Oak Park

Application for Public Hearing
SPECIAL USE PERMITS

YOU MUST PROVIDE THE FOLLOWING INFORMATION: IF ADDITIONAL SPACE IS NEEDED, ATTACH EXTRA PAGES TO THE PETITION.

Name of Business (If applicable): QuikTrip Store No. 4454

Address/Location of Property in Question: SE Corner of Harlem Avenue (IL Rte 43) & Garfield Street

Property Identification Number(s)(PIN): 16-18-300-003

Name of Property Owner(s): SEC Harlem Acquisition

Address of Property Owner(s): 714 Enterprise Dr. Ste 103, Oak Brook, IL 60523

E-Mail of Property Owner(s): operations@krohvan.com **Phone:** 708-340-6587

If Land Trust, name(s) of all beneficial owners: (A Certificate of Trust must be filed.) _____

_____

Name of Applicant(s): QuikTrip Corporation

Applicant's Address: 50 South Main Street Ste 200, Naperville, IL 60540

Applicant's Phone Number: 918-284-9456 E-Mail abukhres@quiktrip.com

Other: _____

Project Contact: (if Different than Applicant) Ali Buckhres, Real Estate Project Manager

Contact's Address: Same as above

Contact's Phone Number: Same as above E-Mail Same as above

Other: _____

Property Interest of Applicant: ____Owner ____Legal Representative __X__Contract Purchaser ____Other

(If Other - Describe): _____

Existing Zoning: GC **Describe Proposal:** Redevelopment of property to a convenience store with fuel offering.

_____

_____

_____

Size of Parcel (from Plat of Survey): 101,611 Square Feet
After alley vacation

Adjacent:	**Zoning Districts**	**Land Uses**
To the North:	*GC General Commercial*	*Car Dealership*
To the South:	*OS Open Space*	*City Park*
To the East:	*GC & R-3-50 Single Family*	*Childcare facility, single & multi-family*
To the West:	*Outside City Limits*	*Mixed use of commercial, single & multi-family*

How the property in question is currently improved?

☐ Residential ☒ Non-Residential ☐ Mixed Use ☐ OTHER: _____

Describe Improvement: *Commercial strip center and concrete batch plant*

Is the property in question currently in violation of the Zoning Ordinance? ____Yes __X__No

If *Yes*, how? _____

Is the property in question presently subject to a Special Use Permit? ____Yes __X__No

If *Yes*, how? _____

If *Yes*, please provide relevant Ordinance No.'s _____

Is the subject property located within any Historic District? ____ Yes __X__ No

If Yes: ☐ Frank Lloyd Wright ☐ Ridgeland/Oak Park ☐ Gunderson

From what Section(s) of the Zoning Ordinance are you requesting approval / relief?

Article: 14 **Section:** 2-3

Article: _____ **Section:** _____

Article: _____ **Section:** _____

Explain why, in your opinion, the grant of this request will be in harmony with the neighborhood and not contrary to the intent and purpose of the Zoning Ordinance or Comprehensive Plan;

The proposed QuikTrip is consistent with the Guiding Principles set forth in the Envision Oak Park Comprehensive Plan, and provides for a dramatic improvement over the strip center and long-defunct concrete batch plant that currently occupy the site. A brand-new facility, constructed with the latest technology and in accordance with Oak Park's requirements, will help maintain locally-based fiscal stability for years to come while simultaneously minimizing the impact of such development on the environment. As one of the country's largest privately-held companies, QuikTrip has the resources to both see the proposed development to fruition and to operate it in any economic climate. QuikTrip has the willingness and capability to foster a strong relationship with Oak Park and ensure a healthy spirit of collaboration and cooperation both within Oak Park and beyond its borders.

OWNER STATEMENT

I (we) certify that all the above statements and the statements contained in any papers or plans submitted herewith are true to the best of my (our) knowledge and belief.

I (we) consent to the entry in or upon the premises described in this application by any authorized official of the Village of Oak Park for the purpose of securing information, posting, maintaining and removing such notices as may be required by law.

Ali Bukhres

(Printed Name) Applicant

abukhres Digitally signed by abukhres DN: E=abukhres@qukhrg.com, CN=abukhres, OU=Com, OU=User Accounts, DC=QT, DC=qukhrg, DC=com Date: 2025.06.03 12:49:37-05'00'

(Signature) Applicant

6-3-2025

Date

SEC Harlem Acquisitions LLC

(Printed Name) Owner

as Managing Principal

(Signature) Owner

6/5/25

Date

Owner's Signature must be notarized

SUBSCRIBED AND SWORN TO BEFORE ME THIS

5th DAY OF June, 2025

(Notary Public)

OFFICIAL SEAL
SANDRA JEAN SULLIVAN
Notary Public, State of Illinois
Commission No. 992708
My Commission Expires
June 24, 2028

Updated August 2021

The recommendation of the Zoning Board of Appeals and decision of the Village Board must make findings to support each of the following conclusions:

1. **The establishment, maintenance, and operation of the proposed special use will not endanger the public health, safety, or welfare.**

   The proposed QuikTrip will be built and operated in accordance with all applicable state and local laws including those governing fuel storage and food safety. Accordingly, its establishment, maintenance and operation will not endanger public health, safety or welfare.

2. **The proposed special use is compatible with the general land use of adjacent properties and other property with the immediate vicinity.**

   QuikTrip's proposed special use is compatible with adjacent properties and those in the immediate vicinity which are largely commercial uses. The design and scale of the proposed QuikTrip store is appropriate for the lot and harmonious with the surrounding community's character.

3. **The special use in the specific location is consistent with the spirit and intent of this Ordinance and adopted land use policies.**

   The proposed QuikTrip will replace a deteriorated strip center and long-defunct concrete batch plant with a modern, attractive convenience store and fuel station. Improvement of underutilized property and contribution to Oak Park's economic health and vitality are both consistent with the Zoning Ordinance and community goals for land use as stated in the *Envision Oak Park* comprehensive plan.

4. **The special use conforms to the regulations of the zoning district in which it is to be located.**

   The proposed QuikTrip will be in conformance with regulations for the General Commercial ("GC") District in which it will be located including parking, signage, occupancy, and building code standards.



FILE LOCATION:C:\Civil 3D Projects\QT4454 Oak Park, IL\89-4454 Civil.dwg TAB NAME:Overall Plan Layout USER:dkhol SAVED:8/20/2025 9:46 AM PLOTTED:8/20/2025 9:47 AM

DARLA K. HOLMAN
062-072191
PROFESSIONAL ENGINEER
OF ILLINOIS
8/20/25

PROJECT NO.:84-4454

Midwest Design Group
Kansas City

PO Box 860015
Shawnee, KS 66286-0015
P 913.248.9385

QuikTrip No. 4454

821 S. HARLEM AVENUE
OAK PARK, COOK COUNTY, ILLINOIS 60304

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PROTOTYPE:	P-122
DIVISION:	84
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 08/20/2025

SHEET TITLE:

OVERALL SITE PLAN

SHEET NUMBER:

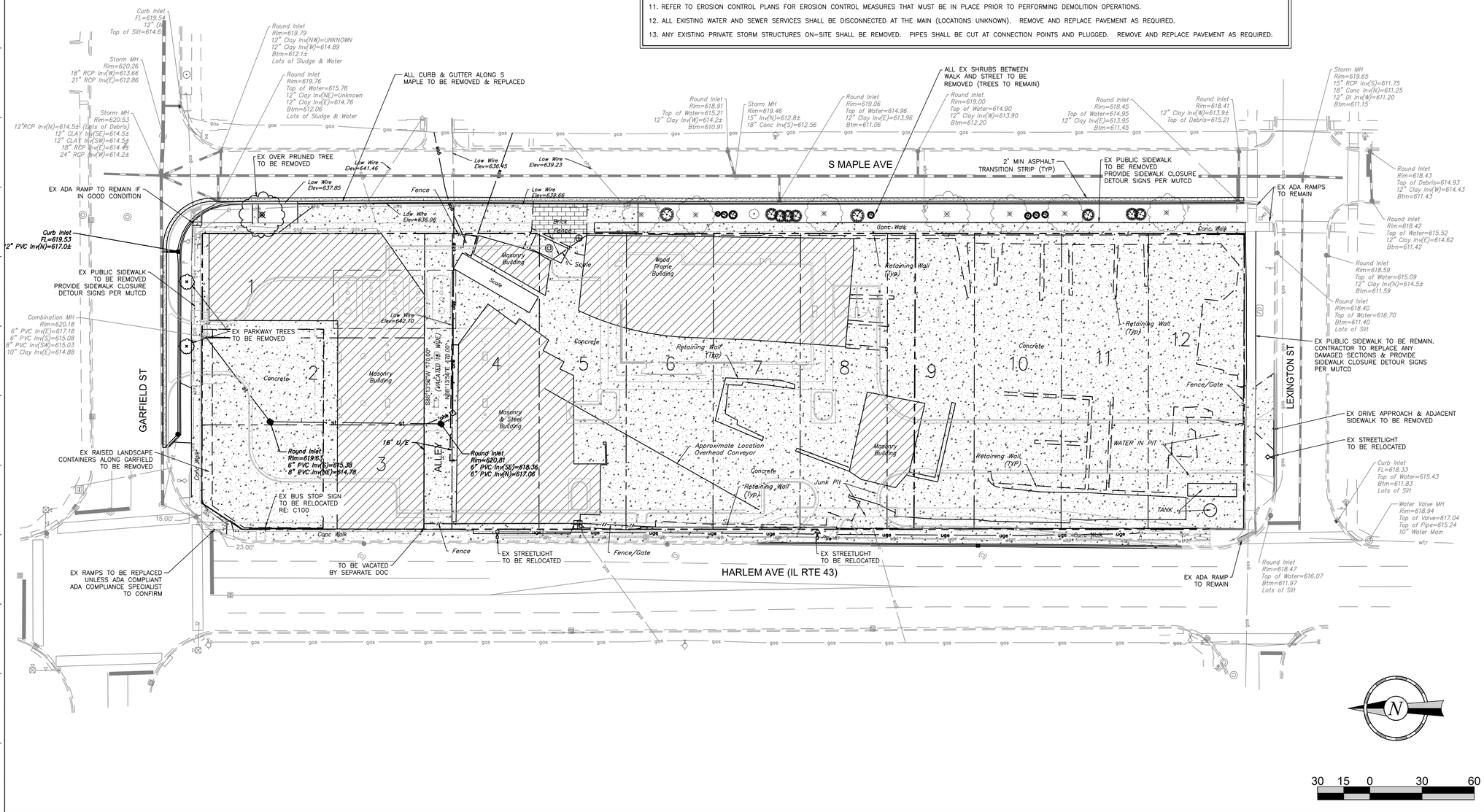
C010

DEMOLITION NOTES:

1. ALL ITEMS IN BOLD ARE TO BE DEMOLISHED.
2. DEMOLITION CONTRACTOR TO VISIT SITE TO DETERMINE THE FULL EXTENT OF REQUIRED DEMOLITION.
3. SUE CONSULTANT TO COORDINATE ALL EXISTING UTILITY SERVICE CONNECTIONS. ANY ASSOCIATED FEES WILL BE PAID BY QUIKTRIP.
4. ALL TREES/BRUSH WITHIN CONSTRUCTION LIMITS ARE TO BE REMOVED. TREES TO BE PRESERVED SHALL BE PROTECTED USING TEMPORARY CONSTRUCTION FENCE INSTALLED AT CANOPY DRIP LINE.
5. DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL CITY, COUNTY, STATE AND FEDERAL PERMITS REQUIRED TO COMPLETE THE DEMOLITION WORK.
6. THE EXISTING FEATURES SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND THOSE TAKEN FROM RECORD DRAWINGS. THERE IS NO GUARANTEE THAT ALL FEATURES (BOTH ABOVE AND BELOW GROUND) ARE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO DETERMINE THE EXTENT OF DEMOLITION REQUIRED.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF ANY EXISTING STRUCTURES (INCLUDING FOOTINGS THAT MAY BE IN PLACE FROM PREVIOUS DEVELOPMENT), RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED AND/OR NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. REFER TO SITE WORK SPECIFICATIONS.
8. THE CONTRACTOR IS TO REMOVE AND DISPOSE OF (OFF-SITE) ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS. ANY HAZARDOUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL LAWS. REFER TO ENVIRONMENTAL REPORT. CONTRACTOR TO CONTACT QT ENVIRONMENTAL COMPLIANCE ENGINEER WITH DISPOSAL PLAN.
9. THE CONTRACTOR SHALL PROVIDE PROPER PROTECTION OF EXISTING FEATURES THAT ARE TO REMAIN TO THE SATISFACTION OF THE OWNER AND GOVERNING AGENCIES. ANY EXISTING FEATURES DAMAGED DURING THE COURSE OF DEMOLITION/CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
10. THE CONTRACTOR SHALL PROVIDE A FULL DEPTH SAW CUT WHERE PAVEMENT DEMOLITION ABUTS PAVEMENT THAT REMAINS IN PLACE. WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO THIS SAW CUT, THE SAW CUT EDGE IS TO BE PROTECTED UNTIL NEW PAVEMENT IS PLACED. IN THE EVENT THE SAW CUT BECOMES DAMAGED THE CONTRACTOR SHALL PROVIDE A NEW SAW CUT TO ESTABLISH A "CLEAN" EDGE FOR THE NEW PAVEMENT TO ABUT.
11. REFER TO EROSION CONTROL PLANS FOR EROSION CONTROL MEASURES THAT MUST BE IN PLACE PRIOR TO PERFORMING DEMOLITION OPERATIONS.
12. ALL EXISTING WATER AND SEWER SERVICES SHALL BE DISCONNECTED AT THE MAIN (LOCATIONS UNKNOWN). REMOVE AND REPLACE PAVEMENT AS REQUIRED.
13. ANY EXISTING PRIVATE STORM STRUCTURES ON-SITE SHALL BE REMOVED. PIPES SHALL BE CUT AT CONNECTION POINTS AND PLUGGED. REMOVE AND REPLACE PAVEMENT AS REQUIRED.

DEMOLITION LEGEND

- EX CONCRETE PAVEMENT /SIDEWALK REMOVAL
- EX ASPHALT PAVEMENT REMOVAL
- BRICK PAVERS
- EX BUILDING DEMOLITION
- LIMITS OF DISTURBANCE (LOD)



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8/20/25

PROJECT NO.: 84-4454

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DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 08/20/2025

SHEET TITLE:
DEMOLITION PLAN

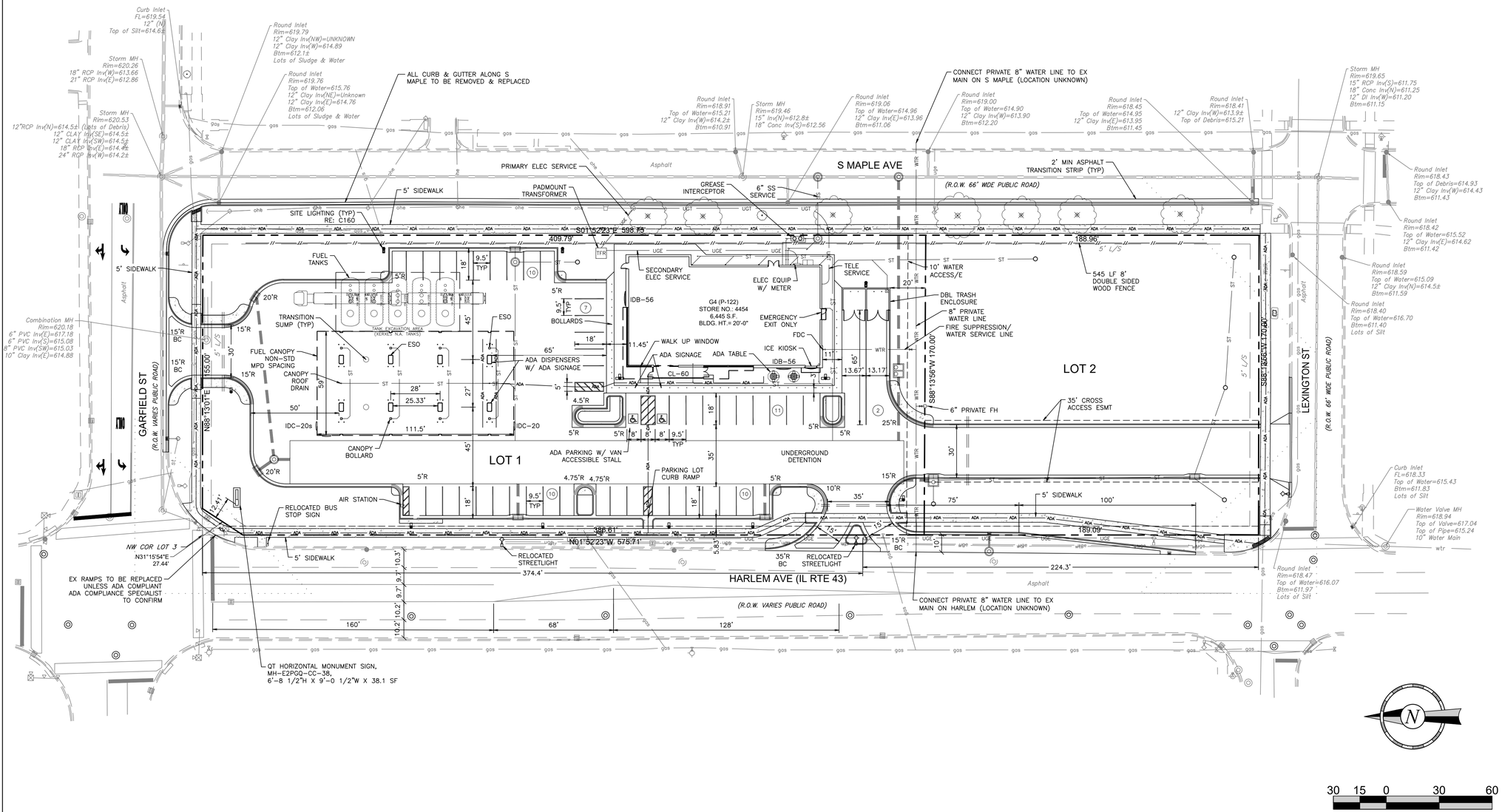
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PARKING REQUIREMENTS	
GAS STATION	
REQUIRED:	2/PUMP ISLAND + 1/500 SF 12 + 6445/500 = 25
PROVIDED:	44 (2 ADA)

SITE LEGEND

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- MOUNTABLE CURB W/RADIUS PROTECTOR
- PARKING SPACE INDICATOR
- AREA LIGHT
- MULTIPLE PRODUCT DISPENSER WITH CANOPY COLUMN AND BOLLARDS
- TRANSFORMER
- FUEL SYSTEM ACCESS MANWAY



30 15 0 30 60

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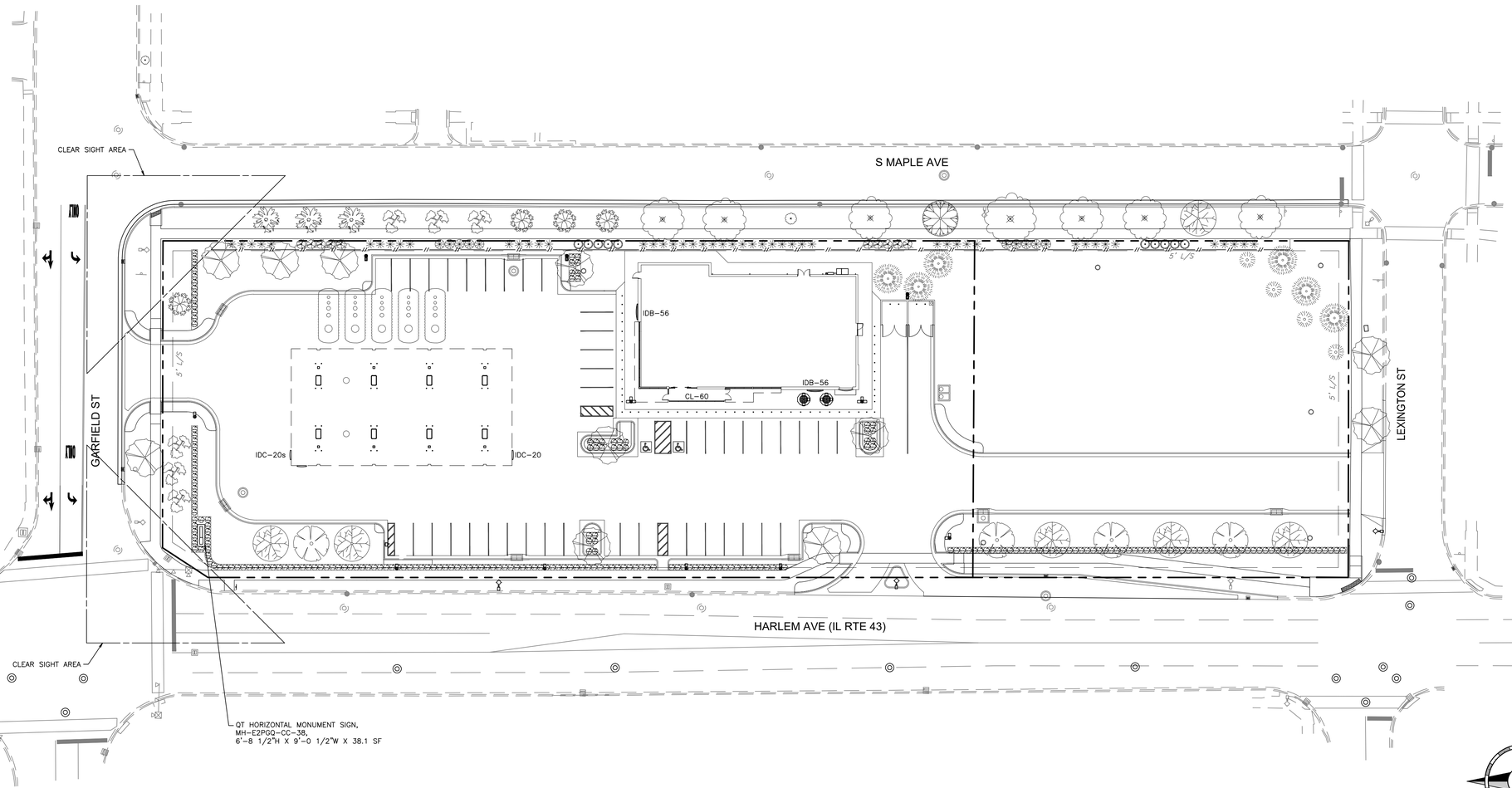
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ORIGINAL ISSUE DATE: 08/20/2025

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SHEET NUMBER: C100

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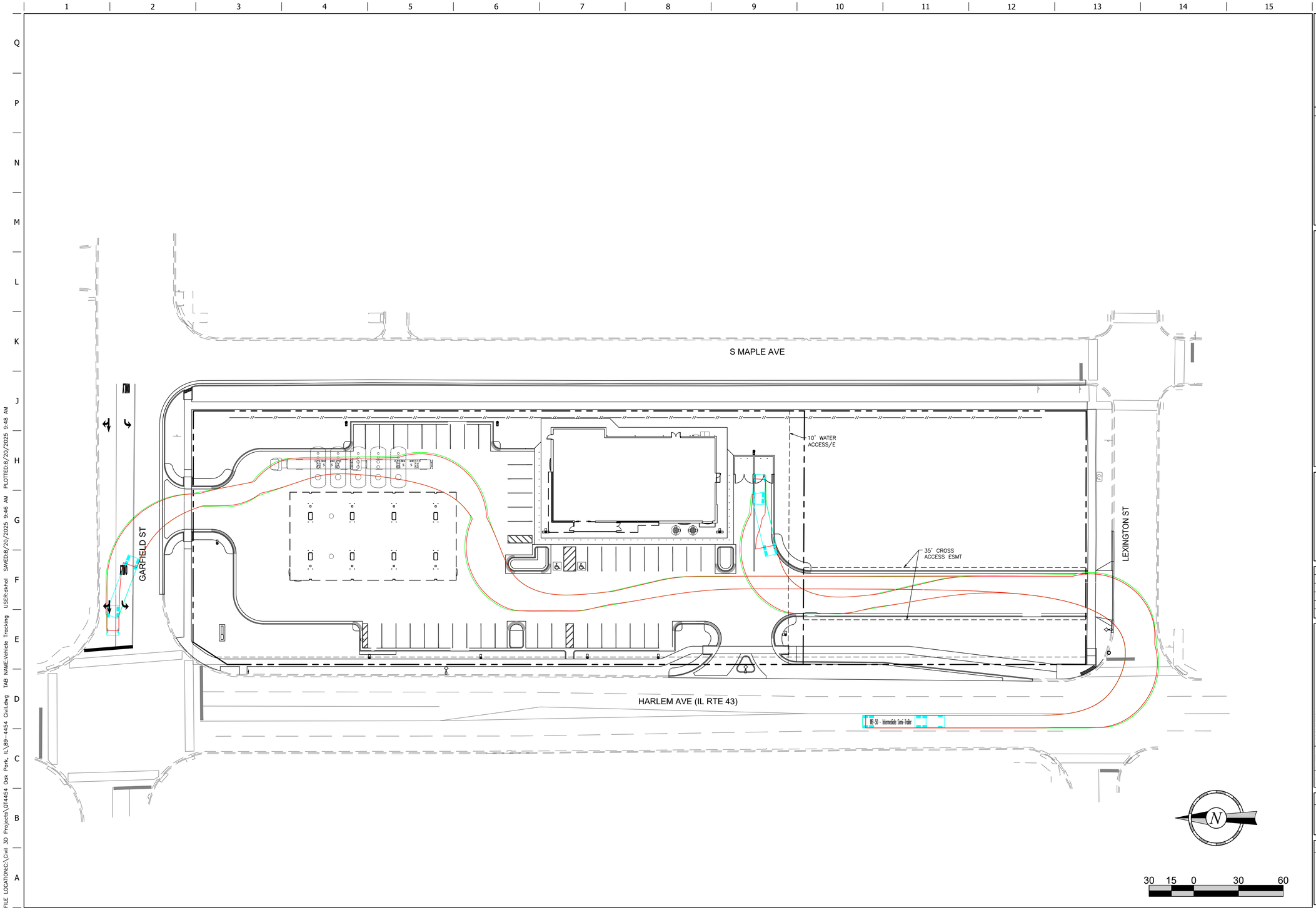
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SHEET TITLE:

SIGNAGE PLAN

SHEET NUMBER:

C101



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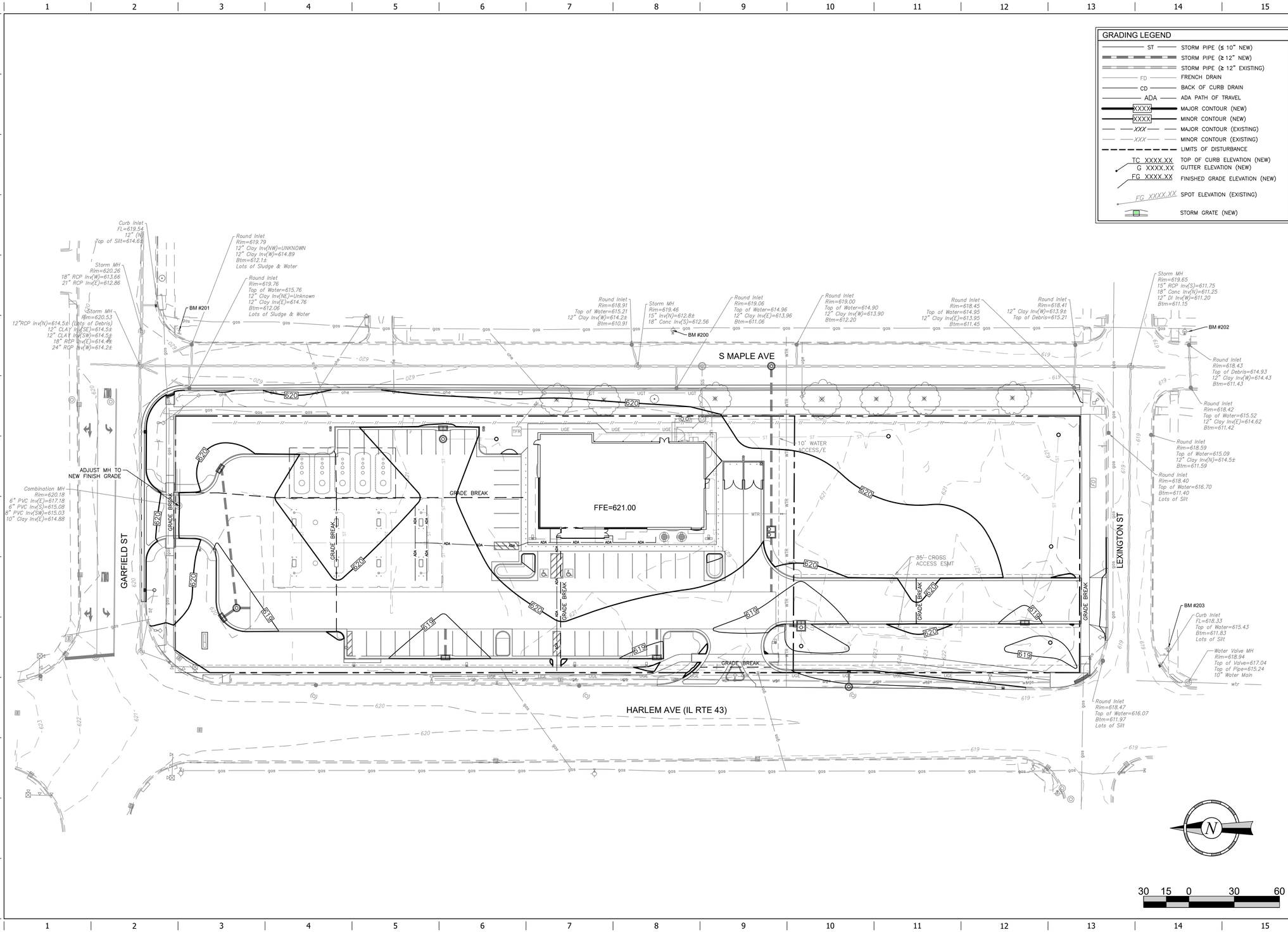
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SHEET TITLE:
VEHICLE TRACKING (FUEL TANKER)

SHEET NUMBER:
C102



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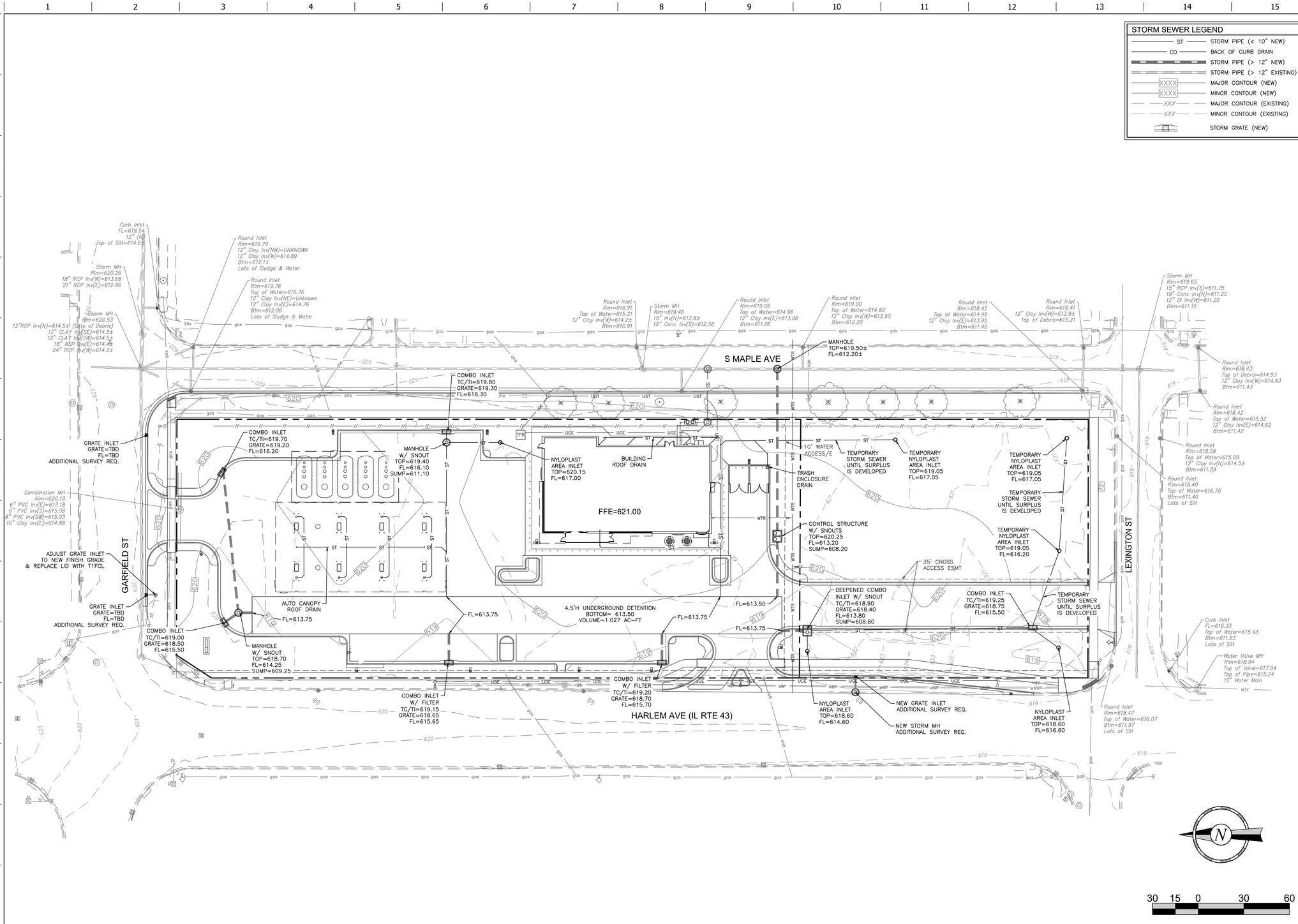
SHEET TITLE:

GRADING PLAN

SHEET NUMBER:

C110

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8/20/25

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SHEET TITLE:
PRELIMINARY STORM SEWER PLAN

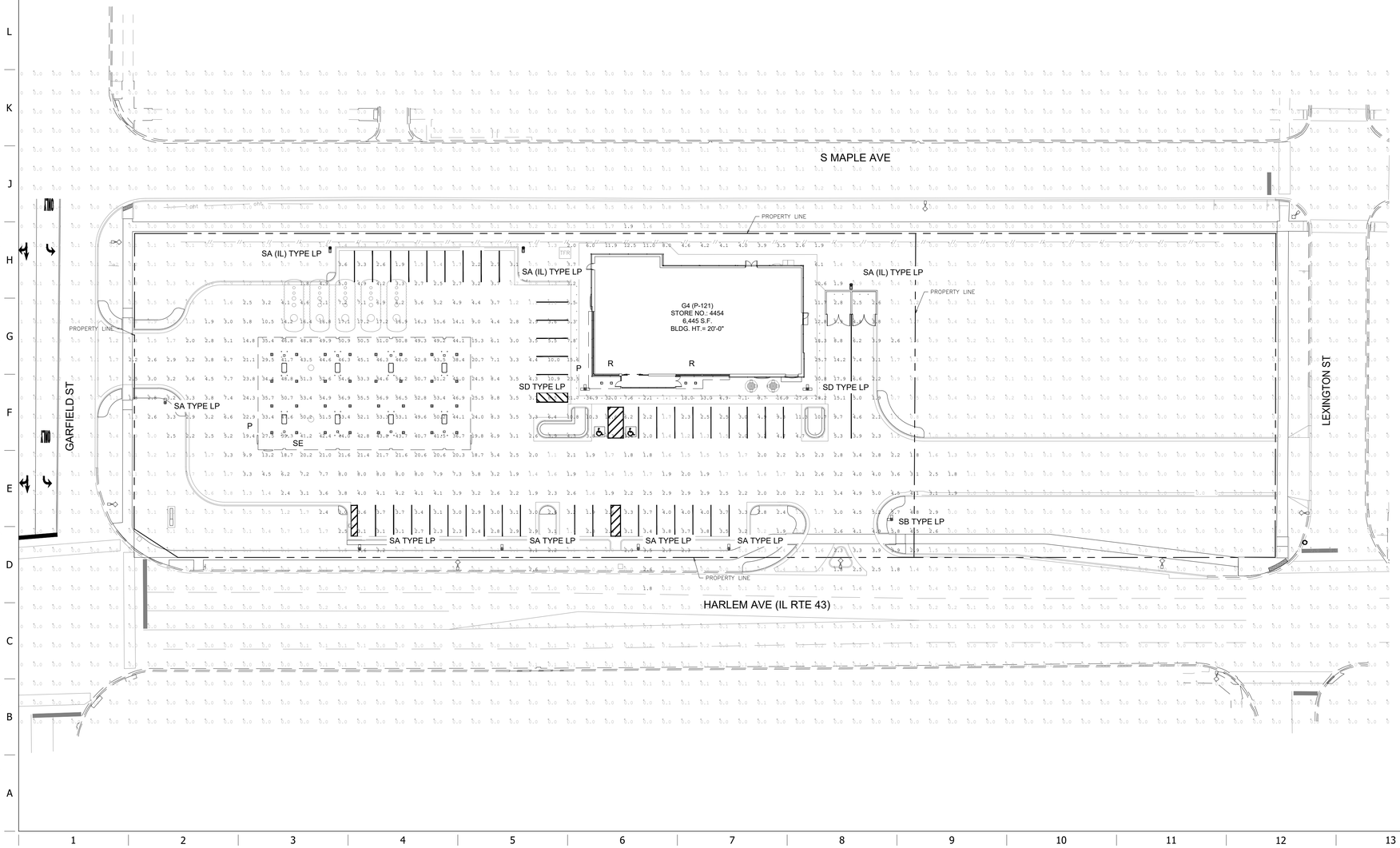
SHEET NUMBER:
C120

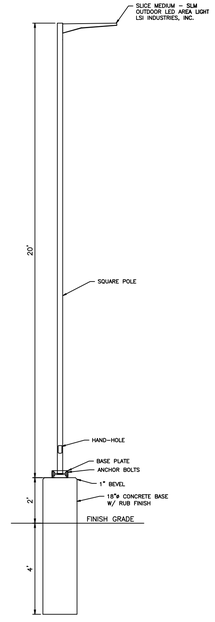
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LUMINAIRE SCHEDULE									
	SYMBOL	LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUMENS PER LAMP	LLF	CATALOG IDENTIFICATION	TOTAL WATTS
		SA	05	SINGLE	22'	12,604	0.90	SLM-LED-12L-SIL-FT-30-70-CRI	93.1
		SA (IL)	03	2 @ 90°	22'	8,029	0.90	SLM-LED-12L-SIL-FT-30-70-CRI-IL	93.1
		SB	01	2 @ 90°	22'	12,604	0.90	SLM-LED-12L-SIL-FT-30-70-CRI	93.1
		SD	02	3 @ 90°	22'	12,604	0.90	SLM-LED-12L-SIL-FT-30-70-CRI	93.1

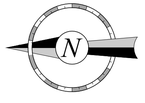
LUMINAIRE SCHEDULE									
	SYMBOL	LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUMENS PER LAMP	LLF	CATALOG IDENTIFICATION	TOTAL WATTS
		SE	32	SINGLE	15' TO 19'	12,567	0.90	SCV-LED-13L-SC-30 (BRONZE)	83.6
		R	04	SINGLE	10' TO 12'	5,733	0.90	XSPS-S-LED-VHO-WW-DFL	48.7
		P	667LF	VARIES	16' TO 18'	447.5/FT	0.90	ARCH-LED-BW-MULTI	10/FT
		SV	00	N/A	12'	N/A	N/A	LOW VOLTAGE POLE	N/A

NOTES:
A. ALL LIGHT FIXTURES ARE FULL CUT OFF, FULLY SHIELDED WITH 0° TILT.





AUTO SIDE LIGHT
STANDARD
NOT TO SCALE



30 15 0 30 60

PROJECT NO.: 84-4454

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SHEET TITLE:
84-4454 PHOTOMETRIC - PHOTOMETRIC

SHEET NUMBER:

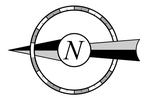
FILE LOCATION:C:\Civil 3D Projects\QT4454 Oak Park, IL\84-4454 Photometric.dwg TAB NAME:Photometric USER:akhol SAVED:8/20/2025 9:33 AM PLOTTED:8/20/2025 9:48 AM

LANDSCAPE REQUIREMENTS

- 3'H MIN PERIMETER SHRUB ROW
- 1 ISLAND / 10 SPACES (REQ: 5 ISLANDS)
- 10% OF PARKING LOT MUST BE LANDSCAPED
- 1 SHADE TREE PER PARKING LOT ISLAND
- ALL GROUND MOUNTED SIGNS MUST HAVE LANDSCAPING AROUND BASE
- 1 STREET TREE PER 40'
- 1 SHADE TREE OR 2 ORNAMENTAL TREES + 10 SHRUBS / 40 LF
- 5 FT MIN LANDSCAPE AREA ADJACENT TO PARKING + 1.5' FOR OVERHANG

LANDSCAPE NOTES:

1. ALL PLANTS MUST BE A-GRADE OR NUMBER-ONE GRADE AND FREE OF DEFECTS, OF NORMAL HEALTH, HEIGHT, LEAF DENSITY, AND SPREAD AS DEFINED BY THE AMERICAN STANDARD FOR NURSERY STOCK, ANSI Z60.1, LATEST EDITION AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN). ALL PLANTS MUST HAVE FULL, EVEN, WELL-DEVELOPED BRANCHING AND A DENSE, FIBROUS, AND VIGOROUS ROOT SYSTEM.
2. TWO 4" DIAMETER SCHEDULE 40 PVC CONDUITS ARE TO BE INSTALLED UNDER PAVEMENT FOR IRRIGATION THROUGHOUT THE SITE. REFER TO SHEET C531 FOR CONDUIT INSTALLATION DETAILS AND L510 FOR EXACT LOCATIONS. THE CONDUIT ENDS ARE TO BE MARKED WITH METAL STAKES. REFER TO QT PROVIDED IRRIGATION PLAN FOR FINAL CONDUIT LOCATIONS.
3. ALL LANDSCAPE/SOD AREAS WILL BE EQUIPPED WITH A BELOW GROUND AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH FREEZE GUARD.
4. ALL LANDSCAPE SHRUB BEDS TO BE BORDERED WITH STEEL LANDSCAPE EDGING.
5. CYPRESS MULCH SHALL BE USED AS A FOUR INCH (4") TOP DRESSING AROUND ALL TREES AND IN LANDSCAPE BEDS.
6. ALL TREES ARE TO BE PLACED A MINIMUM OF 6-FEET FROM THE FACE OF CURB AND/OR CENTERED ON PARKING STRIPES (WHERE APPLICABLE), UNLESS NOTED OTHERWISE.
7. CONTRACTOR TO VERIFY TREE TYPE, LOCATION, SIZE, HEIGHT, AND SPREAD WITH QT REPRESENTATIVE PRIOR TO INSTALLATION.
8. ALL AREAS DISTURBED BY CONSTRUCTION, NOT RECEIVING PAVEMENT, SHALL HAVE 6 INCHES OF TOPSOIL ADDED, GRADED SMOOTH, AND SODDED/SEEDED AFTER FINAL RESTORATION IS COMPLETED. THE CONTRACTOR SHALL PROVIDE TOPSOIL, FOR APPROVAL BY THE OWNER, IF ON-SITE SOILS ARE NOT SUITABLE AS TOPSOIL. TOPSOIL SHALL BE CLOD FREE QUALITY BLACK DIRT. ALL LAWN AREAS WITHIN THE QUIKTRIP PROPERTY LIMITS AND WITHIN ALL ADJACENT RIGHT OF WAY ARE TO BE IRRIGATED AND MOWED.
9. ALL LAWN AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE (RE: L500 SHEETS).
10. 4" LANDSCAPE BED UNDERDRAIN TO BE SCH 40 PVC PIPE. UNDERDRAIN PIPE TO BE PERFORATED PIPE WITHIN INTERNAL LANDSCAPE BED AREAS AND SOLID PIPE OUTSIDE OF LANDSCAPE BED AREAS. ALL ISLAND LANDSCAPE BED DRAINS TO HAVE 4" PVC VERTICAL INSPECTION PIPE AT UPSTREAM END (DESIGNATED BY CO).

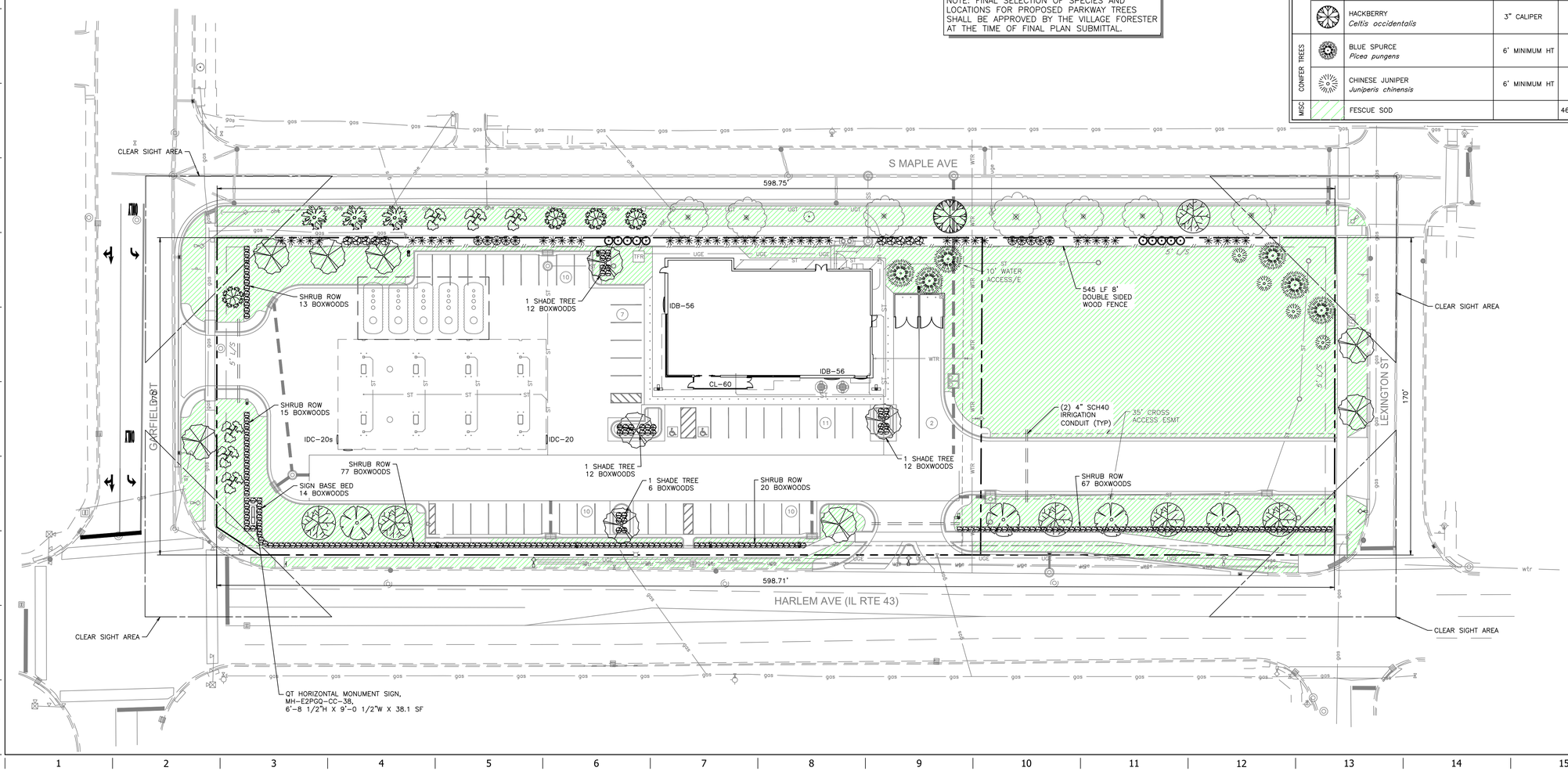


30 15 0 30 60

NOTE: FINAL SELECTION OF SPECIES AND LOCATIONS FOR PROPOSED PARKWAY TREES SHALL BE APPROVED BY THE VILLAGE FORESTER AT THE TIME OF FINAL PLAN SUBMITTAL.

Landscape Schedule

USE	SYMBOL	COMMON NAME *Botanical Name*	MINIMUM SIZE/ HEIGHT/SPREAD	QUANTITIES
SHRUBS		KOREAN BOXWOOD *Buxus microphylla var. koreana*	30" HT MIN	240 EA.
		MISS KIM LILAC *Syringa patula 'MISS KIM'*	30" HT MIN	10 EA.
		WINE & ROSES WEIGELA *Weigela florida 'Alexandra'*	30" HT MIN	10 EA.
		KOREAN SPICE VIBURNUM *Viburnum carlesii*	30" HT MIN	10 EA.
		PERFECTA JUNIPER *Juniperus chinensis 'Perfecta'*	36" HT MIN	53 EA.
ORNAMENTAL TREE		EASTERN REDBUD *Cercis canadensis*	2" CALIPER MIN	7 EA.
		CORNELIANCHERRY DOGWOOD *Cornus mas*	2" CALIPER MIN	6 EA.
		IVORY SILK JAPANESE TREE LILACS *Syringa reticulata 'Ivory Silk'*	2" CALIPER MIN	6 EA.
SHADE TREES		SKYLINE HONEY LOCUST *Gledisia Triacanthos Inermis "Skyline"*	3" CALIPER	11 EA.
		JAPANESE LARCH *Larix kaempferi*	3" CALIPER	4 EA.
		SHAWNEE BRAVE BALDCYPRESS *Taxodium distichum 'Shawnee Brave'*	3" CALIPER	6 EA.
		HACKBERRY *Celtis occidentalis*	3" CALIPER	1 EA.
CONIFER TREES		BLUE SPURCE *Picea pungens*	6' MINIMUM HT	6 EA.
		CHINESE JUNIPER *Juniperis chinensis*	6' MINIMUM HT	4 EA.
MISC		FESCUE SOD		46,600 S.F.



DARLA K. HOLMAN
062-072191
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
8/20/25

PROJECT NO.: 84-4454

MDG
Midwest Design Group
Kansas City
PO Box 860015
Shawnee, KS 66286-0015
P 913.248.9385

QuikTrip No. 4454

821 S. HARLEM AVENUE
OAK PARK, COOK COUNTY, ILLINOIS 60304

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PROTOTYPE:	P-122
DIVISION:	84
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 08/20/2025

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L100

FILE LOCATION:C:\Civil 3D Projects\QT4454 Oak Park, IL\84-4454 Civil.dwg TAB NAME:Landscape USER:dkhol SAVED:8/20/2025 9:46 AM PLOTTED:8/20/2025 9:48 AM

QuickTrip Planned Development Application PL202500017 Engineering Comments 8-5-25

1. Submit an address request form and associated attachments for Village review. The proposed address of 915 Garfield is not approved. It will likely be 821 S. Harlem depending on the proposed exact doorway location. Use the correct address approved by the Village for all associated documents Submitted via portal
2. The Village does not approve of the proposed landscaped parkway and trees along Harlem Ave. This is not feasible considering the proximity to Harlem for the trees and the amount of underground infrastructure in conflict with the proposed trees for IDOT's traffic signal power, fiber signal interconnect, and the Village's water main. Keep existing layout of the sidewalk along Harlem. Parkway trees have been removed.
3. Provide IDOT approvals for proposed driveway along Harlem and any IDOT requirements for the driveway and any access restrictions associated with the driveway (i.e. right turn only). Pending
4. The proposed project will require MWRD, IEPA, and IDOT permits. IDOT permits will be required for the proposed driveway and any work impacting the Harlem ROW including the sidewalk replacement, moving of the existing street light on Harlem. Provide all relevant correspondence between the developer and IDOT. Confirm that IDOT will permit full access at the proposed Harlem driveway. Noted & Pending
5. Does Lot 1 need to have an access easement recorded against it for the shared driveway access and for the garbage access besides any water or sewer easements? Noted, several of these will be included on the Final Plat.
6. Civil Comments
    a. Civil plans need to clearly show what public infrastructure is being replaced with the project, especially for curbs and roadway pavements which are hard to tell from these plans. In general, the entire north half of the block of curb on Maple needs to be replaced to get rid of the old depressed curb and due to deteriorated condition. Clearly show replacement areas and add note that final locations for curb replacement to be determined by the Village Engineer. All curb & gutter along the west side of S Maple noted to be removed & replaced.
    b. Since parking will no longer be allowed on the south side of Garfield due to the large driveway, revise your design to shift the south Garfield curb further north to align with the curb radius at Harlem and add storm inlets Type A 16" depth with 8" DIP Storm Sewer from the proposed inlets to the existing catch basins and change the frame and lid on the catch basins to a T1FCL. Revised. Additional survey required to finalize design.
    c. Revise note on demolition plan regarding the corner sidewalk ramp at Harlem and Garfield. Revise note to indicate existing ramps to be replaced, unless they meet current ADA requirement. Note added.
    d. Revise demolition plan to include the removal of the 2 parkway trees on Garfield for the new driveway apron. Revised.
    e. Include replacing the existing sidewalk ramp at Lexington and Harlem as you will need to remove the existing retaining wall curb along the back of walk and repour the existing sidewalk. Revised.

f. Add replacement of existing sidewalk on Lexington shown as an omission. You are replacing the entire block, don't leave out 80 feet of sidewalk. Revised.
g. Show abandoning and disconnecting the existing water and sewer services at the respective water and sewer mains, filling or removing existing drainage structures, and plugging both ends of sewers to be abandoned for all the existing properties and buildings on the demolition plan. Notes added to Demolition Plan.
h. Street lights being relocated will require installing new conduit and splicing the new conduit to the existing conduit and pulling new wires from the new pole location to the existing poles in each direction, and splicing to the existing wires inside the poles. Underground splicing of the wires is not allowed. Final locations of the relocated poles will be approved by the Village and IDOT following submittals of photometrics by the applicant, if required. Contactors working on the street lights shall eb prequalified by IDOT for this work. Noted, this will be detailed in the final public improvement plans.
i. C110 – revise proposed water to be an 8" diameter water main and extend the water main to also connect to the Harlem Avenue water main. Use a pressure connection to connect to the Maple and the Harlem water main. On Harlem use a 8" tapping valve in a valve box in the sidewalk. On Maple use a *" tapping valve in a 5' dia valve vault if in the roadway. This will be a private water main owned and maintained by the applicant. Add label for the private hydrant to have this hydrant meet the Village's specifications for a hydrant and this hydrant may need to be locked to prevent unauthorized and unmetered use. Add gate valve on the combined fire/domestic branch. We are assuming the future building in Lot 2 will also tap off of this east-west water line and we will need an access easement to access the valve boxes and hydrant for flushing. These notes will be included in the final engineering plans.
j. C110 – is the underground stormwater detention serving only the QuickTrip and landscaped Lot2 or is it sized to also serve the future developed Lot2? Will Lot 2 be able to expand this system in the future or will they need to build their own detention? Will there be an easement or agreement for accessing this system for Lot 2 or any shared piping exiting the detention? Lot 2 will be required to have their own detention. We will see if MWRD requires a shared connection point, or they would prefer it to be separated.

7. Landscape Plan – revise to eliminate the proposed trees and grass parkway along Harlem. Keep sidewalk layout the same as existing on Harlem frontage. We are certain IDOT will require greenspace for safety. For now we have kept the sod, but removed the parkway trees.
8. Landscape plan – the applicant shall pay the Village the appraised value as determined by the Village Forester of the three parkway trees called for removal minus the value of the proposed parkway trees. Noted.
9. Landscape plan – include an additional species to diversify the groupings of the proposed ornamental trees on Maple Avenue's parkway. Add note that the final selection of species and locations for proposed parkway trees shall be approved by the Village Forester. Additional ornamental trees added per Village comments. Note added for Village Forester Approval.

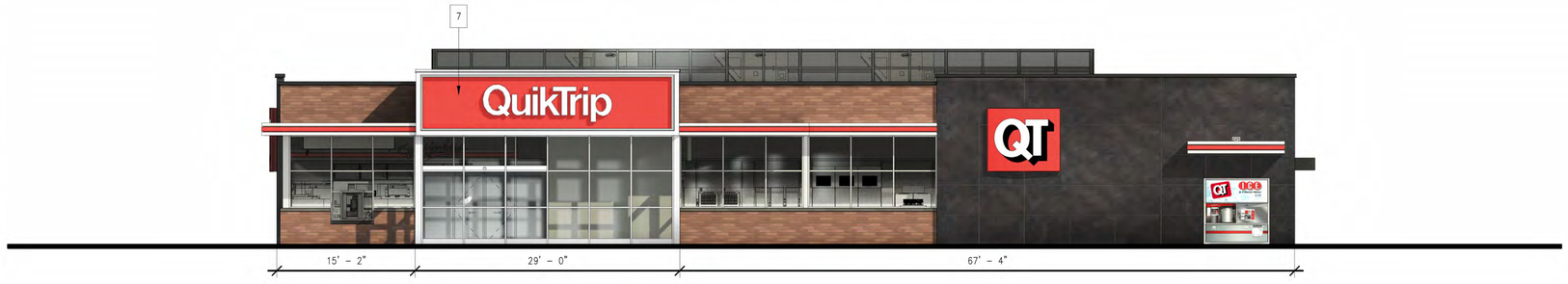
10. Photometric Site Plan – revise exterior fixtures to be 3,000K color temp We will work with staff on this
11. Based on the Traffic Impact Study (TIS) there are concerns about traffic circulating around the block using Lexington and Maple due to inability to easily make left turns out of the driveways on Garfield and on Harlem. We believe drivers will prefer to use the Harlem Avenue or Lexington Avenue access points rather than drive through a narrow residential street. CESO also believes this will not be a concern outside of off-peak hours of the day.

Traffic Impact Study Comments

12. An IDOT permit is required for proposed work on Harlem Avenue. Provide all relevant correspondence between the developer and IDOT. Confirm that IDOT will permit full access at the proposed Harlem driveway. IDOT review is pending.
13. For the next submittal, the TIS must use actual traffic signal timings as provided by IDOT. Revised as requested.
14. Note in the report whether the traffic counts reflect any traffic generated by existing uses within the redevelopment parcels. UPDATED – TRAFFIC COUNTS ARE NOT EXPECTED TO CONTAIN LARGE AMOUNTS OF TRAFFIC GENERATED BY EXISTING USES.
15. Several updates and clarifications are required for the directional distribution estimations:
    a. Provide a standard (and simplified) directional distribution figure that shows overall projected directions of travel. See attached example. REVISED AS REQUESTED. REFER TO FIGURE 6.C OF THE TIS
    b. Only 10% of outbound site traffic is projected to utilize the Harlem/Garfield signal. Given the difficulty of turning onto Harlem, this seems low. DIRECTIONAL DISTRIBUTION HAS BEEN UPDATED TO SHOW MORE TRAFFIC AT THE HARLEM/GARFIELD SIGNAL.
    c. An equal amount of traffic is shown turning left and right at the proposed driveway onto Harlem. Given the difficulty of turning left, it is likely that more traffic will turn right. UPDATED TO SHOW MORE TURNING RIGHT OUT AT SITE DRIVEWAY ON HARLEM.
    d. The directional distribution assumes 40% of traffic entering and exiting the site via Harlem to the south and 30% entering and exiting via Harlem to the north. Given the proximity of the I-290 to the north, should more traffic be originating and destined to the north? Or, given the difficulty of turning left onto Harlem, should a significant amount of traffic be assumed to already be on Harlem northbound and continue to head northbound after existing the site? Over this small of a scale study area, it is OK for these to be imbalanced. PRIMARY DISTRIBUTION WAS INCREASED SLIGHTLY TO SHOW MORE TRAFFIC COMING FROM THE NORTH AND GOING BACK TO THE NORTH. PASS-BY DISTRIBUTION WAS UPDATED TO SHOW MORE TRAFFIC COMING FROM THE SOUTH AND GOING TO THE NORTH.
    e. The text on the TIS should include more of a narrative discussing how the trip distribution projections were developed. In particular, the Village is interested in assumptions regarding traffic on Lexington, Maple, and Garfield. UPDATED – REFER TO SECTION 5.2 OF THE REPORT.
16. Provide information in the report regarding how frequency, what size, and routes for trucks entering and exiting the site. UPDATED – THERE IS NO DIESEL FUELING ON SITE, THEREFORE THE ONLY TRUCKS EXPECTED ARE QUIKTRIP'S FUEL TRUCK (WB-50) AND A GARBAGE TRUCK. NEITHER OF THESE TRUCKS ARE EXPECTED TO BE FREQUEST TRIPS DURING THE WEEK. THE FUEL TRUCK AND GARBAGE TRUCK WILL BE ROUTED TO ENTER THROUGH THE SITE DRIVEWAY ON

HARLEM OR THE SITE DRIVEWAY ON LEXINGTON AND EXIT THE SITE VIA THE SITE DRIVEWAY ON GARFIELD.

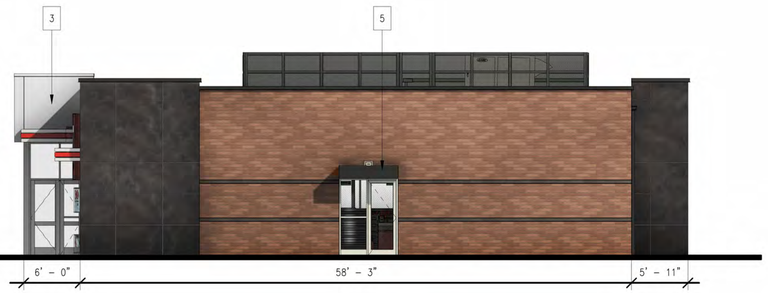
17. Capacity analyses show long queues and delays for eastbound lefts at the site driveway on Harlem and at the intersection of Lexington at Harlem. In reality, drivers will not wait more than 5 minutes to make this left. Further explanation is required. Is the traffic model over-projecting delay? Will more drivers try to access the signal at Harlem/Garfield? Will most traffic accessing the site being originating from the south on Harlem and leaving via northbound Harlem? THE TRAFFIC MODEL IS PROJECTING DELAY BASED ON OPPOSING TRAFFIC VOLUMES. IL-43 (HARLEM AVE) EXPERIENCES SEVERE AMOUNTS OF TRAFFIC THAT MAY RESULT IN LONG SIDE STREET DELAYS AND QUEUE SPILLBACKS. DELAYS AND QUEUES MAY ALSO BE CONSERVATIVE DUE TO OVER PROJECTING SITE TRAFFIC AND ASSUMING BACKGROUND GROWTH EVEN THOUGH THE SURROUNDING AREA IS ALREADY BUILT OUT. THIS REVISION OF THE TIS TAKES INTO CONSIDERATION MORE TRAFFIC ACCESSING THE SIGNAL AT HARLEM/GARFIELD.
18. Traffic projections show that westbound queues on Garfield at Harlem will consistently block the site driveway, impeding the ability of traffic to turn left out of the north site driveway. Provide further discussion on how this driveway will operate during peak periods. IF QUIKTRIP DRWY #1 IS BLOCKED BY WESTBOUND QUEUES AT HARLEM & GARFIELD, TRAFFIC CAN USE QUIKTRIP DRWY #2 AND QUIKTRIP DRWY #3 TO EXIT THE SITE. HOWEVER, DURING OFF PEAK HOURS THE OPERATIONS WILL BE GOOD ENOUGH TO ALLOW TRAFFIC TO ENTER AND EXIT THE SITE FREELY.
19. At a high-level, the Village concurs with the proposed left turn striping modification on Garfield. Show the proposed pavement markings on the engineering and civil plans. Striping was added to Garfield
20. Confirm that all parking along the south curb between Harlem and Lexington would be restricted as part of this development. Yes that parking is removed and the curbline adjusted.
21. The proposed striping and turn lane modifications shown on Harlem shown on Figure 11 of the TIS appear to show widening on the east side of the street. Is an easement or right-of-way dedication proposed to accommodate the realigned sidewalk? Show the proposed modifications along Harlem on the engineering plans. The only widening on Harlem is for the right turn lane. Striping has been added to the engineering plans.
22. The truck turning movement exhibit shows a WB-50. Typically fuel trucks are WB-65s. Please confirm. QT confirmed their trucks are WB-50.
23. Dimension the width of the Garfield driveway on the site plan. Yes that parking is removed and the curbline adjusted. Added.
24. The proposed site driveways, particularly on Harlem and Garfield, must be as narrow as possible with compact radii as practical to maintain optimum walkability. The AutoTurn exhibits show that truck turning movements are not the critical factor in determining driveway widths. Please narrow the width of the driveways and reduce the radii as much as practical. Reduced.



FRONT ELEVATION 1/8" : 1'-0"



LEFT ELEVATION 1/8" : 1'-0"



RIGHT ELEVATION 1/8" : 1'-0"



REAR ELEVATION 1/8" : 1'-0"

FINISH SCHEDULE

#	FINISH	MANUFACTURER	SPECIFICATION
1	BRONZESTONE	INTERSTATE BRICK	ATLAS STRUCTURAL BRICK
2	MIDNIGHT	INTERSTATE BRICK	ATLAS STRUCTURAL BRICK
3	BRUSHED ALUMINUM	REYNOBOND	FASCIA
4	RED POLYCARBONATE	ALLEN INDUSTRIES	ILLUMINATED BAND
5	QT BROWN	LANE	METAL/PAINT
6	BLACK	ALL COURT FABRICS	POLYPRO MESH
7	CL-60R	ALLEN INDUSTRIES	SIGNAGE
8	IDB-56	ALLEN INDUSTRIES	ILLUMINATED SIGNAGE
9	OSSIDO NERO	CROSSVILLE	EXTERIOR TILE

QuikTrip

PROTOTYPE	
ISSUE DATE	02/04/25
DRAWN BY	JTC
PHASE	

DOCUMENT TYPE

SCHEMATIC

STORE TYPE

G4

SUB TYPE

BUILDING ELEVATIONS

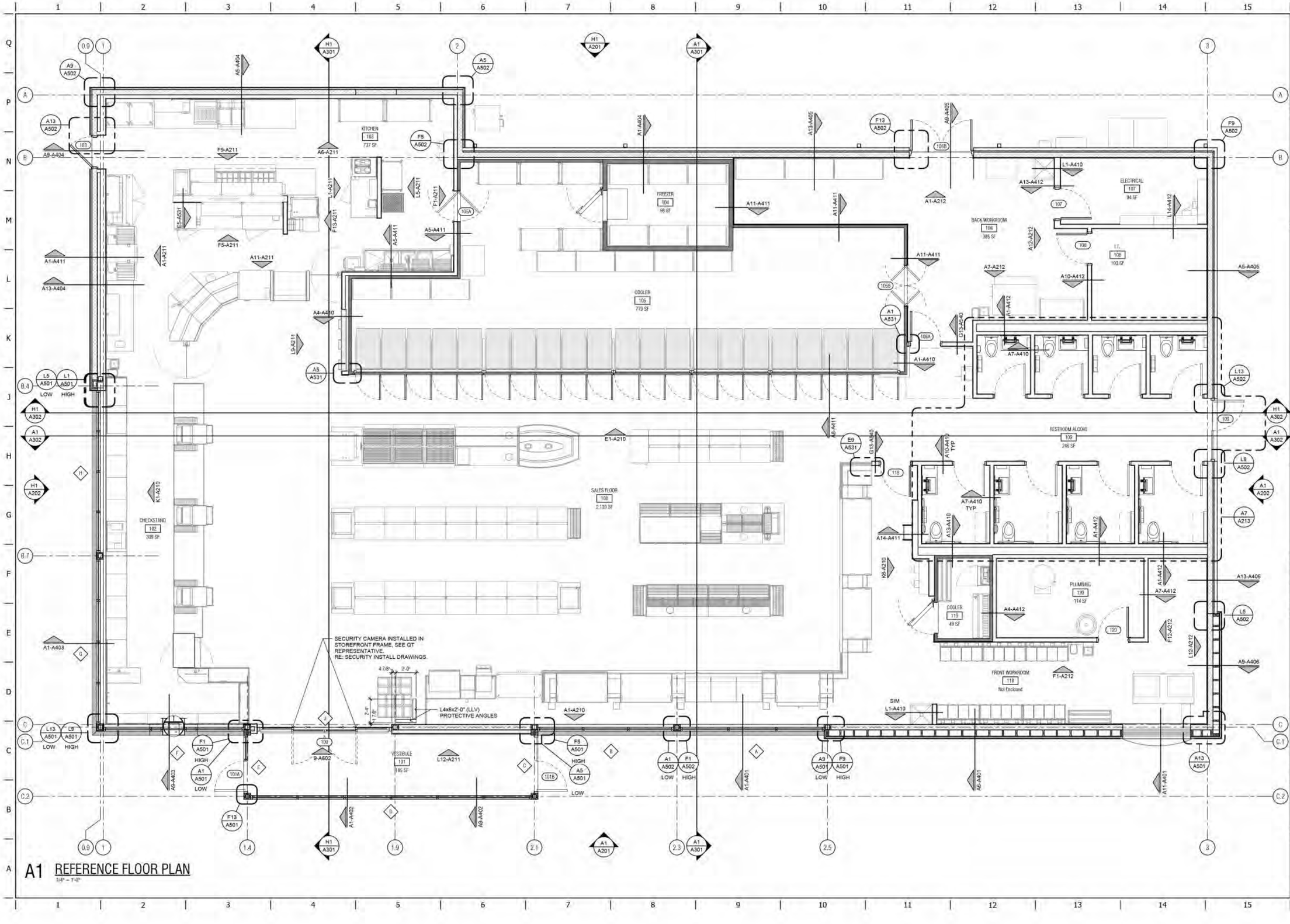
SHEET TITLE:

BUILDING ELEVATIONS

SHEET NUMBER:

BE001

C:\Cooper, Josh\Project — G4\01 DESIGN GROUP\01 SCHEMATIC DESIGN\02 REVIT\01 G4 Revit Models\G4_01_V25_25 0704_Proto.rvt B-001



A1 REFERENCE FLOOR PLAN
3/4" = 1'-0"

PROJECT NO.: 84-4454

LICKEL ARCHITECTURE
16200 Midland Drive
Shawnee, KS 66217
(P) 913.389.7888
(F) 913.389.7848

QuikTrip No. 4454

HARLEM AVENUE (IL 43) & GARFIELD STREET
OAK PARK, COOK COUNTY, ILLINOIS 60304

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PROTOTYPE:	P-121
DIVISION:	80
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 04/29/2025

SHEET TITLE:
FLOOR PLAN

SHEET NUMBER:
A101

APPLICATION FOR
Right-of-Way Vacation

VILLAGE OF OAK PARK, ILLINOIS

Date Filed: _____ Accepted by: _____ Street or **Alley**

YOU MUST PROVIDE THE FOLLOWING INFORMATION: IF ADDITIONAL SPACE IS NEEDED, ATTACH EXTRA PAGES TO THE APPLICATION.

Applicant / Contact Information: QuikTrip Corporation 50 South Main St. STE 200, Naperville, IL 60540
Name Address

918-284-9456 abukhres@quiktrip.com
Phone no. E-mail

Street Name or Location of Alley in Question: Utility easement

Name of Adjacent Property Owner(s), Adjacent Property Addresses and (PIN):

Name	Address	Property Identification Number
SEC Harlem Acquisition LLC	915 S. Maple Ave, Oak Park	16-18-300-003-0000

Briefly Describe Request: Vacation of 10' between two tracts of land with the same pin # being 16-18-300-003-0000

Is the property in question presently subject to a Special Use or Planned Development? X Yes ____ No

If Yes, how? _____

Is the subject property located within any Historic District? ____ Yes X No

Have the effected (abutting) property owners been contacted by the Applicant? ____ Yes X No

If Yes, when? _____

I (we) certify that all the above statements and the statements contained in any papers or plans submitted herewith are true to the best of my (our) knowledge and belief.

I (we) consent to the entry in or upon the premises described in this application by any authorized official of the Village of Oak Park for the purpose of securing information, posting, maintaining and removing such notices as may be required by law. **Applicant's signature must be notarized.**

(Signature) Applicant

7/23/25
Date

SUBSCRIBED AND SWORN TO BEFORE ME THIS

23rd DAY OF July, 2025

OFFICIAL SEAL
ALI FRAG BUKHRES
Notary Public, State of Illinois
Commission No. 1006729
My Commission Expires
March 18, 2029

(Notary Public)

THE FOLLOWING SHALL BE SUBMITTED AS PART OF THIS APPLICATION:

1. Current Plat of Survey of all abutting properties to vacated right-of-way.
2. Photographs of subject right-of-way.
3. Written description of request and proposed use (above).
4. Written authorization from abutting property owners.
5. Drawing (s) of proposed modifications to right-of-way.
6. Vacation Plat, after staff review of application, but **prior** to Plan Commission meeting.

For a working alley only:

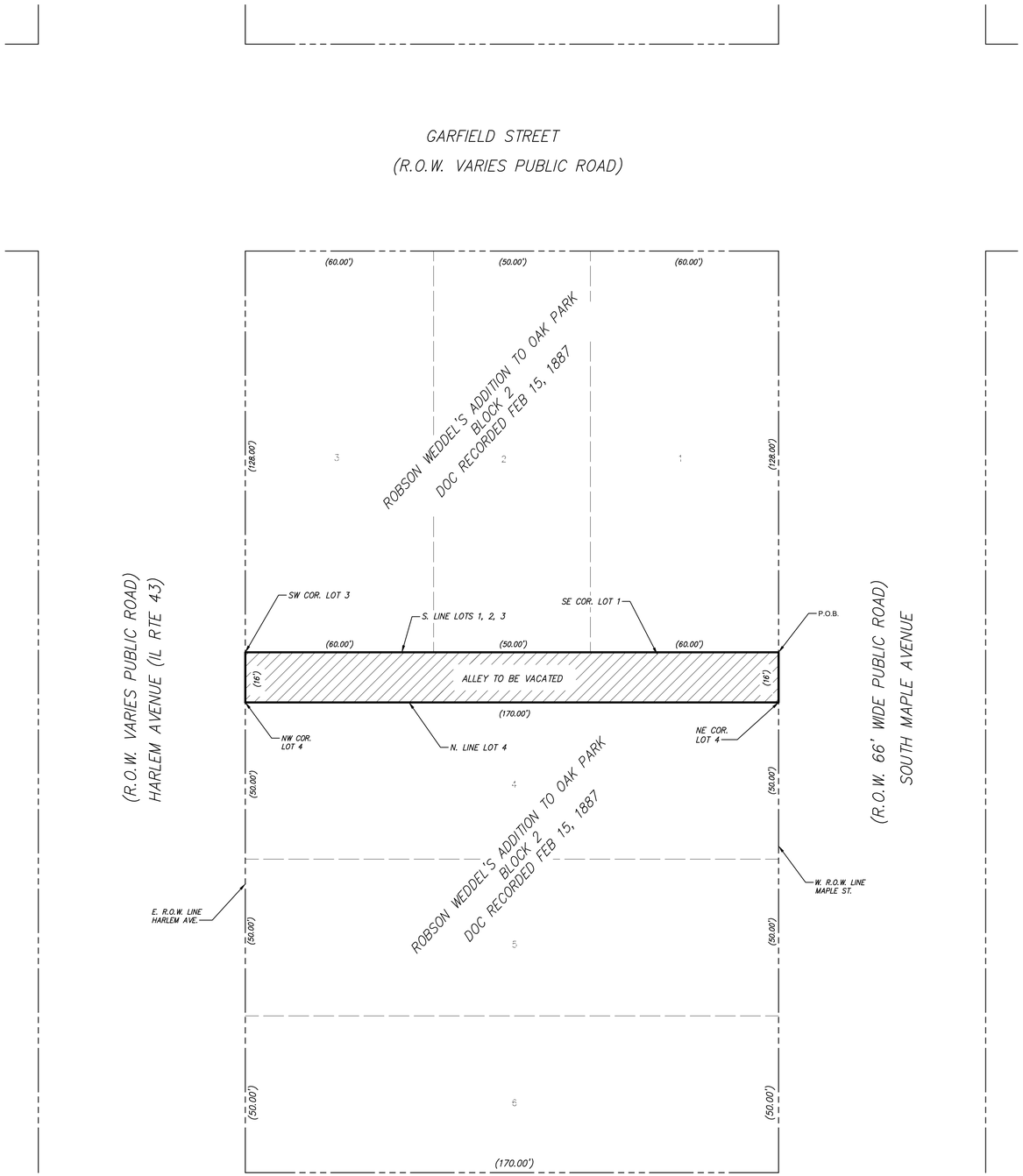
1. Traffic Analysis (If applicable); **prior** to Plan Commission.

General Process for vacating public rights-of-way:

1. Application and written request from the property owner(s) submitted to staff.
2. Staff reviews and provides comments to the Applicant.
3. A Plat of Vacation would need to be prepared.
4. Public Notice for a hearing before the Plan Commission will be prepared by staff (Ad at applicant expense).
5. A traffic analysis would need to be prepared; *If applicable*. (Applicant processes; expense by applicant)
6. The Plan Commission would then meet and discuss the issue and formulate a recommendation to the Village Board. The Plan Commission may elect to ask for input from other boards or commissions.
7. An appraisal of the land would be made to determine the fair market value prior to the Village Board meeting. (Village processes request; expense by applicant)
8. Should the Plan Commission recommend vacation, and the Village Board concurs, the Board would then direct staff to draft the necessary legal documents.
9. The Board would then pass an Ordinance vacating the property in question. Said ordinance would include an agreement outlining the terms for the vacation.
10. The staff would then work with the applicant / owner(s) to arrange for a closing and transfer of title.
11. **All fees, including the initial appraisal, survey (plat of vacation), legal, recording, and purchase would be paid for by the property owner seeking the vacation**.

PLAT OF VACATION

A PART OF BLOCK 2 IN ROBSON WENDELL'S ADDITION TO OAK PARK, BEING A SUBDIVISION OF THE WEST 694 FEET OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 18,TOWNSHIP 39 NORTH, RANGE 13 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, IL



0 10 20 40
SCALE: 1"=20'
U.S. SURVEY FEET

LEGEND

AREA TO BE VACATED 2,720 SQ. FT.

NOTE: ALL PUBLIC UTILITIES SHALL BE RELOCATED BY THE VILLAGE OF OAK PARK PRIOR TO RECORDING THIS PLAT

VILLAGE BOARD CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF COOK)

APPROVED AND ACCEPTED BY THE VILLAGE BOARD OF THE VILLAGE OF OAK PARK, IL AT A MEETING HELD

THIS_____ DAY OF_____ 2025.

_____
PRESIDENT – VILLAGE OF OAK PARK

_____
PRINTED NAME

_____
ATTEST - CLERK – VILLAGE OF OAK PARK

_____
PRINTED NAME

AT&T
APPROVED ON THIS_____ DAY OF _____ 20 ____

_____ _____
BY TITLE

COMMONWEALTH EDISON COMPANY
APPROVED ON THIS_____ DAY OF _____ 20 ____

_____ _____
BY TITLE

COMCAST
APPROVED ON THIS_____ DAY OF _____ 20 ____

_____ _____
BY TITLE

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF COOK)

I, THE UNDERSIGNED, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, DO HEREBY CERTIFY THE PLAT HEREON WAS DRAWN UNDER MY DIRECT SUPERVISON FOR THE PURPOSE STATED HEREON

LEGAL DESCRIPTION OF 16 FOOT WIDE ALLEY TO BE VACATED

BEING A PART OF BLOCK 2 IN ROBSON WEDDELL'S ADDITION TO OAK PARK, BEING A SUBDIVISION OF THE WEST 694 FEET OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 18, TOWNSHIP 39 NORTH, RANGE 13 EAST OF THE THIRD PRINCIPAL MERIDIAN, COOK COUNTY, ILLINOIS AS RECORDED ON FEBRUARY 15, 1887 AS DOCUMENT NUMBER 798586, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHEAST CORNER OF LOT 1 IN SAID BLOCK 2, THENCE SOUTH ALONG ALONG THE WEST RIGHT OF WAY LINE OF MAPLE STREET TO THE NORTHEAST CORNER OF LOT 4 IN SAID BLOCK 2; THENCE WEST ALONG THE NORTH LINE OF SAID LOT 4 TO THE NORTHWEST CORNER THEREOF; THENCE NORTH ALONG THE EAST RIGHT OF WAY LINE OF HARLEM AVENUE TO THE SOUTHWEST CORNER OF LOT 3 IN SAID BLOCK 2, THENCE EAST ALONG THE SOUTH LINE OF LOTS 1, 2, AND 3 TO THE POINT OF BEGINNING, CONTAINING 2,720 SQUARE FEET, OR .062 ACRE MORE OR LESS.

ALL DIMENSIONS ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF

FOR AND ON BEHALF OF
FARNSWORTH GROUP, INC.
100 WALNUT STREET, SUITE 200
PEORIA, ILLINOIS 61602

KENNETH J. SILVERTHORN
3413
PROFESSIONAL LAND SURVEYOR
STATE OF ILLINOIS
PEORIA, ILLINOIS

DATE: _____
EXP. DATE: 11-30-2026
DESIGN FIRM REGISTRATION NO. 184-001856

BY: _____
KENNETH J. SILVERTHORN
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3413
ksilverthorn@f-w.com
www.f-w.com
Phone : 309-689-9888

Farnsworth
GROUP
100 WALNUT STREET, SUITE 200
PEORIA, ILLINOIS 61602
(309) 689-9888 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:

#	DATE:	DESCRIPTION:

PROJECT:

Oak Park, Illinois

DATE:	07/31/25
DESIGNED:	KJS
DRAWN:	GOF
REVIEWED:	PEB
FIELD BOOK NO.:	CHA 200 PG 32

SHEET TITLE:

PLAT OF VACATION

SHEET NUMBER:

1
OF 1

PROJECT NO.: 02401802.001

I_gforsten | z: \2024\02401802.001 - QuikTrip Oak Park IL #4434\Survey\07_Drawings\SV_ALLEY VACATION EXHIBIT - 02401802.001.dwg | 7/31/2025 2:41 PM |

APPLICATION FOR PLAT OF SUBDIVISION

VILLAGE OF OAK PARK, ILLINOIS

Subdivision Name: _____

Date Filed: _____ Accepted by: _____

YOU MUST PROVIDE THE FOLLOWING INFORMATION: IF ADDITIONAL SPACE IS NEEDED, ATTACH EXTRA PAGES TO THE APPLICATION.

Address/Location of Property in Question: 915 S. Maple Ave, Oak Park, IL 60304

Property Identification Number(s) (PIN): 16-18-300-003-0000

Name of Property Owner(s): SEC Harlem Aquisition LLC

If Land Trust, name(s) of all beneficial owners: (A Certificate of Trust must be filed.)

_____ _____

_____ _____

_____ _____

Name of Applicant/Contact(s): QuikTrip

Applicant/Contact's Address: Main Street Promenade 50 South Main Street, Suite 200 Naperville, IL 60540

Office Phone Number 918-284-9456 E-mail abukhres@quiktrip.com

Property Interest of Applicant/Contact: ____Owner ____Legal Representative

__x__Contract Purchaser

____Other (Describe):_____

Existing Zoning: commercial **Describe Request:** Subdivision of lot lines to allow for a outlot to develop in the future

Size of Parcel (from Plat of Survey): 74,544 (Square Feet) or Acre (circle one)

Is the property in question currently in violation of the Zoning Ordinance? ____Yes __x__No

If Yes, how? _____

Is the property in question presently subject to a Special Use or Planned Development? __x__Yes ____No

If Yes, how? _____

Is the subject property located within any Historic District? ____Yes __x__No

I (we) certify that all the above statements and the statements contained in any papers or plans submitted herewith are true to the best of my (our) knowledge and belief.

I (we) consent to the entry in or upon the premises described in this application by any authorized official of the Village of Oak Park for the purpose of securing information, posting, maintaining and removing such notices as may be required by law. **Owner's signature must be notarized.**

(Signature) Applicant — Date: 7/23/25

(Signature) Owner — Date: 7/23/25

(Signature) Owner — Date

SUBSCRIBED AND SWORN TO BEFORE ME THIS

_____DAY OF _____, 20___

(Notary Public)

SUBSCRIBED AND SWORN TO BEFORE ME BY CHRIS KROHE ON BEHALF OF OWNER THIS 23rd DAY OF JULY, 2025.

(Notary Public)

OFFICIAL SEAL
MARK O STERN
NOTARY PUBLIC, STATE OF ILLINOIS
MY COMMISSION EXPIRES: 04/26/2026

SUBMIT THE FOLLOWING WITH THIS APPLICATION:

- Legal Description as It Appears on the Deed.
- Current Plat of Survey of all Applicable Properties.
- Subdivision Plat for both Properties with appropriate signature blocks, signed by the property owner(s) and surveyor. (Electronic copy of each)
- A Zoning Analysis of both properties to ensure all zoning regulations are met; including but not limited to Lot size, lot width, setbacks, lot coverage, etc.
- One (1) original signed Mylar or velum must be submitted **after** Village Board approval.

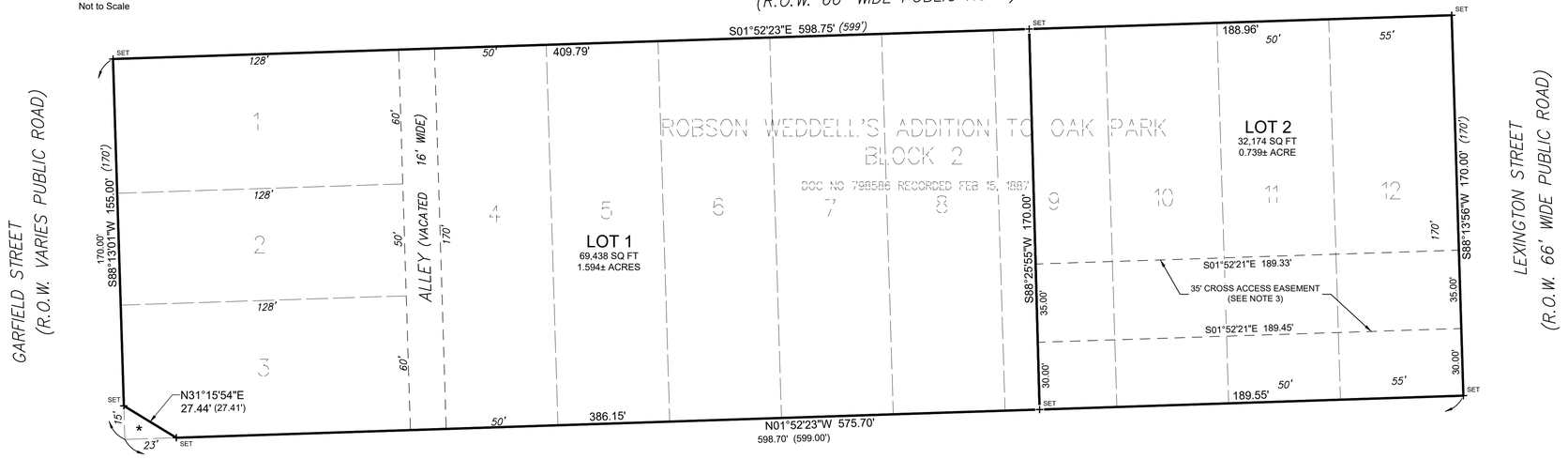
General Process: 1) Approval by staff, Plan Commission, and Village Board; 2) Obtain Village signatures; 3) Record Plat and Ordinance

PLAT OF SUBDIVISION
FOR
QUIKTRIP NO. 4454 ADDITION

BEING A RESUBDIVISION OF LOTS 1, 2, AND 4 THRU 12, INCLUSIVE IN BLOCK 2, PART OF LOT 3 IN BLOCK 2, AND THE VACATED ALLEY IN BLOCK 2, ALL IN ROBSON WEDDELL'S ADDITION TO OAK PARK, BEING A SUBDIVISION OF THE WEST 694 FEET OF THE WEST HALF OF THE SW 1/4 OF SECTION 18, TOWNSHIP 39 NORTH, RANGE 13 EAST OF THE 3RD PRINCIPAL MERIDIAN, VILLAGE OF OAK PARK, COOK COUNTY, ILLINOIS



Location Map
Not to Scale



SCALE: 1"=30'
U.S. SURVEY FEET

BASIS OF BEARINGS IS ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83, 2011 ADJUSTMENT (GEOID18 CONUS)

LEGEND

SET +	SET CUT CROSS
P.O.B.	POINT OF BEGINNING
P.O.C.	POINT OF COMMENCEMENT
(S89°21'26"W 446.71')	PREVIOUS PLAT OR DEED CALL
S89°21'55"W 446.72'	MEASURED BEARING AND DISTANCE
	SUBJECT PROPERTY BOUNDARY
	PARCEL LINE
	EASEMENT LINE
*	AREA PREVIOUSLY DEDICATED TO THE PEOPLE OF THE STATE OF ILLINOIS, DEPARTMENT OF TRANSPORTATION PER DOCUMENT 96360411 FOR ROAD RIGHT OF WAY

BASIS OF BEARINGS:

BEARINGS SHOWN HEREON ARE BASED ON THE ILLINOIS EAST NAD 83 STATE PLANE COORDINATE SYSTEM AS DETERMINED BY USING TRIMBLE VRS (GPS) NETWORK.

DEVELOPER:

QUIKTRIP CORPORATION
ATTN: SKYLER EVANS
50 SOUTH MAIN STREET, SUITE 200
NAPERVILLE, IL 60540

RETURN TO:

QUIKTRIP CORPORATION
ATTN: SKYLER EVANS
50 SOUTH MAIN STREET, SUITE 200
NAPERVILLE, IL 60540

GENERAL NOTES:

1. THIS SUBDIVISION IS IDENTIFIED AS PROPERTY IDENTIFICATION NUMBER: 16-18-300-003-0000.
2. ACCORDING TO THE COOK COUNTY ASSESSORS ONLINE TOOL THE ADDRESS FOR THE SUBJECT SITE IS 915 S. MAPLE AVENUE, OAK PARK, IL. 60304.
3. A CROSS-ACCESS EASEMENT IS A LEGAL AGREEMENT THAT ALLOWS THE OWNERS OF ADJACENT PROPERTIES TO SHARE ACCESS TO EACH OTHER'S LAND, TYPICALLY FOR PURPOSES LIKE SHARED DRIVEWAYS OR PARKING AREAS. THIS AGREEMENT ENSURES VEHICLES OR PEDESTRIANS CAN MOVE FREELY BETWEEN THE PROPERTIES WITHOUT NEEDING TO RE-ENTER THE PUBLIC ROAD. DETAILS OF THE ACCESS EASEMENT WILL BE FINALIZED IN AN AGREEMENT BETWEEN THE ADJACENT LANDOWNERS TO BE FILED IN A SEPARATE DOCUMENT.

OWNERS CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF _____)

THIS IS TO CERTIFY THAT _____ IS THE RECORD OWNER OF THE PROPERTY DESCRIBED HEREON, AND THAT AS SAID RECORD OWNER IT CONSENTS TO THE SUBDIVISION OF SAID PROPERTY. THE VARIOUS DEDICATIONS, GRANTS AND RESERVATIONS OF EASEMENTS AND RIGHT-OF-WAY SHOW THEREON. ALSO THIS IS TO CERTIFY THAT THE PROPERTY BEING SUBDIVIDED AFORESAID, AND TO THE BEST OF THE OWNER'S KNOWLEDGE AND BELIEF, SAID SUBDIVISION LIES ENTIRELY WITHIN THE LIMITS OF OAK PARK SCHOOL DISTRICT 97, OAK PARK AND RIVER FOREST HIGH SCHOOL DIST 200, AND TRITON COMMUNITY COLLEGE 504.

DATED THIS _____ DAY OF _____ A.D., 2025

BY: _____
SIGNATURE

NOTARY'S CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF _____)

I, _____A NOTARY PUBLIC IN AND FOR SAID COUNTY, IN THE STATE AFORESAID, DO HEREBY CERTIFY THAT _____ AND _____ ARE (IS) PERSONALLY KNOWN TO ME TO BE THE SAME PERSON(S), WHOSE NAME(S) ARE (IS) SUBSCRIBED TO THE FOREGOING INSTRUMENT, AS OWNER(S), APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY (HE/SHE) SIGNED AND DELIVERED THE SAID INSTRUMENT AS THEIR (HIS/HER) OWN FREE AND VOLUNTARY ACT(S), FOR THE USES AND PURPOSES THEREIN SET FORTH.
GIVEN UNDER MY HAND AND NOTARIAL SEAL THIS _____ DAY OF _____ , A.D., 2025

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES _____

DIRECTOR OF DEVELOPMENT SERVICES CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF COOK)

APPROVED THIS _____ DAY OF _____, A.D., 2025.

_____
DIRECTOR OF DEVELOPMENT SERVICES, VILLAGE OF OAK PARK

PLAN COMMISSION CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF COOK)

APPROVED THIS _____ DAY OF _____, A.D., 2025.

PLAN COMMISSION, VILLAGE OF OAK PARK

_____
CHAIRMAN, PLAN COMMISSION, VILLAGE OF OAK PARK

BOARD OF TRUSTEES APPROVAL

STATE OF ILLINOIS)
COUNTY OF COOK)

APPROVED THIS _____ DAY OF _____, A.D., 2025, BY THE PRESIDENT AND BOARD OF TRUSTEES OF THE VILLAGE COUNCIL OF OAK PARK, ILLINOIS, PURSUANT TO ORDINANCE NUMBER _____.

BY: _____
PRESIDENT – VILLAGE OF OAK PARK

ATTEST: _____
CLERK – VILLAGE OF OAK PARK

VILLAGE CLERK CERTIFICATION

STATE OF ILLINOIS)
COUNTY OF COOK)

I, THE UNDERSIGNED, AS VILLAGE CLERK OF OAK PARK, COOK COUNTY, ILLINOIS, DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID OR FORFEITED TAXES, AND NO REDEEMABLE TAX SALES AGAINST THE LAND DEPICTED HEREON. I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE PLAT DEPICTED HEREON.
GIVEN UNDER MY HAND AND SEAL OF THE VILLAGE CLERK AT _____, COOK COUNTY, ILLINOIS, THIS _____DAY OF _____, A.D., 2025.

_____
OAK PARK VILLAGE CLERK

DATE: _____

DIRECTOR OF PUBLIC WORKS CERTIFICATE

STATE OF ILLINOIS)
COUNTY OF COOK)

THIS PLAT HAS BEEN CHECKED FOR CONFORMANCE TO THE VILLAGE OF OAK PARK STANDARDS AND REQUIREMENTS. THIS DOCUMENT IS APPROVED UNDER MY OFFICES THIS _____ DAY OF _____, A.D., 2025.

_____
DIRECTOR OF PUBLIC WORKS – VILLAGE OF OAK PARK

ILLINOIS DEPARTMENT OF TRANSPORTATION

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT OF §2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL, BE REQUIRED BY THE DEPARTMENT.

DATED: _____

_____, P.E.
REGION _____ ENGINEER

SURVEYOR'S CERTIFICATE - SUBDIVISION

THIS IS TO CERTIFY THAT I, THE UNDERSIGNED, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HAVE SURVEYED THE PROPERTY AS FOLLOWS:

LEGAL DESCRIPTION - SUBDIVISION

LOTS 1 THRU 12, AND THE VACATED ALLEY, INCLUSIVE, IN BLOCK 2 OF ROBSON WEDDELL'S ADDITION TO OAK PARK, BEING A SUBDIVISION OF THE WEST 694 FEET OF THE WEST ONE-HALF OF THE SOUTHWEST ONE-QUARTER OF SECTION 18, TOWNSHIP 39 NORTH, RANGE 13, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS,

EXCEPT SAID PARCEL TAKE FOR ROAD DESCRIBED AS FOLLOWS:

THAT PART OF LOT 3 IN BLOCK 2 OF ROBSON WEDDELL'S ADDITION TO OAK PARK, BEING A SUBDIVISION OF THE WEST 694 FEET OF THE WEST ONE HALF OF THE SOUTHWEST ONE QUARTER OF SECTION 18, TOWNSHIP 39 NORTH, RANGE 13 EAST OF THE THIRD PRINCIPAL MERIDIAN, SAID PARCEL DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID LOT 3; THENCE NORTH 89 DEGREES 26 MINUTES 11 SECONDS EAST (ASSUMED) 15.00 FEET ALONG THE NORTHERLY LINE THEREOF; THENCE SOUTH 32 DEGREES 22 MINUTES 38 SECONDS WEST 27.41 FEET TO THE WESTERLY LINE OF SAID LOT, SAID LINE BEING ALSO THE EASTERLY RIGHT OF WAY LINE OF HARLEM AVENUE (ILLINOIS ROUTE 43); THENCE NORTH 00 DEGREES 48 MINUTES 23 SECONDS WEST 23.00 FEET ALONG SAID WESTERLY LINE TO SAID POINT OF BEGINNING, IN COOK COUNTY, ILLINOIS.

LEGAL DESCRIPTION - LOT 1

LOTS 1, 2, AND 4 THRU 8, INCLUSIVE, PART OF LOT 3, PART OF LOT 9, AND THE VACATED ALLEY IN BLOCK 2 OF ROBSON WEDDELL'S ADDITION TO OAK PARK, BEING A SUBDIVISION OF THE WEST 694 FEET OF THE WEST ONE-HALF OF THE SOUTHWEST ONE-QUARTER OF SECTION 18, TOWNSHIP 39 NORTH, RANGE 13, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS,

LEGAL DESCRIPTION - LOT 2

LOTS 10 THRU 12, INCLUSIVE, AND PART OF LOT 9 IN BLOCK 2 OF ROBSON WEDDELL'S ADDITION TO OAK PARK, BEING A SUBDIVISION OF THE WEST 694 FEET OF THE WEST ONE-HALF OF THE SOUTHWEST ONE-QUARTER OF SECTION 18, TOWNSHIP 39 NORTH, RANGE 13, EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS,

THE PLAT HEREON DRAWN IS A TRUE AND CORRECT REPRESENTATION OF SAID SURVEY AND ACCURATELY DEPICTS SAID PROPERTY. DIMENSIONS ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF. I FURTHER CERTIFY THAT THE PROPERTY SHOWN ON THE PLAT HEREON DRAWN IS SITUATED WITHIN THE CORPORATE LIMITS OF A MUNICIPALITY WHICH HAS ADOPTED A COMPREHENSIVE PLAT AND IS EXERCISING THE SPECIAL POWERS AUTHORIZED BY THE STATE OF ILLINOIS ACCORDING TO 65 ILCS 5/11-12-6, AS HERETOFORE AND HEREAFTER AMENDED. I FURTHER CERTIFY THAT, BASED UPON A REVIEW OF THE FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP NO. 17031C0485J, EFFECTIVE DATE AUGUST 19, 2008, THE SUBDIVISION LIES WITHIN ZONE X (AREA OF MINIMAL FLOOD HAZARD).

GIVEN MY HAND AND SEAL THIS ___ DAY OF _____, A.D., 2025

BY: _____
KENNETH J. SILVERTHORN
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3413
PH. 309-689-9888 EMAIL: KSILVERTHORN@F-W.COM
WWW.F-W.COM

KENNETH J. SILVERTHORN 3413 PROFESSIONAL LAND SURVEYOR STATE OF ILLINOIS PEORIA, ILLINOIS

DATE: _____
EXP. DATE: 11-30-2026
DESIGN FIRM REGISTRATION NO. 184-001856

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

Farnsworth GROUP
100 WALNUT STREET, SUITE 200
PEORIA, ILLINOIS 61602
(309) 689-9888 / info@f-w.com
www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:

#	DATE:	DESCRIPTION:
1	07/24/2025	REVISED PER CLIENT COMMENT
2	07/31/2025	REVISED PER COMMENTS

PROJECT:

Oak Park, Illinois

DATE:	08/01/2025
DESIGNED:	KJS
DRAWN:	PDM
REVIEWED:	PEB
FIELD BOOK NO.:	CHA 200/32

SHEET TITLE:

FINAL PLAT OF SUBDIVISION FOR QUIKTRIP NO. 4454 ADDITION

SHEET NUMBER:

1
OF 1

PROJECT NO.: 02401802.001

[printed | J:\2024\02401802.001 - QuikTrip Oak Park IL #4454\Survey\07_Drawings\SV_Subdivision Plat - 02401802.001.dwg | 7/31/2025 3:36 PM]

July 10, 2025 *Sent Via E-Mail*

Ali Bukhres
Real Estate Project Manager
50 South Main Street, Suite 200
Naperville, IL 60540

RE: 1141 Garfield Street

Dear Mr. Bukhres:

The Project Review Team (PRT) met on Monday, August 30, 2025, to discuss your request for a special use permit from Section 8.3 (Table 8-1: Use Matrix) of the Zoning Ordinance to operate a Quick Trip Gas Station with a convenience store in the GC General Commercial Zoning District at 1141 Garfield Street. Our comments are as follows:

Comments from Planning Division (Mike Bruce 708-358-5441 or mbruce@oak-park.us.)

1.. There was some discussion amongst the Team on whether the property should have a Harlem address instead of a Garfield address. Please submit an Address Form as part of your application, via the form found on our website here -. It must be submitted via the Village View portal. Submitted Via Portal

2. The alley to the south of the existing strip center has not been formally vacated. A vacation application can accompany the special use permit application and go to the Plan Commission at the same time. Attached is an Application for Right-of-Way Vacation. The Village would need a legal description of the alley for the public notice. Submitted via portal

3. The section of the lot to the south located at the northwest corner of Lexington Street and Maple Avenue is currently part of the entire zoning lot. As such, the entire zoning lot would be subject to the special use permit. As one zoning lot, the southern piece of property shall be landscaped consistently with the rest of the property. ADDITIONAL TREES ADDED.

4. Article 8.4 (J) (Gas Station) (1) of the Zoning Ordinance limits gas stations to two (2) curb cuts. According to the site plan, there are currently three (3) curb cuts proposed for the gas station/convenient store. A variance from Article 8.4 (J) (Gas Station) (1) would be required to allow three (3) curb cuts. The Zoning Board of Appeal would be the hearing body taking formal action on a variance application. If you do not wish to retain this access, a variance would not be needed. Please keep in mind that a variance is not guaranteed and is subject to proof of hardship. A Special Use application can go to either the Plan Commission or the Zoning Board of Appeals. However, the variance can only go to the Zoning Board of Appeals, and an alley vacation and subdivision can only go to the Plan Commission. Submitted Via portal

The southern portion of 915 S Maple Avenue (16-18-300-003-0000) would need to be subdivided from the rest of the property if not part of the QT site. However, if you intend on retaining the driveway to Lexington, it would be considered to be a part of the QT parcel and be subject to the special use permit. If you choose to subdivide the parcel via a formal subdivision process, a subdivision application could be filed along with the special use permit and the vacation application. The three applications could go to the Plan Commission at the same time. Attached

is an Application for Plat of Subdivision. Relative to a tax division, the special use permit could be subject to a tax division separating the zoning lot into two lots.
Submitted via portal
To maintain the current timing (August 7, Plan Commission meeting), I would need revised plans and applications by July 16, 2025. A legal notice for the special use permit, alley vacation and plat of subdivision could be published in the Wednesday Journal on July 23, 2025 for the upcoming hearing date of August 7, 2025. The hearing would be before the Plan Commission.

No later than July 23, 2025, you would be required to send notification letters identifying the proposals and relief sought to all property owners of record within 300 feet of the subject parcel (I can provide e legal notice). The earliest you can send notices would have been 30 days prior to the meeting on August 7, 2025 and no less than 15 days prior to the hearing. Signs, per Zoning Ordinance requirements, shall be posted, no later than July 23, 2025 on each street frontage, in this case 4 street frontages (Harlem, Garfield, Lexington and Maple). Please alert me if you wish to push the Is scheduled meeting date to September 4, 2025 to accommodate the alley vacation and the subdivision submittal process, as it makes since to take all the applications to the Plan Commission at the same, except the variance application.
Will send notices out by August 22nd
Prior to the final submittal and public hearing, **staff strongly suggest**s you hold a neighborhood meeting to discuss your proposal. This will help the neighboring residents understand the proposal ahead of the hearing where you may be able to answer questions and alleviate concerns prior to the hearing.
Will have meeting on Sept. 2nd at 6pm.
In your application and presentation, it would be helpful to understand the newest technology relative to underground gasoline tanks and the precautions and safeguards in place to prevent any leakage or potential negative environmental worries. Noted

Comments from Forestry Superintendent (Grant Jones 708.358.5700 or gjones@oak-park.us.)

5. There are Village tree in the parkway along Garfield Street and Lexington Street that should be shown on the plans. Please specify whether these trees will be maintained or removed. are being kept or proposed for removal.
ONE PARKWAY TREE WILL BE REMOVED AND REPLACED AS SHOWN ON DEMOLITION & LANDSCAPE PLANS
PS
begins.
NOTE ADDED TO C030
7. Are the electric lines along Maple Street remaining above ground or being buried? If they are being buried the tree selection for those areas should change to trees that will have large canopies at maturity. Assuming the lines are remaining above ground, I'd like to see three of the redbuds replaced with three Ivory Silk Japanese Tree Lilacs (*Syringa reticulata* 'Ivory Silk') to add diversity. These species are readily available at nurseries in the area and are appropriate trees to grow under power lines.
OVERHEAD ELEC WILL REMAIN, LILAC TREES HAVE BEEN ADDED.
8. Along S Maple I'd like to see a Shawnee Brave Baldcypress (*Taxodium distichum* 'Shawnee Brave') and a Hackberry (*Celtis occidentalis*) planted instead of the two Frontier Elms. There are several parkway elms near the daycare just to the east of this site. The baldcypress and hackberry are appropriate for the site and will help with tree diversity.
UPDATED
9. According to Engineering, there are a lot of buried utilities in the parkway along Harlem Ave. The parkway width appears to be approximately 8 feet wide. The trees proposed have wider canopies and would require a lot of maintenance to keep branches out of Harlem Ave which has a lot of truck traffic. If trees must be planted in this area, I'd want more upright or columnar trees used. I think omitting parkway trees along Harlem is the best solution.
PARKWAY TREES ALONG HARLEM HAVE BEEN REMOVED.
Comments from Engineering regarding Traffic Study (Bill McKenna 708.358.5722 or bmckenna@oak-park.us.)

Note attached file that is the example cited in comment 4.a.

1. An IDOT permit is required for proposed work on Harlem Avenue. Provide all relevant correspondence between the developer and IDOT. Confirm that IDOT will permit full access at the proposed Harlem driveway.
   PENDING
2. For the next submittal, the TIS must use actual traffic signal timings as provided by IDOT.
   Revised as requested.
3. Note in the report whether the traffic counts reflect any traffic generated by existing uses within the redevelopment parcels. UPDATED – TRAFFIC COUNTS ARE NOT EXPECTED TO CONTAIN LARGE AMOUNTS OF TRAFFIC GENERATED BY EXISTING USES.

4. Several updates and clarifications are required for the directional distribution estimations:
   a. Provide a standard (and simplified) directional distribution figure that shows overall projected directions of travel. See attached example. REVISED AS REQUESTED. REFER TO FIGURE 6.C OF THE TIS
   b. Only 10% of outbound site traffic is projected to utilize the Harlem/Garfield signal. Given the difficulty of turning onto Harlem, this seems low. DIRECTIONAL DISTRIBUTION HAS BEEN UPDATED TO SHOW MORE TRAFFIC AT THE HARLEM/GARFIELD SIGNAL.
   c. An equal amount of traffic is shown turning left and right at the proposed driveway onto Harlem. Given the difficulty of turning left, it is likely that more traffic will turn right. UPDATED TO SHOW MORE TURNING RIGHT OUT AT SITE DRIVEWAY ON HARLEM.
   d. The directional distribution assumes 40% of traffic entering and exiting the site via Harlem to the south and 30% entering and exiting via Harlem to the north. Given the proximity of the I-290 to the north, should more traffic be originating and destined to the north? Or, given the difficulty of turning left onto Harlem, should a significant amount of traffic be assumed to already be on Harlem northbound and continue to head northbound after existing the site? Over this small of a scale study area, it is OK for these to be imbalanced. PRIMARY DISTRIBUTION WAS INCREASED SLIGHTLY TO SHOW MORE TRAFFIC COMING FROM THE NORTH AND GOING BACK TO THE NORTH. PASS-BY DISTRIBUTION WAS UPDATED TO SHOW MORE TRAFFIC COMING FROM THE SOUTH AND GOING TO THE NORTH.
   e. The text on the TIS should include more of a narrative discussing how the trip distribution projections were developed. In particular, the Village is interested in assumptions regarding traffic on Lexington, Maple, and Garfield. UPDATED – REFER TO SECTION 5.2 OF THE REPORT.
5. Provide information in the report regarding how frequency, what size, and routes for trucks entering and exiting the site. UPDATED – THERE IS NO DIESEL FUELING ON SITE, THEREFORE THE ONLY TRUCKS EXPECTED ARE QUIKTRIP'S FUEL TRUCK (WB-50) AND A GARBAGE TRUCK. NEITHER OF THESE TRUCKS ARE EXPECTED TO BE FREQUEST TRIPS DURING THE WEEK. THE FUEL TRUCK AND GARBAGE TRUCK WILL BE ROUTED TO ENTER THROUGH THE SITE DRIVEWAY ON HARLEM OR THE SITE DRIVEWAY ON LEXINGTON AND EXIT THE SITE VIA THE SITE DRIVEWAY ON GARFIELD.

6. Capacity analyses show long queues and delays for eastbound lefts at the site driveway on Harlem and at the intersection of Lexington at Harlem. In reality, drivers will not wait more than 5 minutes to make this left. Further explanation is required. Is the traffic model over-projecting delay? Will more drivers try to access the signal at Harlem/Garfield? Will most traffic accessing the site being originating from the south on Harlem and leaving via northbound Harlem?
   ? THE TRAFFIC MODEL IS PROJECTING DELAY BASED ON OPPOSING TRAFFIC VOLUMES. IL-43 (HARLEM AVE) EXPERIENCES SEVERE AMOUNTS OF TRAFFIC THAT MAY RESULT IN

LONG SIDE STREET DELAYS AND QUEUE SPILLBACKS. DELAYS AND QUEUES MAY ALSO BE CONSERVATIVE DUE TO OVER PROJECTING SITE TRAFFIC AND ASSUMING BACKGROUND GROWTH EVEN THOUGH THE SURROUNDING AREA IS ALREADY BUILT OUT. THIS REVISION OF THE TIS TAKES INTO CONSIDERATION MORE TRAFFIC ACCESSING THE SIGNAL AT HARLEM/GARFIELD.

7. Traffic projections show that westbound queues on Garfield at Harlem will consistently block the site driveway, impeding the ability of traffic to turn left out of the north site driveway. Provide further discussion on how this driveway will operate during peak periods. DRWY #1 IS BLOCKED BY WESTBOUND QUEUES AT HARLEM & GARFIELD, TRAFFIC CAN USE QUIKTRIP DRWY #2 AND QUIKTRIP DRWY #3 TO EXIT THE SITE. HOWEVER, DURING OFF PEAK HOURS THE OPERATIONS WILL BE GOOD ENOUGH TO ALLOW TRAFFIC TO ENTER AND EXIT THE SITE FREELY.
8. At a high-level, the Village concurs with the proposed left turn striping modification on Garfield. Show the proposed pavement markings on the engineering plans.
   ADDED
9. Confirm that all parking along the south curb between Harlem and Lexington would be restricted as part of this development.
   YES STREET PARKING WILL NOT BE ALLOWED IN THIS AREA
10. The proposed striping and turn lane modifications shown on Harlem shown on Figure 11 of the TIS appear to show widening on the east side of the street. Is an easement or right-of-way dedication proposed to accommodate the realigned sidewalk? Show the proposed modifications along Harlem on the engineering plans.
    ADDED
11. The truck turning movement exhibit shows a WB-50. Typically fuel trucks are WB-65s. Please confirm.
    QT FUEL TRUCKS ARE WB-50s
12. Dimension the width of the Garfield driveway on the site plan.
    ADDED
13. The proposed site driveways, particularly on Harlem and Garfield, must be as narrow as possible with compact radii as practical to maintain optimum walkability. The AutoTurn exhibits show that truck turning movements are not the critical factor in determining driveway widths. Please narrow the width of the driveways and reduce the radii as much as practical.
    NARROWED TO 30' WITH 15'R.

Additional Engineering comments may be forwarded to your attention as they become available.

To maintain the current timing (August 7, Plan Commission meeting), I would need revised plans and applications by July 18, 2025. A legal notice for the special use permit, alley vacation and plat of subdivision could be published in the Wednesday Journal on July 23, 2025 for the upcoming hearing date of August 7, 2025. The hearing would be before the Plan Commission. (I am out of the office on Friday.

No later than July 23, 2025, the Applicant would be required to send notification letters identifying the proposals and relief sought to all property owners of record within 300 feet of the subject parcel. The earliest you can send notices would have been 30 days prior to the meeting on August 7, 2025. Signs, per Zoning Ordinance requirements, shall be posted, no later than July 23, 2025. Please alert me if you wish to push the scheduled meeting date to September 4, 2025 to accommodate the alley vacation and the subdivision or tax division, as it makes since to take all the applications to the Plan Commission at the same time instead of separately. Please contact me on Monday to discuss timing.

If you have any questions regarding this letter please feel free to contact me at 708/358-5441 or by e-mail at mbruce@oak-park.us.

Respectfully,

VILLAGE OF OAK PARK

Michael Bruce | **Planning & Urban Design Manager/Village Planner**
Development Services Department
Village of Oak Park
708.358.5441 | mbruce@oak-park.us

CESO

06.30.2025
Revised: 08.20.2025

Traffic Impact Study

Proposed QuikTrip Development



On behalf of:

QuikTrip

Contact:

QuikTrip
Ali Bukhres
50 South Main Street
Naperville, IL 60540

Preparation Date:

Original: 06/30/2025
Revised: 08/20/2025

Traffic Study

CLIENT	QuikTrip
STORE #	
LOCATION:	Village of Oak Park, Illinois
ADDRESS	Southeast Corner of IL-43 (Harlem Ave) & Harrison Street/Garfield Street
COUNTY	Cook
CITY, STATE	Village of Oak Park, IL

PREPARED BY	Jacob Petrella
	CESO, Inc.
ADDRESS	175 Montrose West Ave, Suite 400
CITY, STATE	Akron, OH 44321
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DATE	August 20th, 2025

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1. Executive Summary

1.1. Summary

The following Traffic Impact Study was revised to reflect a right-in/right-out at IL-43 (Harlem Avenue) & QuikTrip Driveway #2.

This Traffic Impact Study (TIS) conducted by CESO, Inc. addresses the traffic related impacts associated with the proposed QuikTrip Development; referred to herein as "QuikTrip Development." The proposed QuikTrip Development is to be located in the southeast corner of the IL-43 (Harlem Ave) & Harrison Street/Garfield Street intersection, within the Village of Oak Park, Cook County, IL. The full buildout of the QuikTrip Development is projected to have a 6,445 S.F. convenience store with 16 passenger car fueling positions.

QuikTrip Site Plan application requests approval of one (1) access connection to Garfield Street, one (1) access connection to IL-43 (Harlem Ave), and one (1) access connection to Lexington Street.

The Traffic Impact Study focused on evaluating the 2026 No-Build, 2026 Build, 2046 No-Build and 2046 Design Year traffic conditions near the site.

1.2. Conclusions

The full buildout of the Site is estimated to generate 506 trips during the weekday AM peak hour (122 primary trips and 384 pass-by trips), 430 trips during the weekday PM peak hour (108 primary trips and 322 pass-by trips), and 476 trips during the Saturday peak hour (118 primary trips and 358 pass-by trips).

Trips for the proposed QuikTrip Development are anticipated to approach and depart the Site following the distribution patterns illustrated on Figures 6.A-6.B (see pg. 21-22).

Synchro Version 12.0 Signalized and TWSC methodology was used to analyze the current level of service at the key study intersections.

Under the **2026 No-Build and 2046 No-Build Traffic Scenarios**, there are existing delays and failures at the signal-controlled intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St. In addition, IL-43 (Harlem Ave) experiences significant traffic which also results in long delays and failures for side street developments along the corridor.

Under the **2026 Build Traffic Scenario**, some movements may experience an increase in delay due to the traffic generated by the proposed QuikTrip Development. However, the recommended improvements improve delay and safety along the IL-43 (Harlem Ave) corridor. The signal-controlled intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St operates at overall level of service (LOS) "D" or better conditions. The recommended improvements include the following:

- Traffic signal timing phase splits were optimized at the signal-controlled intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St.
- Extend the existing WB to SB left-turn lane at the intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St to beyond QuikTrip Driveway #1.
- Construction of a NB to EB right-turn lane at the intersection of IL-43 (Harlem Ave) & QuikTrip Driveway #2.

Under the **2046 Design Year Traffic Scenario**, the compounded background growth and addition of traffic generated by the proposed QuikTrip Development contributes to an increase in delay for side street developments. The proposed optimized signal timings improve the functionality of the IL-43 (Harlem Ave) & Harrison St/Garfield St signal-controlled intersection between the 2046 No-Build and 2046 Design Year traffic scenarios. Consideration should be taken to continually optimize the traffic signal timing at the intersection to best fit the flow of traffic.

CESO conducted turn lane analyses for the study network and reached the following conclusions:

- According to the *IDOT BDE Manual*, a left-turn lane **is not warranted** at any of the study intersections.

- According to the *IDOT BDE Manual,* Figure 36.3-A, an EB to SB right-turn lane **is warranted** at the intersection of Garfield Street & QuikTrip Driveway #1. CESO **does not recommend** the construction of this turn lane due to close proximity to the existing intersection of IL-43 (Harlem Ave) & Garfield Street.

- According to the *IDOT BDE Manual,* Figure 36.3-B, a NB to EB right-turn lane **is warranted** at the intersection of IL-43 (Harlem Ave) & QuikTrip Driveway #2. CESO **recommends** the construction of this NB to EB right-turn lane to accommodate 75' of storage plus a 100' taper.

CESO conducted queue length analyses for the study network and reached the following conclusions:

- IL-43 (Harlem Ave) experiences significant traffic throughout the day which can result in severe queue spillbacks along the corridor.
  - As a result of significant traffic traveling on IL-43 (Harlem Ave), several side streets or site driveways may also experience queue spillbacks and long delays due to minimal gaps in traffic.

- With the proposed roadway improvements applied, CESO determined that the queue lengths will not exceed the proposed storage lengths under the 2026 Build Traffic Scenario.

1.3. Summary of Recommendations

The following summary of recommendations was generated based upon the findings in the Traffic Impact Study. Refer to Figure 11 for the Recommended Improvement graphic.

2026 No-Build Traffic Scenario (Responsibility – Others):

- No improvements are recommended or required.

2026 Build Traffic Scenario (Responsibility – QuikTrip):

IL-43 (Harlem Ave) & Harrison Street/Garfield Street:

- Optimize traffic signal timing phase splits to maintain a 125 second cycle length during the AM and PM Peak Hours and a 120 second cycle length during the Saturday Peak Hour.
- Extend the existing WB to SB left-turn lane beyond QuikTrip Driveway #1. Restripe this turn lane to provide 165' of storage.

Garfield Street & QuikTrip Driveway #1:

- Construct QuikTrip Driveway #1 to permit left-in, left-out, right-in, and right-out (full access) movements of passenger cars. Control this driveway with one (1) stop sign.

IL-43 (Harlem Ave) & QuikTrip Driveway #2:

- Construct QuikTrip Driveway #2 to permit right-in, and right-out (RI/RO) movements of passenger cars. Control this driveway with one (1) stop sign.
- Construct a NBR turn lane to provide 75' of storage plus a 100' taper.

Lexington Street & QuikTrip Driveway #3:

- Construct QuikTrip Driveway #3 to permit left-in, left-out, right-in, and right-out (full access) movements of passenger cars. Control this driveway with one (1) stop sign.

2046 No-Build Traffic Scenario (Responsibility – Others):

- No improvements are recommended or required.

2046 Design Year Traffic Scenario (Responsibility – QuikTrip):

- No additional improvements are recommended or required.

2. Introduction

This report is submitted on behalf of QuikTrip in connection with its application to the Village of Oak Park, Illinois (IL) for Site Plan approval. The Traffic Impact Study (TIS) conducted by CESO, Inc. addresses the traffic related impacts associated with the proposed QuikTrip Development; referred to herein as "QuikTrip Development."

The proposed QuikTrip Development is to be located in the southeast corner of the IL-43 (Harlem Ave) & Harrison Street/Garfield Street intersection, within the Village of Oak Park, Cook County, IL. The full buildout of the QuikTrip Development is projected to have a 6,445 S.F. convenience store with 16 passenger car fueling positions.

QuikTrip Site Plan application requests approval of the following access points:

- Full access driveway connection to Garfield Street (referred to as "QuikTrip Driveway #1") approximately 95' east of IL-43 (Harlem Ave) (stop-bar-to-centerline).

- Right-In/Right-Out (RI/RO) access driveway connection to IL-43 (Harlem Ave) (referred to as "QuikTrip Driveway #2") approximately 365' south of Harrison Street/Garfield Street (stop-bar-to-centerline).

- Full access driveway connection to Lexington Street (referred to as "QuikTrip Driveway #3") approximately 45' east of IL-43 (Harlem Ave) (stop-bar-to-centerline).

Work within the right-of-way for construction of the proposed QuikTrip Driveways along with the recommended roadway improvements. IL-43 (Harlem Ave) is under jurisdiction of the Illinois Department of Transportation (IDOT District 1), and Garfield Street is under jurisdiction of the Village of Oak Park.

This report presents the methodologies, analyses, and results of the Traffic Impact Study (TIS) for traffic generated by the proposed QuikTrip Development. The purpose of the TIS was to identify traffic related improvements warranted during typical weekday AM, PM, and Saturday peak hours of the adjacent street traffic corresponding with the peak hours of operation for the proposed QuikTrip Development.

The following intersections were analyzed in the Traffic Impact Study:

- IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled).
- Garfield Street & S Maple Avenue (Stop Sign Controlled).
- IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled).
- Lexington Street & S Maple Avenue (Stop Sign Controlled).

The following traffic scenarios were included in the analysis:

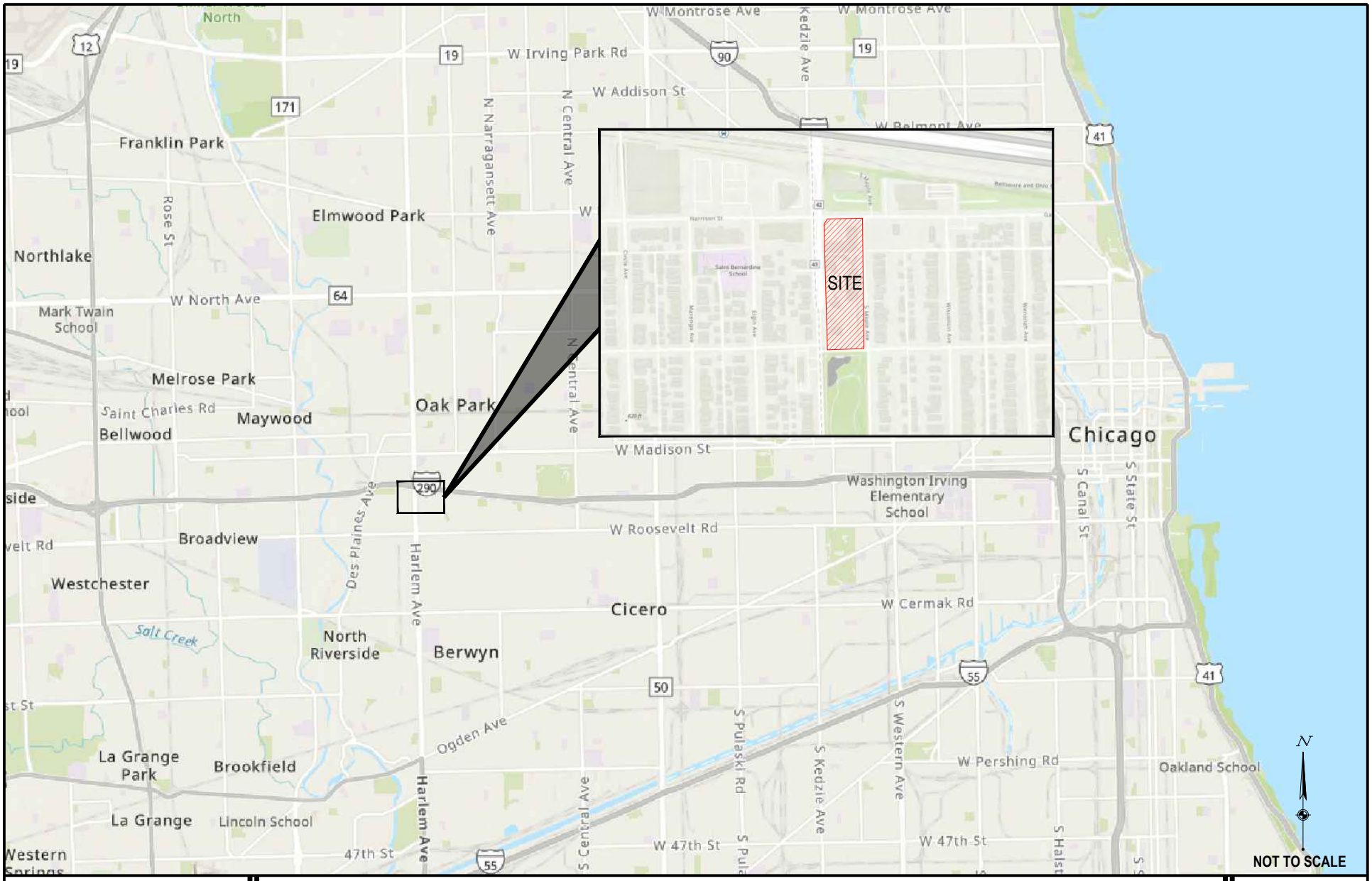
2026 No-Build Traffic Scenario – Represents traffic conditions during the weekday AM, PM, and Saturday Peak Hours of the adjacent roadway network that would exist during year 2026, without the proposed QuikTrip Development.

2026 Build Traffic Scenario – Represents traffic conditions during the weekday AM, PM, and Saturday Peak Hours of the adjacent roadway network that would exist during year 2026, with the proposed QuikTrip Development.

2046 No-Build Traffic Scenario – Represents traffic conditions during the weekday AM, PM, and Saturday Peak Hours of the adjacent roadway network that would exist during year 2046, without the proposed QuikTrip Development.

2046 Design Year Traffic Scenario – Represents traffic conditions during the weekday AM, PM, and Saturday Peak Hours of the adjacent roadway network that would exist during year 2046, with the proposed QuikTrip Development.

Figure 1 illustrates the Site location with respect to the study area.



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SITE LOCATION

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	1
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3. Roadway and Traffic Conditions in the Vicinity of the Site

An inventory of existing transportation conditions in the vicinity of the Site was created to form a database for use in projecting Build conditions.

3.1. Study Location and Area Land Use

The proposed QuikTrip Development is to be located in the southeast corner of the IL-43 (Harlem Ave) & Harrison Street/Garfield Street intersection, within the Village of Oak Park, Cook County, IL. Land use in the direct vicinity of the Site is primarily commercial and residential.

Figure 2 illustrates the Site Plan for the proposed QuikTrip Development.

3.2. Area Roadway Characteristics

The majority of passenger car traffic is assumed to come from IL-43 (Harlem Ave). With the addition of the proposed QuikTrip Development, the site is expected to generate a higher volume of traffic on this roadway. CESO anticipates the QuikTrip Development traffic to have impacts to the traffic conditions of the existing traffic signal at the IL-43 (Harlem Ave) & Harrison Street/Garfield Street intersection.

IL-43 (Harlem Ave) – IL-43 (Harlem Ave) runs in the north/south direction in the vicinity of the Site. IL-43 (Harlem Ave) is a two-way undivided roadway with two lanes in each direction. IL-43 (Harlem Ave) is classified as an Other Principal Arterial according to the *IDOT Roadway Functional Class Map*. IL-43 (Harlem Ave) is under jurisdiction of the Illinois Department of Transportation (IDOT District 1). The posted speed limit on IL-43 (Harlem Ave) is 30 mph.

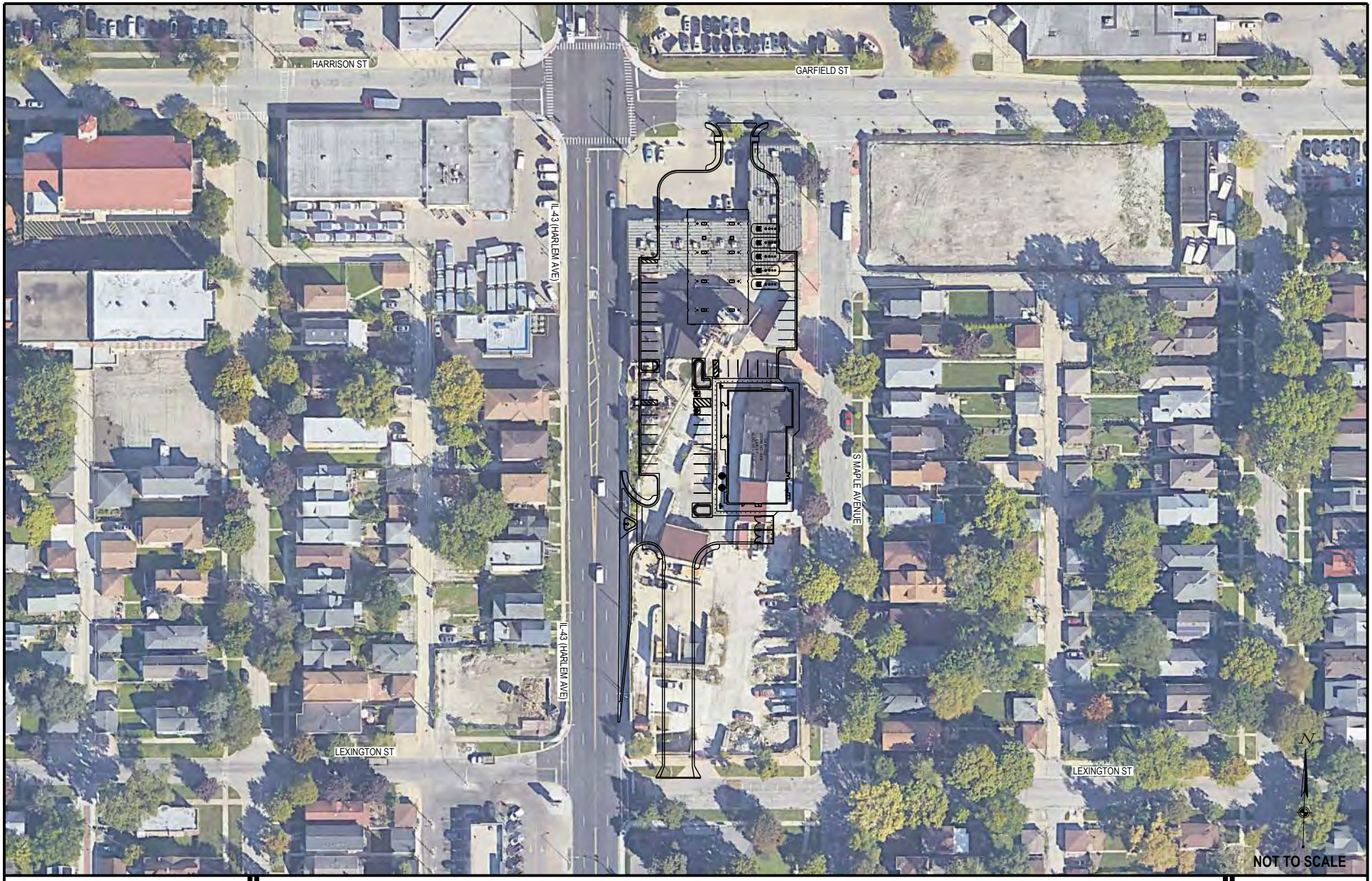
Harrison Street – Harrison Steet runs in the east/west direction in the vicinity of the Site. Harrison Steet is a two-way undivided roadway with one lane in each direction. Harrison Steet is classified as a Major Collector according to the *IDOT Roadway Functional Class Map*. Harrison Steet is under jurisdiction of the Village of Oak Park. The posted speed limit on Harrison Steet is 20 mph.

Garfield Street – Garfield Steet runs in the east/west direction in the vicinity of the Site. Garfield Steet is a two-way undivided roadway with one lane in each direction. Garfield Steet is classified as a Local Road/Street according to the *IDOT Roadway Functional Class Map*. Garfield Steet is under jurisdiction of the Village of Oak Park. The posted speed limit on Garfield Steet is 25 mph.

Lexington Street – Lexington Steet runs in the east/west direction in the vicinity of the Site. Lexington Steet is a two-way undivided roadway with one lane in each direction. Lexington Steet is classified as a Local Road/Street according to the *IDOT Roadway Functional Class Map*. Lexington Steet is under jurisdiction of the Village of Oak Park. The posted speed limit on Lexington Steet is 25 mph.

S Maple Avenue – S Maple Avenue runs in the north/south direction in the vicinity of the Site. S Maple Avenue is a two-way undivided roadway with one lane in each direction. S Maple Avenue is classified as a Local Road/Street according to the *IDOT Roadway Functional Class Map*. S Maple Avenue is under jurisdiction of the Village of Oak Park. The posted speed limit on S Maple Avenue is 25 mph.

The Existing Transportation System is shown on Figure 3 of the report.



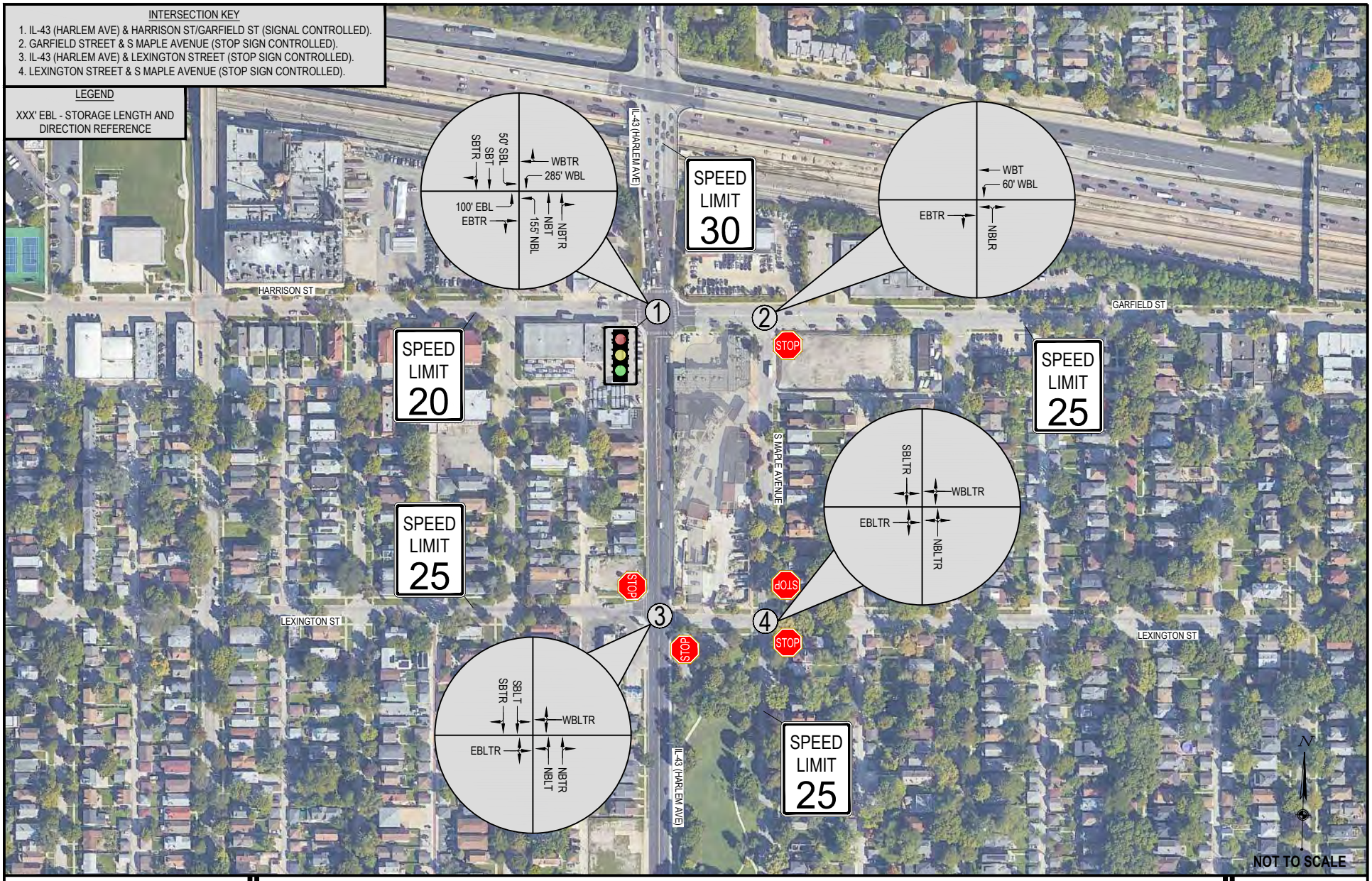
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SITE PLAN

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE 2	
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EXISTING TRANSPORTATION SYSTEM

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE 3	
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3.3. Existing Traffic Volumes

Traffic counts were conducted by Gewalt Hamilton Associates, Inc. (GHA) on Thursday, May 8th, 2025, between the hours of 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM and on Saturday, May 10th, 2025, between the hours of 11:00 AM to 2:00 PM at the following intersections:

- IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled).
- Garfield Street & S Maple Avenue (Stop Sign Controlled).
- IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled).
- Lexington Street & S Maple Avenue (Stop Sign Controlled).

NOTE: Existing traffic volumes are not expected to reflect large amounts of traffic generated by the existing land use that is being redeveloped to the proposed QuikTrip Development.

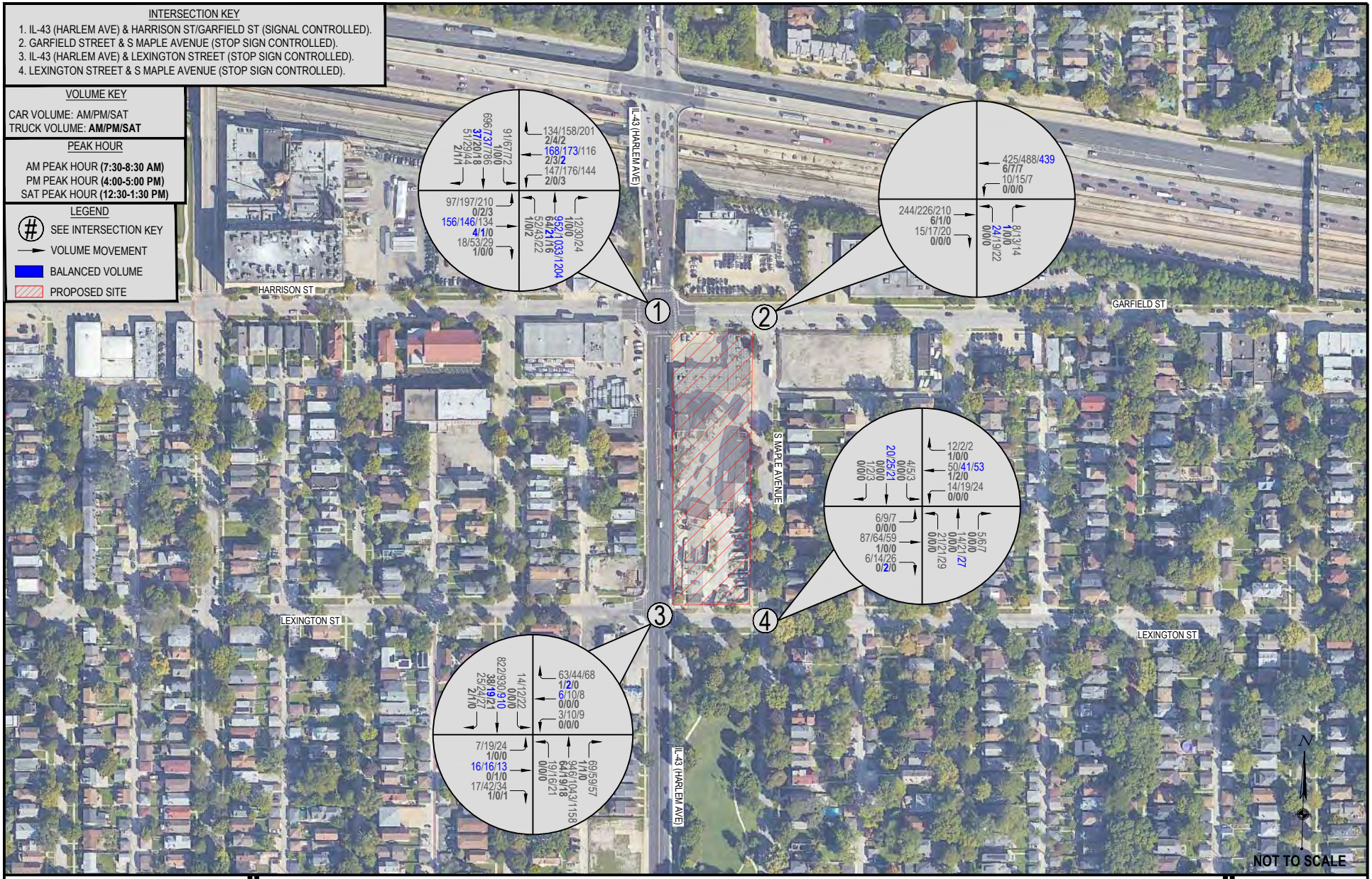
The weekday peak hours of the Traffic Impact Study roadway network were determined to occur between the hours of:

- 7:30 AM – 8:30 AM (AM Peak Hour).
- 4:00 PM – 5:00 PM (PM Peak Hour).
- 12:30 PM – 1:30 PM (Saturday Peak Hour).

Count data collected consists of turning movement counts with classification breakouts of lights (passenger cars), buses, single-unit trucks, and articulated trucks.

NOTE: IDOT provided the existing signal timing for the intersection of IL-43 (Harlem Ave) & Harrison Street/Garfield Street on Wednesday, July 23rd. The signal timing in the Synchro files now reflect the existing day operations.

The Existing Traffic Count Data and Signal Timing Sheets are located in Appendix A of the report. The Existing Traffic Volumes (Year 2025) are illustrated on Figure 4.A (Cars and Trucks) and Figure 4.B (Total Volumes).



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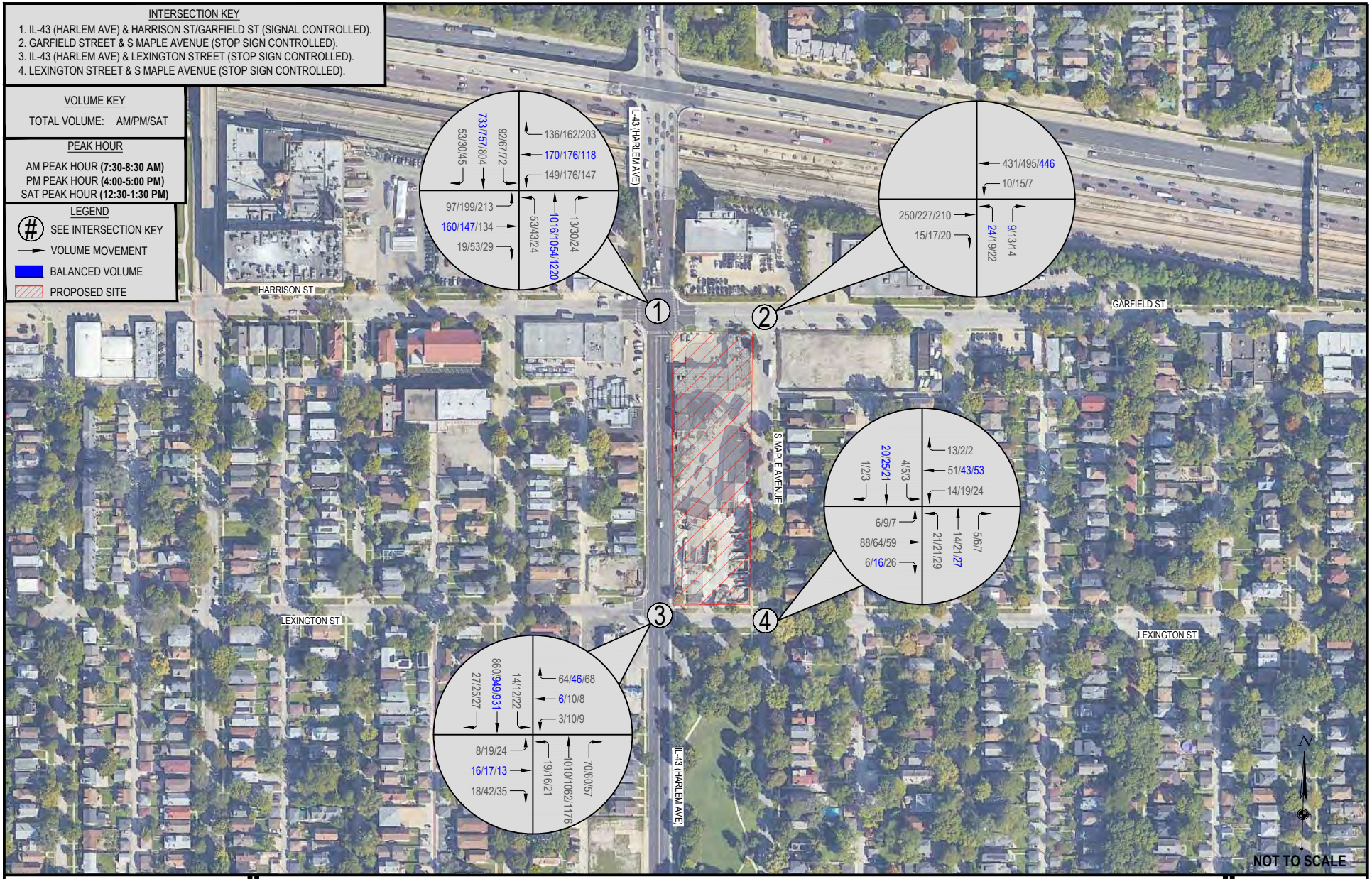
EXISTING PEAK HOUR TRAFFIC VOLUMES (YEAR 2025) - CARS & TRUCKS

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE 4.A

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EXISTING PEAK HOUR TRAFFIC VOLUMES (YEAR 2025) - TOTAL VOLUMES

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	4.B
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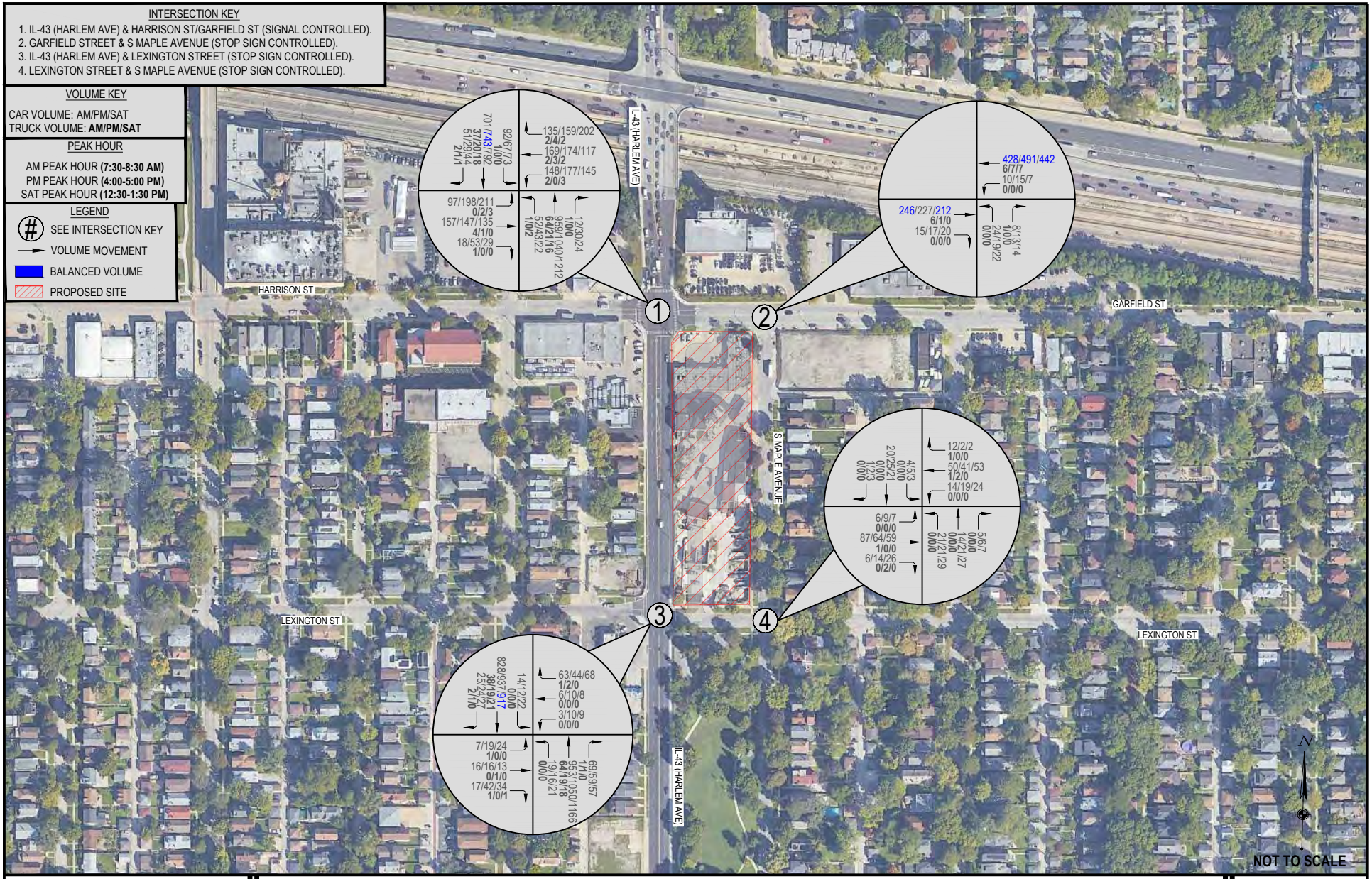
4. Estimates of 2026 No-Build Traffic in the Vicinity of the Site

4.1. 2026 No-Build Traffic Volumes

The 2026 No-Build Traffic Volumes – Cars & Trucks (Figure 5.A) were calculated by applying a compound annual growth rate obtained from the *Chicago Metropolitan Agency for Planning (CMAP)* to the Existing Traffic Volumes (Year 2025) – Cars & Trucks (Figure 4.A). The compound annual growth rates shown below were applied for one (1) year to the volumes on their respective study roadways to reach the 2026 No-Build Traffic Volumes:

- IL-43 (Harlem Ave): Compound annual growth rate of 0.70% for a growth factor of 1.007.
- All other roadways: Compound annual growth rate of 0.49% for a growth factor of 1.005.

The car and truck volumes shown on Figure 5.A were combined to form the 2026 No-Build Traffic Volumes – Total Volumes (Figure 5.B) for simplicity. Refer to Appendix B of the report for Growth Rate Documentation.



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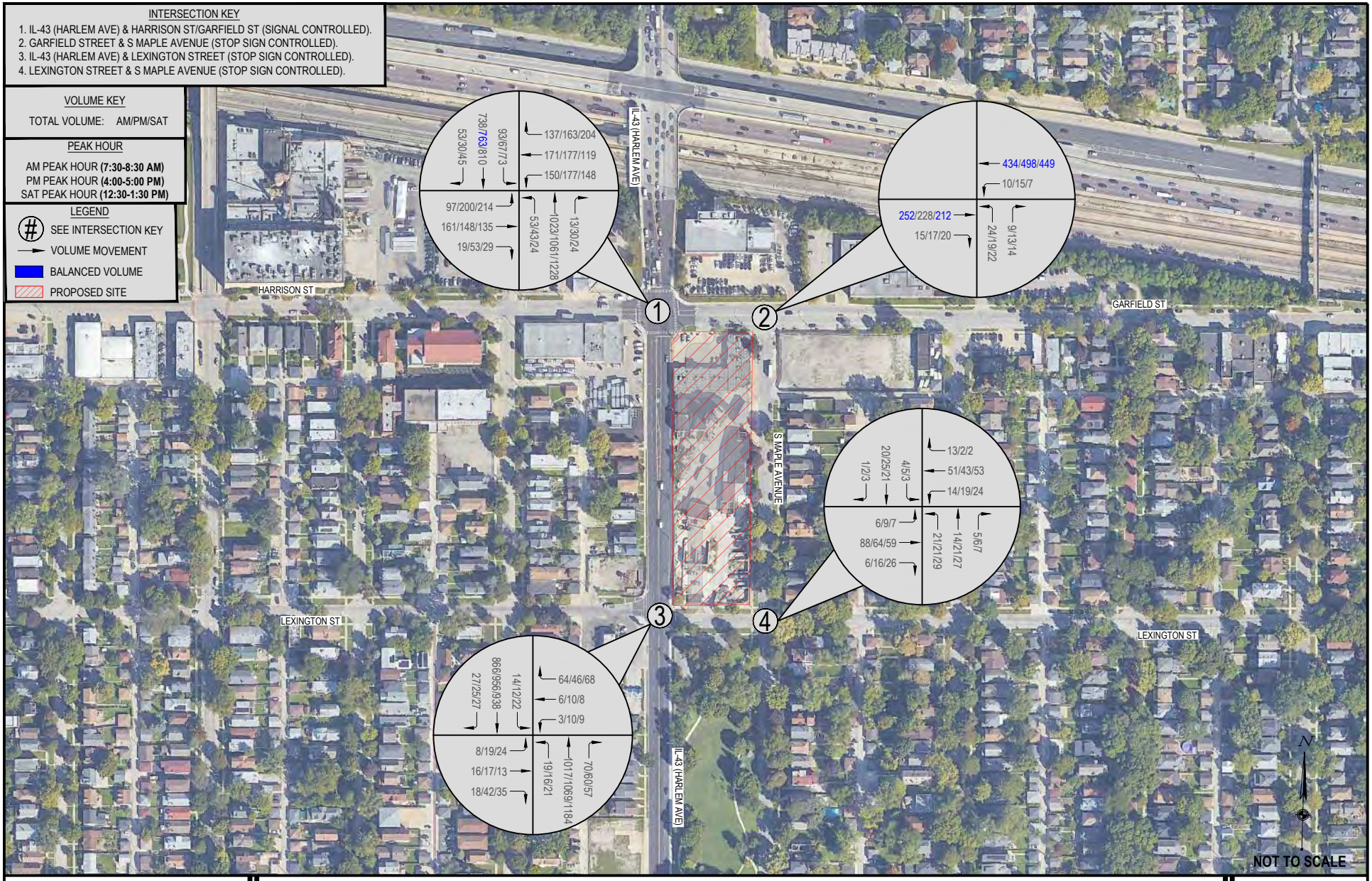
2026 NO-BUILD TRAFFIC VOLUMES - CARS & TRUCKS

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE 5.A

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2026 NO-BUILD TRAFFIC VOLUMES - TOTAL VOLUMES

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	5.B
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5. Trip Generation

5.1. Site Generated Traffic Volumes

Studies of similar developments throughout North America have shown that the amount of traffic generated will be functionally related to some unit of activity (i.e., number of fueling stations, gross floor area, service bays, etc.). In development, site traffic fluctuates substantially on different days and hours throughout the year. Therefore, it is imperative to select an appropriate hourly volume on which to base the design of the external roadway and site access facilities. The Weekday AM, PM, and Saturday Peak Hours were selected based on the adjacent street traffic during this hour.

The 2026 Build and 2046 Design Year Traffic Scenarios include the proposed use of the Site as a QuikTrip Development that consists of:

- Gasoline Service Station with a 6,445 S.F. Convenience Store consisting of 16 passenger car fueling positions.

In addition, the QuikTrip Development is projected to have approximately 48 parking spaces for passenger cars.

For analysis purposes, the base variable unit for the trip-generation rate was number of fueling positions. The Site Generated Traffic Volumes (Table 1) were calculated by utilizing data contained in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition* in combination with methods outlined in the (ITE) *Trip Generation Handbook*. Pass-by trips were applied and based on percentages found in the Institute of Transportation Engineers (ITE) *Trip Generation Handbook, 3rd Edition*. The Site Generated Traffic Volumes are presented below in Table 1.

Table 1
Site Generated Traffic Volumes

Total Generated Trips														
Weekday			Weekday AM Peak Hour				Weekday PM Peak Hour				Saturday Peak Hour			
Tot	In	Out	[A]Tot	In	Out	[B]PB	[A]Tot	In	Out	[B]PB	[A]Tot	In	Out	[B]PB
ITE LUC 945 – Convenience Store/Gas Station – 16 Passenger Car Fueling Positions														
5,532	2,766	2,766	506	61	61	384	430	54	54	322	476	58	60	358
100%	*50%*	*50%*	*100%*	*50%*	*50%*	[C]*76%*	*100%*	*50%*	*50%*	[C]*75%*	*100%*	*49%*	*51%*	[C]*75%*
5,532	2,217	2,217	506	61	61	384	430	54	54	322	476	58	60	358

[A]Tot = Primary Trips + Pass-by Trips, [B]PB = Pass-by Trips, [C] = Percent (%) of [A]Tot

The full buildout of the Site is estimated to generate 122 new trips during the weekday AM peak hour (61 inbound and 61 outbound), 108 new trips during the weekday PM peak hour (54 inbound and 54 outbound), and 118 new trips during the Saturday peak hour (58 inbound and 60 outbound). Pass-by trips were included in the analysis and account for 384 trips in the weekday AM peak hour (192 inbound and 192 outbound), 322 trips during the weekday PM peak hour (161 inbound and 161 outbound), and 358 trips during the Saturday peak hour (179 inbound and 179 outbound).

Appendix C includes trip generation calculations and ITE Trip Generation Category 945 Sheets utilized to calculate the values presented in Table 1.

5.2. Directional Distribution of Site Generated Traffic Volumes

The directional distribution of the development-generated traffic is a function of several variables. The assumptions and methods used in estimating the direction in which traffic will approach and depart the Site varies with several location-specific conditions such as:

- Size and type of the proposed development.
- Population distribution within the defined area of influence.
- Prevailing operating conditions on the existing street system.

NOTE: The directional distribution percentages were developed by taking the proportion of each approach volume for the roadways in the direct vicinity of the site. The directional distribution percentages represented in Figures 6.A-6.C are based primarily on existing traffic patterns but also using engineering judgement to best predict which existing land uses site traffic could be expected to come from/go to.

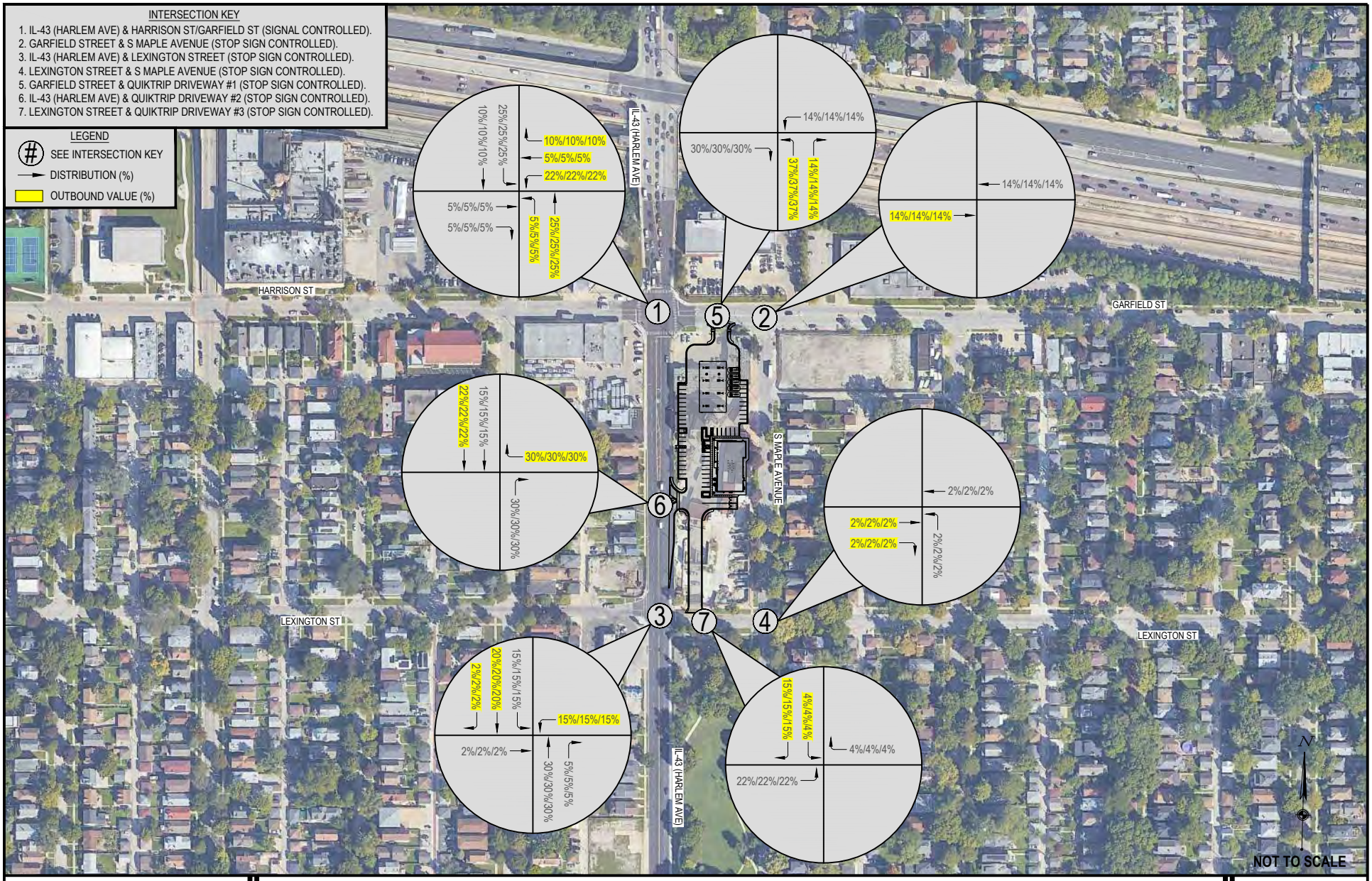
The analysis of directional distribution is based on the observation that drivers normally will choose the fastest (not necessarily the most direct) routes to and from a given traffic generator.

A pass-by trip is defined as a vehicle trip made as an intermediate stop on the way from an origin to a primary trip destination without a route diversion. Pass-by trips are attracted from traffic passing the site on an adjacent street or roadway that offers direct access to the site. Pass-by trips are not diverted from another roadway adjacent to the site.

The anticipated directional distribution of trips generated by the proposed QuikTrip Development are illustrated on Figures 6.A-6.B for primary and pass-by trips for passenger cars. Figure 6.C represents the Overall Directional Distribution of Site Generated Traffic Volumes for each roadway.

Based upon the directional distributions illustrated on Figures 6.A-6.B, the estimated Site Generated Traffic Volumes shown in Table 1 were distributed to the adjacent roadway system. The Site Generated Traffic Volumes are illustrated on Figures 7.A-7.B.

NOTE: There is no diesel fueling on site, therefore the only trucks expected are QuikTrip's fuel truck (WB-50) and a garbage truck. Neither of these trucks are expected to be frequent trips during the week. The fuel truck and garbage truck will be routed to enter through one of the site driveways on IL-43 (Harlem Ave) or Lexington St and exit the site via the site driveway on Garfield St.



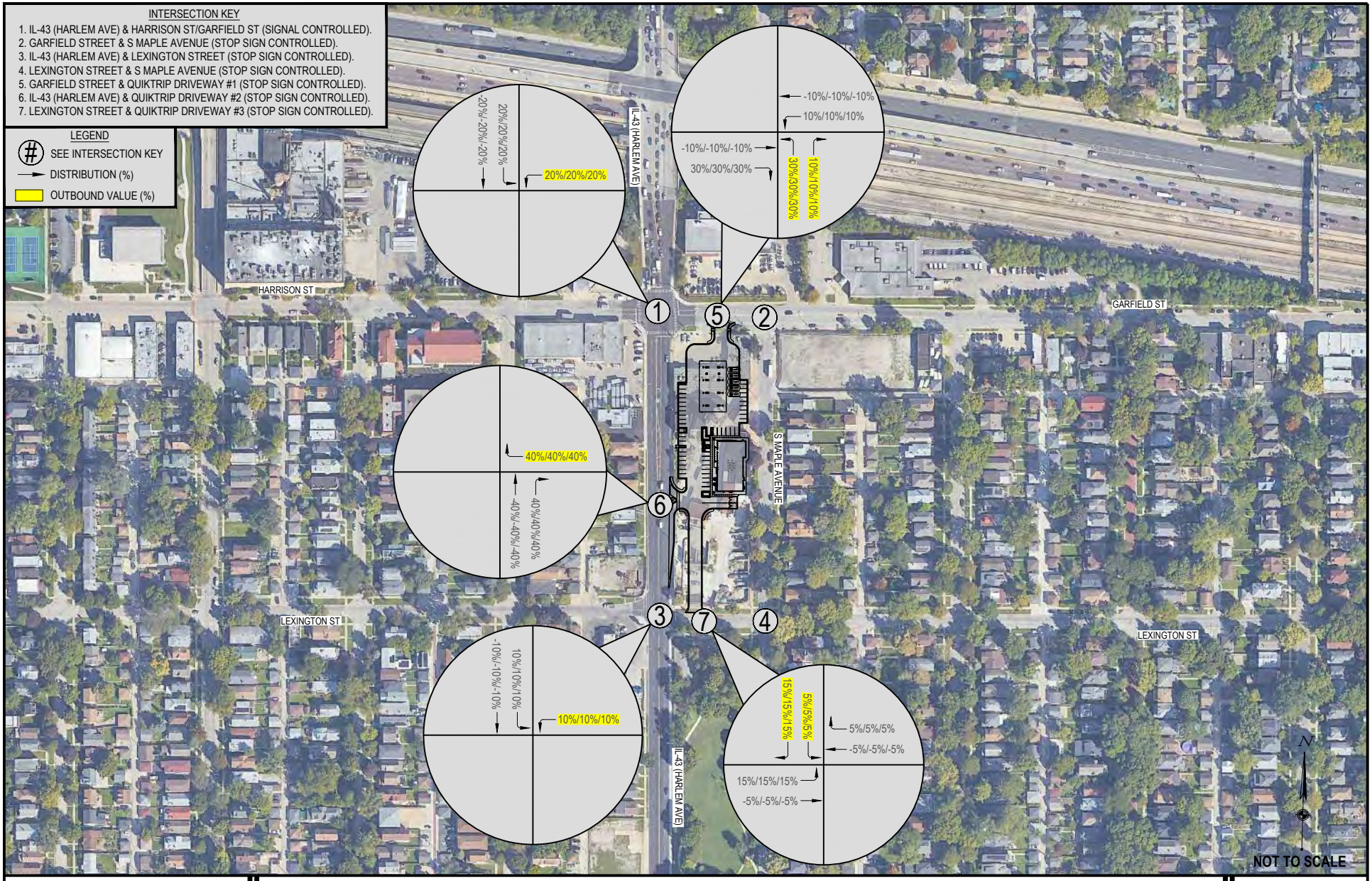
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DIRECTIONAL DISTRIBUTION OF SITE GENERATED TRAFFIC VOLUMES (CARS - PRIMARY)

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	6.A
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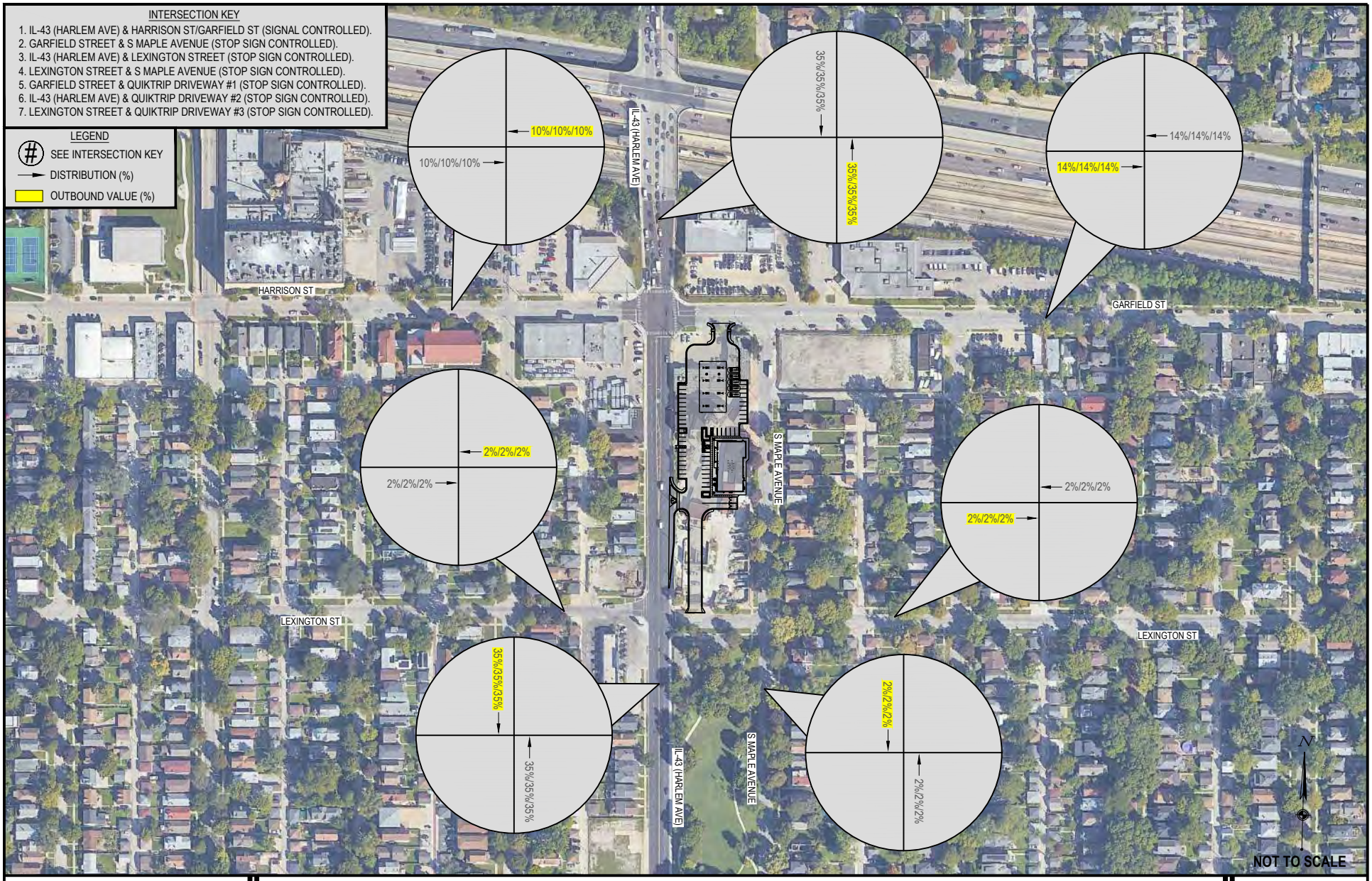
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DIRECTIONAL DISTRIBUTION OF SITE GENERATED TRAFFIC VOLUMES (CARS - PASS-BY)

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	6.B
DATE:	08/20/2025
JOB NO.:	766389-01
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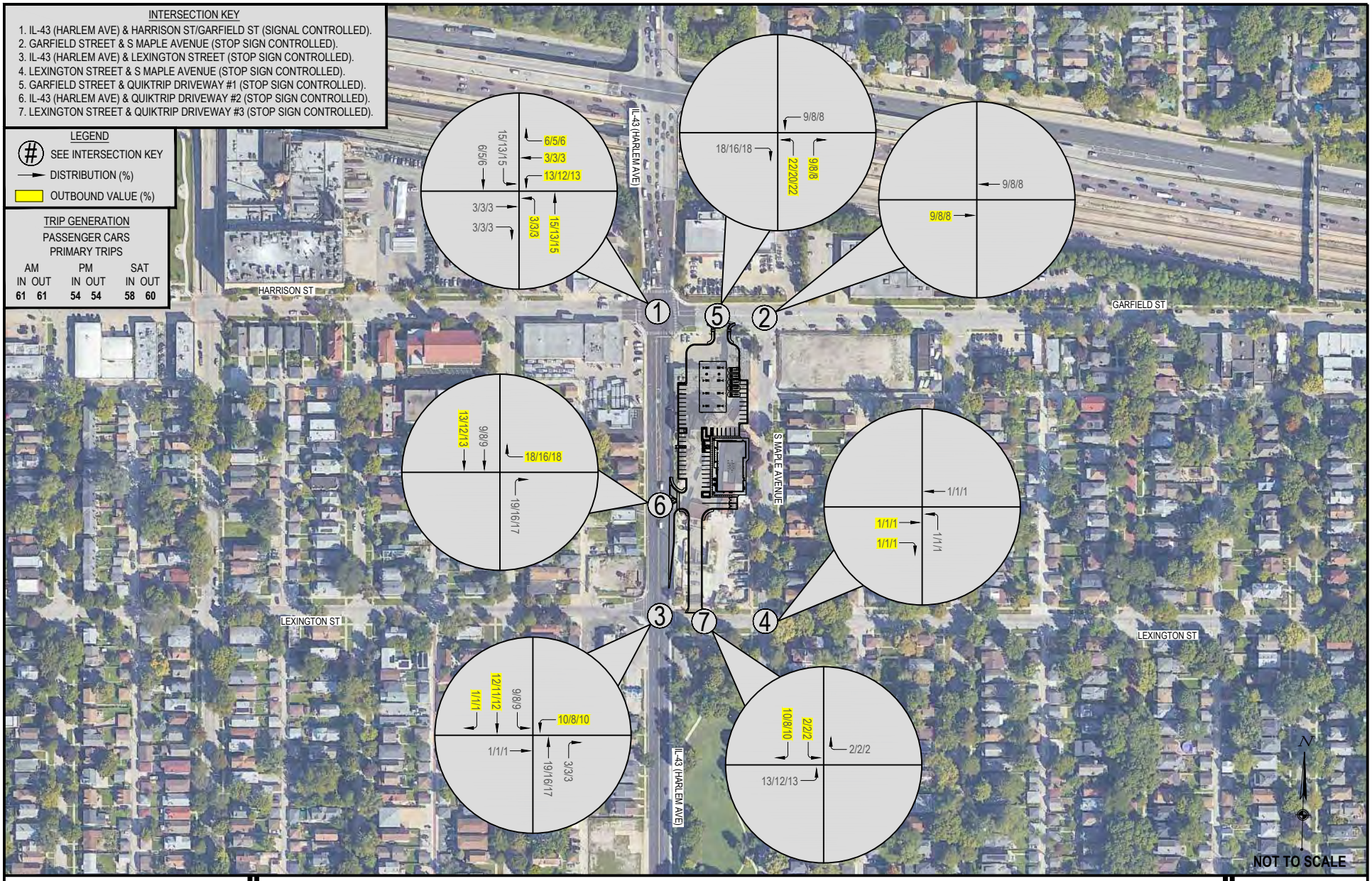
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OVERALL DIRECTIONAL DISTRIBUTION OF SITE GENERATED TRAFFIC VOLUMES

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	6.C
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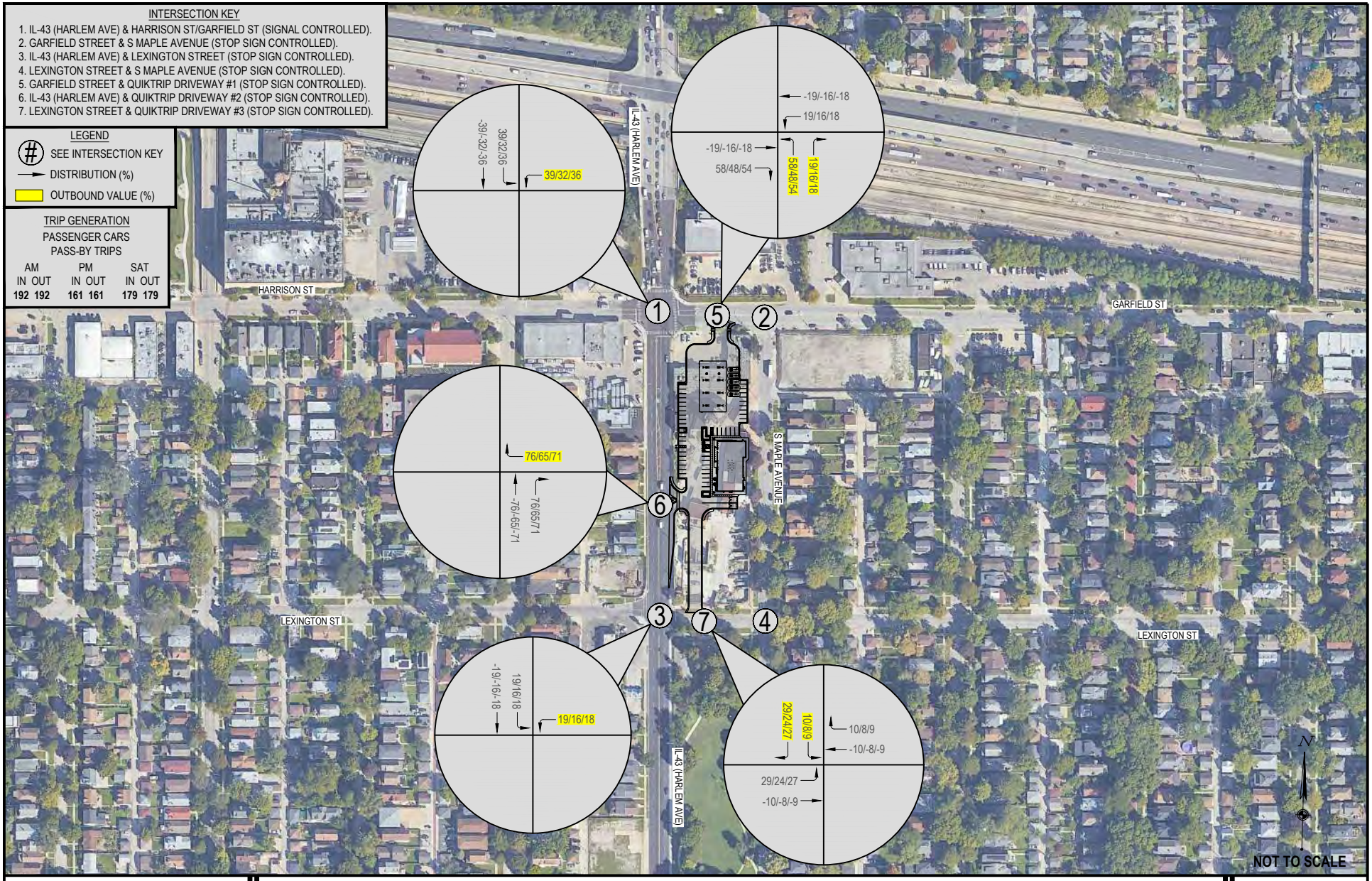
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SITE GENERATED TRAFFIC VOLUMES (CARS - PRIMARY)

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	7.A
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SITE GENERATED TRAFFIC VOLUMES (CARS - PASS-BY)

PROPOSED QUIKTRIP DEVELOPMENT

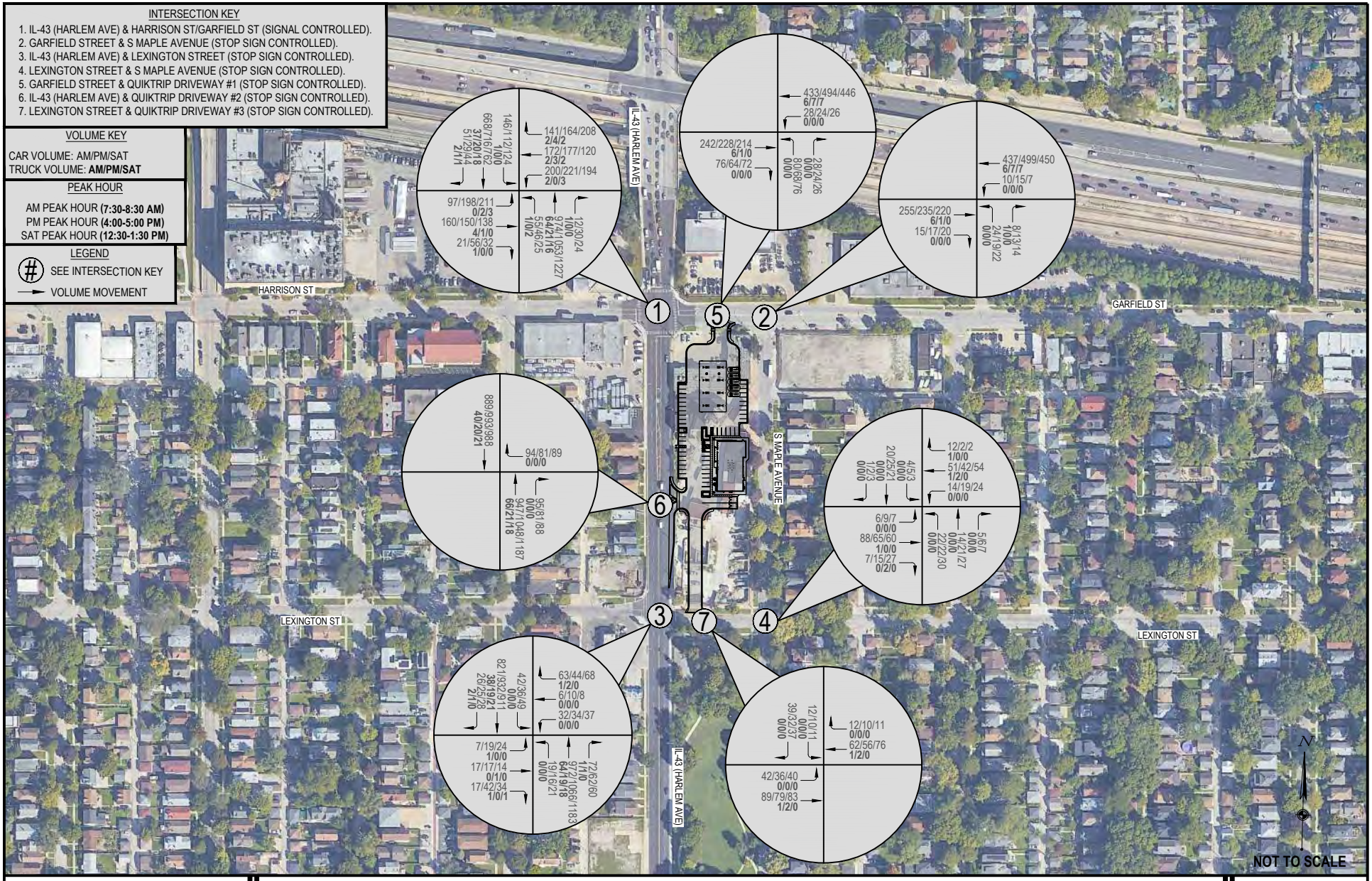
VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE 7.B	
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6. Estimates of 2026 Build Traffic in the Vicinity of the Site

6.1. 2026 Build Traffic Volumes

The 2026 Build Traffic Volumes – Cars & Trucks (Figure 8.A) were calculated by adding the Site Generated Traffic Volumes (Figures 7.A-7.B) to the 2026 No-Build Traffic Volumes – Cars & Trucks (Figure 5.A). The car and truck volumes shown on Figure 8.A were combined to form the 2026 Build Traffic Volumes – Total Volumes (Figure 8.B) for simplicity.



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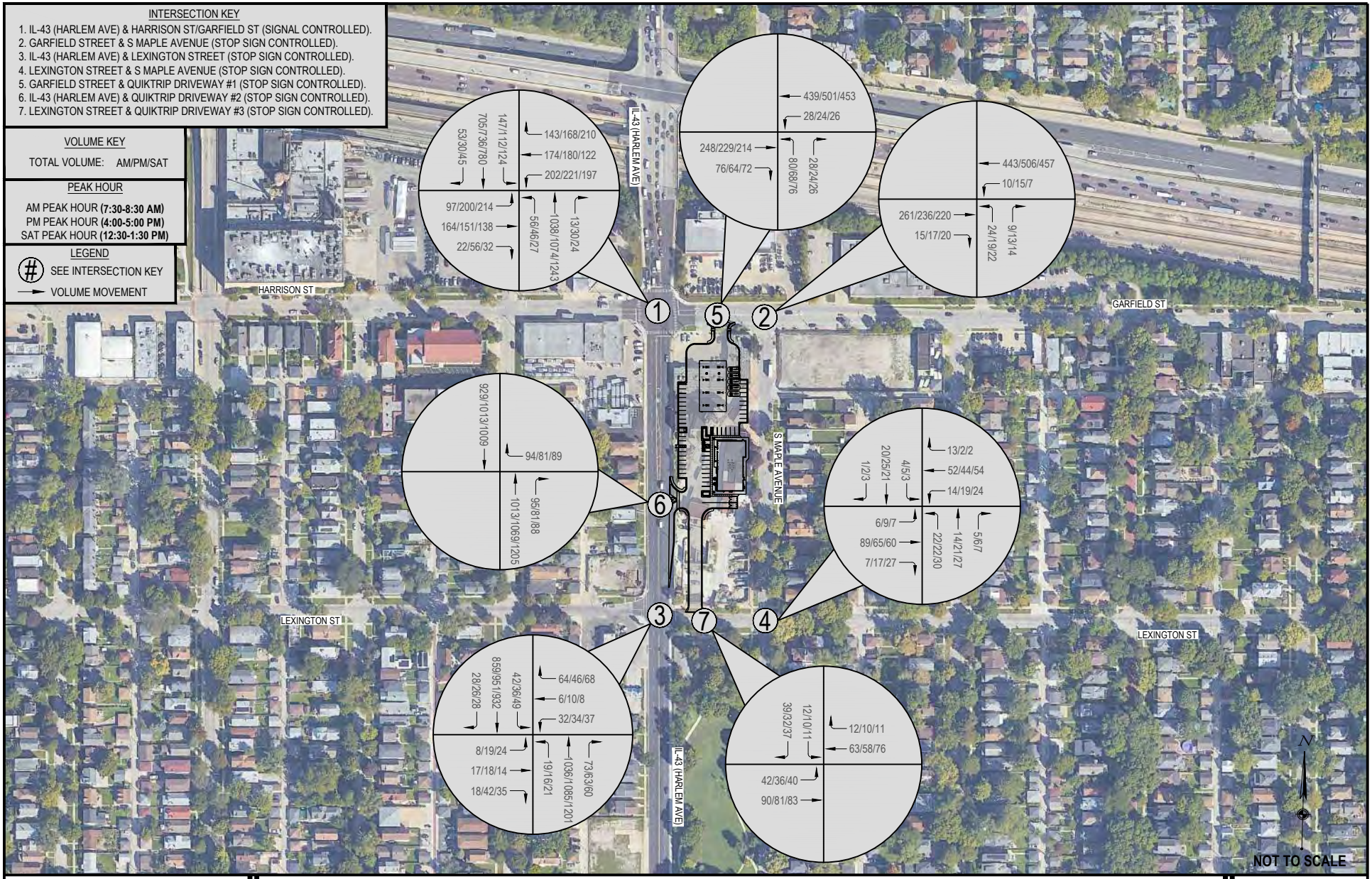
2026 BUILD TRAFFIC VOLUMES - CARS & TRUCKS

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE 8.A

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2026 BUILD TRAFFIC VOLUMES - TOTAL VOLUMES

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	8.B
DATE:	08/20/2025
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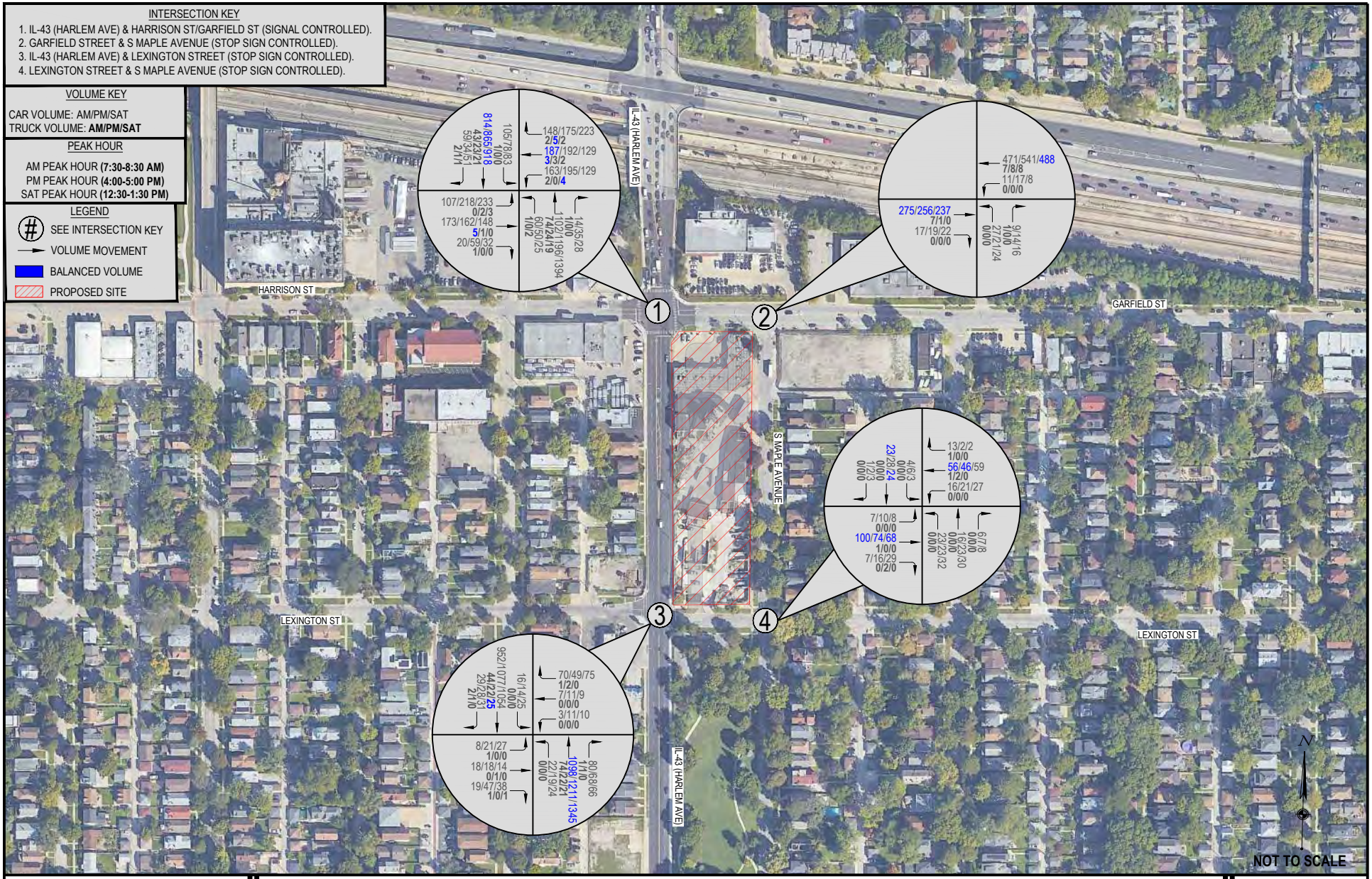
7. Estimates of 2046 No-Build Traffic in the Vicinity of the Site

7.1. 2046 No-Build Traffic Volumes

The 2046 No-Build Traffic Volumes – Cars & Trucks (Figure 9.A) were calculated by applying a compound annual growth rate obtained from the *Chicago Metropolitan Agency for Planning (CMAP)* to the Existing Traffic Volumes (Year 2025) – Cars & Trucks (Figure 4.A). The compound annual growth rates shown below were applied for twenty-one (21) years to the volumes on their respective study roadways to reach the 2046 No-Build Traffic Volumes:

- IL-43 (Harlem Ave): Compound annual growth rate of 0.70% for a growth factor of 1.158.
- All other roadways: Compound annual growth rate of 0.49% for a growth factor of 1.108.

The car and truck volumes shown on Figure 9.A were combined to form the 2046 No-Build Traffic Volumes – Total Volumes (Figure 9.B) for simplicity. Refer to Appendix B of the report for Growth Rate Documentation.



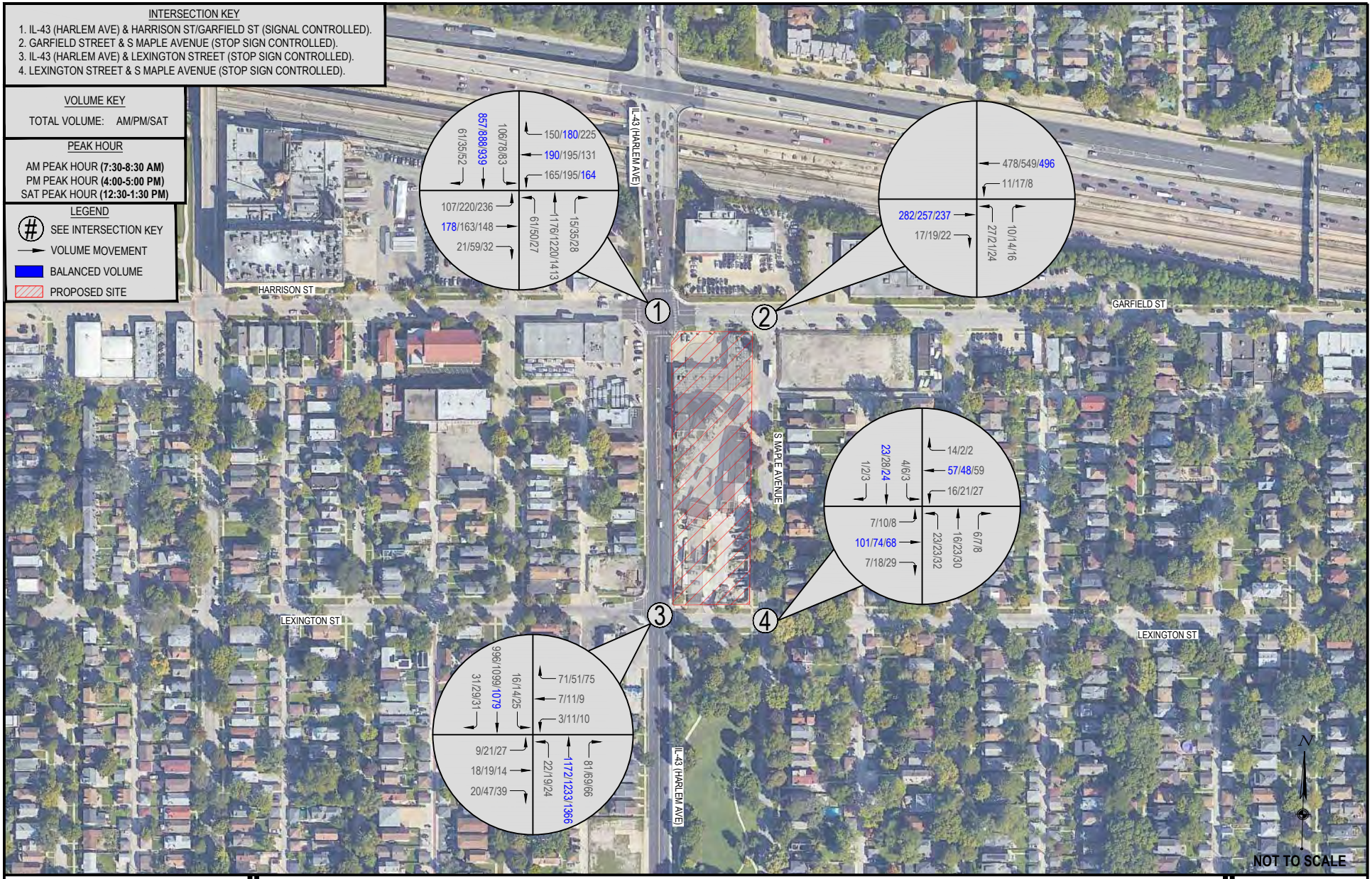
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2046 NO-BUILD TRAFFIC VOLUMES - CARS & TRUCKS

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	9.A
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2046 NO-BUILD TRAFFIC VOLUMES - TOTAL VOLUMES

PROPOSED QUIKTRIP DEVELOPMENT

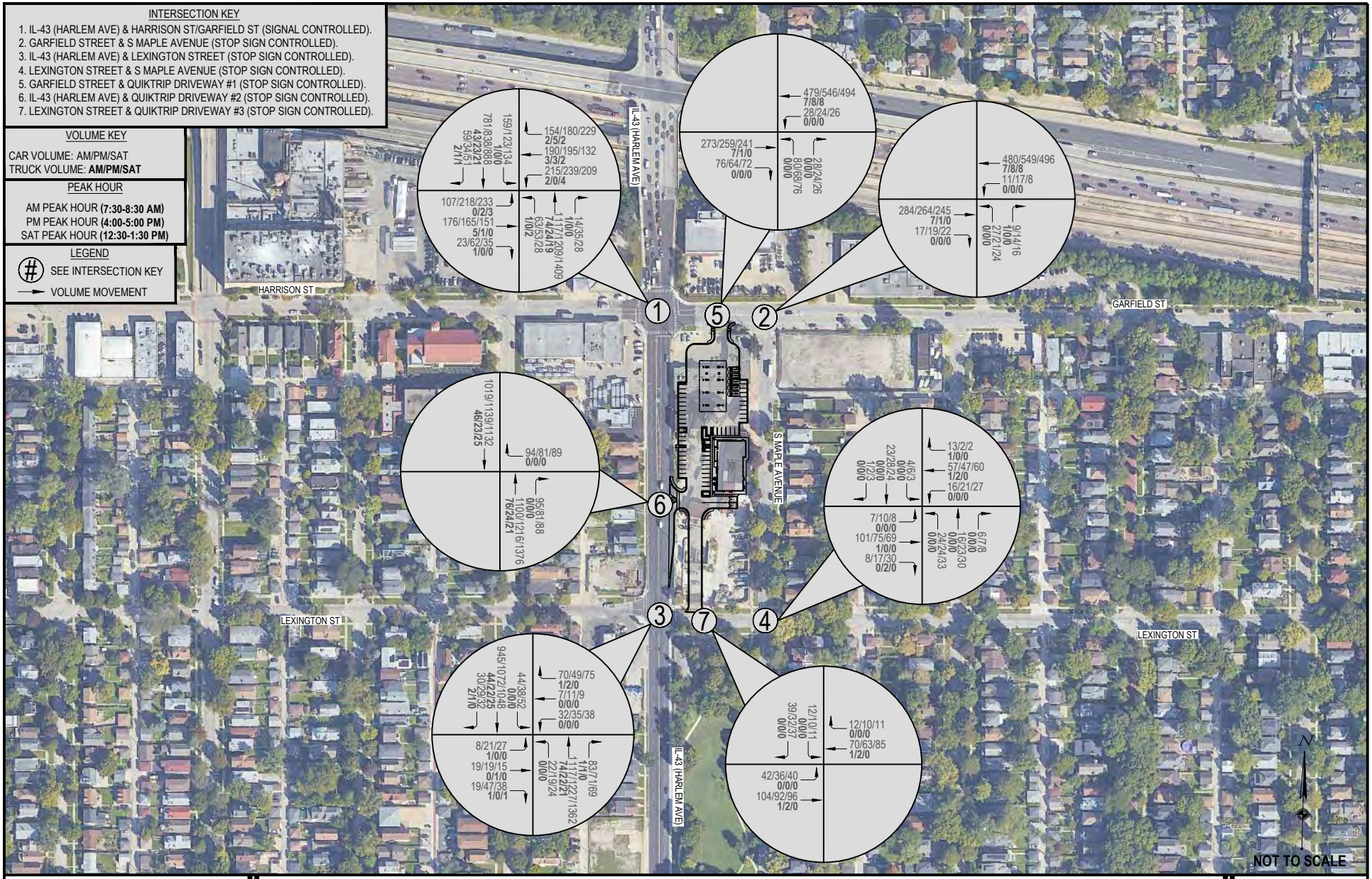
VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	9.B
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8. Estimates of 2046 Design Year Traffic in the Vicinity of the Site

8.1. 2046 Design Year Traffic Volumes

The 2046 Design Year Traffic Volumes – Cars & Trucks (Figure 10.A) were calculated by adding the Site Generated Traffic Volumes (Figures 7.A-7.B) to the 2046 No-Build Traffic Volumes – Cars & Trucks (Figure 9.A). The car and truck volumes shown on Figure 10.A were combined to form the 2046 Design Year Traffic Volumes – Total Volumes (Figure 10.B) for simplicity.



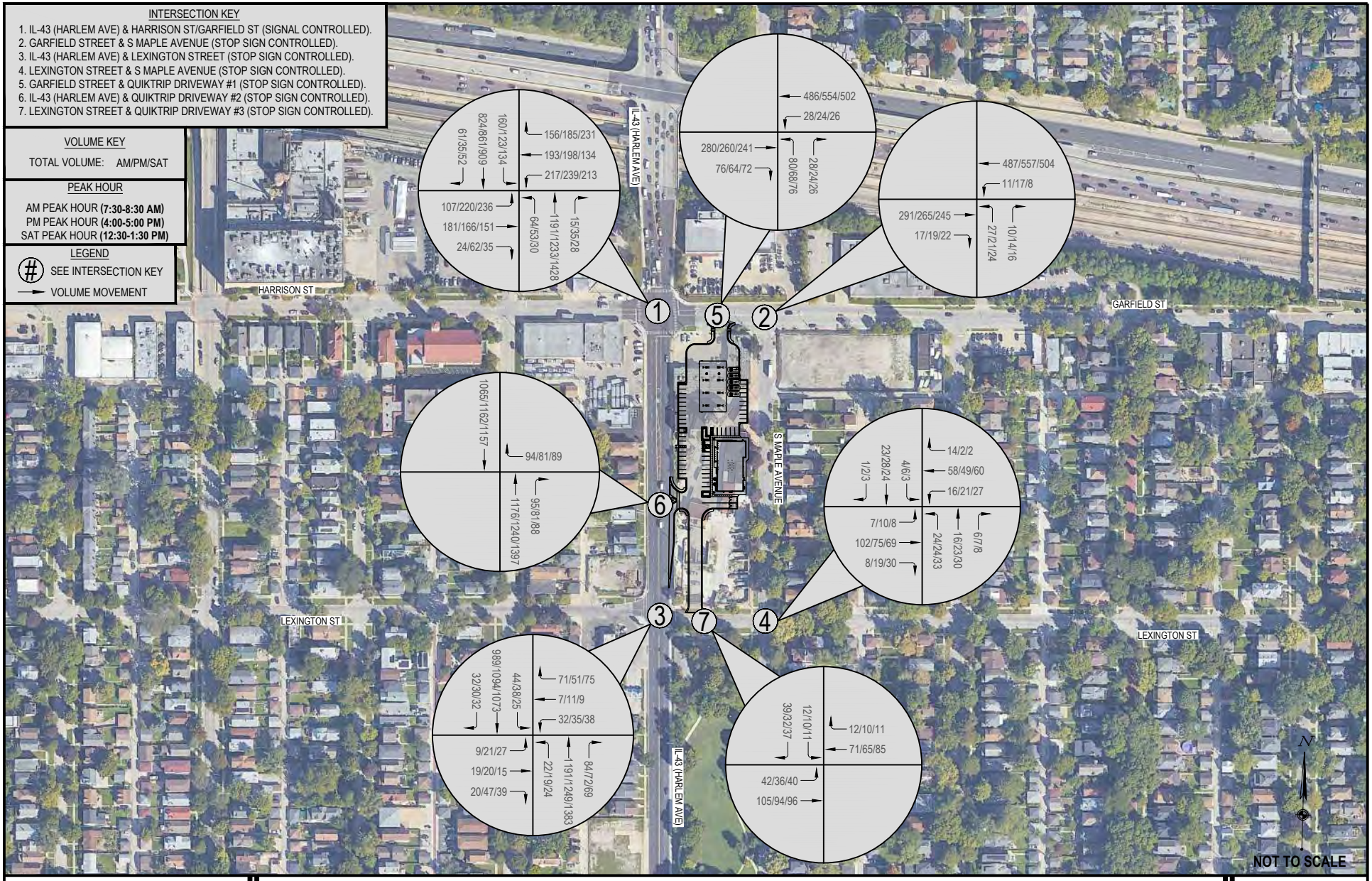
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2046 DESIGN YEAR TRAFFIC VOLUMES - CARS & TRUCKS

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	10.A
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2046 DESIGN YEAR TRAFFIC VOLUMES - TOTAL VOLUMES

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE	10.B
DATE:	08/20/2025
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9. Capacity Analysis

9.1. Capacity Analysis Parameters

The capacity of an intersection (signalized or unsignalized) can best be described by its corresponding Level of Service (LOS). The level of service of an intersection is a qualitative measure of the various attributes of an intersection. There are six levels of service ranging from "ideal" free flow conditions at LOS "A," to forced or "breakdown" conditions at LOS "F." The level of service for signalized intersections is based upon the average stopped delay per vehicle for various movements within the intersection. Although volume capacity ratio (v/c) affects delay, there are other parameters that more strongly affect it, such as the quality of progression, length of green phases, cycle lengths, and others. Thus, for any given v/c ratio, a range of delay values may result, and vice versa.

The level of service for unsignalized intersections is based upon total delay. Total delay is defined in the *Highway Capacity Manual, Seventh Edition: A Guide for Multimodal Mobility Analysis,* as the total elapsed time from when a vehicle stops at the end of the queue until the vehicle departs from the stop line; this time includes the time required for the vehicle to travel from the last-in-queue position to the first-in-queue position. Throughout the report "unsignalized intersections" are commonly referred to as "stop sign controlled."

Highway Capacity Manual 2022 (HCM 7th Edition) methodology was used in the Traffic Impact Study to remain consistent with "state-of-the-practice" professional standards. Table 2 summarizes the LOS criteria for an unsignalized intersection and a signalized intersection.

Table 2
Level of Service Criteria

Level of Service	**Unsignalized Intersection** Control Delay (seconds per vehicle)	**Signalized Intersection** Control Delay (seconds per vehicle)
A	≤ 10.0	< 10.0
B	> 10.0 and ≤ 15.0	> 10.0 and ≤ 20.0
C	> 15.0 and ≤ 25.0	> 20.0 and ≤ 35.0
D	> 25.0 and ≤ 35.0	> 35.0 and ≤ 55.0
E	> 35.0 and ≤ 50.0	> 55.0 and ≤ 80.0
F	≥ 50.0	> 80.0

Source: *Highway Capacity Manual, Seventh Edition: A Guide for Multimodal Mobility Analysis*. Transportation Research Board.

Synchro Version 12.0 was utilized to calculate delay and level of service values. Synchro Version 12.0 model parameters include traffic volumes, movements, peak hour factors, heavy vehicle percentage, intersection traffic control, and storage lengths. The peak hour factors (PHF) from the intersection TMCs were used for the study intersection and a PHF of 0.92 was used for the proposed site driveway intersections.

9.2. Traffic Scenario Capacity Analysis

Utilizing the traffic volumes illustrated on Figures 5.A-5.B, 8.A-8.B, 9.A-9.B, and 10.A-10.B, capacity calculations were performed for the key study intersections and proposed Site Driveways. All capacity calculations followed procedures documented in the *Highway Capacity Manual, Seventh Edition: A Guide for Multimodal Mobility Analysis* (Transportation Research Board, 2022). All study intersections were analyzed with Synchro Version 12.0 HCM 7th Edition Signalized and TWSC methodology. Table 3 summarizes the capacity analyses results for the AM Peak Hour, Table 4 summarizes the capacity analyses results for the PM Peak Hour, and Table 5 summarizes the capacity analyses results for the Saturday Peak Hour.

Table 3
Summary of AM Peak Hour Traffic Scenario Capacity Analysis

Lane	2026 No-Build		2026 Build		2046 No-Build		2046 Design Year	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled)								
Intersection	**C**	**29.0**	**C (C)**	**30.5 (29.9)**	**C**	**32.2**	**C**	**33.8**
EBL	D	41.1	D (D)	41.3 (42.5)	D	40.2	D	42.7
EBTR	D	48.6	D (D)	47.2 (48.4)	D	46.8	D	48.1
EB Approach	**D**	**46.0**	**D (D)**	**45.2 (46.4)**	**D**	**44.5**	**D**	**46.2**
WBL	D	37.2	D (D)	44.4 (41.9)	D	36.6	D	41.6
WBTR	E	67.3	E (E)	68.4 (63.0)	E	71.2	E	65.4
WB Approach	**E**	**57.4**	**E (D)**	**59.1 (54.8)**	**E**	**59.9**	**E**	**56.3**
NBL	B	13.7	B (B)	14.2 (14.4)	B	15.8	B	16.6
NBT	C	22.2	C (C)	24.2 (24.4)	C	27.7	C	31.1
NBTR	C	22.1	C (C)	24.1 (24.3)	C	27.5	C	30.9
NB Approach	**C**	**21.7**	**C (C)**	**23.6 (23.9)**	**C**	**27.0**	**C**	**30.3**
SBL	B	15.9	B (B)	17.9 (18.0)	C	20.5	C	25.3
SBT	B	18.1	B (B)	17.9 (18.0)	C	21.3	C	21.5
SBTR	B	18.0	B (B)	17.9 (18.0)	C	21.2	C	21.4
SB Approach	**B**	**17.8**	**B (B)**	**17.9 (18.0)**	**C**	**21.2**	**C**	**22.0**
Garfield Street & S Maple Avenue (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
WBL	A	7.9	A	8.0	A	8.0	A	8.1
NBLR	C	15.8	C	16.1	C	17.6	C	18.0
IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
EBLTR	F	106.3	F	155.1	F	$	F	$
WBLTR	D	31.8	F	$	F	95.7	F	$
NBLT	B	10.3	B	10.3	B	11.1	B	11.0
SBLT	B	11.2	B	11.7	B	12.3	B	13.0
L – Left T – Through R – Right ( ) – With Recommended Improvements Applied								

$ - Delay exceeds 300 seconds.

Table 3 – Continued.
Summary of AM Peak Hour Traffic Scenario Capacity Analysis

Lane	2026 No-Build		2026 Build		2046 No-Build		2046 Design Year	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
Lexington Street & S Maple Avenue (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
EBLTR	A	7.4	A	7.4	A	7.4	A	7.4
WBLTR	A	7.5	A	7.5	A	7.5	A	7.5
NBLTR	B	10.7	B	10.8	B	11.1	B	11.2
SBLTR	B	10.7	B	10.8	B	11.1	B	11.1
Garfield Street & QuikTrip Driveway #1 (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
WBLT			A	8.0			A	8.1
NBLR			B	14.8			C	15.9
IL-43 (Harlem Ave) & QuikTrip Driveway #2 (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
WBR			C (B)	15.4 (14.4)			C	16.2
Lexington Street & QuikTrip Driveway #3 (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
EBLT			A	7.4			A	7.5
SBLR			A	9.2			A	9.3
L – Left T – Through R – Right ( ) – With Recommended Improvements Applied								

Table 4
Summary of PM Peak Hour Traffic Scenario Capacity Analysis

Lane	2026 No-Build		2026 Build		2046 No-Build		2046 Design Year	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled)								
Intersection	**D**	**35.7**	**D (D)**	**37.6 (35.9)**	**D**	**44.1**	**D**	**43.0**
EBL	F	82.4	F (D)	86.2 (47.2)	F	142.9	D	52.8
EBTR	D	44.7	D (D)	43.7 (44.2)	D	45.5	D	44.0
EB Approach	**E**	**63.5**	**E (D)**	**64.5 (45.7)**	**F**	**94.0**	**D**	**48.4**
WBL	D	35.7	D (C)	42.7 (34.2)	D	38.4	C	32.9
WBTR	E	76.0	E (E)	77.6 (71.1)	F	93.5	E	75.6
WB Approach	**E**	**62.2**	**E (E)**	**64.0 (56.8)**	**E**	**74.6**	**E**	**59.2**
NBL	B	15.7	B (B)	16.4 (18.5)	B	17.0	C	21.4
NBT	C	25.8	C (C)	28.3 (32.3)	C	30.6	D	45.6
NBTR	C	25.7	C (C)	28.1 (32.2)	C	30.4	D	45.3
NB Approach	**C**	**25.3**	**C (C)**	**27.7 (31.7)**	**C**	**30.0**	**D**	**44.5**
SBL	B	18.4	C (C)	20.5 (23.1)	C	22.3	C	34.0
SBT	C	20.7	C (C)	20.8 (23.4)	C	23.1	C	28.3
SBTR	C	20.7	C (C)	20.8 (23.4)	C	23.0	C	28.2
SB Approach	**C**	**20.5**	**C (C)**	**20.7 (23.4)**	**C**	**23.0**	**C**	**29.0**
Garfield Street & S Maple Avenue (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
WBL	A	7.8	A	7.8	A	7.8	A	7.9
NBLR	B	13.4	B	13.6	B	14.5	B	14.7
IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
EBLTR	F	$	F	$	F	$	F	$
WBLTR	F	233.1	F	$	F	$	F	$
NBLT	B	10.8	B	10.7	B	11.7	B	11.7
SBLT	B	11.6	B	12.1	B	12.9	B	13.6
Lexington Street & S Maple Avenue (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
EBLTR	A	7.3	A	7.3	A	7.3	A	7.3
WBLTR	A	7.4	A	7.4	A	7.5	A	7.5
NBLTR	B	10.4	B	10.5	B	10.7	B	10.7
SBLTR	B	10.4	B	10.5	B	10.7	B	10.7
Garfield Street & QuikTrip Driveway #1 (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
WBLT			A	8.0			A	8.0
NBLR			B	14.2			B	15.2
L – Left T – Through R – Right ( ) – With Recommended Improvements Applied								

$ - Delay exceeds 300 seconds.

Table 4 – Continued.
Summary of PM Peak Hour Traffic Scenario Capacity Analysis

Lane	2026 No-Build		2026 Build		2046 No-Build		2046 Design Year	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
IL-43 (Harlem Ave) & QuikTrip Driveway #2 (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
WBR			C (B)	15.4 (14.6)			C	16.5
Lexington Street & QuikTrip Driveway #3 (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
EBLT			A	7.4			A	7.4
SBLR			A	9.1			A	9.2
L – Left T – Through R – Right ( ) – With Recommended Improvements Applied								

Table 5
Summary of Saturday Peak Hour Traffic Scenario Capacity Analysis

Lane	2026 No-Build		2026 Build		2046 No-Build		2046 Design Year	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled)								
Intersection	**D**	**37.2**	**D (D)**	**39.4 (35.5)**	**D**	**45.5**	**D**	**45.0**
EBL	F	113.6	F (D)	120.0 (46.5)	F	157.6	E	59.0
EBTR	D	44.2	D (D)	43.4 (40.7)	D	45.0	D	41.0
EB Approach	**F**	**83.4**	**F (D)**	**86.0 (43.9)**	**F**	**108.9**	**D**	**51.1**
WBL	D	35.2	D (C)	38.9 (32.7)	D	35.9	C	33.1
WBTR	F	92.9	F (E)	100.2 (77.8)	F	126.3	F	102.2
WB Approach	**E**	**74.7**	**E (E)**	**77.3 (61.0)**	**F**	**97.9**	**E**	**76.8**
NBL	B	13.8	B (B)	14.4 (17.5)	B	14.6	B	19.0
NBT	C	24.1	C (C)	26.3 (33.3)	C	28.6	D	45.9
NBTR	C	24.0	C (C)	26.2 (33.0)	C	28.4	D	45.7
NB Approach	**C**	**23.9**	**C (C)**	**26.0 (32.8)**	**C**	**28.3**	**D**	**45.3**
SBL	B	17.3	B (C)	19.9 (24.5)	C	21.6	D	36.5
SBT	B	17.7	B (C)	17.5 (21.3)	B	19.1	C	24.1
SBTR	B	17.6	B (C)	17.5 (21.2)	B	19.1	C	24.0
SB Approach	**B**	**17.6**	**B (C)**	**17.8 (21.7)**	**B**	**19.3**	**C**	**25.6**
Garfield Street & S Maple Avenue (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
WBL	A	7.8	A	7.8	A	7.9	A	7.9
NBLR	B	13.8	B	14.0	B	14.9	C	15.1
IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
EBLTR	F	$	F	$	F	$	F	$
WBLTR	F	121.1	F	$	F	$	F	$
NBLT	B	10.4	B	10.4	B	11.2	B	11.2
SBLT	B	12.1	B	12.7	B	13.6	B	14.4
Lexington Street & S Maple Avenue (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
EBLTR	A	7.3	A	7.3	A	7.3	A	7.3
WBLTR	A	7.4	A	7.4	A	7.5	A	7.5
NBLTR	B	10.7	B	10.7	B	11.1	B	11.1
SBLTR	B	10.5	B	10.5	B	10.8	B	10.8
Garfield Street & QuikTrip Driveway #1 (Stop Sign Controlled)								
Intersection	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
WBLT			A	7.9			A	8.0
NBLR			B	14.0			B	14.9
L – Left T – Through R – Right ( ) – With Recommended Improvements Applied								

$ - Delay exceeds 300 seconds.

Table 5 – Continued.
Summary of Saturday Peak Hour Traffic Scenario Capacity Analysis

Lane	2026 No-Build		2026 Build		2046 No-Build		2046 Design Year	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
IL-43 (Harlem Ave) & QuikTrip Driveway #2 (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
WBR			C (C)	17.5 (16.3)			C	19.0
Lexington Street & QuikTrip Driveway #3 (Stop Sign Controlled)								
Intersection	--	--	--	--	--	--	--	--
EBLT			A	7.5			A	7.5
SBLR			A	9.3			A	9.3
L – Left T – Through R – Right ( ) – With Recommended Improvements Applied								

$ - Delay exceeds 300 seconds.

Under the **2026 No-Build and 2046 No-Build Traffic Scenarios**, there are existing delays and failures at the signal-controlled intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St. In addition, IL-43 (Harlem Ave) experiences significant traffic which also results in long delays and failures for side street developments along the corridor.

Under the **2026 Build Traffic Scenario**, some movements may experience an increase in delay due to the traffic generated by the proposed QuikTrip Development. However, the recommended improvements improve delay and safety along the IL-43 (Harlem Ave) corridor. The signal-controlled intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St operates at overall level of service (LOS) "D" or better conditions. The recommended improvements include the following:

- Traffic signal timing phase splits were optimized at the signal-controlled intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St.
- Extend the existing WB to SB left-turn lane at the intersection of IL-43 (Harlem Ave) & Harrison St/Garfield St to beyond QuikTrip Driveway #1.
- Construction of a NB to EB right-turn lane at the intersection of IL-43 (Harlem Ave) & QuikTrip Driveway #2.

Under the **2046 Design Year Traffic Scenario**, the compounded background growth and addition of traffic generated by the proposed QuikTrip Development contributes to an increase in delay for side street developments. The proposed optimized signal timings improve the functionality of the IL-43 (Harlem Ave) & Harrison St/Garfield St signal-controlled intersection between the 2046 No-Build and 2046 Design Year traffic scenarios. Consideration should be taken to continually optimize the traffic signal timing at the intersection to best fit the flow of traffic.

Please refer to Appendix D, E, F, and G for each traffic scenarios Capacity Analysis Summary Sheets.

10. Turn Lane Analysis

Left and right-turn lane analyses were completed using guidance from the Illinois Department of Transportation (IDOT) – *Bureau of Design and Environment Manual, Chapter Thirty-Six: Intersections*. IDOT turn lane figures are located in Appendix H of the report.

10.1. Left-Turn Lane Analysis

Table 6 provides a summary of the data and results utilized in the review of each site driveway for a right-turn lane, based on Figure 36-3.G of the *IDOT BDE Manual*.

Table 6
Left-Turn Lane Warrant Review

Intersection	Direction	*Advancing Traffic (AM/PM/SAT)	Opposing Traffic (AM/PM/SAT)	Left-Turn (AM/PM/SAT)	Left-Turn Percentage (%)	Method Used	Warranted (AM/PM/SAT)
2026 Build Traffic Scenario							
Lexington Street & QuikTrip Driveway #3	WBL	132/117/123	75/68/87	42/36/40	31.8/30.8/32.5	Figure 36-3.G	**No/No/No**
2046 Design Year Traffic Scenario							
Lexington Street & QuikTrip Driveway #3	WBL	147/130/136	83/75/96	42/36/40	28.6/27.7/39.4	Figure 36-3.G	**No/No/No**

* Includes Left Turns

10.2. Right-Turn Lane Analysis

Table 7 provides a summary of the data and results utilized in the review of each site driveway for a right-turn lane, based on Figures 36-3.A and 36-3.B of the *IDOT BDE Manual*.

Table 7
Right-Turn Lane Warrant Review

Intersection	Direction	*Advancing Traffic (AM/PM/SAT)	Right-Turn (AM/PM/SAT)	Method Used	Warranted (AM/PM/SAT)
2026 Build Traffic Scenario					
Garfield Street & QuikTrip Driveway #1	EBR	324/293/286	76/64/72	Figure 36-3.A	**No/No/No**
IL-43 (Harlem Ave) & QuikTrip Driveway #2	NBR	1108/1150/1293	95/81/88	Figure 36-3.B	**Yes/Yes/Yes**
Lexington Street & QuikTrip Driveway #3	WBR	75/68/87	12/10/11	Figure 36-3.A	**No/No/No**
2046 Design Year Traffic Scenario					
Garfield Street & QuikTrip Driveway #1	EBR	356/324/313	76/64/72	Figure 36-3.A	**Yes/No/No**
IL-43 (Harlem Ave) & QuikTrip Driveway #2	NBR	1271/1321/1485	95/81/88	Figure 36-3.B	**Yes/Yes/Yes**
Lexington Street & QuikTrip Driveway #3	WBR	83/75/96	12/10/11	Figure 36-3.A	**No/No/No**

* Includes Right Turns

10.3. Turn Lane Analysis Summary

According to the *IDOT BDE Manual*, a left-turn lane **is not warranted** at any of the study intersections.

According to the *IDOT BDE Manual,* Figure 36.3-A, an EB to SB right-turn lane **is warranted** at the intersection of Garfield Street & QuikTrip Driveway #1. CESO **does not recommend** the construction of this turn lane due to close proximity to the existing intersection of IL-43 (Harlem Ave) & Garfield Street.

According to the *IDOT BDE Manual,* Figure 36.3-B, a NB to EB right-turn lane **is warranted** at the intersection of IL-43 (Harlem Ave) & QuikTrip Driveway #2. CESO **recommends** the construction of this NB to EB right-turn lane to accommodate 75’ of storage plus a 100’ taper.

Refer to Figure 11 for an illustration of these roadway improvements.

11. Queue Length Analysis

11.1. Queue Length Analysis Procedure and Results

The 95th percentile queue lengths were calculated using Synchro Version 12.0 in combination with SimTraffic. CESO reviewed the 2026 No-Build, 2026 Build, 2046 No-Build, and 2046 Design Year Traffic Scenarios. The results of the analyses are listed below in Tables 8-10. The 95th percentile queue length analysis summary sheets are located in Appendix I of the report.

Table 8
Queue Length Analysis – AM Peak Hour

Location	Movement	*Existing* [Proposed] Storage Length	Traffic Scenario Comparison			
			95th Percentile Queue Lengths			
			AM Peak Hour			
Traffic Scenario →			2026 No-Build	2026 Build	2046 No-Build	2046 Design Year
IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled)	EBL	*100'*	143	148 [152]	156	163
	EBTR	---	224	221 [239]	237	256
	WBL	*285'*	153	163 [166]	174	167
	WBTR	---	264	174 [173]	273	170
	NBL	*155'*	162	166 [169]	200	183
	NBT	---	345	369 [360]	424	438
	NBTR	---	373	383 [377]	434	453
	SBL	*50'*	151	172 [188]	195	213
	SBT	---	285	287 [295]	378	405
	SBTR	---	242	250 [244]	312	330
Garfield Street & S Maple Avenue (Stop Sign Controlled)	EBTR	---	9	20 [9]	19	17
	WBL	*60'*	20	19 [8]	31	28
	WBT	---	90	134 [98]	199	154
	NBLR	---	56	58 [51]	62	64
IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled)	EBLTR	---	73	83 [70]	87	116
	WBLTR	---	68	103 [95]	78	131
	NBLT	---	68	64 [67]	85	123
	NBTR	---	33	40 [29]	44	117
	SBLT	---	64	103 [94]	97	141
	SBTR	---	46	58 [57]	77	112
Lexington Street & S Maple Avenue (Stop Sign Controlled)	EBLTR	---	10	7 [11]	10	10
	WBLTR	---	14	14 [13]	14	40
	NBLTR	---	49	50 [49]	49	58
	SBLTR	---	44	43 [42]	45	45
Garfield Street & QuikTrip Driveway #1 (Stop Sign Controlled)	EBTR	---		36 [35]		38
	WBL	---		79 [86]		88
	WBT	---		115 [117]		128
	NBLR	---		327 [328]		328
Without Improvements [With Improvements]						

Table 8 – Continued
Queue Length Analysis – AM Peak Hour

Location	Movement	*Existing* [Proposed] Storage Length	Traffic Scenario Comparison			
			95th Percentile Queue Lengths			
			AM Peak Hour			
Traffic Scenario →			2026 No-Build	2026 Build	2046 No-Build	2046 Design Year
IL-43 (Harlem Ave) & QuikTrip Driveway #2 (Stop Sign Controlled)	WBR	---		68 [59]		83
	NBT	---		14 [5]		49
	NBTR	---		14 [---]		
	NBT	---		--- [7]		58
	NBR	[75']		---		31
	SBT	---		---		12
	SBT	---		---		5
Lexington Street & QuikTrip Driveway #3 (Stop Sign Controlled)	EBLT	---		27 [25]		39
	WBTR	---		8 [8]		25
	SBLR	---		63 [63]		101
Without Improvements [With Improvements]						

Table 9
Queue Length Analysis – PM Peak Hour

Location	Movement	*Existing* [Proposed] Storage Length	Traffic Scenario Comparison			
			95th Percentile Queue Lengths			
			PM Peak Hour			
Traffic Scenario →			2026 No-Build	2026 Build	2046 No-Build	2046 Design Year
IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled)	EBL	*100'*	193	194 [191]	202	200
	EBTR	---	296	333 [286]	385	338
	WBL	*285'*	193	171 [163]	219	165
	WBTR	---	286	167 [164]	285	161
	NBL	*155'*	126	169 [172]	168	200
	NBT	---	343	356 [397]	398	455
	NBTR	---	363	372 [418]	422	465
	SBL	*50'*	142	170 [179]	168	204
	SBT	---	284	285 [325]	355	386
	SBTR	---	238	239 [264]	294	317
Garfield Street & S Maple Avenue (Stop Sign Controlled)	EBTR	---	32	5 [5]	31	7
	WBL	*60'*	40	47 [26]	76	54
	WBT	---	371	244 [205]	877	295
	NBLR	---	129	62 [49]	387	75
IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled)	EBLTR	---	113	122 [116]	143	291
	WBLTR	---	96	109 [117]	108	95
	NBLT	---	57	52 [63]	85	80
	NBTR	---	22	29 [45]	59	68
	SBLT	---	60	98 [106]	90	114
	SBTR	---	34	58 [77]	68	88
Lexington Street & S Maple Avenue (Stop Sign Controlled)	EBLTR	---	7	12 [7]	28	10
	WBLTR	---	12	15 [25]	18	118
	NBLTR	---	53	50 [49]	54	124
	SBLTR	---	46	46 [47]	47	52
Without Improvements [With Improvements]						

Table 9 – Continued
Queue Length Analysis – PM Peak Hour

Location	Movement	*Existing* [Proposed] Storage Length	Traffic Scenario Comparison 95th Percentile Queue Lengths PM Peak Hour			
Traffic Scenario →			2026 No-Build	2026 Build	2046 No-Build	2046 Design Year
Garfield Street & QuikTrip Driveway #1 (Stop Sign Controlled)	EBTR	---		35 [28]		37
	WBLT	---		102 [66]		94
	WBT	---		142 [138]		147
	NBLR	---		333 [312]		338
IL-43 (Harlem Ave) & QuikTrip Driveway #2 (Stop Sign Controlled)	WBR	---		66 [66]		95
	NBT	---		6 [21]		70
	NBT	---		--- [33]		86
	NBR	[75']		8 [---]		36
	SBT	---		7 [5]		---
	SBT	---		--- [5]		---
Lexington Street & QuikTrip Driveway #3 (Stop Sign Controlled)	EBLT	---		22 [27]		16
	WBTR	---		11 [13]		69
	SBLR	---		59 [75]		129
Without Improvements [With Improvements]						

Table 10
Queue Length Analysis – Saturday Peak Hour

Location	Movement	*Existing* [Proposed] Storage Length	Traffic Scenario Comparison 95th Percentile Queue Lengths Saturday Peak Hour			
Traffic Scenario →			2026 No-Build	2026 Build	2046 No-Build	2046 Design Year
IL-43 (Harlem Ave) & Harrison Street/Garfield Street (Signal Controlled)	EBL	*100'*	189	188 [175]	197	207
	EBTR	---	295	270 [246]	390	730
	WBL	*285'*	181	165 [162]	199	169
	WBTR	---	290	171 [169]	265	210
	NBL	*155'*	96	135 [143]	129	155
	NBT	---	351	361 [405]	437	541
	NBTR	---	368	380 [425]	460	549
	SBL	*50'*	131	175 [172]	161	203
	SBT	---	289	280 [316]	319	451
	SBTR	---	243	234 [269]	280	423
Garfield Street & S Maple Avenue (Stop Sign Controlled)	EBTR	---	21	23 [23]	49	33
	WBL	*60'*	25	33 [11]	70	28
	WBT	---	338	209 [92]	1194	1079
	NBLR	---	138	66 [50]	673	190
Without Improvements [With Improvements]						

Table 10 – Continued
Queue Length Analysis – Saturday Peak Hour

Location	Movement	*Existing* [Proposed] Storage Length	Traffic Scenario Comparison			
			95th Percentile Queue Lengths			
			Saturday Peak Hour			
Traffic Scenario →			2026 No-Build	2026 Build	2046 No-Build	2046 Design Year
IL-43 (Harlem Ave) & Lexington Street (Stop Sign Controlled)	EBLTR	---	118	122 [168]	327	779
	WBLTR	---	116	133 [142]	193	172
	NBLT	---	90	70 [86]	780	1591
	NBTR	---	60	54 [56]	769	1597
	SBLT	---	90	114 [121]	220	291
	SBTR	---	53	71 [83]	202	224
Lexington Street & S Maple Avenue (Stop Sign Controlled)	EBLTR	---	5	6 [8]	132	7
	WBLTR	---	16	18 [24]	164	611
	NBLTR	---	53	55 [58]	333	553
	SBLTR	---	45	43 [44]	52	76
Garfield Street & QuikTrip Driveway #1 (Stop Sign Controlled)	EBTR	---		34 [31]		29
	WBLT	---		75 [68]		109
	WBT	---		137 [118]		142
	NBLR	---		330 [323]		317
IL-43 (Harlem Ave) & QuikTrip Driveway #2 (Stop Sign Controlled)	WBR	---		71 [78]		114
	NBT	---		15 [20]		113
	NBTR	---		14		
	NBT	---		[30]		120
	NBR	[75']		---		31
	SBT	---		2		317
	SBT	---		---		318
Lexington Street & QuikTrip Driveway #3 (Stop Sign Controlled)	EBLT	---		42 [45]		90
	WBTR	---		27 [29]		63
	SBLR	---		90 [90]		217
Without Improvements [With Improvements]						

11.2. Queue Length Analysis Summary

CESO reviewed all study locations to determine if calculated queue lengths exceed existing or proposed storage lengths. The queue length analysis revealed the following:

- IL-43 (Harlem Ave) experiences significant traffic throughout the day which can result in severe queue spillbacks along the corridor.
  - As a result of significant traffic traveling on IL-43 (Harlem Ave), several side streets or site driveways may also experience queue spillbacks and long delays due to minimal gaps in traffic.

- With the proposed roadway improvements applied, CESO determined that the queue lengths will not exceed the proposed storage lengths under the 2026 Build Traffic Scenario.

12. Summary of Recommendations

12.1. Recommendations

The following summary of recommendations was generated based upon the findings in the Traffic Impact Study. Refer to Figure 11 for the Recommended Improvement graphic.

2026 No-Build Traffic Scenario (Responsibility – Others):

- No improvements are recommended or required.

2026 Build Traffic Scenario (Responsibility – QuikTrip):

IL-43 (Harlem Ave) & Harrison Street/Garfield Street:

- Optimize traffic signal timing phase splits to maintain a 125 second cycle length during the AM and PM Peak Hours and a 120 second cycle length during the Saturday Peak Hour.
- Extend the existing WB to SB left-turn lane beyond QuikTrip Driveway #1. Restripe this turn lane to provide 165' of storage.

Garfield Street & QuikTrip Driveway #1:

- Construct QuikTrip Driveway #1 to permit left-in, left-out, right-in, and right-out (full access) movements of passenger cars. Control this driveway with one (1) stop sign.

IL-43 (Harlem Ave) & QuikTrip Driveway #2:

- Construct QuikTrip Driveway #2 to permit right-in, and right-out (RI/RO) movements of passenger cars. Control this driveway with one (1) stop sign.
- Construct a NBR turn lane to provide 75' of storage plus a 100' taper.

Lexington Street & QuikTrip Driveway #3:

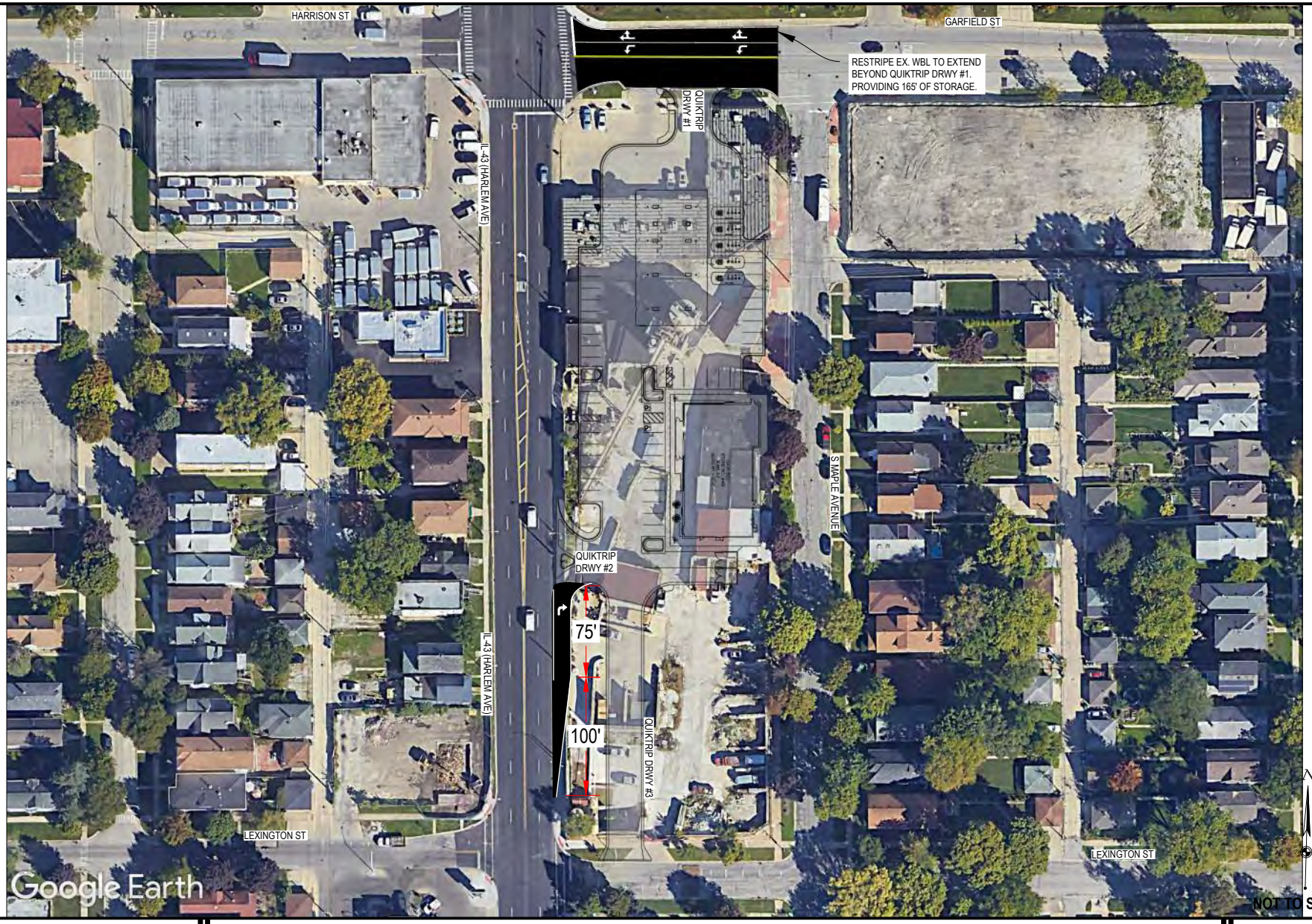
- Construct QuikTrip Driveway #3 to permit left-in, left-out, right-in, and right-out (full access) movements of passenger cars. Control this driveway with one (1) stop sign.

2046 No-Build Traffic Scenario (Responsibility – Others):

- No improvements are recommended or required.

2046 Design Year Traffic Scenario (Responsibility – QuikTrip):

- No additional improvements are recommended or required.



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RECOMMENDED IMPROVEMENTS

PROPOSED QUIKTRIP DEVELOPMENT

VILLAGE OF OAK PARK — COOK COUNTY, ILLINOIS

FIGURE 11	
DATE:	08/20/2025
JOB NO.:	766389-01
DESIGNED BY:	JMP
DRAWN BY:	JMP
CHECKED BY:	REM
PAGE:	49

13. References

This report utilizes information provided by the following sources:

1. *Highway Capacity Manual, Seventh Edition: A Guide for Multimodal Mobility Analysis.* Transportation Research Board, Washington, D.C., 2022.

2. *Trip Generation Manual*. 11th ed. Washington, DC: Institute of Transportation Engineers, 2022.

3. Most recent Site Plan obtained from QuikTrip.

4. *Bureau of Design and Environment (BDE) Manual*. Illinois Department of Transportation (IDOT). May 2025.

5. "Oak Park, IL." 41°52'16.69" N and 87°48'14.32" W, Google Earth. July 11th, 2022.

APPENDIX A
EXISTING TRAFFIC COUNT DATA AND SIGNAL TIMING SHEETS

IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC

Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291365, Location: 41.872314, -87.804435

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

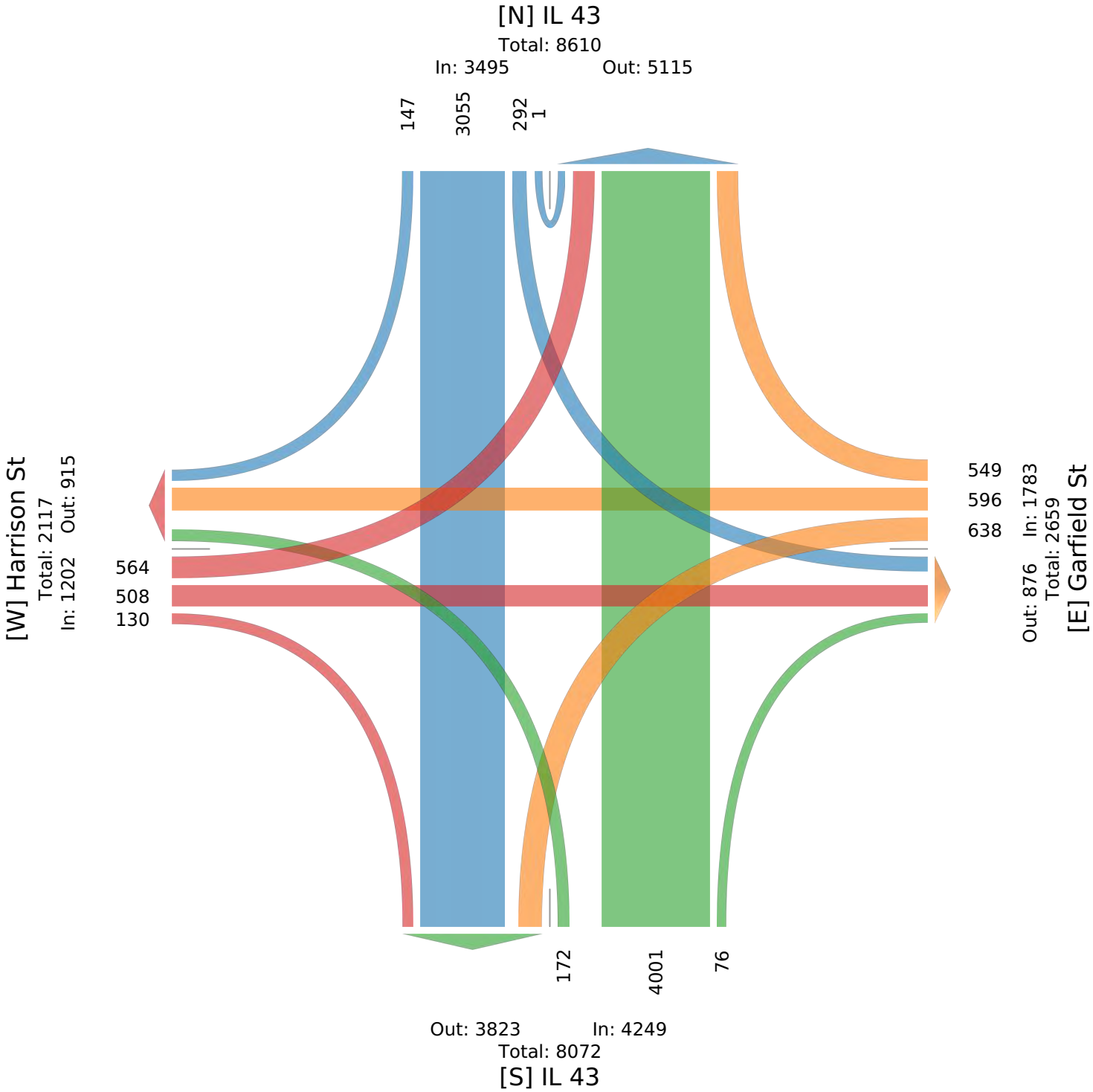
Leg	Harrison St					Garfield St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-08 7:00AM	32	20	3	0	**55**	33	23	22	0	**78**	11	280	0	0	**291**	12	160	6	0	**178**	**602**
7:15AM	27	39	10	0	**76**	37	27	29	0	**93**	8	237	0	0	**245**	14	146	9	0	**169**	**583**
7:30AM	27	48	4	0	**79**	29	31	36	0	**96**	11	275	0	0	**286**	22	189	10	0	**221**	**682**
7:45AM	34	52	9	0	**95**	49	49	44	0	**142**	14	244	0	0	**258**	28	158	18	0	**204**	**699**
Hourly Total	120	159	26	0	**305**	148	130	131	0	**409**	44	1036	0	0	**1080**	76	653	43	0	**772**	**2566**
8:00AM	16	23	3	0	**42**	37	43	33	0	**113**	13	284	9	0	**306**	19	203	17	0	**239**	**700**
8:15AM	20	25	3	0	**48**	34	46	23	0	**103**	15	202	4	0	**221**	23	177	8	0	**208**	**580**
8:30AM	15	25	4	0	**44**	30	32	26	0	**88**	7	222	1	0	**230**	16	217	9	0	**242**	**604**
8:45AM	25	14	3	0	**42**	35	29	30	0	**94**	16	195	3	0	**214**	22	179	11	0	**212**	**562**
Hourly Total	76	87	13	0	**176**	136	150	112	0	**398**	51	903	17	0	**971**	80	776	45	0	**901**	**2446**
4:00PM	40	30	15	0	**85**	48	51	45	0	**144**	12	291	10	0	**313**	14	202	8	0	**224**	**766**
4:15PM	44	31	6	0	**81**	46	47	50	0	**143**	7	237	2	0	**246**	16	181	9	1	**207**	**677**
4:30PM	50	40	15	0	**105**	43	35	32	0	**110**	13	287	8	0	**308**	18	217	9	0	**244**	**767**
4:45PM	65	41	17	0	**123**	39	40	35	0	**114**	11	232	10	0	**253**	19	154	4	0	**177**	**667**
Hourly Total	199	142	53	0	**394**	176	173	162	0	**511**	43	1047	30	0	**1120**	67	754	30	1	**852**	**2877**
5:00PM	41	28	10	0	**79**	47	42	40	0	**129**	10	245	8	0	**263**	17	177	10	0	**204**	**675**
5:15PM	38	33	11	0	**82**	50	38	40	0	**128**	6	247	7	0	**260**	21	213	6	0	**240**	**710**
5:30PM	43	28	5	0	**76**	34	32	25	0	**91**	12	277	7	0	**296**	19	257	8	0	**284**	**747**
5:45PM	47	31	12	0	**90**	47	31	39	0	**117**	6	246	7	0	**259**	12	225	5	0	**242**	**708**
Hourly Total	169	120	38	0	**327**	178	143	144	0	**465**	34	1015	29	0	**1078**	69	872	29	0	**970**	**2840**
Total	564	508	130	0	**1202**	638	596	549	0	**1783**	172	4001	76	0	**4249**	292	3055	147	1	**3495**	**10729**
% Approach	46.9%	42.3%	10.8%	0%	-	35.8%	33.4%	30.8%	0%	-	4.0%	94.2%	1.8%	0%	-	8.4%	87.4%	4.2%	0%	-	-
% Total	5.3%	4.7%	1.2%	0%	**11.2%**	5.9%	5.6%	5.1%	0%	**16.6%**	1.6%	37.3%	0.7%	0%	**39.6%**	2.7%	28.5%	1.4%	0%	**32.6%**	-
Lights	559	507	124	0	**1190**	636	591	542	0	**1769**	170	3849	75	0	**4094**	287	2952	143	1	**3383**	10436
% Lights	99.1%	99.8%	95.4%	0%	**99.0%**	99.7%	99.2%	98.7%	0%	**99.2%**	98.8%	96.2%	98.7%	0%	**96.4%**	98.3%	96.6%	97.3%	100%	**96.8%**	97.3%
Articulated Trucks and Single-Unit Trucks	1	0	6	0	**7**	2	3	5	0	**10**	2	126	1	0	**129**	5	85	4	0	**94**	240
% Articulated Trucks and Single-Unit Trucks	0.2%	0%	4.6%	0%	**0.6%**	0.3%	0.5%	0.9%	0%	**0.6%**	1.2%	3.1%	1.3%	0%	**3.0%**	1.7%	2.8%	2.7%	0%	**2.7%**	2.2%
Buses	4	1	0	0	**5**	0	2	2	0	**4**	0	26	0	0	**26**	0	18	0	0	**18**	53
% Buses	0.7%	0.2%	0%	0%	**0.4%**	0%	0.3%	0.4%	0%	**0.2%**	0%	0.6%	0%	0%	**0.6%**	0%	0.6%	0%	0%	**0.5%**	0.5%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC

Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291365, Location: 41.872314, -87.804435

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC

Thu May 8, 2025
Forced Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291365, Location: 41.872314, -87.804435

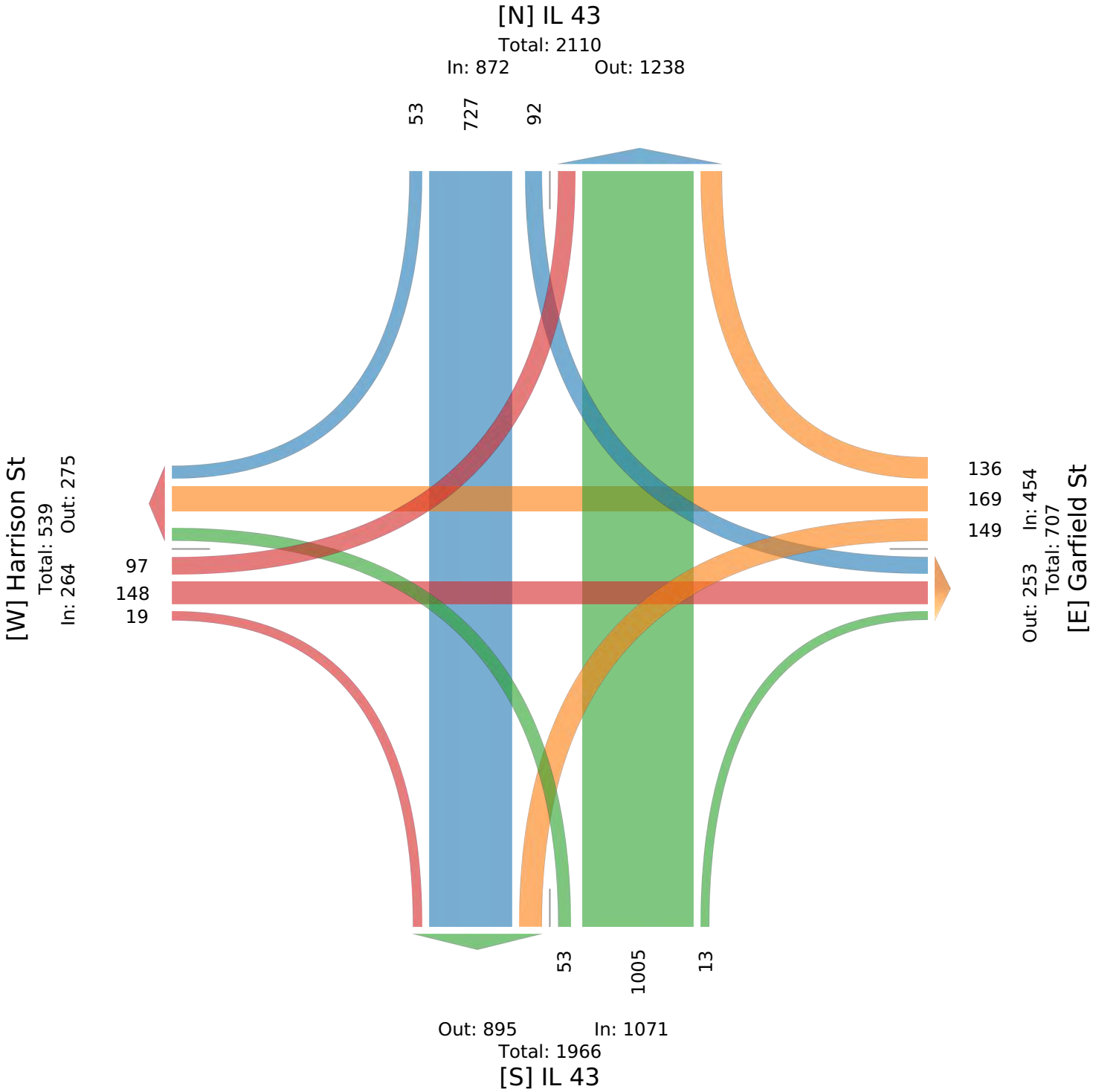
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Harrison St					Garfield St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-08 7:30AM	27	48	4	0	**79**	29	31	36	0	**96**	11	275	0	0	**286**	22	189	10	0	**221**	**682**
7:45AM	34	52	9	0	**95**	49	49	44	0	**142**	14	244	0	0	**258**	28	158	18	0	**204**	**699**
8:00AM	16	23	3	0	**42**	37	43	33	0	**113**	13	284	9	0	**306**	19	203	17	0	**239**	**700**
8:15AM	20	25	3	0	**48**	34	46	23	0	**103**	15	202	4	0	**221**	23	177	8	0	**208**	**580**
Total	97	148	19	0	**264**	149	169	136	0	**454**	53	1005	13	0	**1071**	92	727	53	0	**872**	**2661**
% Approach	36.7%	56.1%	7.2%	0%	**-**	32.8%	37.2%	30.0%	0%	**-**	4.9%	93.8%	1.2%	0%	**-**	10.6%	83.4%	6.1%	0%	**-**	-
% Total	3.6%	5.6%	0.7%	0%	**9.9%**	5.6%	6.4%	5.1%	0%	**17.1%**	2.0%	37.8%	0.5%	0%	**40.2%**	3.5%	27.3%	2.0%	0%	**32.8%**	-
PHF	0.713	0.712	0.528	-	**0.695**	0.760	0.862	0.773	-	**0.799**	0.883	0.885	0.361	-	**0.875**	0.821	0.895	0.736	-	**0.912**	0.950
Lights	97	148	18	0	**263**	147	167	134	0	**448**	52	941	12	0	**1005**	91	696	51	0	**838**	2554
% Lights	100%	100%	94.7%	0%	**99.6%**	98.7%	98.8%	98.5%	0%	**98.7%**	98.1%	93.6%	92.3%	0%	**93.8%**	98.9%	95.7%	96.2%	0%	**96.1%**	96.0%
Articulated Trucks and Single-Unit Trucks	0	0	1	0	**1**	2	2	1	0	**5**	1	55	1	0	**57**	1	28	2	0	**31**	94
% Articulated Trucks and Single-Unit Trucks	0%	0%	5.3%	0%	**0.4%**	1.3%	1.2%	0.7%	0%	**1.1%**	1.9%	5.5%	7.7%	0%	**5.3%**	1.1%	3.9%	3.8%	0%	**3.6%**	3.5%
Buses	0	0	0	0	**0**	0	0	1	0	**1**	0	9	0	0	**9**	0	3	0	0	**3**	13
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0.7%	0%	**0.2%**	0%	0.9%	0%	0%	**0.8%**	0%	0.4%	0%	0%	**0.3%**	0.5%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC
Thu May 8, 2025
Forced Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291365, Location: 41.872314, -87.804435

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC

Thu May 8, 2025
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291365, Location: 41.872314, -87.804435

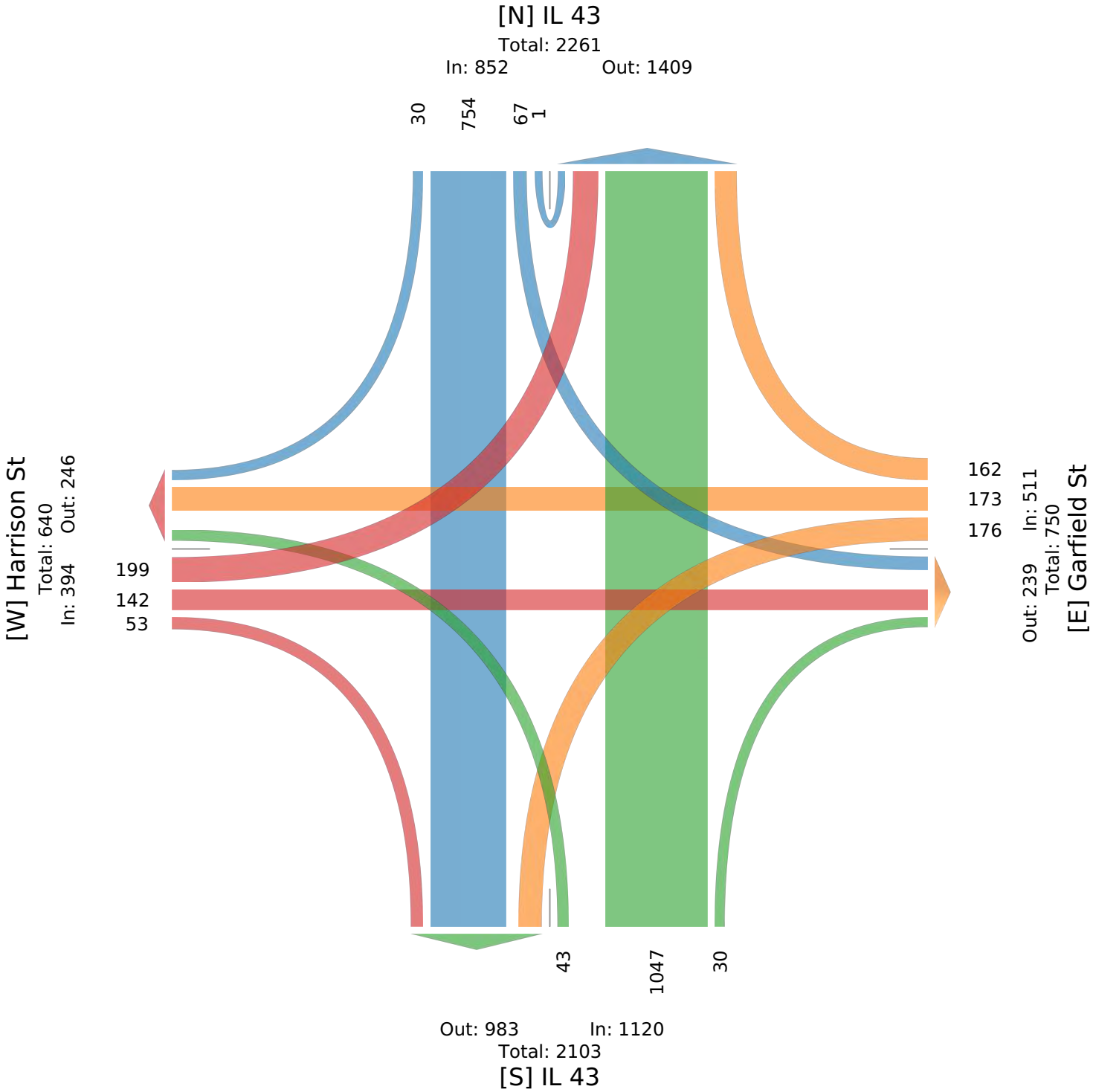
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Harrison St					Garfield St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-08 4:00PM	40	30	15	0	**85**	48	51	45	0	**144**	12	291	10	0	**313**	14	202	8	0	**224**	**766**
4:15PM	44	31	6	0	**81**	46	47	50	0	**143**	7	237	2	0	**246**	16	181	9	1	**207**	**677**
4:30PM	50	40	15	0	**105**	43	35	32	0	**110**	13	287	8	0	**308**	18	217	9	0	**244**	**767**
4:45PM	65	41	17	0	**123**	39	40	35	0	**114**	11	232	10	0	**253**	19	154	4	0	**177**	**667**
Total	199	142	53	0	**394**	176	173	162	0	**511**	43	1047	30	0	**1120**	67	754	30	1	**852**	**2877**
% Approach	50.5%	36.0%	13.5%	0%	**-**	34.4%	33.9%	31.7%	0%	**-**	3.8%	93.5%	2.7%	0%	**-**	7.9%	88.5%	3.5%	0.1%	**-**	-
% Total	6.9%	4.9%	1.8%	0%	**13.7%**	6.1%	6.0%	5.6%	0%	**17.8%**	1.5%	36.4%	1.0%	0%	**38.9%**	2.3%	26.2%	1.0%	0%	**29.6%**	-
PHF	0.765	0.866	0.779	-	**0.801**	0.917	0.848	0.810	-	**0.887**	0.827	0.899	0.750	-	**0.895**	0.882	0.869	0.833	0.250	**0.873**	0.938
Lights	197	142	53	0	**392**	176	170	158	0	**504**	43	1028	30	0	**1101**	67	734	29	1	**831**	2828
% Lights	99.0%	100%	100%	0%	**99.5%**	100%	98.3%	97.5%	0%	**98.6%**	100%	98.2%	100%	0%	**98.3%**	100%	97.3%	96.7%	100%	**97.5%**	98.3%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	**0**	0	1	3	0	**4**	0	14	0	0	**14**	0	15	1	0	**16**	34
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0.6%	1.9%	0%	**0.8%**	0%	1.3%	0%	0%	**1.3%**	0%	2.0%	3.3%	0%	**1.9%**	1.2%
Buses	2	0	0	0	**2**	0	2	1	0	**3**	0	5	0	0	**5**	0	5	0	0	**5**	15
% Buses	1.0%	0%	0%	0%	**0.5%**	0%	1.2%	0.6%	0%	**0.6%**	0%	0.5%	0%	0%	**0.4%**	0%	0.7%	0%	0%	**0.6%**	0.5%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC
Thu May 8, 2025
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291365, Location: 41.872314, -87.804435

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC

Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293353, Location: 41.872314, -87.804435

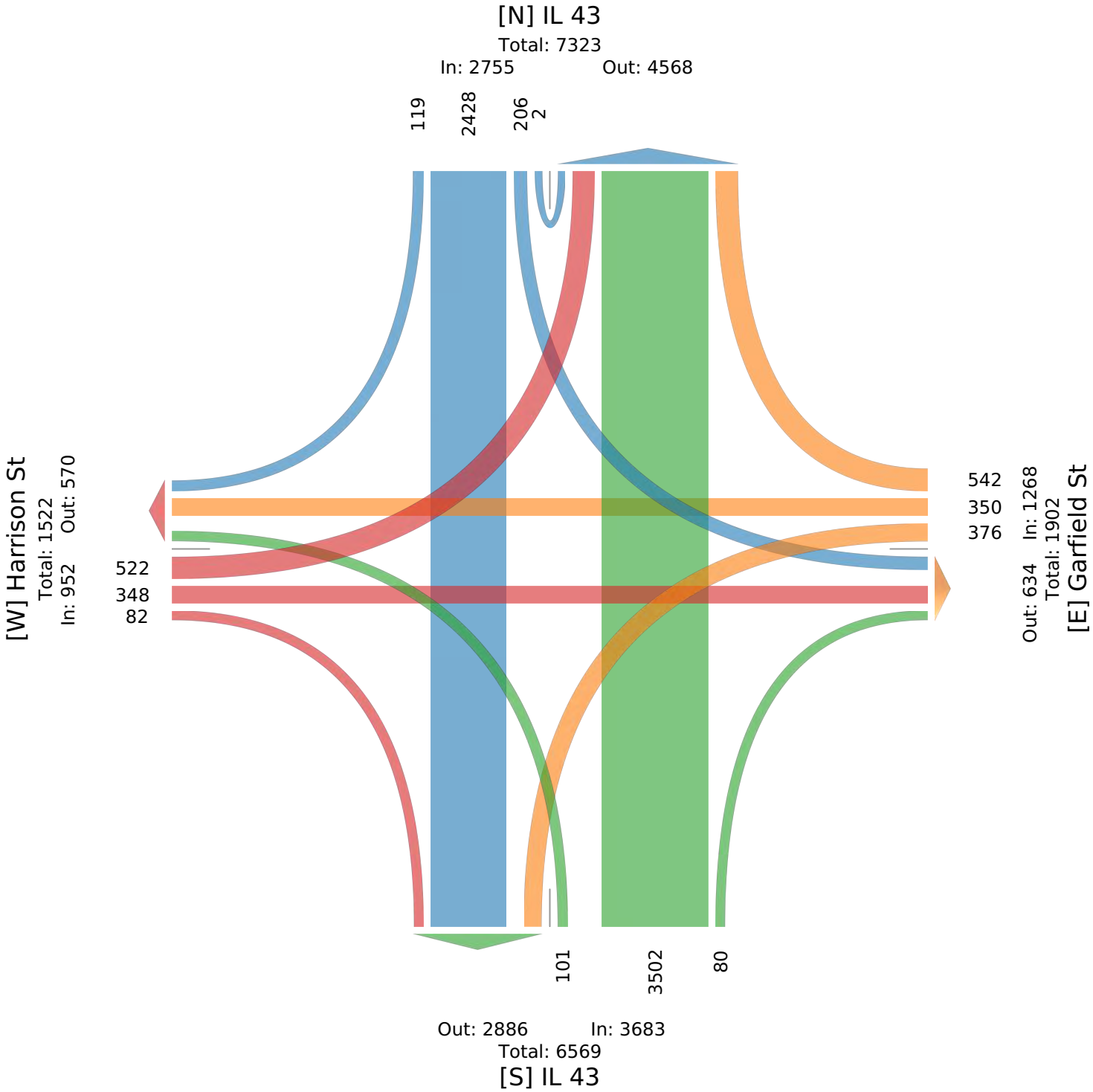
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Harrison St					Garfield St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2025-05-10 11:00AM	20	20	7	0	**47**	22	18	52	0	**92**	8	286	5	0	**299**	25	232	9	0	**266**	**704**
11:15AM	36	20	3	0	**59**	34	34	39	0	**107**	5	263	4	0	**272**	15	213	10	0	**238**	**676**
11:30AM	47	27	4	0	**78**	19	32	47	0	**98**	16	300	11	0	**327**	19	232	6	0	**257**	**760**
11:45AM	37	21	4	0	**62**	26	31	33	0	**90**	9	274	8	0	**291**	13	169	5	1	**188**	**631**
Hourly Total	140	88	18	0	**246**	101	115	171	0	**387**	38	1123	28	0	**1189**	72	846	30	1	**949**	**2771**
12:00PM	36	26	8	0	**70**	27	21	38	0	**86**	5	285	6	0	**296**	16	213	7	1	**237**	**689**
12:15PM	48	34	13	0	**95**	38	25	47	0	**110**	12	296	7	0	**315**	17	171	10	0	**198**	**718**
12:30PM	49	35	13	0	**97**	33	27	51	0	**111**	5	327	7	0	**339**	10	197	12	0	**219**	**766**
12:45PM	66	36	5	0	**107**	31	31	58	0	**120**	9	296	8	0	**313**	16	202	12	0	**230**	**770**
Hourly Total	199	131	39	0	**369**	129	104	194	0	**427**	31	1204	28	0	**1263**	59	783	41	1	**884**	**2943**
1:00PM	59	27	1	0	**87**	42	29	30	0	**101**	6	296	3	0	**305**	21	204	10	0	**235**	**728**
1:15PM	39	36	10	0	**85**	41	30	64	0	**135**	4	300	6	0	**310**	25	201	11	0	**237**	**767**
1:30PM	43	22	7	0	**72**	38	31	30	0	**99**	9	281	8	0	**298**	17	203	12	0	**232**	**701**
1:45PM	42	44	7	0	**93**	25	41	53	0	**119**	13	298	7	0	**318**	12	191	15	0	**218**	**748**
Hourly Total	183	129	25	0	**337**	146	131	177	0	**454**	32	1175	24	0	**1231**	75	799	48	0	**922**	**2944**
Total	522	348	82	0	**952**	376	350	542	0	**1268**	101	3502	80	0	**3683**	206	2428	119	2	**2755**	**8658**
% Approach	54.8%	36.6%	8.6%	0%	**-**	29.7%	27.6%	42.7%	0%	**-**	2.7%	95.1%	2.2%	0%	**-**	7.5%	88.1%	4.3%	0.1%	**-**	-
% Total	6.0%	4.0%	0.9%	0%	**11.0%**	4.3%	4.0%	6.3%	0%	**14.6%**	1.2%	40.4%	0.9%	0%	**42.5%**	2.4%	28.0%	1.4%	0%	**31.8%**	-
Lights	516	345	79	0	**940**	372	347	537	0	**1256**	96	3452	80	0	**3628**	206	2376	116	2	**2700**	8524
% Lights	98.9%	99.1%	96.3%	0%	**98.7%**	98.9%	99.1%	99.1%	0%	**99.1%**	95.0%	98.6%	100%	0%	**98.5%**	100%	97.9%	97.5%	100%	**98.0%**	98.5%
Articulated Trucks and Single-Unit Trucks	5	3	3	0	**11**	2	2	4	0	**8**	5	35	0	0	**40**	0	42	3	0	**45**	104
% Articulated Trucks and Single-Unit Trucks	1.0%	0.9%	3.7%	0%	**1.2%**	0.5%	0.6%	0.7%	0%	**0.6%**	5.0%	1.0%	0%	0%	**1.1%**	0%	1.7%	2.5%	0%	**1.6%**	1.2%
Buses	1	0	0	0	**1**	2	1	1	0	**4**	0	15	0	0	**15**	0	10	0	0	**10**	30
% Buses	0.2%	0%	0%	0%	**0.1%**	0.5%	0.3%	0.2%	0%	**0.3%**	0%	0.4%	0%	0%	**0.4%**	0%	0.4%	0%	0%	**0.4%**	0.3%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC
Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293353, Location: 41.872314, -87.804435

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC

Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293353, Location: 41.872314, -87.804435

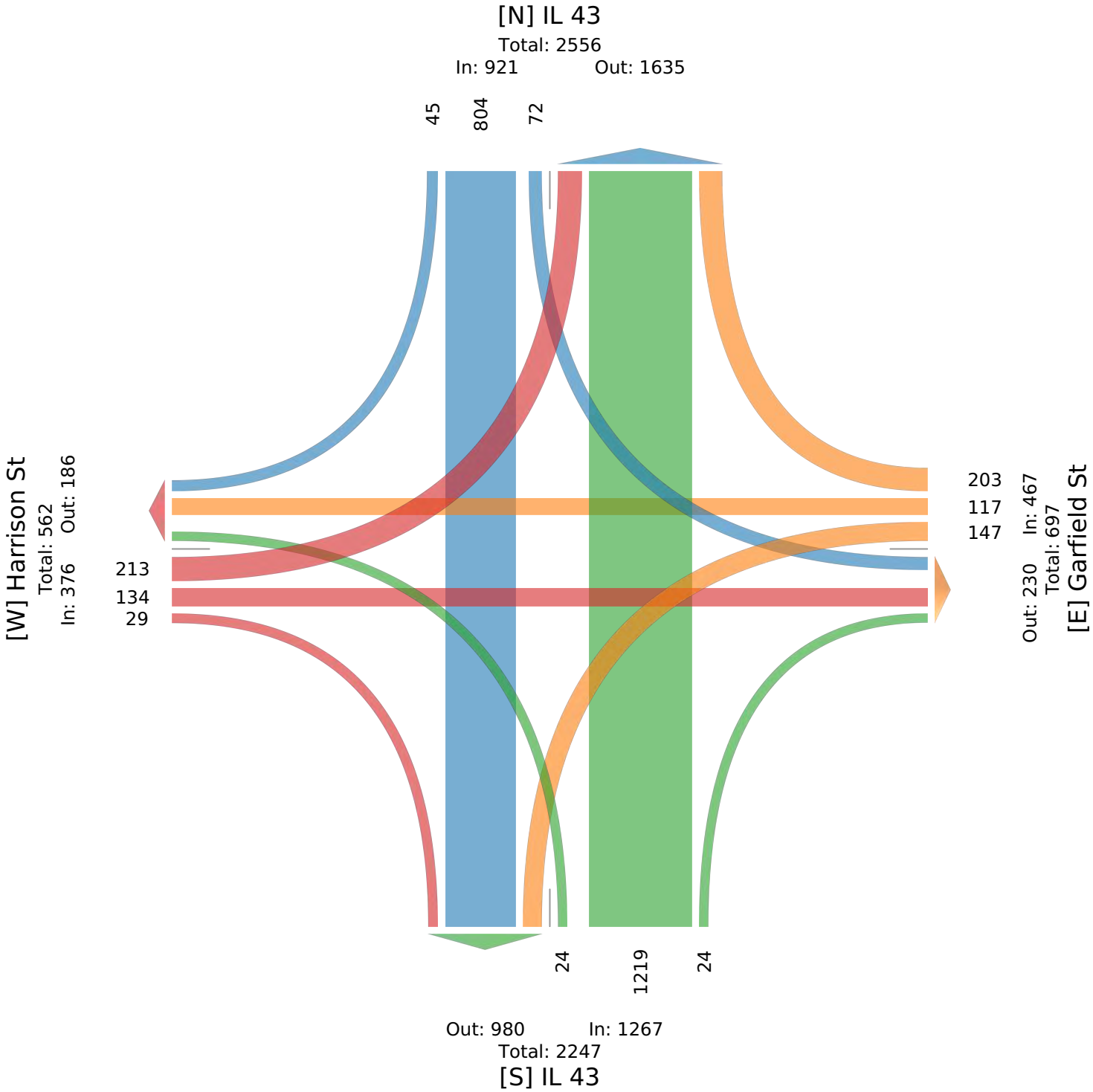
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Harrison St					Garfield St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-10 12:30PM	49	35	13	0	**97**	33	27	51	0	**111**	5	327	7	0	**339**	10	197	12	0	**219**	**766**
12:45PM	66	36	5	0	**107**	31	31	58	0	**120**	9	296	8	0	**313**	16	202	12	0	**230**	**770**
1:00PM	59	27	1	0	**87**	42	29	30	0	**101**	6	296	3	0	**305**	21	204	10	0	**235**	**728**
1:15PM	39	36	10	0	**85**	41	30	64	0	**135**	4	300	6	0	**310**	25	201	11	0	**237**	**767**
Total	213	134	29	0	**376**	147	117	203	0	**467**	24	1219	24	0	**1267**	72	804	45	0	**921**	**3031**
% Approach	56.6%	35.6%	7.7%	0%	**-**	31.5%	25.1%	43.5%	0%	**-**	1.9%	96.2%	1.9%	0%	**-**	7.8%	87.3%	4.9%	0%	**-**	-
% Total	7.0%	4.4%	1.0%	0%	**12.4%**	4.8%	3.9%	6.7%	0%	**15.4%**	0.8%	40.2%	0.8%	0%	**41.8%**	2.4%	26.5%	1.5%	0%	**30.4%**	-
PHF	0.807	0.931	0.558	-	**0.879**	0.875	0.944	0.793	-	**0.865**	0.667	0.932	0.750	-	**0.934**	0.720	0.985	0.938	-	**0.972**	0.984
Lights	210	134	29	0	**373**	144	116	201	0	**461**	22	1203	24	0	**1249**	72	786	44	0	**902**	2985
% Lights	98.6%	100%	100%	0%	**99.2%**	98.0%	99.1%	99.0%	0%	**98.7%**	91.7%	98.7%	100%	0%	**98.6%**	100%	97.8%	97.8%	0%	**97.9%**	98.5%
Articulated Trucks and Single-Unit Trucks	3	0	0	0	**3**	2	1	2	0	**5**	2	14	0	0	**16**	0	14	1	0	**15**	39
% Articulated Trucks and Single-Unit Trucks	1.4%	0%	0%	0%	**0.8%**	1.4%	0.9%	1.0%	0%	**1.1%**	8.3%	1.1%	0%	0%	**1.3%**	0%	1.7%	2.2%	0%	**1.6%**	1.3%
Buses	0	0	0	0	**0**	1	0	0	0	**1**	0	2	0	0	**2**	0	4	0	0	**4**	7
% Buses	0%	0%	0%	0%	**0%**	0.7%	0%	0%	0%	**0.2%**	0%	0.2%	0%	0%	**0.2%**	0%	0.5%	0%	0%	**0.4%**	0.2%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Harrison St/Garfield... - TMC
Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293353, Location: 41.872314, -87.804435

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Garfield Street & S Maple Avenue - TMC

Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291366, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

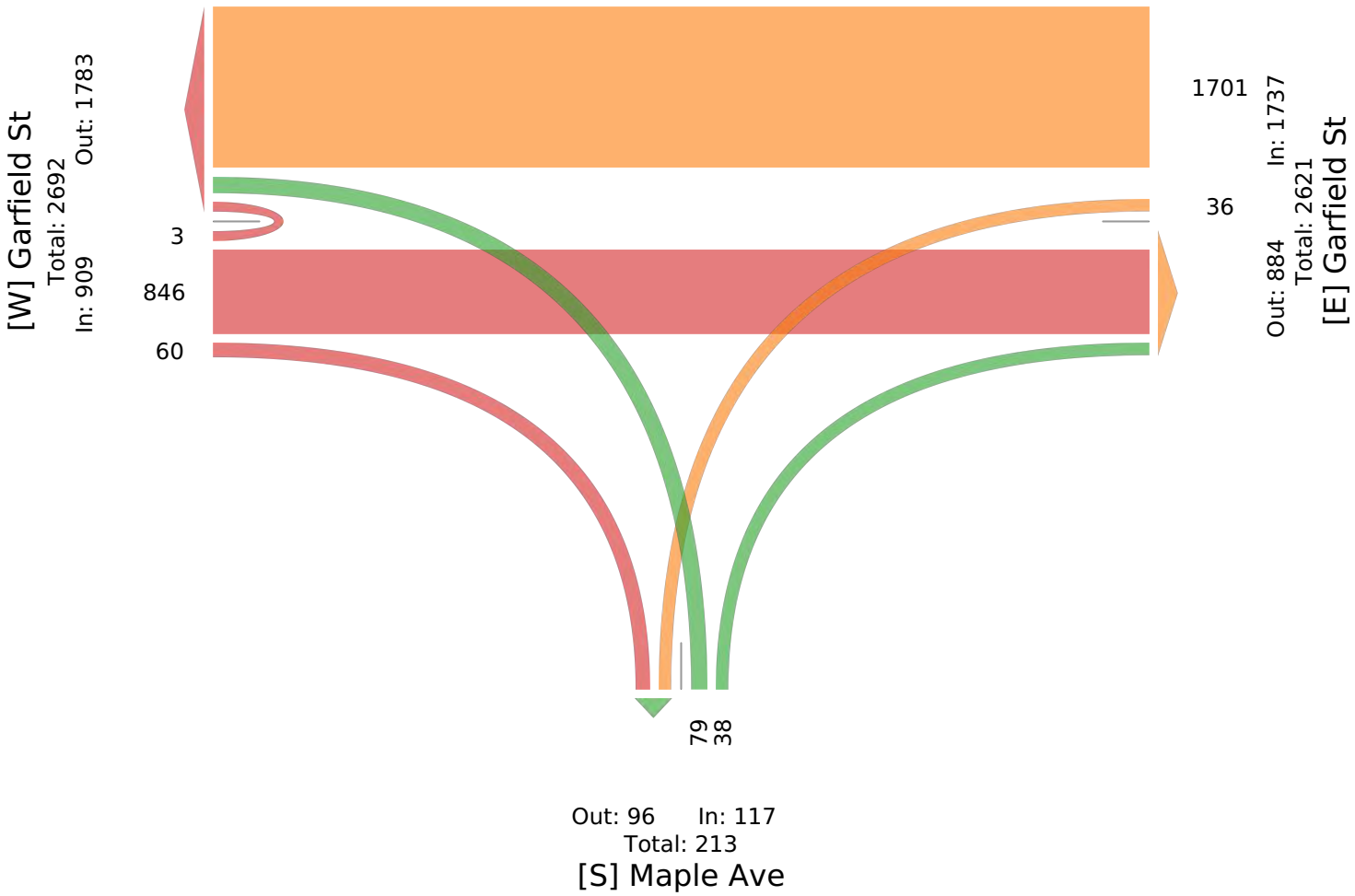
Leg	Garfield St				Garfield St				Maple Ave				
Direction	Eastbound				Westbound				Northbound				
Time	T	R	U	**App**	L	T	U	**App**	L	R	U	**App**	**Int**
2025-05-08 7:00AM	36	0	0	**36**	2	81	0	**83**	3	2	0	**5**	**124**
7:15AM	53	4	0	**57**	0	84	0	**84**	3	3	0	**6**	**147**
7:30AM	74	3	0	**77**	2	98	0	**100**	8	0	0	**8**	**185**
7:45AM	80	7	0	**87**	5	118	0	**123**	10	5	0	**15**	**225**
Hourly Total	243	14	0	**257**	9	381	0	**390**	24	10	0	**34**	**681**
8:00AM	51	0	0	**51**	0	117	0	**117**	2	1	0	**3**	**171**
8:15AM	45	5	0	**50**	3	98	0	**101**	3	2	0	**5**	**156**
8:30AM	41	2	0	**43**	3	88	0	**91**	3	1	0	**4**	**138**
8:45AM	39	2	0	**41**	1	84	0	**85**	4	4	0	**8**	**134**
Hourly Total	176	9	0	**185**	7	387	0	**394**	12	8	0	**20**	**599**
4:00PM	51	4	1	**56**	2	135	0	**137**	6	4	0	**10**	**203**
4:15PM	45	6	0	**51**	5	136	0	**141**	3	1	0	**4**	**196**
4:30PM	66	3	0	**69**	7	115	0	**122**	2	2	0	**4**	**195**
4:45PM	65	4	1	**70**	1	109	0	**110**	8	6	0	**14**	**194**
Hourly Total	227	17	2	**246**	15	495	0	**510**	19	13	0	**32**	**788**
5:00PM	50	6	0	**56**	0	122	0	**122**	4	0	0	**4**	**182**
5:15PM	56	5	0	**61**	3	119	0	**122**	8	4	0	**12**	**195**
5:30PM	49	5	0	**54**	1	87	0	**88**	6	1	0	**7**	**149**
5:45PM	45	4	1	**50**	1	110	0	**111**	6	2	0	**8**	**169**
Hourly Total	200	20	1	**221**	5	438	0	**443**	24	7	0	**31**	**695**
Total	846	60	3	**909**	36	1701	0	**1737**	79	38	0	**117**	**2763**
% Approach	93.1%	6.6%	0.3%	**-**	2.1%	97.9%	0%	**-**	67.5%	32.5%	0%	**-**	-
% Total	30.6%	2.2%	0.1%	**32.9%**	1.3%	61.6%	0%	**62.9%**	2.9%	1.4%	0%	**4.2%**	-
Lights	833	60	3	**896**	36	1685	0	**1721**	78	38	0	**116**	2733
% Lights	98.5%	100%	100%	**98.6%**	100%	99.1%	0%	**99.1%**	98.7%	100%	0%	**99.1%**	98.9%
Articulated Trucks and Single-Unit Trucks	10	0	0	**10**	0	12	0	**12**	1	0	0	**1**	23
% Articulated Trucks and Single-Unit Trucks	1.2%	0%	0%	**1.1%**	0%	0.7%	0%	**0.7%**	1.3%	0%	0%	**0.9%**	0.8%
Buses	3	0	0	**3**	0	4	0	**4**	0	0	0	**0**	7
% Buses	0.4%	0%	0%	**0.3%**	0%	0.2%	0%	**0.2%**	0%	0%	0%	**0%**	0.3%

*L: Left, R: Right, T: Thru, U: U-Turn

Garfield Street & S Maple Avenue - TMC

Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291366, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Garfield Street & S Maple Avenue - TMC

Thu May 8, 2025
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291366, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

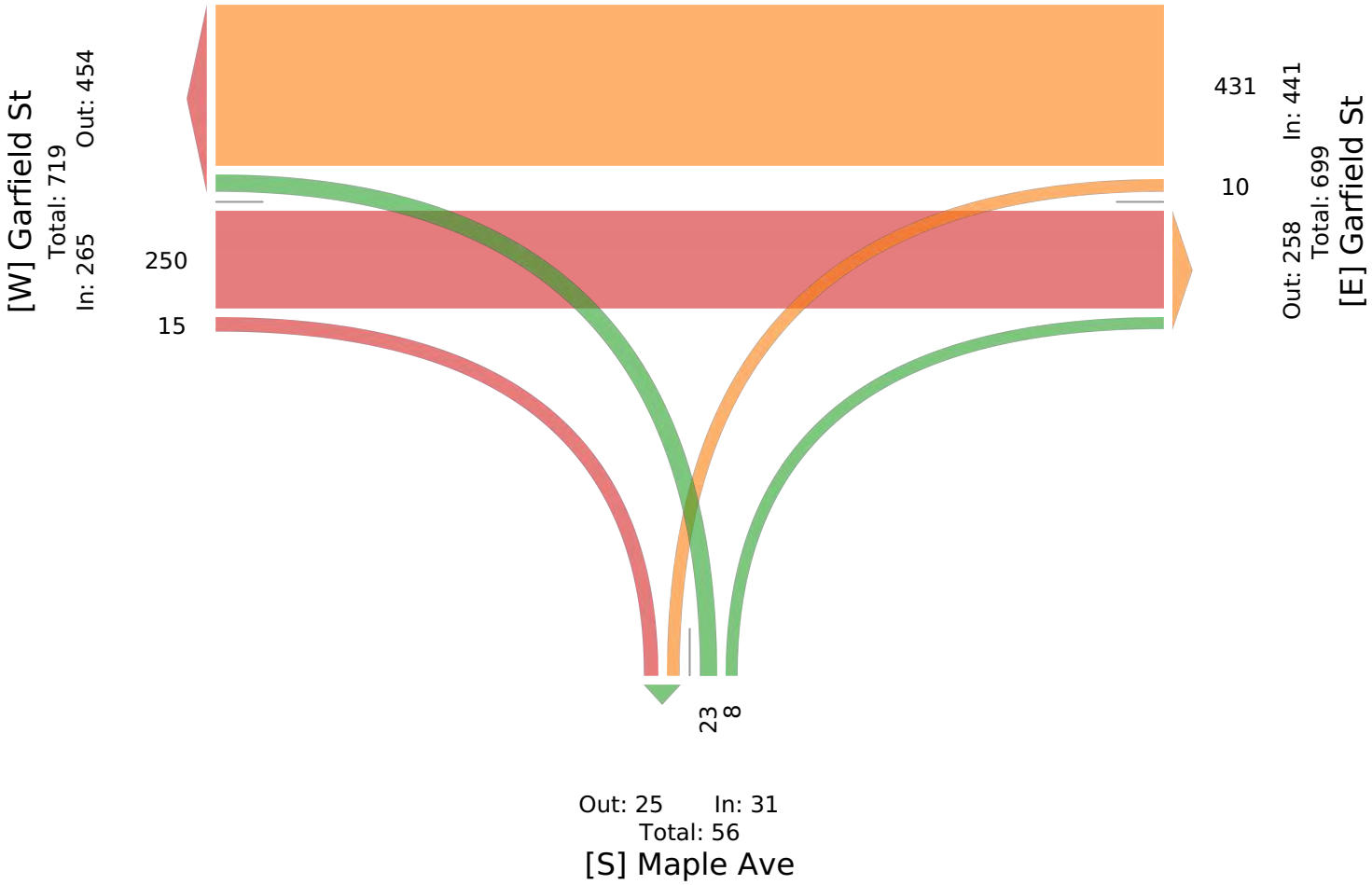
Leg	Garfield St				Garfield St				Maple Ave				
Direction	Eastbound				Westbound				Northbound				
Time	T	R	U	**App**	L	T	U	**App**	L	R	U	**App**	**Int**
2025-05-08 7:30AM	74	3	0	**77**	2	98	0	**100**	8	0	0	**8**	**185**
7:45AM	80	7	0	**87**	5	118	0	**123**	10	5	0	**15**	**225**
8:00AM	51	0	0	**51**	0	117	0	**117**	2	1	0	**3**	**171**
8:15AM	45	5	0	**50**	3	98	0	**101**	3	2	0	**5**	**156**
Total	250	15	0	**265**	10	431	0	**441**	23	8	0	**31**	**737**
% Approach	94.3%	5.7%	0%	**-**	2.3%	97.7%	0%	**-**	74.2%	25.8%	0%	**-**	-
% Total	33.9%	2.0%	0%	**36.0%**	1.4%	58.5%	0%	**59.8%**	3.1%	1.1%	0%	**4.2%**	-
PHF	0.781	0.536	-	**0.761**	0.500	0.913	-	**0.896**	0.575	0.400	-	**0.517**	0.819
Lights	244	15	0	**259**	10	425	0	**435**	23	8	0	**31**	725
% Lights	97.6%	100%	0%	**97.7%**	100%	98.6%	0%	**98.6%**	100%	100%	0%	**100%**	98.4%
Articulated Trucks and Single-Unit Trucks	6	0	0	**6**	0	5	0	**5**	0	0	0	**0**	11
% Articulated Trucks and Single-Unit Trucks	2.4%	0%	0%	**2.3%**	0%	1.2%	0%	**1.1%**	0%	0%	0%	**0%**	1.5%
Buses	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	1
% Buses	0%	0%	0%	**0%**	0%	0.2%	0%	**0.2%**	0%	0%	0%	**0%**	0.1%

*L: Left, R: Right, T: Thru, U: U-Turn

Garfield Street & S Maple Avenue - TMC

Thu May 8, 2025
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291366, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Garfield Street & S Maple Avenue - TMC

Thu May 8, 2025
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291366, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

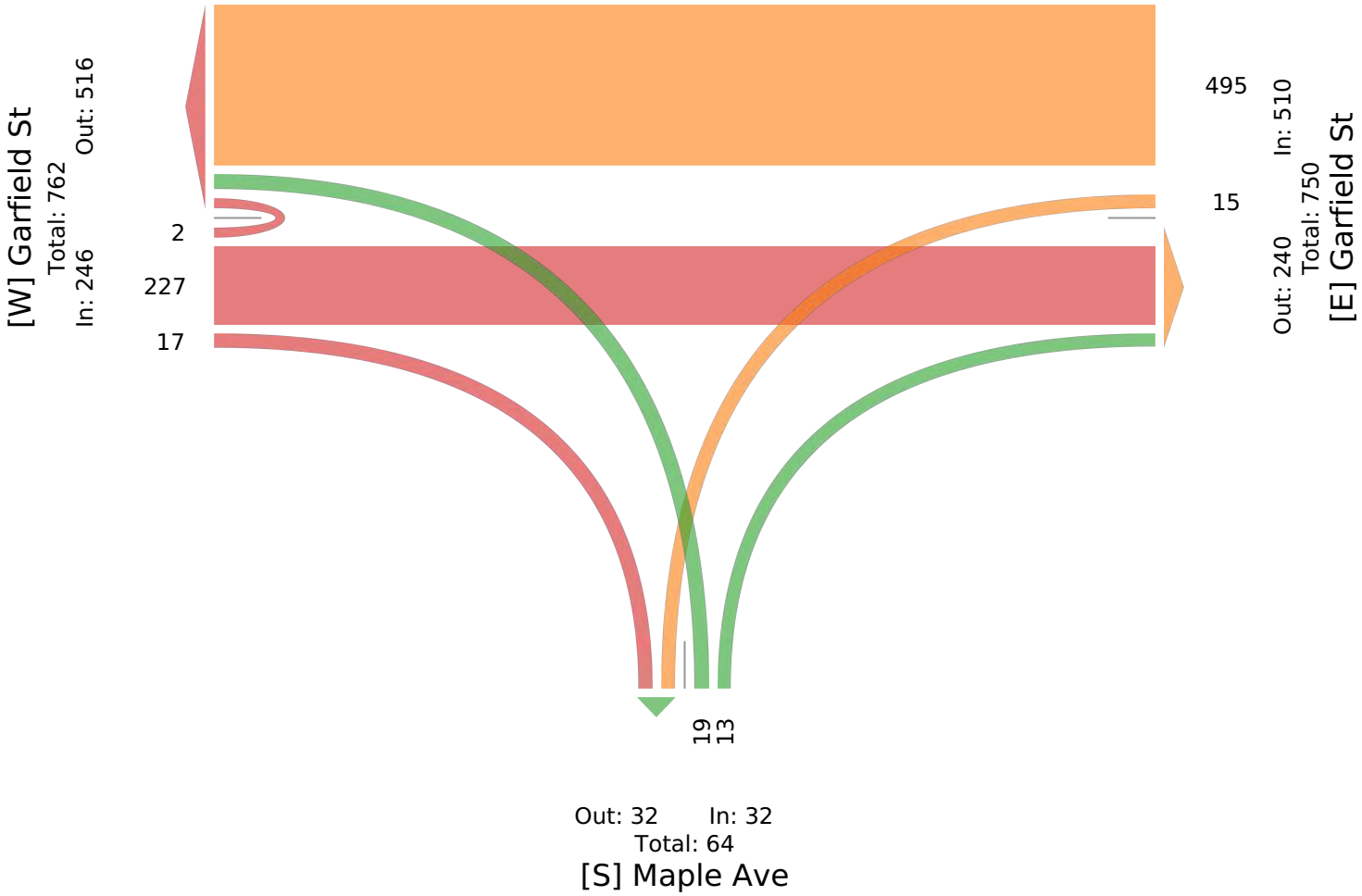
Leg	Garfield St				Garfield St				Maple Ave				
Direction	Eastbound				Westbound				Northbound				
Time	T	R	U	**App**	L	T	U	**App**	L	R	U	**App**	**Int**
2025-05-08 4:00PM	51	4	1	**56**	2	135	0	**137**	6	4	0	**10**	**203**
4:15PM	45	6	0	**51**	5	136	0	**141**	3	1	0	**4**	**196**
4:30PM	66	3	0	**69**	7	115	0	**122**	2	2	0	**4**	**195**
4:45PM	65	4	1	**70**	1	109	0	**110**	8	6	0	**14**	**194**
Total	227	17	2	**246**	15	495	0	**510**	19	13	0	**32**	**788**
% Approach	92.3%	6.9%	0.8%	**-**	2.9%	97.1%	0%	**-**	59.4%	40.6%	0%	**-**	-
% Total	28.8%	2.2%	0.3%	**31.2%**	1.9%	62.8%	0%	**64.7%**	2.4%	1.6%	0%	**4.1%**	-
PHF	0.860	0.708	0.500	**0.879**	0.536	0.910	-	**0.904**	0.594	0.542	-	**0.571**	0.970
Lights	226	17	2	**245**	15	488	0	**503**	19	13	0	**32**	780
% Lights	99.6%	100%	100%	**99.6%**	100%	98.6%	0%	**98.6%**	100%	100%	0%	**100%**	99.0%
Articulated Trucks and Single-Unit Trucks	1	0	0	**1**	0	4	0	**4**	0	0	0	**0**	5
% Articulated Trucks and Single-Unit Trucks	0.4%	0%	0%	**0.4%**	0%	0.8%	0%	**0.8%**	0%	0%	0%	**0%**	0.6%
Buses	0	0	0	**0**	0	3	0	**3**	0	0	0	**0**	3
% Buses	0%	0%	0%	**0%**	0%	0.6%	0%	**0.6%**	0%	0%	0%	**0%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

Garfield Street & S Maple Avenue - TMC

Thu May 8, 2025
PM Peak (4 PM - 5 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291366, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Garfield Street & S Maple Avenue - TMC

Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293354, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

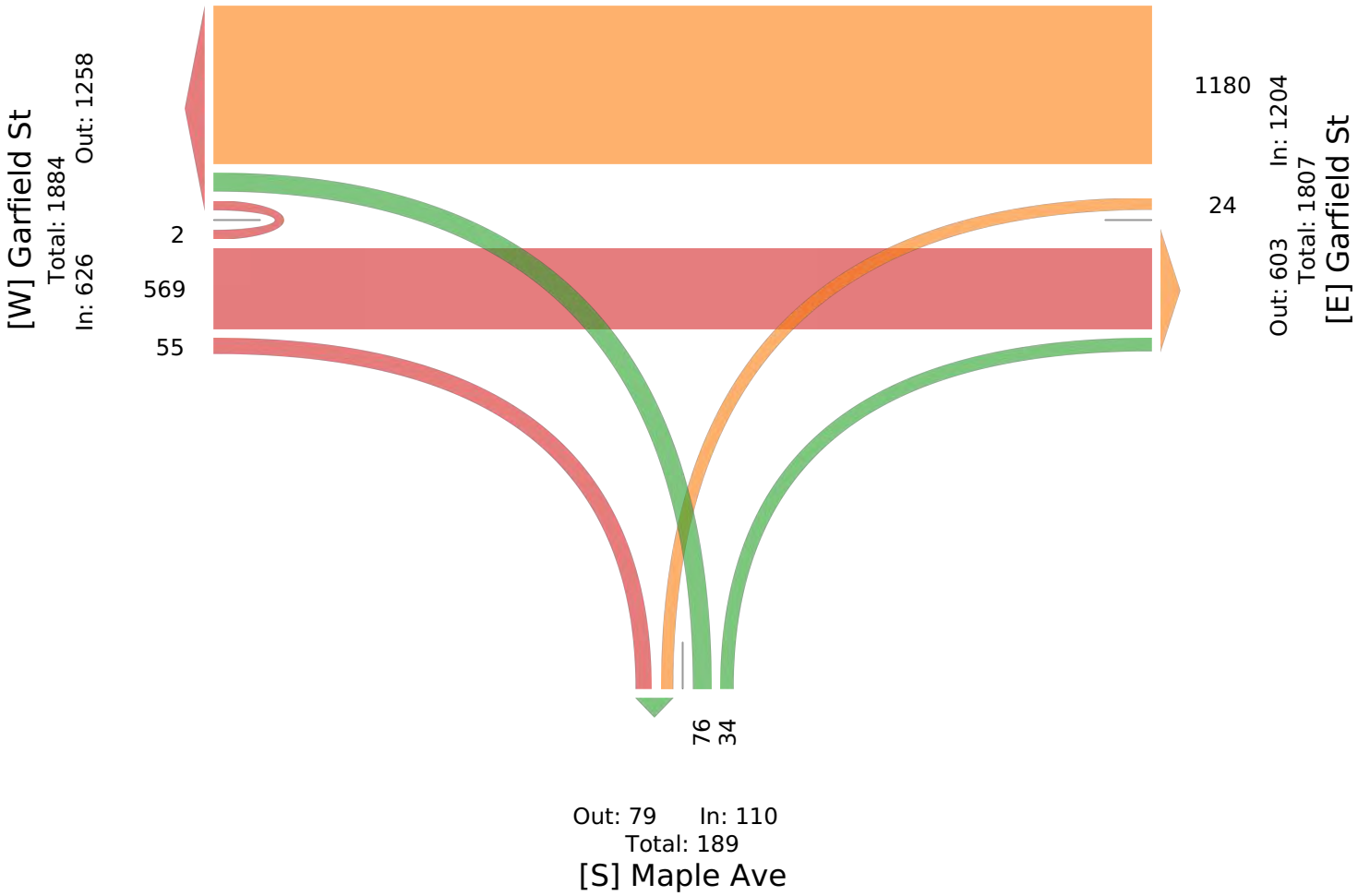
Leg	Garfield St				Garfield St				Maple Ave				
Direction	Eastbound				Westbound				Northbound				
Time	T	R	U	**App**	L	T	U	**App**	L	R	U	**App**	**Int**
2025-05-10 11:00AM	39	9	0	**48**	1	88	0	**89**	5	6	0	**11**	**148**
11:15AM	34	3	1	**38**	3	98	0	**101**	8	2	0	**10**	**149**
11:30AM	51	4	0	**55**	3	83	0	**86**	6	2	0	**8**	**149**
11:45AM	40	2	0	**42**	2	94	0	**96**	7	2	0	**9**	**147**
Hourly Total	164	18	1	**183**	9	363	0	**372**	26	12	0	**38**	**593**
12:00PM	45	1	0	**46**	2	80	0	**82**	3	0	0	**3**	**131**
12:15PM	52	4	1	**57**	4	96	0	**100**	7	6	0	**13**	**170**
12:30PM	45	5	0	**50**	3	103	0	**106**	7	2	0	**9**	**165**
12:45PM	56	4	0	**60**	1	105	0	**106**	10	1	0	**11**	**177**
Hourly Total	198	14	1	**213**	10	384	0	**394**	27	9	0	**36**	**643**
1:00PM	50	3	0	**53**	0	106	0	**106**	4	3	0	**7**	**166**
1:15PM	59	8	0	**67**	3	131	0	**134**	1	8	0	**9**	**210**
1:30PM	41	7	0	**48**	0	93	0	**93**	6	1	0	**7**	**148**
1:45PM	57	5	0	**62**	2	103	0	**105**	12	1	0	**13**	**180**
Hourly Total	207	23	0	**230**	5	433	0	**438**	23	13	0	**36**	**704**
Total	569	55	2	**626**	24	1180	0	**1204**	76	34	0	**110**	**1940**
% Approach	90.9%	8.8%	0.3%	**-**	2.0%	98.0%	0%	**-**	69.1%	30.9%	0%	**-**	-
% Total	29.3%	2.8%	0.1%	**32.3%**	1.2%	60.8%	0%	**62.1%**	3.9%	1.8%	0%	**5.7%**	-
Lights	566	55	2	**623**	24	1169	0	**1193**	76	34	0	**110**	1926
% Lights	99.5%	100%	100%	**99.5%**	100%	99.1%	0%	**99.1%**	100%	100%	0%	**100%**	99.3%
Articulated Trucks and Single-Unit Trucks	3	0	0	**3**	0	7	0	**7**	0	0	0	**0**	10
% Articulated Trucks and Single-Unit Trucks	0.5%	0%	0%	**0.5%**	0%	0.6%	0%	**0.6%**	0%	0%	0%	**0%**	0.5%
Buses	0	0	0	**0**	0	4	0	**4**	0	0	0	**0**	4
% Buses	0%	0%	0%	**0%**	0%	0.3%	0%	**0.3%**	0%	0%	0%	**0%**	0.2%

*L: Left, R: Right, T: Thru, U: U-Turn

Garfield Street & S Maple Avenue - TMC

Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293354, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Garfield Street & S Maple Avenue - TMC

Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293354, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

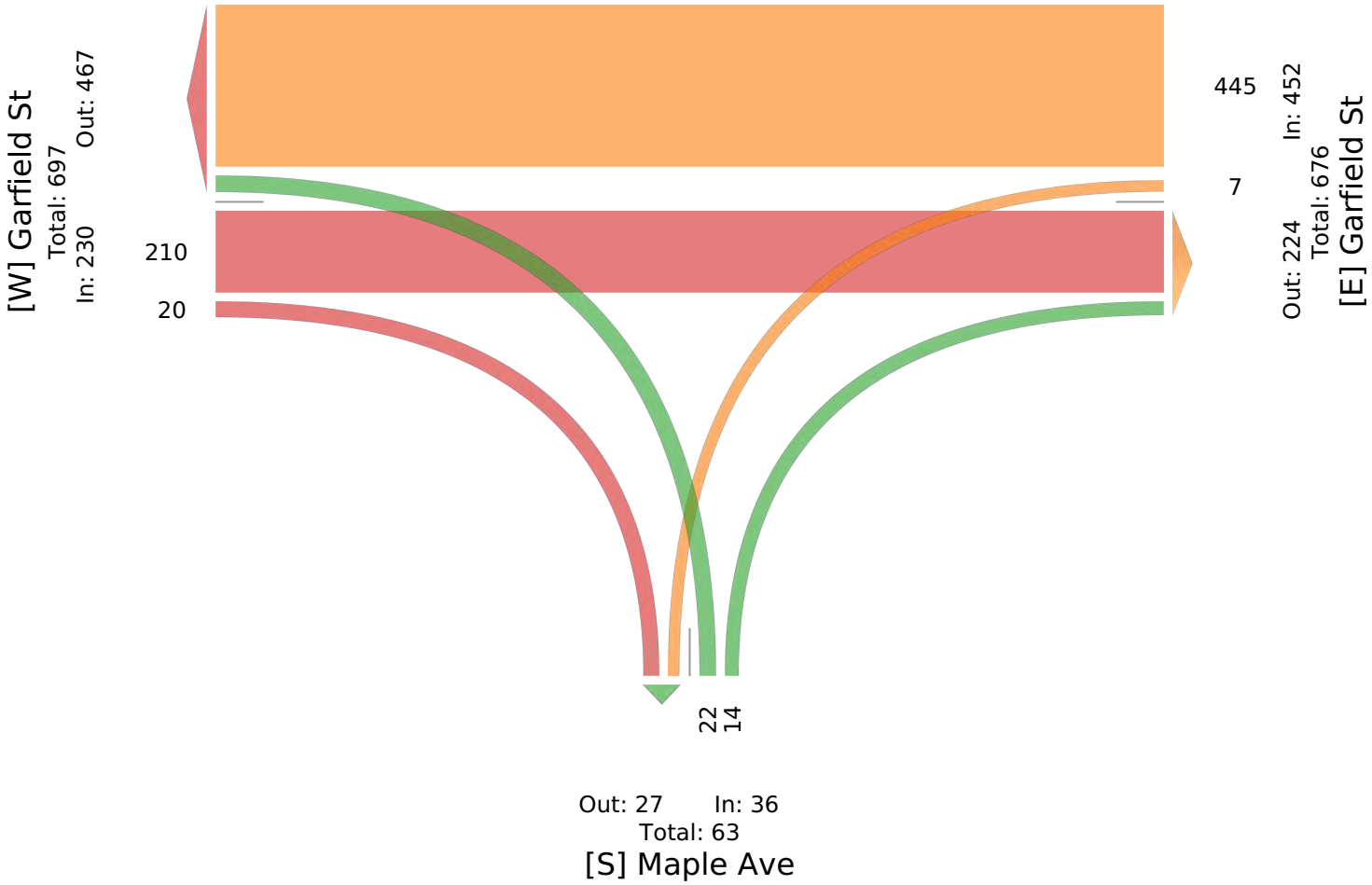
Leg	Garfield St				Garfield St				Maple Ave				
Direction	Eastbound				Westbound				Northbound				
Time	T	R	U	**App**	L	T	U	**App**	L	R	U	**App**	**Int**
2025-05-10 12:30PM	45	5	0	**50**	3	103	0	**106**	7	2	0	**9**	**165**
12:45PM	56	4	0	**60**	1	105	0	**106**	10	1	0	**11**	**177**
1:00PM	50	3	0	**53**	0	106	0	**106**	4	3	0	**7**	**166**
1:15PM	59	8	0	**67**	3	131	0	**134**	1	8	0	**9**	**210**
Total	210	20	0	**230**	7	445	0	**452**	22	14	0	**36**	**718**
% Approach	91.3%	8.7%	0%	**-**	1.5%	98.5%	0%	**-**	61.1%	38.9%	0%	**-**	-
% Total	29.2%	2.8%	0%	**32.0%**	1.0%	62.0%	0%	**63.0%**	3.1%	1.9%	0%	**5.0%**	-
PHF	0.890	0.625	-	**0.858**	0.583	0.849	-	**0.843**	0.550	0.438	-	**0.818**	0.855
Lights	210	20	0	**230**	7	438	0	**445**	22	14	0	**36**	711
% Lights	100%	100%	0%	**100%**	100%	98.4%	0%	**98.5%**	100%	100%	0%	**100%**	99.0%
Articulated Trucks and Single-Unit Trucks	0	0	0	**0**	0	6	0	**6**	0	0	0	**0**	6
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	**0%**	0%	1.3%	0%	**1.3%**	0%	0%	0%	**0%**	0.8%
Buses	0	0	0	**0**	0	1	0	**1**	0	0	0	**0**	1
% Buses	0%	0%	0%	**0%**	0%	0.2%	0%	**0.2%**	0%	0%	0%	**0%**	0.1%

*L: Left, R: Right, T: Thru, U: U-Turn

Garfield Street & S Maple Avenue - TMC

Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293354, Location: 41.872319, -87.803604

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Lexington Street - TMC

Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291367, Location: 41.870482, -87.804375

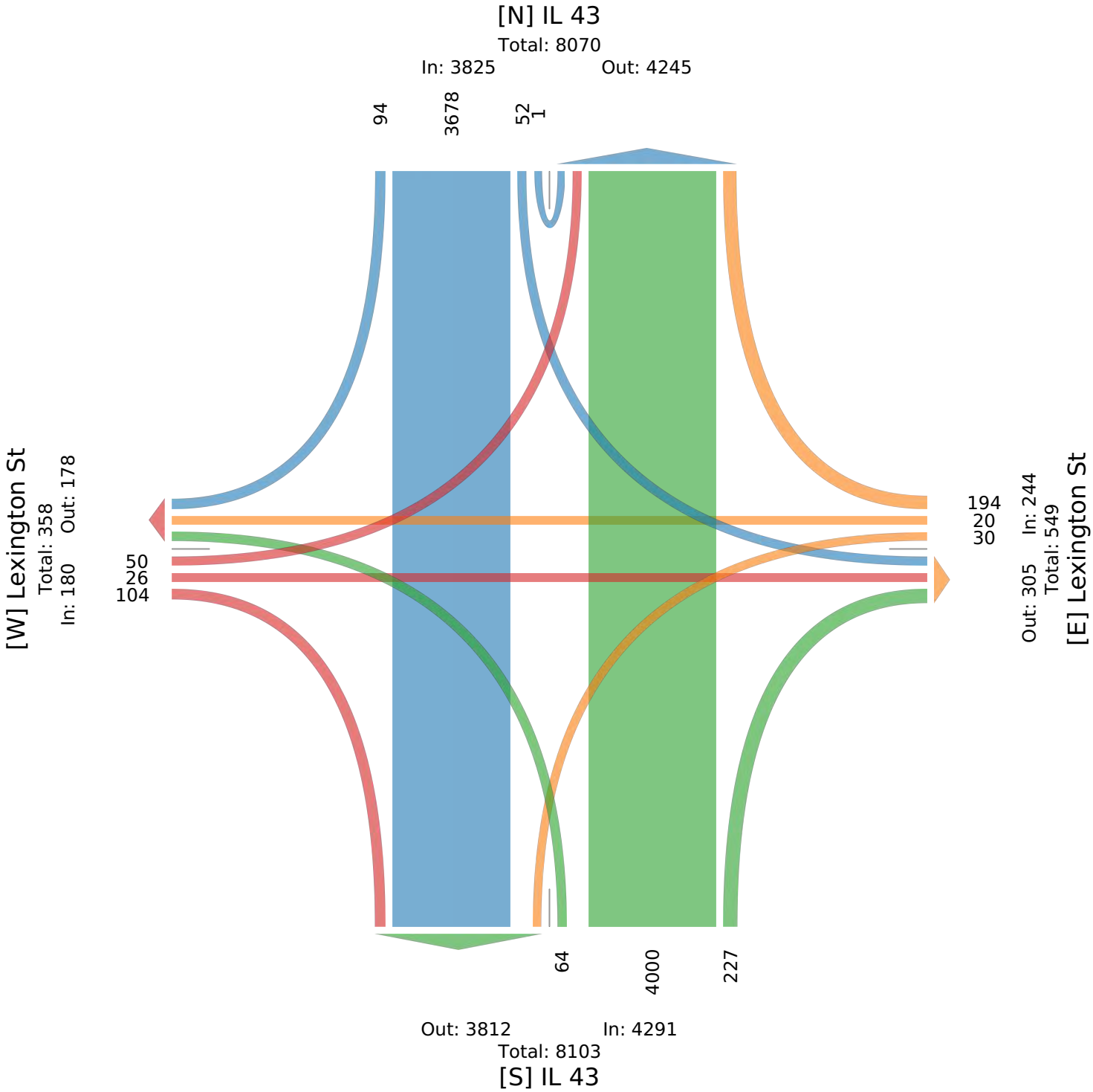
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2025-05-08 7:00AM	3	0	2	0	**5**	1	0	4	0	**5**	3	241	15	0	**259**	1	194	0	0	**195**	**464**
7:15AM	3	1	1	0	**5**	0	0	10	0	**10**	2	250	12	0	**264**	2	189	3	0	**194**	**473**
7:30AM	3	2	3	0	**8**	2	1	11	0	**14**	5	259	26	0	**290**	1	213	2	0	**216**	**528**
7:45AM	3	5	7	0	**15**	0	1	19	0	**20**	2	263	24	0	**289**	2	211	7	0	**220**	**544**
Hourly Total	12	8	13	0	**33**	3	2	44	0	**49**	12	1013	77	0	**1102**	6	807	12	0	**825**	**2009**
8:00AM	0	3	3	0	**6**	1	2	25	0	**28**	2	264	12	0	**278**	7	225	12	0	**244**	**556**
8:15AM	2	1	5	0	**8**	0	1	9	0	**10**	10	224	8	0	**242**	4	211	6	0	**221**	**481**
8:30AM	1	1	5	0	**7**	2	2	11	0	**15**	2	192	4	0	**198**	4	230	9	0	**243**	**463**
8:45AM	3	0	3	0	**6**	0	1	13	0	**14**	3	213	2	0	**218**	2	217	4	0	**223**	**461**
Hourly Total	6	5	16	0	**27**	3	6	58	0	**67**	17	893	26	0	**936**	17	883	31	0	**931**	**1961**
4:00PM	2	0	9	0	**11**	2	4	18	0	**24**	6	290	14	0	**310**	2	260	5	0	**267**	**612**
4:15PM	8	3	7	0	**18**	4	4	7	0	**15**	3	259	8	0	**270**	3	224	5	1	**233**	**536**
4:30PM	2	2	15	0	**19**	3	2	10	0	**15**	5	282	20	0	**307**	5	268	8	0	**281**	**622**
4:45PM	7	3	11	0	**21**	1	0	10	0	**11**	2	231	18	0	**251**	2	195	7	0	**204**	**487**
Hourly Total	19	8	42	0	**69**	10	10	45	0	**65**	16	1062	60	0	**1138**	12	947	25	1	**985**	**2257**
5:00PM	4	0	13	0	**17**	6	2	8	0	**16**	7	247	18	0	**272**	6	230	5	0	**241**	**546**
5:15PM	1	4	8	0	**13**	2	0	13	0	**15**	3	260	13	0	**276**	4	264	8	0	**276**	**580**
5:30PM	5	0	6	0	**11**	3	0	14	0	**17**	6	263	14	0	**283**	1	282	7	0	**290**	**601**
5:45PM	3	1	6	0	**10**	3	0	12	0	**15**	3	262	19	0	**284**	6	265	6	0	**277**	**586**
Hourly Total	13	5	33	0	**51**	14	2	47	0	**63**	19	1032	64	0	**1115**	17	1041	26	0	**1084**	**2313**
Total	50	26	104	0	**180**	30	20	194	0	**244**	64	4000	227	0	**4291**	52	3678	94	1	**3825**	**8540**
% Approach	27.8%	14.4%	57.8%	0%	**-**	12.3%	8.2%	79.5%	0%	**-**	1.5%	93.2%	5.3%	0%	**-**	1.4%	96.2%	2.5%	0%	**-**	-
% Total	0.6%	0.3%	1.2%	0%	**2.1%**	0.4%	0.2%	2.3%	0%	**2.9%**	0.7%	46.8%	2.7%	0%	**50.2%**	0.6%	43.1%	1.1%	0%	**44.8%**	-
Lights	47	25	103	0	**175**	30	20	192	0	**242**	64	3845	222	0	**4131**	52	3567	89	1	**3709**	8257
% Lights	94.0%	96.2%	99.0%	0%	**97.2%**	100%	100%	99.0%	0%	**99.2%**	100%	96.1%	97.8%	0%	**96.3%**	100%	97.0%	94.7%	100%	**97.0%**	96.7%
Articulated Trucks and Single-Unit Trucks	3	0	1	0	**4**	0	0	2	0	**2**	0	126	0	0	**126**	0	94	5	0	**99**	231
% Articulated Trucks and Single-Unit Trucks	6.0%	0%	1.0%	0%	**2.2%**	0%	0%	1.0%	0%	**0.8%**	0%	3.2%	0%	0%	**2.9%**	0%	2.6%	5.3%	0%	**2.6%**	2.7%
Buses	0	1	0	0	**1**	0	0	0	0	**0**	0	29	5	0	**34**	0	17	0	0	**17**	52
% Buses	0%	3.8%	0%	0%	**0.6%**	0%	0%	0%	0%	**0%**	0%	0.7%	2.2%	0%	**0.8%**	0%	0.5%	0%	0%	**0.4%**	0.6%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Lexington Street - TMC
Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291367, Location: 41.870482, -87.804375

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Lexington Street - TMC

Thu May 8, 2025
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291367, Location: 41.870482, -87.804375

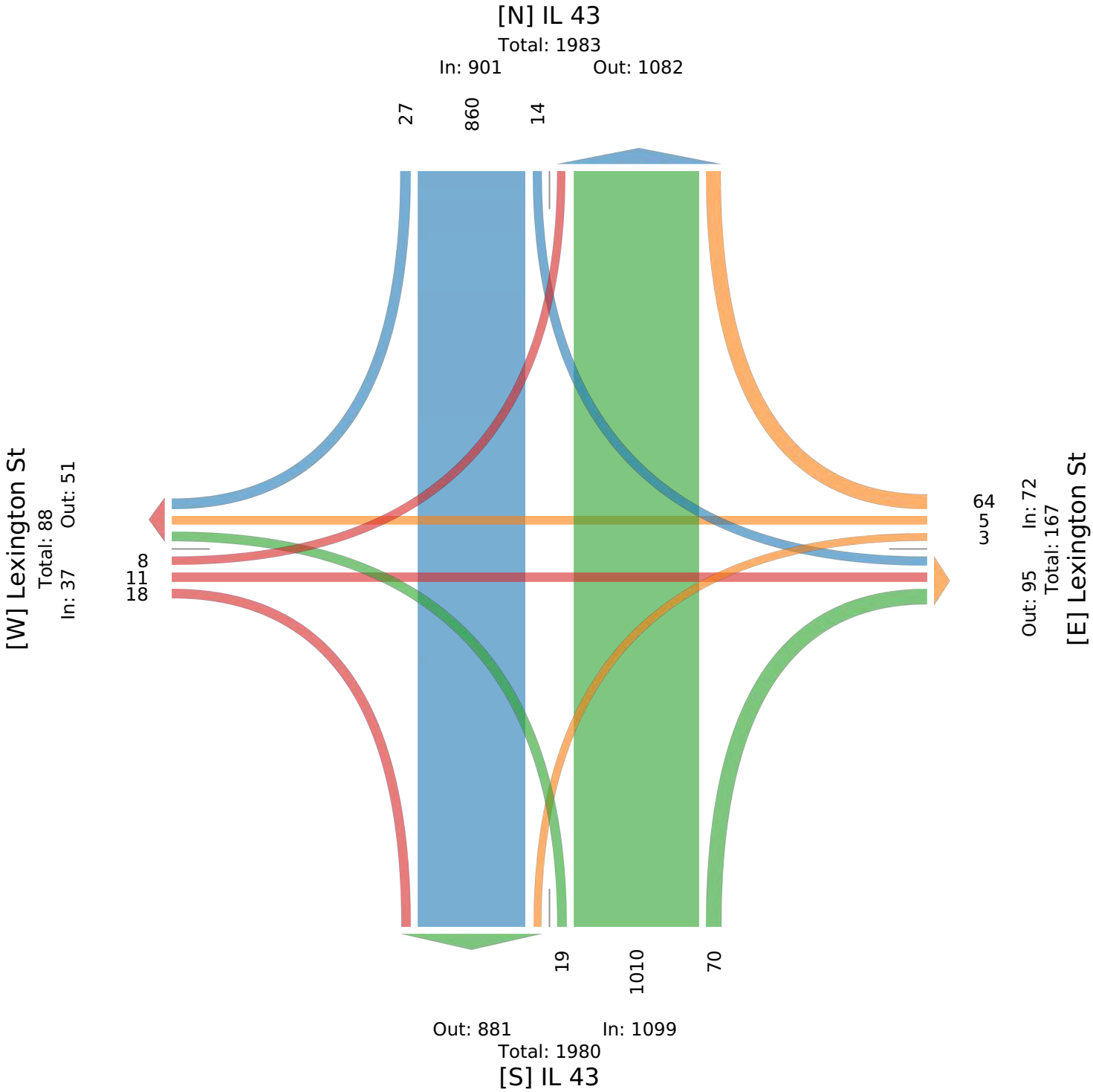
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-08 7:30AM	3	2	3	0	**8**	2	1	11	0	**14**	5	259	26	0	**290**	1	213	2	0	**216**	**528**
7:45AM	3	5	7	0	**15**	0	1	19	0	**20**	2	263	24	0	**289**	2	211	7	0	**220**	**544**
8:00AM	0	3	3	0	**6**	1	2	25	0	**28**	2	264	12	0	**278**	7	225	12	0	**244**	**556**
8:15AM	2	1	5	0	**8**	0	1	9	0	**10**	10	224	8	0	**242**	4	211	6	0	**221**	**481**
Total	8	11	18	0	**37**	3	5	64	0	**72**	19	1010	70	0	**1099**	14	860	27	0	**901**	**2109**
% Approach	21.6%	29.7%	48.6%	0%	**-**	4.2%	6.9%	88.9%	0%	**-**	1.7%	91.9%	6.4%	0%	**-**	1.6%	95.4%	3.0%	0%	**-**	-
% Total	0.4%	0.5%	0.9%	0%	**1.8%**	0.1%	0.2%	3.0%	0%	**3.4%**	0.9%	47.9%	3.3%	0%	**52.1%**	0.7%	40.8%	1.3%	0%	**42.7%**	-
PHF	0.667	0.550	0.643	-	**0.617**	0.375	0.625	0.640	-	**0.643**	0.475	0.956	0.673	-	**0.947**	0.500	0.956	0.563	-	**0.923**	0.948
Lights	7	11	17	0	**35**	3	5	63	0	**71**	19	946	69	0	**1034**	14	822	25	0	**861**	2001
% Lights	87.5%	100%	94.4%	0%	**94.6%**	100%	100%	98.4%	0%	**98.6%**	100%	93.7%	98.6%	0%	**94.1%**	100%	95.6%	92.6%	0%	**95.6%**	94.9%
Articulated Trucks and Single-Unit Trucks	1	0	1	0	**2**	0	0	1	0	**1**	0	56	0	0	**56**	0	34	2	0	**36**	95
% Articulated Trucks and Single-Unit Trucks	12.5%	0%	5.6%	0%	**5.4%**	0%	0%	1.6%	0%	**1.4%**	0%	5.5%	0%	0%	**5.1%**	0%	4.0%	7.4%	0%	**4.0%**	4.5%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	8	1	0	**9**	0	4	0	0	**4**	13
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.8%	1.4%	0%	**0.8%**	0%	0.5%	0%	0%	**0.4%**	0.6%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Lexington Street - TMC
Thu May 8, 2025
AM Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291367, Location: 41.870482, -87.804375

GEWALT HAMILTON ASSOCIATES, INC.
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Lexington Street - TMC

Thu May 8, 2025
Forced Peak (4 PM - 5 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291367, Location: 41.870482, -87.804375

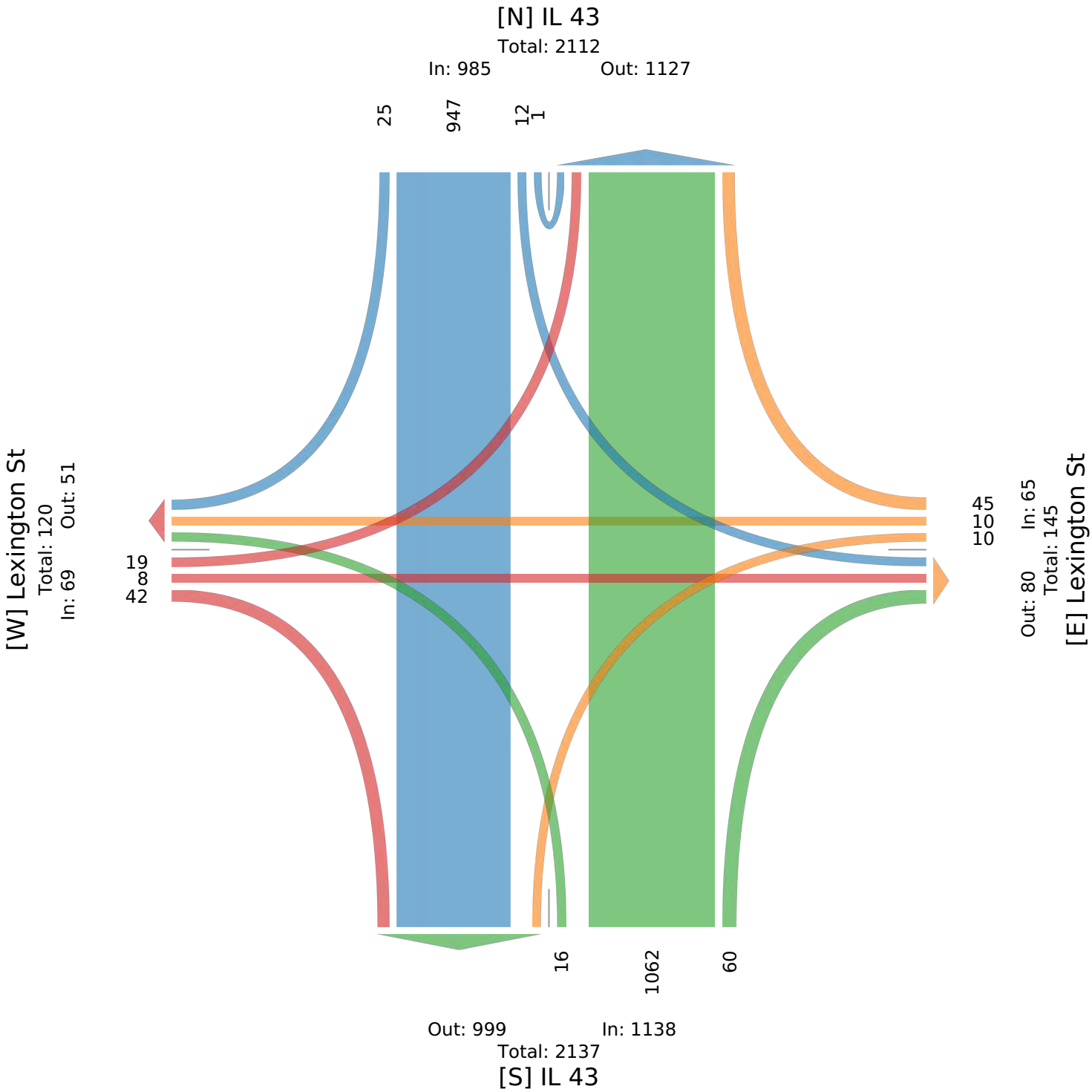
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-08 4:00PM	2	0	9	0	**11**	2	4	18	0	**24**	6	290	14	0	**310**	2	260	5	0	**267**	**612**
4:15PM	8	3	7	0	**18**	4	4	7	0	**15**	3	259	8	0	**270**	3	224	5	1	**233**	**536**
4:30PM	2	2	15	0	**19**	3	2	10	0	**15**	5	282	20	0	**307**	5	268	8	0	**281**	**622**
4:45PM	7	3	11	0	**21**	1	0	10	0	**11**	2	231	18	0	**251**	2	195	7	0	**204**	**487**
Total	19	8	42	0	**69**	10	10	45	0	**65**	16	1062	60	0	**1138**	12	947	25	1	**985**	**2257**
% Approach	27.5%	11.6%	60.9%	0%	**-**	15.4%	15.4%	69.2%	0%	**-**	1.4%	93.3%	5.3%	0%	**-**	1.2%	96.1%	2.5%	0.1%	**-**	-
% Total	0.8%	0.4%	1.9%	0%	**3.1%**	0.4%	0.4%	2.0%	0%	**2.9%**	0.7%	47.1%	2.7%	0%	**50.4%**	0.5%	42.0%	1.1%	0%	**43.6%**	-
PHF	0.594	0.667	0.700	-	**0.821**	0.625	0.625	0.625	-	**0.677**	0.667	0.916	0.750	-	**0.918**	0.600	0.883	0.781	0.250	**0.876**	0.907
Lights	19	7	42	0	**68**	10	10	44	0	**64**	16	1043	59	0	**1118**	12	930	24	1	**967**	2217
% Lights	100%	87.5%	100%	0%	**98.6%**	100%	100%	97.8%	0%	**98.5%**	100%	98.2%	98.3%	0%	**98.2%**	100%	98.2%	96.0%	100%	**98.2%**	98.2%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	**0**	0	0	1	0	**1**	0	13	0	0	**13**	0	13	1	0	**14**	28
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0%	2.2%	0%	**1.5%**	0%	1.2%	0%	0%	**1.1%**	0%	1.4%	4.0%	0%	**1.4%**	1.2%
Buses	0	1	0	0	**1**	0	0	0	0	**0**	0	6	1	0	**7**	0	4	0	0	**4**	12
% Buses	0%	12.5%	0%	0%	**1.4%**	0%	0%	0%	0%	**0%**	0%	0.6%	1.7%	0%	**0.6%**	0%	0.4%	0%	0%	**0.4%**	0.5%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Lexington Street - TMC
Thu May 8, 2025
Forced Peak (4 PM - 5 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291367, Location: 41.870482, -87.804375

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Lexington Street - TMC

Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293355, Location: 41.870482, -87.804375

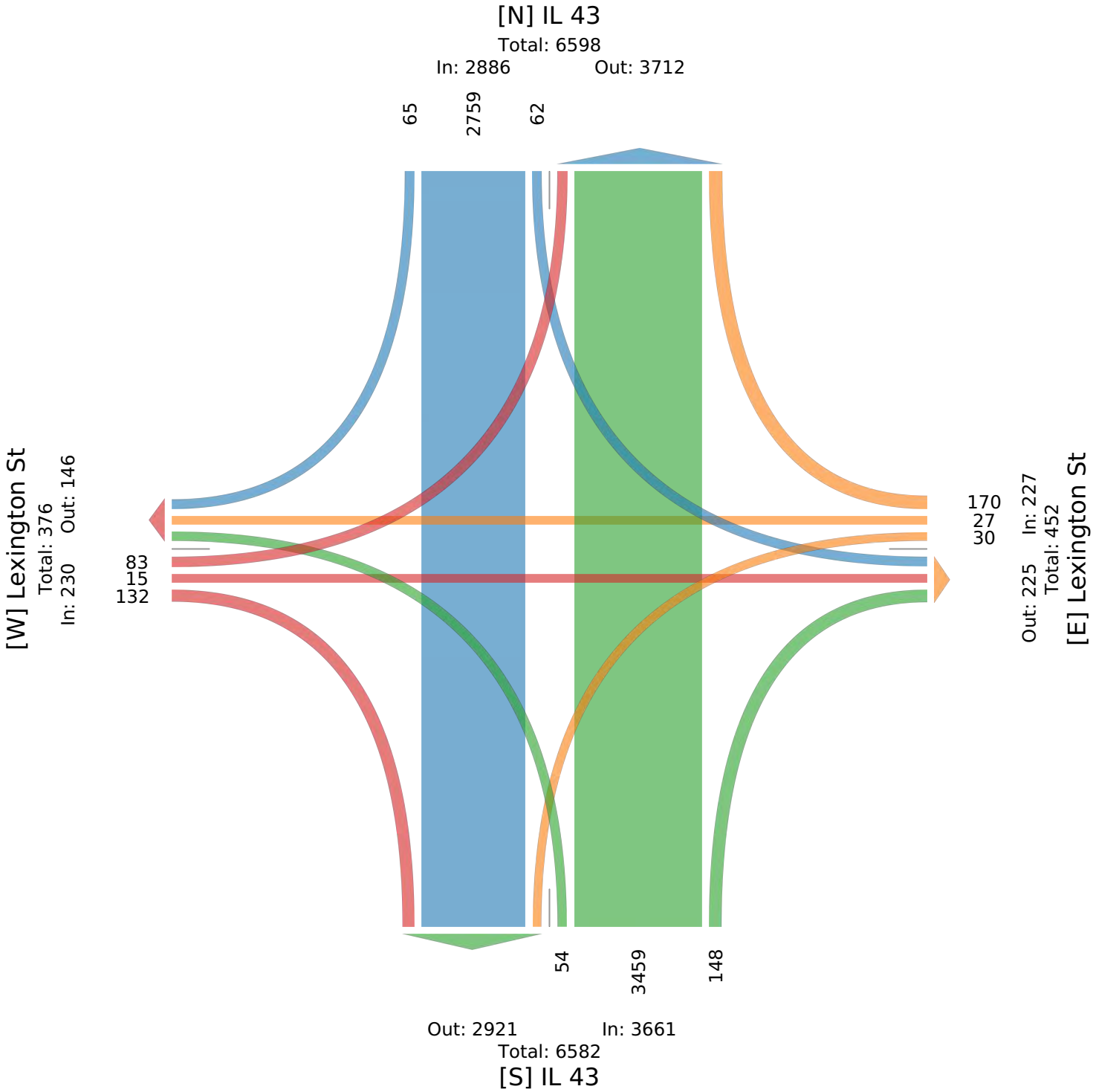
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-10 11:00AM	9	0	13	0	**22**	1	0	11	0	**12**	3	275	12	0	**290**	7	251	4	0	**262**	**586**
11:15AM	7	1	15	0	**23**	1	0	11	0	**12**	5	280	9	0	**294**	14	231	8	0	**253**	**582**
11:30AM	6	1	14	0	**21**	1	0	7	0	**8**	2	302	8	0	**312**	3	242	2	0	**247**	**588**
11:45AM	7	0	14	0	**21**	0	2	10	0	**12**	5	272	13	0	**290**	2	200	4	0	**206**	**529**
Hourly Total	29	2	56	0	**87**	3	2	39	0	**44**	15	1129	42	0	**1186**	26	924	18	0	**968**	**2285**
12:00PM	8	1	14	0	**23**	2	5	17	0	**24**	0	280	14	0	**294**	3	240	5	0	**248**	**589**
12:15PM	2	0	8	0	**10**	1	5	16	0	**22**	9	305	6	0	**320**	4	203	4	0	**211**	**563**
12:30PM	6	3	14	0	**23**	2	2	20	0	**24**	2	311	13	0	**326**	8	233	6	0	**247**	**620**
12:45PM	4	3	10	0	**17**	1	2	16	0	**19**	7	306	11	0	**324**	8	213	8	0	**229**	**589**
Hourly Total	20	7	46	0	**73**	6	14	69	0	**89**	18	1202	44	0	**1264**	23	889	23	0	**935**	**2361**
1:00PM	7	4	6	0	**17**	1	1	13	0	**15**	6	275	12	0	**293**	3	248	4	0	**255**	**580**
1:15PM	7	1	5	0	**13**	5	3	19	0	**27**	6	284	21	0	**311**	3	236	9	0	**248**	**599**
1:30PM	11	0	7	0	**18**	7	4	15	0	**26**	3	274	13	0	**290**	2	251	6	0	**259**	**593**
1:45PM	9	1	12	0	**22**	8	3	15	0	**26**	6	295	16	0	**317**	5	211	5	0	**221**	**586**
Hourly Total	34	6	30	0	**70**	21	11	62	0	**94**	21	1128	62	0	**1211**	13	946	24	0	**983**	**2358**
Total	83	15	132	0	**230**	30	27	170	0	**227**	54	3459	148	0	**3661**	62	2759	65	0	**2886**	**7004**
% Approach	36.1%	6.5%	57.4%	0%	**-**	13.2%	11.9%	74.9%	0%	**-**	1.5%	94.5%	4.0%	0%	**-**	2.1%	95.6%	2.3%	0%	**-**	-
% Total	1.2%	0.2%	1.9%	0%	**3.3%**	0.4%	0.4%	2.4%	0%	**3.2%**	0.8%	49.4%	2.1%	0%	**52.3%**	0.9%	39.4%	0.9%	0%	**41.2%**	-
Lights	83	15	129	0	**227**	30	26	169	0	**225**	53	3406	146	0	**3605**	62	2704	65	0	**2831**	6888
% Lights	100%	100%	97.7%	0%	**98.7%**	100%	96.3%	99.4%	0%	**99.1%**	98.1%	98.5%	98.6%	0%	**98.5%**	100%	98.0%	100%	0%	**98.1%**	98.3%
Articulated Trucks and Single-Unit Trucks	0	0	3	0	**3**	0	1	0	0	**1**	1	39	2	0	**42**	0	42	0	0	**42**	88
% Articulated Trucks and Single-Unit Trucks	0%	0%	2.3%	0%	**1.3%**	0%	3.7%	0%	0%	**0.4%**	1.9%	1.1%	1.4%	0%	**1.1%**	0%	1.5%	0%	0%	**1.5%**	1.3%
Buses	0	0	0	0	**0**	0	0	1	0	**1**	0	14	0	0	**14**	0	13	0	0	**13**	28
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0.6%	0%	**0.4%**	0%	0.4%	0%	0%	**0.4%**	0%	0.5%	0%	0%	**0.5%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Lexington Street - TMC
Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293355, Location: 41.870482, -87.804375

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL-43 (Harlem Avenue) & Lexington Street - TMC

Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293355, Location: 41.870482, -87.804375

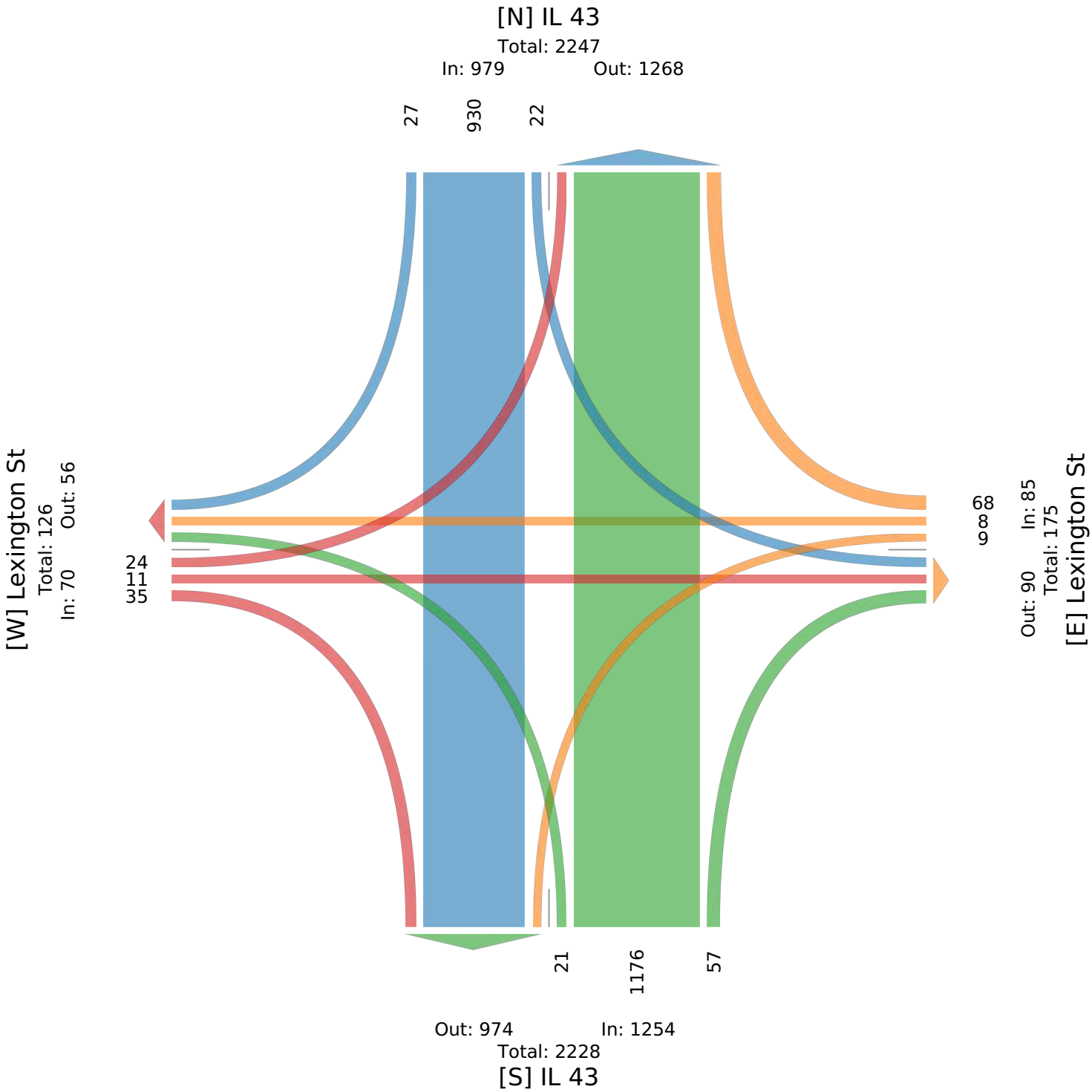
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					IL 43					IL 43					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-10 12:30PM	6	3	14	0	**23**	2	2	20	0	**24**	2	311	13	0	**326**	8	233	6	0	**247**	**620**
12:45PM	4	3	10	0	**17**	1	2	16	0	**19**	7	306	11	0	**324**	8	213	8	0	**229**	**589**
1:00PM	7	4	6	0	**17**	1	1	13	0	**15**	6	275	12	0	**293**	3	248	4	0	**255**	**580**
1:15PM	7	1	5	0	**13**	5	3	19	0	**27**	6	284	21	0	**311**	3	236	9	0	**248**	**599**
Total	24	11	35	0	**70**	9	8	68	0	**85**	21	1176	57	0	**1254**	22	930	27	0	**979**	**2388**
% Approach	34.3%	15.7%	50.0%	0%	**-**	10.6%	9.4%	80.0%	0%	**-**	1.7%	93.8%	4.5%	0%	**-**	2.2%	95.0%	2.8%	0%	**-**	-
% Total	1.0%	0.5%	1.5%	0%	**2.9%**	0.4%	0.3%	2.8%	0%	**3.6%**	0.9%	49.2%	2.4%	0%	**52.5%**	0.9%	38.9%	1.1%	0%	**41.0%**	-
PHF	0.857	0.688	0.625	-	**0.761**	0.450	0.667	0.850	-	**0.787**	0.750	0.945	0.679	-	**0.962**	0.688	0.938	0.750	-	**0.960**	0.963
Lights	24	11	34	0	**69**	9	8	68	0	**85**	21	1158	57	0	**1236**	22	909	27	0	**958**	2348
% Lights	100%	100%	97.1%	0%	**98.6%**	100%	100%	100%	0%	**100%**	100%	98.5%	100%	0%	**98.6%**	100%	97.7%	100%	0%	**97.9%**	98.3%
Articulated Trucks and Single-Unit Trucks	0	0	1	0	**1**	0	0	0	0	**0**	0	16	0	0	**16**	0	16	0	0	**16**	33
% Articulated Trucks and Single-Unit Trucks	0%	0%	2.9%	0%	**1.4%**	0%	0%	0%	0%	**0%**	0%	1.4%	0%	0%	**1.3%**	0%	1.7%	0%	0%	**1.6%**	1.4%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	2	0	0	**2**	0	5	0	0	**5**	7
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0.2%	0%	0%	**0.2%**	0%	0.5%	0%	0%	**0.5%**	0.3%

*L: Left, R: Right, T: Thru, U: U-Turn

IL-43 (Harlem Avenue) & Lexington Street - TMC
Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293355, Location: 41.870482, -87.804375

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Lexington Street & S Maple Avenue - TMC

Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291368, Location: 41.870473, -87.803529

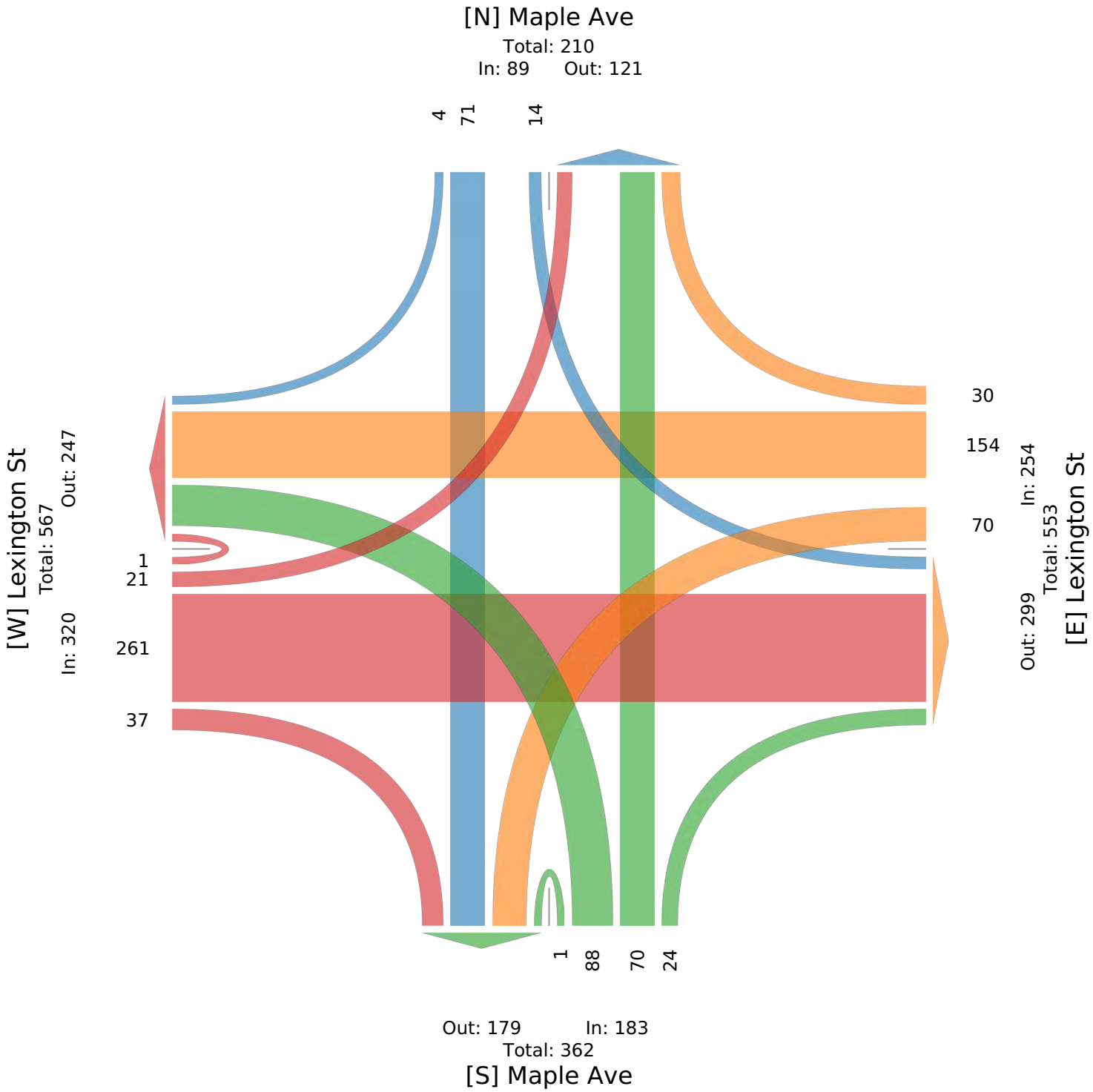
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					Maple Ave					Maple Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	L	T	R	U	App	Int
2025-05-08 7:00AM	3	13	1	0	**17**	2	4	3	0	**9**	1	1	0	0	**2**	0	1	1	0	**2**	**30**
7:15AM	0	15	0	0	**15**	4	8	2	0	**14**	2	4	2	0	**8**	1	3	0	0	**4**	**41**
7:30AM	1	29	1	0	**31**	2	10	6	0	**18**	5	4	4	0	**13**	0	5	0	0	**5**	**67**
7:45AM	5	26	1	0	**32**	6	13	5	0	**24**	7	3	0	0	**10**	3	7	1	0	**11**	**77**
Hourly Total	9	83	3	0	**95**	14	35	16	0	**65**	15	12	6	0	**33**	4	16	2	0	**22**	**215**
8:00AM	0	22	2	0	**24**	4	21	1	0	**26**	5	3	1	0	**9**	0	0	0	0	**0**	**59**
8:15AM	0	11	2	0	**13**	2	7	1	0	**10**	4	4	0	0	**8**	1	6	0	0	**7**	**38**
8:30AM	0	8	2	0	**10**	2	9	2	0	**13**	6	4	1	0	**11**	0	4	0	0	**4**	**38**
8:45AM	0	3	0	0	**3**	6	7	0	0	**13**	7	8	1	0	**16**	0	2	0	0	**2**	**34**
Hourly Total	0	44	6	0	**50**	14	44	4	0	**62**	22	19	3	0	**44**	1	12	0	0	**13**	**169**
4:00PM	5	8	3	1	**17**	3	16	0	0	**19**	6	6	2	0	**14**	1	5	1	0	**7**	**57**
4:15PM	0	13	3	0	**16**	6	7	0	0	**13**	8	3	0	0	**11**	3	7	0	0	**10**	**50**
4:30PM	1	19	7	0	**27**	8	11	1	0	**20**	3	4	3	0	**10**	0	8	1	0	**9**	**66**
4:45PM	3	24	2	0	**29**	2	8	1	0	**11**	4	8	1	0	**13**	1	4	0	0	**5**	**58**
Hourly Total	9	64	15	1	**89**	19	42	2	0	**63**	21	21	6	0	**48**	5	24	2	0	**31**	**231**
5:00PM	0	20	5	0	**25**	6	7	2	0	**15**	9	1	2	0	**12**	3	5	0	0	**8**	**60**
5:15PM	2	14	4	0	**20**	5	10	3	0	**18**	5	6	2	1	**14**	1	6	0	0	**7**	**59**
5:30PM	0	16	0	0	**16**	6	9	2	0	**17**	8	5	2	0	**15**	0	4	0	0	**4**	**52**
5:45PM	1	20	4	0	**25**	6	7	1	0	**14**	8	6	3	0	**17**	0	4	0	0	**4**	**60**
Hourly Total	3	70	13	0	**86**	23	33	8	0	**64**	30	18	9	1	**58**	4	19	0	0	**23**	**231**
Total	21	261	37	1	**320**	70	154	30	0	**254**	88	70	24	1	**183**	14	71	4	0	**89**	**846**
% Approach	6.6%	81.6%	11.6%	0.3%	**-**	27.6%	60.6%	11.8%	0%	**-**	48.1%	38.3%	13.1%	0.5%	**-**	15.7%	79.8%	4.5%	0%	**-**	-
% Total	2.5%	30.9%	4.4%	0.1%	**37.8%**	8.3%	18.2%	3.5%	0%	**30.0%**	10.4%	8.3%	2.8%	0.1%	**21.6%**	1.7%	8.4%	0.5%	0%	**10.5%**	-
Lights	21	257	36	1	**315**	70	150	29	0	**249**	87	69	23	1	**180**	14	71	4	0	**89**	833
% Lights	100%	98.5%	97.3%	100%	**98.4%**	100%	97.4%	96.7%	0%	**98.0%**	98.9%	98.6%	95.8%	100%	**98.4%**	100%	100%	100%	0%	**100%**	98.5%
Articulated Trucks and Single-Unit Trucks	0	2	1	0	**3**	0	4	0	0	**4**	1	1	0	0	**2**	0	0	0	0	**0**	9
% Articulated Trucks and Single-Unit Trucks	0%	0.8%	2.7%	0%	**0.9%**	0%	2.6%	0%	0%	**1.6%**	1.1%	1.4%	0%	0%	**1.1%**	0%	0%	0%	0%	**0%**	1.1%
Buses	0	2	0	0	**2**	0	0	1	0	**1**	0	0	1	0	**1**	0	0	0	0	**0**	4
% Buses	0%	0.8%	0%	0%	**0.6%**	0%	0%	3.3%	0%	**0.4%**	0%	0%	4.2%	0%	**0.5%**	0%	0%	0%	0%	**0%**	0.5%

*L: Left, R: Right, T: Thru, U: U-Turn

Lexington Street & S Maple Avenue - TMC
Thu May 8, 2025
Full Length (7 AM-9 AM, 4 PM-6 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291368, Location: 41.870473, -87.803529

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Lexington Street & S Maple Avenue - TMC

Thu May 8, 2025
Forced Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291368, Location: 41.870473, -87.803529

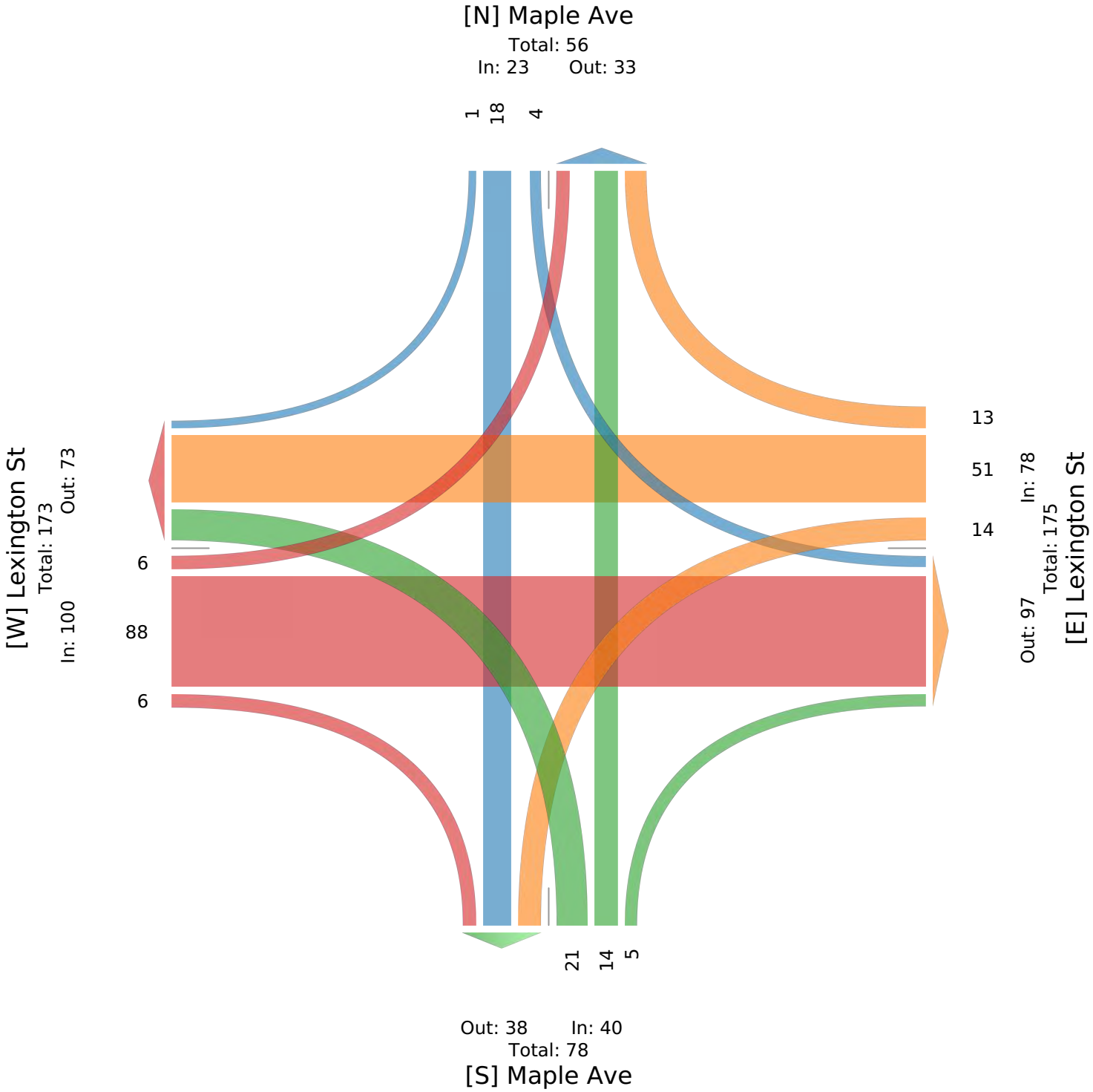
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					Maple Ave					Maple Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-08 7:30AM	1	29	1	0	**31**	2	10	6	0	**18**	5	4	4	0	**13**	0	5	0	0	**5**	**67**
7:45AM	5	26	1	0	**32**	6	13	5	0	**24**	7	3	0	0	**10**	3	7	1	0	**11**	**77**
8:00AM	0	22	2	0	**24**	4	21	1	0	**26**	5	3	1	0	**9**	0	0	0	0	**0**	**59**
8:15AM	0	11	2	0	**13**	2	7	1	0	**10**	4	4	0	0	**8**	1	6	0	0	**7**	**38**
Total	6	88	6	0	**100**	14	51	13	0	**78**	21	14	5	0	**40**	4	18	1	0	**23**	**241**
% Approach	6.0%	88.0%	6.0%	0%	**-**	17.9%	65.4%	16.7%	0%	**-**	52.5%	35.0%	12.5%	0%	**-**	17.4%	78.3%	4.3%	0%	**-**	-
% Total	2.5%	36.5%	2.5%	0%	**41.5%**	5.8%	21.2%	5.4%	0%	**32.4%**	8.7%	5.8%	2.1%	0%	**16.6%**	1.7%	7.5%	0.4%	0%	**9.5%**	-
PHF	0.300	0.759	0.750	-	**0.781**	0.583	0.607	0.542	-	**0.750**	0.750	0.875	0.313	-	**0.769**	0.333	0.643	0.250	-	**0.523**	0.782
Lights	6	87	6	0	**99**	14	50	12	0	**76**	21	14	5	0	**40**	4	18	1	0	**23**	238
% Lights	100%	98.9%	100%	0%	**99.0%**	100%	98.0%	92.3%	0%	**97.4%**	100%	100%	100%	0%	**100%**	100%	100%	100%	0%	**100%**	98.8%
Articulated Trucks and Single-Unit Trucks	0	1	0	0	**1**	0	1	0	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	2
% Articulated Trucks and Single-Unit Trucks	0%	1.1%	0%	0%	**1.0%**	0%	2.0%	0%	0%	**1.3%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.8%
Buses	0	0	0	0	**0**	0	0	1	0	**1**	0	0	0	0	**0**	0	0	0	0	**0**	1
% Buses	0%	0%	0%	0%	**0%**	0%	0%	7.7%	0%	**1.3%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0.4%

*L: Left, R: Right, T: Thru, U: U-Turn

Lexington Street & S Maple Avenue - TMC
Thu May 8, 2025
Forced Peak (7:30 AM - 8:30 AM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291368, Location: 41.870473, -87.803529

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Lexington Street & S Maple Avenue - TMC

Thu May 8, 2025
Forced Peak (4 PM - 5 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291368, Location: 41.870473, -87.803529

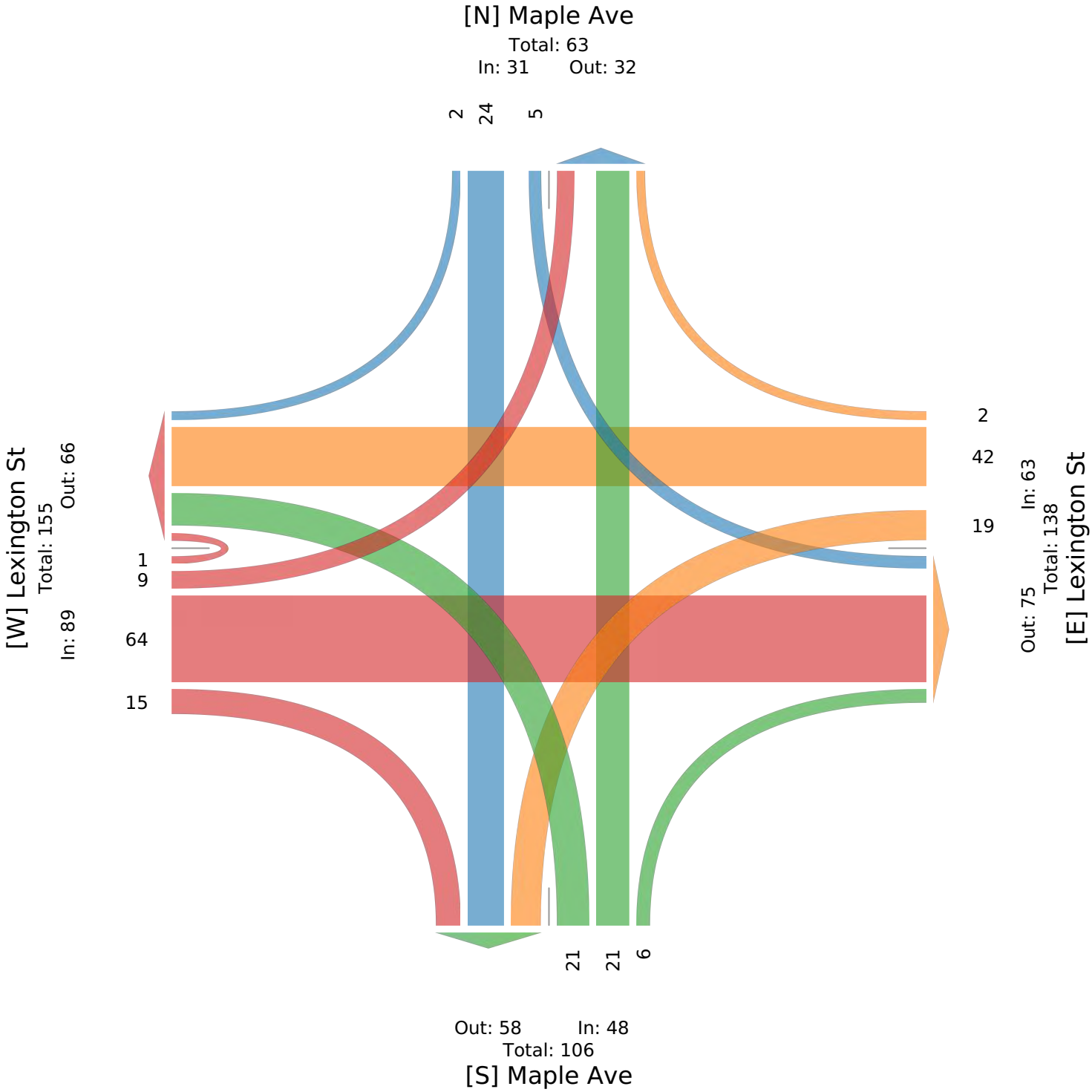
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					Maple Ave					Maple Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-08 4:00PM	5	8	3	1	**17**	3	16	0	0	**19**	6	6	2	0	**14**	1	5	1	0	**7**	**57**
4:15PM	0	13	3	0	**16**	6	7	0	0	**13**	8	3	0	0	**11**	3	7	0	0	**10**	**50**
4:30PM	1	19	7	0	**27**	8	11	1	0	**20**	3	4	3	0	**10**	0	8	1	0	**9**	**66**
4:45PM	3	24	2	0	**29**	2	8	1	0	**11**	4	8	1	0	**13**	1	4	0	0	**5**	**58**
Total	9	64	15	1	**89**	19	42	2	0	**63**	21	21	6	0	**48**	5	24	2	0	**31**	**231**
% Approach	10.1%	71.9%	16.9%	1.1%	**-**	30.2%	66.7%	3.2%	0%	**-**	43.8%	43.8%	12.5%	0%	**-**	16.1%	77.4%	6.5%	0%	**-**	-
% Total	3.9%	27.7%	6.5%	0.4%	**38.5%**	8.2%	18.2%	0.9%	0%	**27.3%**	9.1%	9.1%	2.6%	0%	**20.8%**	2.2%	10.4%	0.9%	0%	**13.4%**	-
PHF	0.450	0.667	0.536	0.250	**0.767**	0.594	0.656	0.500	-	**0.788**	0.656	0.656	0.500	-	**0.857**	0.417	0.750	0.500	-	**0.775**	0.875
Lights	9	64	14	1	**88**	19	40	2	0	**61**	21	21	6	0	**48**	5	24	2	0	**31**	228
% Lights	100%	100%	93.3%	100%	**98.9%**	100%	95.2%	100%	0%	**96.8%**	100%	100%	100%	0%	**100%**	100%	100%	100%	0%	**100%**	98.7%
Articulated Trucks and Single-Unit Trucks	0	0	1	0	**1**	0	2	0	0	**2**	0	0	0	0	**0**	0	0	0	0	**0**	3
% Articulated Trucks and Single-Unit Trucks	0%	0%	6.7%	0%	**1.1%**	0%	4.8%	0%	0%	**3.2%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	1.3%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%

*L: Left, R: Right, T: Thru, U: U-Turn

Lexington Street & S Maple Avenue - TMC
Thu May 8, 2025
Forced Peak (4 PM - 5 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1291368, Location: 41.870473, -87.803529

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Lexington Street & S Maple Avenue - TMC

Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293356, Location: 41.870473, -87.803529

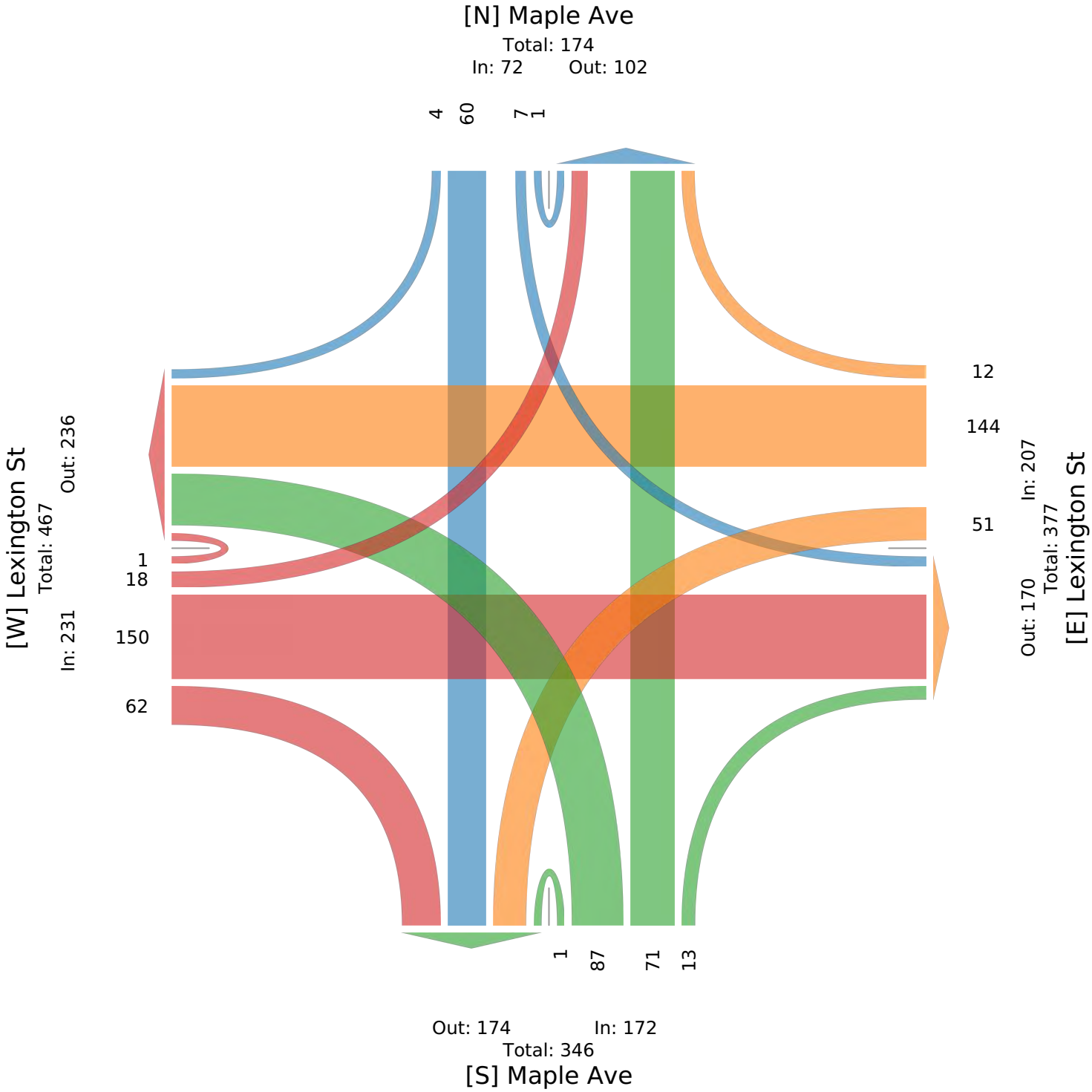
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					Maple Ave					Maple Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-10 11:00AM	3	13	6	0	**22**	5	8	4	0	**17**	5	3	0	0	**8**	0	8	0	0	**8**	**55**
11:15AM	2	13	9	0	**24**	3	9	3	0	**15**	5	3	0	0	**8**	1	6	1	0	**8**	**55**
11:30AM	1	8	4	0	**13**	3	7	0	0	**10**	1	7	2	0	**10**	0	6	0	0	**6**	**39**
11:45AM	3	7	5	0	**15**	5	8	1	0	**14**	9	5	1	0	**15**	0	4	0	0	**4**	**48**
Hourly Total	9	41	24	0	**74**	16	32	8	0	**56**	20	18	3	0	**41**	1	24	1	0	**26**	**197**
12:00PM	0	14	2	1	**17**	3	14	0	0	**17**	7	3	0	0	**10**	0	2	0	0	**2**	**46**
12:15PM	1	6	3	0	**10**	1	17	0	0	**18**	11	10	3	0	**24**	1	6	0	0	**7**	**59**
12:30PM	1	13	10	0	**24**	11	10	0	0	**21**	8	8	2	0	**18**	2	3	2	0	**7**	**70**
12:45PM	1	12	9	0	**22**	4	14	1	0	**19**	5	9	1	1	**16**	0	3	0	0	**3**	**60**
Hourly Total	3	45	24	1	**73**	19	55	1	0	**75**	31	30	6	1	**68**	3	14	2	0	**19**	**235**
1:00PM	1	16	4	0	**21**	4	11	1	0	**16**	5	5	2	0	**12**	0	2	0	1	**3**	**52**
1:15PM	4	18	3	0	**25**	5	14	0	0	**19**	11	4	2	0	**17**	1	9	1	0	**11**	**72**
1:30PM	0	13	3	0	**16**	4	18	1	0	**23**	8	5	0	0	**13**	1	5	0	0	**6**	**58**
1:45PM	1	17	4	0	**22**	3	14	1	0	**18**	12	9	0	0	**21**	1	6	0	0	**7**	**68**
Hourly Total	6	64	14	0	**84**	16	57	3	0	**76**	36	23	4	0	**63**	3	22	1	1	**27**	**250**
Total	18	150	62	1	**231**	51	144	12	0	**207**	87	71	13	1	**172**	7	60	4	1	**72**	**682**
% Approach	7.8%	64.9%	26.8%	0.4%	**-**	24.6%	69.6%	5.8%	0%	**-**	50.6%	41.3%	7.6%	0.6%	**-**	9.7%	83.3%	5.6%	1.4%	**-**	-
% Total	2.6%	22.0%	9.1%	0.1%	**33.9%**	7.5%	21.1%	1.8%	0%	**30.4%**	12.8%	10.4%	1.9%	0.1%	**25.2%**	1.0%	8.8%	0.6%	0.1%	**10.6%**	-
Lights	18	148	61	1	**228**	50	144	12	0	**206**	85	71	13	1	**170**	7	60	4	1	**72**	676
% Lights	100%	98.7%	98.4%	100%	**98.7%**	98.0%	100%	100%	0%	**99.5%**	97.7%	100%	100%	100%	**98.8%**	100%	100%	100%	100%	**100%**	99.1%
Articulated Trucks and Single-Unit Trucks	0	2	0	0	**2**	1	0	0	0	**1**	1	0	0	0	**1**	0	0	0	0	**0**	4
% Articulated Trucks and Single-Unit Trucks	0%	1.3%	0%	0%	**0.9%**	2.0%	0%	0%	0%	**0.5%**	1.1%	0%	0%	0%	**0.6%**	0%	0%	0%	0%	**0%**	0.6%
Buses	0	0	1	0	**1**	0	0	0	0	**0**	1	0	0	0	**1**	0	0	0	0	**0**	2
% Buses	0%	0%	1.6%	0%	**0.4%**	0%	0%	0%	0%	**0%**	1.1%	0%	0%	0%	**0.6%**	0%	0%	0%	0%	**0%**	0.3%

*L: Left, R: Right, T: Thru, U: U-Turn

Lexington Street & S Maple Avenue - TMC
Sat May 10, 2025
Full Length (11 AM-2 PM)
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293356, Location: 41.870473, -87.803529

Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



Lexington Street & S Maple Avenue - TMC

Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293356, Location: 41.870473, -87.803529

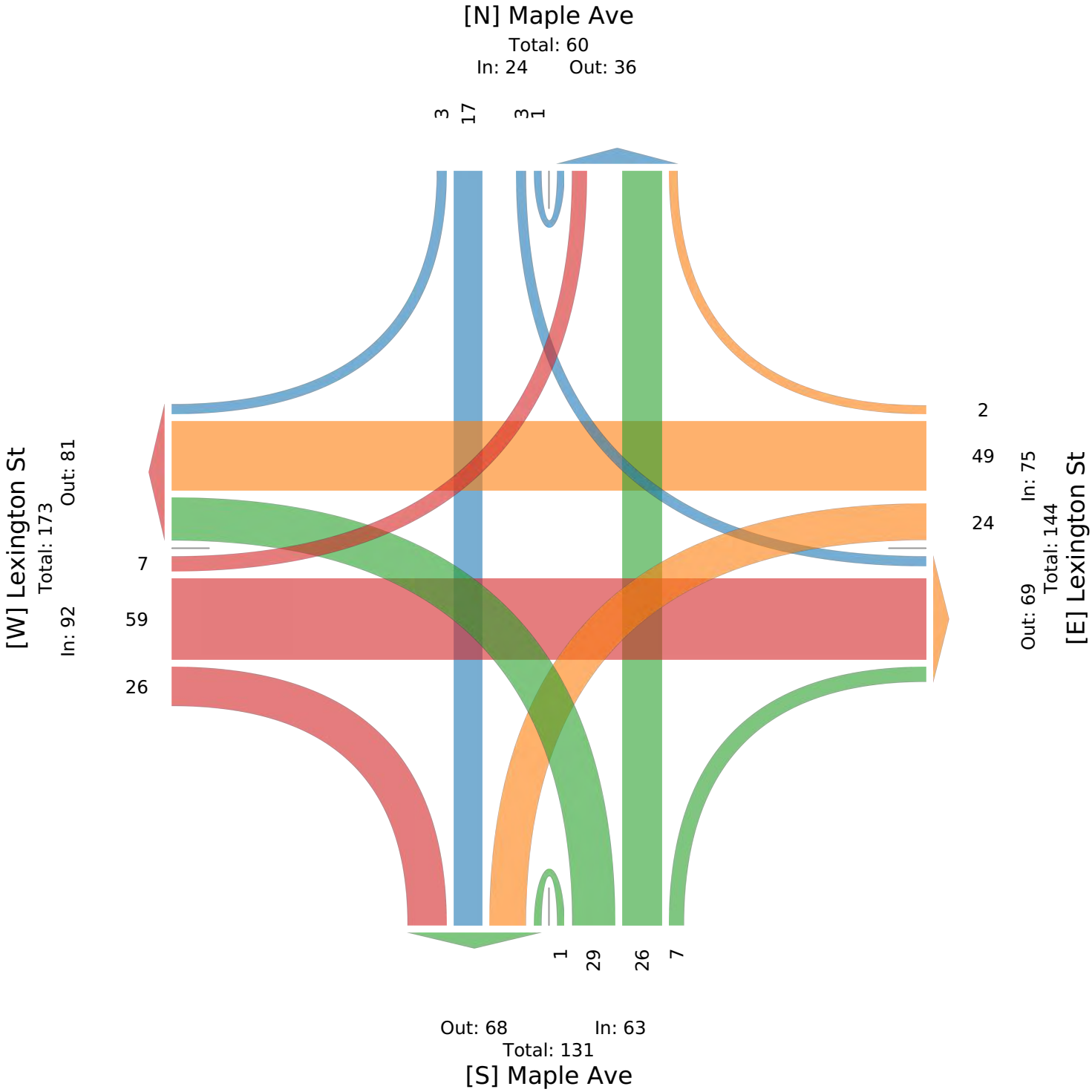
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US

Leg	Lexington St					Lexington St					Maple Ave					Maple Ave					
Direction	Eastbound					Westbound					Northbound					Southbound					
Time	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	L	T	R	U	**App**	**Int**
2025-05-10 12:30PM	1	13	10	0	**24**	11	10	0	0	**21**	8	8	2	0	**18**	2	3	2	0	**7**	**70**
12:45PM	1	12	9	0	**22**	4	14	1	0	**19**	5	9	1	1	**16**	0	3	0	0	**3**	**60**
1:00PM	1	16	4	0	**21**	4	11	1	0	**16**	5	5	2	0	**12**	0	2	0	1	**3**	**52**
1:15PM	4	18	3	0	**25**	5	14	0	0	**19**	11	4	2	0	**17**	1	9	1	0	**11**	**72**
Total	7	59	26	0	**92**	24	49	2	0	**75**	29	26	7	1	**63**	3	17	3	1	**24**	**254**
% Approach	7.6%	64.1%	28.3%	0%	-	32.0%	65.3%	2.7%	0%	-	46.0%	41.3%	11.1%	1.6%	-	12.5%	70.8%	12.5%	4.2%	-	-
% Total	2.8%	23.2%	10.2%	0%	**36.2%**	9.4%	19.3%	0.8%	0%	**29.5%**	11.4%	10.2%	2.8%	0.4%	**24.8%**	1.2%	6.7%	1.2%	0.4%	**9.4%**	-
PHF	0.438	0.819	0.650	-	**0.920**	0.545	0.875	0.500	-	**0.893**	0.659	0.722	0.875	0.250	**0.875**	0.375	0.472	0.375	0.250	**0.545**	0.882
Lights	7	59	26	0	**92**	24	49	2	0	**75**	29	26	7	1	**63**	3	17	3	1	**24**	254
% Lights	100%	100%	100%	0%	**100%**	100%	100%	100%	0%	**100%**	100%	100%	100%	100%	**100%**	100%	100%	100%	100%	**100%**	100%
Articulated Trucks and Single-Unit Trucks	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0
% Articulated Trucks and Single-Unit Trucks	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%
Buses	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0	0	0	0	**0**	0
% Buses	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%	0%	0%	0%	**0%**	0%

*L: Left, R: Right, T: Thru, U: U-Turn

Lexington Street & S Maple Avenue - TMC
Sat May 10, 2025
Midday Peak (WKND) (12:30 PM - 1:30 PM) - Overall Peak Hour
All Classes (Lights, Articulated Trucks and Single-Unit Trucks, Buses)
All Movements
ID: 1293356, Location: 41.870473, -87.803529

GEWALT HAMILTON ASSOCIATES, INC.
Provided by: Gewalt Hamilton Associates Inc.
625 Forest Edge Drive, Vernon Hills, IL, 60061, US



IL 43 (HARLEM) @ I-290 RAMPS - IL 43 (HARLEM) & HARRISON/GARFIELD*

Controller Timing Plan (MM)2-1

Plan 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Direction	SBL	NBT	WBL	EBT	NBL	SBT	EBL	WBT								
Min Green	3	15	3	8	3	15	3	8	0	0	0	0	0	0	0	0
BK Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CS Min Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delay Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk	0	10	0	10	0	10	0	10	0	0	0	0	0	0	0	0
Walk 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Walk Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear	0	26	0	20	0	20	0	20	0	0	0	0	0	0	0	0
Ped Clear 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Clear Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped CO	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Vehicle Ext	3.0	7.0	3.0	5.0	3.0	7.0	3.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Vehicle Ext 2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max 1	10	60	10	25	10	60	10	25	0	0	0	0	0	0	0	0
Max 2	10	60	10	25	10	60	10	25	0	0	0	0	0	0	0	0
Max 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Max	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DYM Stp	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow	3.5	4.5	3.5	4.5	3.5	4.5	3.5	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clear	0.0	1.5	0.0	1.5	0.0	1.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Max	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
ACT B4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SEC/ACT	0.0	1.5	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Max Int	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0
Time B4	0	25	0	0	0	25	0	0	0	0	0	0	0	0	0	0
Cars Wt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
STPT Duc	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

IL 43 (HARLEM) @ I-290 RAMPS - IL 43 (HARLEM) & HARRISON/GARFIELD*

Coordination Options
Coordination Options (MM)3-1

Manual Pattern	Auto	ECPI Coord	Yes
System Source	SYS	System Format	STD
Splits In	Percent	Offsets In	Percent
Transition	Smooth	Max Select	MAXINH
Dwell/Add Time	0		
Delay Coord Walk to LZ	No	Force Off	Fixed
Offset Reference	Lead	Use Ped Time	No
Ped Recall	No	Ped Reservice	Yes
Local Zero Override	No	FO Added Initial Green	Yes
Re-Sync Count	3	Multisync	No

Auto Perm Minimum Green (Seconds) (MM)3-4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Minimum Green	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Split Demand (MM)3-5

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

Demand	1	2
Detector	0	0
Call Time (Sec)	0	0
Cycle Count	0	0

IL 43 (HARLEM) @ I-290 RAMPS - IL 43 (HARLEM) & HARRISON/GARFIELD*

Coordination Pattern Data
Pattern Data (MM)3-2

Pattern - 1

Saturday

Split Pattern	1	TS2 (Pat-Off)	0-1	Splits in	Percent
Cycle	120	Std (COS)	111	Offsets in	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	13.2	63.6	13.2	30.0	13.2	63.6	13.2	30.0								
Splits (Split Pat 1)	11	53	11	25	11	53	11	25	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																
Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X

Special Function Output								

Pattern - 2 AM

Split Pattern	2	TS2 (Pat-Off)	0-2	Splits in	Percent
Cycle	125	Std (COS)	211	Offsets in	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	13.8	61.2	13.8	36.2	13.8	61.2	13.8	36.2								
Splits (Split Pat 2)	11	49	11	29	11	49	11	29	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																
Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X

Special Function Output								

Pattern - 3 PM

Split Pattern	3	TS2 (Pat-Off)	0-3	Splits in	Percent
Cycle	125	Std (COS)	311	Offsets in	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		

Max Select None Force Off None

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description	13.8	62.4	13.8	35.0	13.8	62.4	13.8	35.0								
Splits (Split Pat 3)	11	50	11	28	11	50	11	28	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																
Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X

Special Function Output								

Pattern - 4

Split Pattern	4	TS2 (Pat-Off)	1-1	Splits in	Percent
Cycle	110	Std (COS)	411	Offsets in	Percent
Offset Value	0%	Dwell/Add Time	0		
Actuated Coord	Yes	Timing Plan	0		
Actuated Walk Rest	No	Sequence	0		
Phase Reservice	No	Action Plan	0		
Max Select	None	Force Off	None		

Split Preference Phases

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (Split Pat 4)	12	52	12	24	12	52	12	24	0	0	0	0	0	0	0	0
Preference 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Preference 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Ring	1	2	3	4
Ring Split Ext	0	0	0	0
Ring Disp.	-	0	0	0
Split Sum	100%	100%	0%	0%

Misc. Data

Veh. Permissive 1	0	Veh. Permissive 2	0	Veh. Permissive 2 Disp.	0
Split Demand Pat 1	0	Split Demand Pat 2	0	Crossing Arterial Pat	0

Split Pattern Data

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																
Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X
Special Function Output																

IL 43 (HARLEM) @ I-290 RAMPS - IL 43 (HARLEM) & HARRISON/GARFIELD*

Coordination Split Pattern Data
Split Pattern Data (MM)3-3

Split Pattern - 1

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (percent)	11	53	11	25	11	53	11	25	0	0	0	0	0	0	0	0
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																
Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

Split Pattern - 2

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (percent)	11	49	11	29	11	49	11	29	0	0	0	0	0	0	0	0
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																
Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

Split Pattern - 3

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (percent)	11	50	11	28	11	50	11	28	0	0	0	0	0	0	0	0
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																

Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

Split Pattern - 4

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Description																
Splits (percent)	12	52	12	24	12	52	12	24	0	0	0	0	0	0	0	0
Coordinated Phases		X				X										
Vehicle Recalls		X				X										
Ped Recalls																
Max Recalls																
Phase Omit									X	X	X	X	X	X	X	X

Ring	1	2	3	4
Split Sum	100%	100%	0%	0%

IL 43 (HARLEM) @ I-290 RAMPS - IL 43 (HARLEM) & HARRISON/GARFIELD*

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

Day Plan - 1

Event	Action Plan	Start Time	
1	2	5:30 AM	AM
2	1	9:30 AM	
3	3	2:30 PM	PM
4	11	7:30 PM	
5	4	11:30 PM	

AM: 7:30-8:30 am
PM: 4:00-5:00 pm
Sat: 12:30-1:30 pm

Day Plan - 2

Event	Action Plan	Start Time	
1	1	7:00 AM	Saturday
2	11	6:00 PM	
3	4	11:00 PM	

Day Plan - 3

Event	Action Plan	Start Time
1	1	9:00 AM
2	11	5:00 PM
3	4	11:00 PM

Schedule (MM)5-4

Schedule Number - 1

Day Plan Number: 1

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	X	X	X	X	X	X	X	X	X	X	X	X

Day of Week	Sun	Mon	Tue	Wed	Thur	Fri	Sat
		X	X	X	X	X	

Day of Month	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 2

Day Plan Number: 2

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	X	X	X	X	X	X	X	X	X	X	X	X

Day of Week	Sun	Mon	Tue	Wed	Thur	Fri	Sat
							X

Day of Month	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

Schedule Number - 3

Day Plan Number: 3

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	X	X	X	X	X	X	X	X	X	X	X	X

Day of Week	Sun	Mon	Tue	Wed	Thur	Fri	Sat
	X						

Day of Month	1	2	3	4	5	6	7	8	9	10	11
	X	X	X	X	X	X	X	X	X	X	X
	12	13	14	15	16	17	18	19	20	21	22
	X	X	X	X	X	X	X	X	X	X	X
	23	24	25	26	27	28	29	30	31		
	X	X	X	X	X	X	X	X	X		

APPENDIX B
GROWTH RATE DOCUMENTATION

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

June 9, 2025

Jacob Petrella, E.I.
Traffic Project Engineer
CESO, Inc.
175 Montrose West Avenue
Suite 400
Akron, OH 44321

Subject: IL 43 Harlem Avenue @ Garfield / Harrison Street
IDOT, Village of Oak Park

Dear Mr. Petrella:

In response to a request made on your behalf and dated June 5, 2025, we have developed year 20-year growth rates for the period 2026 to 2046 and compound annual growth rates (CAGR).

Harlem Ave All Traffic 2026-2046 Effective Growth

Growth Pct, 2026-2046	Annual Growth (CAGR)
14.9%	0.70%

Harrison St, Garfield St, Maple Ave and Lexington St All Traffic 2026-2046 Effective Growth

Growth Pct, 2026-2046	Annual Growth (CAGR)
10.3%	0.49%

Single-unit truck, all segments

Growth Pct, 2026-2046	Annual Growth (CAGR)
8.2%	0.39%

Multi-unit truck, all segments

Growth Pct, 2026-2046	Annual Growth (CAGR)
25.1%	1.13%

Traffic projections and projected growth rates are developed using existing ADT data provided in the request letter and the results from the December 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
\2025_trafficForecasts\OakPark\ck-60-25\ck-60-25.docx

TRAFFIC FORECAST RECORD

Record Number: ck-60-25
Type of Report: Projection
Year Sought: 2050
Analyst: JAR
Organization Requestion Forecast: CESO
Contact: Jacob Petrella, E.I.
Email or Phone: jacob.petrella@cesoinc.com
Sponsor: IDOT, Village of Oak Park
Date request was received: 6/5/2025
Date that response was emailed: 6/9/2025
Facility Location: IL 43 Harlem Avenue @ Garfield / Harrison Street
Municipality: Oak Park

APPENDIX C
ITE TRIP GENERATION RESOURCES AND CALCULATIONS

Land Use: 945
Convenience Store/Gas Station

Description

A convenience store/gas station is a facility with a co-located convenience store and gas station. The convenience store sells grocery and other everyday items that a person may need or want as a matter of convenience. The gas station sells automotive fuels such as gasoline and diesel.

A convenience store/gas station is typically located along a major thoroughfare to optimize motorist convenience. Extended hours of operation (with many open 24 hours, 7 days a week) are common at these facilities.

The convenience store product mix typically includes pre-packaged grocery items, beverages, dairy products, snack foods, confectionary, tobacco products, over-the-counter drugs, and toiletries. A convenience store may sell alcohol, often limited to beer and wine. Coffee and pre-made sandwiches are also commonly sold at a convenience store. Made-to-order food orders are sometimes offered. Some stores offer limited seating.

The sites in this land use include both self-pump and attendant-pumped fueling positions and both pre-pay and post-pay operations.

Convenience store (Land Use 851), gasoline/service station (Land Use 944), and truck stop (Land Use 950) are related uses.

Land Use Subcategory

Multiple subcategories were added to this land use to allow for multi-variable evaluation of sites with single-variable data plots. All study sites are assigned to one of three subcategories, based on the number of vehicle fueling positions (VFP) at the site: between 2 and 8 VFP, between 9 and 15 VFP, and between 16 and 24 VFP. For each VFP range subcategory, data plots are presented with GFA as the independent variable for all time periods and trip types for which data are available. The use of both GFA and VFP (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of *Trip Generation Manual*.

Further, the study sites were also assigned to one of three other subcategories, based on the gross floor area (GFA) of the convenience store at the site: between 2,000 and 4,000 square feet, between 4,000 and 5,500 square feet, and between 5,500 and 10,000 square feet. For each GFA subcategory range, data plots are presented with VFP as the independent variable for all time periods and trip types for which data are available. The use of both VFP and GFA (as the independent variable and land use subcategory, respectively) provides a significant improvement in the reliability of a trip generation estimate when compared to the single-variable data plots in prior editions of *Trip Generation Manual*.

When analyzing the convenience store/gas station land use with each combination of GFA and VFP values as described above, the two sets of data plots will produce two estimates of site-generated trips. Both values can be considered when determining a site trip generation estimate.

Data plots are also provided for three additional independent variables: AM peak hour traffic on adjacent street, PM peak hour traffic on adjacent street, and employees. These independent variables are intended to be analyzed as single independent variables and do not have sub-categories associated with them. Within the data plots and within the ITETripGen web app, these plots are found under the land use subcategory "none."

Additional Data

ITE recognizes there are existing convenience store/gas station sites throughout North America that are larger than the sites presented in the data plots. However, the ITE database does not include any site with more than 24 VFP or any site with gross floor area greater than 10,000 square feet. Submission of trip generation data for larger sites is encouraged.

The technical appendices provide supporting information on time-of-day distributions for this land use. The appendices can be accessed through either the ITETripGen web app or the trip generation resource page on the ITE website (https://www.ite.org/technical-resources/topics/trip-and-parking-generation/).

The sites were surveyed in the 1980s, the 1990s, the 2000s, and the 2010s in Alberta (CAN), Arkansas, California, Connecticut, Delaware, Florida, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, Nevada, New Hampshire, New Jersey, Pennsylvania, Rhode Island, South Dakota, Texas, Utah, Vermont, Washington, and Wisconsin.

Source Numbers

221, 245, 274, 288, 300, 340, 350, 351, 352, 355, 359, 385, 440, 617, 718, 810, 813, 844, 850, 853, 864, 865, 867, 869, 882, 883, 888, 904, 926, 927, 936, 938, 954, 960, 962, 977, 1004, 1024, 1025, 1027, 1052

Convenience Store/Gas Station - GFA (5.5-10k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday

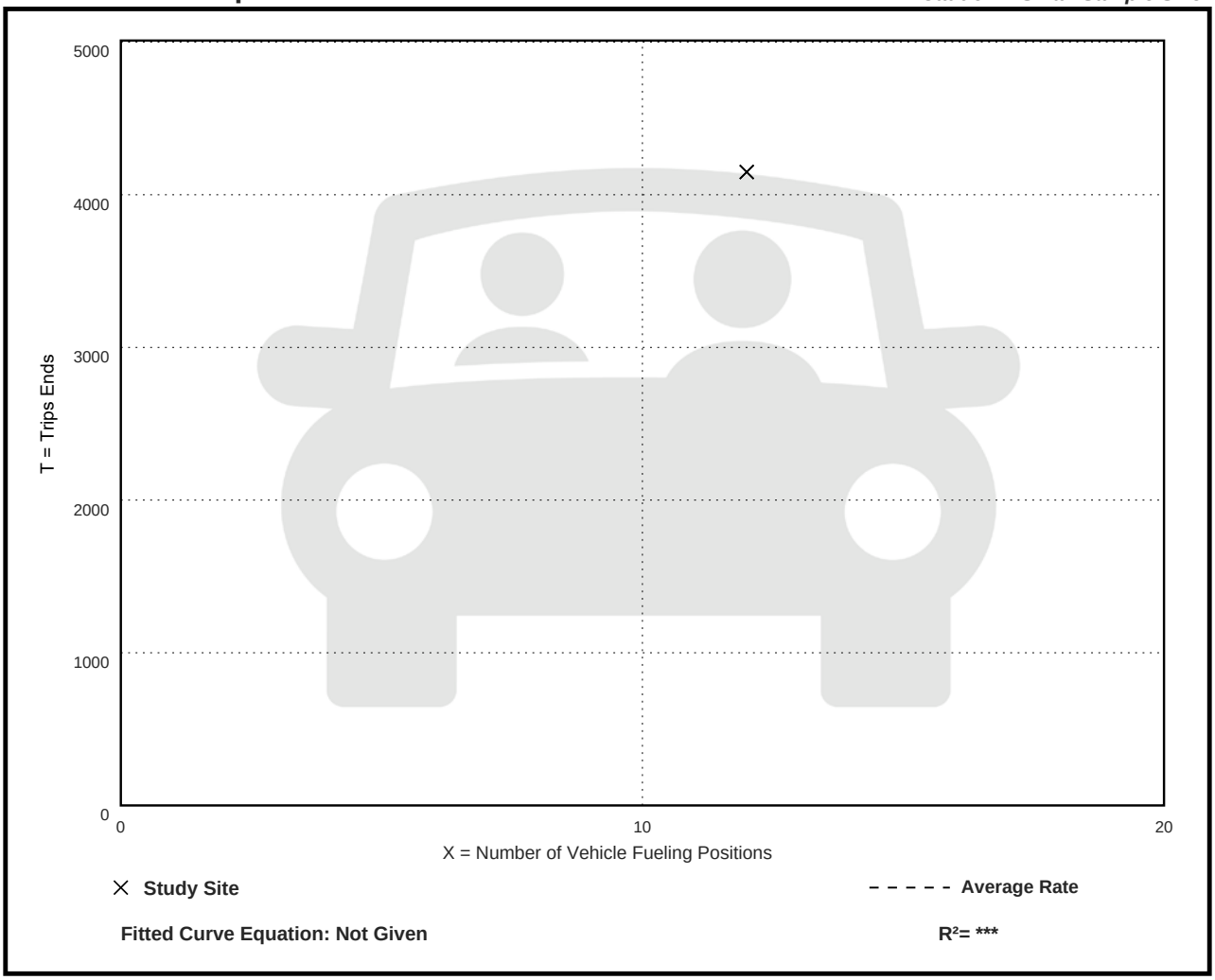
Setting/Location: General Urban/Suburban
Number of Studies: 1
Avg. Num. of Vehicle Fueling Positions: 12
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
345.75	345.75 - 345.75	***

Data Plot and Equation

Caution – Small Sample Size



Fitted Curve Equation: Not Given

R^2= *

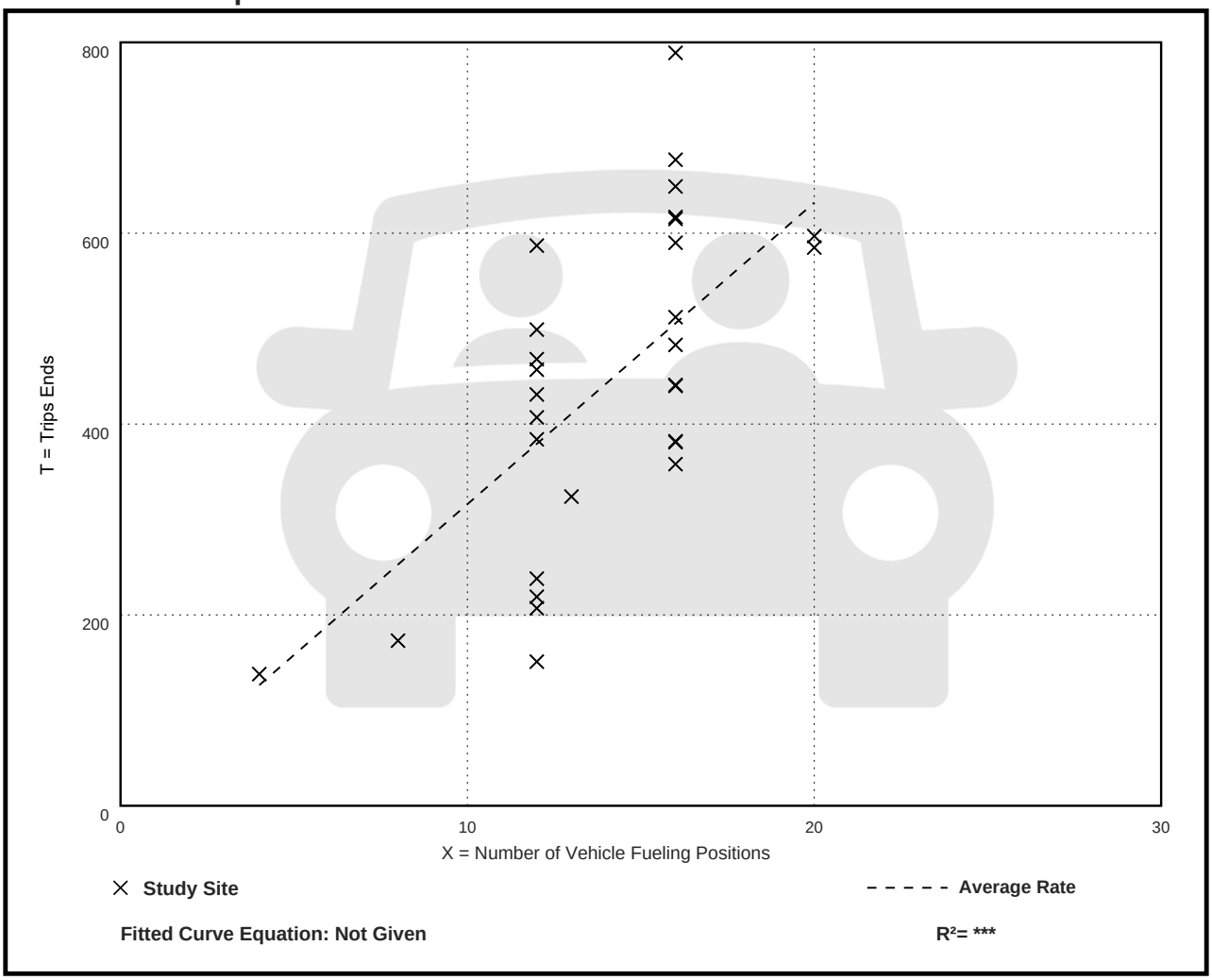
Convenience Store/Gas Station - GFA (5.5-10k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 29
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
31.60	12.58 - 49.31	9.10

Data Plot and Equation



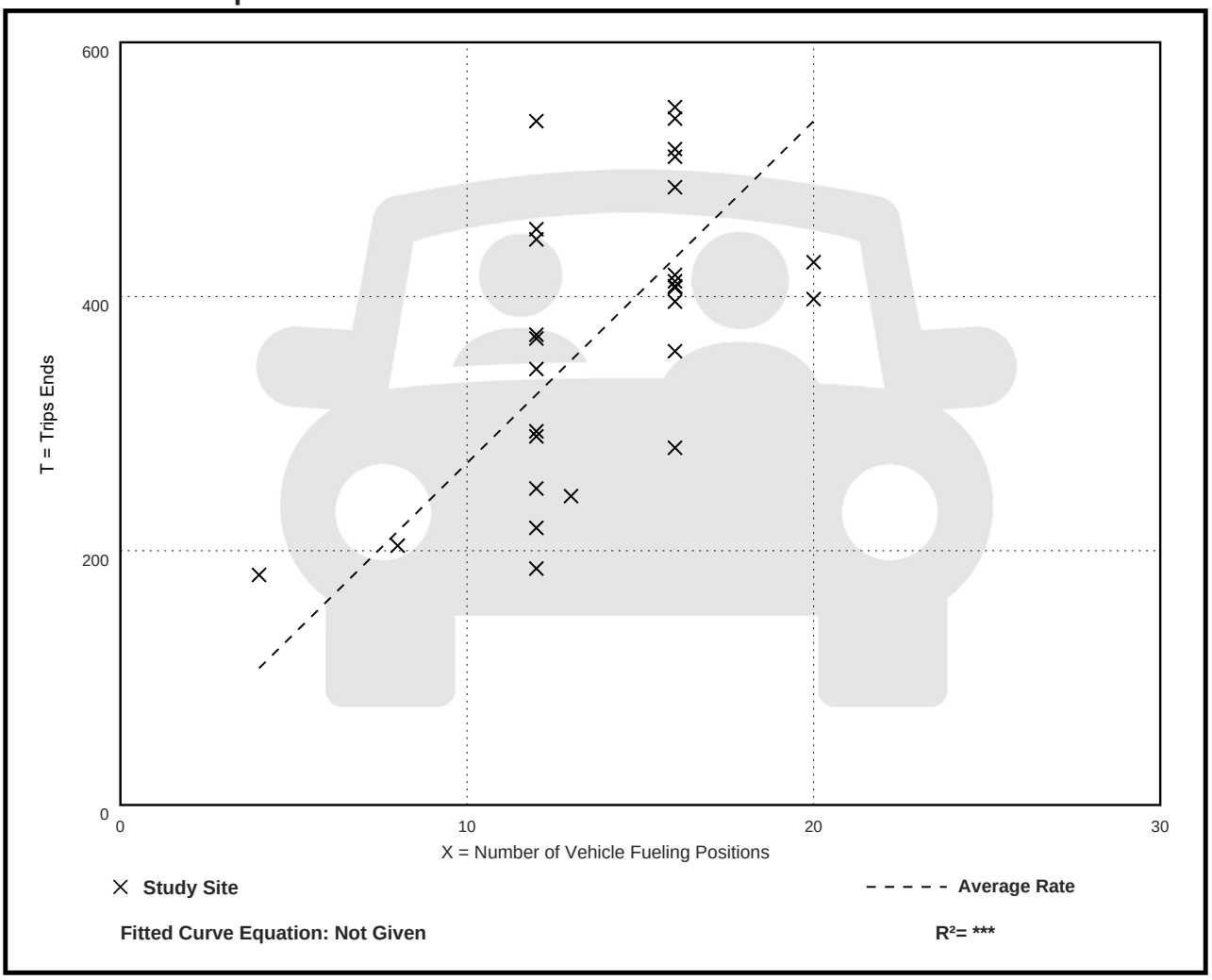
Convenience Store/Gas Station - GFA (5.5-10k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 29
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
26.90	15.50 - 45.25	6.87

Data Plot and Equation



Convenience Store/Gas Station - GFA (5.5-10k) (945)

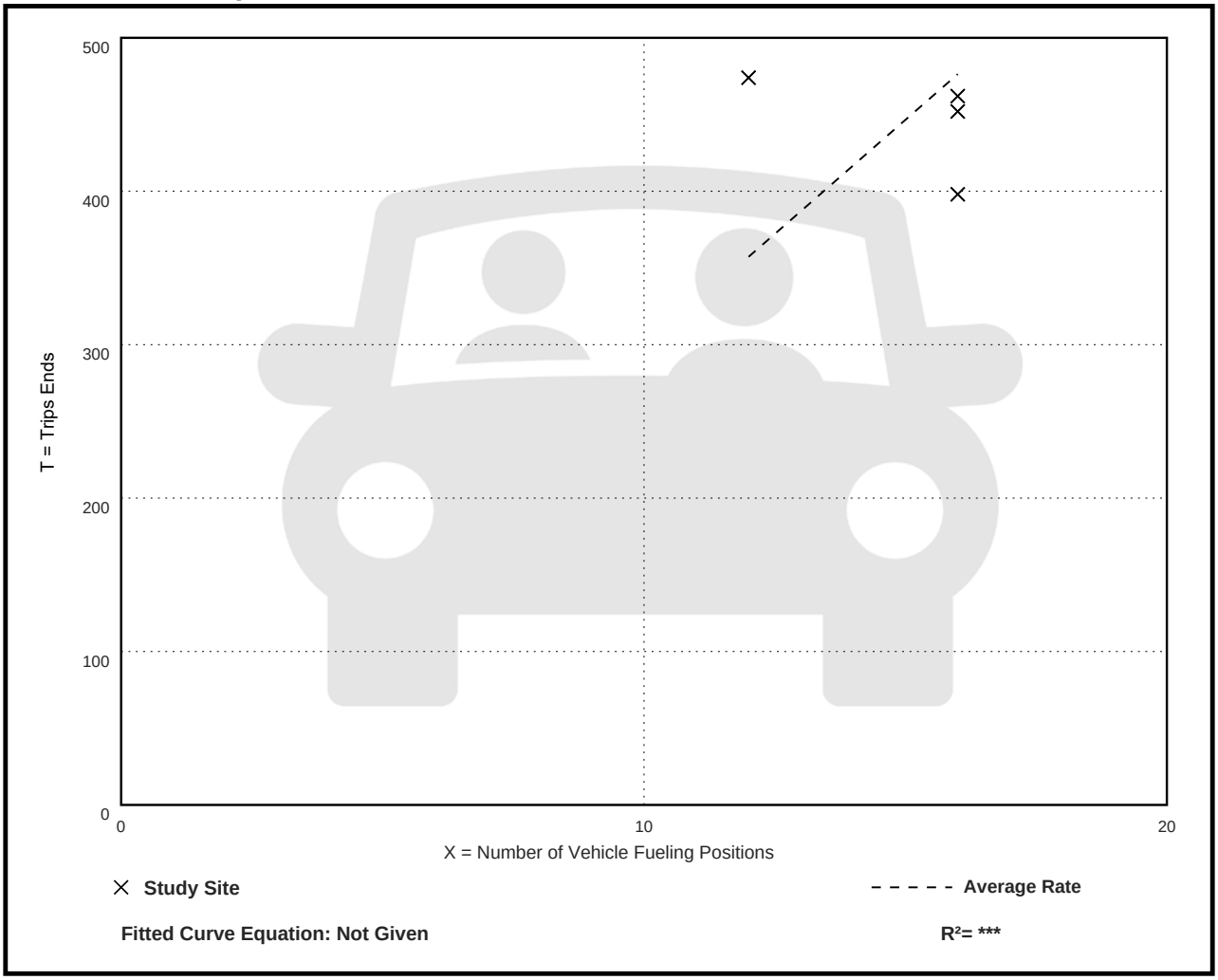
Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 4
Avg. Num. of Vehicle Fueling Positions: 15
Directional Distribution: 49% entering, 51% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
29.77	24.88 - 39.50	5.91

Data Plot and Equation



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www.cesoinc.com

May 2, 2025

Traffic Impact Study – Proposed QuikTrip Development

Oak Park, Illinois

CESO Trip Generation Calculations – 2026 Build and 2046 Design Year Traffic Scenarios:

ITE 945 – Convenience Store/Gas Station

For Weekday → 50% Enter/50% Exit

345.75 x 16 Passenger Car Fuel Position = 5,532 Trips

5,532 Trips x 0.50 (50%) = 2,766 Trips Enter/2,766 Trips Exit

For AM Peak Hour → 50% Enter/50% Exit

31.60 x 16 Passenger Car Fuel Position = 505.60 ≈ 506 Trips for Even Number

Pass-by Trips = 506 Trips x 0.76 (76%) = 384 Trips

Pass-by Trips = 384 Trips x 0.50 (50%) = 192 Trips Enter/192 Trips Exit

Primary Trips = 506 – 384 = 122 Trips

Primary Trips = 122 x 0.50 (50%) and 122 x 0.50 (50%) = 61 Trips Enter/61 Trips Exit

For PM Peak Hour → 50% Enter/50% Exit

26.90 x 16 Passenger Car Fuel Position = 430.40 ≈ 430 Trips for Even Number

Pass-by Trips = 430 Trips x 0.75 (75%) = 322 Trips

Pass-by Trips = 322 Trips x 0.50 (50%) = 161 Trips Enter/161 Trips Exit

Primary Trips = 430 – 322 = 108 Trips

Primary Trips = 108 x 0.50 (50%) and 108 x 0.50 (50%) = 54 Trips Enter/54 Trips Exit

For Saturday Peak Hour → 49% Enter/51% Exit

29.77 x 16 Passenger Car Fuel Position = 476.32 ≈ 476 Trips for Even Number

Pass-by Trips = 476 Trips x 0.75 (75%) = 358 Trips

Pass-by Trips = 358 Trips x 0.50 (50%) = 179 Trips Enter/179 Trips Exit

Primary Trips = 476 – 358 = 118 Trips

Primary Trips = 118 x 0.49 (49%) and 118 x 0.51 (51%) = 58 Trips Enter/60 Trips Exit

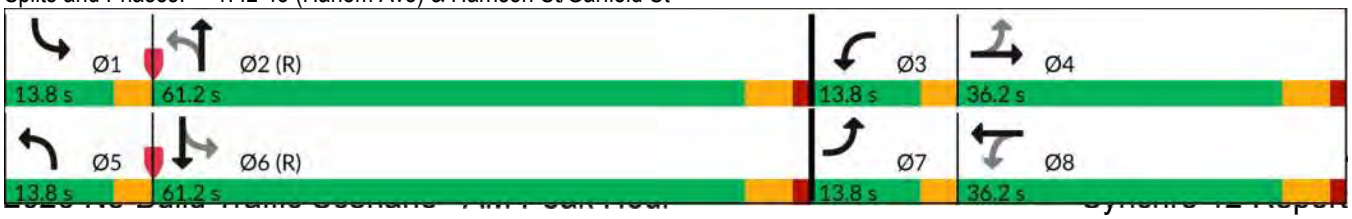
APPENDIX D
2026 NO-BUILD TRAFFIC SCENARIO
CAPACITY ANALYSIS SUMMARY SHEETS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	161	19	150	171	137	53	1023	13	93	738	53
Future Volume (vph)	97	161	19	150	171	137	53	1023	13	93	738	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	0.99		1.00			1.00	1.00	
Frt		0.984			0.933			0.998			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1830	0	1787	1745	0	1703	3399	0	1719	3399	0
Flt Permitted	0.242			0.491			0.275			0.154		
Satd. Flow (perm)	450	1830	0	920	1745	0	492	3399	0	278	3399	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			30			1			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		950			255			671			478	
Travel Time (s)		25.9			7.0			15.3			10.9	
Confl. Peds. (#/hr)	2		1	4		1	6			4		1
Confl. Bikes (#/hr)			1									
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 (%)	2%	2%	2%	1%	1%	1%	6%	6%	6%	5%	5%	5%
Adj. Flow (vph)	102	169	20	158	180	144	56	1077	14	98	777	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	189	0	158	324	0	56	1091	0	98	833	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	36.0		10.5	36.0		10.5	42.5		10.5	36.5	
Total Split (s)	13.8	36.2		13.8	36.2		13.8	61.2		13.8	61.2	
Total Split (%)	11.0%	29.0%		11.0%	29.0%		11.0%	49.0%		11.0%	49.0%	
Maximum Green (s)	10.3	30.2		10.3	30.2		10.3	55.2		10.3	55.2	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		20.0			20.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	38.2	26.2		39.4	26.7		71.0	61.3		74.0	64.3	
Actuated g/C Ratio	0.31	0.21		0.32	0.21		0.57	0.49		0.59	0.51	
v/c Ratio	0.43	0.49		0.44	0.82		0.16	0.65		0.37	0.48	
Control Delay (s/veh)	33.5	46.2		33.3	59.0		12.6	27.4		15.6	22.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	33.5	46.2		33.3	59.0		12.6	27.4		15.6	22.0	
LOS	C	D		C	E		B	C		B	C	
Approach Delay (s/veh)		41.8			50.6			26.7			21.3	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.82			
Intersection Signal Delay (s/veh): 30.5		Intersection LOS: C	
Intersection Capacity Utilization 73.6%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	161	19	150	171	137	53	1023	13	93	738	53
Future Volume (veh/h)	97	161	19	150	171	137	53	1023	13	93	738	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1811	1811	1811	1826	1826	1826
Adj Flow Rate, veh/h	102	169	20	158	180	144	56	1077	14	98	777	56
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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	5	5	5
Cap, veh/h	198	311	37	321	205	164	365	1862	24	293	1802	130
Arrive On Green	0.06	0.19	0.19	0.08	0.21	0.21	0.03	0.54	0.54	0.04	0.55	0.55
Sat Flow, veh/h	1781	1638	194	1795	967	774	1725	3478	45	1739	3281	236
Grp Volume(v), veh/h	102	0	189	158	0	324	56	533	558	98	411	422
Grp Sat Flow(s),veh/h/ln	1781	0	1832	1795	0	1741	1725	1721	1803	1739	1735	1782
Q Serve(g_s), s	5.7	0.0	11.7	8.7	0.0	22.5	1.8	26.0	26.0	3.2	17.5	17.5
Cycle Q Clear(g_c), s	5.7	0.0	11.7	8.7	0.0	22.5	1.8	26.0	26.0	3.2	17.5	17.5
Prop In Lane	1.00		0.11	1.00		0.44	1.00		0.03	1.00		0.13
Lane Grp Cap(c), veh/h	198	0	347	321	0	369	365	921	965	293	953	979
V/C Ratio(X)	0.51	0.00	0.54	0.49	0.00	0.88	0.15	0.58	0.58	0.33	0.43	0.43
Avail Cap(c_a), veh/h	238	0	443	321	0	421	461	921	965	366	953	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.0	0.0	45.8	36.1	0.0	47.7	13.5	19.5	19.5	15.2	16.6	16.6
Incr Delay (d2), s/veh	2.1	0.0	2.8	1.2	0.0	19.6	0.2	2.6	2.5	0.7	1.4	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	5.6	4.0	0.0	11.8	0.7	10.9	11.4	1.3	7.2	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.1	0.0	48.6	37.2	0.0	67.3	13.7	22.2	22.1	15.9	18.1	18.0
LnGrp LOS	D		D	D		E	B	C	C	B	B	B
Approach Vol, veh/h		291			482			1147			931	
Approach Delay, s/veh		46.0			57.4			21.7			17.8	
Approach LOS		D			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.6	72.9	13.8	29.7	6.8	74.7	11.0	32.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	10.3	55.2	10.3	30.2	10.3	55.2	10.3	30.2
Max Q Clear Time (g_c+I1), s	5.2	28.0	10.7	13.7	3.8	19.5	7.7	24.5
Green Ext Time (p_c), s	0.1	20.1	0.0	1.7	0.0	18.8	0.1	1.6

Intersection Summary	
HCM 7th Control Delay, s/veh	29.0
HCM 7th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	252	15	10	434	24	9
Future Volume (vph)	252	15	10	434	24	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993				0.963	
Flt Protected			0.950		0.965	
Satd. Flow (prot)	1850	0	1787	1881	1714	0
Flt Permitted			0.950		0.965	
Satd. Flow (perm)	1850	0	1787	1881	1714	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	255			1430	666	
Travel Time (s)	7.0			39.0	18.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Adj. Flow (vph)	307	18	12	529	29	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	325	0	12	529	40	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	252	15	10	434	24	9
Future Vol, veh/h	252	15	10	434	24	9
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	307	18	12	529	29	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	326	0	871	316
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	555	-
Critical Hdwy	-	-	4.11	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.209	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1240	-	320	722
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	573	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1240	-	317	722
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	567	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.18	15.78
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	374	-	-	1240	-
HCM Lane V/C Ratio	0.108	-	-	0.01	-
HCM Ctrl Dly (s/v)	15.8	-	-	7.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	16	18	3	6	64	19	1017	70	14	866	27
Future Volume (vph)	8	16	18	3	6	64	19	1017	70	14	866	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.942			0.881			0.990			0.996	
Flt Protected		0.991			0.998			0.999			0.999	
Satd. Flow (prot)	0	1689	0	0	1654	0	0	3368	0	0	3454	0
Flt Permitted		0.991			0.998			0.999			0.999	
Satd. Flow (perm)	0	1689	0	0	1654	0	0	3368	0	0	3454	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			248			2002			671	
Travel Time (s)		26.7			6.8			45.5			15.3	
Confl. Peds. (#/hr)			1			1			1			2
Confl. Bikes (#/hr)												1
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 (%)	5%	5%	5%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	8	17	19	3	6	67	20	1071	74	15	912	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	44	0	0	76	0	0	1165	0	0	955	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.5%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	16	18	3	6	64	19	1017	70	14	866	27
Future Vol, veh/h	8	16	18	3	6	64	19	1017	70	14	866	27
Conflicting Peds, #/hr	0	0	1	0	0	1	0	0	1	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	1	1	1	6	6	6	4	4	4
Mvmt Flow	8	17	19	3	6	67	20	1071	74	15	912	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1537	2142	473	1643	2120	574	942	0	0	1145	0	0
Stage 1	957	957	-	1148	1148	-	-	-	-	-	-	-
Stage 2	579	1185	-	495	971	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.52	6.52	6.92	4.22	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.51	4.01	3.31	2.26	-	-	2.24	-	-
Pot Cap-1 Maneuver	77	46	530	66	50	464	699	-	-	594	-	-
Stage 1	271	328	-	213	274	-	-	-	-	-	-	-
Stage 2	460	255	-	528	331	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	53	43	528	37	46	463	698	-	-	594	-	-
Mov Cap-2 Maneuver	53	43	-	37	46	-	-	-	-	-	-	-
Stage 1	261	316	-	204	262	-	-	-	-	-	-	-
Stage 2	367	244	-	465	320	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	106.3	31.8	0.56	0.52
HCM LOS	F	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	57	-	-	75	210	53	-	-
HCM Lane V/C Ratio	0.029	-	-	0.589	0.367	0.025	-	-
HCM Ctrl Dly (s/v)	10.3	0.4	-	106.3	31.8	11.2	0.4	-
HCM Lane LOS	B	A	-	F	D	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	2.6	1.6	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	88	6	14	51	13	21	14	5	4	20	1
Future Volume (vph)	6	88	6	14	51	13	21	14	5	4	20	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.977			0.984			0.996	
Flt Protected		0.997			0.991			0.974			0.992	
Satd. Flow (prot)	0	1861	0	0	1786	0	0	1821	0	0	1877	0
Flt Permitted		0.997			0.991			0.974			0.992	
Satd. Flow (perm)	0	1861	0	0	1786	0	0	1821	0	0	1877	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			1221			1978			666	
Travel Time (s)		6.8			33.3			53.9			18.2	
Confl. Peds. (#/hr)			2				3					
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	8	113	8	18	65	17	27	18	6	5	26	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	129	0	0	100	0	0	51	0	0	32	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	88	6	14	51	13	21	14	5	4	20	1
Future Vol, veh/h	6	88	6	14	51	13	21	14	5	4	20	1
Conflicting Peds, #/hr	0	0	2	0	0	0	3	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	0	0	0
Mvmt Flow	8	113	8	18	65	17	27	18	6	5	26	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	82	0	0	123	0	0	251	252	119	247	248	77
Stage 1	-	-	-	-	-	-	134	134	-	110	110	-
Stage 2	-	-	-	-	-	-	117	118	-	137	138	-
Critical Hdwy	4.11	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1522	-	-	1458	-	-	706	655	939	711	658	990
Stage 1	-	-	-	-	-	-	874	789	-	901	809	-
Stage 2	-	-	-	-	-	-	892	802	-	871	786	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1522	-	-	1456	-	-	662	641	937	674	645	987
Mov Cap-2 Maneuver	-	-	-	-	-	-	662	641	-	674	645	-
Stage 1	-	-	-	-	-	-	868	784	-	889	798	-
Stage 2	-	-	-	-	-	-	849	792	-	840	781	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.44	1.35	10.73	10.74
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	680	107	-	-	310	-	-	659
HCM Lane V/C Ratio	0.075	0.005	-	-	0.012	-	-	0.049
HCM Ctrl Dly (s/v)	10.7	7.4	0	-	7.5	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	148	53	177	177	163	43	1061	30	67	763	30
Future Volume (vph)	200	148	53	177	177	163	43	1061	30	67	763	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		0.99	0.99		1.00	1.00			1.00	
Frt		0.961			0.928			0.996			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1800	0	1787	1733	0	1770	3523	0	1770	3514	0
Flt Permitted	0.179			0.464			0.260			0.138		
Satd. Flow (perm)	336	1800	0	867	1733	0	484	3523	0	257	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13			35			3			4	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			255			671			478	
Travel Time (s)		26.5			7.0			15.3			10.9	
Confl. Peds. (#/hr)	2		3	8		1	1		2			4
Confl. Bikes (#/hr)			1			2						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	213	157	56	188	188	173	46	1129	32	71	812	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	213	213	0	188	361	0	46	1161	0	71	844	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	35.0		10.5	35.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.8	35.0		13.8	35.0		13.8	62.4		13.8	62.4	
Total Split (%)	11.0%	28.0%		11.0%	28.0%		11.0%	49.9%		11.0%	49.9%	
Maximum Green (s)	10.3	29.0		10.3	29.0		10.3	56.4		10.3	56.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		19.0			19.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	40.3	27.5		40.3	27.5		70.7	62.4		72.1	63.1	
Actuated g/C Ratio	0.32	0.22		0.32	0.22		0.57	0.50		0.58	0.50	
v/c Ratio	0.94	0.52		0.53	0.88		0.13	0.66		0.30	0.48	
Control Delay (s/veh)	78.8	45.0		35.6	66.0		12.2	26.7		14.6	22.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	78.8	45.0		35.6	66.0		12.2	26.7		14.6	22.1	
LOS	E	D		D	E		B	C		B	C	
Approach Delay (s/veh)		61.9			55.6			26.2			21.5	
Approach LOS		E			E			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.94			
Intersection Signal Delay (s/veh): 34.9		Intersection LOS: C	
Intersection Capacity Utilization 81.2%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	148	53	177	177	163	43	1061	30	67	763	30
Future Volume (veh/h)	200	148	53	177	177	163	43	1061	30	67	763	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	213	157	56	188	188	173	46	1129	32	71	812	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	227	300	107	350	202	186	339	1786	51	248	1797	71
Arrive On Green	0.08	0.23	0.23	0.08	0.23	0.23	0.02	0.51	0.51	0.03	0.52	0.52
Sat Flow, veh/h	1795	1320	471	1795	892	821	1781	3529	100	1781	3485	137
Grp Volume(v), veh/h	213	0	213	188	0	361	46	568	593	71	414	430
Grp Sat Flow(s),veh/h/ln	1795	0	1791	1795	0	1713	1781	1777	1852	1781	1777	1845
Q Serve(g_s), s	10.3	0.0	13.0	10.1	0.0	25.8	1.6	29.0	29.1	2.4	18.4	18.4
Cycle Q Clear(g_c), s	10.3	0.0	13.0	10.1	0.0	25.8	1.6	29.0	29.1	2.4	18.4	18.4
Prop In Lane	1.00		0.26	1.00		0.48	1.00		0.05	1.00		0.07
Lane Grp Cap(c), veh/h	227	0	406	350	0	389	339	899	937	248	916	952
V/C Ratio(X)	0.94	0.00	0.52	0.54	0.00	0.93	0.14	0.63	0.63	0.29	0.45	0.45
Avail Cap(c_a), veh/h	227	0	415	350	0	397	445	899	937	337	916	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	42.4	34.1	0.0	47.3	15.5	22.4	22.4	17.8	19.1	19.1
Incr Delay (d2), s/veh	43.3	0.0	2.3	1.6	0.0	28.7	0.2	3.4	3.2	0.6	1.6	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	6.1	4.6	0.0	14.2	0.7	12.8	13.3	1.0	7.9	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	82.4	0.0	44.7	35.7	0.0	76.0	15.7	25.8	25.7	18.4	20.7	20.7
LnGrp LOS	F		D	D		E	B	C	C	B	C	C
Approach Vol, veh/h		426			549			1207			915	
Approach Delay, s/veh		63.5			62.2			25.3			20.5	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.6	69.3	13.8	34.4	6.4	70.5	13.8	34.4
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	10.3	56.4	10.3	29.0	10.3	56.4	10.3	29.0
Max Q Clear Time (g_c+I1), s	4.4	31.1	12.1	15.0	3.6	20.4	12.3	27.8
Green Ext Time (p_c), s	0.1	19.9	0.0	1.8	0.0	19.1	0.0	0.4

Intersection Summary	
HCM 7th Control Delay, s/veh	35.7
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	228	17	15	498	19	13
Future Volume (vph)	228	17	15	498	19	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.990				0.947	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	1881	0	1787	1881	1747	0
Flt Permitted			0.950		0.971	
Satd. Flow (perm)	1881	0	1787	1881	1747	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	255			1430	666	
Travel Time (s)	7.0			39.0	18.2	
Confl. Peds. (#/hr)		1				1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	235	18	15	513	20	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	253	0	15	513	33	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	228	17	15	498	19	13
Future Vol, veh/h	228	17	15	498	19	13
Conflicting Peds, #/hr	0	1	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	235	18	15	513	20	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	254	0	789	246
Stage 1	-	-	-	-	245	-
Stage 2	-	-	-	-	544	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1317	-	362	798
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1316	-	358	796
Mov Cap-2 Maneuver	-	-	-	-	358	-
Stage 1	-	-	-	-	800	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.23	13.42
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	461	-	-	1316	-
HCM Lane V/C Ratio	0.072	-	-	0.012	-
HCM Ctrl Dly (s/v)	13.4	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	17	42	10	10	46	16	1069	60	12	956	25
Future Volume (vph)	19	17	42	10	10	46	16	1069	60	12	956	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.928			0.906			0.992			0.996	
Flt Protected		0.988			0.993			0.999			0.999	
Satd. Flow (prot)	0	1725	0	0	1660	0	0	3507	0	0	3522	0
Flt Permitted		0.988			0.993			0.999			0.999	
Satd. Flow (perm)	0	1725	0	0	1660	0	0	3507	0	0	3522	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			248			2002			671	
Travel Time (s)		26.7			6.8			45.5			15.3	
Confl. Peds. (#/hr)	3								2			
Confl. Bikes (#/hr)									4			1
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 (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	19	46	11	11	51	18	1175	66	13	1051	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	73	0	0	1259	0	0	1091	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 56.8%		ICU Level of Service B	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	18.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	17	42	10	10	46	16	1069	60	12	956	25
Future Vol, veh/h	19	17	42	10	10	46	16	1069	60	12	956	25
Conflicting Peds, #/hr	3	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	3	3	3	2	2	2	2	2	2
Mvmt Flow	21	19	46	11	11	51	18	1175	66	13	1051	27

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1722	2368	539	1806	2349	625	1078	0	0	1243	0	0
Stage 1	1091	1091	-	1245	1245	-	-	-	-	-	-	-
Stage 2	631	1278	-	561	1104	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.56	6.56	6.96	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.53	4.03	3.33	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	58	35	489	49	35	425	643	-	-	556	-	-
Stage 1	231	291	-	183	242	-	-	-	-	-	-	-
Stage 2	438	237	-	477	283	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	32	32	489	18	32	423	643	-	-	555	-	-
Mov Cap-2 Maneuver	32	32	-	18	32	-	-	-	-	-	-	-
Stage 1	223	281	-	175	232	-	-	-	-	-	-	-
Stage 2	351	227	-	390	273	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 330.59	233.11	0.56	0.51
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	47	-	-	65	68	42	-	-
HCM Lane V/C Ratio	0.027	-	-	1.326	1.067	0.024	-	-
HCM Ctrl Dly (s/v)	10.8	0.4	-	$ 330.6	233.1	11.6	0.4	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	7.1	5.5	0.1	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	64	16	19	43	2	21	21	6	5	25	2
Future Volume (vph)	9	64	16	19	43	2	21	21	6	5	25	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.976			0.996			0.983			0.992	
Flt Protected		0.995			0.985			0.979			0.992	
Satd. Flow (prot)	0	1809	0	0	1810	0	0	1828	0	0	1870	0
Flt Permitted		0.995			0.985			0.979			0.992	
Satd. Flow (perm)	0	1809	0	0	1810	0	0	1828	0	0	1870	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			1221			1978			666	
Travel Time (s)		6.8			33.3			53.9			18.2	
Confl. Peds. (#/hr)				1								2
Confl. Bikes (#/hr)												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 (%)	2%	2%	2%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	73	18	22	49	2	24	24	7	6	28	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	101	0	0	73	0	0	55	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	64	16	19	43	2	21	21	6	5	25	2
Future Vol, veh/h	9	64	16	19	43	2	21	21	6	5	25	2
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	0	0	0
Mvmt Flow	10	73	18	22	49	2	24	24	7	6	28	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	51	0	0	92	0	0	212	198	83	198	206	52
Stage 1	-	-	-	-	-	-	103	103	-	93	93	-
Stage 2	-	-	-	-	-	-	108	94	-	105	112	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1555	-	-	1497	-	-	750	702	982	765	695	1021
Stage 1	-	-	-	-	-	-	908	814	-	919	822	-
Stage 2	-	-	-	-	-	-	902	821	-	905	806	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1555	-	-	1495	-	-	700	686	981	718	679	1019
Mov Cap-2 Maneuver	-	-	-	-	-	-	700	686	-	718	679	-
Stage 1	-	-	-	-	-	-	900	807	-	905	809	-
Stage 2	-	-	-	-	-	-	854	809	-	867	800	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.74	2.21	10.42	10.43
HCM LOS			B	B

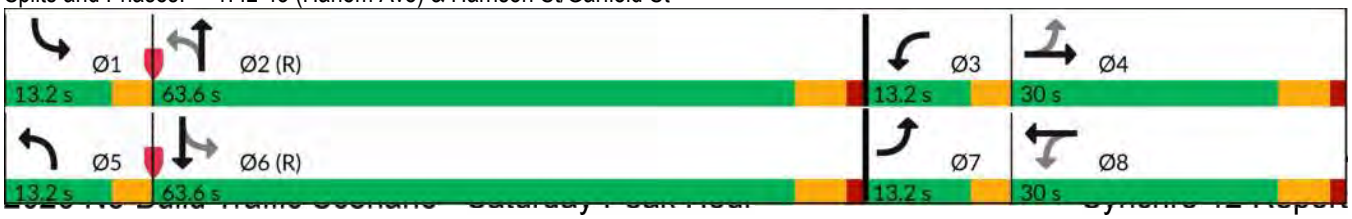
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	719	175	-	-	530	-	-	699
HCM Lane V/C Ratio	0.076	0.007	-	-	0.014	-	-	0.052
HCM Ctrl Dly (s/v)	10.4	7.3	0	-	7.4	0	-	10.4
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	135	29	148	119	204	24	1228	24	73	810	45
Future Volume (vph)	214	135	29	148	119	204	24	1228	24	73	810	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00	0.99			1.00			1.00	
Frt		0.973			0.905			0.997			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1826	0	1787	1688	0	1787	3562	0	1770	3507	0
Flt Permitted	0.177			0.544			0.270			0.112		
Satd. Flow (perm)	333	1826	0	1019	1688	0	508	3562	0	209	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			64			2			6	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			255			671			478	
Travel Time (s)		26.5			7.0			15.3			10.9	
Confl. Peds. (#/hr)			2	4								1
Confl. Bikes (#/hr)						1			2			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	218	138	30	151	121	208	24	1253	24	74	827	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	218	168	0	151	329	0	24	1277	0	74	873	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.2	30.0		13.2	30.0		13.2	63.6		13.2	63.6	
Total Split (%)	11.0%	25.0%		11.0%	25.0%		11.0%	53.0%		11.0%	53.0%	
Maximum Green (s)	9.7	24.0		9.7	24.0		9.7	57.6		9.7	57.6	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		14.0			14.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	35.4	23.2		35.0	23.0		70.2	62.7		73.3	65.8	
Actuated g/C Ratio	0.30	0.19		0.29	0.19		0.59	0.52		0.61	0.55	
v/c Ratio	1.01	0.47		0.42	0.88		0.07	0.69		0.33	0.45	
Control Delay (s/veh)	100.5	45.4		34.1	62.4		9.8	24.8		13.4	18.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	100.5	45.4		34.1	62.4		9.8	24.8		13.4	18.0	
LOS	F	D		C	E		A	C		B	B	
Approach Delay (s/veh)		76.5			53.5			24.5			17.7	
Approach LOS		E			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay (s/veh): 33.3		Intersection LOS: C	
Intersection Capacity Utilization 86.1%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	135	29	148	119	204	24	1228	24	73	810	45
Future Volume (veh/h)	214	135	29	148	119	204	24	1228	24	73	810	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	218	138	30	151	121	208	24	1253	24	74	827	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	209	300	65	351	123	211	342	1897	36	238	1872	104
Arrive On Green	0.08	0.20	0.20	0.08	0.20	0.20	0.01	0.53	0.53	0.03	0.55	0.55
Sat Flow, veh/h	1795	1499	326	1795	615	1056	1795	3593	69	1781	3422	190
Grp Volume(v), veh/h	218	0	168	151	0	329	24	624	653	74	429	444
Grp Sat Flow(s),veh/h/ln	1795	0	1825	1795	0	1671	1795	1791	1871	1781	1777	1836
Q Serve(g_s), s	9.7	0.0	9.7	7.9	0.0	23.5	0.7	30.3	30.3	2.2	17.3	17.3
Cycle Q Clear(g_c), s	9.7	0.0	9.7	7.9	0.0	23.5	0.7	30.3	30.3	2.2	17.3	17.3
Prop In Lane	1.00		0.18	1.00		0.63	1.00		0.04	1.00		0.10
Lane Grp Cap(c), veh/h	209	0	365	351	0	334	342	946	988	238	972	1004
V/C Ratio(X)	1.04	0.00	0.46	0.43	0.00	0.98	0.07	0.66	0.66	0.31	0.44	0.44
Avail Cap(c_a), veh/h	209	0	365	351	0	334	463	946	988	323	972	1004
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.0	0.0	42.3	34.3	0.0	47.8	13.7	20.5	20.5	16.6	16.2	16.2
Incr Delay (d2), s/veh	73.7	0.0	1.9	0.8	0.0	45.1	0.1	3.6	3.5	0.7	1.5	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	4.6	3.6	0.0	14.0	0.3	13.3	13.8	0.9	7.3	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	113.6	0.0	44.2	35.2	0.0	92.9	13.8	24.1	24.0	17.3	17.7	17.6
LnGrp LOS	F		D	D		F	B	C	C	B	B	B
Approach Vol, veh/h		386			480			1301			947	
Approach Delay, s/veh		83.4			74.7			23.9			17.6	
Approach LOS		F			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	69.4	13.2	30.0	5.2	71.6	13.2	30.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	9.7	57.6	9.7	24.0	9.7	57.6	9.7	24.0
Max Q Clear Time (g_c+I1), s	4.2	32.3	9.9	11.7	2.7	19.3	11.7	25.5
Green Ext Time (p_c), s	0.1	21.1	0.0	1.2	0.0	20.6	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	37.2
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	212	20	7	449	22	14
Future Volume (vph)	212	20	7	449	22	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988				0.949	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	1877	0	1770	1863	1749	0
Flt Permitted			0.950		0.970	
Satd. Flow (perm)	1877	0	1770	1863	1749	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	255			1430	666	
Travel Time (s)	7.0			39.0	18.2	
Confl. Peds. (#/hr)					1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%
Adj. Flow (vph)	247	23	8	522	26	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	270	0	8	522	42	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	20	7	449	22	14
Future Vol, veh/h	212	20	7	449	22	14
Conflicting Peds, #/hr	0	0	0	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	247	23	8	522	26	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	270	0	798	259
Stage 1	-	-	-	-	258	-
Stage 2	-	-	-	-	539	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1294	-	358	784
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	589	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1294	-	356	784
Mov Cap-2 Maneuver	-	-	-	-	356	-
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	584	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.12	13.79
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	451	-	-	1294	-
HCM Lane V/C Ratio	0.093	-	-	0.006	-
HCM Ctrl Dly (s/v)	13.8	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	13	35	9	8	68	21	1184	57	22	938	27
Future Volume (vph)	24	13	35	9	8	68	21	1184	57	22	938	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.935			0.891			0.993			0.996	
Flt Protected		0.984			0.995			0.999			0.999	
Satd. Flow (prot)	0	1731	0	0	1684	0	0	3546	0	0	3522	0
Flt Permitted		0.984			0.995			0.999			0.999	
Satd. Flow (perm)	0	1731	0	0	1684	0	0	3546	0	0	3522	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			248			2002			671	
Travel Time (s)		26.7			6.8			45.5			15.3	
Confl. Peds. (#/hr)									1			
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	25	14	36	9	8	71	22	1233	59	23	977	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	75	0	0	88	0	0	1314	0	0	1028	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 65.7%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	14.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	13	35	9	8	68	21	1184	57	22	938	27
Future Vol, veh/h	24	13	35	9	8	68	21	1184	57	22	938	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	2	2	2
Mvmt Flow	25	14	36	9	8	71	22	1233	59	23	977	28

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1702	2374	503	1849	2359	647	1005	0	0	1294	0	0
Stage 1	1037	1037	-	1308	1308	-	-	-	-	-	-	-
Stage 2	665	1337	-	541	1051	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	60	35	517	47	36	418	691	-	-	532	-	-
Stage 1	249	309	-	171	231	-	-	-	-	-	-	-
Stage 2	418	222	-	498	306	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	34	31	517	23	32	418	691	-	-	531	-	-
Mov Cap-2 Maneuver	34	31	-	23	32	-	-	-	-	-	-	-
Stage 1	234	290	-	163	220	-	-	-	-	-	-	-
Stage 2	318	211	-	415	288	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 310.76	121.11	0.64	0.93
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	56	-	-	60	106	77	-	-
HCM Lane V/C Ratio	0.032	-	-	1.245	0.836	0.043	-	-
HCM Ctrl Dly (s/v)	10.4	0.5	-	$ 310.8	121.1	12.1	0.7	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	6.3	4.8	0.1	-	-

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	59	26	24	53	2	29	27	7	3	21	3
Future Volume (vph)	7	59	26	24	53	2	29	27	7	3	21	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.961			0.997			0.985			0.986	
Flt Protected		0.996			0.985			0.978			0.995	
Satd. Flow (prot)	0	1819	0	0	1866	0	0	1830	0	0	1864	0
Flt Permitted		0.996			0.985			0.978			0.995	
Satd. Flow (perm)	0	1819	0	0	1866	0	0	1830	0	0	1864	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			1221			1978			666	
Travel Time (s)		6.8			33.3			53.9			18.2	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	8	67	30	27	60	2	33	31	8	3	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	105	0	0	89	0	0	72	0	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	59	26	24	53	2	29	27	7	3	21	3
Future Vol, veh/h	7	59	26	24	53	2	29	27	7	3	21	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	67	30	27	60	2	33	31	8	3	24	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	63	0	0	97	0	0	224	215	82	214	228	61
Stage 1	-	-	-	-	-	-	98	98	-	116	116	-
Stage 2	-	-	-	-	-	-	127	117	-	98	113	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1553	-	-	1510	-	-	735	686	984	747	675	1009
Stage 1	-	-	-	-	-	-	914	818	-	894	804	-
Stage 2	-	-	-	-	-	-	882	803	-	913	806	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1553	-	-	1510	-	-	690	670	984	691	658	1009
Mov Cap-2 Maneuver	-	-	-	-	-	-	690	670	-	691	658	-
Stage 1	-	-	-	-	-	-	909	814	-	877	788	-
Stage 2	-	-	-	-	-	-	836	788	-	867	802	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.56	2.26	10.69	10.47
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	704	129	-	-	543	-	-	689
HCM Lane V/C Ratio	0.102	0.005	-	-	0.018	-	-	0.045
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1

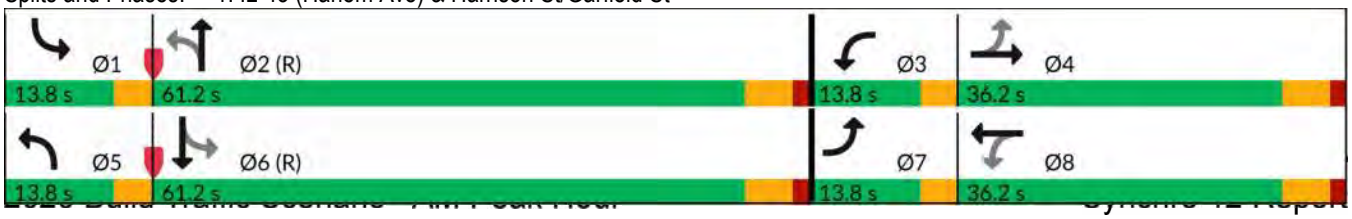
APPENDIX E
2026 BUILD TRAFFIC SCENARIO
CAPACITY ANALYSIS SUMMARY SHEETS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	164	22	202	174	143	56	1038	13	147	705	53
Future Volume (vph)	97	164	22	202	174	143	56	1038	13	147	705	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	0.99		1.00			1.00	1.00	
Frt		0.982			0.932			0.998			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1826	0	1787	1743	0	1703	3399	0	1736	3428	0
Flt Permitted	0.212			0.465			0.297			0.146		
Satd. Flow (perm)	394	1826	0	872	1743	0	531	3399	0	266	3428	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			31			1			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		950			152			414			478	
Travel Time (s)		25.9			4.1			9.4			10.9	
Confl. Peds. (#/hr)	2		1	4		1	6			4		1
Confl. Bikes (#/hr)			1									
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 (%)	2%	2%	2%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	102	173	23	213	183	151	59	1093	14	155	742	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	196	0	213	334	0	59	1107	0	155	798	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	36.0		10.5	36.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.8	36.2		13.8	36.2		13.8	61.2		13.8	61.2	
Total Split (%)	11.0%	29.0%		11.0%	29.0%		11.0%	49.0%		11.0%	49.0%	
Maximum Green (s)	10.3	30.2		10.3	30.2		10.3	55.2		10.3	55.2	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		20.0			20.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	37.3	25.3		38.9	26.1		70.8	61.0		75.4	64.9	
Actuated g/C Ratio	0.30	0.20		0.31	0.21		0.57	0.49		0.60	0.52	
v/c Ratio	0.46	0.53		0.62	0.86		0.16	0.67		0.57	0.45	
Control Delay (s/veh)	35.0	47.6		39.8	64.4		12.4	28.0		20.2	21.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	35.0	47.6		39.8	64.4		12.4	28.0		20.2	21.3	
LOS	D	D		D	E		B	C		C	C	
Approach Delay (s/veh)		43.3			54.8			27.2			21.1	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 31.9		Intersection LOS: C	
Intersection Capacity Utilization 77.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	164	22	202	174	143	56	1038	13	147	705	53
Future Volume (veh/h)	97	164	22	202	174	143	56	1038	13	147	705	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1811	1811	1811	1841	1841	1841
Adj Flow Rate, veh/h	102	173	23	213	183	151	59	1093	14	155	742	56
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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	4	4	4
Cap, veh/h	192	308	41	318	203	168	379	1803	23	306	1800	136
Arrive On Green	0.06	0.19	0.19	0.08	0.21	0.21	0.03	0.52	0.52	0.06	0.55	0.55
Sat Flow, veh/h	1781	1613	214	1795	953	786	1725	3479	45	1753	3295	249
Grp Volume(v), veh/h	102	0	196	213	0	334	59	541	566	155	394	404
Grp Sat Flow(s),veh/h/ln	1781	0	1828	1795	0	1738	1725	1721	1803	1753	1749	1795
Q Serve(g_s), s	5.7	0.0	12.1	10.3	0.0	23.4	2.0	27.6	27.6	5.0	16.5	16.5
Cycle Q Clear(g_c), s	5.7	0.0	12.1	10.3	0.0	23.4	2.0	27.6	27.6	5.0	16.5	16.5
Prop In Lane	1.00		0.12	1.00		0.45	1.00		0.02	1.00		0.14
Lane Grp Cap(c), veh/h	192	0	349	318	0	371	379	892	934	306	955	981
V/C Ratio(X)	0.53	0.00	0.56	0.67	0.00	0.90	0.16	0.61	0.61	0.51	0.41	0.41
Avail Cap(c_a), veh/h	232	0	442	318	0	420	473	892	934	351	955	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	0.0	45.8	39.0	0.0	47.9	14.0	21.1	21.2	16.6	16.6	16.6
Incr Delay (d2), s/veh	2.3	0.0	1.4	5.4	0.0	20.5	0.2	3.1	2.9	1.3	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	5.7	1.7	0.0	12.3	0.8	11.7	12.2	2.0	6.9	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	41.3	0.0	47.2	44.4	0.0	68.4	14.2	24.2	24.1	17.9	17.9	17.9
LnGrp LOS	D		D	D		E	B	C	C	B	B	B
Approach Vol, veh/h		298			547			1166			953	
Approach Delay, s/veh		45.2			59.1			23.6			17.9	
Approach LOS		D			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	70.8	13.8	29.9	7.0	74.3	11.0	32.7
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	10.3	55.2	10.3	30.2	10.3	55.2	10.3	30.2
Max Q Clear Time (g_c+I1), s	7.0	29.6	12.3	14.1	4.0	18.5	7.7	25.4
Green Ext Time (p_c), s	0.1	8.4	0.0	1.0	0.0	5.9	0.1	0.9

Intersection Summary	
HCM 7th Control Delay, s/veh	30.5
HCM 7th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	261	15	10	443	24	9
Future Volume (vph)	261	15	10	443	24	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993				0.963	
Flt Protected			0.950		0.965	
Satd. Flow (prot)	1850	0	1787	1881	1714	0
Flt Permitted			0.950		0.965	
Satd. Flow (perm)	1850	0	1787	1881	1714	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	103			1430	666	
Travel Time (s)	2.8			39.0	18.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Adj. Flow (vph)	318	18	12	540	29	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	336	0	12	540	40	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	261	15	10	443	24	9
Future Vol, veh/h	261	15	10	443	24	9
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	318	18	12	540	29	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	337	0	893	327
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	-	-	4.11	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.209	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1228	-	311	712
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1228	-	307	712
Mov Cap-2 Maneuver	-	-	-	-	307	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.18	16.13
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	364	-	-	1228	-
HCM Lane V/C Ratio	0.111	-	-	0.01	-
HCM Ctrl Dly (s/v)	16.1	-	-	8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	17	18	32	6	64	19	1036	73	42	859	28
Future Volume (vph)	8	17	18	32	6	64	19	1036	73	42	859	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.943			0.915			0.990			0.996	
Flt Protected		0.991			0.984			0.999			0.998	
Satd. Flow (prot)	0	1691	0	0	1694	0	0	3368	0	0	3450	0
Flt Permitted		0.991			0.984			0.999			0.998	
Satd. Flow (perm)	0	1691	0	0	1694	0	0	3368	0	0	3450	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			257	
Travel Time (s)		26.7			3.8			45.5			5.8	
Confl. Peds. (#/hr)			1			1			1			2
Confl. Bikes (#/hr)												1
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 (%)	5%	5%	5%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	8	18	19	34	6	67	20	1091	77	44	904	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	107	0	0	1188	0	0	977	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	24.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	17	18	32	6	64	19	1036	73	42	859	28
Future Vol, veh/h	8	17	18	32	6	64	19	1036	73	42	859	28
Conflicting Peds, #/hr	0	0	1	0	0	1	0	0	1	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	1	1	1	6	6	6	4	4	4
Mvmt Flow	8	18	19	34	6	67	20	1091	77	44	904	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1599	2218	470	1720	2194	586	936	0	0	1168	0	0
Stage 1	1009	1009	-	1170	1170	-	-	-	-	-	-	-
Stage 2	589	1208	-	550	1024	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.52	6.52	6.92	4.22	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.51	4.01	3.31	2.26	-	-	2.24	-	-
Pot Cap-1 Maneuver	69	41	532	58	45	456	703	-	-	582	-	-
Stage 1	252	309	-	207	267	-	-	-	-	-	-	-
Stage 2	454	248	-	489	313	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	43	36	531	~ 26	39	455	702	-	-	582	-	-
Mov Cap-2 Maneuver	43	36	-	~ 26	39	-	-	-	-	-	-	-
Stage 1	225	277	-	198	256	-	-	-	-	-	-	-
Stage 2	361	237	-	395	280	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	155.14	$ 443.11	0.56	1.54
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	56	-	-	62	66	156	-	-
HCM Lane V/C Ratio	0.028	-	-	0.735	1.623	0.076	-	-
HCM Ctrl Dly (s/v)	10.3	0.4	-	155.1	$ 443.1	11.7	1.1	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.2	9.4	0.2	-	-

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	89	7	14	52	13	22	14	5	4	20	1
Future Volume (vph)	6	89	7	14	52	13	22	14	5	4	20	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.991			0.977			0.984			0.996	
Flt Protected		0.997			0.991			0.974			0.992	
Satd. Flow (prot)	0	1859	0	0	1786	0	0	1821	0	0	1877	0
Flt Permitted		0.997			0.991			0.974			0.992	
Satd. Flow (perm)	0	1859	0	0	1786	0	0	1821	0	0	1877	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
Confl. Peds. (#/hr)			2				3					
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	8	114	9	18	67	17	28	18	6	5	26	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	131	0	0	102	0	0	52	0	0	32	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	89	7	14	52	13	22	14	5	4	20	1
Future Vol, veh/h	6	89	7	14	52	13	22	14	5	4	20	1
Conflicting Peds, #/hr	0	0	2	0	0	0	3	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	0	0	0
Mvmt Flow	8	114	9	18	67	17	28	18	6	5	26	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	125	0	0	254	255	121	249	251	78
Stage 1	-	-	-	-	-	-	136	136	-	111	111	-
Stage 2	-	-	-	-	-	-	118	119	-	138	140	-
Critical Hdwy	4.11	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1520	-	-	1455	-	-	703	652	936	708	655	988
Stage 1	-	-	-	-	-	-	872	788	-	899	808	-
Stage 2	-	-	-	-	-	-	891	801	-	869	784	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1520	-	-	1453	-	-	659	639	934	672	642	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	659	639	-	672	642	-
Stage 1	-	-	-	-	-	-	866	782	-	887	797	-
Stage 2	-	-	-	-	-	-	848	791	-	839	779	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.43	1.33	10.77	10.77
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	676	104	-	-	307	-	-	656
HCM Lane V/C Ratio	0.078	0.005	-	-	0.012	-	-	0.049
HCM Ctrl Dly (s/v)	10.8	7.4	0	-	7.5	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	248	76	28	439	80	28
Future Volume (vph)	248	76	28	439	80	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.968				0.965	
Flt Protected				0.997	0.964	
Satd. Flow (prot)	1803	0	0	3564	1767	0
Flt Permitted				0.997	0.964	
Satd. Flow (perm)	1803	0	0	3564	1767	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			103	276	
Travel Time (s)	4.1			2.8	7.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	0%	0%
Adj. Flow (vph)	270	83	30	477	87	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	353	0	0	507	117	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	248	76	28	439	80	28
Future Vol, veh/h	248	76	28	439	80	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	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	270	83	30	477	87	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	352	0	610	311
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1211	-	445	734
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	732	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1211	-	433	734
Mov Cap-2 Maneuver	-	-	-	-	433	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.68	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	484	-	-	216	-
HCM Lane V/C Ratio	0.243	-	-	0.025	-
HCM Ctrl Dly (s/v)	14.8	-	-	8	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	94	1013	95	0	929
Future Volume (vph)	0	94	1013	95	0	929
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.987			
Flt Protected						
Satd. Flow (prot)	0	1644	3361	0	0	3471
Flt Permitted						
Satd. Flow (perm)	0	1644	3361	0	0	3471
Link Speed (mph)	25		30			30
Link Distance (ft)	159		257			414
Travel Time (s)	4.3		5.8			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	6%	6%	4%	4%
Adj. Flow (vph)	0	102	1101	103	0	1010
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	102	1204	0	0	1010
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	94	1013	95	0	929
Future Vol, veh/h	0	94	1013	95	0	929
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, %	0	0	6	6	4	4
Mvmt Flow	0	102	1101	103	0	1010

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	602	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	448	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	448	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	15.41	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	448	-
HCM Lane V/C Ratio	-	-	0.228	-
HCM Ctrl Dly (s/v)	-	-	15.4	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.9	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	42	90	63	12	12	39
Future Volume (vph)	42	90	63	12	12	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.978		0.897	
Flt Protected		0.984			0.988	
Satd. Flow (prot)	0	1851	1840	0	1684	0
Flt Permitted		0.984			0.988	
Satd. Flow (perm)	0	1851	1840	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		193	
Travel Time (s)		3.8	3.0		5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Adj. Flow (vph)	46	98	68	13	13	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	144	81	0	55	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	90	63	12	12	39
Future Vol, veh/h	42	90	63	12	12	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	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	46	98	68	13	13	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	82	0	-	0	264	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1522	-	-	-	729	992
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1522	-	-	-	706	992
Mov Cap-2 Maneuver	-	-	-	-	706	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.37	0	9.23
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	573	-	-	-	906
HCM Lane V/C Ratio	0.03	-	-	-	0.061
HCM Ctrl Dly (s/v)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	151	56	221	180	168	46	1074	30	112	736	30
Future Volume (vph)	200	151	56	221	180	168	46	1074	30	112	736	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		0.99	0.99		1.00	1.00			1.00	
Frt		0.959			0.927			0.996			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1796	0	1787	1731	0	1770	3523	0	1770	3514	0
Flt Permitted	0.159			0.446			0.283			0.120		
Satd. Flow (perm)	299	1796	0	833	1731	0	527	3523	0	224	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			35			3			4	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			147			413			478	
Travel Time (s)		26.5			4.0			9.4			10.9	
Confl. Peds. (#/hr)	2		3	8		1	1		2			4
Confl. Bikes (#/hr)			1			2						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	213	161	60	235	191	179	49	1143	32	119	783	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	213	221	0	235	370	0	49	1175	0	119	815	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	35.0		10.5	35.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.8	35.0		13.8	35.0		13.8	62.4		13.8	62.4	
Total Split (%)	11.0%	28.0%		11.0%	28.0%		11.0%	49.9%		11.0%	49.9%	
Maximum Green (s)	10.3	29.0		10.3	29.0		10.3	56.4		10.3	56.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		19.0			19.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	40.1	27.3		40.1	27.3		69.0	59.5		73.4	63.3	
Actuated g/C Ratio	0.32	0.22		0.32	0.22		0.55	0.48		0.59	0.51	
v/c Ratio	0.98	0.55		0.68	0.92		0.14	0.70		0.49	0.46	
Control Delay (s/veh)	89.3	45.8		42.6	70.9		12.2	29.1		18.7	21.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	89.3	45.8		42.6	70.9		12.2	29.1		18.7	21.8	
LOS	F	D		D	E		B	C		B	C	
Approach Delay (s/veh)		67.1			59.9			28.4			21.4	
Approach LOS		E			E			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.98			
Intersection Signal Delay (s/veh): 37.6		Intersection LOS: D	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	151	56	221	180	168	46	1074	30	112	736	30
Future Volume (veh/h)	200	151	56	221	180	168	46	1074	30	112	736	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	213	161	60	235	191	179	49	1143	32	119	783	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	223	299	112	347	203	190	349	1721	48	259	1778	73
Arrive On Green	0.08	0.23	0.23	0.08	0.23	0.23	0.02	0.49	0.49	0.05	0.51	0.51
Sat Flow, veh/h	1795	1303	485	1795	884	828	1781	3530	99	1781	3479	142
Grp Volume(v), veh/h	213	0	221	235	0	370	49	575	600	119	400	415
Grp Sat Flow(s),veh/h/ln	1795	0	1788	1795	0	1712	1781	1777	1852	1781	1777	1844
Q Serve(g_s), s	10.3	0.0	13.6	10.3	0.0	26.5	1.7	30.7	30.7	4.0	17.7	17.7
Cycle Q Clear(g_c), s	10.3	0.0	13.6	10.3	0.0	26.5	1.7	30.7	30.7	4.0	17.7	17.7
Prop In Lane	1.00		0.27	1.00		0.48	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	223	0	411	347	0	393	349	866	903	259	908	943
V/C Ratio(X)	0.95	0.00	0.54	0.68	0.00	0.94	0.14	0.66	0.66	0.46	0.44	0.44
Avail Cap(c_a), veh/h	223	0	415	347	0	397	452	866	903	320	908	943
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	42.3	37.5	0.0	47.3	16.2	24.3	24.3	19.2	19.3	19.3
Incr Delay (d2), s/veh	47.3	0.0	1.4	5.2	0.0	30.3	0.2	4.0	3.8	1.3	1.5	1.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	0.0	6.2	2.3	0.0	14.7	0.7	13.6	14.2	1.7	7.7	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	86.2	0.0	43.7	42.7	0.0	77.6	16.4	28.3	28.1	20.5	20.8	20.8
LnGrp LOS	F		D	D		E	B	C	C	C	C	C
Approach Vol, veh/h		434			605			1224			934	
Approach Delay, s/veh		64.5			64.0			27.7			20.7	
Approach LOS		E			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	66.9	13.8	34.7	6.6	69.9	13.8	34.7
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	10.3	56.4	10.3	29.0	10.3	56.4	10.3	29.0
Max Q Clear Time (g_c+I1), s	6.0	32.7	12.3	15.6	3.7	19.7	12.3	28.5
Green Ext Time (p_c), s	0.1	8.8	0.0	1.0	0.0	6.0	0.0	0.1

Intersection Summary	
HCM 7th Control Delay, s/veh	37.6
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	236	17	15	506	19	13
Future Volume (vph)	236	17	15	506	19	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.947	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	1883	0	1787	1881	1747	0
Flt Permitted			0.950		0.971	
Satd. Flow (perm)	1883	0	1787	1881	1747	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	108			1430	666	
Travel Time (s)	2.9			39.0	18.2	
Confl. Peds. (#/hr)		1				1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	243	18	15	522	20	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	261	0	15	522	33	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	236	17	15	506	19	13
Future Vol, veh/h	236	17	15	506	19	13
Conflicting Peds, #/hr	0	1	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	243	18	15	522	20	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	262	0	806	254
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	553	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1308	-	354	790
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1307	-	350	788
Mov Cap-2 Maneuver	-	-	-	-	350	-
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	574	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.22	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	452	-	-	1307	-
HCM Lane V/C Ratio	0.073	-	-	0.012	-
HCM Ctrl Dly (s/v)	13.6	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	18	42	34	10	46	16	1085	63	36	951	26
Future Volume (vph)	19	18	42	34	10	46	16	1085	63	36	951	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.929			0.930			0.992			0.996	
Flt Protected		0.988			0.982			0.999			0.998	
Satd. Flow (prot)	0	1727	0	0	1701	0	0	3507	0	0	3518	0
Flt Permitted		0.988			0.982			0.999			0.998	
Satd. Flow (perm)	0	1727	0	0	1701	0	0	3507	0	0	3518	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			258	
Travel Time (s)		26.7			3.8			45.5			5.9	
Confl. Peds. (#/hr)	3								2			
Confl. Bikes (#/hr)									4			1
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 (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	20	46	37	11	51	18	1192	69	40	1045	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	87	0	0	99	0	0	1279	0	0	1114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.6%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	84.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	18	42	34	10	46	16	1085	63	36	951	26
Future Vol, veh/h	19	18	42	34	10	46	16	1085	63	36	951	26
Conflicting Peds, #/hr	3	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	20	46	37	11	51	18	1192	69	40	1045	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1778	2437	537	1876	2417	636	1074	0	0	1264	0	0
Stage 1	1138	1138	-	1264	1264	-	-	-	-	-	-	-
Stage 2	640	1299	-	612	1153	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	53	32	491	44	32	421	645	-	-	546	-	-
Stage 1	216	276	-	179	239	-	-	-	-	-	-	-
Stage 2	433	232	-	447	270	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	25	27	491	~ 10	28	419	645	-	-	545	-	-
Mov Cap-2 Maneuver	25	27	-	~ 10	28	-	-	-	-	-	-	-
Stage 1	194	248	-	171	228	-	-	-	-	-	-	-
Stage 2	346	222	-	334	242	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 489.68	$ 1759.04	0.56	1.53
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	46	-	-	53	24	123	-	-
HCM Lane V/C Ratio	0.027	-	-	1.653	4.166	0.073	-	-
HCM Ctrl Dly (s/v)	10.7	0.4	-	$ 489.7	$ 1759	12.1	1.2	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	8.2	12.4	0.2	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	65	17	19	44	2	22	21	6	5	25	2
Future Volume (vph)	9	65	17	19	44	2	22	21	6	5	25	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.996			0.983			0.992	
Flt Protected		0.995			0.985			0.978			0.992	
Satd. Flow (prot)	0	1807	0	0	1810	0	0	1827	0	0	1870	0
Flt Permitted		0.995			0.985			0.978			0.992	
Satd. Flow (perm)	0	1807	0	0	1810	0	0	1827	0	0	1870	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
Confl. Peds. (#/hr)				1								2
Confl. Bikes (#/hr)												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 (%)	2%	2%	2%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	74	19	22	50	2	25	24	7	6	28	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	74	0	0	56	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	65	17	19	44	2	22	21	6	5	25	2
Future Vol, veh/h	9	65	17	19	44	2	22	21	6	5	25	2
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	0	0	0
Mvmt Flow	10	74	19	22	50	2	25	24	7	6	28	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	52	0	0	94	0	0	214	200	85	201	209	53
Stage 1	-	-	-	-	-	-	105	105	-	94	94	-
Stage 2	-	-	-	-	-	-	109	95	-	106	115	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1554	-	-	1494	-	-	747	699	980	762	692	1020
Stage 1	-	-	-	-	-	-	906	812	-	917	821	-
Stage 2	-	-	-	-	-	-	901	820	-	904	805	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1554	-	-	1492	-	-	697	683	979	715	676	1018
Mov Cap-2 Maneuver	-	-	-	-	-	-	697	683	-	715	676	-
Stage 1	-	-	-	-	-	-	898	806	-	904	809	-
Stage 2	-	-	-	-	-	-	853	808	-	865	798	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.73	2.18	10.45	10.45
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	716	171	-	-	522	-	-	696
HCM Lane V/C Ratio	0.078	0.007	-	-	0.014	-	-	0.052
HCM Ctrl Dly (s/v)	10.5	7.3	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	229	64	24	501	68	24
Future Volume (vph)	229	64	24	501	68	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.970				0.965	
Flt Protected				0.998	0.964	
Satd. Flow (prot)	1843	0	0	3567	1767	0
Flt Permitted				0.998	0.964	
Satd. Flow (perm)	1843	0	0	3567	1767	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	147			108	282	
Travel Time (s)	4.0			2.9	7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	249	70	26	545	74	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	319	0	0	571	100	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	229	64	24	501	68	24
Future Vol, veh/h	229	64	24	501	68	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	249	70	26	545	74	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	318	0	608	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1246	-	447	760
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1246	-	436	760
Mov Cap-2 Maneuver	-	-	-	-	436	-
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	694	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.53	14.21
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	490	-	-	165	-
HCM Lane V/C Ratio	0.204	-	-	0.021	-
HCM Ctrl Dly (s/v)	14.2	-	-	8	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	81	1069	81	0	1013
Future Volume (vph)	0	81	1069	81	0	1013
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.989			
Flt Protected						
Satd. Flow (prot)	0	1644	3500	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1644	3500	0	0	3539
Link Speed (mph)	25		30			30
Link Distance (ft)	187		258			413
Travel Time (s)	5.1		5.9			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	88	1162	88	0	1101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	88	1250	0	0	1101
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	81	1069	81	0	1013
Future Vol, veh/h	0	81	1069	81	0	1013
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, %	0	0	2	2	2	2
Mvmt Flow	0	88	1162	88	0	1101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	625	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	433	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	433	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	15.44	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	433	-
HCM Lane V/C Ratio	-	-	0.204	-
HCM Ctrl Dly (s/v)	-	-	15.4	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.8	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	81	58	10	10	32
Future Volume (vph)	36	81	58	10	10	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.980		0.897	
Flt Protected		0.985			0.988	
Satd. Flow (prot)	0	1835	1808	0	1684	0
Flt Permitted		0.985			0.988	
Satd. Flow (perm)	0	1835	1808	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		201	
Travel Time (s)		3.8	3.0		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	3%	0%	0%
Adj. Flow (vph)	39	88	63	11	11	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	127	74	0	46	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	81	58	10	10	32
Future Vol, veh/h	36	81	58	10	10	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	3	0	0
Mvmt Flow	39	88	63	11	11	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	74	0	-	0	235	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	166	-
Critical Hdwy	4.12	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1526	-	-	-	758	1000
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1526	-	-	-	737	1000
Mov Cap-2 Maneuver	-	-	-	-	737	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	868	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.28	0	9.11
HCM LOS			A

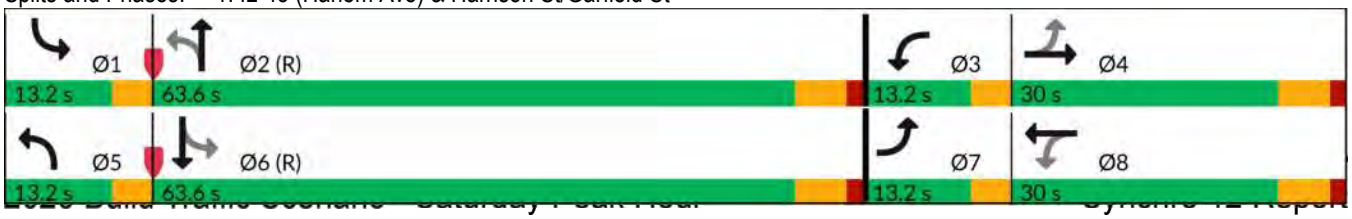
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	922
HCM Lane V/C Ratio	0.026	-	-	-	0.05
HCM Ctrl Dly (s/v)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	138	32	197	122	210	27	1243	24	124	780	45
Future Volume (vph)	214	138	32	197	122	210	27	1243	24	124	780	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00	0.99			1.00			1.00	
Frt		0.972			0.905			0.997			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1823	0	1787	1688	0	1787	3562	0	1770	3507	0
Flt Permitted	0.177			0.521			0.294			0.100		
Satd. Flow (perm)	333	1823	0	976	1688	0	553	3562	0	186	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			65			2			7	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			152			414			478	
Travel Time (s)		26.5			4.1			9.4			10.9	
Confl. Peds. (#/hr)			2	4								1
Confl. Bikes (#/hr)						1			2			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	218	141	33	201	124	214	28	1268	24	127	796	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	218	174	0	201	338	0	28	1292	0	127	842	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.2	30.0		13.2	30.0		13.2	63.6		13.2	63.6	
Total Split (%)	11.0%	25.0%		11.0%	25.0%		11.0%	53.0%		11.0%	53.0%	
Maximum Green (s)	9.7	24.0		9.7	24.0		9.7	57.6		9.7	57.6	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		14.0			14.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	34.8	22.6		34.8	22.6		68.8	60.0		74.3	66.1	
Actuated g/C Ratio	0.29	0.19		0.29	0.19		0.57	0.50		0.62	0.55	
v/c Ratio	1.02	0.50		0.58	0.91		0.07	0.73		0.55	0.44	
Control Delay (s/veh)	102.2	46.2		39.2	67.6		9.9	27.0		20.8	17.7	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	102.2	46.2		39.2	67.6		9.9	27.0		20.8	17.7	
LOS	F	D		D	E		A	C		C	B	
Approach Delay (s/veh)		77.3			57.0			26.6			18.1	
Approach LOS		E			E			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.02			
Intersection Signal Delay (s/veh): 35.3		Intersection LOS: D	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	138	32	197	122	210	27	1243	24	124	780	45
Future Volume (veh/h)	214	138	32	197	122	210	27	1243	24	124	780	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	218	141	33	201	124	214	28	1268	24	127	796	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	205	295	69	346	123	212	356	1839	35	252	1863	108
Arrive On Green	0.08	0.20	0.20	0.08	0.20	0.20	0.02	0.51	0.51	0.05	0.55	0.55
Sat Flow, veh/h	1795	1476	346	1795	613	1058	1795	3594	68	1781	3414	197
Grp Volume(v), veh/h	218	0	174	201	0	338	28	632	660	127	414	428
Grp Sat Flow(s),veh/h/ln	1795	0	1822	1795	0	1671	1795	1791	1871	1781	1777	1835
Q Serve(g_s), s	9.7	0.0	10.1	9.7	0.0	24.0	0.9	31.9	32.0	3.9	16.6	16.6
Cycle Q Clear(g_c), s	9.7	0.0	10.1	9.7	0.0	24.0	0.9	31.9	32.0	3.9	16.6	16.6
Prop In Lane	1.00		0.19	1.00		0.63	1.00		0.04	1.00		0.11
Lane Grp Cap(c), veh/h	205	0	364	346	0	334	356	916	957	252	970	1001
V/C Ratio(X)	1.06	0.00	0.48	0.58	0.00	1.01	0.08	0.69	0.69	0.50	0.43	0.43
Avail Cap(c_a), veh/h	205	0	364	346	0	334	473	916	957	309	970	1001
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	42.5	36.4	0.0	48.0	14.3	22.1	22.1	18.4	16.1	16.2
Incr Delay (d2), s/veh	80.4	0.0	1.0	2.4	0.0	52.2	0.1	4.2	4.1	1.6	1.4	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	4.7	5.0	0.0	14.9	0.4	14.2	14.8	1.6	7.0	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	120.0	0.0	43.4	38.9	0.0	100.2	14.4	26.3	26.2	19.9	17.5	17.5
LnGrp LOS	F		D	D		F	B	C	C	B	B	B
Approach Vol, veh/h		392			539			1320			969	
Approach Delay, s/veh		86.0			77.3			26.0			17.8	
Approach LOS		F			E			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.4	67.4	13.2	30.0	5.3	71.5	13.2	30.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	9.7	57.6	9.7	24.0	9.7	57.6	9.7	24.0
Max Q Clear Time (g_c+I1), s	5.9	34.0	11.7	12.1	2.9	18.6	11.7	26.0
Green Ext Time (p_c), s	0.1	10.0	0.0	0.7	0.0	6.3	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	39.4
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	220	20	7	457	22	14
Future Volume (vph)	220	20	7	457	22	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.989				0.949	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	1879	0	1770	1863	1749	0
Flt Permitted			0.950		0.970	
Satd. Flow (perm)	1879	0	1770	1863	1749	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	103			1430	666	
Travel Time (s)	2.8			39.0	18.2	
Confl. Peds. (#/hr)					1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%
Adj. Flow (vph)	256	23	8	531	26	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	0	8	531	42	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	220	20	7	457	22	14
Future Vol, veh/h	220	20	7	457	22	14
Conflicting Peds, #/hr	0	0	0	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	256	23	8	531	26	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	279	0	816	268
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	549	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1284	-	349	775
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	583	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1284	-	347	774
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.12	14.01
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	441	-	-	1284	-
HCM Lane V/C Ratio	0.095	-	-	0.006	-
HCM Ctrl Dly (s/v)	14	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	14	35	37	8	68	21	1201	60	49	932	28
Future Volume (vph)	24	14	35	37	8	68	21	1201	60	49	932	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.936			0.919			0.993			0.996	
Flt Protected		0.984			0.984			0.999			0.998	
Satd. Flow (prot)	0	1733	0	0	1718	0	0	3546	0	0	3518	0
Flt Permitted		0.984			0.984			0.999			0.998	
Satd. Flow (perm)	0	1733	0	0	1718	0	0	3546	0	0	3518	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			257	
Travel Time (s)		26.7			3.8			45.5			5.8	
Confl. Peds. (#/hr)									1			
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	25	15	36	39	8	71	22	1251	63	51	971	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	0	118	0	0	1336	0	0	1051	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	66.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	14	35	37	8	68	21	1201	60	49	932	28
Future Vol, veh/h	24	14	35	37	8	68	21	1201	60	49	932	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	2	2	2
Mvmt Flow	25	15	36	39	8	71	22	1251	63	51	971	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1761	2446	500	1922	2429	658	1000	0	0	1315	0	0
Stage 1	1088	1088	-	1327	1327	-	-	-	-	-	-	-
Stage 2	673	1358	-	595	1102	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	54	31	519	41	32	412	694	-	-	522	-	-
Stage 1	232	292	-	167	227	-	-	-	-	-	-	-
Stage 2	413	217	-	463	290	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	27	26	519	~ 15	27	411	694	-	-	521	-	-
Mov Cap-2 Maneuver	27	26	-	~ 15	27	-	-	-	-	-	-	-
Stage 1	201	253	-	158	215	-	-	-	-	-	-	-
Stage 2	312	206	-	350	250	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 471.47	$ 1133.2	0.64	2.05
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	55	-	-	48	39	168	-	-
HCM Lane V/C Ratio	0.032	-	-	1.573	3.03	0.098	-	-
HCM Ctrl Dly (s/v)	10.4	0.5	-	$ 471.$	$ 1133.2	12.7	1.6	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	7.3	13.2	0.3	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	60	27	24	54	2	30	27	7	3	21	3
Future Volume (vph)	7	60	27	24	54	2	30	27	7	3	21	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.961			0.997			0.985			0.986	
Flt Protected		0.996			0.985			0.977			0.995	
Satd. Flow (prot)	0	1819	0	0	1866	0	0	1828	0	0	1864	0
Flt Permitted		0.996			0.985			0.977			0.995	
Satd. Flow (perm)	0	1819	0	0	1866	0	0	1828	0	0	1864	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	8	68	31	27	61	2	34	31	8	3	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	90	0	0	73	0	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	60	27	24	54	2	30	27	7	3	21	3
Future Vol, veh/h	7	60	27	24	54	2	30	27	7	3	21	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	68	31	27	61	2	34	31	8	3	24	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	99	0	0	227	218	84	216	232	63
Stage 1	-	-	-	-	-	-	99	99	-	117	117	-
Stage 2	-	-	-	-	-	-	128	118	-	99	115	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1552	-	-	1507	-	-	732	684	981	744	672	1008
Stage 1	-	-	-	-	-	-	912	817	-	892	803	-
Stage 2	-	-	-	-	-	-	881	802	-	912	804	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1552	-	-	1507	-	-	687	667	981	688	656	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	687	667	-	688	656	-
Stage 1	-	-	-	-	-	-	907	812	-	876	788	-
Stage 2	-	-	-	-	-	-	835	787	-	865	800	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.55	2.23	10.73	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	701	126	-	-	536	-	-	686
HCM Lane V/C Ratio	0.104	0.005	-	-	0.018	-	-	0.045
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	72	26	453	76	26
Future Volume (vph)	214	72	26	453	76	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.966				0.966	
Flt Protected				0.997	0.964	
Satd. Flow (prot)	1835	0	0	3564	1769	0
Flt Permitted				0.997	0.964	
Satd. Flow (perm)	1835	0	0	3564	1769	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			103	288	
Travel Time (s)	4.1			2.8	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	233	78	28	492	83	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	0	520	111	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	214	72	26	453	76	26
Future Vol, veh/h	214	72	26	453	76	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	233	78	28	492	83	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	311	0	574	272
Stage 1	-	-	-	-	272	-
Stage 2	-	-	-	-	303	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1254	-	468	772
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1254	-	456	772
Mov Cap-2 Maneuver	-	-	-	-	456	-
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	710	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.61	14.03
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	509	-	-	195	-
HCM Lane V/C Ratio	0.218	-	-	0.023	-
HCM Ctrl Dly (s/v)	14	-	-	7.9	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	89	1205	88	0	1009
Future Volume (vph)	0	89	1205	88	0	1009
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.865	0.990			
Flt Protected						
Satd. Flow (prot)	0	1644	3539	0	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1644	3539	0	0	3539
Link Speed (mph)	25		30			30
Link Distance (ft)	186		257			414
Travel Time (s)	5.1		5.8			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Adj. Flow (vph)	0	97	1310	96	0	1097
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	97	1406	0	0	1097
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	89	1205	88	0	1009
Future Vol, veh/h	0	89	1205	88	0	1009
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, %	0	0	1	1	2	2
Mvmt Flow	0	97	1310	96	0	1097

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	703	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	385	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	385	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	17.47	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	385	-
HCM Lane V/C Ratio	-	-	0.251	-
HCM Ctrl Dly (s/v)	-	-	17.5	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	83	76	11	11	37
Future Volume (vph)	40	83	76	11	11	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.983		0.896	
Flt Protected		0.984			0.989	
Satd. Flow (prot)	0	1870	1868	0	1684	0
Flt Permitted		0.984			0.989	
Satd. Flow (perm)	0	1870	1868	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		200	
Travel Time (s)		3.8	3.0		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	43	90	83	12	12	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	133	95	0	52	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	83	76	11	11	37
Future Vol, veh/h	40	83	76	11	11	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	90	83	12	12	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	95	0	-	0	266	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1512	-	-	-	728	975
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	858	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	706	975
Mov Cap-2 Maneuver	-	-	-	-	706	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	858	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.42	0	9.26
HCM LOS			A

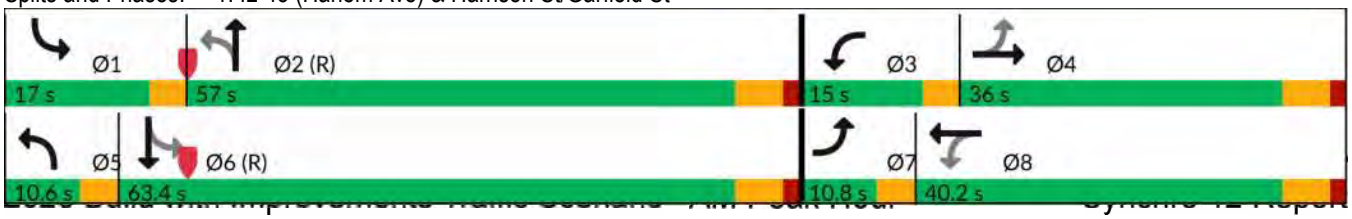
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	585	-	-	-	897
HCM Lane V/C Ratio	0.029	-	-	-	0.058
HCM Ctrl Dly (s/v)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	97	164	22	202	174	143	56	1038	13	147	705	53
Future Volume (vph)	97	164	22	202	174	143	56	1038	13	147	705	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	0.99		1.00			1.00	1.00	
Frt		0.982			0.932			0.998			0.989	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1826	0	1787	1743	0	1703	3399	0	1736	3428	0
Flt Permitted	0.258			0.391			0.309			0.147		
Satd. Flow (perm)	480	1826	0	733	1743	0	552	3399	0	268	3428	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			33			1			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		950			152			414			478	
Travel Time (s)		25.9			4.1			9.4			10.9	
Confl. Peds. (#/hr)	2		1	4		1	6			4		1
Confl. Bikes (#/hr)			1									
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 (%)	2%	2%	2%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	102	173	23	213	183	151	59	1093	14	155	742	56
Shared Lane Traffic (%)												
Lane Group Flow (vph)	102	196	0	213	334	0	59	1107	0	155	798	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	36.0		10.5	36.0		10.5	42.0		10.5	36.0	
Total Split (s)	10.8	36.0		15.0	40.2		10.6	57.0		17.0	63.4	
Total Split (%)	8.6%	28.8%		12.0%	32.2%		8.5%	45.6%		13.6%	50.7%	
Maximum Green (s)	7.3	30.0		11.5	34.2		7.1	51.0		13.5	57.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		20.0			20.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	32.4	22.6		40.1	26.8		70.9	61.5		77.5	66.8	
Actuated g/C Ratio	0.26	0.18		0.32	0.21		0.57	0.49		0.62	0.53	
v/c Ratio	0.51	0.59		0.64	0.84		0.16	0.66		0.54	0.43	
Control Delay (s/veh)	38.9	51.9		41.4	60.0		12.0	27.9		18.1	19.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	38.9	51.9		41.4	60.0		12.0	27.9		18.1	19.9	
LOS	D	D		D	E		B	C		B	B	
Approach Delay (s/veh)		47.5			52.8			27.1			19.6	
Approach LOS		D			D			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.84			
Intersection Signal Delay (s/veh): 31.5		Intersection LOS: C	
Intersection Capacity Utilization 77.5%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	97	164	22	202	174	143	56	1038	13	147	705	53
Future Volume (veh/h)	97	164	22	202	174	143	56	1038	13	147	705	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1811	1811	1811	1841	1841	1841
Adj Flow Rate, veh/h	102	173	23	213	183	151	59	1093	14	155	742	56
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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	4	4	4
Cap, veh/h	193	295	39	324	206	170	378	1795	23	305	1796	136
Arrive On Green	0.06	0.18	0.18	0.09	0.22	0.22	0.03	0.52	0.52	0.06	0.55	0.55
Sat Flow, veh/h	1781	1613	214	1795	953	786	1725	3479	45	1753	3295	249
Grp Volume(v), veh/h	102	0	196	213	0	334	59	541	566	155	394	404
Grp Sat Flow(s),veh/h/ln	1781	0	1828	1795	0	1739	1725	1721	1803	1753	1749	1795
Q Serve(g_s), s	5.8	0.0	12.3	11.5	0.0	23.3	2.0	27.7	27.7	5.0	16.5	16.5
Cycle Q Clear(g_c), s	5.8	0.0	12.3	11.5	0.0	23.3	2.0	27.7	27.7	5.0	16.5	16.5
Prop In Lane	1.00		0.12	1.00		0.45	1.00		0.02	1.00		0.14
Lane Grp Cap(c), veh/h	193	0	334	324	0	376	378	888	930	305	953	978
V/C Ratio(X)	0.53	0.00	0.59	0.66	0.00	0.89	0.16	0.61	0.61	0.51	0.41	0.41
Avail Cap(c_a), veh/h	193	0	439	324	0	476	428	888	930	394	953	978
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	46.8	37.1	0.0	47.5	14.2	21.3	21.3	16.7	16.7	16.7
Incr Delay (d2), s/veh	2.7	0.0	1.6	4.8	0.0	15.5	0.2	3.1	3.0	1.3	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	0.0	5.8	5.7	0.0	11.8	0.8	11.7	12.3	2.0	6.9	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.5	0.0	48.4	41.9	0.0	63.0	14.4	24.4	24.3	18.0	18.0	18.0
LnGrp LOS	D		D	D		E	B	C	C	B	B	B
Approach Vol, veh/h		298			547			1166			953	
Approach Delay, s/veh		46.4			54.8			23.9			18.0	
Approach LOS		D			D			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	70.5	15.0	28.8	7.0	74.1	10.8	33.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	13.5	51.0	11.5	30.0	7.1	57.4	7.3	34.2
Max Q Clear Time (g_c+I1), s	7.0	29.7	13.5	14.3	4.0	18.5	7.8	25.3
Green Ext Time (p_c), s	0.2	7.8	0.0	1.0	0.0	5.9	0.0	1.4

Intersection Summary	
HCM 7th Control Delay, s/veh	29.9
HCM 7th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	261	15	10	443	24	9
Future Volume (vph)	261	15	10	443	24	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.993				0.963	
Flt Protected			0.950		0.965	
Satd. Flow (prot)	1850	0	1787	1881	1714	0
Flt Permitted			0.950		0.965	
Satd. Flow (perm)	1850	0	1787	1881	1714	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	103			1430	666	
Travel Time (s)	2.8			39.0	18.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Adj. Flow (vph)	318	18	12	540	29	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	336	0	12	540	40	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	261	15	10	443	24	9
Future Vol, veh/h	261	15	10	443	24	9
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	318	18	12	540	29	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	337	0	893	327
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	-	-	4.11	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.209	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1228	-	311	712
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1228	-	307	712
Mov Cap-2 Maneuver	-	-	-	-	307	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.18	16.13
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	364	-	-	1228	-
HCM Lane V/C Ratio	0.111	-	-	0.01	-
HCM Ctrl Dly (s/v)	16.1	-	-	8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	17	18	32	6	64	19	1036	73	42	859	28
Future Volume (vph)	8	17	18	32	6	64	19	1036	73	42	859	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.943			0.915			0.990			0.996	
Flt Protected		0.991			0.984			0.999			0.998	
Satd. Flow (prot)	0	1691	0	0	1694	0	0	3368	0	0	3450	0
Flt Permitted		0.991			0.984			0.999			0.998	
Satd. Flow (perm)	0	1691	0	0	1694	0	0	3368	0	0	3450	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			257	
Travel Time (s)		26.7			3.8			45.5			5.8	
Confl. Peds. (#/hr)			1			1			1			2
Confl. Bikes (#/hr)												1
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 (%)	5%	5%	5%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	8	18	19	34	6	67	20	1091	77	44	904	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	45	0	0	107	0	0	1188	0	0	977	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	24.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	17	18	32	6	64	19	1036	73	42	859	28
Future Vol, veh/h	8	17	18	32	6	64	19	1036	73	42	859	28
Conflicting Peds, #/hr	0	0	1	0	0	1	0	0	1	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	5	5	5	1	1	1	6	6	6	4	4	4
Mvmt Flow	8	18	19	34	6	67	20	1091	77	44	904	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1599	2218	470	1720	2194	586	936	0	0	1168	0	0
Stage 1	1009	1009	-	1170	1170	-	-	-	-	-	-	-
Stage 2	589	1208	-	550	1024	-	-	-	-	-	-	-
Critical Hdwy	7.6	6.6	7	7.52	6.52	6.92	4.22	-	-	4.18	-	-
Critical Hdwy Stg 1	6.6	5.6	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.6	5.6	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.55	4.05	3.35	3.51	4.01	3.31	2.26	-	-	2.24	-	-
Pot Cap-1 Maneuver	69	41	532	58	45	456	703	-	-	582	-	-
Stage 1	252	309	-	207	267	-	-	-	-	-	-	-
Stage 2	454	248	-	489	313	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	43	36	531	~ 26	39	455	702	-	-	582	-	-
Mov Cap-2 Maneuver	43	36	-	~ 26	39	-	-	-	-	-	-	-
Stage 1	225	277	-	198	256	-	-	-	-	-	-	-
Stage 2	361	237	-	395	280	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	155.14	$ 443.11	0.56	1.54
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	56	-	-	62	66	156	-	-
HCM Lane V/C Ratio	0.028	-	-	0.735	1.623	0.076	-	-
HCM Ctrl Dly (s/v)	10.3	0.4	-	155.1	$ 443.1	11.7	1.1	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.2	9.4	0.2	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	89	7	14	52	13	22	14	5	4	20	1
Future Volume (vph)	6	89	7	14	52	13	22	14	5	4	20	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.991			0.977			0.984			0.996	
Flt Protected		0.997			0.991			0.974			0.992	
Satd. Flow (prot)	0	1859	0	0	1786	0	0	1821	0	0	1877	0
Flt Permitted		0.997			0.991			0.974			0.992	
Satd. Flow (perm)	0	1859	0	0	1786	0	0	1821	0	0	1877	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
Confl. Peds. (#/hr)			2				3					
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	8	114	9	18	67	17	28	18	6	5	26	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	131	0	0	102	0	0	52	0	0	32	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	89	7	14	52	13	22	14	5	4	20	1
Future Vol, veh/h	6	89	7	14	52	13	22	14	5	4	20	1
Conflicting Peds, #/hr	0	0	2	0	0	0	3	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	1	1	1	3	3	3	0	0	0	0	0	0
Mvmt Flow	8	114	9	18	67	17	28	18	6	5	26	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	83	0	0	125	0	0	254	255	121	249	251	78
Stage 1	-	-	-	-	-	-	136	136	-	111	111	-
Stage 2	-	-	-	-	-	-	118	119	-	138	140	-
Critical Hdwy	4.11	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1520	-	-	1455	-	-	703	652	936	708	655	988
Stage 1	-	-	-	-	-	-	872	788	-	899	808	-
Stage 2	-	-	-	-	-	-	891	801	-	869	784	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1520	-	-	1453	-	-	659	639	934	672	642	985
Mov Cap-2 Maneuver	-	-	-	-	-	-	659	639	-	672	642	-
Stage 1	-	-	-	-	-	-	866	782	-	887	797	-
Stage 2	-	-	-	-	-	-	848	791	-	839	779	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.43	1.33	10.77	10.77
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	676	104	-	-	307	-	-	656
HCM Lane V/C Ratio	0.078	0.005	-	-	0.012	-	-	0.049
HCM Ctrl Dly (s/v)	10.8	7.4	0	-	7.5	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	248	76	28	439	80	28
Future Volume (vph)	248	76	28	439	80	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.968				0.965	
Flt Protected				0.997	0.964	
Satd. Flow (prot)	1803	0	0	3564	1767	0
Flt Permitted				0.997	0.964	
Satd. Flow (perm)	1803	0	0	3564	1767	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			103	276	
Travel Time (s)	4.1			2.8	7.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	0%	0%
Adj. Flow (vph)	270	83	30	477	87	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	353	0	0	507	117	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	248	76	28	439	80	28
Future Vol, veh/h	248	76	28	439	80	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	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	270	83	30	477	87	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	352	0	610	311
Stage 1	-	-	-	-	311	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1211	-	445	734
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	732	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1211	-	433	734
Mov Cap-2 Maneuver	-	-	-	-	433	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	711	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.68	14.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	484	-	-	216	-
HCM Lane V/C Ratio	0.243	-	-	0.025	-
HCM Ctrl Dly (s/v)	14.8	-	-	8	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	94	1013	95	0	929
Future Volume (vph)	0	94	1013	95	0	929
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		75	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1644	3406	1524	0	3471
Flt Permitted						
Satd. Flow (perm)	0	1644	3406	1524	0	3471
Link Speed (mph)	25		30			30
Link Distance (ft)	159		257			414
Travel Time (s)	4.3		5.8			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	6%	6%	4%	4%
Adj. Flow (vph)	0	102	1101	103	0	1010
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	102	1101	103	0	1010
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	94	1013	95	0	929
Future Vol, veh/h	0	94	1013	95	0	929
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	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	6	6	4	4
Mvmt Flow	0	102	1101	103	0	1010

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	551	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	484	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	484	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.43	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	484	-
HCM Lane V/C Ratio	-	-	0.211	-
HCM Ctrl Dly (s/v)	-	-	14.4	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.8	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	42	90	63	12	12	39
Future Volume (vph)	42	90	63	12	12	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.978		0.897	
Flt Protected		0.984			0.988	
Satd. Flow (prot)	0	1851	1840	0	1684	0
Flt Permitted		0.984			0.988	
Satd. Flow (perm)	0	1851	1840	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		193	
Travel Time (s)		3.8	3.0		5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Adj. Flow (vph)	46	98	68	13	13	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	144	81	0	55	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	90	63	12	12	39
Future Vol, veh/h	42	90	63	12	12	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	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	46	98	68	13	13	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	82	0	-	0	264	75
Stage 1	-	-	-	-	75	-
Stage 2	-	-	-	-	189	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1522	-	-	-	729	992
Stage 1	-	-	-	-	953	-
Stage 2	-	-	-	-	848	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1522	-	-	-	706	992
Mov Cap-2 Maneuver	-	-	-	-	706	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	848	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.37	0	9.23
HCM LOS			A

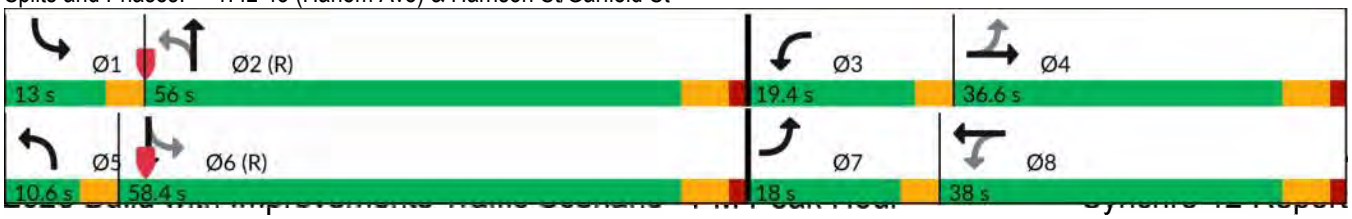
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	573	-	-	-	906
HCM Lane V/C Ratio	0.03	-	-	-	0.061
HCM Ctrl Dly (s/v)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	151	56	221	180	168	46	1074	30	112	736	30
Future Volume (vph)	200	151	56	221	180	168	46	1074	30	112	736	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		0.99	0.99		1.00	1.00			1.00	
Frt		0.959			0.927			0.996			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1796	0	1787	1731	0	1770	3523	0	1770	3514	0
Flt Permitted	0.185			0.428			0.271			0.101		
Satd. Flow (perm)	348	1796	0	800	1731	0	505	3523	0	188	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			36			3			4	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			147			413			478	
Travel Time (s)		26.5			4.0			9.4			10.9	
Confl. Peds. (#/hr)	2		3	8		1	1		2			4
Confl. Bikes (#/hr)			1			2						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	213	161	60	235	191	179	49	1143	32	119	783	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	213	221	0	235	370	0	49	1175	0	119	815	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	35.0		10.5	35.0		10.5	42.0		10.5	36.0	
Total Split (s)	18.0	36.6		19.4	38.0		10.6	56.0		13.0	58.4	
Total Split (%)	14.4%	29.3%		15.5%	30.4%		8.5%	44.8%		10.4%	46.7%	
Maximum Green (s)	14.5	30.6		15.9	32.0		7.1	50.0		9.5	52.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		19.0			19.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	43.6	27.2		45.9	28.3		64.2	55.1		68.8	58.9	
Actuated g/C Ratio	0.35	0.22		0.37	0.23		0.51	0.44		0.55	0.47	
v/c Ratio	0.76	0.55		0.57	0.88		0.15	0.76		0.56	0.49	
Control Delay (s/veh)	44.0	45.5		32.2	64.6		15.4	34.3		25.3	25.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	44.0	45.5		32.2	64.6		15.4	34.3		25.3	25.4	
LOS	D	D		C	E		B	C		C	C	
Approach Delay (s/veh)		44.8			52.0			33.6			25.4	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 36.2		Intersection LOS: D	
Intersection Capacity Utilization 84.5%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	151	56	221	180	168	46	1074	30	112	736	30
Future Volume (veh/h)	200	151	56	221	180	168	46	1074	30	112	736	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	213	161	60	235	191	179	49	1143	32	119	783	32
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	272	292	109	400	207	194	325	1615	45	241	1678	69
Arrive On Green	0.11	0.22	0.22	0.12	0.23	0.23	0.03	0.46	0.46	0.05	0.48	0.48
Sat Flow, veh/h	1795	1303	485	1795	884	828	1781	3530	99	1781	3479	142
Grp Volume(v), veh/h	213	0	221	235	0	370	49	575	600	119	400	415
Grp Sat Flow(s),veh/h/ln	1795	0	1788	1795	0	1712	1781	1777	1852	1781	1777	1844
Q Serve(g_s), s	11.3	0.0	13.7	12.4	0.0	26.4	1.8	32.5	32.5	4.3	18.8	18.8
Cycle Q Clear(g_c), s	11.3	0.0	13.7	12.4	0.0	26.4	1.8	32.5	32.5	4.3	18.8	18.8
Prop In Lane	1.00		0.27	1.00		0.48	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	272	0	401	400	0	400	325	813	848	241	857	890
V/C Ratio(X)	0.78	0.00	0.55	0.59	0.00	0.92	0.15	0.71	0.71	0.49	0.47	0.47
Avail Cap(c_a), veh/h	289	0	438	420	0	438	381	813	848	287	857	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	42.9	32.2	0.0	46.8	18.3	27.2	27.2	21.6	21.6	21.6
Incr Delay (d2), s/veh	12.5	0.0	1.2	2.0	0.0	24.3	0.2	5.2	5.0	1.6	1.8	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	6.3	5.7	0.0	14.0	0.8	14.7	15.3	1.9	8.2	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	47.2	0.0	44.2	34.2	0.0	71.1	18.5	32.3	32.2	23.1	23.4	23.4
LnGrp LOS	D		D	C		E	B	C	C	C	C	C
Approach Vol, veh/h		434			605			1224			934	
Approach Delay, s/veh		45.7			56.8			31.7			23.4	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	63.2	18.0	34.0	6.6	66.3	16.8	35.2
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	9.5	50.0	15.9	30.6	7.1	52.4	14.5	32.0
Max Q Clear Time (g_c+I1), s	6.3	34.5	14.4	15.7	3.8	20.8	13.3	28.4
Green Ext Time (p_c), s	0.1	7.1	0.1	1.1	0.0	5.9	0.1	0.8

Intersection Summary	
HCM 7th Control Delay, s/veh	35.9
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	236	17	15	506	19	13
Future Volume (vph)	236	17	15	506	19	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.947	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	1883	0	1787	1881	1747	0
Flt Permitted			0.950		0.971	
Satd. Flow (perm)	1883	0	1787	1881	1747	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	108			1430	666	
Travel Time (s)	2.9			39.0	18.2	
Confl. Peds. (#/hr)		1				1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	243	18	15	522	20	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	261	0	15	522	33	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	236	17	15	506	19	13
Future Vol, veh/h	236	17	15	506	19	13
Conflicting Peds, #/hr	0	1	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	243	18	15	522	20	13

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	262	0	806	254
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	553	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1308	-	354	790
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	580	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1307	-	350	788
Mov Cap-2 Maneuver	-	-	-	-	350	-
Stage 1	-	-	-	-	793	-
Stage 2	-	-	-	-	574	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.22	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	452	-	-	1307	-
HCM Lane V/C Ratio	0.073	-	-	0.012	-
HCM Ctrl Dly (s/v)	13.6	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	18	42	34	10	46	16	1085	63	36	951	26
Future Volume (vph)	19	18	42	34	10	46	16	1085	63	36	951	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.929			0.930			0.992			0.996	
Flt Protected		0.988			0.982			0.999			0.998	
Satd. Flow (prot)	0	1727	0	0	1701	0	0	3507	0	0	3518	0
Flt Permitted		0.988			0.982			0.999			0.998	
Satd. Flow (perm)	0	1727	0	0	1701	0	0	3507	0	0	3518	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			258	
Travel Time (s)		26.7			3.8			45.5			5.9	
Confl. Peds. (#/hr)	3								2			
Confl. Bikes (#/hr)									4			1
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 (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	21	20	46	37	11	51	18	1192	69	40	1045	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	87	0	0	99	0	0	1279	0	0	1114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.6%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	84.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	18	42	34	10	46	16	1085	63	36	951	26
Future Vol, veh/h	19	18	42	34	10	46	16	1085	63	36	951	26
Conflicting Peds, #/hr	3	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2
Mvmt Flow	21	20	46	37	11	51	18	1192	69	40	1045	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1778	2437	537	1876	2417	636	1074	0	0	1264	0	0
Stage 1	1138	1138	-	1264	1264	-	-	-	-	-	-	-
Stage 2	640	1299	-	612	1153	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	53	32	491	44	32	421	645	-	-	546	-	-
Stage 1	216	276	-	179	239	-	-	-	-	-	-	-
Stage 2	433	232	-	447	270	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	25	27	491	~ 10	28	419	645	-	-	545	-	-
Mov Cap-2 Maneuver	25	27	-	~ 10	28	-	-	-	-	-	-	-
Stage 1	194	248	-	171	228	-	-	-	-	-	-	-
Stage 2	346	222	-	334	242	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 489.68	$ 1759.04	0.56	1.53
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	46	-	-	53	24	123	-	-
HCM Lane V/C Ratio	0.027	-	-	1.653	4.166	0.073	-	-
HCM Ctrl Dly (s/v)	10.7	0.4	-	$ 489.7	$ 1759	12.1	1.2	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	8.2	12.4	0.2	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	65	17	19	44	2	22	21	6	5	25	2
Future Volume (vph)	9	65	17	19	44	2	22	21	6	5	25	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.996			0.983			0.992	
Flt Protected		0.995			0.985			0.978			0.992	
Satd. Flow (prot)	0	1807	0	0	1810	0	0	1827	0	0	1870	0
Flt Permitted		0.995			0.985			0.978			0.992	
Satd. Flow (perm)	0	1807	0	0	1810	0	0	1827	0	0	1870	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
Confl. Peds. (#/hr)				1								2
Confl. Bikes (#/hr)												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 (%)	2%	2%	2%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	10	74	19	22	50	2	25	24	7	6	28	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	74	0	0	56	0	0	36	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	9	65	17	19	44	2	22	21	6	5	25	2
Future Vol, veh/h	9	65	17	19	44	2	22	21	6	5	25	2
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	0	0	0
Mvmt Flow	10	74	19	22	50	2	25	24	7	6	28	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	52	0	0	94	0	0	214	200	85	201	209	53
Stage 1	-	-	-	-	-	-	105	105	-	94	94	-
Stage 2	-	-	-	-	-	-	109	95	-	106	115	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1554	-	-	1494	-	-	747	699	980	762	692	1020
Stage 1	-	-	-	-	-	-	906	812	-	917	821	-
Stage 2	-	-	-	-	-	-	901	820	-	904	805	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1554	-	-	1492	-	-	697	683	979	715	676	1018
Mov Cap-2 Maneuver	-	-	-	-	-	-	697	683	-	715	676	-
Stage 1	-	-	-	-	-	-	898	806	-	904	809	-
Stage 2	-	-	-	-	-	-	853	808	-	865	798	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.73	2.18	10.45	10.45
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	716	171	-	-	522	-	-	696
HCM Lane V/C Ratio	0.078	0.007	-	-	0.014	-	-	0.052
HCM Ctrl Dly (s/v)	10.5	7.3	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	229	64	24	501	68	24
Future Volume (vph)	229	64	24	501	68	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.970				0.965	
Flt Protected				0.998	0.964	
Satd. Flow (prot)	1843	0	0	3567	1767	0
Flt Permitted				0.998	0.964	
Satd. Flow (perm)	1843	0	0	3567	1767	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	147			108	282	
Travel Time (s)	4.0			2.9	7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	249	70	26	545	74	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	319	0	0	571	100	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	229	64	24	501	68	24
Future Vol, veh/h	229	64	24	501	68	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	249	70	26	545	74	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	318	0	608	284
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	324	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1246	-	447	760
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1246	-	436	760
Mov Cap-2 Maneuver	-	-	-	-	436	-
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	694	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.53	14.21
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	490	-	-	165	-
HCM Lane V/C Ratio	0.204	-	-	0.021	-
HCM Ctrl Dly (s/v)	14.2	-	-	8	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	81	1069	81	0	1013
Future Volume (vph)	0	81	1069	81	0	1013
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		75	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1644	3539	1583	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1644	3539	1583	0	3539
Link Speed (mph)	25		30			30
Link Distance (ft)	187		258			413
Travel Time (s)	5.1		5.9			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	88	1162	88	0	1101
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	88	1162	88	0	1101
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	41.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	81	1069	81	0	1013
Future Vol, veh/h	0	81	1069	81	0	1013
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	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	0	88	1162	88	0	1101

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	581	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	462	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	462	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	14.62	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	462	-
HCM Lane V/C Ratio	-	-	0.191	-
HCM Ctrl Dly (s/v)	-	-	14.6	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.7	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	81	58	10	10	32
Future Volume (vph)	36	81	58	10	10	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.980		0.897	
Flt Protected		0.985			0.988	
Satd. Flow (prot)	0	1835	1808	0	1684	0
Flt Permitted		0.985			0.988	
Satd. Flow (perm)	0	1835	1808	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		201	
Travel Time (s)		3.8	3.0		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	3%	0%	0%
Adj. Flow (vph)	39	88	63	11	11	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	127	74	0	46	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	81	58	10	10	32
Future Vol, veh/h	36	81	58	10	10	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	3	0	0
Mvmt Flow	39	88	63	11	11	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	74	0	-	0	235	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	166	-
Critical Hdwy	4.12	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1526	-	-	-	758	1000
Stage 1	-	-	-	-	959	-
Stage 2	-	-	-	-	868	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1526	-	-	-	737	1000
Mov Cap-2 Maneuver	-	-	-	-	737	-
Stage 1	-	-	-	-	934	-
Stage 2	-	-	-	-	868	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.28	0	9.11
HCM LOS			A

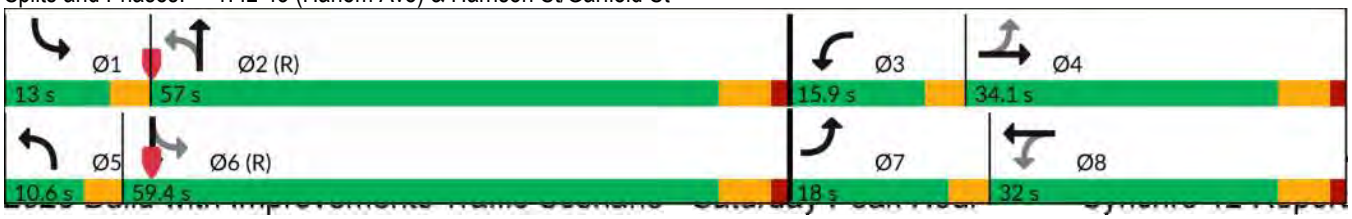
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	922
HCM Lane V/C Ratio	0.026	-	-	-	0.05
HCM Ctrl Dly (s/v)	7.4	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	214	138	32	197	122	210	27	1243	24	124	780	45
Future Volume (vph)	214	138	32	197	122	210	27	1243	24	124	780	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00	0.99			1.00			1.00	
Frt		0.972			0.905			0.997			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1823	0	1787	1688	0	1787	3562	0	1770	3507	0
Flt Permitted	0.158			0.586			0.280			0.078		
Satd. Flow (perm)	297	1823	0	1097	1688	0	527	3562	0	145	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			66			2			6	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			152			414			478	
Travel Time (s)		26.5			4.1			9.4			10.9	
Confl. Peds. (#/hr)			2	4								1
Confl. Bikes (#/hr)						1			2			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	218	141	33	201	124	214	28	1268	24	127	796	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	218	174	0	201	338	0	28	1292	0	127	842	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	42.0		10.5	36.0	
Total Split (s)	18.0	34.1		15.9	32.0		10.6	57.0		13.0	59.4	
Total Split (%)	15.0%	28.4%		13.3%	26.7%		8.8%	47.5%		10.8%	49.5%	
Maximum Green (s)	14.5	28.1		12.4	26.0		7.1	51.0		9.5	53.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		14.0			14.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	41.9	25.4		38.0	23.4		63.7	54.9		69.1	60.9	
Actuated g/C Ratio	0.35	0.21		0.32	0.20		0.53	0.46		0.58	0.51	
v/c Ratio	0.79	0.44		0.48	0.88		0.08	0.79		0.63	0.47	
Control Delay (s/veh)	48.3	42.1		31.4	62.1		12.7	33.1		32.1	21.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	48.3	42.1		31.4	62.1		12.7	33.1		32.1	21.6	
LOS	D	D		C	E		B	C		C	C	
Approach Delay (s/veh)		45.5			50.6			32.7			23.0	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay (s/veh): 34.3		Intersection LOS: C	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	214	138	32	197	122	210	27	1243	24	124	780	45
Future Volume (veh/h)	214	138	32	197	122	210	27	1243	24	124	780	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	218	141	33	201	124	214	28	1268	24	127	796	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	276	330	77	417	132	228	317	1664	31	226	1708	99
Arrive On Green	0.11	0.22	0.22	0.10	0.22	0.22	0.02	0.46	0.46	0.05	0.50	0.50
Sat Flow, veh/h	1795	1476	346	1795	613	1058	1795	3594	68	1781	3414	197
Grp Volume(v), veh/h	218	0	174	201	0	338	28	632	660	127	414	428
Grp Sat Flow(s),veh/h/ln	1795	0	1822	1795	0	1671	1795	1791	1871	1781	1777	1835
Q Serve(g_s), s	11.2	0.0	9.8	10.3	0.0	23.9	1.0	35.1	35.2	4.3	18.2	18.2
Cycle Q Clear(g_c), s	11.2	0.0	9.8	10.3	0.0	23.9	1.0	35.1	35.2	4.3	18.2	18.2
Prop In Lane	1.00		0.19	1.00		0.63	1.00		0.04	1.00		0.11
Lane Grp Cap(c), veh/h	276	0	408	417	0	361	317	829	866	226	889	918
V/C Ratio(X)	0.79	0.00	0.43	0.48	0.00	0.94	0.09	0.76	0.76	0.56	0.47	0.47
Avail Cap(c_a), veh/h	295	0	427	418	0	362	396	829	866	274	889	918
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	40.0	31.8	0.0	46.3	17.4	26.7	26.7	22.3	19.5	19.5
Incr Delay (d2), s/veh	12.8	0.0	0.7	0.9	0.0	31.6	0.1	6.5	6.3	2.2	1.8	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	4.5	4.6	0.0	13.1	0.4	16.2	16.9	1.9	7.9	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	46.5	0.0	40.7	32.7	0.0	77.8	17.5	33.3	33.0	24.5	21.3	21.2
LnGrp LOS	D		D	C		E	B	C	C	C	C	C
Approach Vol, veh/h		392			539			1320			969	
Approach Delay, s/veh		43.9			61.0			32.8			21.7	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	61.6	15.8	32.8	5.3	66.0	16.8	31.9
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	9.5	51.0	12.4	28.1	7.1	53.4	14.5	26.0
Max Q Clear Time (g_c+I1), s	6.3	37.2	12.3	11.8	3.0	20.2	13.2	25.9
Green Ext Time (p_c), s	0.1	7.4	0.0	0.8	0.0	6.2	0.1	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	35.5
HCM 7th LOS	D

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	220	20	7	457	22	14
Future Volume (vph)	220	20	7	457	22	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.989				0.949	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	1879	0	1770	1863	1749	0
Flt Permitted			0.950		0.970	
Satd. Flow (perm)	1879	0	1770	1863	1749	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	103			1430	666	
Travel Time (s)	2.8			39.0	18.2	
Confl. Peds. (#/hr)					1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%
Adj. Flow (vph)	256	23	8	531	26	16
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	0	8	531	42	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 34.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	220	20	7	457	22	14
Future Vol, veh/h	220	20	7	457	22	14
Conflicting Peds, #/hr	0	0	0	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	256	23	8	531	26	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	279	0	816	268
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	549	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1284	-	349	775
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	583	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1284	-	347	774
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	579	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.12	14.01
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	441	-	-	1284	-
HCM Lane V/C Ratio	0.095	-	-	0.006	-
HCM Ctrl Dly (s/v)	14	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	14	35	37	8	68	21	1201	60	49	932	28
Future Volume (vph)	24	14	35	37	8	68	21	1201	60	49	932	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.936			0.919			0.993			0.996	
Flt Protected		0.984			0.984			0.999			0.998	
Satd. Flow (prot)	0	1733	0	0	1718	0	0	3546	0	0	3518	0
Flt Permitted		0.984			0.984			0.999			0.998	
Satd. Flow (perm)	0	1733	0	0	1718	0	0	3546	0	0	3518	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			257	
Travel Time (s)		26.7			3.8			45.5			5.8	
Confl. Peds. (#/hr)									1			
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	25	15	36	39	8	71	22	1251	63	51	971	29
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	76	0	0	118	0	0	1336	0	0	1051	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	66.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	24	14	35	37	8	68	21	1201	60	49	932	28
Future Vol, veh/h	24	14	35	37	8	68	21	1201	60	49	932	28
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	2	2	2
Mvmt Flow	25	15	36	39	8	71	22	1251	63	51	971	29

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1761	2446	500	1922	2429	658	1000	0	0	1315	0	0
Stage 1	1088	1088	-	1327	1327	-	-	-	-	-	-	-
Stage 2	673	1358	-	595	1102	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	54	31	519	41	32	412	694	-	-	522	-	-
Stage 1	232	292	-	167	227	-	-	-	-	-	-	-
Stage 2	413	217	-	463	290	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	27	26	519	~ 15	27	411	694	-	-	521	-	-
Mov Cap-2 Maneuver	27	26	-	~ 15	27	-	-	-	-	-	-	-
Stage 1	201	253	-	158	215	-	-	-	-	-	-	-
Stage 2	312	206	-	350	250	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 471.47	$ 1133.2	0.64	2.05
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	55	-	-	48	39	168	-	-
HCM Lane V/C Ratio	0.032	-	-	1.573	3.03	0.098	-	-
HCM Ctrl Dly (s/v)	10.4	0.5	-	$ 471.5	$ 1133.2	12.7	1.6	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	7.3	13.2	0.3	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	60	27	24	54	2	30	27	7	3	21	3
Future Volume (vph)	7	60	27	24	54	2	30	27	7	3	21	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.961			0.997			0.985			0.986	
Flt Protected		0.996			0.985			0.977			0.995	
Satd. Flow (prot)	0	1819	0	0	1866	0	0	1828	0	0	1864	0
Flt Permitted		0.996			0.985			0.977			0.995	
Satd. Flow (perm)	0	1819	0	0	1866	0	0	1828	0	0	1864	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	8	68	31	27	61	2	34	31	8	3	24	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	107	0	0	90	0	0	73	0	0	30	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	60	27	24	54	2	30	27	7	3	21	3
Future Vol, veh/h	7	60	27	24	54	2	30	27	7	3	21	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	8	68	31	27	61	2	34	31	8	3	24	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	64	0	0	99	0	0	227	218	84	216	232	63
Stage 1	-	-	-	-	-	-	99	99	-	117	117	-
Stage 2	-	-	-	-	-	-	128	118	-	99	115	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1552	-	-	1507	-	-	732	684	981	744	672	1008
Stage 1	-	-	-	-	-	-	912	817	-	892	803	-
Stage 2	-	-	-	-	-	-	881	802	-	912	804	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1552	-	-	1507	-	-	687	667	981	688	656	1008
Mov Cap-2 Maneuver	-	-	-	-	-	-	687	667	-	688	656	-
Stage 1	-	-	-	-	-	-	907	812	-	876	788	-
Stage 2	-	-	-	-	-	-	835	787	-	865	800	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.55	2.23	10.73	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	701	126	-	-	536	-	-	686
HCM Lane V/C Ratio	0.104	0.005	-	-	0.018	-	-	0.045
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.4	0	-	10.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.1	-	-	0.1



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	214	72	26	453	76	26
Future Volume (vph)	214	72	26	453	76	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.966				0.966	
Flt Protected				0.997	0.964	
Satd. Flow (prot)	1835	0	0	3564	1769	0
Flt Permitted				0.997	0.964	
Satd. Flow (perm)	1835	0	0	3564	1769	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			103	288	
Travel Time (s)	4.1			2.8	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	233	78	28	492	83	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	0	520	111	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	214	72	26	453	76	26
Future Vol, veh/h	214	72	26	453	76	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	233	78	28	492	83	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	311	0	574	272
Stage 1	-	-	-	-	272	-
Stage 2	-	-	-	-	303	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1254	-	468	772
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1254	-	456	772
Mov Cap-2 Maneuver	-	-	-	-	456	-
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	710	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.61	14.03
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	509	-	-	195	-
HCM Lane V/C Ratio	0.218	-	-	0.023	-
HCM Ctrl Dly (s/v)	14	-	-	7.9	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	89	1205	88	0	1009
Future Volume (vph)	0	89	1205	88	0	1009
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		75	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1644	3574	1599	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1644	3574	1599	0	3539
Link Speed (mph)	25		30			30
Link Distance (ft)	186		257			414
Travel Time (s)	5.1		5.8			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Adj. Flow (vph)	0	97	1310	96	0	1097
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	97	1310	96	0	1097
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	89	1205	88	0	1009
Future Vol, veh/h	0	89	1205	88	0	1009
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	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	0	97	1310	96	0	1097

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	655	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	414	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	414	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.34	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	414	-
HCM Lane V/C Ratio	-	-	0.234	-
HCM Ctrl Dly (s/v)	-	-	16.3	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.9	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	83	76	11	11	37
Future Volume (vph)	40	83	76	11	11	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.983		0.896	
Flt Protected		0.984			0.989	
Satd. Flow (prot)	0	1870	1868	0	1684	0
Flt Permitted		0.984			0.989	
Satd. Flow (perm)	0	1870	1868	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		200	
Travel Time (s)		3.8	3.0		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	43	90	83	12	12	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	133	95	0	52	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	83	76	11	11	37
Future Vol, veh/h	40	83	76	11	11	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	90	83	12	12	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	95	0	-	0	266	89
Stage 1	-	-	-	-	89	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1512	-	-	-	728	975
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	858	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1512	-	-	-	706	975
Mov Cap-2 Maneuver	-	-	-	-	706	-
Stage 1	-	-	-	-	911	-
Stage 2	-	-	-	-	858	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.42	0	9.26
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	585	-	-	-	897
HCM Lane V/C Ratio	0.029	-	-	-	0.058
HCM Ctrl Dly (s/v)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

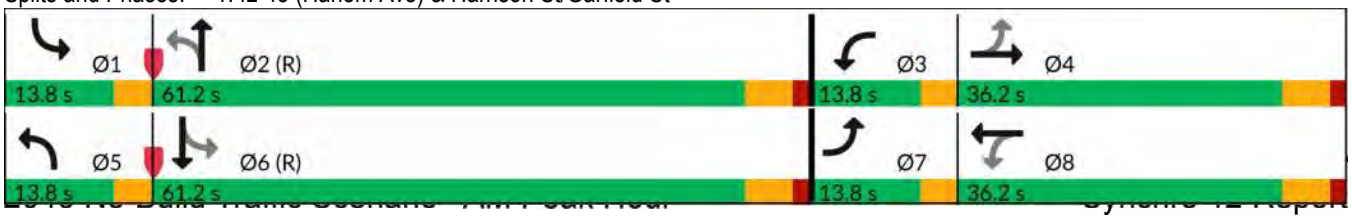
APPENDIX F
2046 NO-BUILD TRAFFIC SCENARIO
CAPACITY ANALYSIS SUMMARY SHEETS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	178	21	165	190	150	61	1176	15	106	857	61
Future Volume (vph)	107	178	21	165	190	150	61	1176	15	106	857	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	0.99		1.00			1.00	1.00	
Frt		0.984			0.934			0.998			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1830	0	1787	1747	0	1703	3399	0	1736	3431	0
Flt Permitted	0.199			0.464			0.214			0.099		
Satd. Flow (perm)	370	1830	0	870	1747	0	383	3399	0	181	3431	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4			30			1			7	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		950			255			671			478	
Travel Time (s)		25.9			7.0			15.3			10.9	
Confl. Peds. (#/hr)	2		1	4		1	6			4		1
Confl. Bikes (#/hr)			1									
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 (%)	2%	2%	2%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	113	187	22	174	200	158	64	1238	16	112	902	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	209	0	174	358	0	64	1254	0	112	966	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	36.0		10.5	36.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.8	36.2		13.8	36.2		13.8	61.2		13.8	61.2	
Total Split (%)	11.0%	29.0%		11.0%	29.0%		11.0%	49.0%		11.0%	49.0%	
Maximum Green (s)	10.3	30.2		10.3	30.2		10.3	55.2		10.3	55.2	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		20.0			20.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	39.7	27.5		40.8	28.1		69.5	59.4		72.6	62.5	
Actuated g/C Ratio	0.32	0.22		0.33	0.22		0.56	0.48		0.58	0.50	
v/c Ratio	0.50	0.51		0.49	0.86		0.22	0.78		0.52	0.56	
Control Delay (s/veh)	35.4	46.2		33.8	63.1		13.6	32.4		21.9	24.5	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	35.4	46.2		33.8	63.1		13.6	32.4		21.9	24.5	
LOS	D	D		C	E		B	C		C	C	
Approach Delay (s/veh)		42.4			53.5			31.5			24.3	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 97.5 (78%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.86			
Intersection Signal Delay (s/veh): 33.8		Intersection LOS: C	
Intersection Capacity Utilization 80.9%		ICU Level of Service D	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	178	21	165	190	150	61	1176	15	106	857	61
Future Volume (veh/h)	107	178	21	165	190	150	61	1176	15	106	857	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1811	1811	1811	1841	1841	1841
Adj Flow Rate, veh/h	113	187	22	174	200	158	64	1238	16	112	902	64
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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	4	4	4
Cap, veh/h	199	341	40	331	220	174	307	1780	23	243	1745	124
Arrive On Green	0.06	0.21	0.21	0.08	0.23	0.23	0.03	0.51	0.51	0.05	0.53	0.53
Sat Flow, veh/h	1781	1639	193	1795	973	769	1725	3478	45	1753	3311	235
Grp Volume(v), veh/h	113	0	209	174	0	358	64	612	642	112	476	490
Grp Sat Flow(s),veh/h/ln	1781	0	1832	1795	0	1742	1725	1721	1803	1753	1749	1797
Q Serve(g_s), s	6.2	0.0	12.7	9.4	0.0	25.0	2.2	33.7	33.7	3.7	22.1	22.1
Cycle Q Clear(g_c), s	6.2	0.0	12.7	9.4	0.0	25.0	2.2	33.7	33.7	3.7	22.1	22.1
Prop In Lane	1.00		0.11	1.00		0.44	1.00		0.02	1.00		0.13
Lane Grp Cap(c), veh/h	199	0	381	331	0	394	307	880	922	243	922	947
V/C Ratio(X)	0.57	0.00	0.55	0.53	0.00	0.91	0.21	0.70	0.70	0.46	0.52	0.52
Avail Cap(c_a), veh/h	231	0	443	331	0	421	397	880	922	307	922	947
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	44.2	35.1	0.0	47.1	15.5	23.1	23.1	19.2	19.2	19.2
Incr Delay (d2), s/veh	2.5	0.0	2.6	1.5	0.0	24.1	0.3	4.5	4.3	1.4	2.1	2.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	6.1	4.3	0.0	13.5	0.9	14.5	15.1	1.6	9.4	9.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	40.2	0.0	46.8	36.6	0.0	71.2	15.8	27.7	27.5	20.5	21.3	21.2
LnGrp LOS	D		D	D		E	B	C	C	C	C	C
Approach Vol, veh/h		322			532			1318			1078	
Approach Delay, s/veh		44.5			59.9			27.0			21.2	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.2	70.0	13.8	32.0	7.3	71.9	11.5	34.3
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	10.3	55.2	10.3	30.2	10.3	55.2	10.3	30.2
Max Q Clear Time (g_c+I1), s	5.7	35.7	11.4	14.7	4.2	24.1	8.2	27.0
Green Ext Time (p_c), s	0.1	16.6	0.0	1.8	0.1	20.0	0.0	1.1

Intersection Summary	
HCM 7th Control Delay, s/veh	32.2
HCM 7th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	282	17	11	478	27	10
Future Volume (vph)	282	17	11	478	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.964	
Flt Protected			0.950		0.965	
Satd. Flow (prot)	1848	0	1787	1881	1716	0
Flt Permitted			0.950		0.965	
Satd. Flow (perm)	1848	0	1787	1881	1716	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	255			1430	666	
Travel Time (s)	7.0			39.0	18.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Adj. Flow (vph)	344	21	13	583	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	365	0	13	583	45	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	282	17	11	478	27	10
Future Vol, veh/h	282	17	11	478	27	10
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	344	21	13	583	33	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	365	0	965	354
Stage 1	-	-	-	-	354	-
Stage 2	-	-	-	-	611	-
Critical Hdwy	-	-	4.11	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.209	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1199	-	282	687
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1199	-	278	687
Mov Cap-2 Maneuver	-	-	-	-	278	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	533	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.18	17.56
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	331	-	-	1199	-
HCM Lane V/C Ratio	0.136	-	-	0.011	-
HCM Ctrl Dly (s/v)	17.6	-	-	8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	18	20	3	7	71	22	1172	81	16	996	31
Future Volume (vph)	9	18	20	3	7	71	22	1172	81	16	996	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.942			0.881			0.990			0.995	
Flt Protected		0.991			0.998			0.999			0.999	
Satd. Flow (prot)	0	1705	0	0	1654	0	0	3368	0	0	3450	0
Flt Permitted		0.991			0.998			0.999			0.999	
Satd. Flow (perm)	0	1705	0	0	1654	0	0	3368	0	0	3450	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			248			2002			671	
Travel Time (s)		26.7			6.8			45.5			15.3	
Confl. Peds. (#/hr)			1			1			1			2
Confl. Bikes (#/hr)												1
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 (%)	4%	4%	4%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	9	19	21	3	7	75	23	1234	85	17	1048	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	49	0	0	85	0	0	1342	0	0	1098	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.1%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	9.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	18	20	3	7	71	22	1172	81	16	996	31
Future Vol, veh/h	9	18	20	3	7	71	22	1172	81	16	996	31
Conflicting Peds, #/hr	0	0	1	0	0	1	0	0	1	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	1	1	1	6	6	6	4	4	4
Mvmt Flow	9	19	21	3	7	75	23	1234	85	17	1048	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1768	2467	544	1892	2440	661	1083	0	0	1320	0	0
Stage 1	1100	1100	-	1324	1324	-	-	-	-	-	-	-
Stage 2	668	1366	-	568	1117	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.52	6.52	6.92	4.22	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.51	4.01	3.31	2.26	-	-	2.24	-	-
Pot Cap-1 Maneuver	52	29	478	43	31	407	617	-	-	509	-	-
Stage 1	223	282	-	166	226	-	-	-	-	-	-	-
Stage 2	409	210	-	477	283	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	29	26	477	11	28	406	616	-	-	508	-	-
Mov Cap-2 Maneuver	29	26	-	11	28	-	-	-	-	-	-	-
Stage 1	212	268	-	156	212	-	-	-	-	-	-	-
Stage 2	303	197	-	403	269	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 311.29	95.67	0.78	0.73
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	57	-	-	45	115	53	-	-
HCM Lane V/C Ratio	0.038	-	-	1.107	0.741	0.033	-	-
HCM Ctrl Dly (s/v)	11.1	0.6	-	$ 311.3	95.7	12.3	0.6	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	4.6	4.1	0.1	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	101	7	16	57	14	23	16	6	4	23	1
Future Volume (vph)	7	101	7	16	57	14	23	16	6	4	23	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.992			0.978			0.981			0.996	
Flt Protected		0.997			0.991			0.976			0.993	
Satd. Flow (prot)	0	1861	0	0	1805	0	0	1819	0	0	1879	0
Flt Permitted		0.997			0.991			0.976			0.993	
Satd. Flow (perm)	0	1861	0	0	1805	0	0	1819	0	0	1879	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			1221			1978			666	
Travel Time (s)		6.8			33.3			53.9			18.2	
Confl. Peds. (#/hr)			2				3					
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	9	129	9	21	73	18	29	21	8	5	29	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	147	0	0	112	0	0	58	0	0	35	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 22.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	101	7	16	57	14	23	16	6	4	23	1
Future Vol, veh/h	7	101	7	16	57	14	23	16	6	4	23	1
Conflicting Peds, #/hr	0	0	2	0	0	0	3	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	0	0	0
Mvmt Flow	9	129	9	21	73	18	29	21	8	5	29	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	91	0	0	140	0	0	286	286	136	281	281	85
Stage 1	-	-	-	-	-	-	154	154	-	123	123	-
Stage 2	-	-	-	-	-	-	132	132	-	158	158	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1510	-	-	1443	-	-	671	627	918	676	630	979
Stage 1	-	-	-	-	-	-	853	774	-	886	798	-
Stage 2	-	-	-	-	-	-	876	791	-	849	771	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1510	-	-	1440	-	-	622	612	916	634	616	977
Mov Cap-2 Maneuver	-	-	-	-	-	-	622	612	-	634	616	-
Stage 1	-	-	-	-	-	-	846	768	-	873	786	-
Stage 2	-	-	-	-	-	-	827	779	-	814	764	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.45	1.39	11.12	11.09
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	646	108	-	-	318	-	-	627
HCM Lane V/C Ratio	0.089	0.006	-	-	0.014	-	-	0.057
HCM Ctrl Dly (s/v)	11.1	7.4	0	-	7.5	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	163	59	195	195	180	50	1220	35	78	888	35
Future Volume (vph)	220	163	59	195	195	180	50	1220	35	78	888	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		0.99	0.99		1.00	1.00			1.00	
Frt		0.960			0.928			0.996			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1798	0	1787	1733	0	1770	3523	0	1770	3514	0
Flt Permitted	0.139			0.430			0.200			0.082		
Satd. Flow (perm)	261	1798	0	804	1733	0	372	3523	0	153	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			35			3			4	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			255			671			478	
Travel Time (s)		26.5			7.0			15.3			10.9	
Confl. Peds. (#/hr)	2		3	8		1	1		2			4
Confl. Bikes (#/hr)			1			2						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	234	173	63	207	207	191	53	1298	37	83	945	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	236	0	207	398	0	53	1335	0	83	982	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	35.0		10.5	35.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.8	35.0		13.8	35.0		13.8	62.4		13.8	62.4	
Total Split (%)	11.0%	28.0%		11.0%	28.0%		11.0%	49.9%		11.0%	49.9%	
Maximum Green (s)	10.3	29.0		10.3	29.0		10.3	56.4		10.3	56.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		19.0			19.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	41.5	28.7		41.5	28.7		69.3	60.9		71.1	61.8	
Actuated g/C Ratio	0.33	0.23		0.33	0.23		0.55	0.49		0.57	0.49	
v/c Ratio	1.10	0.56		0.60	0.94		0.19	0.78		0.43	0.57	
Control Delay (s/veh)	123.7	45.7		37.8	74.5		13.0	31.3		18.8	24.4	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	123.7	45.7		37.8	74.5		13.0	31.3		18.8	24.4	
LOS	F	D		D	E		B	C		B	C	
Approach Delay (s/veh)		84.5			61.9			30.6			24.0	
Approach LOS		F			E			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 97.5 (78%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.10			
Intersection Signal Delay (s/veh): 41.2		Intersection LOS: D	
Intersection Capacity Utilization 89.4%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	163	59	195	195	180	50	1220	35	78	888	35
Future Volume (veh/h)	220	163	59	195	195	180	50	1220	35	78	888	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	173	63	207	207	191	53	1298	37	83	945	37
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	206	304	111	338	207	191	290	1752	50	207	1769	69
Arrive On Green	0.08	0.23	0.23	0.08	0.23	0.23	0.03	0.50	0.50	0.04	0.51	0.51
Sat Flow, veh/h	1795	1312	478	1795	891	822	1781	3528	101	1781	3486	136
Grp Volume(v), veh/h	234	0	236	207	0	398	53	653	682	83	482	500
Grp Sat Flow(s),veh/h/ln	1795	0	1790	1795	0	1713	1781	1777	1852	1781	1777	1845
Q Serve(g_s), s	10.3	0.0	14.6	10.3	0.0	29.0	1.8	36.6	36.7	2.8	22.9	22.9
Cycle Q Clear(g_c), s	10.3	0.0	14.6	10.3	0.0	29.0	1.8	36.6	36.7	2.8	22.9	22.9
Prop In Lane	1.00		0.27	1.00		0.48	1.00		0.05	1.00		0.07
Lane Grp Cap(c), veh/h	206	0	415	338	0	397	290	882	919	207	902	937
V/C Ratio(X)	1.14	0.00	0.57	0.61	0.00	1.00	0.18	0.74	0.74	0.40	0.53	0.53
Avail Cap(c_a), veh/h	206	0	415	338	0	397	390	882	919	288	902	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	42.5	35.2	0.0	48.0	16.7	25.1	25.1	21.0	20.8	20.8
Incr Delay (d2), s/veh	105.0	0.0	3.0	3.2	0.0	45.5	0.3	5.6	5.4	1.3	2.3	2.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.9	0.0	6.9	5.2	0.0	17.4	0.8	16.4	17.1	1.2	10.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	142.9	0.0	45.5	38.4	0.0	93.5	17.0	30.6	30.4	22.3	23.1	23.0
LnGrp LOS	F		D	D		F	B	C	C	C	C	C
Approach Vol, veh/h		470			605			1388			1065	
Approach Delay, s/veh		94.0			74.6			30.0			23.0	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.1	68.1	13.8	35.0	6.8	69.4	13.8	35.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	10.3	56.4	10.3	29.0	10.3	56.4	10.3	29.0
Max Q Clear Time (g_c+I1), s	4.8	38.7	12.3	16.6	3.8	24.9	12.3	31.0
Green Ext Time (p_c), s	0.1	15.8	0.0	1.9	0.0	20.5	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	44.1
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	257	19	17	549	21	14
Future Volume (vph)	257	19	17	549	21	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.947	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	1883	0	1787	1881	1745	0
Flt Permitted			0.950		0.970	
Satd. Flow (perm)	1883	0	1787	1881	1745	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	255			1430	666	
Travel Time (s)	7.0			39.0	18.2	
Confl. Peds. (#/hr)		1				1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	265	20	18	566	22	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	285	0	18	566	36	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	257	19	17	549	21	14
Future Vol, veh/h	257	19	17	549	21	14
Conflicting Peds, #/hr	0	1	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	265	20	18	566	22	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	286	0	877	277
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	601	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1282	-	322	767
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	551	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1281	-	317	765
Mov Cap-2 Maneuver	-	-	-	-	317	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	544	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.24	14.53
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	414	-	-	1281	-
HCM Lane V/C Ratio	0.087	-	-	0.014	-
HCM Ctrl Dly (s/v)	14.5	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	19	47	11	11	51	19	1233	69	14	1099	29
Future Volume (vph)	21	19	47	11	11	51	19	1233	69	14	1099	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.927			0.905			0.992			0.996	
Flt Protected		0.988			0.993			0.999			0.999	
Satd. Flow (prot)	0	1723	0	0	1658	0	0	3507	0	0	3522	0
Flt Permitted		0.988			0.993			0.999			0.999	
Satd. Flow (perm)	0	1723	0	0	1658	0	0	3507	0	0	3522	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			248			2002			671	
Travel Time (s)		26.7			6.8			45.5			15.3	
Confl. Peds. (#/hr)	3								2			
Confl. Bikes (#/hr)									4			1
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 (%)	1%	1%	1%	3%	3%	3%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	23	21	52	12	12	56	21	1355	76	15	1208	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	96	0	0	80	0	0	1452	0	0	1255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	49

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	19	47	11	11	51	19	1233	69	14	1099	29
Future Vol, veh/h	21	19	47	11	11	51	19	1233	69	14	1099	29
Conflicting Peds, #/hr	3	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	3	3	3	2	2	2	2	2	2
Mvmt Flow	23	21	52	12	12	56	21	1355	76	15	1208	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1983	2729	620	2082	2707	720	1240	0	0	1433	0	0
Stage 1	1254	1254	-	1437	1437	-	-	-	-	-	-	-
Stage 2	728	1475	-	645	1270	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.56	6.56	6.96	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.56	5.56	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.56	5.56	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.53	4.03	3.33	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	37	~ 20	433	30	21	368	558	-	-	470	-	-
Stage 1	183	243	-	139	195	-	-	-	-	-	-	-
Stage 2	383	191	-	425	235	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 10	~ 18	433	-	18	366	558	-	-	469	-	-
Mov Cap-2 Maneuver	~ 10	~ 18	-	-	18	-	-	-	-	-	-	-
Stage 1	174	231	-	130	183	-	-	-	-	-	-	-
Stage 2	283	178	-	323	224	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 1455.53		0.83	0.77
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	48	-	-	27	-	43	-	-
HCM Lane V/C Ratio	0.037	-	-	3.562	-	0.033	-	-
HCM Ctrl Dly (s/v)	11.7	0.7		$ 1455.5	-	12.9	0.6	-
HCM Lane LOS	B	A	-	F	-	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	11.7	-	0.1	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	74	18	21	48	2	23	23	7	6	28	2
Future Volume (vph)	10	74	18	21	48	2	23	23	7	6	28	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.977			0.997			0.982			0.993	
Flt Protected		0.995			0.985			0.979			0.992	
Satd. Flow (prot)	0	1811	0	0	1812	0	0	1827	0	0	1872	0
Flt Permitted		0.995			0.985			0.979			0.992	
Satd. Flow (perm)	0	1811	0	0	1812	0	0	1827	0	0	1872	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			1221			1978			666	
Travel Time (s)		6.8			33.3			53.9			18.2	
Confl. Peds. (#/hr)				1								2
Confl. Bikes (#/hr)												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 (%)	2%	2%	2%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	11	84	20	24	55	2	26	26	8	7	32	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	115	0	0	81	0	0	60	0	0	41	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.3%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	74	18	21	48	2	23	23	7	6	28	2
Future Vol, veh/h	10	74	18	21	48	2	23	23	7	6	28	2
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	0	0	0
Mvmt Flow	11	84	20	24	55	2	26	26	8	7	32	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	57	0	0	106	0	0	238	223	95	223	232	58
Stage 1	-	-	-	-	-	-	118	118	-	103	103	-
Stage 2	-	-	-	-	-	-	120	105	-	120	128	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1548	-	-	1479	-	-	720	680	967	737	672	1014
Stage 1	-	-	-	-	-	-	891	802	-	907	813	-
Stage 2	-	-	-	-	-	-	889	813	-	889	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1548	-	-	1478	-	-	666	662	966	685	655	1012
Mov Cap-2 Maneuver	-	-	-	-	-	-	666	662	-	685	655	-
Stage 1	-	-	-	-	-	-	884	795	-	892	800	-
Stage 2	-	-	-	-	-	-	836	799	-	846	787	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.72	2.21	10.69	10.69
HCM LOS			B	B

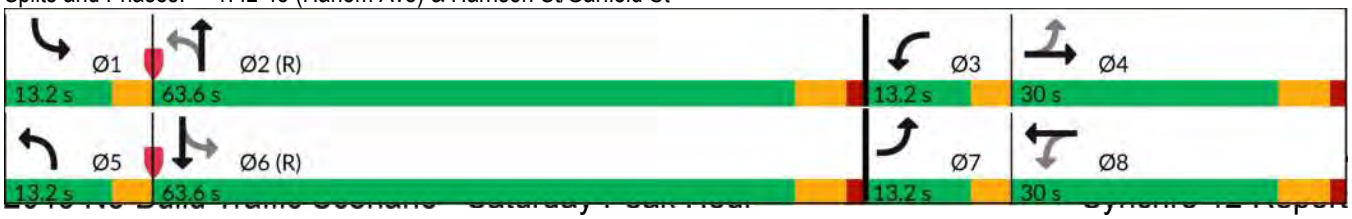
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	693	170	-	-	528	-	-	673
HCM Lane V/C Ratio	0.087	0.007	-	-	0.016	-	-	0.061
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.5	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	148	32	164	131	225	27	1413	28	83	939	52
Future Volume (vph)	236	148	32	164	131	225	27	1413	28	83	939	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00	0.99			1.00			1.00	
Frt		0.973			0.905			0.997			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1825	0	1770	1672	0	1787	3562	0	1770	3507	0
Flt Permitted	0.166			0.513			0.213			0.063		
Satd. Flow (perm)	312	1825	0	952	1672	0	401	3562	0	117	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		8			64			2			6	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			255			671			478	
Travel Time (s)		26.5			7.0			15.3			10.9	
Confl. Peds. (#/hr)			2	4								1
Confl. Bikes (#/hr)						1			2			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	241	151	33	167	134	230	28	1442	29	85	958	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	241	184	0	167	364	0	28	1471	0	85	1011	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	42.0		10.5	36.0	
Total Split (s)	13.2	30.0		13.2	30.0		13.2	63.6		13.2	63.6	
Total Split (%)	11.0%	25.0%		11.0%	25.0%		11.0%	53.0%		11.0%	53.0%	
Maximum Green (s)	9.7	24.0		9.7	24.0		9.7	57.6		9.7	57.6	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		14.0			14.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	36.3	24.1		36.1	24.0		69.0	61.4		72.4	64.7	
Actuated g/C Ratio	0.30	0.20		0.30	0.20		0.58	0.51		0.60	0.54	
v/c Ratio	1.13	0.49		0.48	0.95		0.09	0.81		0.48	0.53	
Control Delay (s/veh)	133.9	45.9		35.2	73.5		10.1	29.6		22.3	19.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	133.9	45.9		35.2	73.5		10.1	29.6		22.3	19.8	
LOS	F	D		D	E		B	C		C	B	
Approach Delay (s/veh)		95.8			61.5			29.2			20.0	
Approach LOS		F			E			C			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 97.5 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.13			
Intersection Signal Delay (s/veh): 39.2		Intersection LOS: D	
Intersection Capacity Utilization 95.0%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	148	32	164	131	225	27	1413	28	83	939	52
Future Volume (veh/h)	236	148	32	164	131	225	27	1413	28	83	939	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1870	1870	1870	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	241	151	33	167	134	230	28	1442	29	85	958	53
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	2	2	2	1	1	1	2	2	2
Cap, veh/h	205	300	65	336	122	210	295	1882	38	199	1868	103
Arrive On Green	0.08	0.20	0.20	0.08	0.20	0.20	0.02	0.52	0.52	0.04	0.55	0.55
Sat Flow, veh/h	1795	1498	327	1781	610	1048	1795	3589	72	1781	3424	189
Grp Volume(v), veh/h	241	0	184	167	0	364	28	719	752	85	497	514
Grp Sat Flow(s),veh/h/ln	1795	0	1825	1781	0	1658	1795	1791	1870	1781	1777	1836
Q Serve(g_s), s	9.7	0.0	10.8	8.9	0.0	24.0	0.9	38.3	38.4	2.6	21.2	21.2
Cycle Q Clear(g_c), s	9.7	0.0	10.8	8.9	0.0	24.0	0.9	38.3	38.4	2.6	21.2	21.2
Prop In Lane	1.00		0.18	1.00		0.63	1.00		0.04	1.00		0.10
Lane Grp Cap(c), veh/h	205	0	365	336	0	332	295	939	981	199	970	1002
V/C Ratio(X)	1.17	0.00	0.50	0.50	0.00	1.10	0.10	0.77	0.77	0.43	0.51	0.51
Avail Cap(c_a), veh/h	205	0	365	336	0	332	413	939	981	278	970	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	42.7	34.8	0.0	48.0	14.4	22.7	22.7	20.2	17.2	17.2
Incr Delay (d2), s/veh	118.0	0.0	2.3	1.1	0.0	78.3	0.1	5.9	5.7	1.5	1.9	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	0.0	5.1	4.0	0.0	17.2	0.4	17.1	17.9	1.1	9.0	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	157.6	0.0	45.0	35.9	0.0	126.3	14.6	28.6	28.4	21.6	19.1	19.1
LnGrp LOS	F		D	D		F	B	C	C	C	B	B
Approach Vol, veh/h		425			531			1499			1096	
Approach Delay, s/veh		108.9			97.9			28.3			19.3	
Approach LOS		F			F			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.9	68.9	13.2	30.0	5.3	71.5	13.2	30.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	9.7	57.6	9.7	24.0	9.7	57.6	9.7	24.0
Max Q Clear Time (g_c+I1), s	4.6	40.4	10.9	12.8	2.9	23.2	11.7	26.0
Green Ext Time (p_c), s	0.1	15.9	0.0	1.3	0.0	22.4	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	45.5
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	237	22	8	496	24	16
Future Volume (vph)	237	22	8	496	24	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.988				0.945	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	1877	0	1770	1863	1743	0
Flt Permitted			0.950		0.971	
Satd. Flow (perm)	1877	0	1770	1863	1743	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	255			1430	666	
Travel Time (s)	7.0			39.0	18.2	
Confl. Peds. (#/hr)					1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%
Adj. Flow (vph)	276	26	9	577	28	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	302	0	9	577	47	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.4%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	237	22	8	496	24	16
Future Vol, veh/h	237	22	8	496	24	16
Conflicting Peds, #/hr	0	0	0	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	276	26	9	577	28	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	301	0	885	289
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	596	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1260	-	318	755
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	554	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1260	-	315	754
Mov Cap-2 Maneuver	-	-	-	-	315	-
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	549	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.13	14.87
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	411	-	-	1260	-
HCM Lane V/C Ratio	0.113	-	-	0.007	-
HCM Ctrl Dly (s/v)	14.9	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	14	39	10	9	75	24	1366	66	25	1079	31
Future Volume (vph)	27	14	39	10	9	75	24	1366	66	25	1079	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.934			0.891			0.993			0.996	
Flt Protected		0.984			0.995			0.999			0.999	
Satd. Flow (prot)	0	1729	0	0	1684	0	0	3546	0	0	3522	0
Flt Permitted		0.984			0.995			0.999			0.999	
Satd. Flow (perm)	0	1729	0	0	1684	0	0	3546	0	0	3522	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			248			2002			671	
Travel Time (s)		26.7			6.8			45.5			15.3	
Confl. Peds. (#/hr)									1			
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	28	15	41	10	9	78	25	1423	69	26	1124	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	84	0	0	97	0	0	1517	0	0	1182	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	83.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	14	39	10	9	75	24	1366	66	25	1079	31
Future Vol, veh/h	27	14	39	10	9	75	24	1366	66	25	1079	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	2	2	2
Mvmt Flow	28	15	41	10	9	78	25	1423	69	26	1124	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1958	2735	578	2130	2717	747	1156	0	0	1493	0	0
Stage 1	1192	1192	-	1508	1508	-	-	-	-	-	-	-
Stage 2	766	1543	-	621	1208	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	38	20	462	29	21	360	606	-	-	446	-	-
Stage 1	200	261	-	129	185	-	-	-	-	-	-	-
Stage 2	364	177	-	446	258	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 13	17	462	~ 4	18	360	606	-	-	445	-	-
Mov Cap-2 Maneuver	~ 13	17	-	~ 4	18	-	-	-	-	-	-	-
Stage 1	183	238	-	119	172	-	-	-	-	-	-	-
Stage 2	250	164	-	349	236	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 1230.06	$ 1375.91	0.9	1.37
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	56	-	-	27	29	76	-	-
HCM Lane V/C Ratio	0.041	-	-	3.059	3.421	0.058	-	-
HCM Ctrl Dly (s/v)	11.2	0.8	$ 1230.3	$ 1375.9	13.6	1.1	-	
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	10.1	11.8	0.2	-	-

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	68	29	27	59	2	32	30	8	3	24	3
Future Volume (vph)	8	68	29	27	59	2	32	30	8	3	24	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.963			0.997			0.985			0.988	
Flt Protected		0.996			0.985			0.978			0.995	
Satd. Flow (prot)	0	1822	0	0	1866	0	0	1830	0	0	1868	0
Flt Permitted		0.996			0.985			0.978			0.995	
Satd. Flow (perm)	0	1822	0	0	1866	0	0	1830	0	0	1868	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		248			1221			1978			666	
Travel Time (s)		6.8			33.3			53.9			18.2	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	9	77	33	31	67	2	36	34	9	3	27	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	119	0	0	100	0	0	79	0	0	33	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	68	29	27	59	2	32	30	8	3	24	3
Future Vol, veh/h	8	68	29	27	59	2	32	30	8	3	24	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	77	33	31	67	2	36	34	9	3	27	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	69	0	0	110	0	0	254	243	94	242	258	68
Stage 1	-	-	-	-	-	-	112	112	-	130	130	-
Stage 2	-	-	-	-	-	-	142	131	-	113	128	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1544	-	-	1492	-	-	703	663	969	716	650	1001
Stage 1	-	-	-	-	-	-	898	807	-	879	793	-
Stage 2	-	-	-	-	-	-	866	792	-	897	794	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1544	-	-	1492	-	-	653	644	969	654	632	1001
Mov Cap-2 Maneuver	-	-	-	-	-	-	653	644	-	654	632	-
Stage 1	-	-	-	-	-	-	892	802	-	860	776	-
Stage 2	-	-	-	-	-	-	815	775	-	846	789	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.56	2.29	11.05	10.77
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	674	129	-	-	549	-	-	658
HCM Lane V/C Ratio	0.118	0.006	-	-	0.021	-	-	0.052
HCM Ctrl Dly (s/v)	11.1	7.3	0	-	7.5	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2

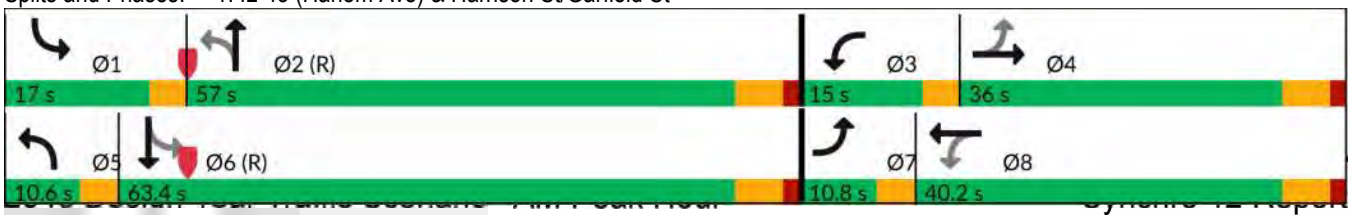
APPENDIX G
2046 DESIGN YEAR TRAFFIC SCENARIO
CAPACITY ANALYSIS SUMMARY SHEETS

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	181	24	217	193	156	64	1191	15	160	824	61
Future Volume (vph)	107	181	24	217	193	156	64	1191	15	160	824	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		1.00	0.99		1.00				1.00	
Frt		0.983			0.933			0.998			0.990	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1828	0	1787	1745	0	1703	3399	0	1736	3431	0
Flt Permitted	0.244			0.387			0.246			0.084		
Satd. Flow (perm)	454	1828	0	726	1745	0	440	3399	0	153	3431	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5			32			1			8	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		950			152			414			478	
Travel Time (s)		25.9			4.1			9.4			10.9	
Confl. Peds. (#/hr)	2		1	4		1	6			4		1
Confl. Bikes (#/hr)			1									
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 (%)	2%	2%	2%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	113	191	25	228	203	164	67	1254	16	168	867	64
Shared Lane Traffic (%)												
Lane Group Flow (vph)	113	216	0	228	367	0	67	1270	0	168	931	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	36.0		10.5	36.0		10.5	42.0		10.5	36.0	
Total Split (s)	10.8	36.0		15.0	40.2		10.6	57.0		17.0	63.4	
Total Split (%)	8.6%	28.8%		12.0%	32.2%		8.5%	45.6%		13.6%	50.7%	
Maximum Green (s)	7.3	30.0		11.5	34.2		7.1	51.0		13.5	57.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		20.0			20.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	35.5	25.7		43.2	29.9		66.6	57.2		74.8	63.8	
Actuated g/C Ratio	0.28	0.21		0.35	0.24		0.53	0.46		0.60	0.51	
v/c Ratio	0.55	0.57		0.66	0.83		0.22	0.82		0.71	0.53	
Control Delay (s/veh)	38.9	49.0		39.9	57.2		13.9	35.9		37.2	23.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	38.9	49.0		39.9	57.2		13.9	35.9		37.2	23.1	
LOS	D	D		D	E		B	D		D	C	
Approach Delay (s/veh)		45.5			50.6			34.8			25.3	
Approach LOS		D			D			C			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.83			
Intersection Signal Delay (s/veh): 35.5		Intersection LOS: D	
Intersection Capacity Utilization 84.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	181	24	217	193	156	64	1191	15	160	824	61
Future Volume (veh/h)	107	181	24	217	193	156	64	1191	15	160	824	61
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	1885	1811	1811	1811	1841	1841	1841
Adj Flow Rate, veh/h	113	191	25	228	203	164	67	1254	16	168	867	64
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
Percent Heavy Veh, %	2	2	2	1	1	1	6	6	6	4	4	4
Cap, veh/h	195	328	43	336	228	184	317	1703	22	255	1719	127
Arrive On Green	0.06	0.20	0.20	0.09	0.24	0.24	0.03	0.49	0.49	0.06	0.52	0.52
Sat Flow, veh/h	1781	1617	212	1795	963	778	1725	3479	44	1753	3301	244
Grp Volume(v), veh/h	113	0	216	228	0	367	67	620	650	168	459	472
Grp Sat Flow(s),veh/h/ln	1781	0	1828	1795	0	1741	1725	1721	1803	1753	1749	1796
Q Serve(g_s), s	6.3	0.0	13.3	11.5	0.0	25.5	2.4	35.9	36.0	5.7	21.3	21.3
Cycle Q Clear(g_c), s	6.3	0.0	13.3	11.5	0.0	25.5	2.4	35.9	36.0	5.7	21.3	21.3
Prop In Lane	1.00		0.12	1.00		0.45	1.00		0.02	1.00		0.14
Lane Grp Cap(c), veh/h	195	0	371	336	0	412	317	842	883	255	911	935
V/C Ratio(X)	0.58	0.00	0.58	0.68	0.00	0.89	0.21	0.74	0.74	0.66	0.50	0.50
Avail Cap(c_a), veh/h	195	0	439	336	0	476	359	842	883	334	911	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.4	0.0	45.0	36.2	0.0	46.1	16.3	25.5	25.5	22.3	19.5	19.5
Incr Delay (d2), s/veh	4.2	0.0	3.1	5.4	0.0	19.2	0.3	5.7	5.4	3.0	2.0	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	6.4	6.0	0.0	13.3	1.0	15.7	16.4	2.5	9.1	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	42.7	0.0	48.1	41.6	0.0	65.4	16.6	31.1	30.9	25.3	21.5	21.4
LnGrp LOS	D		D	D		E	B	C	C	C	C	C
Approach Vol, veh/h		329			595			1337			1099	
Approach Delay, s/veh		46.2			56.3			30.3			22.0	
Approach LOS		D			E			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	67.2	15.0	31.4	7.5	71.1	10.8	35.6
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	13.5	51.0	11.5	30.0	7.1	57.4	7.3	34.2
Max Q Clear Time (g_c+I1), s	7.7	38.0	13.5	15.3	4.4	23.3	8.3	27.5
Green Ext Time (p_c), s	0.2	11.6	0.0	1.8	0.0	20.5	0.0	2.1

Intersection Summary	
HCM 7th Control Delay, s/veh	33.8
HCM 7th LOS	C



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	291	17	11	487	27	10
Future Volume (vph)	291	17	11	487	27	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.992				0.964	
Flt Protected			0.950		0.965	
Satd. Flow (prot)	1848	0	1787	1881	1716	0
Flt Permitted			0.950		0.965	
Satd. Flow (perm)	1848	0	1787	1881	1716	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	103			1430	666	
Travel Time (s)	2.8			39.0	18.2	
Confl. Peds. (#/hr)					1	
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	2%	1%	1%	3%	3%
Adj. Flow (vph)	355	21	13	594	33	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	376	0	13	594	45	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	291	17	11	487	27	10
Future Vol, veh/h	291	17	11	487	27	10
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	1	1	3	3
Mvmt Flow	355	21	13	594	33	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	376	0	987	365
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	622	-
Critical Hdwy	-	-	4.11	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.209	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1188	-	273	678
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	534	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1188	-	270	678
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.18	17.98
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	322	-	-	1188	-
HCM Lane V/C Ratio	0.14	-	-	0.011	-
HCM Ctrl Dly (s/v)	18	-	-	8.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	9	19	20	32	7	71	22	1191	84	44	989	32
Future Volume (vph)	9	19	20	32	7	71	22	1191	84	44	989	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.943			0.913			0.990			0.995	
Flt Protected		0.991			0.986			0.999			0.998	
Satd. Flow (prot)	0	1707	0	0	1693	0	0	3368	0	0	3447	0
Flt Permitted		0.991			0.986			0.999			0.998	
Satd. Flow (perm)	0	1707	0	0	1693	0	0	3368	0	0	3447	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			257	
Travel Time (s)		26.7			3.8			45.5			5.8	
Confl. Peds. (#/hr)			1			1			1			2
Confl. Bikes (#/hr)												1
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 (%)	4%	4%	4%	1%	1%	1%	6%	6%	6%	4%	4%	4%
Adj. Flow (vph)	9	20	21	34	7	75	23	1254	88	46	1041	34
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	50	0	0	116	0	0	1365	0	0	1121	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	429.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	9	19	20	32	7	71	22	1191	84	44	989	32
Future Vol, veh/h	9	19	20	32	7	71	22	1191	84	44	989	32
Conflicting Peds, #/hr	0	0	1	0	0	1	0	0	1	0	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	4	4	4	1	1	1	6	6	6	4	4	4
Mvmt Flow	9	20	21	34	7	75	23	1254	88	46	1041	34

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1830	2542	540	1969	2515	673	1077	0	0	1343	0	0
Stage 1	1153	1153	-	1345	1345	-	-	-	-	-	-	-
Stage 2	678	1389	-	624	1169	-	-	-	-	-	-	-
Critical Hdwy	7.58	6.58	6.98	7.52	6.52	6.92	4.22	-	-	4.18	-	-
Critical Hdwy Stg 1	6.58	5.58	-	6.52	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.58	5.58	-	6.52	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.54	4.04	3.34	3.51	4.01	3.31	2.26	-	-	2.24	-	-
Pot Cap-1 Maneuver	46	26	481	38	28	400	620	-	-	499	-	-
Stage 1	207	266	-	161	220	-	-	-	-	-	-	-
Stage 2	404	204	-	442	267	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	22	21	479	~ 2	23	399	619	-	-	498	-	-
Mov Cap-2 Maneuver	22	21	-	~ 2	23	-	-	-	-	-	-	-
Stage 1	179	230	-	151	207	-	-	-	-	-	-	-
Stage 2	297	192	-	334	231	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 473.21	$ 9595.9	0.78	2.01
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	56	-	-	36	6	142	-	-
HCM Lane V/C Ratio	0.037	-	-	1.422	19.624	0.093	-	-
HCM Ctrl Dly (s/v)	11	0.6	-	$ 473.2	$ 9595.9	13	1.6	-
HCM Lane LOS	B	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	5.4	16.4	0.3	-	-

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



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	102	8	16	58	14	24	16	6	4	23	1
Future Volume (vph)	7	102	8	16	58	14	24	16	6	4	23	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.991			0.978			0.982			0.996	
Flt Protected		0.997			0.991			0.975			0.993	
Satd. Flow (prot)	0	1859	0	0	1805	0	0	1819	0	0	1879	0
Flt Permitted		0.997			0.991			0.975			0.993	
Satd. Flow (perm)	0	1859	0	0	1805	0	0	1819	0	0	1879	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
Confl. Peds. (#/hr)			2				3					
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	1%	1%	1%	2%	2%	2%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	9	131	10	21	74	18	31	21	8	5	29	1
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	150	0	0	113	0	0	60	0	0	35	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.1%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	7	102	8	16	58	14	24	16	6	4	23	1
Future Vol, veh/h	7	102	8	16	58	14	24	16	6	4	23	1
Conflicting Peds, #/hr	0	0	2	0	0	0	3	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	78	78	78	78	78	78	78	78	78
Heavy Vehicles, %	1	1	1	2	2	2	0	0	0	0	0	0
Mvmt Flow	9	131	10	21	74	18	31	21	8	5	29	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	92	0	0	143	0	0	289	289	138	283	285	86
Stage 1	-	-	-	-	-	-	156	156	-	124	124	-
Stage 2	-	-	-	-	-	-	133	133	-	159	161	-
Critical Hdwy	4.11	-	-	4.12	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.209	-	-	2.218	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1509	-	-	1440	-	-	667	624	916	673	627	978
Stage 1	-	-	-	-	-	-	851	772	-	885	797	-
Stage 2	-	-	-	-	-	-	875	790	-	848	769	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1509	-	-	1437	-	-	618	610	914	631	613	975
Mov Cap-2 Maneuver	-	-	-	-	-	-	618	610	-	631	613	-
Stage 1	-	-	-	-	-	-	844	766	-	871	785	-
Stage 2	-	-	-	-	-	-	826	778	-	813	762	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.44	1.37	11.17	11.12
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	642	106	-	-	315	-	-	624
HCM Lane V/C Ratio	0.092	0.006	-	-	0.014	-	-	0.058
HCM Ctrl Dly (s/v)	11.2	7.4	0	-	7.5	0	-	11.1
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	280	76	28	486	80	28
Future Volume (vph)	280	76	28	486	80	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.971				0.965	
Flt Protected				0.997	0.964	
Satd. Flow (prot)	1809	0	0	3564	1767	0
Flt Permitted				0.997	0.964	
Satd. Flow (perm)	1809	0	0	3564	1767	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			103	276	
Travel Time (s)	4.1			2.8	7.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	1%	0%	0%
Adj. Flow (vph)	304	83	30	528	87	30
Shared Lane Traffic (%)						
Lane Group Flow (vph)	387	0	0	558	117	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.2%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	280	76	28	486	80	28
Future Vol, veh/h	280	76	28	486	80	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	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	1	1	0	0
Mvmt Flow	304	83	30	528	87	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	387	0	671	346
Stage 1	-	-	-	-	346	-
Stage 2	-	-	-	-	325	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1176	-	409	702
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	711	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1176	-	397	702
Mov Cap-2 Maneuver	-	-	-	-	397	-
Stage 1	-	-	-	-	721	-
Stage 2	-	-	-	-	689	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.65	15.88
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	447	-	-	196	-
HCM Lane V/C Ratio	0.262	-	-	0.026	-
HCM Ctrl Dly (s/v)	15.9	-	-	8.1	0.2
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	94	1176	95	0	1065
Future Volume (vph)	0	94	1176	95	0	1065
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		75	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				65	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1644	3406	1524	0	3471
Flt Permitted						
Satd. Flow (perm)	0	1644	3406	1524	0	3471
Link Speed (mph)	25		30			30
Link Distance (ft)	159		257			414
Travel Time (s)	4.3		5.8			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	6%	6%	4%	4%
Adj. Flow (vph)	0	102	1278	103	0	1158
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	102	1278	103	0	1158
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	94	1176	95	0	1065
Future Vol, veh/h	0	94	1176	95	0	1065
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	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	6	6	4	4
Mvmt Flow	0	102	1278	103	0	1158

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	639	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	423	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	423	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.18	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	423	-
HCM Lane V/C Ratio	-	-	0.241	-
HCM Ctrl Dly (s/v)	-	-	16.2	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.9	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	42	105	71	12	12	39
Future Volume (vph)	42	105	71	12	12	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.980		0.897	
Flt Protected		0.986			0.988	
Satd. Flow (prot)	0	1855	1844	0	1684	0
Flt Permitted		0.986			0.988	
Satd. Flow (perm)	0	1855	1844	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		193	
Travel Time (s)		3.8	3.0		5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	1%	1%	1%	1%	0%	0%
Adj. Flow (vph)	46	114	77	13	13	42
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	160	90	0	55	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.5%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	42	105	71	12	12	39
Future Vol, veh/h	42	105	71	12	12	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	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	1	1	1	1	0	0
Mvmt Flow	46	114	77	13	13	42

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	90	0	-	0	289	84
Stage 1	-	-	-	-	84	-
Stage 2	-	-	-	-	205	-
Critical Hdwy	4.11	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.209	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1511	-	-	-	706	981
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	834	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1511	-	-	-	683	981
Mov Cap-2 Maneuver	-	-	-	-	683	-
Stage 1	-	-	-	-	914	-
Stage 2	-	-	-	-	834	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.13	0	9.31
HCM LOS			A

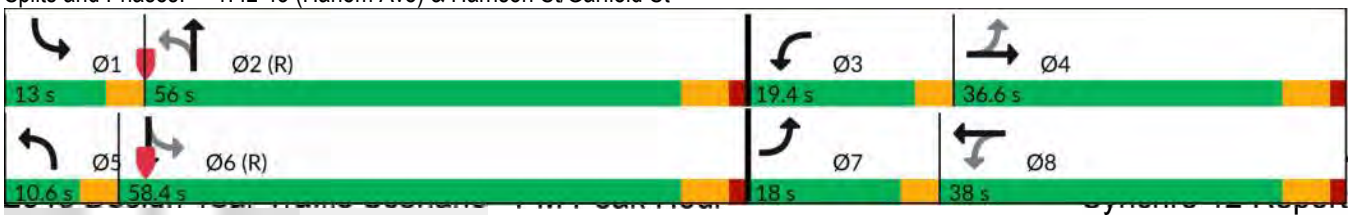
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	514	-	-	-	890
HCM Lane V/C Ratio	0.03	-	-	-	0.062
HCM Ctrl Dly (s/v)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	166	62	239	198	185	53	1233	35	123	861	35
Future Volume (vph)	220	166	62	239	198	185	53	1233	35	123	861	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor	1.00	1.00		0.99	0.99		1.00	1.00			1.00	
Frt		0.959			0.928			0.996			0.994	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1796	0	1787	1733	0	1770	3523	0	1770	3514	0
Flt Permitted	0.160			0.418			0.199			0.072		
Satd. Flow (perm)	301	1796	0	782	1733	0	371	3523	0	134	3514	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			36			3			4	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			147			413			478	
Travel Time (s)		26.5			4.0			9.4			10.9	
Confl. Peds. (#/hr)	2		3	8		1	1		2			4
Confl. Bikes (#/hr)			1			2						
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	234	177	66	254	211	197	56	1312	37	131	916	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	234	243	0	254	408	0	56	1349	0	131	953	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	35.0		10.5	35.0		10.5	42.0		10.5	36.0	
Total Split (s)	18.0	36.6		19.4	38.0		10.6	56.0		13.0	58.4	
Total Split (%)	14.4%	29.3%		15.5%	30.4%		8.5%	44.8%		10.4%	46.7%	
Maximum Green (s)	14.5	30.6		15.9	32.0		7.1	50.0		9.5	52.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		19.0			19.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	46.7	29.9		48.4	30.8		61.2	52.0		66.1	56.1	
Actuated g/C Ratio	0.37	0.24		0.39	0.25		0.49	0.42		0.53	0.45	
v/c Ratio	0.83	0.55		0.60	0.90		0.22	0.92		0.70	0.60	
Control Delay (s/veh)	52.1	44.4		31.8	65.2		16.9	46.2		41.8	29.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	52.1	44.4		31.8	65.2		16.9	46.2		41.8	29.0	
LOS	D	D		C	E		B	D		D	C	
Approach Delay (s/veh)		48.1			52.4			45.1			30.5	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay (s/veh): 42.5		Intersection LOS: D	
Intersection Capacity Utilization 92.7%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	166	62	239	198	185	53	1233	35	123	861	35
Future Volume (veh/h)	220	166	62	239	198	185	53	1233	35	123	861	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.98	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	177	66	254	211	197	56	1312	37	131	916	37
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	1	1	1	1	1	2	2	2	2	2	2
Cap, veh/h	278	318	118	418	224	209	262	1508	42	193	1580	64
Arrive On Green	0.11	0.24	0.24	0.12	0.25	0.25	0.03	0.43	0.43	0.06	0.45	0.45
Sat Flow, veh/h	1795	1302	486	1795	886	827	1781	3530	99	1781	3481	141
Grp Volume(v), veh/h	234	0	243	254	0	408	56	660	689	131	468	485
Grp Sat Flow(s),veh/h/ln	1795	0	1788	1795	0	1713	1781	1777	1852	1781	1777	1844
Q Serve(g_s), s	12.1	0.0	14.9	13.1	0.0	29.2	2.2	42.3	42.4	5.0	24.4	24.4
Cycle Q Clear(g_c), s	12.1	0.0	14.9	13.1	0.0	29.2	2.2	42.3	42.4	5.0	24.4	24.4
Prop In Lane	1.00		0.27	1.00		0.48	1.00		0.05	1.00		0.08
Lane Grp Cap(c), veh/h	278	0	436	418	0	432	262	759	791	193	807	837
V/C Ratio(X)	0.84	0.00	0.56	0.61	0.00	0.94	0.21	0.87	0.87	0.68	0.58	0.58
Avail Cap(c_a), veh/h	284	0	438	429	0	439	311	759	791	229	807	837
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.4	0.0	41.4	30.5	0.0	45.9	21.0	32.6	32.7	27.7	25.3	25.3
Incr Delay (d2), s/veh	19.5	0.0	2.7	2.4	0.0	29.7	0.4	13.0	12.6	6.3	3.0	2.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	7.0	6.0	0.0	16.0	1.0	20.6	21.4	2.4	10.9	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	52.8	0.0	44.0	32.9	0.0	75.6	21.4	45.6	45.3	34.0	28.3	28.2
LnGrp LOS	D		D	C		E	C	D	D	C	C	C
Approach Vol, veh/h		477			662			1405			1084	
Approach Delay, s/veh		48.4			59.2			44.5			29.0	
Approach LOS		D			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.5	59.4	18.6	36.5	7.1	62.8	17.6	37.5
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	9.5	50.0	15.9	30.6	7.1	52.4	14.5	32.0
Max Q Clear Time (g_c+I1), s	7.0	44.4	15.1	16.9	4.2	26.4	14.1	31.2
Green Ext Time (p_c), s	0.1	5.3	0.1	2.1	0.0	17.4	0.0	0.3

Intersection Summary	
HCM 7th Control Delay, s/veh	43.0
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	265	19	17	557	21	14
Future Volume (vph)	265	19	17	557	21	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.991				0.947	
Flt Protected			0.950		0.970	
Satd. Flow (prot)	1883	0	1787	1881	1745	0
Flt Permitted			0.950		0.970	
Satd. Flow (perm)	1883	0	1787	1881	1745	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	108			1430	666	
Travel Time (s)	2.9			39.0	18.2	
Confl. Peds. (#/hr)		1				1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	273	20	18	574	22	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	293	0	18	574	36	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	265	19	17	557	21	14
Future Vol, veh/h	265	19	17	557	21	14
Conflicting Peds, #/hr	0	1	0	0	0	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	273	20	18	574	22	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	294	0	893	285
Stage 1	-	-	-	-	284	-
Stage 2	-	-	-	-	609	-
Critical Hdwy	-	-	4.11	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.209	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1274	-	314	759
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	547	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1272	-	310	757
Mov Cap-2 Maneuver	-	-	-	-	310	-
Stage 1	-	-	-	-	768	-
Stage 2	-	-	-	-	539	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.23	14.74
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	406	-	-	1272	-
HCM Lane V/C Ratio	0.089	-	-	0.014	-
HCM Ctrl Dly (s/v)	14.7	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	20	47	35	11	51	19	1249	72	38	1094	30
Future Volume (vph)	21	20	47	35	11	51	19	1249	72	38	1094	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.928			0.929			0.992			0.996	
Flt Protected		0.988			0.982			0.999			0.998	
Satd. Flow (prot)	0	1725	0	0	1699	0	0	3507	0	0	3518	0
Flt Permitted		0.988			0.982			0.999			0.998	
Satd. Flow (perm)	0	1725	0	0	1699	0	0	3507	0	0	3518	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			258	
Travel Time (s)		26.7			3.8			45.5			5.9	
Confl. Peds. (#/hr)	3								2			
Confl. Bikes (#/hr)									4			1
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 (%)	1%	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	23	22	52	38	12	56	21	1373	79	42	1202	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	97	0	0	106	0	0	1473	0	0	1277	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	87.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	20	47	35	11	51	19	1249	72	38	1094	30
Future Vol, veh/h	21	20	47	35	11	51	19	1249	72	38	1094	30
Conflicting Peds, #/hr	3	0	0	0	0	0	0	0	2	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	22	52	38	12	56	21	1373	79	42	1202	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2039	2798	618	2151	2775	731	1235	0	0	1454	0	0
Stage 1	1302	1302	-	1456	1456	-	-	-	-	-	-	-
Stage 2	737	1495	-	696	1319	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	33	~ 18	435	~ 27	19	364	560	-	-	461	-	-
Stage 1	171	231	-	136	193	-	-	-	-	-	-	-
Stage 2	378	186	-	398	225	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 5	~ 15	435	-	15	363	560	-	-	461	-	-
Mov Cap-2 Maneuver	~ 5	~ 15	-	-	15	-	-	-	-	-	-	-
Stage 1	148	199	-	127	180	-	-	-	-	-	-	-
Stage 2	279	174	-	269	194	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 2641.67		0.83	2.1
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	47	-	-	17	-	113	-	-
HCM Lane V/C Ratio	0.037	-	-	5.849	-	0.091	-	-
HCM Ctrl Dly (s/v)	11.7	0.7		$ 2641.7	-	13.6	1.8	-
HCM Lane LOS	B	A	-	F	-	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	12.8	-	0.3	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	75	19	21	49	2	24	23	7	6	28	2
Future Volume (vph)	10	75	19	21	49	2	24	23	7	6	28	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.975			0.997			0.982			0.993	
Flt Protected		0.995			0.986			0.978			0.992	
Satd. Flow (prot)	0	1807	0	0	1813	0	0	1825	0	0	1872	0
Flt Permitted		0.995			0.986			0.978			0.992	
Satd. Flow (perm)	0	1807	0	0	1813	0	0	1825	0	0	1872	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
Confl. Peds. (#/hr)				1								2
Confl. Bikes (#/hr)												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 (%)	2%	2%	2%	3%	3%	3%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	11	85	22	24	56	2	27	26	8	7	32	2
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	118	0	0	82	0	0	61	0	0	41	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 21.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	10	75	19	21	49	2	24	23	7	6	28	2
Future Vol, veh/h	10	75	19	21	49	2	24	23	7	6	28	2
Conflicting Peds, #/hr	0	0	0	1	0	0	0	0	0	0	0	2
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	3	3	3	0	0	0	0	0	0
Mvmt Flow	11	85	22	24	56	2	27	26	8	7	32	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	58	0	0	108	0	0	241	225	97	226	235	59
Stage 1	-	-	-	-	-	-	120	120	-	105	105	-
Stage 2	-	-	-	-	-	-	121	106	-	121	131	-
Critical Hdwy	4.12	-	-	4.13	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.218	-	-	2.227	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1546	-	-	1477	-	-	717	677	965	734	669	1013
Stage 1	-	-	-	-	-	-	890	800	-	906	813	-
Stage 2	-	-	-	-	-	-	888	812	-	888	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1546	-	-	1475	-	-	663	660	964	683	652	1011
Mov Cap-2 Maneuver	-	-	-	-	-	-	663	660	-	683	652	-
Stage 1	-	-	-	-	-	-	882	793	-	891	799	-
Stage 2	-	-	-	-	-	-	835	798	-	845	785	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.71	2.18	10.73	10.72
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	690	166	-	-	521	-	-	670
HCM Lane V/C Ratio	0.089	0.007	-	-	0.016	-	-	0.061
HCM Ctrl Dly (s/v)	10.7	7.3	0	-	7.5	0	-	10.7
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	260	64	24	554	68	24
Future Volume (vph)	260	64	24	554	68	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.973				0.965	
Flt Protected				0.998	0.964	
Satd. Flow (prot)	1849	0	0	3567	1767	0
Flt Permitted				0.998	0.964	
Satd. Flow (perm)	1849	0	0	3567	1767	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	147			108	282	
Travel Time (s)	4.0			2.9	7.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	0%	0%
Adj. Flow (vph)	283	70	26	602	74	26
Shared Lane Traffic (%)						
Lane Group Flow (vph)	353	0	0	628	100	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	260	64	24	554	68	24
Future Vol, veh/h	260	64	24	554	68	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	0	0
Mvmt Flow	283	70	26	602	74	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	352	0	671	317
Stage 1	-	-	-	-	317	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	-	-	4.115	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2095	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1211	-	409	728
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	688	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1211	-	399	728
Mov Cap-2 Maneuver	-	-	-	-	399	-
Stage 1	-	-	-	-	743	-
Stage 2	-	-	-	-	670	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.52	15.21
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	452	-	-	149	-
HCM Lane V/C Ratio	0.221	-	-	0.022	-
HCM Ctrl Dly (s/v)	15.2	-	-	8	0.2
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	81	1240	81	0	1162
Future Volume (vph)	0	81	1240	81	0	1162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		75	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				65	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1644	3539	1583	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1644	3539	1583	0	3539
Link Speed (mph)	25		30			30
Link Distance (ft)	187		258			413
Travel Time (s)	5.1		5.9			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	88	1348	88	0	1263
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	88	1348	88	0	1263
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	81	1240	81	0	1162
Future Vol, veh/h	0	81	1240	81	0	1162
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	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	2	2
Mvmt Flow	0	88	1348	88	0	1263

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	674	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	402	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	402	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	16.45	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	402	-
HCM Lane V/C Ratio	-	-	0.219	-
HCM Ctrl Dly (s/v)	-	-	16.5	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	0.8	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	94	65	10	10	32
Future Volume (vph)	36	94	65	10	10	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.982		0.897	
Flt Protected		0.986			0.988	
Satd. Flow (prot)	0	1837	1811	0	1684	0
Flt Permitted		0.986			0.988	
Satd. Flow (perm)	0	1837	1811	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		201	
Travel Time (s)		3.8	3.0		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	3%	0%	0%
Adj. Flow (vph)	39	102	71	11	11	35
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	141	82	0	46	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	94	65	10	10	32
Future Vol, veh/h	36	94	65	10	10	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	3	3	0	0
Mvmt Flow	39	102	71	11	11	35

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	82	0	-	0	257	76
Stage 1	-	-	-	-	76	-
Stage 2	-	-	-	-	180	-
Critical Hdwy	4.12	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.218	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1516	-	-	-	737	991
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	856	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1516	-	-	-	716	991
Mov Cap-2 Maneuver	-	-	-	-	716	-
Stage 1	-	-	-	-	926	-
Stage 2	-	-	-	-	856	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.06	0	9.17
HCM LOS			A

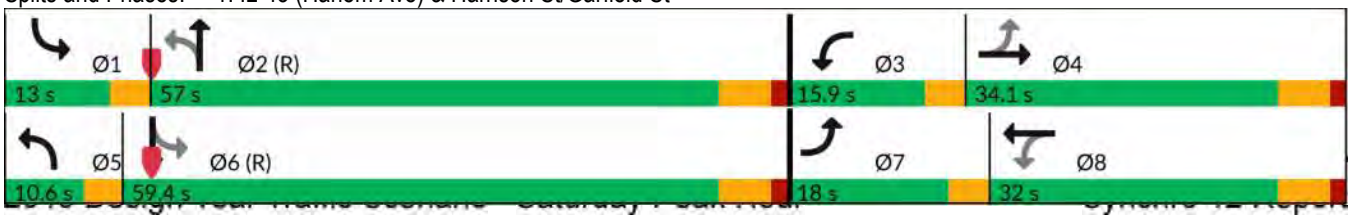
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	498	-	-	-	908
HCM Lane V/C Ratio	0.026	-	-	-	0.05
HCM Ctrl Dly (s/v)	7.4	0	-	-	9.2
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	236	151	35	213	134	231	30	1428	28	134	909	52
Future Volume (vph)	236	151	35	213	134	231	30	1428	28	134	909	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	155		0	50		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	70			25			65			130		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor		1.00		1.00	0.99			1.00			1.00	
Frt		0.972			0.905			0.997			0.992	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	1823	0	1787	1688	0	1787	3562	0	1770	3507	0
Flt Permitted	0.145			0.575			0.212			0.072		
Satd. Flow (perm)	273	1823	0	1077	1688	0	399	3562	0	134	3507	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		9			66			2			6	
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		973			152			414			478	
Travel Time (s)		26.5			4.1			9.4			10.9	
Confl. Peds. (#/hr)			2	4								1
Confl. Bikes (#/hr)						1			2			
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	241	154	36	217	137	236	31	1457	29	137	928	53
Shared Lane Traffic (%)												
Lane Group Flow (vph)	241	190	0	217	373	0	31	1486	0	137	981	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2			6		
Detector Phase	7	4		3	8		5	2		1	6	
Switch Phase												
Minimum Initial (s)	3.0	8.0		3.0	8.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	10.5	30.0		10.5	30.0		10.5	42.0		10.5	36.0	
Total Split (s)	18.0	34.1		15.9	32.0		10.6	57.0		13.0	59.4	
Total Split (%)	15.0%	28.4%		13.3%	26.7%		8.8%	47.5%		10.8%	49.5%	
Maximum Green (s)	14.5	28.1		12.4	26.0		7.1	51.0		9.5	53.4	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	7.0		3.0	7.0	
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	
Walk Time (s)		10.0			10.0			10.0			10.0	
Flash Don't Walk (s)		14.0			14.0			26.0			20.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	44.6	27.6		39.8	25.2		61.2	52.3		66.8	58.6	
Actuated g/C Ratio	0.37	0.23		0.33	0.21		0.51	0.44		0.56	0.49	
v/c Ratio	0.85	0.45		0.51	0.92		0.11	0.96		0.70	0.57	
Control Delay (s/veh)	55.5	41.4		31.1	66.4		13.3	47.9		39.9	24.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay (s/veh)	55.5	41.4		31.1	66.4		13.3	47.9		39.9	24.3	
LOS	E	D		C	E		B	D		D	C	
Approach Delay (s/veh)		49.3			53.4			47.2			26.2	
Approach LOS		D			D			D			C	

Intersection Summary			
Area Type:	Other		
Cycle Length: 120			
Actuated Cycle Length: 120			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 95			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay (s/veh): 42.0		Intersection LOS: D	
Intersection Capacity Utilization 98.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	236	151	35	213	134	231	30	1428	28	134	909	52
Future Volume (veh/h)	236	151	35	213	134	231	30	1428	28	134	909	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1885	1885	1885	1885	1885	1885	1885	1885	1870	1870	1870
Adj Flow Rate, veh/h	241	154	36	217	137	236	31	1457	29	137	928	53
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	274	343	80	417	133	229	263	1613	32	186	1671	95
Arrive On Green	0.12	0.23	0.23	0.10	0.22	0.22	0.02	0.45	0.45	0.06	0.49	0.49
Sat Flow, veh/h	1795	1477	345	1795	614	1057	1795	3590	71	1781	3417	195
Grp Volume(v), veh/h	241	0	190	217	0	373	31	726	760	137	483	498
Grp Sat Flow(s),veh/h/ln	1795	0	1822	1795	0	1671	1795	1791	1870	1781	1777	1835
Q Serve(g_s), s	12.3	0.0	10.7	11.2	0.0	26.0	1.1	45.1	45.2	4.8	22.9	22.9
Cycle Q Clear(g_c), s	12.3	0.0	10.7	11.2	0.0	26.0	1.1	45.1	45.2	4.8	22.9	22.9
Prop In Lane	1.00		0.19	1.00		0.63	1.00		0.04	1.00		0.11
Lane Grp Cap(c), veh/h	274	0	424	417	0	362	263	805	840	186	869	897
V/C Ratio(X)	0.88	0.00	0.45	0.52	0.00	1.03	0.12	0.90	0.90	0.74	0.56	0.56
Avail Cap(c_a), veh/h	277	0	427	417	0	362	339	805	840	227	869	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	39.5	32.0	0.0	47.0	18.8	30.6	30.7	27.0	21.5	21.5
Incr Delay (d2), s/veh	25.9	0.0	1.6	1.1	0.0	55.2	0.2	15.3	15.0	9.4	2.6	2.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	5.0	5.1	0.0	16.4	0.5	22.3	23.3	2.4	10.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	59.0	0.0	41.0	33.1	0.0	102.2	19.0	45.9	45.7	36.5	24.1	24.0
LnGrp LOS	E		D	C		F	B	D	D	D	C	C
Approach Vol, veh/h		431			590			1517			1118	
Approach Delay, s/veh		51.1			76.8			45.3			25.6	
Approach LOS		D			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.3	59.9	15.9	33.9	5.5	64.7	17.8	32.0
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0
Max Green Setting (Gmax), s	9.5	51.0	12.4	28.1	7.1	53.4	14.5	26.0
Max Q Clear Time (g_c+I1), s	6.8	47.2	13.2	12.7	3.1	24.9	14.3	28.0
Green Ext Time (p_c), s	0.1	3.6	0.0	1.6	0.0	19.1	0.0	0.0

Intersection Summary	
HCM 7th Control Delay, s/veh	45.0
HCM 7th LOS	D



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	245	22	8	504	24	16
Future Volume (vph)	245	22	8	504	24	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	60		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			70		25	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.989				0.945	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	1879	0	1770	1863	1743	0
Flt Permitted			0.950		0.971	
Satd. Flow (perm)	1879	0	1770	1863	1743	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	103			1430	666	
Travel Time (s)	2.8			39.0	18.2	
Confl. Peds. (#/hr)					1	1
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%
Adj. Flow (vph)	285	26	9	586	28	19
Shared Lane Traffic (%)						
Lane Group Flow (vph)	311	0	9	586	47	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	6			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	245	22	8	504	24	16
Future Vol, veh/h	245	22	8	504	24	16
Conflicting Peds, #/hr	0	0	0	0	1	1
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	60	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	285	26	9	586	28	19

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	310	0	903	299
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	606	-
Critical Hdwy	-	-	4.12	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.218	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1250	-	310	746
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	549	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1250	-	308	745
Mov Cap-2 Maneuver	-	-	-	-	308	-
Stage 1	-	-	-	-	758	-
Stage 2	-	-	-	-	544	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.12	15.12
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	402	-	-	1250	-
HCM Lane V/C Ratio	0.116	-	-	0.007	-
HCM Ctrl Dly (s/v)	15.1	-	-	7.9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	15	39	38	9	75	24	1383	69	52	1073	32
Future Volume (vph)	27	15	39	38	9	75	24	1383	69	52	1073	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95
Ped Bike Factor												
Frt		0.935			0.917			0.993			0.996	
Flt Protected		0.984			0.984			0.999			0.998	
Satd. Flow (prot)	0	1731	0	0	1714	0	0	3546	0	0	3518	0
Flt Permitted		0.984			0.984			0.999			0.998	
Satd. Flow (perm)	0	1731	0	0	1714	0	0	3546	0	0	3518	0
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		978			139			2002			257	
Travel Time (s)		26.7			3.8			45.5			5.8	
Confl. Peds. (#/hr)									1			
Confl. Bikes (#/hr)												1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	28	16	41	40	9	78	25	1441	72	54	1118	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	85	0	0	127	0	0	1538	0	0	1205	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 85.1%		ICU Level of Service E	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	58.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	27	15	39	38	9	75	24	1383	69	52	1073	32
Future Vol, veh/h	27	15	39	38	9	75	24	1383	69	52	1073	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	1	1	1	0	0	0	1	1	1	2	2	2
Mvmt Flow	28	16	41	40	9	78	25	1441	72	54	1118	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2018	2806	576	2203	2787	757	1151	0	0	1514	0	0
Stage 1	1243	1243	-	1528	1528	-	-	-	-	-	-	-
Stage 2	775	1564	-	675	1259	-	-	-	-	-	-	-
Critical Hdwy	7.52	6.52	6.92	7.5	6.5	6.9	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.52	5.52	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.51	4.01	3.31	3.5	4	3.3	2.21	-	-	2.22	-	-
Pot Cap-1 Maneuver	35	18	463	~ 25	19	354	608	-	-	438	-	-
Stage 1	186	247	-	125	181	-	-	-	-	-	-	-
Stage 2	359	172	-	415	244	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 9	~ 14	463	-	14	354	608	-	-	437	-	-
Mov Cap-2 Maneuver	~ 9	~ 14	-	-	14	-	-	-	-	-	-	-
Stage 1	152	202	-	116	168	-	-	-	-	-	-	-
Stage 2	245	160	-	285	200	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	$ 1997.46		0.9	2.87
HCM LOS	F	-		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	55	-	-	19	-	155	-	-
HCM Lane V/C Ratio	0.041	-	-	4.516	-	0.124	-	-
HCM Ctrl Dly (s/v)	11.2	0.8		$ 1997.5	-	14.4	2.4	-
HCM Lane LOS	B	A	-	F	-	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	11.1	-	0.4	-	-

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

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	69	30	27	60	2	33	30	8	3	24	3
Future Volume (vph)	8	69	30	27	60	2	33	30	8	3	24	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.962			0.997			0.985			0.988	
Flt Protected		0.996			0.985			0.977			0.995	
Satd. Flow (prot)	0	1820	0	0	1866	0	0	1828	0	0	1868	0
Flt Permitted		0.996			0.985			0.977			0.995	
Satd. Flow (perm)	0	1820	0	0	1866	0	0	1828	0	0	1868	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		109			1221			1978			666	
Travel Time (s)		3.0			33.3			53.9			18.2	
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 (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	9	78	34	31	68	2	38	34	9	3	27	3
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	121	0	0	101	0	0	81	0	0	33	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.7%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	69	30	27	60	2	33	30	8	3	24	3
Future Vol, veh/h	8	69	30	27	60	2	33	30	8	3	24	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	9	78	34	31	68	2	38	34	9	3	27	3

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	70	0	0	113	0	0	257	245	95	244	261	69
Stage 1	-	-	-	-	-	-	114	114	-	131	131	-
Stage 2	-	-	-	-	-	-	143	132	-	114	131	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1543	-	-	1490	-	-	700	660	967	714	647	999
Stage 1	-	-	-	-	-	-	896	805	-	878	792	-
Stage 2	-	-	-	-	-	-	864	791	-	896	792	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1543	-	-	1490	-	-	650	642	967	652	629	999
Mov Cap-2 Maneuver	-	-	-	-	-	-	650	642	-	652	629	-
Stage 1	-	-	-	-	-	-	890	800	-	859	775	-
Stage 2	-	-	-	-	-	-	813	774	-	845	787	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	0.55	2.27	11.09	10.79
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	671	127	-	-	543	-	-	656
HCM Lane V/C Ratio	0.12	0.006	-	-	0.021	-	-	0.052
HCM Ctrl Dly (s/v)	11.1	7.3	0	-	7.5	0	-	10.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.4	0	-	-	0.1	-	-	0.2



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	241	72	26	502	76	26
Future Volume (vph)	241	72	26	502	76	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	1.00
Frt	0.969				0.966	
Flt Protected				0.998	0.964	
Satd. Flow (prot)	1841	0	0	3532	1769	0
Flt Permitted				0.998	0.964	
Satd. Flow (perm)	1841	0	0	3532	1769	0
Link Speed (mph)	25			25	25	
Link Distance (ft)	152			103	288	
Travel Time (s)	4.1			2.8	7.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	2%	2%	0%	0%
Adj. Flow (vph)	262	78	28	546	83	28
Shared Lane Traffic (%)						
Lane Group Flow (vph)	340	0	0	574	111	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 45.6%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	241	72	26	502	76	26
Future Vol, veh/h	241	72	26	502	76	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	2	0	0
Mvmt Flow	262	78	28	546	83	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	340	0	630	301
Stage 1	-	-	-	-	301	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	-	-	4.13	-	6.6	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.219	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1217	-	433	743
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	707	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1217	-	421	743
Mov Cap-2 Maneuver	-	-	-	-	421	-
Stage 1	-	-	-	-	755	-
Stage 2	-	-	-	-	688	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.58	14.91
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	474	-	-	177	-
HCM Lane V/C Ratio	0.234	-	-	0.023	-
HCM Ctrl Dly (s/v)	14.9	-	-	8	0.2
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.9	-	-	0.1	-



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	89	1397	88	0	1157
Future Volume (vph)	0	89	1397	88	0	1157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		75	0	
Storage Lanes	0	1		1	0	
Taper Length (ft)	25				65	
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt		0.865		0.850		
Flt Protected						
Satd. Flow (prot)	0	1644	3574	1599	0	3539
Flt Permitted						
Satd. Flow (perm)	0	1644	3574	1599	0	3539
Link Speed (mph)	25		30			30
Link Distance (ft)	186		257			414
Travel Time (s)	5.1		5.8			9.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	1%	1%	2%	2%
Adj. Flow (vph)	0	97	1518	96	0	1258
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	97	1518	96	0	1258
Enter Blocked Intersection	No	No	Yes	Yes	Yes	Yes
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 50.8%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	0.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	89	1397	88	0	1157
Future Vol, veh/h	0	89	1397	88	0	1157
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	-	75	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	1	1	2	2
Mvmt Flow	0	97	1518	96	0	1258

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	759	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.9	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.3	-	-	-	-
Pot Cap-1 Maneuver	0	353	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	-	353	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Ctrl Dly, s/v	18.99	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	353	-
HCM Lane V/C Ratio	-	-	0.274	-
HCM Ctrl Dly (s/v)	-	-	19	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	1.1	-



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	40	96	85	11	11	37
Future Volume (vph)	40	96	85	11	11	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.984		0.896	
Flt Protected		0.986			0.989	
Satd. Flow (prot)	0	1873	1870	0	1684	0
Flt Permitted		0.986			0.989	
Satd. Flow (perm)	0	1873	1870	0	1684	0
Link Speed (mph)		25	25		25	
Link Distance (ft)		139	109		200	
Travel Time (s)		3.8	3.0		5.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	43	104	92	12	12	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	147	104	0	52	0
Enter Blocked Intersection	Yes	Yes	Yes	Yes	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.9%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	40	96	85	11	11	37
Future Vol, veh/h	40	96	85	11	11	37
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	104	92	12	12	40

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	104	0	-	0	290	98
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	191	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1500	-	-	-	705	963
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	846	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1500	-	-	-	683	963
Mov Cap-2 Maneuver	-	-	-	-	683	-
Stage 1	-	-	-	-	902	-
Stage 2	-	-	-	-	846	-

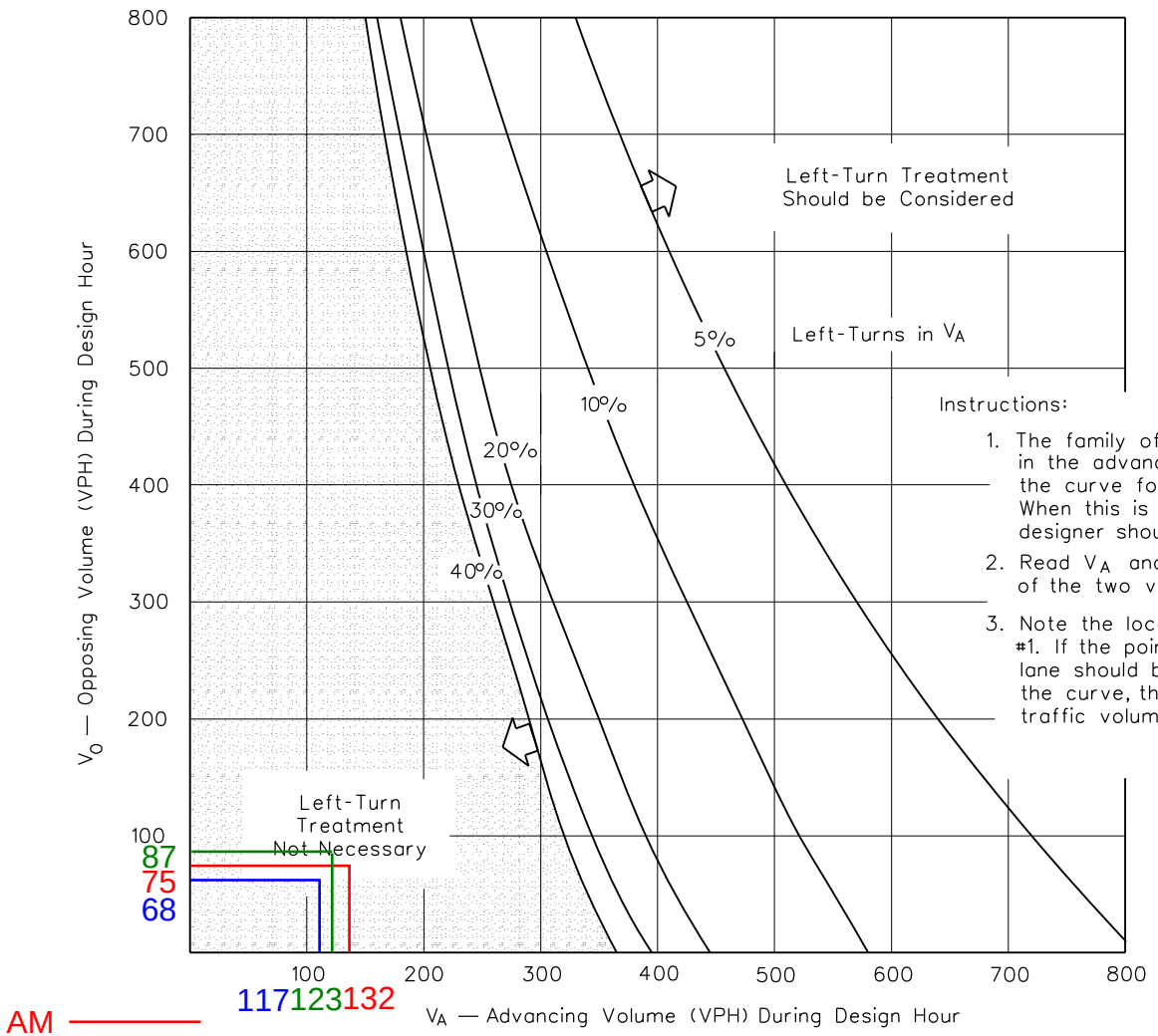
Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.2	0	9.35
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	529	-	-	-	881
HCM Lane V/C Ratio	0.029	-	-	-	0.059
HCM Ctrl Dly (s/v)	7.5	0	-	-	9.3
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.2

APPENDIX H
IDOT TURN LANE ANALYSIS RESOURCES

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2026 Build Traffic Scenario
Lexington Street & Quiktrip Driveway #3



V_A = Total advancing traffic volume which includes all turning traffic

V_O = Total opposing traffic volume which includes all turning traffic

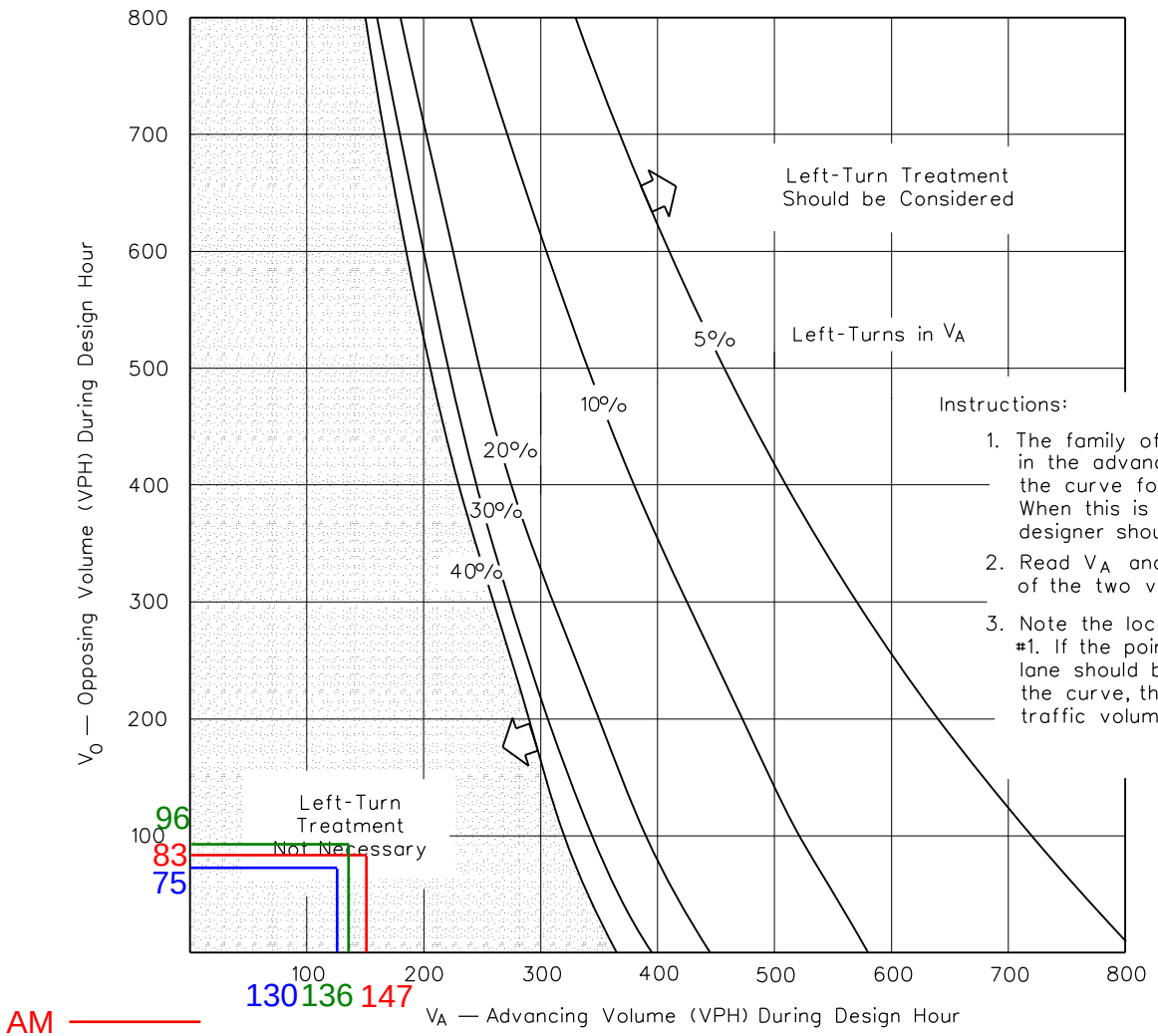
Instructions:

1. The family of curves represent the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of five, the designer should estimate where the curve lies.
2. Read V_A and V_O into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the curve in #1. If the point is to the right of the curve, then a left-turn lane should be considered. If the point is to the left of the curve, then a left-turn lane is not warranted based on traffic volumes.

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS
(40 mph Design Speed)

Figure 36-3.G

2046 Design Year Traffic Scenario
Lexington Street & Quiktrip Driveway #3



V_A = Total advancing traffic volume which includes all turning traffic

V_O = Total opposing traffic volume which includes all turning traffic

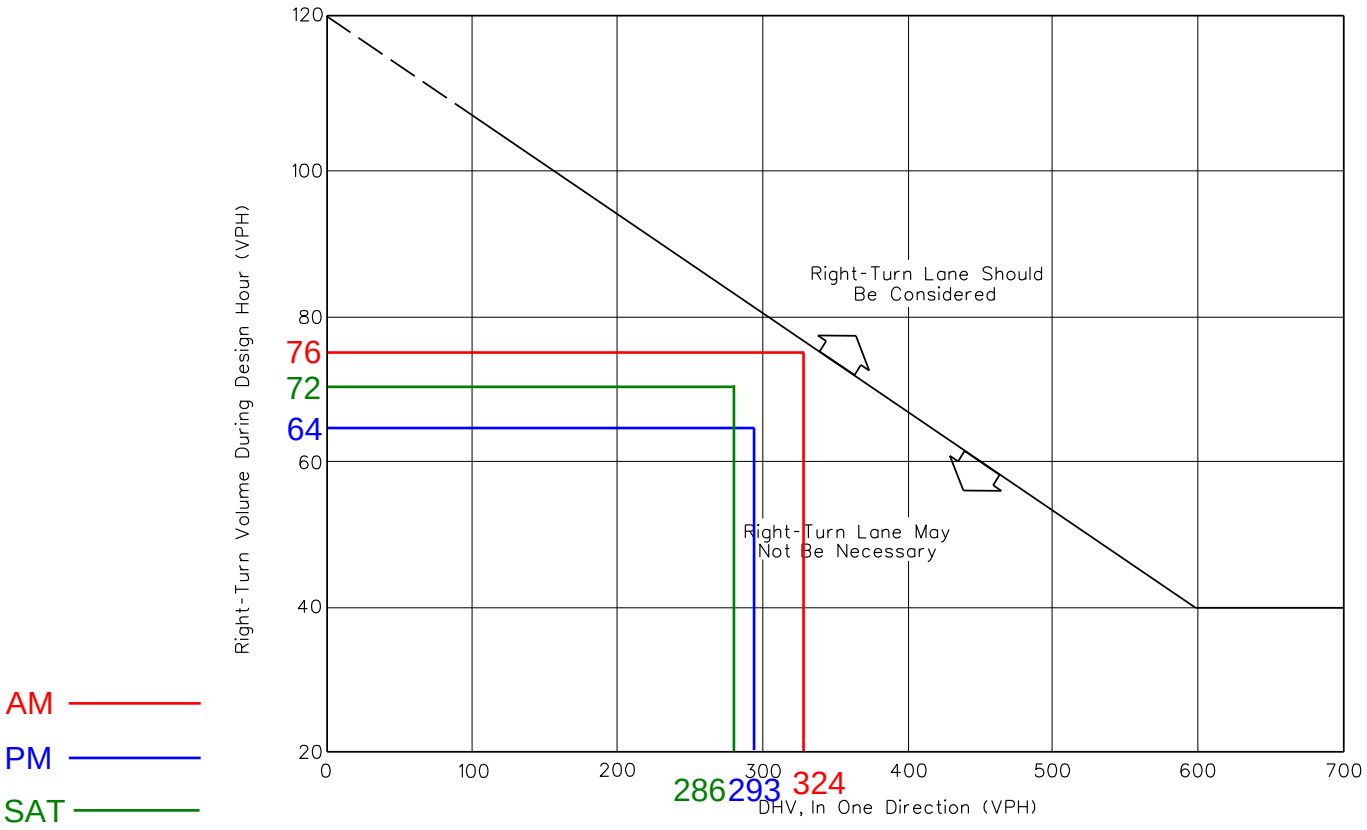
Instructions:

1. The family of curves represent the percent of left turns in the advancing volume (V_A). The designer should locate the curve for the actual percentage of left turns. When this is not an even increment of five, the designer should estimate where the curve lies.
2. Read V_A and V_O into the chart and locate the intersection of the two volumes.
3. Note the location of the point in #2 relative to the curve in #1. If the point is to the right of the curve, then a left-turn lane should be considered. If the point is to the left of the curve, then a left-turn lane is not warranted based on traffic volumes.

VOLUME GUIDELINES FOR LEFT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS
(40 mph Design Speed)

Figure 36-3.G

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Note: For highways with a design speed below 50 mph (80 km/hr), with a DHV in one direction of less than 300, and where right turns are greater than 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:	Design Speed	=	35 mph (60 km/hr)
	DHV (in one direction)	=	250 vph
	Right Turns	=	100 vph

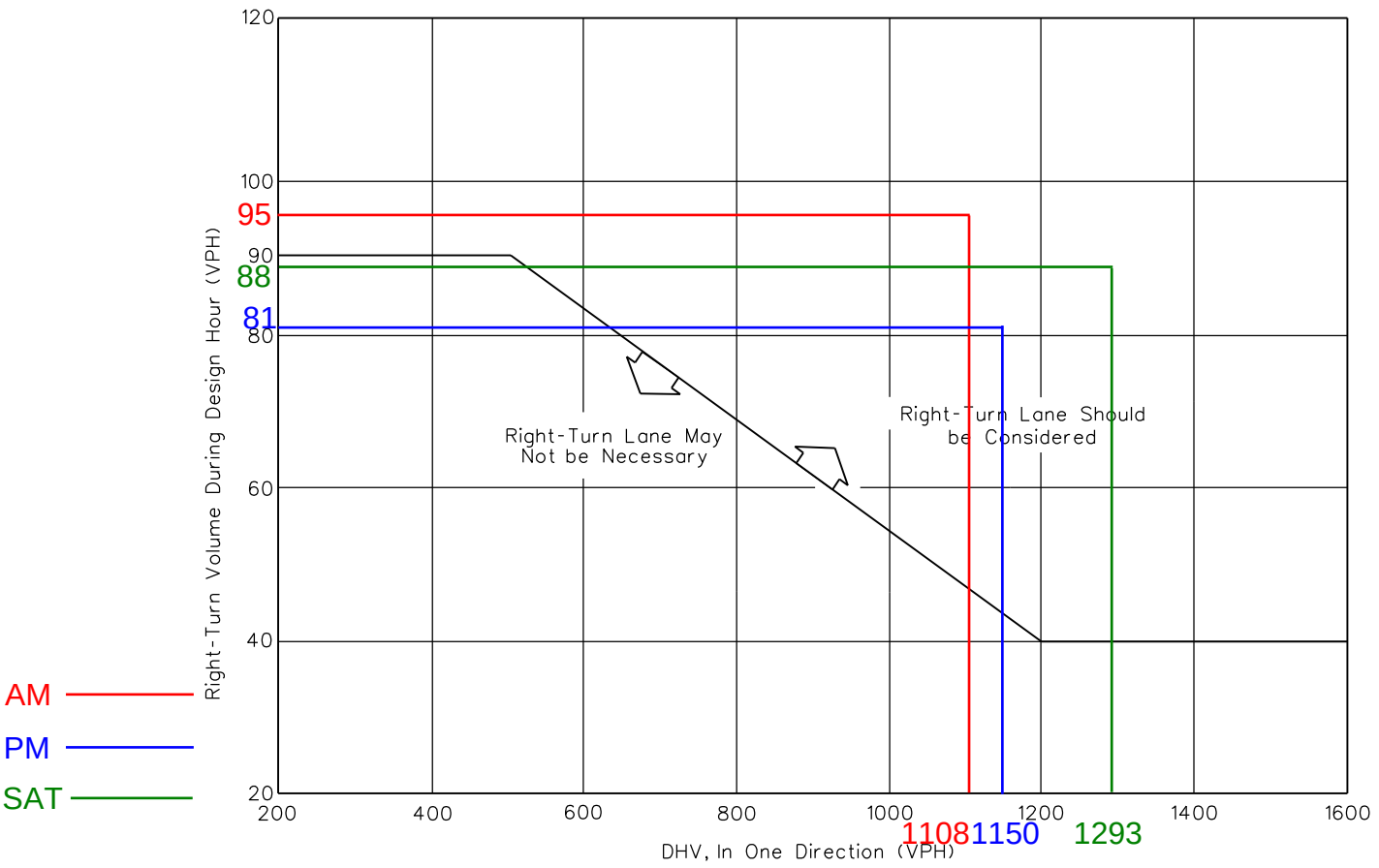
Problem: Determine if a right-turn lane is warranted.

Solution: To read the vertical axis, use 100 - 20 = 80 vph. The figure indicates that right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS

Figure 36-3.A

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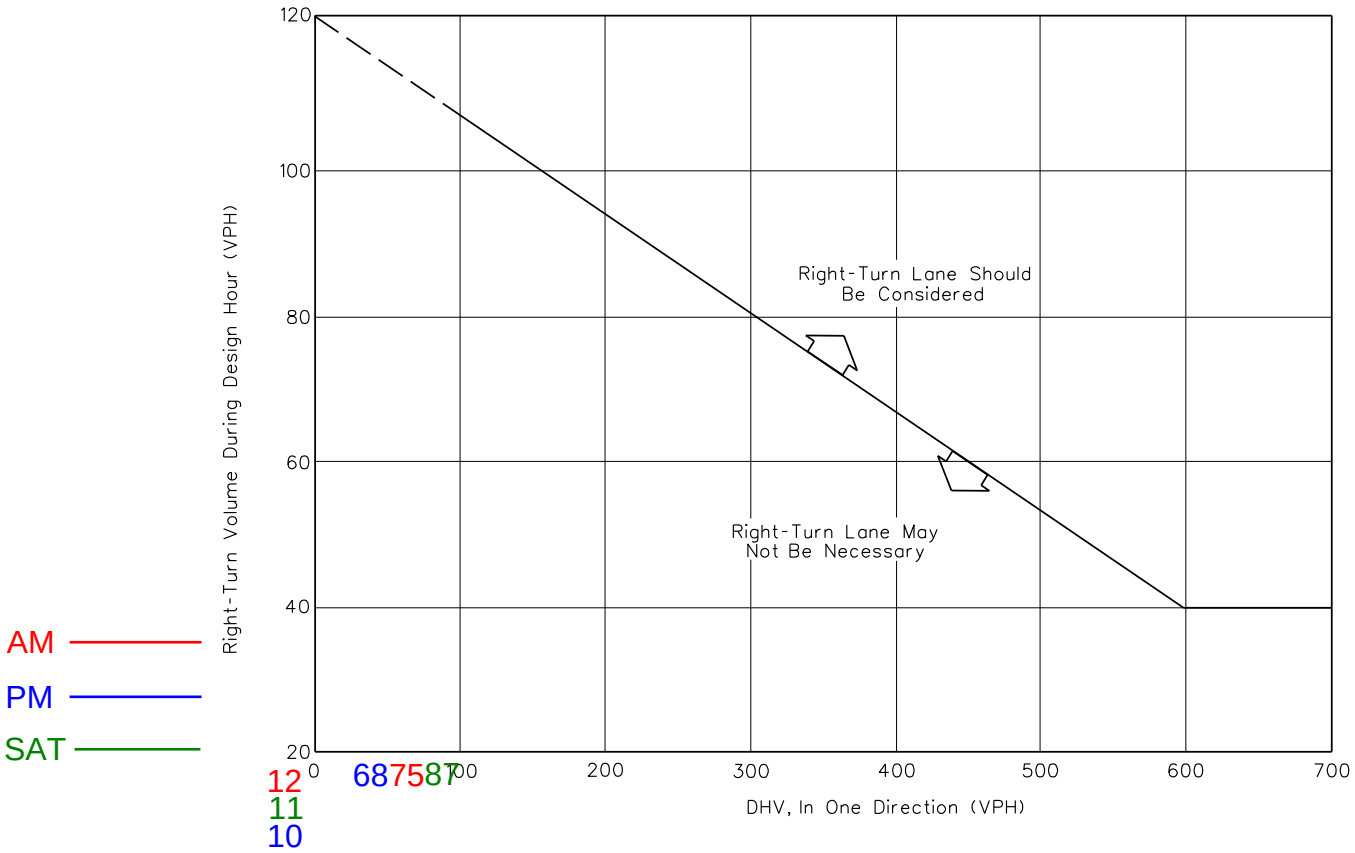


Note: For speeds less than 50 mph (80 km/hr), see Section 36-3.01(a).

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTION ON FOUR-LANE HIGHWAYS
(Design Speed of 50 mph (80 km/hr) or Greater)

Figure 36-3.B

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Note: For highways with a design speed below 50 mph (80 km/hr), with a DHV in one direction of less than 300, and where right turns are greater than 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:	Design Speed	=	35 mph (60 km/hr)
	DHV (in one direction)	=	250 vph
	Right Turns	=	100 vph

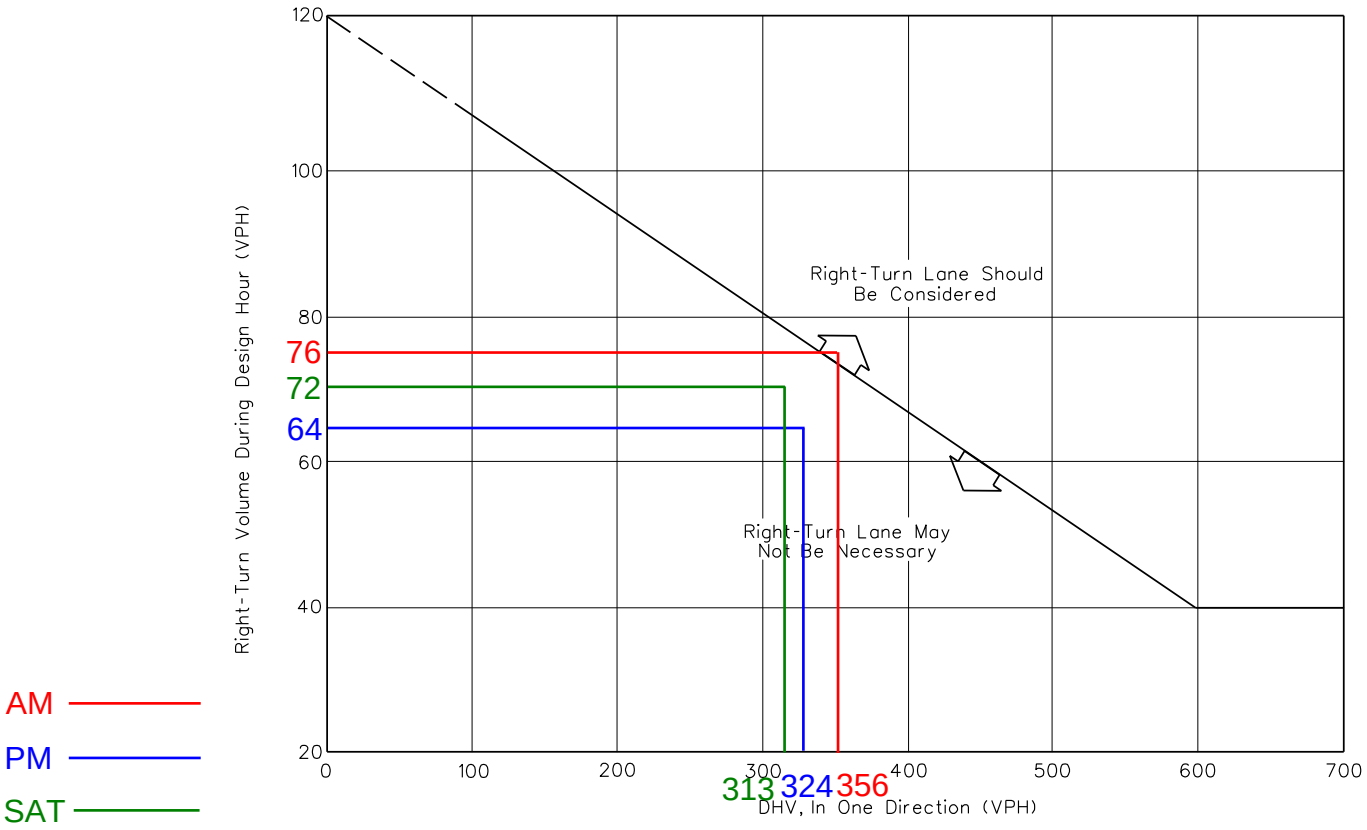
Problem: Determine if a right-turn lane is warranted.

Solution: To read the vertical axis, use 100 - 20 = 80 vph. The figure indicates that right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS

Figure 36-3.A

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Note: For highways with a design speed below 50 mph (80 km/hr), with a DHV in one direction of less than 300, and where right turns are greater than 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:	Design Speed	=	35 mph (60 km/hr)
	DHV (in one direction)	=	250 vph
	Right Turns	=	100 vph

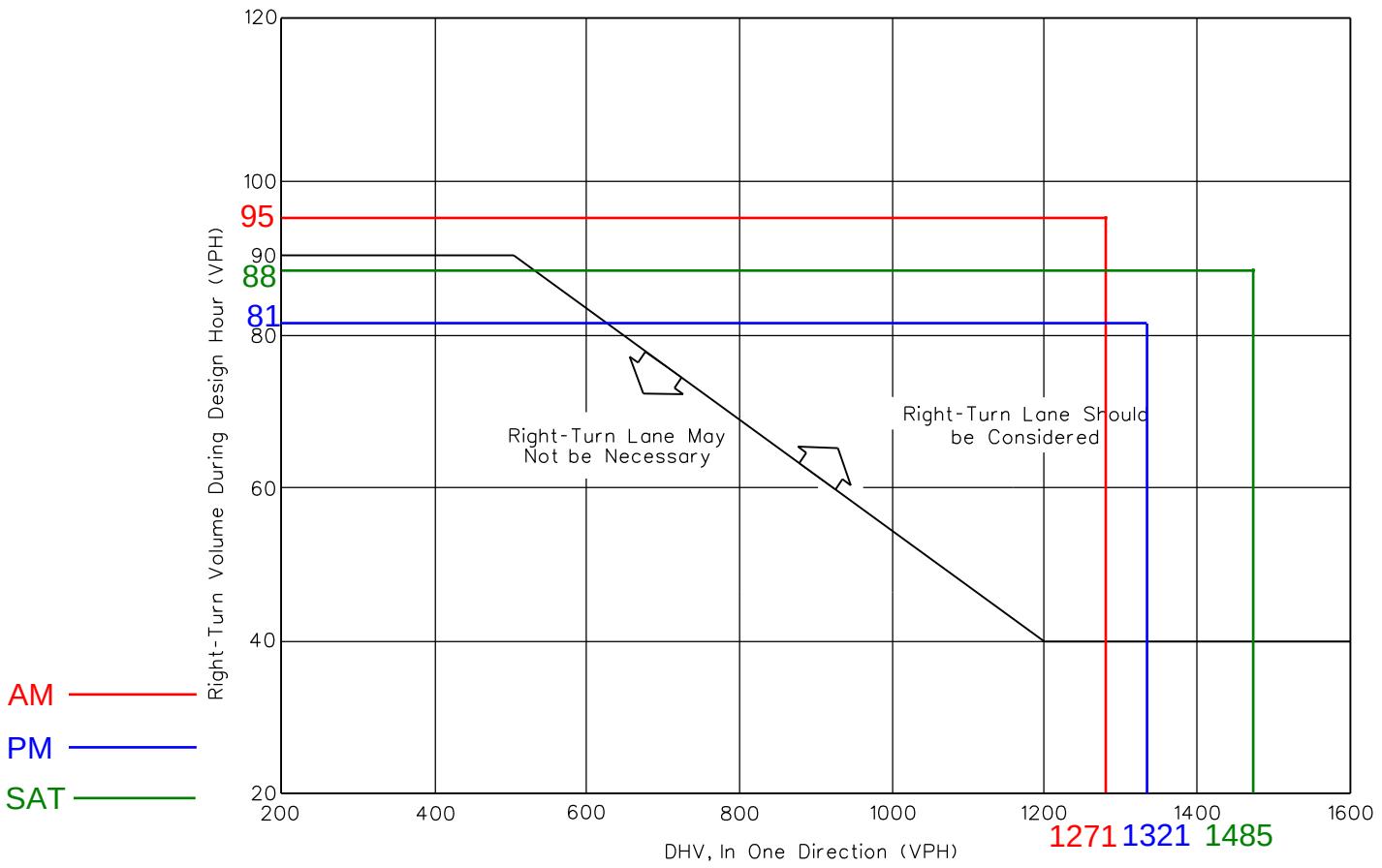
Problem: Determine if a right-turn lane is warranted.

Solution: To read the vertical axis, use 100 - 20 = 80 vph. The figure indicates that right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS

Figure 36-3.A

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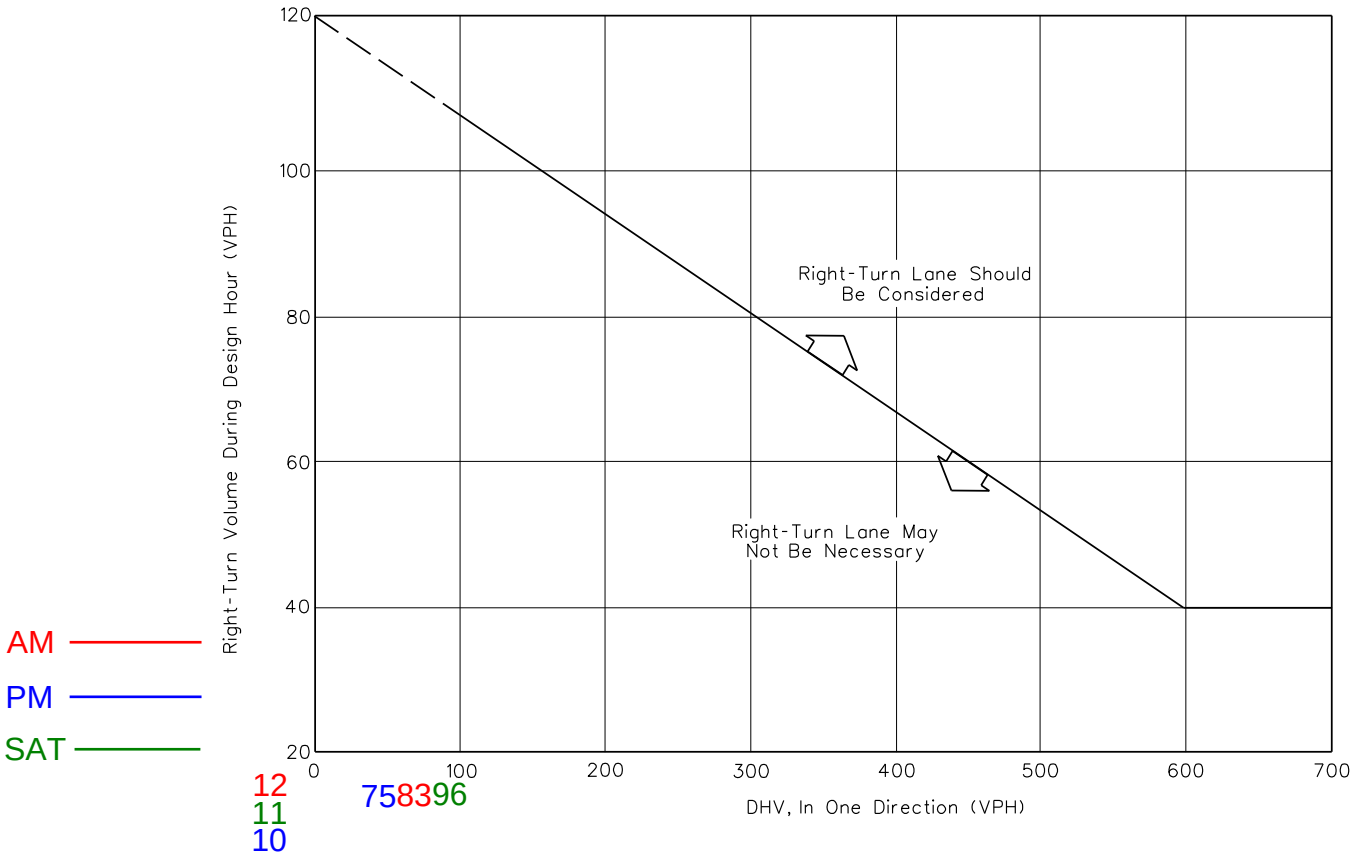


Note: For speeds less than 50 mph (80 km/hr), see Section 36-3.01(a).

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTION ON FOUR-LANE HIGHWAYS
(Design Speed of 50 mph (80 km/hr) or Greater)

Figure 36-3.B

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Note: For highways with a design speed below 50 mph (80 km/hr), with a DHV in one direction of less than 300, and where right turns are greater than 40, an adjustment should be used. To read the vertical axis of the chart, subtract 20 from the actual number of right turns.

Example

Given:	Design Speed	=	35 mph (60 km/hr)
	DHV (in one direction)	=	250 vph
	Right Turns	=	100 vph

Problem: Determine if a right-turn lane is warranted.

Solution: To read the vertical axis, use 100 - 20 = 80 vph. The figure indicates that right-turn lane is not necessary, unless other factors (e.g., high crash rate) indicate a lane is needed.

GUIDELINES FOR RIGHT-TURN LANES AT UNSIGNALIZED INTERSECTIONS ON TWO-LANE HIGHWAYS

Figure 36-3.A

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APPENDIX I
95TH PERCENTILE
QUEUE LENGTH SHEETS

2026 NO-BUILD TRAFFIC SCENARIO

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	269	181	248	205	384	412	179	325	277
Average Queue (ft)	72	123	87	174	56	229	250	67	189	145
95th Queue (ft)	143	224	153	264	162	345	373	151	285	242
Link Distance (ft)		903	174	174		608	608		443	443
Upstream Blk Time (%)			0	16						
Queuing Penalty (veh)			1	37						
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	3	19				18		15	35	
Queuing Penalty (veh)	6	19				9		54	32	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	14	37	171	73
Average Queue (ft)	0	2	19	24
95th Queue (ft)	9	20	90	56
Link Distance (ft)	174		1407	604
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		60		
Storage Blk Time (%)			3	
Queuing Penalty (veh)			0	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	111	81	108	68	112	87
Average Queue (ft)	33	38	18	3	16	6
95th Queue (ft)	73	68	68	33	64	46
Link Distance (ft)	932	174	1974	1974	608	608
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	21	33	50	38
Average Queue (ft)	1	2	23	18
95th Queue (ft)	10	14	49	44
Link Distance (ft)	174	1193	1949	604
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 159

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	363	225	248	188	388	408	179	325	264
Average Queue (ft)	124	163	107	209	39	235	253	58	192	145
95th Queue (ft)	193	296	193	286	126	343	363	142	284	238
Link Distance (ft)		926	174	174		608	608		443	443
Upstream Blk Time (%)			4	37						
Queuing Penalty (veh)			9	94						
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	24	23				18		10	36	
Queuing Penalty (veh)	49	46				8		38	24	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	36	67	390	122
Average Queue (ft)	2	5	112	41
95th Queue (ft)	32	40	371	129
Link Distance (ft)	174		1407	604
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	18	
Queuing Penalty (veh)		0	3	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	148	124	100	38	89	63
Average Queue (ft)	51	44	14	2	15	4
95th Queue (ft)	113	96	57	22	60	34
Link Distance (ft)	932	174	1974	1974	608	608
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	9	27	57	42
Average Queue (ft)	1	2	28	20
95th Queue (ft)	7	12	53	46
Link Distance (ft)	174	1193	1949	604
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 273

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	364	210	260	183	387	407	177	328	272
Average Queue (ft)	126	151	99	208	24	248	265	55	191	145
95th Queue (ft)	189	295	181	290	96	351	368	131	289	243
Link Distance (ft)		926	174	174		608	608		443	443
Upstream Blk Time (%)			3	41						
Queuing Penalty (veh)			7	98						
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	27	19				19		11	32	
Queuing Penalty (veh)	44	40				5		43	23	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	44	51	427	165
Average Queue (ft)	1	3	110	49
95th Queue (ft)	21	25	338	138
Link Distance (ft)	174		1407	604
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	22	
Queuing Penalty (veh)		0	2	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	166	155	140	88	131	110
Average Queue (ft)	55	54	20	4	28	7
95th Queue (ft)	118	116	90	60	90	53
Link Distance (ft)	932	174	1974	1974	608	608
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	6	33	57	40
Average Queue (ft)	0	2	32	20
95th Queue (ft)	5	16	53	45
Link Distance (ft)	174	1193	1949	604
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 263

2026 BUILD TRAFFIC SCENARIO

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	264	146	160	219	390	409	180	339	303
Average Queue (ft)	73	128	111	136	58	251	264	92	180	146
95th Queue (ft)	148	221	163	174	166	369	383	172	287	250
Link Distance (ft)		903	72	72		352	352		443	443
Upstream Blk Time (%)			43	56		1	1			
Queuing Penalty (veh)			111	144		5	8			
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	3	24			0	20		34	34	
Queuing Penalty (veh)	6	23			0	11		119	50	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	39	42	247	74
Average Queue (ft)	3	2	27	24
95th Queue (ft)	20	19	134	58
Link Distance (ft)	45		1407	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	4	
Queuing Penalty (veh)		0	0	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	109	123	104	87	147	117
Average Queue (ft)	37	56	17	5	39	10
95th Queue (ft)	83	103	64	40	103	58
Link Distance (ft)	937	75	1974	1974	199	199
Upstream Blk Time (%)		13			0	
Queuing Penalty (veh)		13			0	
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	15	32	57	38
Average Queue (ft)	1	2	25	17
95th Queue (ft)	7	14	50	43
Link Distance (ft)	47	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	72	106	115	261
Average Queue (ft)	6	25	47	187
95th Queue (ft)	36	79	115	327
Link Distance (ft)	72	45	45	246
Upstream Blk Time (%)	1	5	14	45
Queuing Penalty (veh)	2	12	33	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB
Directions Served	R	T	TR
Maximum Queue (ft)	89	22	25
Average Queue (ft)	39	1	1
95th Queue (ft)	68	14	14
Link Distance (ft)	113	199	199
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	46	19	76
Average Queue (ft)	5	1	30
95th Queue (ft)	27	8	63
Link Distance (ft)	75	47	164
Upstream Blk Time (%)	0	0	1
Queuing Penalty (veh)	0	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 539

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	396	147	161	219	375	390	180	324	263
Average Queue (ft)	125	175	115	138	54	249	266	83	189	144
95th Queue (ft)	194	333	171	167	169	356	372	170	285	239
Link Distance (ft)		926	67	67		351	351		443	443
Upstream Blk Time (%)			49	65		1	1			
Queuing Penalty (veh)			141	184		3	6			
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	23	27				21		23	35	
Queuing Penalty (veh)	47	54				10		85	39	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	6	99	331	70
Average Queue (ft)	0	7	79	24
95th Queue (ft)	5	47	244	62
Link Distance (ft)	50		1407	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	12	
Queuing Penalty (veh)		0	2	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	144	129	89	66	147	116
Average Queue (ft)	57	58	13	4	36	9
95th Queue (ft)	122	109	52	29	98	58
Link Distance (ft)	937	75	1974	1974	201	201
Upstream Blk Time (%)		15			0	0
Queuing Penalty (veh)		14			0	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	26	57	46
Average Queue (ft)	1	2	27	20
95th Queue (ft)	12	15	50	46
Link Distance (ft)	46	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	67	124	121	266
Average Queue (ft)	6	37	73	226
95th Queue (ft)	35	102	142	333
Link Distance (ft)	67	50	50	251
Upstream Blk Time (%)	0	11	26	66
Queuing Penalty (veh)	1	28	68	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB	SB
Directions Served	R	T	TR	T
Maximum Queue (ft)	80	6	8	8
Average Queue (ft)	37	0	0	0
95th Queue (ft)	66	6	8	7
Link Distance (ft)	141	201	201	351
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	41	18	68
Average Queue (ft)	3	1	28
95th Queue (ft)	22	11	59
Link Distance (ft)	75	46	173
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 683

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	324	154	157	184	375	397	179	322	250
Average Queue (ft)	127	148	111	142	36	268	283	85	184	141
95th Queue (ft)	188	270	165	171	135	361	380	175	280	234
Link Distance (ft)		926	72	72		352	352		443	443
Upstream Blk Time (%)			45	70		1	1		0	
Queuing Penalty (veh)			119	184		3	8		0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	26	20				22		26	32	
Queuing Penalty (veh)	44	44				6		101	39	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	41	63	289	88
Average Queue (ft)	3	5	58	29
95th Queue (ft)	23	33	209	66
Link Distance (ft)	45		1407	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	10	
Queuing Penalty (veh)		0	1	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	152	137	114	91	146	130
Average Queue (ft)	57	74	19	8	47	13
95th Queue (ft)	122	133	70	54	114	71
Link Distance (ft)	938	74	1974	1974	200	200
Upstream Blk Time (%)		30				
Queuing Penalty (veh)		34				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	11	34	61	38
Average Queue (ft)	0	3	31	18
95th Queue (ft)	6	18	55	43
Link Distance (ft)	46	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	67	99	118	272
Average Queue (ft)	6	23	68	248
95th Queue (ft)	34	75	137	330
Link Distance (ft)	72	45	45	257
Upstream Blk Time (%)	0	5	29	82
Queuing Penalty (veh)	1	13	68	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB	SB
Directions Served	R	T	TR	T
Maximum Queue (ft)	90	27	29	2
Average Queue (ft)	40	1	1	0
95th Queue (ft)	71	15	14	2
Link Distance (ft)	140	200	200	352
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	59	45	114
Average Queue (ft)	9	4	37
95th Queue (ft)	42	27	90
Link Distance (ft)	74	46	172
Upstream Blk Time (%)	2	1	1
Queuing Penalty (veh)	2	1	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 671

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	296	151	164	219	394	395	180	341	281
Average Queue (ft)	76	133	115	136	56	247	267	99	186	143
95th Queue (ft)	152	239	166	173	169	360	377	188	295	244
Link Distance (ft)		903	72	72		352	352		443	443
Upstream Blk Time (%)			45	54		1	1		0	
Queuing Penalty (veh)			118	139		5	7		0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	3	24				21		32	34	
Queuing Penalty (veh)	6	23				12		113	50	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	18	15	191	62
Average Queue (ft)	1	1	21	22
95th Queue (ft)	9	8	98	51
Link Distance (ft)	45		1407	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)			3	
Queuing Penalty (veh)			0	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	96	115	104	53	133	100
Average Queue (ft)	32	52	19	4	36	9
95th Queue (ft)	70	95	67	29	94	57
Link Distance (ft)	937	75	1974	1974	200	200
Upstream Blk Time (%)		9			0	0
Queuing Penalty (veh)		10			0	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	26	50	43
Average Queue (ft)	1	2	23	16
95th Queue (ft)	11	13	49	42
Link Distance (ft)	47	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	66	108	115	261
Average Queue (ft)	6	30	46	198
95th Queue (ft)	35	86	117	328
Link Distance (ft)	72	45	45	246
Upstream Blk Time (%)	1	6	13	46
Queuing Penalty (veh)	2	15	32	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB
Directions Served	R	T	T
Maximum Queue (ft)	74	6	8
Average Queue (ft)	31	0	0
95th Queue (ft)	59	5	7
Link Distance (ft)	99	200	200
Upstream Blk Time (%)	0		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	46	18	83
Average Queue (ft)	5	1	29
95th Queue (ft)	25	8	63
Link Distance (ft)	75	47	164
Upstream Blk Time (%)	0	0	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 532

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	327	147	160	219	407	423	180	383	302
Average Queue (ft)	117	154	106	139	55	282	300	90	211	161
95th Queue (ft)	191	286	163	164	172	397	418	179	325	264
Link Distance (ft)		926	67	67		351	351		443	443
Upstream Blk Time (%)			37	60		3	4		0	
Queuing Penalty (veh)			105	171		15	26		0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	18	23				28		28	40	
Queuing Penalty (veh)	37	45				13		103	45	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	9	43	299	52
Average Queue (ft)	0	4	51	23
95th Queue (ft)	5	26	205	49
Link Distance (ft)	50		1407	603
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	6	
Queuing Penalty (veh)		0	1	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	142	133	101	84	141	142
Average Queue (ft)	54	63	17	7	40	14
95th Queue (ft)	116	117	63	45	106	77
Link Distance (ft)	937	75	1974	1974	201	201
Upstream Blk Time (%)		20			0	0
Queuing Penalty (veh)		18			0	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	12	43	54	46
Average Queue (ft)	1	3	27	22
95th Queue (ft)	7	25	49	47
Link Distance (ft)	46	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	64	101	119	244
Average Queue (ft)	4	19	71	172
95th Queue (ft)	28	66	138	312
Link Distance (ft)	67	50	50	251
Upstream Blk Time (%)	0	3	22	34
Queuing Penalty (veh)	1	9	58	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB	SB	SB
Directions Served	R	T	T	T	T
Maximum Queue (ft)	87	35	66	6	5
Average Queue (ft)	33	2	4	0	0
95th Queue (ft)	66	21	33	5	5
Link Distance (ft)	128	201	201	351	351
Upstream Blk Time (%)	0				
Queuing Penalty (veh)	0				
Storage Bay Dist (ft)					
Storage Blk Time (%)			0		
Queuing Penalty (veh)			0		

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	46	18	86
Average Queue (ft)	5	1	31
95th Queue (ft)	27	13	75
Link Distance (ft)	75	46	173
Upstream Blk Time (%)	0	1	1
Queuing Penalty (veh)	0	1	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 650

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	297	147	156	219	409	419	179	351	300
Average Queue (ft)	114	128	109	138	39	303	322	87	203	159
95th Queue (ft)	175	246	162	169	143	405	425	172	316	269
Link Distance (ft)		926	72	72		352	352		443	443
Upstream Blk Time (%)			36	60		3	5		0	0
Queuing Penalty (veh)			96	158		18	31		0	0
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	16	16				28		35	37	
Queuing Penalty (veh)	26	35				8		135	46	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	49	25	171	54
Average Queue (ft)	3	1	21	23
95th Queue (ft)	23	11	92	50
Link Distance (ft)	45		1407	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)			3	
Queuing Penalty (veh)			0	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	188	145	133	107	160	146
Average Queue (ft)	66	77	25	8	48	16
95th Queue (ft)	168	142	86	56	121	83
Link Distance (ft)	938	74	1974	1974	200	200
Upstream Blk Time (%)		34			0	0
Queuing Penalty (veh)		39			0	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	12	43	69	38
Average Queue (ft)	1	4	32	19
95th Queue (ft)	8	24	58	44
Link Distance (ft)	46	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	58	92	114	267
Average Queue (ft)	5	22	51	183
95th Queue (ft)	31	68	118	323
Link Distance (ft)	72	45	45	257
Upstream Blk Time (%)	0	3	16	33
Queuing Penalty (veh)	0	7	38	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB
Directions Served	R	T	T
Maximum Queue (ft)	94	35	63
Average Queue (ft)	37	1	3
95th Queue (ft)	78	20	30
Link Distance (ft)	127	200	200
Upstream Blk Time (%)	1		
Queuing Penalty (veh)	0		
Storage Bay Dist (ft)			
Storage Blk Time (%)			0
Queuing Penalty (veh)			0

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	68	54	122
Average Queue (ft)	10	5	38
95th Queue (ft)	45	29	90
Link Distance (ft)	74	46	172
Upstream Blk Time (%)	2	3	0
Queuing Penalty (veh)	2	2	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 643

2046 NO-BUILD TRAFFIC SCENARIO

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	285	203	253	219	475	472	180	417	346
Average Queue (ft)	82	138	103	198	73	281	296	95	244	194
95th Queue (ft)	156	237	174	273	200	424	434	195	378	312
Link Distance (ft)		903	174	174		608	608		443	443
Upstream Blk Time (%)			2	24					0	
Queuing Penalty (veh)			5	62					0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	4	23				23		24	39	
Queuing Penalty (veh)	8	24				14		104	42	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	33	54	292	79
Average Queue (ft)	1	4	49	27
95th Queue (ft)	19	31	199	62
Link Distance (ft)	174		1407	604
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		60		
Storage Blk Time (%)			7	
Queuing Penalty (veh)			1	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	101	98	125	84	168	145
Average Queue (ft)	39	42	25	6	25	12
95th Queue (ft)	87	78	85	44	97	77
Link Distance (ft)	932	174	1974	1974	608	608
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	15	26	54	45
Average Queue (ft)	1	2	26	19
95th Queue (ft)	10	14	49	45
Link Distance (ft)	174	1193	1949	604
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 260

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	440	238	258	219	422	448	179	404	332
Average Queue (ft)	140	206	126	228	56	279	299	72	242	192
95th Queue (ft)	202	385	219	285	168	398	422	168	355	294
Link Distance (ft)		926	174	174		608	608		443	443
Upstream Blk Time (%)			8	55					0	
Queuing Penalty (veh)			24	157					0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	34	30			0	24		14	38	
Queuing Penalty (veh)	76	66			0	12		61	30	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	45	119	752	336
Average Queue (ft)	2	15	342	131
95th Queue (ft)	31	76	877	387
Link Distance (ft)	174		1407	604
Upstream Blk Time (%)	0			1
Queuing Penalty (veh)	0			0
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	41	
Queuing Penalty (veh)		0	7	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	180	136	131	127	142	117
Average Queue (ft)	70	52	23	7	22	11
95th Queue (ft)	143	108	85	59	90	68
Link Distance (ft)	932	174	1974	1974	608	608
Upstream Blk Time (%)		0				
Queuing Penalty (veh)		0				
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	27	31	61	45
Average Queue (ft)	2	3	30	23
95th Queue (ft)	28	18	54	47
Link Distance (ft)	174	1193	1949	604
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 434

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	451	221	258	190	471	484	180	376	318
Average Queue (ft)	137	188	117	240	35	271	290	70	212	173
95th Queue (ft)	197	390	199	265	129	437	460	161	319	280
Link Distance (ft)		926	174	174		608	608		443	443
Upstream Blk Time (%)			5	72		0	0		0	
Queuing Penalty (veh)			14	187		0	0		0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	35	22			0	23		16	34	
Queuing Penalty (veh)	63	51			0	6		74	29	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	104	97	978	508
Average Queue (ft)	6	12	542	305
95th Queue (ft)	49	70	1194	673
Link Distance (ft)	174		1407	604
Upstream Blk Time (%)	0		3	19
Queuing Penalty (veh)	0		0	7
Storage Bay Dist (ft)		60		
Storage Blk Time (%)			60	
Queuing Penalty (veh)			5	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	348	181	765	742	248	243
Average Queue (ft)	123	92	135	118	61	42
95th Queue (ft)	327	193	780	769	220	202
Link Distance (ft)	932	174	1974	1974	608	608
Upstream Blk Time (%)		17	2	2		0
Queuing Penalty (veh)		16	0	0		0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	118	158	317	59
Average Queue (ft)	29	30	101	21
95th Queue (ft)	132	164	333	52
Link Distance (ft)	174	1193	1949	604
Upstream Blk Time (%)	12			
Queuing Penalty (veh)	13			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Network Summary

Network wide Queuing Penalty: 466

2046 DESIGN YEAR TRAFFIC SCENARIO

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	332	147	163	219	438	437	180	440	375
Average Queue (ft)	83	147	116	140	66	323	340	125	258	206
95th Queue (ft)	163	256	167	170	183	438	453	213	405	330
Link Distance (ft)		903	72	72		352	352		443	443
Upstream Blk Time (%)			47	56		6	9		0	
Queuing Penalty (veh)			133	160		37	57		0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	4	27			0	30		48	41	
Queuing Penalty (veh)	8	29			0	19		197	65	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	41	54	259	84
Average Queue (ft)	2	3	38	28
95th Queue (ft)	17	28	154	64
Link Distance (ft)	45		1407	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)		60		
Storage Blk Time (%)			6	
Queuing Penalty (veh)			1	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	146	142	220	218	210	198
Average Queue (ft)	49	71	28	14	50	23
95th Queue (ft)	116	131	123	117	141	112
Link Distance (ft)	937	75	1974	1974	200	200
Upstream Blk Time (%)		27			0	0
Queuing Penalty (veh)		30			2	1
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	23	68	71	46
Average Queue (ft)	1	5	28	19
95th Queue (ft)	10	40	58	45
Link Distance (ft)	47	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	78	106	115	261
Average Queue (ft)	6	32	60	218
95th Queue (ft)	38	88	128	328
Link Distance (ft)	72	45	45	246
Upstream Blk Time (%)	0	8	18	61
Queuing Penalty (veh)	1	20	46	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB	NB	SB	SB
Directions Served	R	T	T	R	T	T
Maximum Queue (ft)	100	96	101	18	18	5
Average Queue (ft)	40	7	10	2	1	0
95th Queue (ft)	83	49	58	31	12	5
Link Distance (ft)	99	200	200		352	352
Upstream Blk Time (%)	3	0	0			
Queuing Penalty (veh)	0	0	1			
Storage Bay Dist (ft)				75		
Storage Blk Time (%)			1			
Queuing Penalty (veh)			1			

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	68	46	120
Average Queue (ft)	8	4	41
95th Queue (ft)	39	25	101
Link Distance (ft)	75	47	164
Upstream Blk Time (%)	2	2	2
Queuing Penalty (veh)	3	2	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 814

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	407	145	157	219	427	435	180	413	352
Average Queue (ft)	130	183	112	141	70	346	363	113	265	209
95th Queue (ft)	200	338	165	161	200	455	465	204	386	317
Link Distance (ft)		926	67	67		351	351		443	443
Upstream Blk Time (%)			41	64		10	14		0	
Queuing Penalty (veh)			127	198		66	92		0	
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	25	27				36		45	45	
Queuing Penalty (veh)	56	59				19		193	55	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	14	110	371	102
Average Queue (ft)	0	10	100	29
95th Queue (ft)	7	54	295	75
Link Distance (ft)	50		1407	603
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		60		
Storage Blk Time (%)		0	14	
Queuing Penalty (veh)		0	2	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	278	85	129	154	151	155
Average Queue (ft)	119	66	21	11	43	18
95th Queue (ft)	291	95	80	68	114	88
Link Distance (ft)	937	75	1974	1974	201	201
Upstream Blk Time (%)		44			0	0
Queuing Penalty (veh)		43			0	0
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	22	154	149	56
Average Queue (ft)	1	29	46	25
95th Queue (ft)	10	118	124	52
Link Distance (ft)	46	1193	1949	603
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	63	121	124	266
Average Queue (ft)	6	32	83	229
95th Queue (ft)	37	94	147	338
Link Distance (ft)	67	50	50	251
Upstream Blk Time (%)	1	7	30	71
Queuing Penalty (veh)	2	21	88	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB	NB
Directions Served	R	T	T	R
Maximum Queue (ft)	113	123	136	59
Average Queue (ft)	43	13	20	3
95th Queue (ft)	95	70	86	36
Link Distance (ft)	128	201	201	
Upstream Blk Time (%)	4	0	0	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (ft)				75
Storage Blk Time (%)			1	0
Queuing Penalty (veh)			1	0

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	34	62	115
Average Queue (ft)	2	27	50
95th Queue (ft)	16	69	129
Link Distance (ft)	75	46	173
Upstream Blk Time (%)	0	27	7
Queuing Penalty (veh)	0	20	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1045

Intersection: 1: IL-43 (Harlem Ave) & Harrison St/Garfield St

Movement	EB	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	TR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	170	560	160	167	203	428	423	180	425	375
Average Queue (ft)	116	276	115	125	40	311	324	92	285	237
95th Queue (ft)	207	730	169	210	155	541	549	203	451	423
Link Distance (ft)		926	72	72		352	352		443	443
Upstream Blk Time (%)		12	48	59		12	16		17	16
Queuing Penalty (veh)		0	139	172		87	118		0	0
Storage Bay Dist (ft)	100				155			50		
Storage Blk Time (%)	21	33				32		36	51	
Queuing Penalty (veh)	38	77				10		166	68	

Intersection: 2: S Maple Ave & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	50	60	711	148
Average Queue (ft)	4	3	291	53
95th Queue (ft)	33	28	1079	190
Link Distance (ft)	45		1407	603
Upstream Blk Time (%)	2		13	
Queuing Penalty (veh)	6		0	
Storage Bay Dist (ft)		60		
Storage Blk Time (%)			29	
Queuing Penalty (veh)			2	

Intersection: 3: IL-43 (Harlem Ave) & Lexington St

Movement	EB	WB	NB	NB	SB	SB
Directions Served	LTR	LTR	LT	TR	LT	TR
Maximum Queue (ft)	586	146	1036	1038	261	244
Average Queue (ft)	273	113	417	413	124	66
95th Queue (ft)	779	172	1591	1597	291	224
Link Distance (ft)	938	74	1974	1974	200	200
Upstream Blk Time (%)	7	74	14	14	25	9
Queuing Penalty (veh)	0	90	0	0	145	52
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 4: S Maple Ave & Lexington St

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	17	401	384	65
Average Queue (ft)	1	130	139	25
95th Queue (ft)	7	611	553	76
Link Distance (ft)	46	1193	1949	603
Upstream Blk Time (%)	0	3		
Queuing Penalty (veh)	0	0		
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 5: QuikTrip Drwy #1 & Garfield St

Movement	EB	WB	WB	NB
Directions Served	TR	LT	T	LR
Maximum Queue (ft)	44	108	118	272
Average Queue (ft)	4	39	67	252
95th Queue (ft)	29	109	142	317
Link Distance (ft)	72	45	45	257
Upstream Blk Time (%)	2	21	29	90
Queuing Penalty (veh)	6	54	78	0
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 6: IL-43 (Harlem Ave) & QuikTrip Drwy #2

Movement	WB	NB	NB	NB	SB	SB
Directions Served	R	T	T	R	T	T
Maximum Queue (ft)	122	136	147	35	212	220
Average Queue (ft)	52	26	30	2	82	80
95th Queue (ft)	114	113	120	31	317	318
Link Distance (ft)	127	200	200		352	352
Upstream Blk Time (%)	7	1	1		17	17
Queuing Penalty (veh)	0	4	4		96	97
Storage Bay Dist (ft)				75		
Storage Blk Time (%)			4			
Queuing Penalty (veh)			4			

Intersection: 7: Lexington St & QuikTrip Drwy #3

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	75	64	166
Average Queue (ft)	33	22	105
95th Queue (ft)	90	63	217
Link Distance (ft)	74	46	172
Upstream Blk Time (%)	30	30	40
Queuing Penalty (veh)	40	28	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Network Summary

Network wide Queuing Penalty: 1580

Request for Address Assignment

The Village of Oak Park
Public Works Center
201 South Blvd.
Oak Park, IL 60302

708.358.5700
708.358.5711 fax
publicworks@oak-park.us
www.oak-park.us/publicworks

Instructions

The Village of Oak Park is authorized by state law to regulate the numbering of buildings, units within buildings and lots. The following are required to request an address for a new or existing building:

- Cover letter requesting the assignment of street addresses
- Completed Request for Address Assignment Application form
- One set of plan drawings for the site and for each floor in the building

The plan drawings should be the same as the drawings that were or will be submitted for a building permit. Drawings should be to a scale and show the following items:

- Placement of the building on the property
- Building outline
- Property lines and right-of-way lines
- Dimensions
- Plan drawing scale
- Driveways
- Name of the streets where access to the property is located
- Entrance doors
  - Indicate primary entrance to the building with a red 'P' on the plan drawings - this will be used to assign the building address
  - Indicate with a red 'A' on the plan drawings all other building entrance points for which an address assignment is requested
- Floor plans for each floor

Submit requests to:

Address Assignment Officer
The Village of Oak Park
Public Works Center
201 South Boulevard
Oak Park, IL 60302

Processing may take up to 10 business days.

Important Facts

Addresses typically are assigned as part of the building permit process. Obtaining address assignments early in the process is recommended.

A particular address number or street name may be requested, but cannot be guaranteed. The primary purpose of assigning street addresses is to provide an accurate and easily visible address for rapidly locating a home or business in any emergency requiring fire, life and/or safety services and for efficient mail and parcel delivery to homes and businesses.

When interior spaces are reconfigured in an existing building, existing addresses and/or unit numbers may be subject to change.

When an apartment building is converted into a condominium building, the Village will assign individual unit numbers based upon addressing guidelines. This may result in a condominium unit numbering system that differs from the apartment unit numbering system.

Whenever practical, street addresses will be assigned to conform to the numbering of buildings and lots as specified in Oak Park Village Code. This may result in a change to the street number of an existing building or site.

Once an address has been assigned or changed, a letter will be sent to the applicant informing him/her of the newly assigned or changed address. The Village also will notify the local Post Office and election officials, as required by law. It is the property owner's responsibility to notify all other parties interested in the new or changed address.

For more information, call 708.358.5724 or e-mail ***publicworks@oak-park.us***.

Rev. 02/10

Request for Address Assignment Application

The Village of Oak Park
Public Works Center
201 South Blvd.
Oak Park, IL 60302

708.358.5700
708.358.5711 fax
publicworks@oak-park.us
www.oak-park.us/publicworks

APPLICANT INFORMATION - PLEASE PRINT OR TYPE CLEARLY

Name	Firm	Date
Ali Bukhres	QuikTrip	7-30-25

Applicant Street Address	City	State	ZIP
50 South Main Street Ste 200	Naperville	IL	60540

Phone Number	Fax Number	E-mail
918-284-9456		abukhres@quiktrip.com

APPLICANT IS: (circle one) Architect | Contractor | (Developer) | Engineer | Property Owner | Tenant | Other _____

REQUEST FOR: (circle all that apply) Verify Address | (New Address) | Add Address | Change Address | Add Suites | Change Suites

Current Property Address (if applicable)	Tax PIN (Property Index Number - if known)
1141 Garfield Street	16-18-300-003-0000w

DEVELOPMENT INFORMATION

Name of Development (if applicable): QuikTrip Store 4454

Describe scope of work: Convenience store with fuel offer

TYPE OF BUILDING (circle all that apply): Single Family | Apartments | Condominiums | Townhouses | (Commercial - Retail) | Commercial - Offices | Commercial - Other | Other _____

# of Stories	Total # of Units: Apartments	Condominiums	Townhomes	Commercial
1				1

Estimated Date of First Occupancy (month/year): August 2026

Remarks: _____

PROPERTY OWNER

If the property is owned in partnership or by a corporation, then a partner or corporate officer may sign as owner. A tenant or leasee may not sign for the property owner.

Name	Firm
Christopher Krohe	SEC Harlem Acquistions LLC

CIRCLE ONE: ( ) Property Owner (•) Partner ( ) Corporate Officer

Owner Street Address	City	State	ZIP
714 Enterprise Dr, Ste 103	Oak Brook	IL	60523

Phone Number	Fax Number	E-mail
708.393.6466		ckrohe@krohvan.com

Signature	Date
Christopher Krohe Christopher Krohe (Aug 12, 2025 08:49:44 CDT)	08/12/25

OFFICE USE ONLY

Address Assigned By	Date	Application ID #



QuikTrip

Store 4454
84-4454-PE00

Village of Oak Park, IL
Date: 08.25.25 By:JK

QuikTrip

Store 4454

84-4454-PE08

Village of Oak Park, IL

Date: 08.25.25 By:JK



QuikTrip

Store 4454

84-4454-PE09

Village of Oak Park, IL

Date: 08.25.25 By:JK