			31			694		
Turn Bay Length (ft)												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	413			343			891	709		956		
Starvation Cap Reductn	0			0			0	0		0		
Spillback Cap Reductn	0			0			0	0		0		
Storage Cap Reductn	0			0			0	0		0		
Reduced v/c Ratio	0.36				0.16			0.32	0.11		0.32	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 25 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.36

Intersection Signal Delay: 10.4

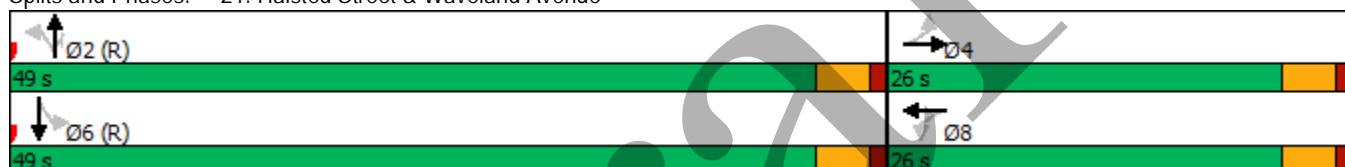
Intersection LOS: B

Intersection Capacity Utilization 103.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 21: Halsted Street & Waveland Avenue



Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	→	→	→	←	←	←	↑	↑	↓	↓	←	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	259	120	36	253	31	92	190	45	88	157	25
Future Volume (vph)	22	259	120	36	253	31	92	190	45	88	157	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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												
Frt		0.955				0.987			0.981		0.988	
Flt Protected			0.997			0.994			0.986		0.984	
Satd. Flow (prot)	0	3062	0	0	1734	0	0	1665	0	0	1638	0
Flt Permitted						0.913			0.806		0.748	
Satd. Flow (perm)	0	2819	0	0	1576	0	0	1317	0	0	1198	0
Right Turn on Red				No			No			No		No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	124		144	144		124	130		251	251		130
Confl. Bikes (#/hr)			5			2			3			7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	0%	6%	0%	7%	8%	0%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	418	0	0	334	0	0	341	0	0	282	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	47.0	47.0		47.0	47.0		40.0	40.0		40.0	40.0	
Total Split (s)	47.0	47.0		47.0	47.0		43.0	43.0		43.0	43.0	
Total Split (%)	52.2%	52.2%		52.2%	52.2%		47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		7.0			7.0			8.0			8.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		40.0			40.0			35.0			35.0	
Actuated g/C Ratio		0.44			0.44			0.39			0.39	
v/c Ratio		0.33			0.48			0.67			0.61	
Control Delay		17.3			4.5			30.4			28.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.3			4.5			30.4			28.7	
LOS	B		A		C			C			C	
Approach Delay		17.3			4.5			30.4			28.7	
Approach LOS		B		A			C			C		
Queue Length 50th (ft)		78			22			157			126	
Queue Length 95th (ft)		114			m27			257			213	
Internal Link Dist (ft)		60			1075			193			654	

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1252				700			512			465	
Starvation Cap Reductn	0				0			0			0	
Spillback Cap Reductn	0				0			0			0	
Storage Cap Reductn	0				0			0			0	
Reduced v/c Ratio	0.33				0.48			0.67			0.61	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 85 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.67

Intersection Signal Delay: 19.8

Intersection LOS: B

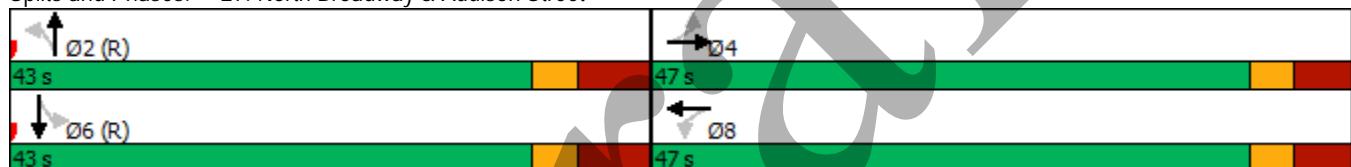
Intersection Capacity Utilization 85.6%

ICU Level of Service E

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	83	170	130	252	214	162	
Future Volume (vph)	83	170	130	252	214	162	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	10	10	12	12	11	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	
Ped Bike Factor	0.87	0.98		0.98	0.94		
Frt		0.850			0.935		
Flt Protected	0.950			0.983			
Satd. Flow (prot)	1574	1298	0	1519	2927	0	
Flt Permitted	0.950			0.727			
Satd. Flow (perm)	1366	1278	0	1097	2927	0	
Right Turn on Red		No			No		
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	1155			396	503		
Travel Time (s)	26.3			9.0	11.4		
Confl. Peds. (#/hr)	115	4	64		64		
Confl. Bikes (#/hr)		2			5		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	7%	1%	1%	11%	5%	4%	
Parking (#/hr)		6		5		5	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	86	177	0	398	392	0	
Turn Type	Prot	Perm	custom	NA	NA		
Protected Phases	4		5	2.5	6		2
Permitted Phases		4	2				
Minimum Split (s)	43.0	43.0	10.0		34.0	34.0	
Total Split (s)	43.0	43.0	13.0		34.0	34.0	
Total Split (%)	47.8%	47.8%	14.4%		37.8%	38%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	0.0		7.0	7.0	
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	4.0	4.0			10.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	39.0	39.0		27.0	24.0		
Actuated g/C Ratio	0.43	0.43		0.30	0.27		
v/c Ratio	0.13	0.32		1.16	0.50		
Control Delay	10.9	12.9		129.7	30.6		
Queue Delay	0.0	0.0		0.0	0.0		
Total Delay	10.9	12.9		129.7	30.6		
LOS	B	B		F	C		
Approach Delay	12.3			129.7	30.6		
Approach LOS	B			F	C		
Queue Length 50th (ft)	23	48		~217	99		
Queue Length 95th (ft)	m37	m77		#446	144		
Internal Link Dist (ft)	1075			316	423		
Turn Bay Length (ft)							



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Base Capacity (vph)	682	553		343	780		
Starvation Cap Reductn	0	0		0	0		
Spillback Cap Reductn	0	0		0	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.13	0.32		1.16	0.50		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 1.16

Intersection Signal Delay: 63.5

Intersection LOS: E

Intersection Capacity Utilization 93.0%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

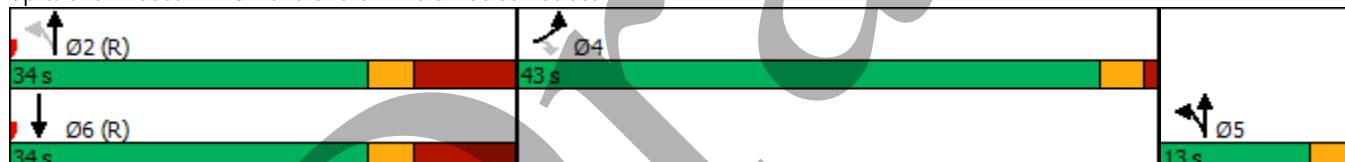
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 28: Lake Shore Drive & Addison Street



Intersection

Intersection Delay, s/veh 9.7

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖						↖			↖	
Traffic Vol, veh/h	18	91	44	0	0	0	27	198	41	38	140	17
Future Vol, veh/h	18	91	44	0	0	0	27	198	41	38	140	17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	3	0	0	0	0	0	6	0	0	9	47
Mvmt Flow	20	100	48	0	0	0	30	218	45	42	154	19
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0
Approach	EB						NB			SB		
Opposing Approach							SB			NB		
Opposing Lanes	0						1			1		
Conflicting Approach Left	SB						EB					
Conflicting Lanes Left	1						1			0		
Conflicting Approach Right	NB									EB		
Conflicting Lanes Right	1							0		1		
HCM Control Delay	9.4							10.1			9.4	
HCM LOS	A						B			A		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	10%	12%	19%
Vol Thru, %	74%	59%	72%
Vol Right, %	15%	29%	9%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	266	153	195
LT Vol	27	18	38
Through Vol	198	91	140
RT Vol	41	44	17
Lane Flow Rate	292	168	214
Geometry Grp	1	1	1
Degree of Util (X)	0.365	0.228	0.276
Departure Headway (Hd)	4.494	4.88	4.632
Convergence, Y/N	Yes	Yes	Yes
Cap	798	733	774
Service Time	2.534	2.933	2.676
HCM Lane V/C Ratio	0.366	0.229	0.276
HCM Control Delay	10.1	9.4	9.4
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.7	0.9	1.1

Intersection

Intersection Delay, s/veh 11.8

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	102	82	0	319	311	0
Future Vol, veh/h	102	82	0	319	311	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	1	0	11	4	0
Mvmt Flow	107	86	0	336	327	0
Number of Lanes	1	0	0	1	1	0
Approach	EB		NB	SB		
Opposing Approach			SB	NB		
Opposing Lanes	0		1	1		
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	1		1	0		
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	1			0	1	
HCM Control Delay	10.5			12.4	11.9	
HCM LOS	B		B	B		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	55%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	45%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	319	184	311
LT Vol	0	102	0
Through Vol	319	0	311
RT Vol	0	82	0
Lane Flow Rate	336	194	327
Geometry Grp	1	1	1
Degree of Util (X)	0.466	0.284	0.445
Departure Headway (Hd)	4.994	5.285	4.895
Convergence, Y/N	Yes	Yes	Yes
Cap	715	672	730
Service Time	3.073	3.379	2.973
HCM Lane V/C Ratio	0.47	0.289	0.448
HCM Control Delay	12.4	10.5	11.9
HCM Lane LOS	B	B	B
HCM 95th-tile Q	2.5	1.2	2.3

Intersection

Int Delay, s/veh 3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑				↗	
Traffic Vol, veh/h	123	0	0	0	0	61
Future Vol, veh/h	123	0	0	0	0	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	16983	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	134	0	0	0	0	66

Major/Minor	Major1	Minor1
Conflicting Flow All	0	-
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	-
Pot Cap-1 Maneuver	-	0
Stage 1	-	0
Stage 2	-	0
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	EB	NB
HCM Control Delay, s	0	9.2
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBT
Capacity (veh/h)	915	-
HCM Lane V/C Ratio	0.072	-
HCM Control Delay (s)	9.2	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Capacity Analysis Summary Reports

Evening Peak Hour (Game Day) – Existing Conditions

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

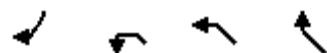
12/04/2018

	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Lane Configurations	↑	↑				↔		↑	↑	↑	↑	↑
Traffic Volume (vph)	78	134	82	19	83	201	21	42	291	7	204	277
Future Volume (vph)	78	134	82	19	83	201	21	42	291	7	204	277
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	10	13
Storage Length (ft)	0	25			25		0	50			50	
Storage Lanes	1	1			0		0	1			1	
Taper Length (ft)	25				25			80			90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.95	0.75				0.92		0.74		0.84	0.91	
Frт		0.850				0.991				0.850		
Flt Protected	0.950					0.984		0.950			0.950	
Satd. Flow (prot)	1641	1312	0	0	0	1409	0	1626	1489	1589	1574	1499
Flt Permitted	0.472					0.984		0.584			0.950	
Satd. Flow (perm)	772	982	0	0	0	1305	0	742	1489	1336	1439	1499
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		109				4				97		
Link Speed (mph)						30		30			30	
Link Distance (ft)						173		774			546	
Travel Time (s)						3.9		17.6			12.4	
Confl. Peds. (#/hr)	67	61	84	61	84		67	179		61	61	
Confl. Bikes (#/hr)		2	2				3			8		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	3%	4%	0%	2%	3%	0%	11%	11%	0%	7%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	4	0	0
Parking (#/hr)		12				23			6			9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	80	223	0	0	0	335	0	43	300	7	210	286
Turn Type	Perm	Perm		Perm	Perm	NA		Perm	NA	Perm	custom	NA
Protected Phases						8			2		6	26
Permitted Phases	4	4		8	8			2		2	6	
Detector Phase	4	4		8	8	8		2	2	2	6	26
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		9.0	9.0	9.0	17.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%	36.7%		30.0%	30.0%	30.0%	33.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		3.0	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)	5.0	5.0				5.0		6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max	Max		Max	Max	Max	C-Max	
Act Effct Green (s)	28.0	28.0				28.0		21.0	21.0	21.0	24.0	51.0
Actuated g/C Ratio	0.31	0.31				0.31		0.23	0.23	0.23	0.27	0.57
v/c Ratio	0.33	0.59				0.82		0.25	0.86	0.02	0.50	0.34
Control Delay	28.7	20.4				43.2		32.6	58.8	0.1	32.9	11.8
Queue Delay	0.0	0.0				0.0		0.0	0.0	0.0	0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

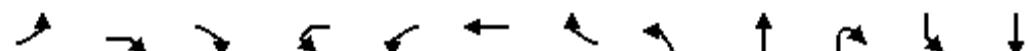


Lane Group	SBR	NWL2	NWL	NWR
Lane Configurations	1	1	1	1
Traffic Volume (vph)	25	1	19	222
Future Volume (vph)	25	1	19	222
Ideal Flow (vphpl)	1900	1900	1900	1900
Lane Width (ft)	8	12	9	10
Storage Length (ft)	25		115	0
Storage Lanes	1		1	1
Taper Length (ft)			25	
Lane Util. Factor	1.00	1.00	1.00	1.00
Ped Bike Factor	0.60		0.65	
Fr _t	0.850			0.850
Flt Protected			0.950	
Satd. Flow (prot)	1400	0	1624	1322
Flt Permitted			0.556	
Satd. Flow (perm)	834	0	620	1322
Right Turn on Red	Yes			
Satd. Flow (RTOR)	24			
Link Speed (mph)			30	
Link Distance (ft)			844	
Travel Time (s)			19.2	
Confl. Peds. (#/hr)	179	84	179	67
Confl. Bikes (#/hr)	20			9
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	14%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)	26	0	21	229
Turn Type	Perm	Perm	Perm	Prot
Protected Phases				10
Permitted Phases	2	6	10	10
Detector Phase	2	6	10	10
Switch Phase				
Minimum Initial (s)		17.0	17.0	17.0
Minimum Split (s)		30.0	30.0	30.0
Total Split (s)		30.0	30.0	30.0
Total Split (%)		33.3%	33.3%	33.3%
Yellow Time (s)		3.0	3.0	3.0
All-Red Time (s)		3.0	3.0	3.0
Lost Time Adjust (s)			0.0	0.0
Total Lost Time (s)			6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	C-Max	
Act Effct Green (s)	51.0		24.0	24.0
Actuated g/C Ratio	0.57		0.27	0.27
v/c Ratio	0.05		0.13	0.65
Control Delay	4.1		27.6	39.3
Queue Delay	0.0		0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Total Delay	28.7	20.4				43.2		32.6	58.8	0.1	32.9	11.8
LOS	C	C				D		C	E	A	C	B
Approach Delay						43.2			54.4			19.9
Approach LOS						D			D			B
Queue Length 50th (ft)	35	52				161		20	165	0	101	81
Queue Length 95th (ft)	76	131				#319		51	#309	0	171	132
Internal Link Dist (ft)						93			694			466
Turn Bay Length (ft)						25			50		75	50
Base Capacity (vph)	240	380				408		173	347	386	419	849
Starvation Cap Reductn	0	0				0		0	0	0	0	0
Spillback Cap Reductn	0	0				0		0	0	0	0	0
Storage Cap Reductn	0	0				0		0	0	0	0	0
Reduced v/c Ratio	0.33	0.59				0.82		0.25	0.86	0.02	0.50	0.34

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 69 (77%), Referenced to phase 6:SBTL and 10:NWL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 34.3

Intersection LOS: C

Intersection Capacity Utilization 96.7%

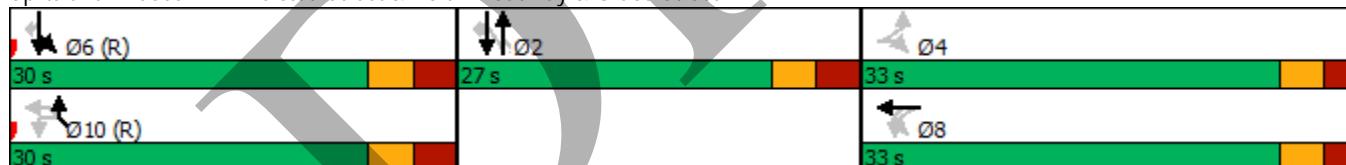
ICU Level of Service F

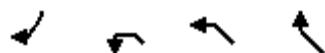
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Halsted Street & North Broadway & Grace Street





Lane Group	SBR	NWL2	NWL	NWR
Total Delay	4.1	27.6	39.3	
LOS	A	C	D	
Approach Delay		38.3		
Approach LOS		D		
Queue Length 50th (ft)	1	9	116	
Queue Length 95th (ft)	11	29	196	
Internal Link Dist (ft)		764		
Turn Bay Length (ft)	25	115		
Base Capacity (vph)	483	165	352	
Starvation Cap Reductn	0	0	0	
Spillback Cap Reductn	0	0	0	
Storage Cap Reductn	0	0	0	
Reduced v/c Ratio	0.05	0.13	0.65	
Intersection Summary				

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018

Lane Group	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations						
Traffic Volume (vph)	47	320	590	0	0	59
Future Volume (vph)	47	320	590	0	0	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	0	65
Storage Lanes	1			0	0	1
Taper Length (ft)	25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88
Ped Bike Factor	0.87					
Fr _t						0.850
Flt Protected	0.950					
Satd. Flow (prot)	1456	1727	1863	0	0	2389
Flt Permitted						
Satd. Flow (perm)	1338	1727	1863	0	0	2389
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)						704
Link Speed (mph)	30	30		30		
Link Distance (ft)	112	148		213		
Travel Time (s)	2.5	3.4		4.8		
Confl. Peds. (#/hr)	87			87		
Confl. Bikes (#/hr)				2		1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	24%	10%	2%	0%	0%	19%
Shared Lane Traffic (%)						
Lane Group Flow (vph)	49	333	615	0	0	61
Turn Type	custom	NA	NA			Over
Protected Phases	2	2 4 6	6		2	4
Permitted Phases	4 6					
Minimum Split (s)	21.0		41.0		21.0	22.0
Total Split (s)	27.0		41.0		27.0	22.0
Total Split (%)	30.0%		45.6%		30.0%	24%
Yellow Time (s)	3.0		2.0		3.0	3.0
All-Red Time (s)	2.0		1.0		2.0	2.0
Lost Time Adjust (s)	0.0		0.0		0.0	
Total Lost Time (s)	5.0		3.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Act Effct Green (s)	80.0	90.0	38.0		22.0	
Actuated g/C Ratio	0.89	1.00	0.42		0.24	
v/c Ratio	0.04	0.19	0.78		0.05	
Control Delay	0.3	0.4	31.0		0.1	
Queue Delay	1.1	0.0	3.5		0.0	
Total Delay	1.4	0.4	34.6		0.1	
LOS	A	A	C		A	
Approach Delay		0.5	34.6		0.1	
Approach LOS		A	C		A	
Queue Length 50th (ft)	1	0	294		0	
Queue Length 95th (ft)	0	3	435		0	
Internal Link Dist (ft)	32	68		133		

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018



Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Turn Bay Length (ft)							65
Base Capacity (vph)	1218	1727	786				1115
Starvation Cap Reductn	1040	0	0				0
Spillback Cap Reductn	0	0	99				43
Storage Cap Reductn	0	0	0				0
Reduced v/c Ratio	0.28	0.19	0.90				0.06

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Pretimed

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 20.3

Intersection LOS: C

Intersection Capacity Utilization 42.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 16: Lake Shore Drive & Sheridan Road



Lanes, Volumes, Timings
17: Lake Shore Drive & Grace Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Lane Configurations								
Traffic Volume (vph)	17	12	36	360	358	291		
Future Volume (vph)	17	12	36	360	358	291		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	10	10	12	10		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00		
Ped Bike Factor	0.96				1.00	0.94		
Frt	0.943					0.940		
Flt Protected	0.972				0.995			
Satd. Flow (prot)	1287	0	0	2820	1618	0		
Flt Permitted	0.972				0.865			
Satd. Flow (perm)	1287	0	0	2443	1618	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	13				108			
Link Speed (mph)	30			30	30			
Link Distance (ft)	1129			149	112			
Travel Time (s)	25.7				3.4	2.5		
Confl. Peds. (#/hr)		55	152			152		
Confl. Bikes (#/hr)		1				5		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Heavy Vehicles (%)	6%	0%	10%	12%	6%	1%		
Bus Blockages (#/hr)	0	0	0	5	0	0		
Parking (#/hr)	9	9		0				
Shared Lane Traffic (%)								
Lane Group Flow (vph)	31	0	0	417	683	0		
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2 6	2 6		2	6
Permitted Phases			2 6					
Minimum Split (s)	22.0					21.0	41.0	
Total Split (s)	22.0					27.0	41.0	
Total Split (%)	24.4%					30%	46%	
Yellow Time (s)	3.0					3.0	2.0	
All-Red Time (s)	2.0					2.0	1.0	
Lost Time Adjust (s)	0.0							
Total Lost Time (s)	5.0							
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	17.0			63.0	63.0			
Actuated g/C Ratio	0.19			0.70	0.70			
v/c Ratio	0.12			0.24	0.59			
Control Delay	22.3			5.3	4.2			
Queue Delay	0.0			0.0	3.0			
Total Delay	22.3			5.3	7.2			
LOS	C			A	A			
Approach Delay	22.3			5.3	7.2			
Approach LOS	C			A	A			
Queue Length 50th (ft)	9			38	54			
Queue Length 95th (ft)	33			56	81			
Internal Link Dist (ft)	1049			69	32			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Turn Bay Length (ft)								
Base Capacity (vph)	253			1710	1165			
Starvation Cap Reductn	0			0	364			
Spillback Cap Reductn	0			0	0			
Storage Cap Reductn	0			0	0			
Reduced v/c Ratio	0.12			0.24	0.85			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Prettimed

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 6.9

Intersection LOS: A

Intersection Capacity Utilization 62.3%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 17: Lake Shore Drive & Grace Street

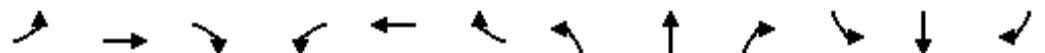


Lanes, Volumes, Timings
21: Halsted Street & Waveland Avenue

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	73	76	29	64	19	76	314	56	30	312	71
Future Volume (vph)	40	73	76	29	64	19	76	314	56	30	312	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	10	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946				0.977				0.850		0.977
Flt Protected						0.987				0.990		0.996
Satd. Flow (prot)	0	1279	0	0	1439	0	0	1573	1266	0	1562	0
Flt Permitted						0.893			0.847			0.954
Satd. Flow (perm)	0	1109	0	0	1205	0	0	1313	1057	0	1489	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)		45				14				63		25
Link Speed (mph)		30				30			30			30
Link Distance (ft)		559				320			111			774
Travel Time (s)		12.7				7.3			2.5			17.6
Confl. Peds. (#/hr)	237		264	264		237	307		159	159		307
Confl. Bikes (#/hr)			17			11			29			21
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	13%	7%	33%	10%	0%	6%	13%	3%	6%	11%	1%
Parking (#/hr)			7			7			7			7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	212	0	0	126	0	0	438	63	0	465	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		65.3%	65.3%	65.3%	65.3%	65.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		22.0			22.0			45.0	45.0		45.0	
Actuated g/C Ratio		0.29			0.29			0.60	0.60		0.60	
v/c Ratio		0.59			0.35			0.56	0.10		0.51	
Control Delay		25.7			21.8			12.4	2.2		10.7	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		25.7			21.8			12.4	2.2		10.7	
LOS		C			C			B	A		B	
Approach Delay		25.7			21.8			11.1			10.7	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		65			40			110	0		105	
Queue Length 95th (ft)		134			84			186	13		175	
Internal Link Dist (ft)		479			240			31			694	
Turn Bay Length (ft)												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	357			363			787	659		903		
Starvation Cap Reductn	0			0			0	0		0		
Spillback Cap Reductn	0			0			0	0		0		
Storage Cap Reductn	0			0			0	0		0		
Reduced v/c Ratio	0.59			0.35			0.56	0.10		0.51		

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 25 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.59

Intersection Signal Delay: 14.4

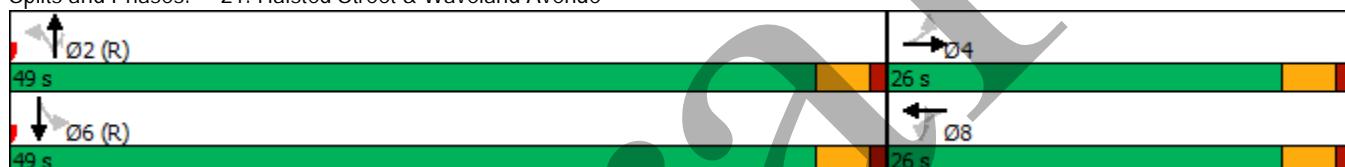
Intersection LOS: B

Intersection Capacity Utilization 103.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 21: Halsted Street & Waveland Avenue



Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	→	→	→	←	←	←	↑	↑	↓	↓	←	
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	230	49	62	318	33	84	265	53	51	257	21
Future Volume (vph)	31	230	49	62	318	33	84	265	53	51	257	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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												
Frt		0.976				0.989			0.982		0.991	
Flt Protected			0.995			0.993			0.990		0.992	
Satd. Flow (prot)	0	3020	0	0	1693	0	0	1573	0	0	1642	0
Flt Permitted						0.891			0.815		0.868	
Satd. Flow (perm)	0	2634	0	0	1481	0	0	1256	0	0	1412	0
Right Turn on Red				No			No		No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	212		235	235		212	187		282	282		187
Confl. Bikes (#/hr)			5			6			31			17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	8%	6%	0%	5%	6%	2%	14%	0%	2%	9%	9%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	327	0	0	435	0	0	423	0	0	347	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	47.0	47.0		47.0	47.0		40.0	40.0		40.0	40.0	
Total Split (s)	47.0	47.0		47.0	47.0		43.0	43.0		43.0	43.0	
Total Split (%)	52.2%	52.2%		52.2%	52.2%		47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		7.0			7.0			8.0			8.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		40.0			40.0			35.0			35.0	
Actuated g/C Ratio		0.44			0.44			0.39			0.39	
v/c Ratio		0.28			0.66			0.87			0.63	
Control Delay		16.7			4.4			45.6			28.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.7			4.4			45.6			28.6	
LOS		B			A			D			C	
Approach Delay		16.7			4.4			45.6			28.6	
Approach LOS		B			A			D			C	
Queue Length 50th (ft)		60			25			217			157	
Queue Length 95th (ft)		90			m24			#393			253	
Internal Link Dist (ft)		60			1075			193			654	

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1170			658			488			549		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.28			0.66			0.87			0.63		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 85 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 23.9

Intersection LOS: C

Intersection Capacity Utilization 118.6%

ICU Level of Service H

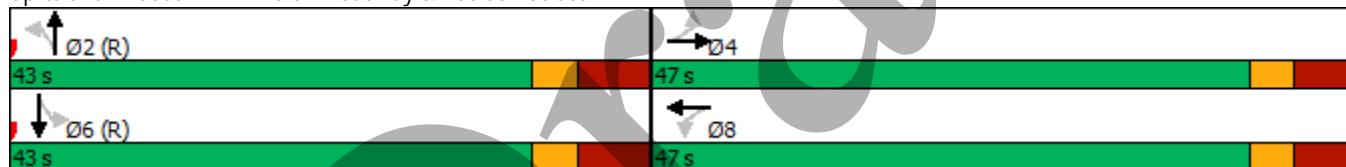
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	95	199	214	210	227	211	
Future Volume (vph)	95	199	214	210	227	211	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	12	11	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	
Ped Bike Factor	0.84	0.98		0.95	0.89		
Frt		0.850			0.928		
Flt Protected	0.950			0.975			
Satd. Flow (prot)	1558	1306	0	1481	2729	0	
Flt Permitted	0.950			0.576			
Satd. Flow (perm)	1310	1282	0	831	2729	0	
Right Turn on Red		No			No		
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	1155			396	503		
Travel Time (s)	26.3			9.0	11.4		
Confl. Peds. (#/hr)	138	4	106		106		
Confl. Bikes (#/hr)		7			5		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	
Heavy Vehicles (%)	12%	4%	2%	17%	8%	4%	
Parking (#/hr)		6		5		5	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	106	221	0	471	486	0	
Turn Type	Prot	Perm	custom	NA	NA		
Protected Phases	4		5	2.5	6		2
Permitted Phases		4	2				
Minimum Split (s)	43.0	43.0	10.0		34.0	34.0	
Total Split (s)	43.0	43.0	13.0		34.0	34.0	
Total Split (%)	47.8%	47.8%	14.4%		37.8%	38%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	0.0		7.0	7.0	
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	4.0	4.0			10.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	39.0	39.0		27.0	24.0		
Actuated g/C Ratio	0.43	0.43		0.30	0.27		
v/c Ratio	0.16	0.40		1.74	0.67		
Control Delay	10.6	13.1		374.0	34.8		
Queue Delay	0.0	0.0		0.0	0.0		
Total Delay	10.6	13.1		374.0	34.8		
LOS	B	B		F	C		
Approach Delay	12.3			374.0	34.8		
Approach LOS	B			F	C		
Queue Length 50th (ft)	26	58		~401	130		
Queue Length 95th (ft)	m40	m84		#587	184		
Internal Link Dist (ft)	1075			316	423		
Turn Bay Length (ft)							



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Base Capacity (vph)	675	555		270	727		
Starvation Cap Reductn	0	0		0	0		
Spillback Cap Reductn	0	0		0	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.16	0.40		1.74	0.67		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 140

Control Type: Pretimed

Maximum v/c Ratio: 1.74

Intersection Signal Delay: 153.5

Intersection LOS: F

Intersection Capacity Utilization 95.4%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

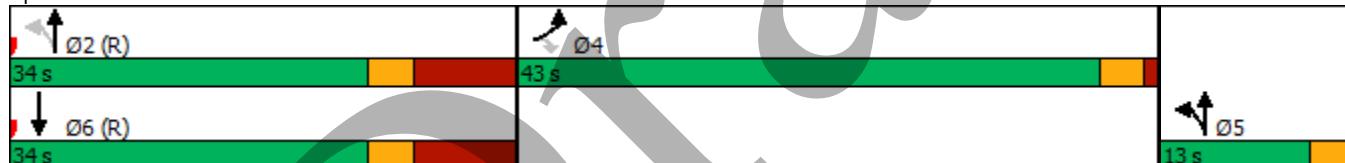
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 28: Lake Shore Drive & Addison Street



Intersection

Intersection Delay, s/veh

13

Intersection LOS

B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	93	58	0	0	0	74	225	52	62	268	22
Future Vol, veh/h	21	93	58	0	0	0	74	225	52	62	268	22
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	9	11	5	0	0	0	1	15	2	2	8	32
Mvmt Flow	23	101	63	0	0	0	80	245	57	67	291	24
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0
Approach												
Opposing Approach								SB			NB	SB
Opposing Lanes	0						1				1	
Conflicting Approach Left	SB						EB					
Conflicting Lanes Left	1						1				0	
Conflicting Approach Right	NB										EB	
Conflicting Lanes Right	1							0			1	
HCM Control Delay	11.2							13.3			13.6	
HCM LOS	B						B				B	

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	21%	12%	18%
Vol Thru, %	64%	54%	76%
Vol Right, %	15%	34%	6%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	351	172	352
LT Vol	74	21	62
Through Vol	225	93	268
RT Vol	52	58	22
Lane Flow Rate	382	187	383
Geometry Grp	1	1	1
Degree of Util (X)	0.525	0.297	0.533
Departure Headway (Hd)	4.956	5.715	5.011
Convergence, Y/N	Yes	Yes	Yes
Cap	729	628	723
Service Time	2.967	3.75	3.021
HCM Lane V/C Ratio	0.524	0.298	0.53
HCM Control Delay	13.3	11.2	13.6
HCM Lane LOS	B	B	B
HCM 95th-tile Q	3.1	1.2	3.2

Intersection

Intersection Delay, s/veh 13.1

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	105	93	0	296	370	0
Future Vol, veh/h	105	93	0	296	370	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	2	0	15	6	0
Mvmt Flow	112	99	0	315	394	0
Number of Lanes	1	0	0	1	1	0
Approach	EB		NB	SB		
Opposing Approach			SB	NB		
Opposing Lanes	0		1	1		
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	1		1	0		
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay	11.2		12.9	14.3		
HCM LOS	B		B	B		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	53%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	47%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	296	198	370
LT Vol	0	105	0
Through Vol	296	0	370
RT Vol	0	93	0
Lane Flow Rate	315	211	394
Geometry Grp	1	1	1
Degree of Util (X)	0.464	0.323	0.557
Departure Headway (Hd)	5.307	5.521	5.09
Convergence, Y/N	Yes	Yes	Yes
Cap	680	651	712
Service Time	3.336	3.556	3.09
HCM Lane V/C Ratio	0.463	0.324	0.553
HCM Control Delay	12.9	11.2	14.3
HCM Lane LOS	B	B	B
HCM 95th-tile Q	2.5	1.4	3.5

Intersection

Int Delay, s/veh 1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑				↗	
Traffic Vol, veh/h	159	0	0	0	0	39
Future Vol, veh/h	159	0	0	0	0	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	16983	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	173	0	0	0	0	42

Major/Minor	Major1	Minor1
Conflicting Flow All	0	-
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	-
Pot Cap-1 Maneuver	-	0
Stage 1	-	0
Stage 2	-	0
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	EB	NB
HCM Control Delay, s	0	9.3
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBT
Capacity (veh/h)	871	-
HCM Lane V/C Ratio	0.049	-
HCM Control Delay (s)	9.3	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Capacity Analysis Summary Reports

Morning Peak Hour – Projected Conditions

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	52	30	36	11	39	34	19	15	104	0	217	310
Future Volume (vph)	52	30	36	11	39	34	19	15	104	0	217	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	10	13
Storage Length (ft)	0	25			25		0	50			50	
Storage Lanes	1	1			0		0	1			1	
Taper Length (ft)	25				25			80			90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.93	0.86				0.93		0.89			0.94	
Fr _t		0.850				0.975						
Flt Protected		0.950				0.976		0.950			0.950	
Satd. Flow (prot)	1736	1306	0	0	0	1366	0	1805	1605	1870	1560	1584
Flt Permitted		0.702				0.976		0.556			0.950	
Satd. Flow (perm)	1198	1122	0	0	0	1292	0	937	1605	1870	1469	1584
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		109				13						
Link Speed (mph)						30		30			30	
Link Distance (ft)						173		774			546	
Travel Time (s)						3.9		17.6			12.4	
Confl. Peds. (#/hr)	50	37	32	32	37		50	85			32	32
Confl. Bikes (#/hr)		6	6			3						
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	0%	7%	0%	0%	6%	0%	0%	3%	0%	8%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	4	0	0
Parking (#/hr)		12				23		6			9	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	73	0	0	0	113	0	16	114	0	238	341
Turn Type	Perm	Perm		Perm	Perm	NA		Perm	NA	Perm	custom	NA
Protected Phases						8			2		6	26
Permitted Phases	4	4		8	8			2		2	6	
Detector Phase	4	4		8	8	8		2	2	2	6	26
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		9.0	9.0	9.0	17.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%	36.7%		30.0%	30.0%	30.0%	33.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		3.0	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)	5.0	5.0				5.0		6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max	Max		Max	Max	Max	C-Max	
Act Effct Green (s)	28.0	28.0				28.0		21.0	21.0		24.0	51.0
Actuated g/C Ratio	0.31	0.31				0.31		0.23	0.23		0.27	0.57
v/c Ratio	0.15	0.17				0.28		0.07	0.30		0.57	0.38
Control Delay	23.9	2.9				22.8		28.1	31.2		34.9	12.3
Queue Delay	0.0	0.0				0.0		0.0	0.0		0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

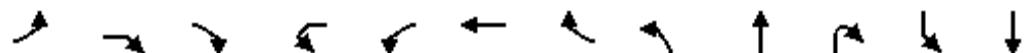


Lane Group	SBR	NWL	NWR
Lane Configurations	1	1	1
Traffic Volume (vph)	18	5	122
Future Volume (vph)	18	5	122
Ideal Flow (vphpl)	1900	1900	1900
Lane Width (ft)	8	9	10
Storage Length (ft)	25	115	0
Storage Lanes	1	1	1
Taper Length (ft)		25	
Lane Util. Factor	1.00	1.00	1.00
Ped Bike Factor	0.79	0.90	
Fr1	0.850		0.850
Flt Protected		0.950	
Satd. Flow (prot)	1400	1624	1396
Flt Permitted		0.507	
Satd. Flow (perm)	1108	776	1396
Right Turn on Red	Yes		
Satd. Flow (RTOR)	24		
Link Speed (mph)		30	
Link Distance (ft)		844	
Travel Time (s)		19.2	
Confl. Peds. (#/hr)	85	85	50
Confl. Bikes (#/hr)	18		1
Peak Hour Factor	0.91	0.91	0.91
Heavy Vehicles (%)	0%	0%	8%
Bus Blockages (#/hr)	0	0	0
Parking (#/hr)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)	20	5	134
Turn Type	Perm	Perm	Prot
Protected Phases			10
Permitted Phases	2	6	10
Detector Phase	2	6	10
Switch Phase			
Minimum Initial (s)		17.0	17.0
Minimum Split (s)		30.0	30.0
Total Split (s)		30.0	30.0
Total Split (%)		33.3%	33.3%
Yellow Time (s)		3.0	3.0
All-Red Time (s)		3.0	3.0
Lost Time Adjust (s)		0.0	0.0
Total Lost Time (s)		6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	C-Max	C-Max	
Act Effct Green (s)	51.0	24.0	24.0
Actuated g/C Ratio	0.57	0.27	0.27
v/c Ratio	0.03	0.02	0.36
Control Delay	3.3	25.0	30.2
Queue Delay	0.0	0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Total Delay	23.9	2.9				22.8		28.1	31.2		34.9	12.3
LOS	C	A				C		C	C		C	B
Approach Delay						22.8			30.8			21.0
Approach LOS						C			C			C
Queue Length 50th (ft)	23	0				42		7	54		117	100
Queue Length 95th (ft)	53	15				87		24	102		194	158
Internal Link Dist (ft)						93			694			466
Turn Bay Length (ft)		25						50				50
Base Capacity (vph)	372	424				410		218	374		416	897
Starvation Cap Reductn	0	0				0		0	0		0	0
Spillback Cap Reductn	0	0				0		0	0		0	0
Storage Cap Reductn	0	0				0		0	0		0	0
Reduced v/c Ratio	0.15	0.17				0.28		0.07	0.30		0.57	0.38

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 69 (77%), Referenced to phase 6:SBTL and 10:NWL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 22.4

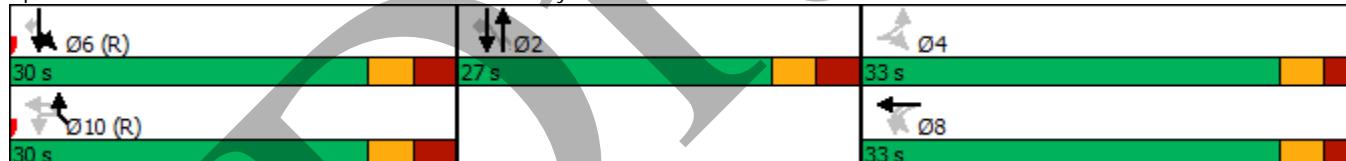
Intersection LOS: C

Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Halsted Street & North Broadway & Grace Street





Lane Group	SBR	NWL	NWR
Total Delay	3.3	25.0	30.2
LOS	A	C	C
Approach Delay	30.0		
Approach LOS		C	
Queue Length 50th (ft)	0	2	62
Queue Length 95th (ft)	9	11	114
Internal Link Dist (ft)	764		
Turn Bay Length (ft)	25	115	
Base Capacity (vph)	638	206	372
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.03	0.02	0.36
Intersection Summary			

Draft

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018

Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Lane Configurations							
Traffic Volume (vph)	41	302	421	0	0	62	
Future Volume (vph)	41	302	421	0	0	62	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			0	0	65	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	
Ped Bike Factor	1.00						
Fr _t					0.850		
Flt Protected	0.950						
Satd. Flow (prot)	1543	1776	1881	0	0	2369	
Flt Permitted							
Satd. Flow (perm)	1618	1776	1881	0	0	2369	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						879	
Link Speed (mph)		30	30		30		
Link Distance (ft)		112	148		213		
Travel Time (s)		2.5	3.4		4.8		
Confl. Peds. (#/hr)	12			12			
Confl. Bikes (#/hr)				1			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	
Heavy Vehicles (%)	17%	7%	1%	0%	0%	20%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	46	339	473	0	0	70	
Turn Type	Perm	NA	NA			Prot	
Protected Phases	2 4 6		6		2	4	
Permitted Phases	2 4 6						
Minimum Split (s)			41.0		21.0	22.0	
Total Split (s)			41.0		27.0	22.0	
Total Split (%)			45.6%		30.0%	24%	
Yellow Time (s)			2.0		3.0	3.0	
All-Red Time (s)			1.0		2.0	2.0	
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			3.0		5.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	90.0	90.0	38.0		22.0		
Actuated g/C Ratio	1.00	1.00	0.42		0.24		
v/c Ratio	0.03	0.19	0.60		0.06		
Control Delay	0.0	0.5	23.9		0.1		
Queue Delay	0.0	0.0	0.3		0.0		
Total Delay	0.0	0.5	24.2		0.1		
LOS	A	A	C		A		
Approach Delay		0.4	24.2		0.1		
Approach LOS		A	C		A		
Queue Length 50th (ft)	0	0	202		0		
Queue Length 95th (ft)	0	2	297		0		
Internal Link Dist (ft)		32	68		133		

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018



Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Turn Bay Length (ft)							65
Base Capacity (vph)	1618	1776	794				1243
Starvation Cap Reductn	0	0	0				0
Spillback Cap Reductn	0	0	51				24
Storage Cap Reductn	0	0	0				0
Reduced v/c Ratio	0.03	0.19	0.64				0.06

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Pretimed

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 12.5

Intersection LOS: B

Intersection Capacity Utilization 42.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 16: Lake Shore Drive & Sheridan Road



Lanes, Volumes, Timings
17: Lake Shore Drive & Grace Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Lane Configurations								
Traffic Volume (vph)	27	11	17	316	448	35		
Future Volume (vph)	27	11	17	316	448	35		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	10	10	12	10		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00		
Ped Bike Factor	0.99				1.00	1.00		
Frt	0.961					0.990		
Flt Protected	0.966				0.997			
Satd. Flow (prot)	1368	0	0	2979	1724	0		
Flt Permitted	0.966				0.924			
Satd. Flow (perm)	1368	0	0	2760	1724	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	12				10			
Link Speed (mph)	30				30	30		
Link Distance (ft)	1129				149	112		
Travel Time (s)	25.7				3.4	2.5		
Confl. Peds. (#/hr)		4	30			30		
Confl. Bikes (#/hr)		1				1		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Heavy Vehicles (%)	0%	8%	7%	6%	9%	6%		
Bus Blockages (#/hr)	0	0	0	5	0	0		
Parking (#/hr)	9	9		0				
Shared Lane Traffic (%)								
Lane Group Flow (vph)	42	0	0	370	537	0		
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2 6	2 6		2	6
Permitted Phases			2 6					
Minimum Split (s)	22.0					21.0	41.0	
Total Split (s)	22.0					27.0	41.0	
Total Split (%)	24.4%					30%	46%	
Yellow Time (s)	3.0					3.0	2.0	
All-Red Time (s)	2.0					2.0	1.0	
Lost Time Adjust (s)	0.0							
Total Lost Time (s)	5.0							
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	17.0			63.0	63.0			
Actuated g/C Ratio	0.19			0.70	0.70			
v/c Ratio	0.16			0.19	0.44			
Control Delay	25.5			5.0	2.4			
Queue Delay	0.0			0.0	0.9			
Total Delay	25.5			5.0	3.3			
LOS	C			A	A			
Approach Delay	25.5			5.0	3.3			
Approach LOS	C			A	A			
Queue Length 50th (ft)	14			32	19			
Queue Length 95th (ft)	43			48	23			
Internal Link Dist (ft)	1049			69	32			

Lanes, Volumes, Timings
17: Lake Shore Drive & Grace Street

12/04/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Turn Bay Length (ft)								
Base Capacity (vph)	268			1932	1209			
Starvation Cap Reductn	0			0	384			
Spillback Cap Reductn	0			10	0			
Storage Cap Reductn	0			0	0			
Reduced v/c Ratio	0.16			0.19	0.65			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Prettimed

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 4.9

Intersection LOS: A

Intersection Capacity Utilization 48.4%

ICU Level of Service A

Analysis Period (min) 15

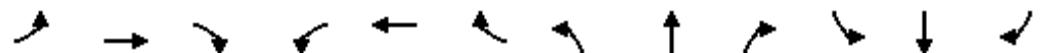
Splits and Phases: 17: Lake Shore Drive & Grace Street



Lanes, Volumes, Timings
21: Halsted Street & Waveland Avenue

12/04/2018

	→	→	→	←	←	↑	↑	↓	↓	←		
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	45	30	18	10	6	22	111	38	24	354	23
Future Volume (vph)	16	45	30	18	10	6	22	111	38	24	354	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	10	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94			0.93			1.00	0.95		0.99	
Frt		0.955			0.975				0.850		0.992	
Flt Protected		0.991			0.974			0.992			0.997	
Satd. Flow (prot)	0	1522	0	0	1202	0	0	1497	1196	0	1765	0
Flt Permitted		0.961			0.874			0.913			0.981	
Satd. Flow (perm)	0	1458	0	0	1021	0	0	1371	1137	0	1731	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	33			7				43			7	
Link Speed (mph)	30			30			30			30		
Link Distance (ft)	559			320			111			774		
Travel Time (s)	12.7			7.3			2.5			17.6		
Confl. Peds. (#/hr)	43		72	72		43	72		35	72		35
Confl. Bikes (#/hr)		1				1			1			1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	12%	9%	7%	70%	9%	17%	5%	20%	9%	0%	3%	0%
Parking (#/hr)		7				7			7			7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	38	0	0	151	43	0	455	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		65.3%	65.3%	65.3%	65.3%	65.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	22.0			22.0			45.0	45.0		45.0		
Actuated g/C Ratio	0.29			0.29			0.60	0.60		0.60		
v/c Ratio	0.23			0.12			0.18	0.06		0.44		
Control Delay	15.8			18.1			7.5	2.4		9.6		
Queue Delay	0.0			0.0			0.0	0.0		0.0		
Total Delay	15.8			18.1			7.5	2.4		9.6		
LOS	B			B			A	A		A		
Approach Delay	15.8			18.1			6.3			9.6		
Approach LOS	B			B			A			A		
Queue Length 50th (ft)	24			10			28	0		101		
Queue Length 95th (ft)	59			31			53	11		157		
Internal Link Dist (ft)	479			240			31			694		
Turn Bay Length (ft)												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	451			304			822	699		1041		
Starvation Cap Reductn	0			0			0	0		0		
Spillback Cap Reductn	0			0			0	0		0		
Storage Cap Reductn	0			0			0	0		0		
Reduced v/c Ratio	0.23				0.13			0.18	0.06		0.44	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 50 (67%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.44

Intersection Signal Delay: 10.0

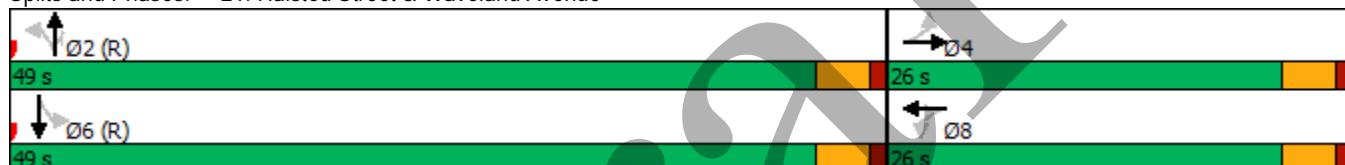
Intersection LOS: B

Intersection Capacity Utilization 103.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 21: Halsted Street & Waveland Avenue



Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Configurations												
Traffic Volume (vph)	12	241	144	73	229	26	59	115	20	19	219	26
Future Volume (vph)	12	241	144	73	229	26	59	115	20	19	219	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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		0.97			0.99			0.99			0.99	
Frt		0.946			0.989			0.986			0.987	
Flt Protected		0.998			0.989			0.985			0.996	
Satd. Flow (prot)	0	3067	0	0	1705	0	0	1669	0	0	1696	0
Flt Permitted		0.940			0.812			0.826			0.969	
Satd. Flow (perm)	0	2884	0	0	1392	0	0	1389	0	0	1646	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	81		41	41		81	29		56	56		29
Confl. Bikes (#/hr)			1			1			2			2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	5%	0%	5%	12%	9%	5%	5%	6%	6%	4%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	427	0	0	352	0	0	209	0	0	283	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	47.0	47.0		47.0	47.0		40.0	40.0		40.0	40.0	
Total Split (s)	47.0	47.0		47.0	47.0		43.0	43.0		43.0	43.0	
Total Split (%)	52.2%	52.2%		52.2%	52.2%		47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		7.0			7.0			8.0			8.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		40.0			40.0			35.0			35.0	
Actuated g/C Ratio		0.44			0.44			0.39			0.39	
v/c Ratio		0.33			0.57			0.39			0.44	
Control Delay		17.2			10.5			22.5			23.0	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		17.2			10.5			22.5			23.0	
LOS	B			B			C			C		
Approach Delay		17.2			10.5			22.5			23.0	
Approach LOS		B			B			C			C	
Queue Length 50th (ft)		80			38			84			116	
Queue Length 95th (ft)		116			m50			143			187	
Internal Link Dist (ft)		60			1075			193			654	

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1281			618			540			640		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.33			0.57			0.39			0.44		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 87 (97%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.57

Intersection Signal Delay: 17.5

Intersection LOS: B

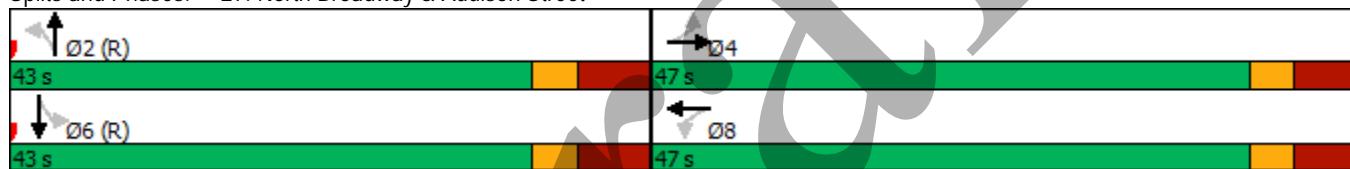
Intersection Capacity Utilization 112.6%

ICU Level of Service H

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	95	204	108	125	432	120	
Future Volume (vph)	95	204	108	125	432	120	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	12	12	11	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	
Ped Bike Factor	0.98	0.99		0.99	0.98		
Frt		0.850			0.967		
Flt Protected	0.950			0.977			
Satd. Flow (prot)	1616	1332	0	1551	3041	0	
Flt Permitted	0.950			0.522			
Satd. Flow (perm)	1589	1313	0	820	3041	0	
Right Turn on Red		No			No		
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	1155			396	355		
Travel Time (s)	26.3				9.0	8.1	
Confl. Peds. (#/hr)	14	3	32			32	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	8%	2%	1%	8%	9%	10%	
Parking (#/hr)		6		5		5	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	99	213	0	243	575	0	
Turn Type	Prot	Perm	custom	NA	NA		
Protected Phases	4			5	25	6	2
Permitted Phases			4	2			
Minimum Split (s)	43.0	43.0	10.0		37.0	37.0	
Total Split (s)	43.0	43.0	10.0		37.0	37.0	
Total Split (%)	47.8%	47.8%	11.1%		41.1%	41%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	0.0		7.0	7.0	
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	4.0	4.0			10.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	39.0	39.0		27.0	27.0		
Actuated g/C Ratio	0.43	0.43		0.30	0.30		
v/c Ratio	0.14	0.38		0.99	0.63		
Control Delay	10.0	11.9		88.9	30.9		
Queue Delay	0.0	0.0		0.0	0.0		
Total Delay	10.0	11.9		88.9	30.9		
LOS	B	B		F	C		
Approach Delay	11.3			88.9	30.9		
Approach LOS	B			F	C		
Queue Length 50th (ft)	18	39		137	147		
Queue Length 95th (ft)	33	61		#289	204		
Internal Link Dist (ft)	1075			316	275		
Turn Bay Length (ft)							
Base Capacity (vph)	700	568		246	912		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Starvation Cap Reductn	0	0		0	0		
Spillback Cap Reductn	0	0		0	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.14	0.38		0.99	0.63		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.99

Intersection Signal Delay: 38.0

Intersection LOS: D

Intersection Capacity Utilization 87.6%

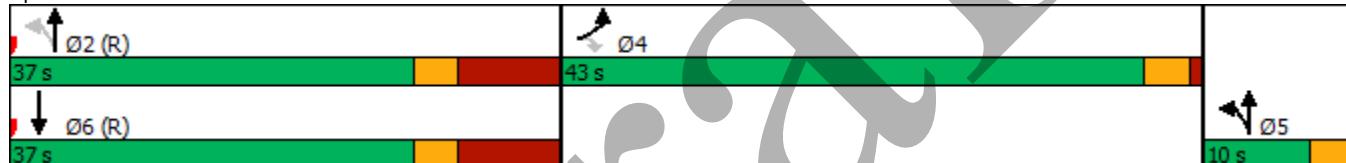
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 28: Lake Shore Drive & Addison Street



Intersection

Intersection Delay, s/veh 9.8

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔						↔			↔	
Traffic Vol, veh/h	12	63	33	0	0	0	20	116	34	31	228	13
Future Vol, veh/h	12	63	33	0	0	0	20	116	34	31	228	13
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	8	11	6	2	2	2	5	4	3	0	6	77
Mvmt Flow	14	74	39	0	0	0	24	136	40	36	268	15
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0
Approach	EB						NB			SB		
Opposing Approach							SB			NB		
Opposing Lanes	0						1			1		
Conflicting Approach Left	SB						EB					
Conflicting Lanes Left	1						1			0		
Conflicting Approach Right	NB									EB		
Conflicting Lanes Right	1							0		1		
HCM Control Delay	9.2							9.1			10.4	
HCM LOS	A						A			B		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	12%	11%	11%
Vol Thru, %	68%	58%	84%
Vol Right, %	20%	31%	5%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	170	108	272
LT Vol	20	12	31
Through Vol	116	63	228
RT Vol	34	33	13
Lane Flow Rate	200	127	320
Geometry Grp	1	1	1
Degree of Util (X)	0.253	0.177	0.395
Departure Headway (Hd)	4.561	5.027	4.442
Convergence, Y/N	Yes	Yes	Yes
Cap	786	712	810
Service Time	2.596	3.072	2.473
HCM Lane V/C Ratio	0.254	0.178	0.395
HCM Control Delay	9.1	9.2	10.4
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1	0.6	1.9

Intersection

Intersection Delay, s/veh 13.3

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	94	41	0	227	462	0
Future Vol, veh/h	94	41	0	227	462	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles, %	1	0	0	7	9	0
Mvmt Flow	98	43	0	236	481	0
Number of Lanes	1	0	0	1	1	0
Approach	EB		NB	SB		
Opposing Approach			SB	NB		
Opposing Lanes	0		1	1		
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	1		1	0		
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay	10.1		10.4	15.6		
HCM LOS	B		B	C		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	70%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	30%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	227	135	462
LT Vol	0	94	0
Through Vol	227	0	462
RT Vol	0	41	0
Lane Flow Rate	236	141	481
Geometry Grp	1	1	1
Degree of Util (X)	0.326	0.215	0.632
Departure Headway (Hd)	4.961	5.516	4.724
Convergence, Y/N	Yes	Yes	Yes
Cap	719	644	760
Service Time	3.028	3.604	2.779
HCM Lane V/C Ratio	0.328	0.219	0.633
HCM Control Delay	10.4	10.1	15.6
HCM Lane LOS	B	B	C
HCM 95th-tile Q	1.4	0.8	4.6

Intersection

Int Delay, s/veh 1.3

Movement	EBL	EBC	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	17	63	10	210	485	18
Future Vol, veh/h	17	63	10	210	485	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	68	11	228	527	20

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	787	274	547	0	-	0
Stage 1	537	-	-	-	-	-
Stage 2	250	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	344	724	1020	-	-	-
Stage 1	551	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	340	724	1020	-	-	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	544	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	12.2	0.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1020	-	584	-	-
HCM Lane V/C Ratio	0.011	-	0.149	-	-
HCM Control Delay (s)	8.6	0	12.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.5	-	-

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Configurations												
Traffic Volume (vph)	12	241	144	73	229	26	59	115	20	18	219	26
Future Volume (vph)	12	241	144	73	229	26	59	115	20	18	219	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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		0.97			0.98			0.99			0.99	
Frt		0.946			0.989			0.986			0.987	
Flt Protected		0.998			0.989			0.985			0.997	
Satd. Flow (prot)	0	3061	0	0	1704	0	0	1669	0	0	1697	0
Flt Permitted		0.939			0.808			0.730			0.969	
Satd. Flow (perm)	0	2875	0	0	1383	0	0	1229	0	0	1646	0
Right Turn on Red			No			No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	81		41	41		81	29		56	56		29
Confl. Bikes (#/hr)			1			1			2			2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	0%	5%	5%	0%	5%	12%	9%	5%	5%	6%	6%	4%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	427	0	0	352	0	0	209	0	0	282	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			25			6	
Permitted Phases		4			8			25			6	
Minimum Split (s)	43.0	43.0		43.0	43.0						38.0	38.0
Total Split (s)	43.0	43.0		43.0	43.0						38.0	38.0
Total Split (%)	47.8%	47.8%		47.8%	47.8%						42.2%	42.2%
Yellow Time (s)	3.0	3.0		3.0	3.0						3.0	3.0
All-Red Time (s)	4.0	4.0		4.0	4.0						5.0	5.0
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		7.0			7.0						8.0	
Lead/Lag											Lag	Lag
Lead-Lag Optimize?											Yes	Yes
Act Effct Green (s)		36.0			36.0			39.0			30.0	
Actuated g/C Ratio		0.40			0.40			0.43			0.33	
v/c Ratio		0.37			0.64			0.39			0.51	
Control Delay		20.2			15.8			20.2			28.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		20.2			15.8			20.2			28.2	
LOS		C			B			C			C	
Approach Delay		20.2			15.8			20.2			28.2	
Approach LOS		C			B			C			C	
Queue Length 50th (ft)		87			121			79			128	
Queue Length 95th (ft)		126			266			137			205	
Internal Link Dist (ft)		60			1075			193			654	

Lane Group	Ø2	Ø5
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	5
Permitted Phases		
Minimum Split (s)	40.0	8.0
Total Split (s)	47.0	9.0
Total Split (%)	52%	10%
Yellow Time (s)	3.0	3.5
All-Red Time (s)	5.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1150				553			532			548	
Starvation Cap Reductn	0				0			0			0	
Spillback Cap Reductn	0				0			0			0	
Storage Cap Reductn	0				0			0			0	
Reduced v/c Ratio	0.37				0.64			0.39			0.51	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 20.8

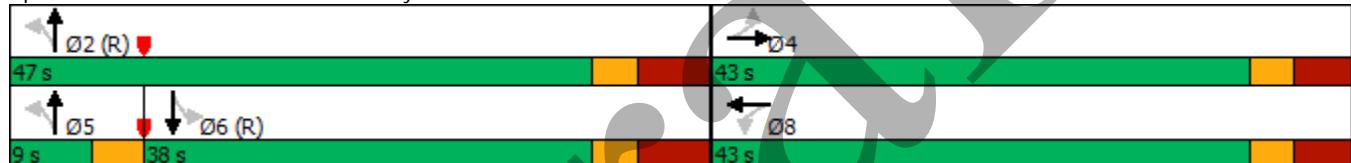
Intersection LOS: C

Intersection Capacity Utilization 106.6%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 27: North Broadway & Addison Street



Lane Group	Ø2	Ø5
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Draft

Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Lane Configurations								
Traffic Volume (vph)	95	204	108	125	432	120		
Future Volume (vph)	95	204	108	125	432	120		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	11	11	12	12	11	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Ped Bike Factor	0.98	0.99		0.99	0.98			
Frt		0.850			0.967			
Flt Protected	0.950			0.977				
Satd. Flow (prot)	1616	1332	0	1551	3041	0		
Flt Permitted	0.950			0.540				
Satd. Flow (perm)	1586	1312	0	848	3041	0		
Right Turn on Red		No			No			
Satd. Flow (RTOR)								
Link Speed (mph)	30			30	30			
Link Distance (ft)	1155			396	503			
Travel Time (s)	26.3				9.0	11.4		
Confl. Peds. (#/hr)	14	3	32			32		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Heavy Vehicles (%)	8%	2%	1%	8%	9%	10%		
Parking (#/hr)		6		5		5		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	99	213	0	243	575	0		
Turn Type	Prot	Perm	Perm	NA	NA			
Protected Phases	4			25	6		2	5
Permitted Phases		4	25					
Minimum Split (s)	38.0	38.0			37.0		37.0	10.0
Total Split (s)	38.0	38.0			37.0		37.0	15.0
Total Split (%)	42.2%	42.2%			41.1%		41%	17%
Yellow Time (s)	3.0	3.0			3.0		3.0	3.0
All-Red Time (s)	1.0	1.0			7.0		7.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0			
Total Lost Time (s)	4.0	4.0			10.0			
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	34.0	34.0		42.0	27.0			
Actuated g/C Ratio	0.38	0.38		0.47	0.30			
v/c Ratio	0.16	0.43		0.62	0.63			
Control Delay	10.8	13.3		26.2	30.9			
Queue Delay	0.0	0.0		0.0	0.0			
Total Delay	10.8	13.3		26.2	30.9			
LOS	B	B		C	C			
Approach Delay	12.5			26.2	30.9			
Approach LOS	B			C	C			
Queue Length 50th (ft)	17	38		99	147			
Queue Length 95th (ft)	32	60		187	204			
Internal Link Dist (ft)	1075			316	423			
Turn Bay Length (ft)								
Base Capacity (vph)	610	495		395	912			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Starvation Cap Reductn	0	0		0	0			
Spillback Cap Reductn	0	0		0	0			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.16	0.43		0.62	0.63			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 85

Control Type: Pretimed

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 24.8

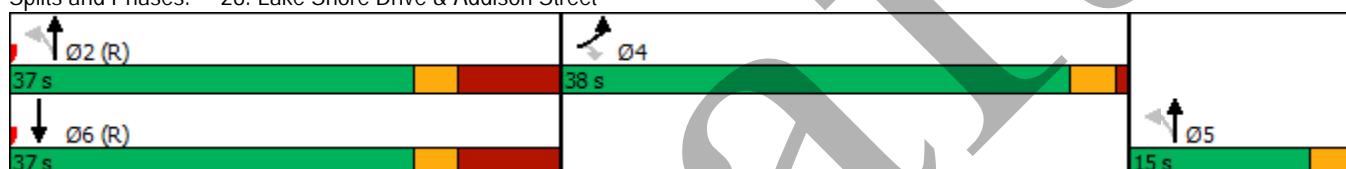
Intersection LOS: C

Intersection Capacity Utilization 83.4%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 28: Lake Shore Drive & Addison Street



Intersection

Int Delay, s/veh 3.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑				↗	
Traffic Vol, veh/h	81	0	0	0	0	52
Future Vol, veh/h	81	0	0	0	0	52
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	16983	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	88	0	0	0	0	57

Major/Minor Major1 Minor1

Conflicting Flow All	0	-	-	88
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	-	3.318
Pot Cap-1 Maneuver	-	0	0	970
Stage 1	-	0	0	-
Stage 2	-	0	0	-
Platoon blocked, %	-			
Mov Cap-1 Maneuver	-	-	-	970
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach EB NB

HCM Control Delay, s	0	8.9
HCM LOS		A

Minor Lane/Major Mvmt NBLn1 EBT

Capacity (veh/h)	970	-
HCM Lane V/C Ratio	0.058	-
HCM Control Delay (s)	8.9	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Capacity Analysis Summary Reports
Evening Peak Hour – Projected Conditions

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Lane Configurations	↑	↑				↔			↑	↑	↑	↑
Traffic Volume (vph)	55	29	29	25	47	50	19	29	213	5	165	227
Future Volume (vph)	55	29	29	25	47	50	19	29	213	5	165	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	10	12	10	10	10	10	13
Storage Length (ft)	0	25			25		0	50			50	
Storage Lanes	1	1			0		0	1			1	
Taper Length (ft)	25				25			80			90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.89	0.63				0.81		0.63		0.74	0.84	
Frт		0.850				0.982				0.850		
Flt Protected	0.950					0.975		0.950			0.950	
Satd. Flow (prot)	1620	1223	0	0	0	1271	0	1685	1498	1483	1560	1584
Flt Permitted	0.666					0.975		0.613			0.950	
Satd. Flow (perm)	1005	775	0	0	0	1054	0	680	1498	1094	1314	1584
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		109				9			97			
Link Speed (mph)						30		30			30	
Link Distance (ft)						173		774			546	
Travel Time (s)						3.9		17.6			12.4	
Confl. Peds. (#/hr)	94	100	109	100	109		103	275		100	100	
Confl. Bikes (#/hr)		11	11				9			26		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	4%	0%	7%	0%	0%	6%	0%	0%	3%	0%	8%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	4	0	0
Parking (#/hr)		12				23			6			9
Shared Lane Traffic (%)												
Lane Group Flow (vph)	57	60	0	0	0	146	0	30	220	5	170	234
Turn Type	Perm	Perm		Perm	Perm	NA		Perm	NA	Perm	custom	NA
Protected Phases						8			2		6	26
Permitted Phases	4	4		8	8			2		2	6	
Detector Phase	4	4		8	8	8		2	2	2	6	26
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		9.0	9.0	9.0	17.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%	36.7%		30.0%	30.0%	30.0%	33.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		3.0	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)	5.0	5.0				5.0		6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max	Max		Max	Max	Max	C-Max	
Act Effct Green (s)	28.0	28.0				28.0		21.0	21.0	21.0	24.0	51.0
Actuated g/C Ratio	0.31	0.31				0.31		0.23	0.23	0.23	0.27	0.57
v/c Ratio	0.18	0.19				0.44		0.19	0.63	0.02	0.41	0.26
Control Delay	24.7	2.3			23.9		31.4	40.2	0.0	30.8	10.9	
Queue Delay	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

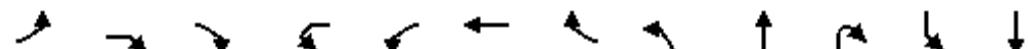


Lane Group	SBR	NWL2	NWL	NWR
Lane Configurations	1	1	1	1
Traffic Volume (vph)	20	1	15	204
Future Volume (vph)	20	1	15	204
Ideal Flow (vphpl)	1900	1900	1900	1900
Lane Width (ft)	8	12	9	10
Storage Length (ft)	25		115	0
Storage Lanes	1		1	1
Taper Length (ft)			25	
Lane Util. Factor	1.00	1.00	1.00	1.00
Ped Bike Factor	0.46		0.58	
Fr1	0.850			0.850
Flt Protected			0.950	
Satd. Flow (prot)	1400	0	1624	1396
Flt Permitted			0.626	
Satd. Flow (perm)	650	0	619	1396
Right Turn on Red	Yes			
Satd. Flow (RTOR)	24			
Link Speed (mph)			30	
Link Distance (ft)			844	
Travel Time (s)			19.2	
Confl. Peds. (#/hr)	275	109	275	103
Confl. Bikes (#/hr)	26			22
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	8%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)	21	0	16	210
Turn Type	Perm	Perm	Perm	Prot
Protected Phases				10
Permitted Phases	2	6	10	10
Detector Phase	2	6	10	10
Switch Phase				
Minimum Initial (s)		17.0	17.0	17.0
Minimum Split (s)		30.0	30.0	30.0
Total Split (s)		30.0	30.0	30.0
Total Split (%)		33.3%	33.3%	33.3%
Yellow Time (s)		3.0	3.0	3.0
All-Red Time (s)		3.0	3.0	3.0
Lost Time Adjust (s)			0.0	0.0
Total Lost Time (s)			6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	C-Max	
Act Effct Green (s)	51.0		24.0	24.0
Actuated g/C Ratio	0.57		0.27	0.27
v/c Ratio	0.06		0.10	0.56
Control Delay	3.6		26.8	35.4
Queue Delay	0.0		0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Total Delay	24.7	2.3				23.9		31.4	40.2	0.0	30.8	10.9
LOS	C	A				C		C	D	A	C	B
Approach Delay						23.9			38.4			18.5
Approach LOS						C			D			B
Queue Length 50th (ft)	24	0				58		14	113	0	80	63
Queue Length 95th (ft)	54	7				113		39	190	0	139	105
Internal Link Dist (ft)						93			694			466
Turn Bay Length (ft)		25						50		75		50
Base Capacity (vph)	312	316				334		158	349	329	416	897
Starvation Cap Reductn	0	0				0		0	0	0	0	0
Spillback Cap Reductn	0	0				0		0	0	0	0	0
Storage Cap Reductn	0	0				0		0	0	0	0	0
Reduced v/c Ratio	0.18	0.19				0.44		0.19	0.63	0.02	0.41	0.26

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 69 (77%), Referenced to phase 6:SBTL and 10:NWL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 26.1

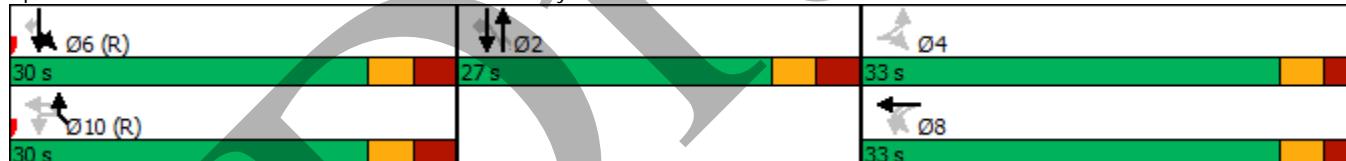
Intersection LOS: C

Intersection Capacity Utilization 96.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 2: Halsted Street & North Broadway & Grace Street





Lane Group	SBR	NWL2	NWL	NWR
Total Delay	3.6	26.8	35.4	
LOS	A	C	D	
Approach Delay		34.8		
Approach LOS		C		
Queue Length 50th (ft)	0	7	103	
Queue Length 95th (ft)	9	24	177	
Internal Link Dist (ft)		764		
Turn Bay Length (ft)	25	115		
Base Capacity (vph)	378	165	372	
Starvation Cap Reductn	0	0	0	
Spillback Cap Reductn	0	0	0	
Storage Cap Reductn	0	0	0	
Reduced v/c Ratio	0.06	0.10	0.56	
Intersection Summary				

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018

Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Lane Configurations							
Traffic Volume (vph)	77	357	385	0	0	52	
Future Volume (vph)	77	357	385	0	0	52	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			0	0	65	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	
Ped Bike Factor	0.98						
Fr _t					0.850		
Flt Protected	0.950						
Satd. Flow (prot)	1543	1776	1881	0	0	2369	
Flt Permitted							
Satd. Flow (perm)	1588	1776	1881	0	0	2369	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						834	
Link Speed (mph)		30	30		30		
Link Distance (ft)		112	148		213		
Travel Time (s)		2.5	3.4		4.8		
Confl. Peds. (#/hr)	77			77			
Confl. Bikes (#/hr)				2		1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	
Heavy Vehicles (%)	17%	7%	1%	0%	0%	20%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	79	368	397	0	0	54	
Turn Type	Perm	NA	NA			Prot	
Protected Phases	2 4 6		6		2	4	
Permitted Phases	2 4 6						
Minimum Split (s)			41.0		21.0	22.0	
Total Split (s)			41.0		27.0	22.0	
Total Split (%)			45.6%		30.0%	24%	
Yellow Time (s)			2.0		3.0	3.0	
All-Red Time (s)			1.0		2.0	2.0	
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			3.0		5.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	90.0	90.0	38.0		22.0		
Actuated g/C Ratio	1.00	1.00	0.42		0.24		
v/c Ratio	0.05	0.21	0.50		0.04		
Control Delay	0.1	0.4	21.8		0.1		
Queue Delay	0.0	0.0	0.0		0.0		
Total Delay	0.1	0.4	21.8		0.1		
LOS	A	A	C		A		
Approach Delay		0.4	21.8		0.1		
Approach LOS		A	C		A		
Queue Length 50th (ft)	0	0	161		0		
Queue Length 95th (ft)	0	6	245		0		
Internal Link Dist (ft)		32	68		133		

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018



Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Turn Bay Length (ft)							65
Base Capacity (vph)	1588	1776	794				1209
Starvation Cap Reductn	0	0	0				0
Spillback Cap Reductn	0	0	16				6
Storage Cap Reductn	0	0	0				0
Reduced v/c Ratio	0.05	0.21	0.51				0.04

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Pretimed

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 9.8

Intersection LOS: A

Intersection Capacity Utilization 43.4%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 16: Lake Shore Drive & Sheridan Road



Lanes, Volumes, Timings
17: Lake Shore Drive & Grace Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Lane Configurations								
Traffic Volume (vph)	14	7	32	420	340	97		
Future Volume (vph)	14	7	32	420	340	97		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	10	10	12	10		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00		
Ped Bike Factor	0.96				1.00	0.98		
Frt	0.957					0.970		
Flt Protected	0.967				0.997			
Satd. Flow (prot)	1344	0	0	2941	1746	0		
Flt Permitted	0.967				0.906			
Satd. Flow (perm)	1344	0	0	2664	1746	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	7				38			
Link Speed (mph)	30				30	30		
Link Distance (ft)	1129				149	112		
Travel Time (s)	25.7				3.4	2.5		
Confl. Peds. (#/hr)		77	114			114		
Confl. Bikes (#/hr)						3		
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Heavy Vehicles (%)	0%	0%	0%	8%	4%	0%		
Bus Blockages (#/hr)	0	0	0	5	0	0		
Parking (#/hr)	9	9		0				
Shared Lane Traffic (%)								
Lane Group Flow (vph)	22	0	0	471	455	0		
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2 6	2 6		2	6
Permitted Phases			2 6					
Minimum Split (s)	22.0						21.0	41.0
Total Split (s)	22.0						27.0	41.0
Total Split (%)	24.4%						30%	46%
Yellow Time (s)	3.0						3.0	2.0
All-Red Time (s)	2.0						2.0	1.0
Lost Time Adjust (s)	0.0							
Total Lost Time (s)	5.0							
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	17.0			63.0	63.0			
Actuated g/C Ratio	0.19			0.70	0.70			
v/c Ratio	0.08			0.25	0.37			
Control Delay	24.6			5.3	1.6			
Queue Delay	0.0			0.0	0.5			
Total Delay	24.6			5.3	2.1			
LOS	C			A	A			
Approach Delay	24.6			5.3	2.1			
Approach LOS	C			A	A			
Queue Length 50th (ft)	7			43	12			
Queue Length 95th (ft)	28			63	15			
Internal Link Dist (ft)	1049			69	32			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Turn Bay Length (ft)								
Base Capacity (vph)	259			1864	1233			
Starvation Cap Reductn	0			0	399			
Spillback Cap Reductn	0			1	0			
Storage Cap Reductn	0			0	0			
Reduced v/c Ratio	0.08			0.25	0.55			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Prettimed

Maximum v/c Ratio: 0.50

Intersection Signal Delay: 4.2

Intersection LOS: A

Intersection Capacity Utilization 58.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 17: Lake Shore Drive & Grace Street



Lanes, Volumes, Timings
21: Halsted Street & Waveland Avenue

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	73	43	26	20	9	39	246	84	23	246	32
Future Volume (vph)	32	73	43	26	20	9	39	246	84	23	246	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	10	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.84				0.83			0.98	0.87		0.97	
Frt		0.961				0.979			0.850		0.986	
Flt Protected		0.989				0.977			0.993		0.996	
Satd. Flow (prot)	0	1484	0	0	1467	0	0	1615	1291	0	1633	0
Flt Permitted		0.939				0.857		0.930			0.968	
Satd. Flow (perm)	0	1325	0	0	1127	0	0	1479	1121	0	1579	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)	28				9				88		14	
Link Speed (mph)	30				30			30			30	
Link Distance (ft)	559				320			111			774	
Travel Time (s)	12.7				7.3			2.5			17.6	
Confl. Peds. (#/hr)	178		211	211		178	307		129	129		307
Confl. Bikes (#/hr)		7				3			12			19
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	4%	9%	18%	14%	0%	3%	10%	1%	0%	8%	6%
Parking (#/hr)		7				7			7			7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	154	0	0	57	0	0	297	88	0	313	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (s)	26.0	26.0		26.0	26.0		49.0	49.0	49.0	49.0	49.0	
Total Split (%)	34.7%	34.7%		34.7%	34.7%		65.3%	65.3%	65.3%	65.3%	65.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)	0.0			0.0			0.0	0.0			0.0	
Total Lost Time (s)	4.0			4.0			4.0	4.0			4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	22.0			22.0			45.0	45.0		45.0		
Actuated g/C Ratio	0.29			0.29			0.60	0.60		0.60		
v/c Ratio	0.38			0.17			0.33	0.12		0.33		
Control Delay	20.3			18.9			8.8	2.1		8.3		
Queue Delay	0.0			0.0			0.0	0.0		0.0		
Total Delay	20.3			18.9			8.8	2.1		8.3		
LOS	C			B			A	A		A		
Approach Delay	20.3			18.9			7.3			8.3		
Approach LOS	C			B			A			A		
Queue Length 50th (ft)	46			16			62	0		62		
Queue Length 95th (ft)	96			44			106	16		106		
Internal Link Dist (ft)	479			240			31			694		
Turn Bay Length (ft)												



Lane Group	EBL	EBT	EBR	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	408			336			887	707		953	
Starvation Cap Reductn	0			0			0	0		0	
Spillback Cap Reductn	0			0			0	0		0	
Storage Cap Reductn	0			0			0	0		0	
Reduced v/c Ratio	0.38			0.17			0.33	0.12		0.33	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 25 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.38

Intersection Signal Delay: 10.6

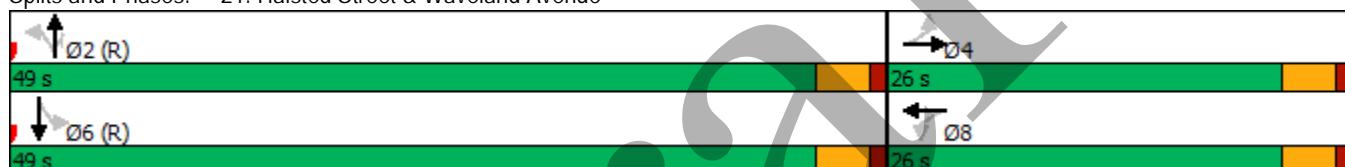
Intersection LOS: B

Intersection Capacity Utilization 103.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 21: Halsted Street & Waveland Avenue



Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Configurations												
Traffic Volume (vph)	27	272	124	44	271	32	95	206	46	91	162	26
Future Volume (vph)	27	272	124	44	271	32	95	206	46	91	162	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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												
Frt		0.956				0.988			0.982		0.987	
Flt Protected			0.997			0.994			0.987		0.984	
Satd. Flow (prot)	0	3055	0	0	1735	0	0	1664	0	0	1634	0
Flt Permitted						0.895			0.806		0.732	
Satd. Flow (perm)	0	2779	0	0	1543	0	0	1313	0	0	1166	0
Right Turn on Red				No		No			No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	136		158	158		136	143		276	276		143
Confl. Bikes (#/hr)			5			2			3			7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	0%	6%	0%	7%	8%	0%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	440	0	0	361	0	0	362	0	0	291	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	47.0	47.0		47.0	47.0		40.0	40.0		40.0	40.0	
Total Split (s)	47.0	47.0		47.0	47.0		43.0	43.0		43.0	43.0	
Total Split (%)	52.2%	52.2%		52.2%	52.2%		47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
Lost Time Adjust (s)	0.0			0.0			0.0			0.0		
Total Lost Time (s)	7.0			7.0			8.0			8.0		
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)	40.0			40.0			35.0			35.0		
Actuated g/C Ratio	0.44			0.44			0.39			0.39		
v/c Ratio	0.36			0.53			0.71			0.64		
Control Delay	17.5			6.6			32.4			30.3		
Queue Delay	0.0			0.0			0.0			0.0		
Total Delay	17.5			6.6			32.4			30.3		
LOS	B			A			C			C		
Approach Delay	17.5			6.6			32.4			30.3		
Approach LOS	B			A			C			C		
Queue Length 50th (ft)	84			28			170			132		
Queue Length 95th (ft)	121			m37			278			224		
Internal Link Dist (ft)	60			1075			193			654		

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1235			685			510			453		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.36			0.53			0.71			0.64		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 85 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.71

Intersection Signal Delay: 21.1

Intersection LOS: C

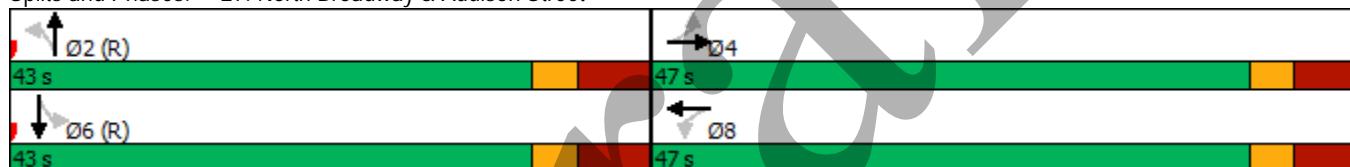
Intersection Capacity Utilization 93.6%

ICU Level of Service F

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Lane Configurations								
Traffic Volume (vph)	90	175	134	270	229	184		
Future Volume (vph)	90	175	134	270	229	184		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	12	12	11	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Ped Bike Factor	0.85	0.98		0.98	0.93			
Frt		0.850			0.933			
Flt Protected	0.950			0.984				
Satd. Flow (prot)	1574	1298	0	1519	2899	0		
Flt Permitted	0.950			0.715				
Satd. Flow (perm)	1344	1278	0	1077	2899	0		
Right Turn on Red		No			No			
Satd. Flow (RTOR)								
Link Speed (mph)	30			30	30			
Link Distance (ft)	1155			396	416			
Travel Time (s)	26.3				9.0	9.5		
Confl. Peds. (#/hr)	127	4	70		70			
Confl. Bikes (#/hr)		2			5			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Heavy Vehicles (%)	7%	1%	1%	11%	5%	4%		
Parking (#/hr)		6		5		5		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	94	182	0	421	431	0		
Turn Type	Prot	Perm	Perm	NA	NA			
Protected Phases	4			25	6		2	5
Permitted Phases		4	25					
Minimum Split (s)	43.0	43.0			34.0		34.0	10.0
Total Split (s)	43.0	43.0			34.0		34.0	13.0
Total Split (%)	47.8%	47.8%			37.8%		38%	14%
Yellow Time (s)	3.0	3.0			3.0		3.0	3.0
All-Red Time (s)	1.0	1.0			7.0		7.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0			
Total Lost Time (s)	4.0	4.0			10.0			
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	39.0	39.0		37.0	24.0			
Actuated g/C Ratio	0.43	0.43		0.41	0.27			
v/c Ratio	0.14	0.33		0.95	0.56			
Control Delay	10.8	12.8		60.5	31.7			
Queue Delay	0.0	0.0		0.0	0.0			
Total Delay	10.8	12.8		60.5	31.7			
LOS	B	B		E	C			
Approach Delay	12.1			60.5	31.7			
Approach LOS	B			E	C			
Queue Length 50th (ft)	25	49		226	111			
Queue Length 95th (ft)	m38	m75		#418	159			
Internal Link Dist (ft)	1075			316	336			
Turn Bay Length (ft)								

Lanes, Volumes, Timings

28: Lake Shore Drive & Addison Street

12/04/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Base Capacity (vph)	682	553		442	773			
Starvation Cap Reductn	0	0		0	0			
Spillback Cap Reductn	0	0		0	0			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.14	0.33		0.95	0.56			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 100

Control Type: Pretimed

Maximum v/c Ratio: 0.95

Intersection Signal Delay: 37.7

Intersection LOS: D

Intersection Capacity Utilization 94.1%

ICU Level of Service F

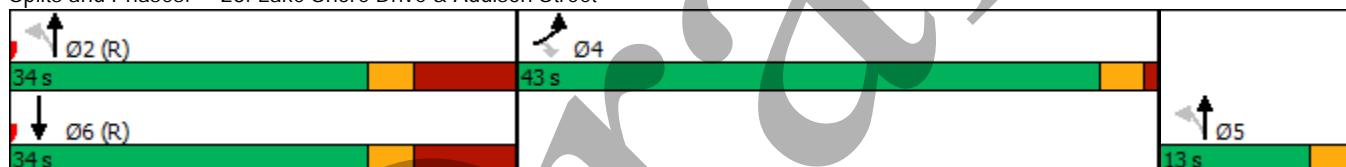
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 28: Lake Shore Drive & Addison Street



Intersection

Intersection Delay, s/veh 10.2

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	107	45	0	0	0	28	204	56	49	144	18
Future Vol, veh/h	19	107	45	0	0	0	28	204	56	49	144	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles, %	0	3	0	0	0	0	0	6	0	0	9	47
Mvmt Flow	21	118	49	0	0	0	31	224	62	54	158	20
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0
Approach												
Opposing Approach							NB			SB		
Opposing Lanes	0						1			1		
Conflicting Approach Left	SB						EB					
Conflicting Lanes Left	1						1			0		
Conflicting Approach Right	NB									EB		
Conflicting Lanes Right	1							0		1		
HCM Control Delay	9.8							10.6			9.9	
HCM LOS	A						B			A		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	10%	11%	23%
Vol Thru, %	71%	63%	68%
Vol Right, %	19%	26%	9%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	288	171	211
LT Vol	28	19	49
Through Vol	204	107	144
RT Vol	56	45	18
Lane Flow Rate	316	188	232
Geometry Grp	1	1	1
Degree of Util (X)	0.4	0.261	0.305
Departure Headway (Hd)	4.553	4.993	4.732
Convergence, Y/N	Yes	Yes	Yes
Cap	788	714	756
Service Time	2.605	3.056	2.787
HCM Lane V/C Ratio	0.401	0.263	0.307
HCM Control Delay	10.6	9.8	9.9
HCM Lane LOS	B	A	A
HCM 95th-tile Q	1.9	1	1.3

Intersection

Intersection Delay, s/veh 12.7

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	119	65	0	341	333	0
Future Vol, veh/h	119	65	0	341	333	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	0	1	0	11	4	0
Mvmt Flow	125	68	0	359	351	0
Number of Lanes	1	0	0	1	1	0
Approach	EB		NB	SB		
Opposing Approach			SB	NB		
Opposing Lanes	0		1	1		
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	1		1	0		
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay	11		13.5	12.8		
HCM LOS	B		B	B		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	65%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	35%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	341	184	333
LT Vol	0	119	0
Through Vol	341	0	333
RT Vol	0	65	0
Lane Flow Rate	359	194	351
Geometry Grp	1	1	1
Degree of Util (X)	0.513	0.3	0.491
Departure Headway (Hd)	5.143	5.573	5.044
Convergence, Y/N	Yes	Yes	Yes
Cap	704	645	719
Service Time	3.152	3.605	3.053
HCM Lane V/C Ratio	0.51	0.301	0.488
HCM Control Delay	13.5	11	12.8
HCM Lane LOS	B	B	B
HCM 95th-tile Q	3	1.3	2.7

Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	12	46	24	329	357	40
Future Vol, veh/h	12	46	24	329	357	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	13	50	26	358	388	43

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	820	216	431	0	-	0
Stage 1	410	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	328	789	1127	-	-	-
Stage 1	639	-	-	-	-	-
Stage 2	669	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	318	789	1127	-	-	-
Mov Cap-2 Maneuver	318	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	669	-	-	-	-	-

Approach	EB	NB	SB
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HCM Control Delay, s	11.7	0.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1127	-	604	-	-
HCM Lane V/C Ratio	0.023	-	0.104	-	-
HCM Control Delay (s)	8.3	0	11.7	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection

Int Delay, s/veh 2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑				↗	
Traffic Vol, veh/h	133	0	0	0	0	41
Future Vol, veh/h	133	0	0	0	0	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	16983	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	145	0	0	0	0	45

Major/Minor	Major1	Minor1
Conflicting Flow All	0	-
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	-
Pot Cap-1 Maneuver	-	0
Stage 1	-	0
Stage 2	-	0
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-

Approach	EB	NB
HCM Control Delay, s	0	9.2
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBT
Capacity (veh/h)	902	-
HCM Lane V/C Ratio	0.049	-
HCM Control Delay (s)	9.2	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.2	-

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	272	124	44	271	32	95	206	46	91	162	26
Future Volume (vph)	27	272	124	44	271	32	95	206	46	91	162	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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												
Frt												
Flt Protected												
Satd. Flow (prot)	0	3036	0	0	1732	0	0	1664	0	0	1632	0
Flt Permitted												
Satd. Flow (perm)	0	2758	0	0	1533	0	0	1233	0	0	1191	0
Right Turn on Red							No		No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	136		158	158		136	143		276	276		143
Confl. Bikes (#/hr)			5			2			3			7
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	0%	6%	0%	7%	8%	0%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	440	0	0	361	0	0	362	0	0	291	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			25			6	
Permitted Phases	4			8			25			6		
Minimum Split (s)	43.0	43.0		43.0	43.0						38.0	38.0
Total Split (s)	43.0	43.0		43.0	43.0						38.0	38.0
Total Split (%)	47.8%	47.8%		47.8%	47.8%						42.2%	42.2%
Yellow Time (s)	3.0	3.0		3.0	3.0						3.0	3.0
All-Red Time (s)	4.0	4.0		4.0	4.0						5.0	5.0
Lost Time Adjust (s)	0.0			0.0							0.0	
Total Lost Time (s)	7.0			7.0							8.0	
Lead/Lag											Lag	Lag
Lead-Lag Optimize?											Yes	Yes
Act Effct Green (s)	36.0			36.0			39.0				30.0	
Actuated g/C Ratio	0.40			0.40			0.43				0.33	
v/c Ratio	0.40			0.59			0.68				0.73	
Control Delay	20.6			6.5			28.3				39.3	
Queue Delay	0.0			0.0			0.0				0.0	
Total Delay	20.6			6.5			28.3				39.3	
LOS	C			A			C				D	
Approach Delay	20.6			6.5			28.3				39.3	
Approach LOS	C			A			C				D	
Queue Length 50th (ft)	92			35			160				145	
Queue Length 95th (ft)	132			m43			267			#266		
Internal Link Dist (ft)	60			1075			193				654	

Lane Group	Ø2	Ø5
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Lane Util. Factor		
Ped Bike Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Confl. Peds. (#/hr)		
Confl. Bikes (#/hr)		
Peak Hour Factor		
Heavy Vehicles (%)		
Bus Blockages (#/hr)		
Parking (#/hr)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Turn Type		
Protected Phases	2	5
Permitted Phases		
Minimum Split (s)	40.0	8.0
Total Split (s)	47.0	9.0
Total Split (%)	52%	10%
Yellow Time (s)	3.0	3.0
All-Red Time (s)	5.0	0.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	
Lead-Lag Optimize?	Yes	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1103			613			534			397		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.40			0.59			0.68			0.73		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 85 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 22.8

Intersection LOS: C

Intersection Capacity Utilization 93.6%

ICU Level of Service F

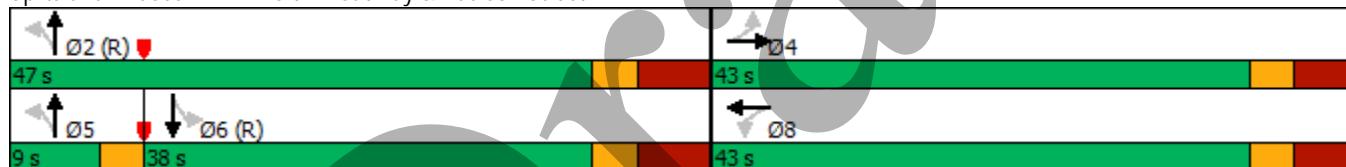
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lane Group	Ø2	Ø5
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		
Intersection Summary		

Draft

Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Lane Configurations								
Traffic Volume (vph)	90	175	134	270	229	184		
Future Volume (vph)	90	175	134	270	229	184		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	12	12	11	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Ped Bike Factor	0.82	0.98		0.98	0.93			
Frt		0.850			0.933			
Flt Protected	0.950			0.984				
Satd. Flow (prot)	1574	1298	0	1519	2899	0		
Flt Permitted	0.950			0.715				
Satd. Flow (perm)	1293	1277	0	1077	2899	0		
Right Turn on Red		No			No			
Satd. Flow (RTOR)								
Link Speed (mph)	30			30	30			
Link Distance (ft)	1155			396	503			
Travel Time (s)	26.3				9.0	11.4		
Confl. Peds. (#/hr)	127	4	70		70			
Confl. Bikes (#/hr)		2			5			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		
Heavy Vehicles (%)	7%	1%	1%	11%	5%	4%		
Parking (#/hr)		6		5		5		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	94	182	0	421	431	0		
Turn Type	Prot	Perm	Perm	NA	NA			
Protected Phases	4			25	6		2	5
Permitted Phases		4	25					
Minimum Split (s)	36.0	36.0			34.0		34.0	10.0
Total Split (s)	36.0	36.0			34.0		34.0	20.0
Total Split (%)	40.0%	40.0%			37.8%		38%	22%
Yellow Time (s)	3.0	3.0			3.0		3.0	3.0
All-Red Time (s)	1.0	1.0			7.0		7.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0			
Total Lost Time (s)	4.0	4.0			10.0			
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	32.0	32.0		44.0	24.0			
Actuated g/C Ratio	0.36	0.36		0.49	0.27			
v/c Ratio	0.17	0.40		0.80	0.56			
Control Delay	12.3	14.9		33.2	31.7			
Queue Delay	0.0	0.0		0.0	0.0			
Total Delay	12.3	14.9		33.2	31.7			
LOS	B	B		C	C			
Approach Delay	14.0			33.2	31.7			
Approach LOS	B			C	C			
Queue Length 50th (ft)	25	49		192	111			
Queue Length 95th (ft)	m40	m77		#368	159			
Internal Link Dist (ft)	1075			316	423			
Turn Bay Length (ft)								



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Base Capacity (vph)	559	454		526	773			
Starvation Cap Reductn	0	0		0	0			
Spillback Cap Reductn	0	0		0	0			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.17	0.40		0.80	0.56			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBTL and 6:SBT, Start of Green

Natural Cycle: 90

Control Type: Pretimed

Maximum v/c Ratio: 0.80

Intersection Signal Delay: 28.0

Intersection LOS: C

Intersection Capacity Utilization 88.3%

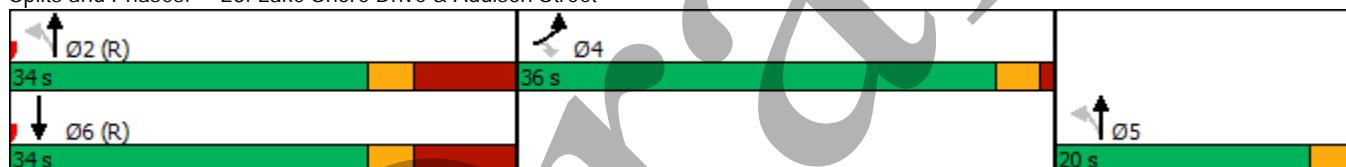
ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 28: Lake Shore Drive & Addison Street

Capacity Analysis Summary Reports

Evening Peak Hour (Game Day) – Projected Conditions

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	80	141	84	20	85	209	22	43	300	7	217	285
Future Volume (vph)	80	141	84	20	85	209	22	43	300	7	217	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	10	13
Storage Length (ft)	0	25			25		0	50			50	
Storage Lanes	1	1			0		0	1			1	
Taper Length (ft)	25				25			80			90	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor	0.94	0.73				0.91		0.72		0.83	0.91	
Fr _t		0.850				0.991				0.850		
Flt Protected		0.950				0.985		0.950			0.950	
Satd. Flow (prot)	1641	1312	0	0	0	1409	0	1626	1489	1589	1574	1499
Flt Permitted		0.463				0.985		0.580			0.950	
Satd. Flow (perm)	754	953	0	0	0	1296	0	714	1489	1316	1427	1499
Right Turn on Red			Yes				Yes			Yes		
Satd. Flow (RTOR)		109				4				97		
Link Speed (mph)						30		30			30	
Link Distance (ft)						173		774			546	
Travel Time (s)						3.9		17.6			12.4	
Confl. Peds. (#/hr)	74	67	92	67	92		74	197		67	67	
Confl. Bikes (#/hr)		2	2			3				8		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	3%	4%	0%	2%	3%	0%	11%	11%	0%	7%	12%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	4	0	0
Parking (#/hr)		12			23			6			9	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	82	232	0	0	0	347	0	44	309	7	224	294
Turn Type	Perm	Perm		Perm	Perm	NA		Perm	NA	Perm	custom	NA
Protected Phases						8			2		6	26
Permitted Phases	4	4		8	8			2		2	6	
Detector Phase	4	4		8	8	8		2	2	2	6	26
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0		9.0	9.0	9.0	17.0	
Minimum Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (s)	33.0	33.0		33.0	33.0	33.0		27.0	27.0	27.0	30.0	
Total Split (%)	36.7%	36.7%		36.7%	36.7%	36.7%		30.0%	30.0%	30.0%	33.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0		3.0	3.0	3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0		3.0	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)	5.0	5.0				5.0		6.0	6.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		Max	Max	Max		Max	Max	Max	C-Max	
Act Effct Green (s)	28.0	28.0				28.0		21.0	21.0	21.0	24.0	51.0
Actuated g/C Ratio	0.31	0.31				0.31		0.23	0.23	0.23	0.27	0.57
v/c Ratio	0.35	0.63				0.86		0.27	0.89	0.02	0.53	0.35
Control Delay	29.3	22.3				47.6		33.3	62.5	0.1	33.8	12.0
Queue Delay	0.0	0.0				0.0		0.0	0.0	0.0	0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018

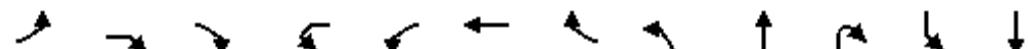


Lane Group	SBR	NWL2	NWL	NWR
Lane Configurations	↑	↑	↑	↑
Traffic Volume (vph)	26	1	20	229
Future Volume (vph)	26	1	20	229
Ideal Flow (vphpl)	1900	1900	1900	1900
Lane Width (ft)	8	12	9	10
Storage Length (ft)	25		115	0
Storage Lanes	1		1	1
Taper Length (ft)			25	
Lane Util. Factor	1.00	1.00	1.00	1.00
Ped Bike Factor	0.56		0.65	
Fr _t	0.850			0.850
Flt Protected			0.950	
Satd. Flow (prot)	1400	0	1624	1322
Flt Permitted			0.531	
Satd. Flow (perm)	782	0	594	1322
Right Turn on Red	Yes			
Satd. Flow (RTOR)	24			
Link Speed (mph)			30	
Link Distance (ft)			844	
Travel Time (s)			19.2	
Confl. Peds. (#/hr)	197	92	197	74
Confl. Bikes (#/hr)	20			9
Peak Hour Factor	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	0%	14%
Bus Blockages (#/hr)	0	0	0	0
Parking (#/hr)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)	27	0	22	236
Turn Type	Perm	Perm	Perm	Prot
Protected Phases				10
Permitted Phases	2	6	10	10
Detector Phase	2	6	10	10
Switch Phase				
Minimum Initial (s)		17.0	17.0	17.0
Minimum Split (s)		30.0	30.0	30.0
Total Split (s)		30.0	30.0	30.0
Total Split (%)		33.3%	33.3%	33.3%
Yellow Time (s)		3.0	3.0	3.0
All-Red Time (s)		3.0	3.0	3.0
Lost Time Adjust (s)			0.0	0.0
Total Lost Time (s)			6.0	6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	C-Max	
Act Effct Green (s)	51.0		24.0	24.0
Actuated g/C Ratio	0.57		0.27	0.27
v/c Ratio	0.06		0.14	0.67
Control Delay	4.3		28.0	40.3
Queue Delay	0.0		0.0	0.0

Lanes, Volumes, Timings

2: Halsted Street & North Broadway & Grace Street

12/04/2018



Lane Group	EBL	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR2	SBL	SBT
Total Delay	29.3	22.3				47.6		33.3	62.5	0.1	33.8	12.0
LOS	C	C				D		C	E	A	C	B
Approach Delay						47.6			57.8			20.5
Approach LOS						D			E			C
Queue Length 50th (ft)	36	57				170		21	171	0	109	84
Queue Length 95th (ft)	78	142				#340		52	#322	0	182	136
Internal Link Dist (ft)						93			694			466
Turn Bay Length (ft)						25		50		75		50
Base Capacity (vph)	234	371				405		166	347	381	419	849
Starvation Cap Reductn	0	0				0		0	0	0	0	0
Spillback Cap Reductn	0	0				0		0	0	0	0	0
Storage Cap Reductn	0	0				0		0	0	0	0	0
Reduced v/c Ratio	0.35	0.63				0.86		0.27	0.89	0.02	0.53	0.35

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 69 (77%), Referenced to phase 6:SBTL and 10:NWL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 36.3

Intersection LOS: D

Intersection Capacity Utilization 96.7%

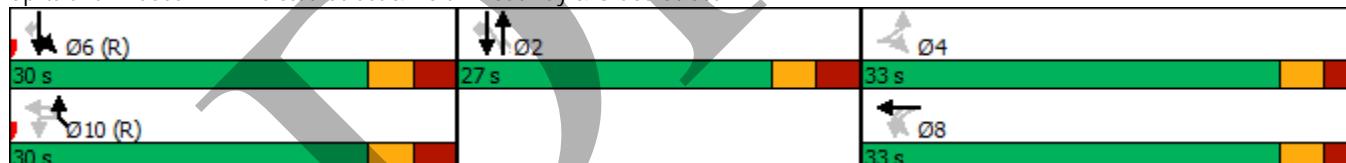
ICU Level of Service F

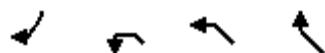
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 2: Halsted Street & North Broadway & Grace Street





Lane Group	SBR	NWL2	NWL	NWR
Total Delay	4.3	28.0	40.3	
LOS	A	C	D	
Approach Delay		39.3		
Approach LOS		D		
Queue Length 50th (ft)	1	10	120	
Queue Length 95th (ft)	12	30	#206	
Internal Link Dist (ft)		764		
Turn Bay Length (ft)	25	115		
Base Capacity (vph)	453	158	352	
Starvation Cap Reductn	0	0	0	
Spillback Cap Reductn	0	0	0	
Storage Cap Reductn	0	0	0	
Reduced v/c Ratio	0.06	0.14	0.67	
Intersection Summary				

Lanes, Volumes, Timings
16: Lake Shore Drive & Sheridan Road

12/04/2018

Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Lane Configurations							
Traffic Volume (vph)	62	348	618	0	0	64	
Future Volume (vph)	62	348	618	0	0	64	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0			0	0	65	
Storage Lanes	1			0	0	1	
Taper Length (ft)	25			25			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	0.88	
Ped Bike Factor	0.97						
Fr _t					0.850		
Flt Protected	0.950						
Satd. Flow (prot)	1456	1727	1863	0	0	2389	
Flt Permitted							
Satd. Flow (perm)	1491	1727	1863	0	0	2389	
Right Turn on Red				Yes		Yes	
Satd. Flow (RTOR)						688	
Link Speed (mph)	30	30		30			
Link Distance (ft)	112	148		213			
Travel Time (s)	2.5	3.4		4.8			
Confl. Peds. (#/hr)	96			96			
Confl. Bikes (#/hr)				2		1	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Heavy Vehicles (%)	24%	10%	2%	0%	0%	19%	
Shared Lane Traffic (%)							
Lane Group Flow (vph)	65	363	644	0	0	67	
Turn Type	Perm	NA	NA			Prot	
Protected Phases	2 4 6		6		2	4	
Permitted Phases	2 4 6						
Minimum Split (s)			41.0		21.0	22.0	
Total Split (s)			41.0		27.0	22.0	
Total Split (%)			45.6%		30.0%	24%	
Yellow Time (s)			2.0		3.0	3.0	
All-Red Time (s)			1.0		2.0	2.0	
Lost Time Adjust (s)			0.0		0.0		
Total Lost Time (s)			3.0		5.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	90.0	90.0	38.0		22.0		
Actuated g/C Ratio	1.00	1.00	0.42		0.24		
v/c Ratio	0.04	0.21	0.82		0.06		
Control Delay	0.0	0.4	33.4		0.1		
Queue Delay	0.0	0.0	8.7		0.0		
Total Delay	0.0	0.4	42.1		0.1		
LOS	A	A	D		A		
Approach Delay		0.3	42.1		0.1		
Approach LOS		A	D		A		
Queue Length 50th (ft)	0	0	315		0		
Queue Length 95th (ft)	0	4	#506		0		
Internal Link Dist (ft)	32	68		133			



Lane Group	NBL	NBT	SBT	SBR	SEL	SER	Ø4
Turn Bay Length (ft)							65
Base Capacity (vph)	1491	1727	786				1103
Starvation Cap Reductn	0	0	0				0
Spillback Cap Reductn	0	0	115				47
Storage Cap Reductn	0	0	0				0
Reduced v/c Ratio	0.04	0.21	0.96				0.06

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 85

Control Type: Pretimed

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 23.9

Intersection LOS: C

Intersection Capacity Utilization 43.5%

ICU Level of Service A

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 16: Lake Shore Drive & Sheridan Road



Lanes, Volumes, Timings

17: Lake Shore Drive & Grace Street

12/04/2018



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Lane Configurations								
Traffic Volume (vph)	18	12	39	392	382	300		
Future Volume (vph)	18	12	39	392	382	300		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	10	10	10	10	12	10		
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00		
Ped Bike Factor	0.96				1.00	0.94		
Frt	0.945					0.941		
Flt Protected	0.971				0.996			
Satd. Flow (prot)	1284	0	0	2823	1612	0		
Flt Permitted	0.971				0.857			
Satd. Flow (perm)	1284	0	0	2420	1612	0		
Right Turn on Red		Yes				Yes		
Satd. Flow (RTOR)	13				105			
Link Speed (mph)	30				30	30		
Link Distance (ft)	1129				149	112		
Travel Time (s)	25.7				3.4	2.5		
Confl. Peds. (#/hr)		61	167			167		
Confl. Bikes (#/hr)		1				5		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		
Heavy Vehicles (%)	6%	0%	10%	12%	6%	1%		
Bus Blockages (#/hr)	0	0	0	5	0	0		
Parking (#/hr)	9	9		0				
Shared Lane Traffic (%)								
Lane Group Flow (vph)	32	0	0	454	718	0		
Turn Type	Prot		Perm	NA	NA			
Protected Phases	4			2 6	2 6		2	6
Permitted Phases			2 6					
Minimum Split (s)	22.0					21.0	41.0	
Total Split (s)	22.0					27.0	41.0	
Total Split (%)	24.4%					30%	46%	
Yellow Time (s)	3.0					3.0	2.0	
All-Red Time (s)	2.0					2.0	1.0	
Lost Time Adjust (s)	0.0							
Total Lost Time (s)	5.0							
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	17.0			63.0	63.0			
Actuated g/C Ratio	0.19			0.70	0.70			
v/c Ratio	0.13			0.27	0.62			
Control Delay	22.6			5.5	4.8			
Queue Delay	0.0			0.0	4.3			
Total Delay	22.6			5.5	9.1			
LOS	C			A	A			
Approach Delay	22.6			5.5	9.1			
Approach LOS	C			A	A			
Queue Length 50th (ft)	9			43	61			
Queue Length 95th (ft)	34			62	m94			
Internal Link Dist (ft)	1049			69	32			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø6
Turn Bay Length (ft)								
Base Capacity (vph)	253			1694	1159			
Starvation Cap Reductn	0			0	354			
Spillback Cap Reductn	0			0	0			
Storage Cap Reductn	0			0	0			
Reduced v/c Ratio	0.13			0.27	0.89			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 36 (40%), Referenced to phase 2:NBT, Start of Green

Natural Cycle: 85

Control Type: Prewimed

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 8.1

Intersection LOS: A

Intersection Capacity Utilization 64.2%

ICU Level of Service C

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 17: Lake Shore Drive & Grace Street



Lanes, Volumes, Timings
21: Halsted Street & Waveland Avenue

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	78	78	30	66	20	78	323	68	31	321	73
Future Volume (vph)	41	78	78	30	66	20	78	323	68	31	321	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	10	10	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.946				0.977				0.850		0.977
Flt Protected			0.990			0.987			0.990			0.996
Satd. Flow (prot)	0	1256	0	0	1428	0	0	1573	1266	0	1555	0
Flt Permitted						0.890			0.842			0.952
Satd. Flow (perm)	0	1084	0	0	1184	0	0	1303	1040	0	1478	0
Right Turn on Red				Yes			Yes			Yes		Yes
Satd. Flow (RTOR)		45			14				51		25	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		559			320			111			774	
Travel Time (s)		12.7			7.3			2.5			17.6	
Confl. Peds. (#/hr)	261		290	290		261	338		175	175		338
Confl. Bikes (#/hr)			17			11			29			21
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	5%	13%	7%	33%	10%	0%	6%	13%	3%	6%	11%	1%
Parking (#/hr)			7			7			7			7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	222	0	0	130	0	0	451	76	0	478	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Minimum Split (s)	26.0	26.0	26.0	26.0		49.0	49.0	49.0	49.0	49.0	49.0	
Total Split (s)	26.0	26.0	26.0	26.0		49.0	49.0	49.0	49.0	49.0	49.0	
Total Split (%)	34.7%	34.7%	34.7%	34.7%		65.3%	65.3%	65.3%	65.3%	65.3%	65.3%	
Yellow Time (s)	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0		0.0	
Total Lost Time (s)		4.0			4.0			4.0	4.0		4.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		22.0			22.0			45.0	45.0		45.0	
Actuated g/C Ratio		0.29			0.29			0.60	0.60		0.60	
v/c Ratio		0.64			0.36			0.58	0.12		0.53	
Control Delay		27.8			22.2			12.9	3.5		11.0	
Queue Delay		0.0			0.0			0.0	0.0		0.0	
Total Delay		27.8			22.2			12.9	3.5		11.0	
LOS		C			C			B	A		B	
Approach Delay		27.8			22.2			11.5			11.0	
Approach LOS		C			C			B			B	
Queue Length 50th (ft)		70			42			115	4		110	
Queue Length 95th (ft)		144			87			195	20		183	
Internal Link Dist (ft)		479			240			31			694	
Turn Bay Length (ft)												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Base Capacity (vph)	349			357			781	644		896		
Starvation Cap Reductn	0			0			0	0		0		
Spillback Cap Reductn	0			0			0	0		0		
Storage Cap Reductn	0			0			0	0		0		
Reduced v/c Ratio	0.64				0.36			0.58	0.12		0.53	

Intersection Summary

Area Type: Other

Cycle Length: 75

Actuated Cycle Length: 75

Offset: 25 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green

Natural Cycle: 75

Control Type: Pretimed

Maximum v/c Ratio: 0.64

Intersection Signal Delay: 15.0

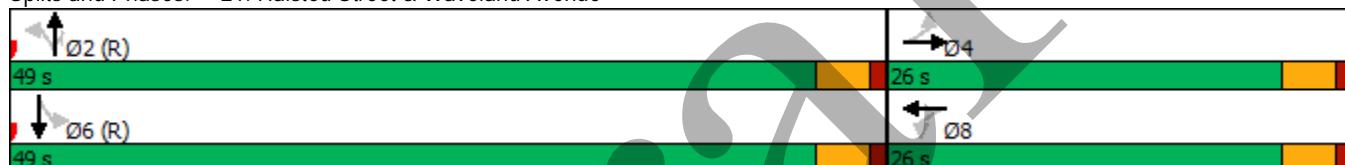
Intersection LOS: B

Intersection Capacity Utilization 103.3%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 21: Halsted Street & Waveland Avenue



Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	242	50	71	338	34	87	283	55	53	265	22
Future Volume (vph)	26	242	50	71	338	34	87	283	55	53	265	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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												
Frt												
Flt Protected												
Satd. Flow (prot)	0	3008	0	0	1692	0	0	1570	0	0	1639	0
Flt Permitted												
Satd. Flow (perm)	0	2671	0	0	1454	0	0	1238	0	0	1387	0
Right Turn on Red							No		No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	233		259	259		233	206		310	310		206
Confl. Bikes (#/hr)			5			6			31			17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	8%	6%	0%	5%	6%	2%	14%	0%	2%	9%	9%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	335	0	0	467	0	0	448	0	0	358	0
Turn Type	Perm	NA										
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	47.0	47.0		47.0	47.0		40.0	40.0		40.0	40.0	
Total Split (s)	47.0	47.0		47.0	47.0		43.0	43.0		43.0	43.0	
Total Split (%)	52.2%	52.2%		52.2%	52.2%		47.8%	47.8%		47.8%	47.8%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0		5.0	5.0		5.0	5.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		7.0			7.0			8.0			8.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		40.0			40.0			35.0			35.0	
Actuated g/C Ratio		0.44			0.44			0.39			0.39	
v/c Ratio		0.28			0.72			0.93			0.66	
Control Delay		16.7			6.3			55.6			29.9	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		16.7			6.3			55.6			29.9	
LOS	B		A		E			C				
Approach Delay		16.7			6.3			55.6			29.9	
Approach LOS		B			A			E			C	
Queue Length 50th (ft)		61			253			239			164	
Queue Length 95th (ft)		92			m30			#431			266	
Internal Link Dist (ft)		60			1075			193			654	

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1187			646			481			539		
Starvation Cap Reductn	0			0			0			0		
Spillback Cap Reductn	0			0			0			0		
Storage Cap Reductn	0			0			0			0		
Reduced v/c Ratio	0.28			0.72			0.93			0.66		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 85 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 27.4

Intersection LOS: C

Intersection Capacity Utilization 120.1%

ICU Level of Service H

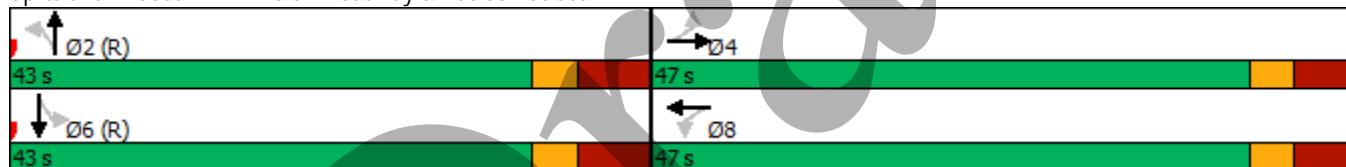
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Lane Configurations								
Traffic Volume (vph)	103	205	220	226	243	234		
Future Volume (vph)	103	205	220	226	243	234		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900		
Lane Width (ft)	11	11	12	12	11	12		
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95		
Ped Bike Factor	0.82	0.98		0.95	0.88			
Frt		0.850			0.926			
Flt Protected	0.950			0.976				
Satd. Flow (prot)	1558	1306	0	1480	2688	0		
Flt Permitted	0.950			0.550				
Satd. Flow (perm)	1285	1282	0	793	2688	0		
Right Turn on Red		No			No			
Satd. Flow (RTOR)								
Link Speed (mph)	30			30	30			
Link Distance (ft)	1155			396	415			
Travel Time (s)	26.3				9.0	9.4		
Confl. Peds. (#/hr)	152	4	117			117		
Confl. Bikes (#/hr)		7				5		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Heavy Vehicles (%)	12%	4%	2%	17%	8%	4%		
Parking (#/hr)		6		5		5		
Shared Lane Traffic (%)								
Lane Group Flow (vph)	114	228	0	495	530	0		
Turn Type	Prot	Perm	Perm	NA	NA			
Protected Phases	4			2	5		2	5
Permitted Phases		4	25					
Minimum Split (s)	43.0	43.0			34.0		34.0	10.0
Total Split (s)	43.0	43.0			34.0		34.0	13.0
Total Split (%)	47.8%	47.8%			37.8%		38%	14%
Yellow Time (s)	3.0	3.0			3.0		3.0	3.0
All-Red Time (s)	1.0	1.0			7.0		7.0	0.0
Lost Time Adjust (s)	0.0	0.0			0.0			
Total Lost Time (s)	4.0	4.0			10.0			
Lead/Lag								
Lead-Lag Optimize?								
Act Effct Green (s)	39.0	39.0		37.0	24.0			
Actuated g/C Ratio	0.43	0.43		0.41	0.27			
v/c Ratio	0.17	0.41		1.52	0.74			
Control Delay	10.6	13.1		273.5	37.4			
Queue Delay	0.0	0.0		0.0	0.0			
Total Delay	10.6	13.1		273.5	37.4			
LOS	B	B		F	D			
Approach Delay	12.3			273.5	37.4			
Approach LOS	B			F	D			
Queue Length 50th (ft)	27	58		~397	144			
Queue Length 95th (ft)	m41	m84		#586	204			
Internal Link Dist (ft)	1075			316	335			
Turn Bay Length (ft)								



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2	Ø5
Base Capacity (vph)	675	555		326	716			
Starvation Cap Reductn	0	0		0	0			
Spillback Cap Reductn	0	0		0	0			
Storage Cap Reductn	0	0		0	0			
Reduced v/c Ratio	0.17	0.41		1.52	0.74			

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 150

Control Type: Pretimed

Maximum v/c Ratio: 1.52

Intersection Signal Delay: 116.6

Intersection LOS: F

Intersection Capacity Utilization 96.6%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

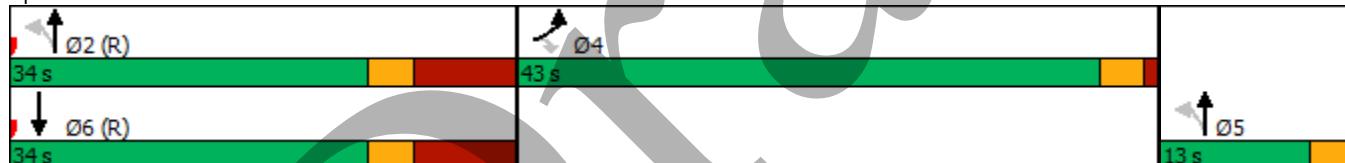
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 28: Lake Shore Drive & Addison Street



Intersection

Intersection Delay, s/veh 14.3

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	109	60	0	0	0	76	232	68	74	276	23
Future Vol, veh/h	22	109	60	0	0	0	76	232	68	74	276	23
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	9	11	5	0	0	0	1	15	2	2	8	32
Mvmt Flow	24	118	65	0	0	0	83	252	74	80	300	25
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0
Approach												
Opposing Approach							NB			SB		
Opposing Lanes	0						1			1		
Conflicting Approach Left	SB						EB					
Conflicting Lanes Left	1						1			0		
Conflicting Approach Right	NB									EB		
Conflicting Lanes Right	1							0		1		
HCM Control Delay	11.9							14.7			15	
HCM LOS	B						B			B		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	20%	12%	20%
Vol Thru, %	62%	57%	74%
Vol Right, %	18%	31%	6%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	376	191	373
LT Vol	76	22	74
Through Vol	232	109	276
RT Vol	68	60	23
Lane Flow Rate	409	208	405
Geometry Grp	1	1	1
Degree of Util (X)	0.574	0.339	0.578
Departure Headway (Hd)	5.052	5.871	5.136
Convergence, Y/N	Yes	Yes	Yes
Cap	715	612	701
Service Time	3.082	3.91	3.167
HCM Lane V/C Ratio	0.572	0.34	0.578
HCM Control Delay	14.7	11.9	15
HCM Lane LOS	B	B	B
HCM 95th-tile Q	3.7	1.5	3.7

Intersection

Intersection Delay, s/veh 14.2

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	126	82	0	313	394	0
Future Vol, veh/h	126	82	0	313	394	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	1	2	0	15	6	0
Mvmt Flow	134	87	0	333	419	0
Number of Lanes	1	0	0	1	1	0
Approach	EB		NB	SB		
Opposing Approach			SB	NB		
Opposing Lanes	0		1	1		
Conflicting Approach Left	SB		EB			
Conflicting Lanes Left	1		1	0		
Conflicting Approach Right	NB			EB		
Conflicting Lanes Right	1		0	1		
HCM Control Delay	11.8		13.8	15.7		
HCM LOS	B		B	C		

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	61%	0%
Vol Thru, %	100%	0%	100%
Vol Right, %	0%	39%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	313	208	394
LT Vol	0	126	0
Through Vol	313	0	394
RT Vol	0	82	0
Lane Flow Rate	333	221	419
Geometry Grp	1	1	1
Degree of Util (X)	0.5	0.351	0.601
Departure Headway (Hd)	5.41	5.707	5.158
Convergence, Y/N	Yes	Yes	Yes
Cap	666	631	700
Service Time	3.441	3.745	3.187
HCM Lane V/C Ratio	0.5	0.35	0.599
HCM Control Delay	13.8	11.8	15.7
HCM Lane LOS	B	B	C
HCM 95th-tile Q	2.8	1.6	4

Intersection

Int Delay, s/veh 0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
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Lane Configurations						
Traffic Vol, veh/h	8	40	18	305	431	45
Future Vol, veh/h	8	40	18	305	431	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	9	43	20	332	468	49

Major/Minor	Minor2	Major1	Major2
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Conflicting Flow All	865	259	517	0	-	0
Stage 1	493	-	-	-	-	-
Stage 2	372	-	-	-	-	-
Critical Hdwy	6.63	6.93	4.13	-	-	-
Critical Hdwy Stg 1	5.83	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	2.219	-	-	-
Pot Cap-1 Maneuver	308	741	1047	-	-	-
Stage 1	580	-	-	-	-	-
Stage 2	696	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	301	741	1047	-	-	-
Mov Cap-2 Maneuver	301	-	-	-	-	-
Stage 1	567	-	-	-	-	-
Stage 2	696	-	-	-	-	-

Approach	EB	NB	SB
----------	----	----	----

HCM Control Delay, s	11.6	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1047	-	596	-	-
HCM Lane V/C Ratio	0.019	-	0.088	-	-
HCM Control Delay (s)	8.5	0	11.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection

Int Delay, s/veh 1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑				↗	
Traffic Vol, veh/h	170	0	0	0	0	28
Future Vol, veh/h	170	0	0	0	0	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	16983	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	185	0	0	0	0	30

Major/Minor	Major1	Minor1
Conflicting Flow All	0	-
Stage 1	-	-
Stage 2	-	-
Critical Hdwy	-	-
Critical Hdwy Stg 1	-	-
Critical Hdwy Stg 2	-	-
Follow-up Hdwy	-	-
Pot Cap-1 Maneuver	-	0
Stage 1	-	0
Stage 2	-	0
Platoon blocked, %	-	-
Mov Cap-1 Maneuver	-	-
Mov Cap-2 Maneuver	-	-
Stage 1	-	-
Stage 2	-	-
Approach	EB	NB
HCM Control Delay, s	0	9.4
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBT
Capacity (veh/h)	857	-
HCM Lane V/C Ratio	0.036	-
HCM Control Delay (s)	9.4	-
HCM Lane LOS	A	-
HCM 95th %tile Q(veh)	0.1	-

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group												
Lane Configurations												
Traffic Volume (vph)	26	242	50	71	338	34	87	283	55	51	265	22
Future Volume (vph)	26	242	50	71	338	34	87	283	55	51	265	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	11	12	12	11	12	12	11	12
Lane Util. Factor	0.95	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												
Frt												
Flt Protected												
Satd. Flow (prot)	0	2987	0	0	1687	0	0	1571	0	0	1638	0
Flt Permitted												
Satd. Flow (perm)	0	2653	0	0	1437	0	0	1198	0	0	1393	0
Right Turn on Red							No		No		No	
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		140			1155			273			734	
Travel Time (s)		3.2			26.3			6.2			16.7	
Confl. Peds. (#/hr)	233		259	259		233	206		310	310		206
Confl. Bikes (#/hr)			5			6			31			17
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	3%	8%	6%	0%	5%	6%	2%	14%	0%	2%	9%	9%
Bus Blockages (#/hr)	0	0	5	0	0	5	0	0	0	0	0	0
Parking (#/hr)			0			0			0			0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	335	0	0	467	0	0	448	0	0	356	0
Turn Type	Perm	NA		Perm	NA		custom	NA		Perm	NA	
Protected Phases		4			8			5	2	5		6
Permitted Phases	4			8			2			6		
Minimum Split (s)	42.0	42.0		42.0	42.0			8.0		39.0	39.0	
Total Split (s)	42.0	42.0		42.0	42.0			9.0		39.0	39.0	
Total Split (%)	46.7%	46.7%		46.7%	46.7%			10.0%		43.3%	43.3%	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
All-Red Time (s)	4.0	4.0		4.0	4.0			0.0		5.0	5.0	
Lost Time Adjust (s)		0.0			0.0					0.0		
Total Lost Time (s)		7.0			7.0					8.0		
Lead/Lag							Lead			Lag		Lag
Lead-Lag Optimize?							Yes			Yes		Yes
Act Effct Green (s)	35.0			35.0				40.0			31.0	
Actuated g/C Ratio	0.39			0.39				0.44			0.34	
v/c Ratio	0.32			0.84				0.84			0.74	
Control Delay	20.3			19.6				38.0			37.3	
Queue Delay	0.0			0.0				0.0			0.0	
Total Delay	20.3			19.6				38.0			37.3	
LOS	C			B				D			D	
Approach Delay	20.3			19.6				38.0			37.3	
Approach LOS	C			B				D			D	
Queue Length 50th (ft)	68			275				191			176	
Queue Length 95th (ft)	103			m336				#355			#307	
Internal Link Dist (ft)	60			1075				193			654	

Lane Group	Ø2
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Lane Util. Factor	
Ped Bike Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	2
Permitted Phases	
Minimum Split (s)	40.0
Total Split (s)	48.0
Total Split (%)	53%
Yellow Time (s)	3.0
All-Red Time (s)	5.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	

Lanes, Volumes, Timings
27: North Broadway & Addison Street

12/04/2018



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Bay Length (ft)												
Base Capacity (vph)	1031				558			536			479	
Starvation Cap Reductn	0				0			0			0	
Spillback Cap Reductn	0				0			0			0	
Storage Cap Reductn	0				0			0			0	
Reduced v/c Ratio	0.32				0.84			0.84			0.74	

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Prewimed

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 28.8

Intersection LOS: C

Intersection Capacity Utilization 112.2%

ICU Level of Service H

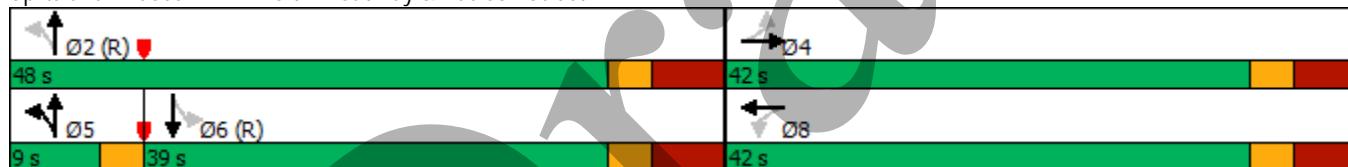
Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 27: North Broadway & Addison Street



Lane Group	Ø2
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Draft

Lanes, Volumes, Timings
28: Lake Shore Drive & Addison Street

12/04/2018

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Lane Configurations							
Traffic Volume (vph)	103	205	220	226	243	234	
Future Volume (vph)	103	205	220	226	243	234	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	11	11	9	12	11	12	
Storage Length (ft)	0	0	100		0		
Storage Lanes	1	1	0		0		
Taper Length (ft)	25		25				
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	0.95	
Ped Bike Factor	0.76	0.98		0.95	0.88		
Fr _t		0.850			0.926		
Flt Protected	0.950			0.976			
Satd. Flow (prot)	1558	1306	0	1481	2688	0	
Flt Permitted	0.950			0.564			
Satd. Flow (perm)	1177	1279	0	811	2688	0	
Right Turn on Red		No			No		
Satd. Flow (RTOR)							
Link Speed (mph)	30			30	30		
Link Distance (ft)	1155			396	503		
Travel Time (s)	26.3			9.0	11.4		
Confl. Peds. (#/hr)	152	4	117		117		
Confl. Bikes (#/hr)		7			5		
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	
Heavy Vehicles (%)	12%	4%	2%	17%	8%	4%	
Parking (#/hr)		6		5	5		
Shared Lane Traffic (%)							
Lane Group Flow (vph)	108	216	0	470	502	0	
Turn Type	Prot	Perm	custom	NA	NA		
Protected Phases	4			5	2		
Permitted Phases		4		2			
Minimum Split (s)	32.0	32.0	10.0		34.0	34.0	
Total Split (s)	32.0	32.0	24.0		34.0	34.0	
Total Split (%)	35.6%	35.6%	26.7%		37.8%	38%	
Yellow Time (s)	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	0.0		7.0	7.0	
Lost Time Adjust (s)	0.0	0.0			0.0		
Total Lost Time (s)	4.0	4.0			10.0		
Lead/Lag							
Lead-Lag Optimize?							
Act Effct Green (s)	28.0	28.0		38.0	24.0		
Actuated g/C Ratio	0.31	0.31		0.42	0.27		
v/c Ratio	0.22	0.54		1.05	0.70		
Control Delay	15.9	20.9		79.0	35.9		
Queue Delay	0.0	0.0		0.0	0.0		
Total Delay	15.9	20.9		79.0	35.9		
LOS	B	C		E	D		
Approach Delay	19.2			79.0	35.9		
Approach LOS	B			E	D		
Queue Length 50th (ft)	29	63		~191	135		



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR	Ø2
Queue Length 95th (ft)	m50	m101		#342	192		
Internal Link Dist (ft)	1075			316	423		
Turn Bay Length (ft)							
Base Capacity (vph)	484	397		446	716		
Starvation Cap Reductn	0	0		0	0		
Spillback Cap Reductn	0	0		0	0		
Storage Cap Reductn	0	0		0	0		
Reduced v/c Ratio	0.22	0.54		1.05	0.70		

Intersection Summary

Area Type: Other

Cycle Length: 90

Actuated Cycle Length: 90

Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBT, Start of Green

Natural Cycle: 110

Control Type: Pretimed

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 47.4

Intersection LOS: D

Intersection Capacity Utilization 87.4%

ICU Level of Service E

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 28: Lake Shore Drive & Addison Street

