

EXHIBIT D

# MEDICAL OFFICE BUILDING

*Traffic Impact Study*

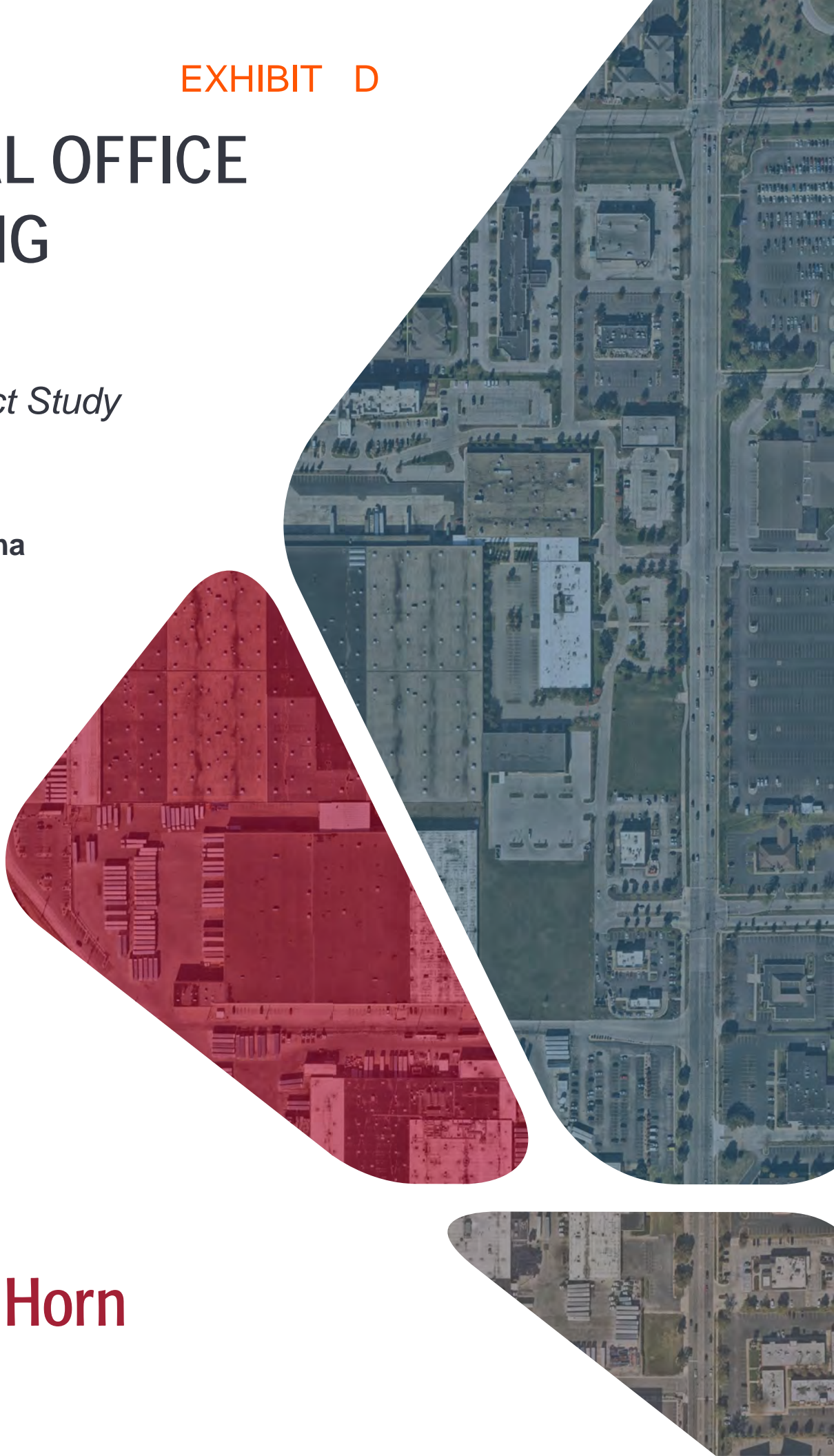
Munster, Indiana

April 2025

Prepared for:

**Cannon Design**

**Kimley»Horn**



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## EXECUTIVE SUMMARY

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by Cannon Design to prepare a traffic impact study for a proposed orthopedics facility located at the western terminus of Fran Lin Parkway, approximately 260 feet west of Calumet Avenue in Munster, Indiana. The proposed development would include a medical office building totaling 29,980 square feet. The medical office building would house a Midwest Orthopaedics at Rush (MOR) outpatient facility. The subject site is currently vacant, undeveloped land. Access to the site would be provided by two access driveways on the west side of the internal roadway west of Calumet Avenue serving existing commercial and industrial developments (referred to herein as Frontage Road). The proposed development is expected to be completed in 2026.

This traffic impact study evaluates existing and future traffic conditions for area intersections following the development of the subject site. Based on a review of future traffic conditions, site-generated traffic is not expected to materially impact the study intersections along Calumet Avenue and Fran Lin Parkway. Under Build Year 2026 conditions, the study intersections and approaches are expected to operate at similar levels of service compared to existing conditions. Therefore, off-site improvements were not included in the analysis of future conditions.

A parking evaluation was also completed for the subject site and, based on data from the operator and the national Institute of Transportation Engineer's database, the proposed parking supply of 159 spaces is expected to accommodate peak parking demand. Spillover of parking to adjacent parcels or roadways is not anticipated.

At the access driveways to Frontage Road, one inbound and outbound lane should be provided. Minor-leg stop-control should be provided for outbound traffic with a stop sign and stop bar. These recommendations and study results are discussed in more detail in the *Recommendations & Conclusions* section of this report.

## 1. INTRODUCTION

Kimley-Horn and Associates, Inc., (Kimley-Horn) was retained by Cannon Design to prepare a traffic impact study for a proposed development located in the southwest quadrant of the Calumet Avenue/Fran Lin Parkway intersection in Munster, Indiana. The proposed development would include a 29,980-square foot medical office building and a parking lot with 159 total spaces. An aerial view of the study location and the surrounding roadway network is presented in **Exhibit 1**.

Access to the development would be provided via two access driveways (North Access and South Access). North Access is located at the western terminus of Fran Lin Parkway and would be the west leg of the unsignalized intersection of Fran Lin Parkway/Frontage Road. South Access is located approximately 110 feet south of North Access and is aligned between the existing driveways for the commercial developments on the east side of Frontage Road.

As a part of this study, the existing network was analyzed to determine the current operations at the study intersections. In order to assess the site's impact on the area roadway network, site-generated trips were established and added to background traffic volumes. Consistent with Indiana Department of Transportation (INDOT) requirements, future traffic conditions were evaluated for anticipated occupancy of development.

This report presents and documents the study methodology, summarizes data collection and development traffic characteristics, highlights the evaluation of traffic conditions on the study intersections and roadways, and identifies recommendations to address operational impacts and integrate the proposed development into the surrounding transportation system.







## 2. EXISTING CONDITIONS

Kimley-Horn reviewed the subject site and surrounding area to collect relevant information pertaining to site context, surrounding land uses, the adjacent street system, current traffic volumes and operating conditions, lane configurations and traffic controls at nearby intersections, and other key transportation characteristics. This section of the report details information on existing conditions.

### Area Land Uses & Connectivity

Regional access near the site is provided by Interstate 94 (I-94), Illinois Route 394 (IL 394), and Indianapolis Boulevard. I-94 provides east-west access across northern Indiana with connectivity to adjacent states. A full interchange to I-94 is provided at Calumet Avenue approximately 1.9 miles north of the site. IL 394 provides north-south access west of the site and Indianapolis Boulevard provides north-south access east of the site.

The surrounding area is primarily residential development with commercial and industrial developments concentrated on the primary arterials of the surrounding roadway network. The subject property is bounded by commercial developments to the east and industrial developments to the north, south, and west. Community Hospital is located approximately 1,000 feet north of the subject site on the east side of Calumet Avenue and Rush Munster medical center is located immediately north of the subject site.

### Existing Roadway Characteristics

The following information was obtained about the existing roadway network based on available maps and aerial imagery.

**Calumet Avenue** is a four-lane, north-south roadway classified by INDOT as a Principal Arterial in the study area. North of Fran Lin Parkway, Calumet Avenue provides two travel lanes in each direction with dedicated left-turn lanes provided at intersections and driveways. South of Fran Lin Parkway, Calumet Avenue provides two travel lanes in each direction with a continuous two-way left-turn lane (TWLTL) in the center median. At its signalized intersections with Fisher Street and Fran Lin Parkway, Calumet Avenue provides a dedicated left-turn lane, one through lane, and a shared through/right-turn lane on both the north and south legs. Striped crosswalks and pedestrian pushbuttons are provided on both legs of Calumet Avenue at Fisher Street and Fran Lin Parkway. A 35-mile per hour (MPH) speed limit is posted within the vicinity of the project area. Calumet Avenue is under Town of Munster jurisdiction through the study area.

**Fisher Street** is a two-lane, east-west roadway classified by INDOT as a Major Collector. The typical section of the existing roadway includes one travel lane in each direction. At its signalized intersection with Calumet Avenue, Fisher Street provides a dedicated left-turn lane and one shared through/right-turn lane on the east and west legs. Striped crosswalks and pedestrian pushbuttons are provided on both legs of Fisher Street at Calumet Avenue. A 35 MPH speed limit is posted on Fisher Street. Fisher Street is under the Town of Munster jurisdiction.

**Fran Lin Parkway** is a two-lane, east-west roadway. Classified by INDOT as a Major Collector, Fran Lin Parkway provides a single travel lane in each direction. Near its intersection with Calumet Avenue, Fran Lin Parkway is a divided roadway with a landscaped center median. Dedicated bike lanes are

provided on both the north and south sides of the street east of Calumet Avenue. At its signalized intersection with Calumet Avenue, Fran Lin Parkway provides a dedicated left-turn lane and a shared through/right-turn lane on the east leg. On the west leg, Fran Lin Parkway provides a shared left/through lane and a dedicated right-turn lane. At its signalized intersection with Columbia Avenue, Fran Lin Parkway provides a dedicated left-turn lane, a dedicated through lane, and a dedicated right-turn lane on both the east and west legs. A striped crosswalk and pedestrian pushbuttons are provided on both legs of Fran Lin Parkway at both Calumet Avenue and Columbia Avenue. A 35 MPH speed limit is posted on Fran Lin Parkway in the study area. Fran Lin Parkway is under Town of Munster jurisdiction through the study area.

**Columbia Avenue** is a two-lane, north-south roadway classified by INDOT as a Minor Arterial. Columbia Avenue provides one travel lane in each direction with a continuous two-way left-turn lane (TWLTL) in the center median. At its signalized intersection with Fran Lin Parkway, Columbia Avenue provides a dedicated left-turn lane and a shared through/right-turn lane on both the north and south legs. A striped crosswalk and pedestrian pushbuttons are provided on both legs of Columbia Avenue at Fran Lin Parkway. A 35 MPH speed limit is posted on Columbia Avenue in the study area. Columbia Avenue is under Town of Munster jurisdiction through the study area.

### Traffic Count Data

Turning movement count data was collected in February 2025 at the intersections listed below.

- Calumet Avenue / Fisher Street
- Calumet Avenue / Fran Lin Parkway
- Columbia Avenue / Fran Lin Parkway

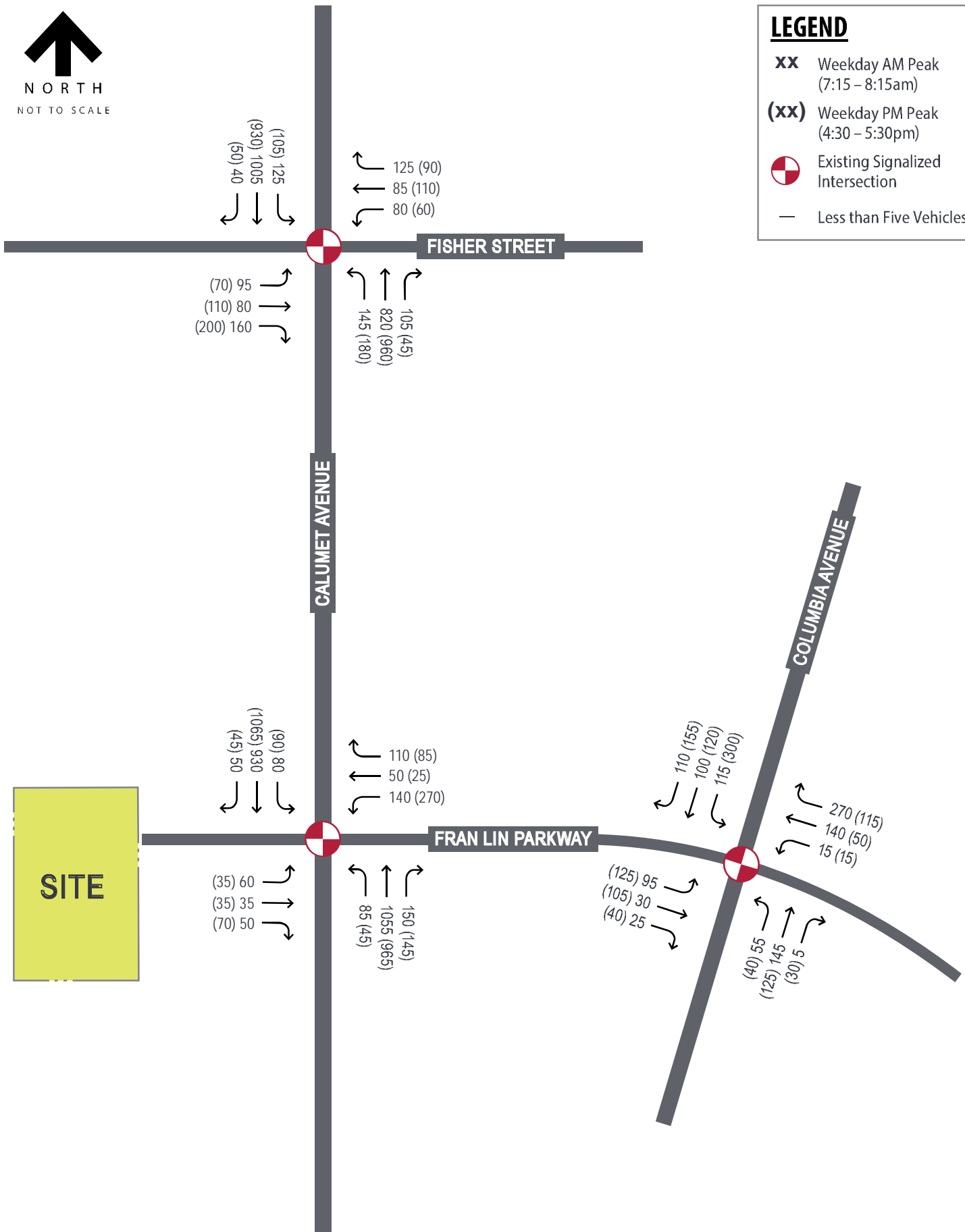
All turning movement counts were conducted on a typical weekday from 7:00-9:00AM and 4:00-6:00PM. These time periods coincide with the typical peak traffic periods of the proposed end user as well as the surrounding street system. The resulting count data reveals the peak hours of adjacent street traffic occurred from 7:15-8:15AM and 4:30-5:30PM.

The existing peak hour traffic counts, rounded to the nearest multiple of five, are presented in **Exhibit 2**. For purposes of this analysis, traffic volumes were not balanced between study intersections due to the presence of side streets and driveways along both Calumet Avenue and Fran Lin Parkway.



## LEGEND

- xx** Weekday AM Peak (7:15 – 8:15am)
- (xx)** Weekday PM Peak (4:30 – 5:30pm)
-  Existing Signalized Intersection
- Less than Five Vehicles





## Existing Capacity Analysis

Capacity analyses were conducted to assess existing and future build operating conditions at the study intersections during the weekday peak hours. The capacity of an intersection quantifies its ability to accommodate traffic volumes and is expressed in terms of level of service (LOS), measured in average delay per vehicle. LOS grades range from A to F, with LOS A as the highest (best traffic flow and least delay), LOS E as saturated or at-capacity conditions, and LOS F as the lowest (oversaturated conditions).

The LOS grades shown below, which are provided in the Transportation Research Board's Highway Capacity Manual (HCM), quantify and categorize the driver's discomfort, frustration, fuel consumption, and travel times experienced as a result of intersection control and the resulting traffic queuing. A detailed description of each LOS rating can be found in **Table 2.1**.

Table 2.1 Level of Service Grading Descriptions<sup>1</sup>

Level of Service	Description
A	Minimal control delay; traffic operates at primarily free-flow conditions; unimpeded movement within traffic stream.
B	Minor control delay at signalized intersections; traffic operates at a fairly unimpeded level with slightly restricted movement within traffic stream.
C	Moderate control delay; movement within traffic stream more restricted than at LOS B; formation of queues contributes to lower average travel speeds.
D	Considerable control delay that may be substantially increased by small increases in flow; average travel speeds continue to decrease.
E	High control delay; average travel speed no more than 33 percent of free flow speed.
F	Extremely high control delay; extensive queuing and high volumes create exceedingly restricted traffic flow.

<sup>1</sup>Highway Capacity Manual, 7th Edition.

The range of control delay for each rating (as detailed in the HCM) is shown in **Table 2.2**. Because signalized intersections are expected to carry a larger volume of vehicles and stopping is required during red time, note that higher delays are tolerated for the corresponding LOS ratings.

Table 2.2 Level of Service Grading Criteria<sup>1</sup>

Level of Service	Average Control Delay (s/veh) at:	
	Unsignalized Intersections	Signalized Intersections
A	0 – 10	0 – 10
B	> 10 – 15	> 10 – 20
C	> 15 – 25	> 20 – 35
D	> 25 – 35	> 35 – 55
E	> 35 – 50	> 55 – 80
F <sup>2</sup>	> 50	> 80

<sup>1</sup>Highway Capacity Manual, 7th Edition

<sup>2</sup>All movements with a Volume to Capacity (v/C) ratio greater than 1 receive a rating of LOS F.

Based on the LOS standards, capacity results were identified for the study intersections under existing conditions. In order to evaluate existing traffic operations, signal timings for the study intersections were obtained from data provided by Town of Munster. It should be noted that the signalized intersections along Calumet Avenue are part of an interconnected, coordinated traffic signal system.

**Table 2.3** summarizes the capacity analysis results for existing peak hour traffic conditions. In this table, operation on each approach is quantified according to the average delay per vehicle and the corresponding level of service. Overall intersection operations are reported for all signalized intersections. The results presented in Table 2.3 are based on Synchro's HCM 7<sup>th</sup> Edition reports. Copies of the capacity analysis reports are provided in the appendix.

Table 2.3 Existing (2025) Levels of Service

Intersection	Weekday AM Peak		Weekday PM Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Calumet Avenue / Fisher Street *				
Eastbound	63	E	65	E
Westbound	58	E	44	D
Northbound	17	B	19	B
Southbound	18	B	21	C
<i>Intersection</i>	27	C	28	C
Calumet Avenue / Fran Lin Parkway *				
Eastbound	60	E	60	E
Westbound	48	D	41	D
Northbound	14	B	18	B
Southbound	13	B	17	B
<i>Intersection</i>	20	B	23	C
Columbia Avenue / Fran Lin Parkway *				
Eastbound	14	B	18	B
Westbound	22	C	22	C
Northbound	18	B	18	B
Southbound	18	B	14	B
<i>Intersection</i>	19	B	17	B

\* -Signalized Intersection

As shown in Table 2.3, the study intersections currently operate at an overall LOS C or better during both peak hours. The majority of approaches operate at LOS D or better during both peak hours and the 95<sup>th</sup> percentile queues for each movement are accommodated within the existing storage. Exceptions are listed below.

At the intersection of Calumet Avenue/Fisher Street, the eastbound approach operates at LOS E during both peak hours and the westbound approach operates at LOS E during the morning peak hour. This is, in part, attributable to the signal timing priority given to north-south traffic on Calumet Avenue. The estimated 95<sup>th</sup> percentile queues for both the eastbound and westbound left-turn

movements are approximately 125 feet (5 vehicles) or less, which is accommodated within the existing storage provided.

At the intersection of Calumet Avenue/Fran Lin Parkway, the eastbound approach operates at LOS E during both peak hours. Similar to the intersection of Calumet Avenue/Fisher Street, this is attributable to the signal timing priority given to north-south traffic on Calumet Avenue as well as the eastbound left-turn movement operating with permitted-only phasing. The estimated 95<sup>th</sup> percentile queues for the eastbound approach are approximately 150 feet (6 vehicles) or less during the peak hours. This is accommodated within the existing storage as there is approximately 170 feet of storage from the intersection of Frontage Road/Fran Lin Parkway to Calumet Avenue. The westbound approach operates acceptably at LOS D during both peak hours. The estimated 95<sup>th</sup> percentile queue for the westbound left-turn movement is approximately 200 feet (8 vehicles) in the morning peak hour and 300 feet (12 vehicles) in the evening peak hour.



### 3. DEVELOPMENT CHARACTERISTICS

This section of the report outlines the proposed site plan, summarizes site-specific traffic characteristics, and develops future traffic projections for analysis.

#### Development Characteristics

The proposed development would occupy the undeveloped parcel at the western terminus of Franklin Parkway on the west side of Frontage Road. The development site plan includes a 29,980 square-foot medical-office building and a parking lot with a total supply of 159 spaces. The medical-office building would provide musculoskeletal health services from diagnosis to treatment, recovery, and physical therapy. Access to the development would be provided via two access driveways on the west side of Frontage Road. A copy of the site plan is provided in the appendix.

#### Trip Generation

In order to calculate trips generated by the proposed development, data was referenced from the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11<sup>th</sup> Edition*. Trip generation rates for the ITE Land Use Code (LUC) corresponding to the proposed use are shown in **Table 3.1**. Due to the proposed development providing diagnosis and outpatient care but not prolonged in-house medical and surgical care, LUC 720 was used. Rush Munster is located immediately north of the subject site and Community Hospital is located approximately 1,000 feet north of the subject site on the east side of Calumet Avenue; therefore, the subcategory “within/near hospital campus” was selected. Copies of the ITE data are provided in the appendix.

Table 3.1 ITE Trip Generation Data

ITE Land Use	Unit	Daily	AM Peak Hour	PM Peak Hour
Medical-Dental Office Building- Within/ Near Hospital Campus (LUC 720)	Per 1,000 sq. ft.	$T = 35.59(X) - 127.95$ 50% in/50% out	$T = 2.72(X) - 1.53$ 81% in/19% out	$T = 3.05(X) - 7.38$ 25% in/75% out

X = square feet (SF) of development

The site-generated trips estimated for the peak hours were rounded to the nearest multiple of five and daily trips were rounded to the nearest multiple of ten. Projected site traffic volumes are summarized in **Table 3.2**.

Table 3.2 Site-Generated Traffic Projections

Land Use	Unit	Daily	AM Peak Hour			PM Peak Hour		
			In	Out	Total	In	Out	Total
Medical-Dental Office Building- Within/ Near Hospital Campus (LUC 720)	29,980 sq. ft.	940	65	15	80	20	65	85

<sup>1</sup>In/Out volumes are rounded to the nearest multiple of five. For rounding purposes, total volumes are a sum of in and out.

#### Directional Distribution

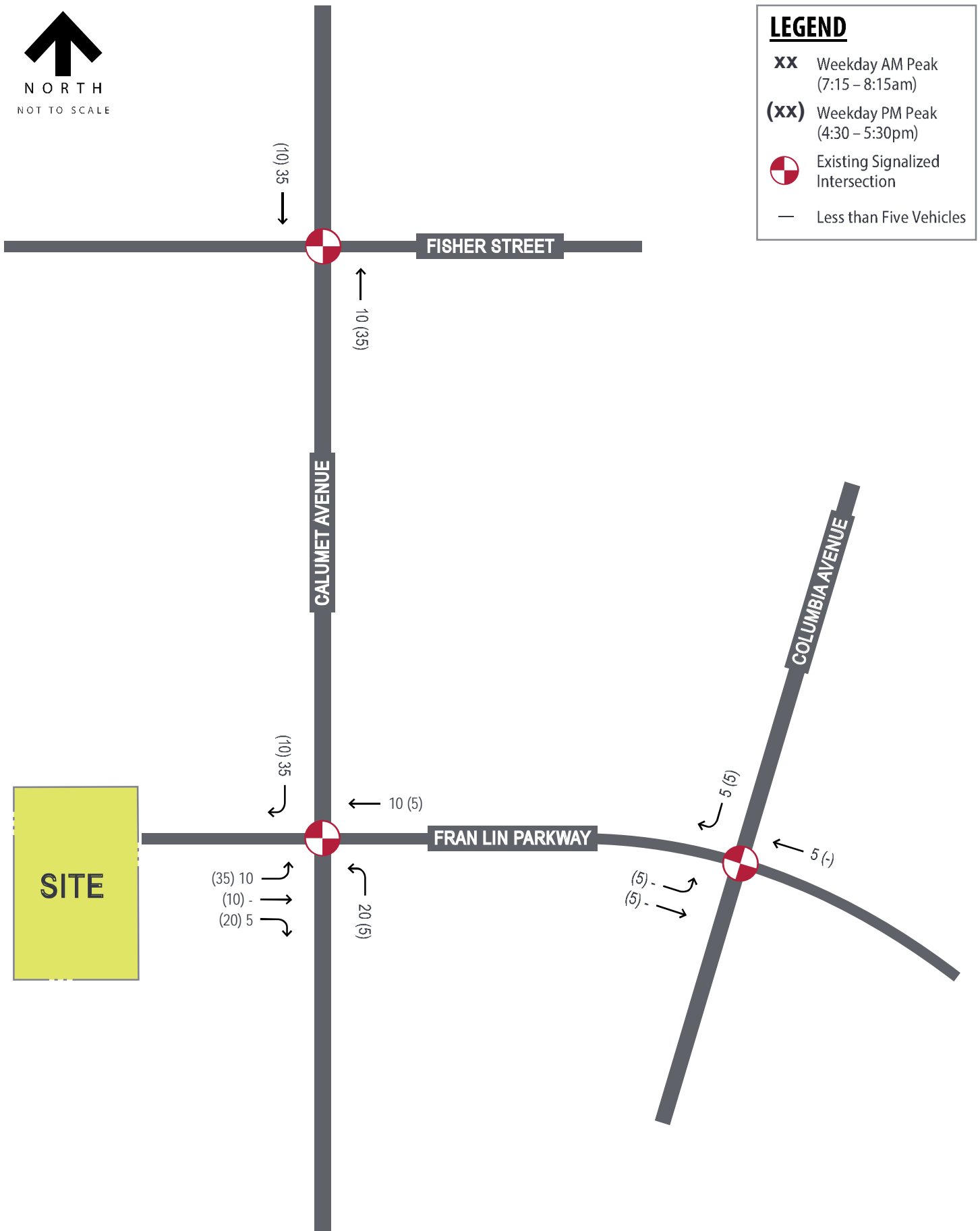
The estimated distribution of site-generated traffic on the surrounding roadway network as it approaches and departs the site is a function of several variables, such as the nature of surrounding land uses, prevailing traffic volumes/patterns, and the ease with which motorists can travel various

sections of the area roadway network. The anticipated directional distribution of site-generated trips is presented in **Table 3.3**.

**Table 3.3 Estimated Trip Distribution**

Traveling to/from	Site-Generated Trips
North via Calumet Avenue	50%
South via Calumet Avenue	35%
North via Columbia Avenue	10%
East via Fran Lin Parkway	5%
Total	100%

The site traffic assignment, representing traffic volumes associated with the proposed development at the study intersections, is a function of the estimated trip generation (Table 3.2) and the directional distribution (Table 3.3). The site trip assignment for the proposed development is presented in **Exhibit 3**.





## 4. FUTURE CONDITIONS

This section of the report outlines the proposed site plan, summarizes site-specific traffic characteristics, and develops future traffic projections for analysis.

### Future Background Traffic Projections

Background traffic projections were estimated using the INDOT [Traffic Count Map \(TCMap\)](#). Based on the available historical Annual Average Daily Traffic (AADT) data, an average annual growth rate of 1.2 percent per year was applied to existing traffic volumes (Exhibit 2) for a 1-year period to estimate Year 2026 background traffic volumes. Background traffic projections for Year 2026 are presented in **Exhibit 4**.

### Future Build Traffic Projections

To develop future build traffic projections, site-generated traffic (Exhibit 3) was added to background traffic projections (Exhibit 4). Future (2026) Build traffic projections are illustrated in **Exhibit 5**.

### Future Geometry

A southbound right-turn lane was evaluated at Calumet Avenue/Fran Lin Parkway using guidelines in the *INDOT Design Manual* (IDM). The study intersection is signalized; therefore, IDM guidance for right-turn lanes at signalized intersections was referenced. A right-turn lane at a signalized intersection is warranted where capacity analysis determines the turn lane is needed to meet level-of-service criteria. As shown in the analysis of future build conditions, the southbound approach is expected to operate at LOS B and LOS C during the morning and evening peak hours, respectively. Based on these levels of delay, a southbound right-turn lane was not included in the analysis of future conditions.



**LEGEND**

xx

Weekday AM Peak  
(7:15 – 8:15am)

(xx)

Weekday PM Peak  
(4:30 – 5:30pm)

Existing Signalized  
Intersection

—

Less than Five Vehicles





**LEGEND**

xx

Weekday AM Peak  
(7:15 – 8:15am)

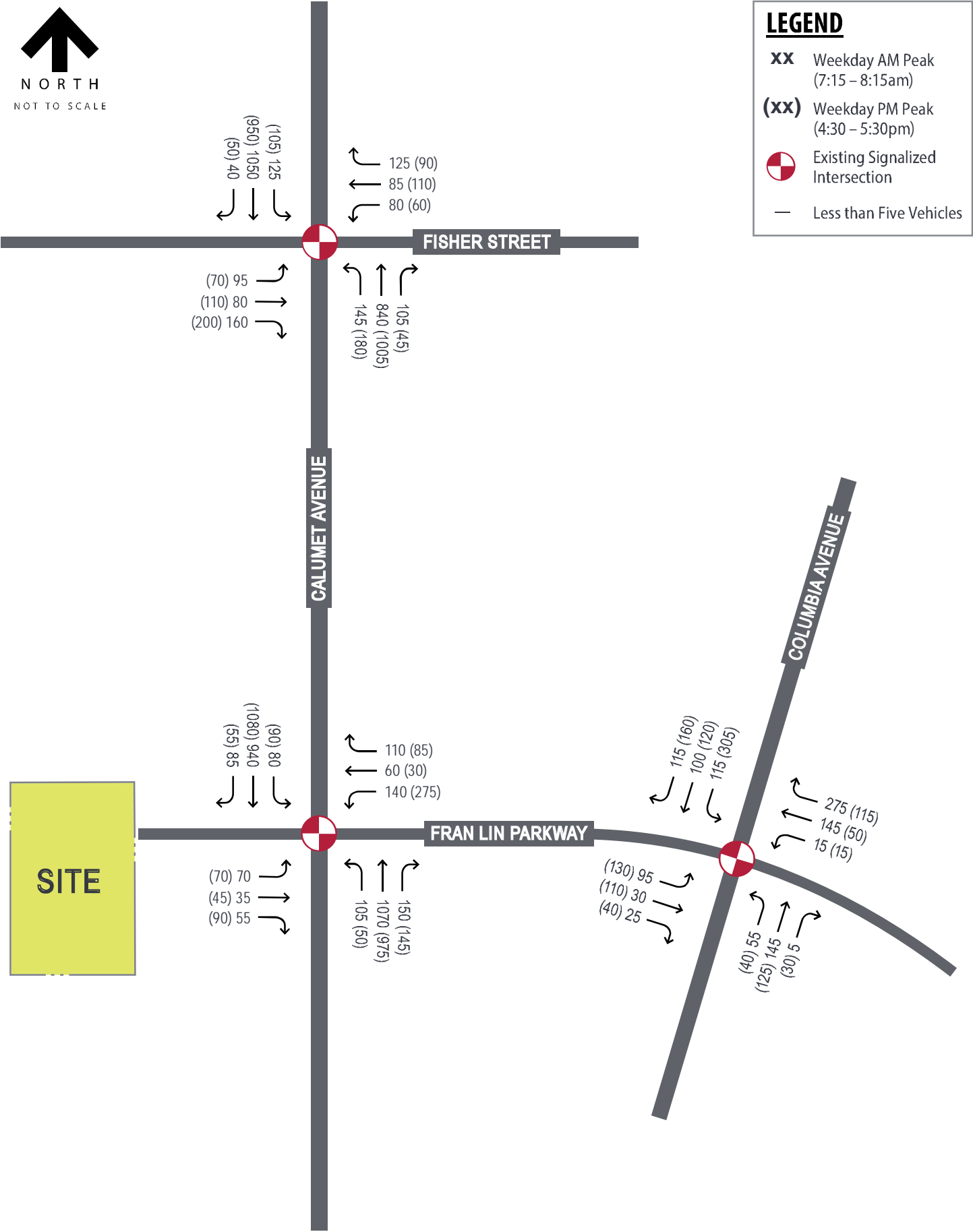
(xx)

Weekday PM Peak  
(4:30 – 5:30pm)

Existing Signalized  
Intersection

—

Less than Five Vehicles





## Future Build Capacity Analysis

Capacity results were identified for the study intersections under Future (2026) Build conditions (Exhibit 5). The results of the capacity analysis are summarized in **Table 4.1**. Consistent with the analysis of existing conditions, the results are based on Synchro's HCM 7<sup>th</sup> Edition reports. Copies of these reports are included in the appendix.

**Table 4.1 Future (2026) Build Levels of Service**

Intersection	Weekday AM Peak		Weekday PM Peak	
	Delay (s/veh)	LOS	Delay (s/veh)	LOS
Calumet Avenue / Fisher Street	★			
Eastbound	63	E	65	E
Westbound	58	E	44	D
Northbound	17	B	20-	B
Southbound	19	B	21	C
Intersection	27	C	28	C
Calumet Avenue / Fran Lin Parkway	★			
Eastbound	59	E	55+	E
Westbound	47	D	39	D
Northbound	15	B	22	C
Southbound	14	B	20+	C
Intersection	21	C	26	C
Columbia Avenue / Fran Lin Parkway	★			
Eastbound	14	B	18	B
Westbound	22	C	22	C
Northbound	18	B	19	B
Southbound	18	B	14	B
Intersection	19	B	17	B

★ -Signalized Intersection

With the addition of background traffic and site-generated trips, all study intersections are expected to operate at the same level of service as existing conditions, with the exception of the Calumet Avenue/Fran Lin Parkway intersection during the morning peak hour. Under existing conditions, this intersection operates at LOS B, nearing the threshold to LOS C. Under build conditions, delay per vehicle at this intersection is expected to increase by approximately one second, resulting in this intersection projected to operate at LOS C in the future.

Additionally, the majority of approaches are expected to operate at similar levels of service under build conditions as existing conditions. The eastbound approach of Calumet Avenue/Fran Lin Parkway is expected to continue to operate at LOS E during both peak hours, consistent with existing conditions. The 95<sup>th</sup> percentile queue for the eastbound left-turn movement is projected to increase by one vehicle (25 feet) under build conditions during both peak hours, indicating minimal impacts to existing traffic operations at this intersection.

All other 95<sup>th</sup> percentile queues at the study intersections are projected to be accommodated by the existing storage lengths, consistent with existing conditions.

## Parking Evaluation

A total of 159 parking spaces, including 16 Americans with Disabilities Act (ADA) spaces, would be provided at the subject site, as shown on the site plan. Per the Town of Munster Zoning Ordinance, Medical Office Buildings are required to provide 5.7 spaces per 1,000 square feet of floor area. Therefore, a total of 171 spaces would be required for the proposed development per code. A total of 159 spaces would be provided, which does not satisfy local requirements.

### ITE Parking Generation

Kimley-Horn reviewed parking demand data provided in the Institute of Transportation Engineers (ITE) Parking Generation Manual, 6<sup>th</sup> Edition to estimate the required parking supply per industry resources. Consistent with trip generation, LUC 720, Medical-Dental Office Building, near a hospital campus, was assumed for the proposed use. The average and 85<sup>th</sup> percentile parking generation rates are provided in **Table 4.2** and the data is provided in the Appendix.

Table 4.2 ITE Parking Generation Rates

ITE Land Use	Unit (X)	Monday – Friday	
		Average	85 <sup>th</sup> Percentile
Medical-Dental Office Building- Within/ Near Hospital Campus (LUC 720)	1,000 sq. ft.	S = 3.58X	S = 4.75X

As shown in **Table 4.3**, based on ITE parking demand data, the proposed parking supply of 159 spaces would accommodate the average and 85<sup>th</sup> percentile project parking demand on a typical weekday.

Table 4.3 Peaking Generation Estimates

Land Use Code	Size	Monday – Friday	
		Average	85 <sup>th</sup> Percentile
Medical-Dental Office Building- Within/ Near Hospital Campus (LUC 720)	29,980 sq. ft.	107	142

### Operational Parking Demand

Based on coordination with MOR, the following on-site staff, patients, and family members are expected during a typical weekday:

- Clinic staff: 30 employees daily
- Clinic patients: 48 per hour
- Physical therapy patient: 40 per hour
- Family members: 30 per hour

Peak operational parking demand was developed using the above assumptions. The number of required parking spaces per each group is provided in **Table 4.4**. It was assumed that all staff will drive to the site individually (one employee = one vehicle). It is expected that some carpooling will

occur with patients and family members. Therefore, it was assumed that approximately half of the family members would travel in the same vehicle as the clinic and/or physical therapy patients.

**Table 4.4 Operational Parking Demand**

Category	Hourly Parking Demand
Clinic Staff	30 spaces
Clinic Patients	48 spaces
Physical Therapy Patients	40 spaces
Family Members	15 spaces
<b>Total</b>	<b>133 spaces</b>

<sup>1</sup>It was assumed that 50% of the hourly family members expected on site would travel to the site in the same vehicle as the clinic/physical therapy patient.

Based on a review of ITE parking demand data and operational parking demand data, the parking supply of 159 spaces will accommodate anticipated parking demand. The operational data is specific to the proposed use and is expected to most accurately reflect anticipated parking demand. Although the proposed parking supply is less than the local requirements, based on data from the operator and the national ITE database, spillover of parking to adjacent parcels or roadways is not anticipated.

## 5. RECOMMENDATIONS & CONCLUSIONS

Based on Kimley-Horn's review of the proposed site plan and evaluation of existing and future traffic conditions, the consistency between existing and build conditions results indicate traffic generated by the proposed medical-office building is not expected to materially impact operations at any of the study intersections. The study intersections are projected to adequately accommodate the proposed development with the following recommendations:

- Provide a single inbound and outbound lane at North Access and South Access.
- Install minor-leg stop control for outbound traffic at the access driveways.

A parking evaluation was also completed for the subject site and, based on data from the operator and the national database, the proposed parking supply of 159 spaces is expected to accommodate peak parking demand. Spillover to adjacent parcels or roadways is not anticipated.

Regardless of the final configuration of the intersection geometrics, several additional items should be taken into consideration when preparing site and roadway improvement plans for the subject development. As the site design progresses, care should be taken with landscaping, signage, and monumentation at the site access locations to ensure that adequate horizontal sight distance is maintained. If alterations to the site plan or land use should occur, changes to the analysis provided within this traffic impact study may be needed.



## APPENDIX

Conceptual Site Plan

Traffic Count Data

Existing Year (2025) Capacity Reports

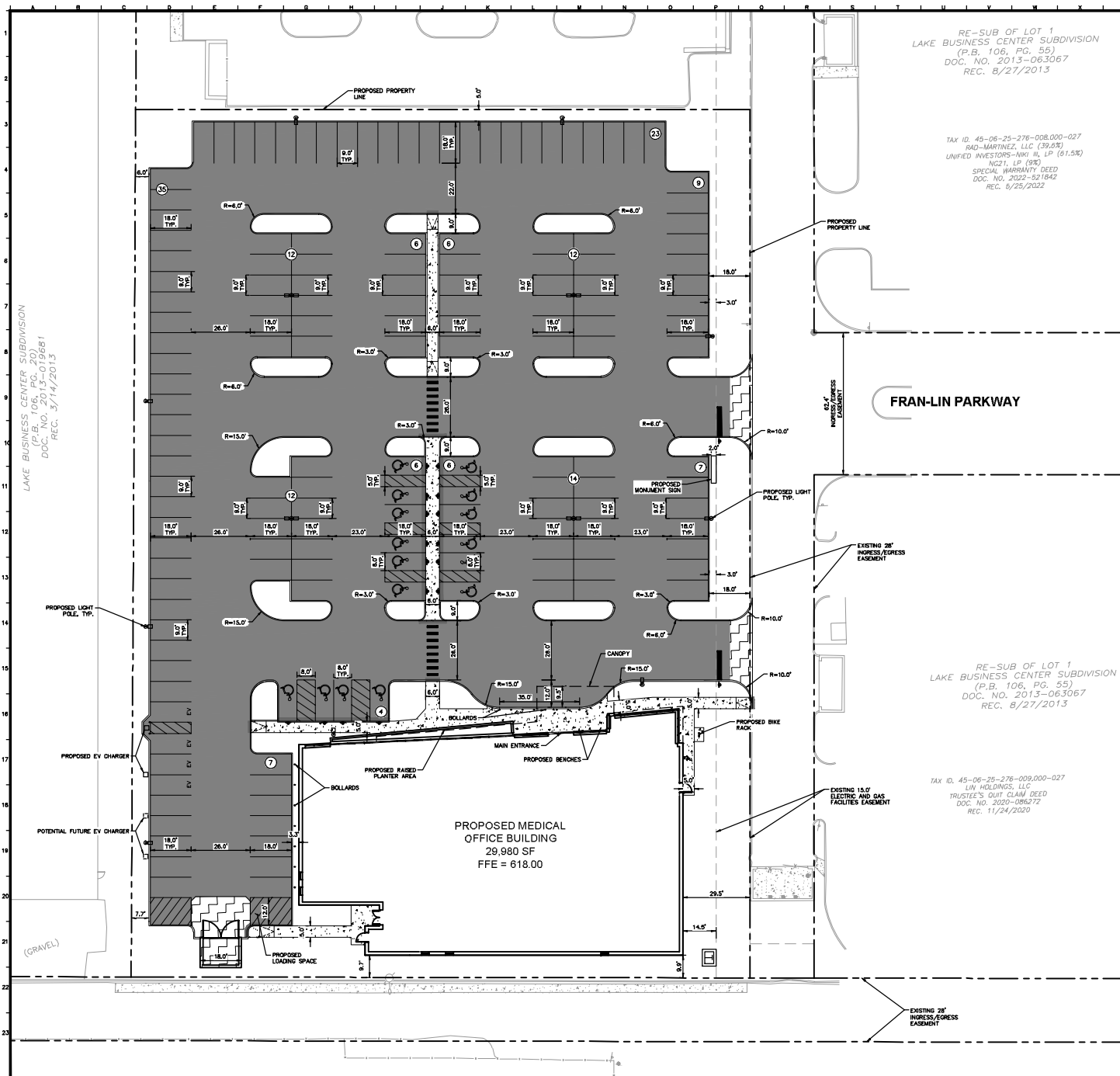
Data from ITE Trip Generation Manual, 11<sup>th</sup> Edition

Future Year (2026) Build Capacity Report

Data from ITE Parking Generation Manual, 6<sup>th</sup> Edition

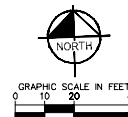
## CONCEPTUAL SITE PLAN

LAKE BUSINESS CENTER SUBDIVISION  
(P.B. 106, PG. 20)  
DOC. NO. 2013-019681  
REC. 3/14/2013



RE-SUB OF LOT 1  
LAKE BUSINESS CENTER SUBDIVISION  
(P.B. 106, PG. 55)  
DOC. NO. 2013-063067  
REC. 8/27/2013






TAX ID. 45-06-25-276-008.000-027  
RAD-MARTINEZ, LLC (39.6%)  
UNIFIED INVESTORS-NIKI III, LP (61.5%)  
NG21, LP (9%)  
SPECIAL WARRANTY DEED  
DOC. NO. 2022-521842  
REC. 5/25/2022



## SITE DATA TABLE

TOTAL PARKING SPACES PROVIDED	= 159 SPACES
STANDARD ADA SPACES PROVIDED	= 12 SPACES
VAN ADA SPACES PROVIDED	= 4 SPACES
BICYCLE PARKING REQUIREMENTS	= 2 SPACES
(1 SPACE PER 10 EXAM/PATIENT ROOMS)	
BICYCLE PARKING PROVIDED	= 2 SPACES
PARKING RATIO	6.3 SPACES / 1000 SQ
SITE AREA	2.37 ACRES
CURRENT ZONING	SU-PUD
PROPOSED ZONING	SU-PUD (CD-S)
LOT COVERAGE REQUIRED	80% MAX.
LOT COVERAGE PROVIDED	16%

## PAVING AND CURB LEGEND

	PROPOSED ASPHALT PAVEMENT 1.5" BITUMINOUS SURFACE 2.5" BITUMINOUS BINDER 8" CA-6 BASE COURSE
	PROPOSED HEAVY DUTY CONCRETE PAVEMENT 9" P.C. CONCRETE PAVEMENT 4" CA-6 SUBBASE
	CONCRETE SIDEWALK 6" P.C. CONCRETE 4" CA-6 SUBBASE
	BARRIER CURB
	DEPRESSED CURB

FRAN-LIN PARKWAY

RE-SUB OF LOT 1  
LAKE BUSINESS CENTER SUBDIVISION  
(P.B. 106, PG. 55)  
DOC. NO. 2013-063067  
REC. 8/27/2013

TAX ID. 45-06-25-276-009,000-027  
LIN HOLDINGS, LLC  
TRUSTEE'S QUIT CLAIM DEED  
DOC. NO. 2020-086272  
REC. 11/24/2020

## TRAFFIC COUNT DATA

# Calumet Avenue & Fisher Street - TMC

Tue Feb 11, 2025

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269099, Location: 41.551831, -87.509006



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

Leg Direction	Fisher St Eastbound							Fisher St Westbound							Calumet Ave Northbound							Calumet Ave Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		Int
2025-02-11																													
7:00AM	18	8	27	0	53	1		3	7	20	0	30	0		10	179	10	0	199	0		30	144	6	0	180	0		462
7:15AM	23	13	33	0	69	0		7	8	20	0	35	0		18	202	24	0	244	0		21	216	9	0	246	0		594
7:30AM	25	37	45	0	107	0		31	23	41	0	95	0		26	236	43	0	305	0		28	252	6	0	286	0		793
7:45AM	27	12	40	0	79	0		28	29	45	0	102	0		54	210	28	0	292	0		32	307	12	0	351	0		824
Hourly Total	93	70	145	0	308	1		69	67	126	0	262	0		108	827	105	0	1040	0		111	919	33	0	1063	0		2673
8:00AM	20	17	43	0	80	0		12	23	19	0	54	0		45	172	8	0	225	0		44	232	13	0	289	0		648
8:15AM	12	7	34	0	53	0		11	17	20	0	48	0		34	204	7	0	245	0		23	234	10	0	267	0		613
8:30AM	7	20	28	0	55	0		12	14	13	0	39	0		34	202	7	0	243	0		27	216	11	0	254	0		591
8:45AM	13	20	57	0	90	0		11	17	17	0	45	0		21	180	12	0	213	0		27	258	19	0	304	0		652
Hourly Total	52	64	162	0	278	0		46	71	69	0	186	0		134	758	34	0	926	0		121	940	53	0	1114	0		2504
4:00PM	17	29	37	0	83	0		21	31	28	0	80	1		49	223	6	0	278	0		25	217	10	0	252	0		693
4:15PM	26	25	44	0	95	1		17	29	22	0	68	0		45	208	7	0	260	0		29	235	11	0	275	1		698
4:30PM	14	25	56	0	95	0		19	24	34	0	77	0		42	254	11	0	307	0		30	218	7	0	255	0		734
4:45PM	20	24	38	0	82	0		16	21	18	0	55	0		41	224	12	0	277	0		22	222	21	0	265	0		679
Hourly Total	77	103	175	0	355	1		73	105	102	0	280	1		177	909	36	0	1122	0		106	892	49	0	1047	1		2804
5:00PM	17	30	51	0	98	0		11	32	22	0	65	0		43	238	7	0	288	1		33	240	11	0	284	0		735
5:15PM	18	32	56	0	106	0		14	35	16	0	65	0		53	244	13	0	310	0		18	250	9	0	277	0		758
5:30PM	11	28	39	0	78	0		25	30	26	0	81	0		33	201	13	0	247	0		27	226	9	0	262	0		668
5:45PM	22	15	33	0	70	0		12	22	22	0	56	0		37	171	14	0	222	0		31	205	10	0	246	0		594
Hourly Total	68	105	179	0	352	0		62	119	86	0	267	0		166	854	47	0	1067	1		109	921	39	0	1069	0		2755
<b>Total</b>	<b>290</b>	<b>342</b>	<b>661</b>	<b>0</b>	<b>1293</b>	<b>2</b>		<b>250</b>	<b>362</b>	<b>383</b>	<b>0</b>	<b>995</b>	<b>1</b>		<b>585</b>	<b>3348</b>	<b>222</b>	<b>0</b>	<b>4155</b>	<b>1</b>		<b>447</b>	<b>3672</b>	<b>174</b>	<b>0</b>	<b>4293</b>	<b>1</b>		<b>10736</b>
<b>% Approach</b>	<b>22.4%</b>	<b>26.5%</b>	<b>51.1%</b>	<b>0%</b>	<b>-</b>	<b>-</b>		<b>25.1%</b>	<b>36.4%</b>	<b>38.5%</b>	<b>0%</b>	<b>-</b>	<b>-</b>		<b>14.1%</b>	<b>80.6%</b>	<b>5.3%</b>	<b>0%</b>	<b>-</b>	<b>-</b>		<b>10.4%</b>	<b>85.5%</b>	<b>4.1%</b>	<b>0%</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>% Total</b>	<b>2.7%</b>	<b>3.2%</b>	<b>6.2%</b>	<b>0%</b>	<b>12.0%</b>	<b>-</b>		<b>2.3%</b>	<b>3.4%</b>	<b>3.6%</b>	<b>0%</b>	<b>9.3%</b>	<b>-</b>		<b>5.4%</b>	<b>31.2%</b>	<b>2.1%</b>	<b>0%</b>	<b>38.7%</b>	<b>-</b>		<b>4.2%</b>	<b>34.2%</b>	<b>1.6%</b>	<b>0%</b>	<b>40.0%</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Lights</b>	<b>286</b>	<b>332</b>	<b>651</b>	<b>0</b>	<b>1269</b>	<b>-</b>		<b>239</b>	<b>359</b>	<b>374</b>	<b>0</b>	<b>972</b>	<b>-</b>		<b>574</b>	<b>3260</b>	<b>219</b>	<b>0</b>	<b>4053</b>	<b>-</b>		<b>437</b>	<b>3544</b>	<b>171</b>	<b>0</b>	<b>4152</b>	<b>-</b>	<b>10446</b>	<b>-</b>
<b>% Lights</b>	<b>98.6%</b>	<b>97.1%</b>	<b>98.5%</b>	<b>0%</b>	<b>98.1%</b>	<b>-</b>		<b>95.6%</b>	<b>99.2%</b>	<b>97.7%</b>	<b>0%</b>	<b>97.7%</b>	<b>-</b>		<b>98.1%</b>	<b>97.4%</b>	<b>98.6%</b>	<b>0%</b>	<b>97.5%</b>	<b>-</b>		<b>97.8%</b>	<b>96.5%</b>	<b>98.3%</b>	<b>0%</b>	<b>96.7%</b>	<b>-</b>	<b>97.3%</b>	<b>-</b>
<b>Articulated Trucks</b>	<b>0</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>5</b>	<b>-</b>		<b>1</b>	<b>1</b>	<b>3</b>	<b>0</b>	<b>5</b>	<b>-</b>		<b>0</b>	<b>54</b>	<b>1</b>	<b>0</b>	<b>55</b>	<b>-</b>		<b>2</b>	<b>73</b>	<b>0</b>	<b>0</b>	<b>75</b>	<b>-</b>	<b>140</b>	<b>-</b>
<b>% Articulated Trucks</b>	<b>0%</b>	<b>0.9%</b>	<b>0.3%</b>	<b>0%</b>	<b>0.4%</b>	<b>-</b>		<b>0.4%</b>	<b>0.3%</b>	<b>0.8%</b>	<b>0%</b>	<b>0.5%</b>	<b>-</b>		<b>0%</b>	<b>1.6%</b>	<b>0.5%</b>	<b>0%</b>	<b>1.3%</b>	<b>-</b>		<b>0.4%</b>	<b>2.0%</b>	<b>0%</b>	<b>0%</b>	<b>1.7%</b>	<b>-</b>	<b>1.3%</b>	<b>-</b>
<b>Buses and Single-Unit Trucks</b>	<b>4</b>	<b>7</b>	<b>8</b>	<b>0</b>	<b>19</b>	<b>-</b>		<b>10</b>	<b>2</b>	<b>6</b>	<b>0</b>	<b>18</b>	<b>-</b>		<b>11</b>	<b>34</b>	<b>2</b>	<b>0</b>	<b>47</b>	<b>-</b>		<b>8</b>	<b>54</b>	<b>3</b>	<b>0</b>	<b>65</b>	<b>-</b>	<b>149</b>	<b>-</b>
<b>% Buses and Single-Unit Trucks</b>	<b>1.4%</b>	<b>2.0%</b>	<b>1.2%</b>	<b>0%</b>	<b>1.5%</b>	<b>-</b>		<b>4.0%</b>	<b>0.6%</b>	<b>1.6%</b>	<b>0%</b>	<b>1.8%</b>	<b>-</b>		<b>1.9%</b>	<b>1.0%</b>	<b>0.9%</b>	<b>0%</b>	<b>1.1%</b>	<b>-</b>		<b>1.8%</b>	<b>1.5%</b>	<b>1.7%</b>	<b>0%</b>	<b>1.5%</b>	<b>-</b>	<b>1.4%</b>	<b>-</b>
<b>Bicycles on Road</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>-</b>		<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>
<b>% Bicycles on Road</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>-</b>		<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>-</b>		<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>-</b>		<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>-</b>	<b>0%</b>	<b>-</b>
<b>Pedestrians</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1</b>	
<b>% Pedestrians</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100%</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100%</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100%</b>		<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>100%</b>	<b>-</b>

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



# Calumet Avenue & Fisher Street - TMC

Tue Feb 11, 2025

Forced Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269099, Location: 41.551831, -87.509006



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

Leg Direction	Fisher St Eastbound							Fisher St Westbound							Calumet Ave Northbound							Calumet Ave Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*	Int	
2025-02-11																													
7:15AM	23	13	33	0	69	0		7	8	20	0	35	0		18	202	24	0	244	0		21	216	9	0	246	0	594	
7:30AM	25	37	45	0	107	0		31	23	41	0	95	0		26	236	43	0	305	0		28	252	6	0	286	0	793	
7:45AM	27	12	40	0	79	0		28	29	45	0	102	0		54	210	28	0	292	0		32	307	12	0	351	0	824	
8:00AM	20	17	43	0	80	0		12	23	19	0	54	0		45	172	8	0	225	0		44	232	13	0	289	0	648	
Total	95	79	161	0	335	0		78	83	125	0	286	0		143	820	103	0	1066	0		125	1007	40	0	1172	0	2859	
% Approach	28.4%	23.6%	48.1%	0%	-	-		27.3%	29.0%	43.7%	0%	-	-		13.4%	76.9%	9.7%	0%	-	-		10.7%	85.9%	3.4%	0%	-	-	-	
% Total	3.3%	2.8%	5.6%	0%	11.7%	-		2.7%	2.9%	4.4%	0%	10.0%	-		5.0%	28.7%	3.6%	0%	37.3%	-		4.4%	35.2%	1.4%	0%	41.0%	-	-	
PHF	0.880	0.534	0.894	-	0.783	-		0.629	0.716	0.694	-	0.701	-		0.662	0.869	0.599	-	0.874	-		0.710	0.820	0.769	-	0.835	-	0.867	
Lights	94	75	155	0	324	-		76	81	123	0	280	-		140	800	102	0	1042	-		121	961	40	0	1122	-	2768	
% Lights	98.9%	94.9%	96.3%	0%	96.7%	-		97.4%	97.6%	98.4%	0%	97.9%	-		97.9%	97.6%	99.0%	0%	97.7%	-		96.8%	95.4%	100%	0%	95.7%	-	96.8%	
Articulated Trucks	0	0	1	0	1	-		0	0	1	0	1	-		0	12	0	0	12	-		2	25	0	0	27	-	41	
% Articulated Trucks	0%	0%	0.6%	0%	0.3%	-		0%	0%	0.8%	0%	0.3%	-		0%	1.5%	0%	0%	1.1%	-		1.6%	2.5%	0%	0%	2.3%	-	1.4%	
Buses and Single-Unit Trucks	1	4	5	0	10	-		2	2	1	0	5	-		3	8	1	0	12	-		2	21	0	0	23	-	50	
% Buses and Single-Unit Trucks	1.1%	5.1%	3.1%	0%	3.0%	-		2.6%	2.4%	0.8%	0%	1.7%	-		2.1%	1.0%	1.0%	0%	1.1%	-		1.6%	2.1%	0%	0%	2.0%	-	1.7%	
Bicycles on Road	0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	-	0		
% Pedestrians	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Calumet Avenue & Fisher Street - TMC

Tue Feb 11, 2025

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269099, Location: 41.551831, -87.509006



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

Leg Direction	Fisher St Eastbound							Fisher St Westbound							Calumet Ave Northbound							Calumet Ave Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*	Int	
2025-02-11 4:30PM	14	25	56	0	95	0		19	24	34	0	77	0		42	254	11	0	307	0		30	218	7	0	255	0	734	
4:45PM	20	24	38	0	82	0		16	21	18	0	55	0		41	224	12	0	277	0		22	222	21	0	265	0	679	
5:00PM	17	30	51	0	98	0		11	32	22	0	65	0		43	238	7	0	288	1		33	240	11	0	284	0	735	
5:15PM	18	32	56	0	106	0		14	35	16	0	65	0		53	244	13	0	310	0		18	250	9	0	277	0	758	
Total	69	111	201	0	381	0		60	112	90	0	262	0		179	960	43	0	1182	1		103	930	48	0	1081	0	2906	
% Approach	18.1%	29.1%	52.8%	0%	-	-		22.9%	42.7%	34.4%	0%	-	-		15.1%	81.2%	3.6%	0%	-	-		9.5%	86.0%	4.4%	0%	-	-	-	
% Total	2.4%	3.8%	6.9%	0%	13.1%	-		2.1%	3.9%	3.1%	0%	9.0%	-		6.2%	33.0%	1.5%	0%	40.7%	-		3.5%	32.0%	1.7%	0%	37.2%	-	-	
PHF	0.863	0.867	0.897	-	0.899	-		0.789	0.800	0.662	-	0.851	-		0.844	0.945	0.827	-	0.953	-		0.780	0.933	0.571	-	0.951	-	0.959	
Lights	68	108	201	0	377	-		60	111	89	0	260	-		179	950	42	0	1171	-		103	909	48	0	1060	-	2868	
% Lights	98.6%	97.3%	100%	0%	99.0%	-		100%	99.1%	98.9%	0%	99.2%	-		100%	99.0%	97.7%	0%	99.1%	-		100%	97.7%	100%	0%	98.1%	-	98.7%	
Articulated Trucks	0	2	0	0	2	-		0	1	0	0	1	-		0	8	0	0	8	-		0	16	0	0	16	-	27	
% Articulated Trucks	0%	1.8%	0%	0%	0.5%	-		0%	0.9%	0%	0%	0.4%	-		0%	0.8%	0%	0%	0.7%	-		0%	1.7%	0%	0%	1.5%	-	0.9%	
Buses and Single-Unit Trucks	1	1	0	0	2	-		0	0	1	0	1	-		0	2	1	0	3	-		0	4	0	0	4	-	10	
% Buses and Single-Unit Trucks	1.4%	0.9%	0%	0%	0.5%	-		0%	0%	1.1%	0%	0.4%	-		0%	0.2%	2.3%	0%	0.3%	-		0%	0.4%	0%	0%	0.4%	-	0.3%	
Bicycles on Road	0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0	1	0	0	1	-	1	
% Bicycles on Road	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0.1%	0%	0%	0.1%	-	0%	
Pedestrians	-	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	-	1		-	-	-	-	-	0		
% Pedestrians	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	100%		-	-	-	-	-	-	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Calumet Avenue & Fran-lin Parkway - TMC

Tue Feb 11, 2025

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269100, Location: 41.546634, -87.509034



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

Leg Direction	Fran-Lin Parkway Eastbound							Fran-Lin Parkway Westbound							Calumet Ave Northbound							Calumet Ave Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*	Int	
2025-02-11 7:00AM	10	7	14	0	31	0		23	9	12	0	44	0		15	222	33	0	270	0		14	132	11	0	157	0		502
7:15AM	10	6	11	0	27	0		21	11	21	0	53	0		16	292	51	0	359	0		9	192	8	0	209	0		648
7:30AM	20	10	10	0	40	0		38	14	26	0	78	0		20	289	28	0	337	0		9	244	10	0	263	0		718
7:45AM	13	8	19	0	40	0		45	13	35	0	93	0		31	265	38	0	334	0		34	265	18	0	317	0		784
Hourly Total	53	31	54	0	138	0		127	47	94	0	268	0		82	1068	150	0	1300	0		66	833	47	0	946	0		2652
8:00AM	16	11	10	0	37	0		35	11	29	0	75	0		17	207	34	0	258	0		27	229	15	0	271	0		641
8:15AM	10	9	18	0	37	0		26	8	21	0	55	0		20	227	34	0	281	0		16	224	16	0	256	0		629
8:30AM	17	1	18	1	37	0		29	7	24	0	60	0		13	220	26	0	259	0		26	194	14	0	234	0		590
8:45AM	13	14	17	0	44	0		41	12	24	0	77	0		13	193	30	1	237	0		23	271	11	0	305	1		663
Hourly Total	56	35	63	1	155	0		131	38	98	0	267	0		63	847	124	1	1035	0		92	918	56	0	1066	1		2523
4:00PM	5	9	21	0	35	0		75	7	19	0	101	0		11	246	31	0	288	0		26	222	8	0	256	1		680
4:15PM	11	9	11	0	31	0		54	8	17	0	79	0		10	221	25	0	256	0		37	254	10	0	301	0		667
4:30PM	9	8	19	0	36	0		80	6	21	0	107	1		6	253	43	0	302	0		14	263	6	0	283	1		728
4:45PM	6	8	13	0	27	0		75	5	21	0	101	0		17	223	32	0	272	0		23	228	6	0	257	0		657
Hourly Total	31	34	64	0	129	0		284	26	78	0	388	1		44	943	131	0	1118	0		100	967	30	0	1097	2		2732
5:00PM	10	8	25	0	43	0		74	6	23	0	103	0		12	251	37	0	300	0		27	273	18	0	318	0		764
5:15PM	8	9	15	0	32	0		42	6	22	0	70	0		10	238	33	0	281	0		26	301	14	0	341	0		724
5:30PM	15	8	16	0	39	0		46	4	16	0	66	0		13	207	24	0	244	0		25	249	18	0	292	0		641
5:45PM	7	6	13	0	26	1		36	7	17	0	60	1		6	186	12	0	204	0		17	238	7	0	262	0		552
Hourly Total	40	31	69	0	140	1		198	23	78	0	299	1		41	882	106	0	1029	0		95	1061	57	0	1213	0		2681
Total	180	131	250	1	562	1		740	134	348	0	1222	2		230	3740	511	1	4482	0		353	3779	190	0	4322	3		10588
% Approach	32.0%	23.3%	44.5%	0.2%	-	-		60.6%	11.0%	28.5%	0%	-	-		5.1%	83.4%	11.4%	0%	-	-		8.2%	87.4%	4.4%	0%	-	-		-
% Total	1.7%	1.2%	2.4%	0%	5.3%	-		7.0%	1.3%	3.3%	0%	11.5%	-		2.2%	35.3%	4.8%	0%	42.3%	-		3.3%	35.7%	1.8%	0%	40.8%	-		-
Lights	178	130	249	1	558	-		733	132	345	0	1210	-		229	3634	504	1	4368	-		352	3648	187	0	4187	-		10323
% Lights	98.9%	99.2%	99.6%	100%	99.3%	-		99.1%	98.5%	99.1%	0%	99.0%	-		99.6%	97.2%	98.6%	100%	97.5%	-		99.7%	96.5%	98.4%	0%	96.9%	-		97.5%
Articulated Trucks	0	0	1	0	1	-		1	0	0	0	1	-		0	57	0	0	57	-		0	68	2	0	70	-		129
% Articulated Trucks	0%	0%	0.4%	0%	0.2%	-		0.1%	0%	0%	0%	0.1%	-		0%	1.5%	0%	0%	1.3%	-		0%	1.8%	1.1%	0%	1.6%	-		1.2%
Buses and Single-Unit Trucks	2	1	0	0	3	-		6	1	3	0	10	-		1	49	7	0	57	-		1	62	1	0	64	-		134
% Buses and Single-Unit Trucks	1.1%	0.8%	0%	0%	0.5%	-		0.8%	0.7%	0.9%	0%	0.8%	-		0.4%	1.3%	1.4%	0%	1.3%	-		0.3%	1.6%	0.5%	0%	1.5%	-		1.3%
Bicycles on Road	0	0	0	0	0	-		0	1	0	0	1	-		0	0	0	0	0	-		0	1	0	0	1	-		2
% Bicycles on Road	0%	0%	0%	0%	0%	-		0%	0.7%	0%	0%	0.1%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%
Pedestrians	-	-	-	-	-	1		-	-	-	-	-	2		-	-	-	-	-	0		-	-	-	-	-	3		
% Pedestrians	-	-	-	-	-	100%		-	-	-	-	-	100%		-	-	-	-	-	-		-	-	-	-	-	-		

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Calumet Avenue & Fran-lin Parkway - TMC

Tue Feb 11, 2025

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269100, Location: 41.546634, -87.509034



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

Leg Direction	Fran-Lin Parkway Eastbound							Fran-Lin Parkway Westbound							Calumet Ave Northbound							Calumet Ave Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*	Int	
2025-02-11 7:15AM	10	6	11	0	27	0		21	11	21	0	53	0		16	292	51	0	359	0		9	192	8	0	209	0		648
7:30AM	20	10	10	0	40	0		38	14	26	0	78	0		20	289	28	0	337	0		9	244	10	0	263	0		718
7:45AM	13	8	19	0	40	0		45	13	35	0	93	0		31	265	38	0	334	0		34	265	18	0	317	0		784
8:00AM	16	11	10	0	37	0		35	11	29	0	75	0		17	207	34	0	258	0		27	229	15	0	271	0		641
Total	59	35	50	0	144	0		139	49	111	0	299	0		84	1053	151	0	1288	0		79	930	51	0	1060	0		2791
% Approach	41.0%	24.3%	34.7%	0%	-	-		46.5%	16.4%	37.1%	0%	-	-		6.5%	81.8%	11.7%	0%	-	-		7.5%	87.7%	4.8%	0%	-	-		-
% Total	2.1%	1.3%	1.8%	0%	5.2%	-		5.0%	1.8%	4.0%	0%	10.7%	-		3.0%	37.7%	5.4%	0%	46.1%	-		2.8%	33.3%	1.8%	0%	38.0%	-		-
PHF	0.738	0.795	0.658	-	0.900	-		0.772	0.875	0.793	-	0.804	-		0.677	0.902	0.740	-	0.897	-		0.581	0.877	0.708	-	0.836	-		0.890
Lights	57	35	50	0	142	-		138	49	111	0	298	-		83	1025	146	0	1254	-		79	884	50	0	1013	-		2707
% Lights	96.6%	100%	100%	0%	98.6%	-		99.3%	100%	100%	0%	99.7%	-		98.8%	97.3%	96.7%	0%	97.4%	-		100%	95.1%	98.0%	0%	95.6%	-		97.0%
Articulated Trucks	0	0	0	0	0	-		1	0	0	0	1	-		0	15	0	0	15	-		0	23	1	0	24	-		40
% Articulated Trucks	0%	0%	0%	0%	0%	-		0.7%	0%	0%	0%	0.3%	-		0%	1.4%	0%	0%	1.2%	-		0%	2.5%	2.0%	0%	2.3%	-		1.4%
Buses and Single-Unit Trucks	2	0	0	0	2	-		0	0	0	0	0	-		1	13	5	0	19	-		0	23	0	0	23	-		44
% Buses and Single-Unit Trucks	3.4%	0%	0%	0%	1.4%	-		0%	0%	0%	0%	0%	-		1.2%	1.2%	3.3%	0%	1.5%	-		0%	2.5%	0%	0%	2.2%	-		1.6%
Bicycles on Road	0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0
% Bicycles on Road	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%
Pedestrians	-	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	-	0		
% Pedestrians	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Calumet Avenue & Fran-lin Parkway - TMC

Tue Feb 11, 2025

PM Peak (4:30 PM - 5:30 PM) - Overall Peak Hour

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269100, Location: 41.546634, -87.509034



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

Leg Direction	Fran-Lin Parkway Eastbound						Fran-Lin Parkway Westbound						Calumet Ave Northbound						Calumet Ave Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2025-02-11 4:30PM	9	8	19	0	36	0	80	6	21	0	107	1	6	253	43	0	302	0	14	263	6	0	283	1	728
4:45PM	6	8	13	0	27	0	75	5	21	0	101	0	17	223	32	0	272	0	23	228	6	0	257	0	657
5:00PM	10	8	25	0	43	0	74	6	23	0	103	0	12	251	37	0	300	0	27	273	18	0	318	0	764
5:15PM	8	9	15	0	32	0	42	6	22	0	70	0	10	238	33	0	281	0	26	301	14	0	341	0	724
<b>Total</b>	33	33	72	0	138	0	271	23	87	0	381	1	45	965	145	0	1155	0	90	1065	44	0	1199	1	2873
<b>% Approach</b>	23.9%	23.9%	52.2%	0%	-	-	71.1%	6.0%	22.8%	0%	-	-	3.9%	83.5%	12.6%	0%	-	-	7.5%	88.8%	3.7%	0%	-	-	-
<b>% Total</b>	1.1%	1.1%	2.5%	0%	4.8%	-	9.4%	0.8%	3.0%	0%	13.3%	-	1.6%	33.6%	5.0%	0%	40.2%	-	3.1%	37.1%	1.5%	0%	41.7%	-	-
<b>PHF</b>	0.825	0.917	0.720	-	0.802	-	0.847	0.958	0.946	-	0.890	-	0.662	0.954	0.843	-	0.956	-	0.833	0.884	0.611	-	0.878	-	0.940
<b>Lights</b>	33	33	72	0	138	-	271	22	87	0	380	-	45	951	144	0	1140	-	90	1044	44	0	1178	-	2836
<b>% Lights</b>	100%	100%	100%	0%	100%	-	100%	95.7%	100%	0%	99.7%	-	100%	98.5%	99.3%	0%	98.7%	-	100%	98.0%	100%	0%	98.2%	-	98.7%
<b>Articulated Trucks</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	9	0	0	9	-	0	17	0	0	17	-	26
<b>% Articulated Trucks</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.9%	0%	0%	0.8%	-	0%	1.6%	0%	0%	1.4%	-	0.9%
<b>Buses and Single-Unit Trucks</b>	0	0	0	0	0	-	0	1	0	0	1	-	0	5	1	0	6	-	0	3	0	0	3	-	10
<b>% Buses and Single-Unit Trucks</b>	0%	0%	0%	0%	0%	-	0%	4.3%	0%	0%	0.3%	-	0%	0.5%	0.7%	0%	0.5%	-	0%	0.3%	0%	0%	0.3%	-	0.3%
<b>Bicycles on Road</b>	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1	0	0	1	-	1
<b>% Bicycles on Road</b>	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0.1%	0%	0%	0.1%	-	0%
<b>Pedestrians</b>	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	
<b>% Pedestrians</b>	-	-	-	-	-	-	-	-	-	-	-	100%	-	-	-	-	-	-	-	-	-	-	-	100%	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn



# Fran-lin Parkway & Columbia Avenue - TMC

Tue Feb 11, 2025

Full Length (7 AM-9 AM, 4 PM-6 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269101, Location: 41.546444, -87.505941



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

Leg Direction	Fran-Lin Parkway Eastbound							Fran-Lin Parkway Westbound							Columbia Ave Northbound							Columbia Ave Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*	Int	
2025-02-11 7:00AM	25	12	3	0	40	0		2	21	39	0	62	0		9	28	0	0	37	0		10	6	16	0	32	0	171	
7:15AM	27	6	6	0	39	0		3	29	67	0	99	0		11	40	0	0	51	0		15	11	19	0	45	0	234	
7:30AM	29	5	5	0	39	0		4	34	103	0	141	0		16	40	1	0	57	0		27	20	26	0	73	0	310	
7:45AM	19	9	8	0	36	0		3	51	61	0	115	0		12	45	2	0	59	0		42	33	27	0	102	0	312	
Hourly Total	100	32	22	0	154	0		12	135	270	0	417	0		48	153	3	0	204	0		94	70	88	0	252	0	1027	
8:00AM	19	12	5	0	36	0		6	25	41	0	72	0		16	22	2	0	40	0		31	34	40	0	105	0	253	
8:15AM	20	11	5	0	36	0		4	23	37	0	64	0		10	24	1	0	35	0		18	21	15	0	54	0	189	
8:30AM	20	13	3	0	36	0		0	19	32	0	51	0		16	30	2	0	48	0		22	20	27	0	69	0	204	
8:45AM	22	23	5	0	50	0		5	29	36	0	70	0		12	30	1	0	43	0		24	25	30	0	79	0	242	
Hourly Total	81	59	18	0	158	0		15	96	146	0	257	0		54	106	6	0	166	0		95	100	112	0	307	0	888	
4:00PM	28	43	8	0	79	0		2	20	35	0	57	0		9	27	4	0	40	0		107	34	38	0	179	0	355	
4:15PM	21	34	4	0	59	2		2	12	41	0	55	0		4	36	8	0	48	0		78	28	38	0	144	0	306	
4:30PM	24	26	13	0	63	0		3	16	26	0	45	0		9	27	7	0	43	0		94	37	45	0	176	0	327	
4:45PM	30	25	13	0	68	0		8	8	32	0	48	0		14	38	9	0	61	0		76	24	44	0	144	0	321	
Hourly Total	103	128	38	0	269	2		15	56	134	0	205	0		36	128	28	0	192	0		355	123	165	0	643	0	1309	
5:00PM	35	27	9	0	71	1		3	8	29	0	40	0		10	34	9	0	53	0		77	33	45	0	155	0	319	
5:15PM	35	29	7	0	71	0		0	17	28	0	45	0		6	25	5	0	36	0		53	26	21	0	100	0	252	
5:30PM	19	36	5	0	60	1		2	13	31	0	46	0		7	30	2	0	39	0		48	27	32	0	107	0	252	
5:45PM	16	16	4	0	36	0		3	13	43	0	59	0		5	24	1	0	30	0		36	22	32	0	90	0	215	
Hourly Total	105	108	25	0	238	2		8	51	131	0	190	0		28	113	17	0	158	0		214	108	130	0	452	0	1038	
Total	389	327	103	0	819	4		50	338	681	0	1069	0		166	500	54	0	720	0		758	401	495	0	1654	0	4262	
% Approach	47.5%	39.9%	12.6%	0%	-	-		4.7%	31.6%	63.7%	0%	-	-		23.1%	69.4%	7.5%	0%	-	-		45.8%	24.2%	29.9%	0%	-	-	-	
% Total	9.1%	7.7%	2.4%	0%	19.2%	-		1.2%	7.9%	16.0%	0%	25.1%	-		3.9%	11.7%	1.3%	0%	16.9%	-		17.8%	9.4%	11.6%	0%	38.8%	-	-	
Lights	385	325	101	0	811	-		50	336	674	0	1060	-		164	496	53	0	713	-		752	398	489	0	1639	-	4223	
% Lights	99.0%	99.4%	98.1%	0%	99.0%	-		100%	99.4%	99.0%	0%	99.2%	-		98.8%	99.2%	98.1%	0%	99.0%	-		99.2%	99.3%	98.8%	0%	99.1%	-	99.1%	
Articulated Trucks	0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0	1	0	0	1	-	1	
% Articulated Trucks	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0.2%	0%	0%	0.1%	-	0%	
Buses and Single-Unit Trucks	4	2	2	0	8	-		0	2	7	0	9	-		1	4	1	0	6	-		6	2	6	0	14	-	37	
% Buses and Single-Unit Trucks	1.0%	0.6%	1.9%	0%	1.0%	-		0%	0.6%	1.0%	0%	0.8%	-		0.6%	0.8%	1.9%	0%	0.8%	-		0.8%	0.5%	1.2%	0%	0.8%	-	0.9%	
Bicycles on Road	0	0	0	0	0	-		0	0	0	0	0	-		1	0	0	0	1	-		0	0	0	0	0	-	1	
% Bicycles on Road	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0.6%	0%	0%	0%	0.1%	-		0%	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	4		-	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	-	0		
% Pedestrians	-	-	-	-	-	100%		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-		

\* Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Fran-lin Parkway & Columbia Avenue - TMC

Tue Feb 11, 2025

AM Peak (7:15 AM - 8:15 AM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269101, Location: 41.546444, -87.505941



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

Leg Direction	Fran-Lin Parkway Eastbound						Fran-Lin Parkway Westbound						Columbia Ave Northbound						Columbia Ave Southbound						
Time	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	L	T	R	U	App	Ped*	Int
2025-02-11 7:15AM	27	6	6	0	39	0	3	29	67	0	99	0	11	40	0	0	51	0	15	11	19	0	45	0	234
7:30AM	29	5	5	0	39	0	4	34	103	0	141	0	16	40	1	0	57	0	27	20	26	0	73	0	310
7:45AM	19	9	8	0	36	0	3	51	61	0	115	0	12	45	2	0	59	0	42	33	27	0	102	0	312
8:00AM	19	12	5	0	36	0	6	25	41	0	72	0	16	22	2	0	40	0	31	34	40	0	105	0	253
Total	94	32	24	0	150	0	16	139	272	0	427	0	55	147	5	0	207	0	115	98	112	0	325	0	1109
% Approach	62.7%	21.3%	16.0%	0%	-	-	3.7%	32.6%	63.7%	0%	-	-	26.6%	71.0%	2.4%	0%	-	-	35.4%	30.2%	34.5%	0%	-	-	-
% Total	8.5%	2.9%	2.2%	0%	13.5%	-	1.4%	12.5%	24.5%	0%	38.5%	-	5.0%	13.3%	0.5%	0%	18.7%	-	10.4%	8.8%	10.1%	0%	29.3%	-	-
PHF	0.810	0.667	0.750	-	0.962	-	0.667	0.681	0.660	-	0.757	-	0.844	0.817	0.625	-	0.873	-	0.685	0.721	0.700	-	0.774	-	0.888
Lights	90	32	23	0	145	-	16	139	268	0	423	-	54	144	5	0	203	-	114	97	112	0	323	-	1094
% Lights	95.7%	100%	95.8%	0%	96.7%	-	100%	100%	98.5%	0%	99.1%	-	98.2%	98.0%	100%	0%	98.1%	-	99.1%	99.0%	100%	0%	99.4%	-	98.6%
Articulated Trucks	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0
% Articulated Trucks	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	0%
Buses and Single-Unit Trucks	4	0	1	0	5	-	0	0	4	0	4	-	0	3	0	0	3	-	1	1	0	0	2	-	14
% Buses and Single-Unit Trucks	4.3%	0%	4.2%	0%	3.3%	-	0%	0%	1.5%	0%	0.9%	-	0%	2.0%	0%	0%	1.4%	-	0.9%	1.0%	0%	0%	0.6%	-	1.3%
Bicycles on Road	0	0	0	0	0	-	0	0	0	0	0	-	1	0	0	0	1	-	0	0	0	0	0	-	1
% Bicycles on Road	0%	0%	0%	0%	0%	-	0%	0%	0%	0%	0%	-	1.8%	0%	0%	0%	0.5%	-	0%	0%	0%	0%	0%	-	0.1%
Pedestrians	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn

# Fran-lin Parkway & Columbia Avenue - TMC

Tue Feb 11, 2025

Forced Peak (4:30 PM - 5:30 PM)

All Classes (Lights, Articulated Trucks, Buses and Single-Unit Trucks, Pedestrians, Bicycles on Road)

All Movements

ID: 1269101, Location: 41.546444, -87.505941



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

Leg Direction	Fran-Lin Parkway Eastbound							Fran-Lin Parkway Westbound							Columbia Ave Northbound							Columbia Ave Southbound							
Time	L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*		L	T	R	U	App	Ped*	Int	
2025-02-11 4:30PM	24	26	13	0	63	0		3	16	26	0	45	0		9	27	7	0	43	0		94	37	45	0	176	0	327	
4:45PM	30	25	13	0	68	0		8	8	32	0	48	0		14	38	9	0	61	0		76	24	44	0	144	0	321	
5:00PM	35	27	9	0	71	1		3	8	29	0	40	0		10	34	9	0	53	0		77	33	45	0	155	0	319	
5:15PM	35	29	7	0	71	0		0	17	28	0	45	0		6	25	5	0	36	0		53	26	21	0	100	0	252	
Total	124	107	42	0	273	1		14	49	115	0	178	0		39	124	30	0	193	0		300	120	155	0	575	0	1219	
% Approach	45.4%	39.2%	15.4%	0%	-	-		7.9%	27.5%	64.6%	0%	-	-		20.2%	64.2%	15.5%	0%	-	-		52.2%	20.9%	27.0%	0%	-	-	-	
% Total	10.2%	8.8%	3.4%	0%	22.4%	-		1.1%	4.0%	9.4%	0%	14.6%	-		3.2%	10.2%	2.5%	0%	15.8%	-		24.6%	9.8%	12.7%	0%	47.2%	-	-	
PHF	0.886	0.922	0.808	-	0.961	-		0.438	0.721	0.898	-	0.927	-		0.696	0.816	0.833	-	0.791	-		0.798	0.811	0.861	-	0.817	-	0.932	
Lights	124	106	42	0	272	-		14	49	115	0	178	-		39	124	29	0	192	-		300	120	155	0	575	-	1217	
% Lights	100%	99.1%	100%	0%	99.6%	-		100%	100%	100%	0%	100%	-		100%	100%	96.7%	0%	99.5%	-		100%	100%	100%	0%	100%	-	99.8%	
Articulated Trucks	0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-	0	
% Articulated Trucks	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-	0%	
Buses and Single-Unit Trucks	0	1	0	0	1	-		0	0	0	0	0	-		0	0	1	0	1	-		0	0	0	0	0	-	2	
% Buses and Single-Unit Trucks	0%	0.9%	0%	0%	0.4%	-		0%	0%	0%	0%	0%	-		0%	0%	3.3%	0%	0.5%	-		0%	0%	0%	0%	0%	-	0.2%	
Bicycles on Road	0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-		0	0	0	0	0	-	0	
% Bicycles on Road	0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-		0%	0%	0%	0%	0%	-	0%	
Pedestrians	-	-	-	-	-	1		-	-	-	-	-	0		-	-	-	-	-	0		-	-	-	-	-	0		
% Pedestrians	-	-	-	-	-	100%		-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-	-	-	

\*Pedestrians and Bicycles on Crosswalk. L: Left, R: Right, T: Thru, U: U-Turn





















## EXISTING YEAR (2025) CAPACITY REPORTS

# HCM 7th Signalized Intersection Summary

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	80	160	80	85	125	145	820	105	125	1005	40
Future Volume (veh/h)	95	80	160	80	85	125	145	820	105	125	1005	40
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	100	84	168	84	89	132	153	863	111	132	1058	42
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	2	2	2	2	2	2	2	3	2
Cap, veh/h	210	97	195	180	113	168	346	1837	236	383	1990	79
Arrive On Green	0.06	0.18	0.18	0.05	0.17	0.17	0.05	0.58	0.58	0.05	0.58	0.58
Sat Flow, veh/h	1781	557	1113	1781	680	1009	1781	3167	407	1781	3456	137
Grp Volume(v), veh/h	100	0	252	84	0	221	153	484	490	132	540	560
Grp Sat Flow(s),veh/h/ln	1781	0	1670	1781	0	1689	1781	1777	1797	1781	1763	1831
Q Serve(g_s), s	6.0	0.0	19.1	5.0	0.0	16.3	4.6	20.4	20.4	3.9	24.3	24.3
Cycle Q Clear(g_c), s	6.0	0.0	19.1	5.0	0.0	16.3	4.6	20.4	20.4	3.9	24.3	24.3
Prop In Lane	1.00		0.67	1.00		0.60	1.00		0.23	1.00		0.07
Lane Grp Cap(c), veh/h	210	0	292	180	0	282	346	1031	1042	383	1015	1054
V/C Ratio(X)	0.48	0.00	0.86	0.47	0.00	0.78	0.44	0.47	0.47	0.34	0.53	0.53
Avail Cap(c_a), veh/h	247	0	398	231	0	403	398	1031	1042	526	1015	1054
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	42.3	0.0	52.1	43.0	0.0	51.9	13.1	15.8	15.8	12.0	16.9	16.9
Incr Delay (d2), s/veh	1.7	0.0	18.0	1.9	0.0	10.8	0.9	1.5	1.5	0.5	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(95%),veh/ln	4.9	0.0	14.4	4.1	0.0	12.3	3.3	13.2	13.3	2.8	15.3	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.9	0.0	70.1	44.9	0.0	62.7	14.0	17.3	17.3	12.5	18.9	18.8
LnGrp LOS	D		E	D		E	B	B	B	B	B	B
Approach Vol, veh/h	352				305				1127			
Approach Delay, s/veh	62.7				57.8				16.8			
Approach LOS	E				E				B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	81.4	10.2	28.8	10.2	80.8	11.3	27.7				
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	16.5	53.0	10.5	31.0	10.5	59.0	10.5	31.0				
Max Q Clear Time (g_c+I1), s	5.9	22.4	7.0	21.1	6.6	26.3	8.0	18.3				
Green Ext Time (p_c), s	0.2	19.6	0.0	1.7	0.1	23.0	0.0	1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	26.9											
HCM 7th LOS	C											























# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	80	160	80	85	125	145	820	105	125	1005	40
Future Volume (veh/h)	95	80	160	80	85	125	145	820	105	125	1005	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	100	84	168	84	89	132	153	863	111	132	1058	42
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	2	2	2	2	2	2	2	3	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	210	97	195	180	113	168	346	1837	236	383	1990	79
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
Prop Arrive On Green	0.06	0.18	0.18	0.05	0.17	0.17	0.05	0.58	0.58	0.05	0.58	0.58
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	0.0	70.1	44.9	0.0	62.7	14.0	17.3	17.3	12.5	18.9	18.8
Ln Grp LOS	D		E	D		E	B	B	B	B	B	B
Approach Vol, veh/h	352			305			1127			1232		
Approach Delay, s/veh	62.7			57.8			16.8			18.1		
Approach LOS	E			E			B			B		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0				
Phs Duration (G+Y+Rc), s	9.6	81.4	10.2	28.8	10.2	80.8	11.3	27.7				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green (Gmax), s	16.5	53.0	10.5	31.0	10.5	59.0	10.5	31.0				
Max Allow Headway (MAH), s	3.8	9.2	3.8	7.3	3.8	9.1	3.8	7.3				
Max Q Clear (g_c+I1), s	5.9	22.4	7.0	21.1	6.6	26.3	8.0	18.3				
Green Ext Time (g_e), s	0.2	19.6	0.0	1.7	0.1	23.0	0.0	1.7				
Prob of Phs Call (p_c)	0.99	1.00	0.95	1.00	1.00	1.00	0.97	1.00				
Prob of Max Out (p_x)	0.00	0.60	1.00	0.52	0.85	0.66	1.00	0.23				
Left-Turn Movement Data												
Assigned Mvmt	1		3		5		7					
Mvmt Sat Flow, veh/h	1781		1781		1781		1781					
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		3167		557		3456		680				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		407		1113		137		1009				
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes

AM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	132	0	84	0	153	0	100	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	3.9	0.0	5.0	0.0	4.6	0.0	6.0	0.0
Cycle Q Clear Time (g_c), s	3.9	0.0	5.0	0.0	4.6	0.0	6.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	577	0	1128	0	513	0	1160	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	74.8	0.0	21.7	0.0	74.8	0.0	21.7	0.0
Perm LT Serve Time (g_u), s	55.0	0.0	3.7	0.0	50.5	0.0	5.4	0.0
Perm LT Q Serve Time (g_ps), s	5.9	0.0	1.4	0.0	10.4	0.0	1.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	383	0	180	0	346	0	210	0
V/C Ratio (X)	0.34	0.00	0.47	0.00	0.44	0.00	0.48	0.00
Avail Cap (c_a), veh/h	526	0	231	0	398	0	247	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	12.0	0.0	43.0	0.0	13.1	0.0	42.3	0.0
Incr Delay (d2), s/veh	0.5	0.0	1.9	0.0	0.9	0.0	1.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.5	0.0	44.9	0.0	14.0	0.0	43.9	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	2.2	0.0	1.7	0.0	2.6	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.8	0.0	4.1	0.0	3.3	0.0	4.9	0.0
%ile Storage Ratio (RQ%)	0.47	0.00	0.78	0.00	0.20	0.00	0.52	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	484	0	0	0	540	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1763	0	0
Q Serve Time (g_s), s	0.0	20.4	0.0	0.0	0.0	24.3	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	20.4	0.0	0.0	0.0	24.3	0.0	0.0
Lane Grp Cap (c), veh/h	0	1031	0	0	0	1015	0	0
V/C Ratio (X)	0.00	0.47	0.00	0.00	0.00	0.53	0.00	0.00
Avail Cap (c_a), veh/h	0	1031	0	0	0	1015	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.8	0.0	0.0	0.0	16.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.0	0.0	0.0	2.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.3	0.0	0.0	0.0	18.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.0	0.0	0.0	0.0	9.5	0.0	0.0

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes  
AM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.56	0.00	1.00	0.00	1.52	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	13.2	0.0	0.0	0.0	15.3	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.39	0.00	0.00	0.00	0.52	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	490	0	252	0	560	0	221
Grp Sat Flow (s), veh/h/ln	0	1797	0	1670	0	1831	0	1689
Q Serve Time (g_s), s	0.0	20.4	0.0	19.1	0.0	24.3	0.0	16.3
Cycle Q Clear Time (g_c), s	0.0	20.4	0.0	19.1	0.0	24.3	0.0	16.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.23	0.00	0.67	0.00	0.07	0.00	0.60
Lane Grp Cap (c), veh/h	0	1042	0	292	0	1054	0	282
V/C Ratio (X)	0.00	0.47	0.00	0.86	0.00	0.53	0.00	0.78
Avail Cap (c_a), veh/h	0	1042	0	398	0	1054	0	403
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.8	0.0	52.1	0.0	16.9	0.0	51.9
Incr Delay (d2), s/veh	0.0	1.5	0.0	18.0	0.0	1.9	0.0	10.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.3	0.0	70.1	0.0	18.8	0.0	62.7
1st-Term Q (Q1), veh/ln	0.0	8.1	0.0	7.9	0.0	9.9	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	1.5	0.0	0.6	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.56	0.00	1.54	0.00	1.51	0.00	1.59
%ile Back of Q (95%), veh/ln	0.0	13.3	0.0	14.4	0.0	15.7	0.0	12.3
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.55	0.00	0.53	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Intersection Summary





















HCM 7th Control Delay, s/veh	26.9
HCM 7th LOS	C

# HCM 7th Signalized Intersection Summary

## 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

AM Peak Hour























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	35	50	140	50	110	85	1055	150	80	930	50
Future Volume (veh/h)	60	35	50	140	50	110	85	1055	150	80	930	50
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	63	37	53	147	53	116	89	1111	158	84	979	53
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	2	2	2	2	2	2	2	3	2
Cap, veh/h	121	50	141	241	107	235	385	2014	286	305	2188	118
Arrive On Green	0.09	0.09	0.09	0.09	0.21	0.21	0.03	0.64	0.64	0.03	0.64	0.64
Sat Flow, veh/h	853	558	1585	1781	522	1143	1781	3124	443	1781	3401	184
Grp Volume(v), veh/h	100	0	53	147	0	169	89	631	638	84	507	525
Grp Sat Flow(s),veh/h/ln	1411	0	1585	1781	0	1665	1781	1777	1791	1781	1763	1822
Q Serve(g_s), s	8.7	0.0	4.1	9.4	0.0	11.7	2.2	25.4	25.6	2.1	18.7	18.7
Cycle Q Clear(g_c), s	9.0	0.0	4.1	9.4	0.0	11.7	2.2	25.4	25.6	2.1	18.7	18.7
Prop In Lane	0.63		1.00	1.00		0.69	1.00		0.25	1.00		0.10
Lane Grp Cap(c), veh/h	170	0	141	241	0	343	385	1145	1154	305	1134	1172
V/C Ratio(X)	0.59	0.00	0.38	0.61	0.00	0.49	0.23	0.55	0.55	0.28	0.45	0.45
Avail Cap(c_a), veh/h	304	0	293	526	0	768	445	1145	1154	367	1134	1172
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	0.97	0.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.0	0.0	55.8	46.5	0.0	45.6	8.8	12.7	12.8	10.3	11.6	11.6
Incr Delay (d2), s/veh	3.2	0.0	1.7	2.4	0.0	1.1	0.3	1.9	1.9	0.5	1.3	1.2
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(95%),veh/ln	6.1	0.0	3.1	7.7	0.0	8.5	1.5	15.4	15.5	1.4	11.8	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	61.2	0.0	57.5	48.9	0.0	46.7	9.1	14.6	14.7	10.8	12.9	12.8
LnGrp LOS	E		E	D		D	A	B	B	B	B	B
Approach Vol, veh/h	153		316			1358			1116			
Approach Delay, s/veh	59.9		47.7			14.3			12.7			
Approach LOS	E		D			B			B			
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	7.5	89.8	15.2	17.5	7.6	89.6	32.8					
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	6.0					
Max Green Setting (Gmax), s	8.5	46.0	32.5	24.0	8.5	46.0	60.0					
Max Q Clear Time (g_c+I1), s	4.1	27.6	11.4	11.0	4.2	20.7	13.7					
Green Ext Time (p_c), s	0.1	8.3	0.4	0.5	0.1	7.2	1.1					
Intersection Summary												
HCM 7th Control Delay, s/veh			19.7									
HCM 7th LOS			B									

# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	35	50	140	50	110	85	1055	150	80	930	50
Future Volume (veh/h)	60	35	50	140	50	110	85	1055	150	80	930	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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 <sub>pbT</sub> )	1.00		1.00	1.00		1.00	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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	63	37	53	147	53	116	89	1111	158	84	979	53
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	2	2	2	2	2	2	2	3	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	121	50	141	241	107	235	385	2014	286	305	2188	118
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
Prop Arrive On Green	0.09	0.09	0.09	0.09	0.21	0.21	0.03	0.64	0.64	0.03	0.64	0.64
Unsig. Movement Delay												
Ln Grp Delay, s/veh	61.2	0.0	57.5	48.9	0.0	46.7	9.1	14.6	14.7	10.8	12.9	12.8
Ln Grp LOS	E		E	D		D	A	B	B	B	B	B
Approach Vol, veh/h		153			316			1358			1116	
Approach Delay, s/veh		59.9			47.7			14.3			12.7	
Approach LOS		E			D			B			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6		8			
Case No		1.1	4.0	1.2	7.3	1.1	4.0		4.0			
Phs Duration (G+Y+Rc), s		7.5	89.8	15.2	17.5	7.6	89.6		32.8			
Change Period (Y+Rc), s		3.5	6.0	3.5	6.0	3.5	6.0		6.0			
Max Green (Gmax), s		8.5	46.0	32.5	24.0	8.5	46.0		60.0			
Max Allow Headway (MAH), s		3.8	5.2	3.8	5.0	3.8	5.1		5.3			
Max Q Clear (g <sub>c</sub> +I1), s		4.1	27.6	11.4	11.0	4.2	20.7		13.7			
Green Ext Time (g <sub>e</sub> ), s		0.1	8.3	0.4	0.5	0.1	7.2		1.1			
Prob of Phs Call (p <sub>c</sub> )		0.95	1.00	1.00	1.00	0.96	1.00		1.00			
Prob of Max Out (p <sub>x</sub> )		0.48	0.38	0.00	0.01	0.57	0.11		0.00			
Left-Turn Movement Data												
Assigned Mvmt		1		3	7	5						
Mvmt Sat Flow, veh/h		1781		1781	853	1781						
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3124		558		3401		522			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			443		1585		184		1143			
Left Lane Group Data												
Assigned Mvmt		1	0	3	7	5	0	0	0			

# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

AM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L+TL (Pr/Pm)			
Lanes in Grp	1	0	1	1	1	0	0	0
Grp Vol (v), veh/h	84	0	147	100	89	0	0	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	1411	1781	0	0	0
Q Serve Time (g_s), s	2.1	0.0	9.4	8.7	2.2	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.1	0.0	9.4	9.0	2.2	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	437	0	1307	1236	547	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	83.6	0.0	13.5	11.5	83.6	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	58.2	0.0	2.5	11.5	64.9	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	6.1	0.0	1.4	8.7	3.6	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.63	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	305	0	241	170	385	0	0	0
V/C Ratio (X)	0.28	0.00	0.61	0.59	0.23	0.00	0.00	0.00
Avail Cap (c_a), veh/h	367	0	526	304	445	0	0	0
Upstream Filter (I)	1.00	0.00	0.97	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	10.3	0.0	46.5	58.0	8.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	2.4	3.2	0.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	10.8	0.0	48.9	61.2	9.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	4.2	3.2	0.8	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.78	1.80	1.80	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	1.4	0.0	7.7	6.1	1.5	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.19	0.00	4.33	0.76	0.27	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	631	0	0	0	507	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1763	0	0
Q Serve Time (g_s), s	0.0	25.4	0.0	0.0	0.0	18.7	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	25.4	0.0	0.0	0.0	18.7	0.0	0.0
Lane Grp Cap (c), veh/h	0	1145	0	0	0	1134	0	0
V/C Ratio (X)	0.00	0.55	0.00	0.00	0.00	0.45	0.00	0.00
Avail Cap (c_a), veh/h	0	1145	0	0	0	1134	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	12.7	0.0	0.0	0.0	11.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.9	0.0	0.0	0.0	1.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.6	0.0	0.0	0.0	12.9	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	0.0	0.0	7.0	0.0	0.0



# HCM 7th Signalized Intersection Capacity Analysis 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes  
AM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.4	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.52	0.00	1.00	0.00	1.60	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	15.4	0.0	0.0	0.0	11.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.83	0.00	0.00	0.00	0.33	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	638	0	53	0	525	0	169
Grp Sat Flow (s), veh/h/ln	0	1791	0	1585	0	1822	0	1665
Q Serve Time (g_s), s	0.0	25.6	0.0	4.1	0.0	18.7	0.0	11.7
Cycle Q Clear Time (g_c), s	0.0	25.6	0.0	4.1	0.0	18.7	0.0	11.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.25	0.00	1.00	0.00	0.10	0.00	0.69
Lane Grp Cap (c), veh/h	0	1154	0	141	0	1172	0	343
V/C Ratio (X)	0.00	0.55	0.00	0.38	0.00	0.45	0.00	0.49
Avail Cap (c_a), veh/h	0	1154	0	293	0	1172	0	768
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	12.8	0.0	55.8	0.0	11.6	0.0	45.6
Incr Delay (d2), s/veh	0.0	1.9	0.0	1.7	0.0	1.2	0.0	1.1
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	14.7	0.0	57.5	0.0	12.8	0.0	46.7
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	1.6	0.0	7.2	0.0	4.8
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.1	0.0	0.4	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.51	0.00	1.80	0.00	1.59	0.00	1.73
%ile Back of Q (95%), veh/ln	0.0	15.5	0.0	3.1	0.0	12.1	0.0	8.5
%ile Storage Ratio (RQ%)	0.00	0.84	0.00	0.38	0.00	0.34	0.00	0.28
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary






















HCM 7th Control Delay, s/veh	19.7
HCM 7th LOS	B

# HCM 7th Signalized Intersection Summary

## 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

AM Peak Hour























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	30	25	15	140	270	55	145	5	115	100	110
Future Volume (veh/h)	95	30	25	15	140	270	55	145	5	115	100	110
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	32	26	16	147	284	58	153	5	121	105	116
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	433	573	486	505	481	407	421	468	15	492	229	253
Arrive On Green	0.07	0.31	0.31	0.02	0.26	0.26	0.05	0.26	0.26	0.07	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1801	59	1781	812	897
Grp Volume(v), veh/h	100	32	26	16	147	284	58	0	158	121	0	221
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1860	1781	0	1709
Q Serve(g_s), s	2.3	0.7	0.7	0.4	3.7	9.4	1.3	0.0	4.0	2.8	0.0	6.2
Cycle Q Clear(g_c), s	2.3	0.7	0.7	0.4	3.7	9.4	1.3	0.0	4.0	2.8	0.0	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		0.52
Lane Grp Cap(c), veh/h	433	573	486	505	481	407	421	0	483	492	0	481
V/C Ratio(X)	0.23	0.06	0.05	0.03	0.31	0.70	0.14	0.00	0.33	0.25	0.00	0.46
Avail Cap(c_a), veh/h	634	963	816	795	963	816	652	0	796	684	0	732
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.8	14.1	14.1	15.2	17.3	19.4	14.3	0.0	17.3	13.9	0.0	17.1
Incr Delay (d2), s/veh	0.3	0.1	0.1	0.0	0.8	4.6	0.1	0.0	1.8	0.3	0.0	3.1
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(95%),veh/ln	1.5	0.5	0.4	0.3	2.7	6.4	0.9	0.0	3.2	1.8	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.0	14.2	14.2	15.3	18.0	24.0	14.5	0.0	19.1	14.1	0.0	20.2
LnGrp LOS	B	B	B	B	B	C	B		B	B		C
Approach Vol, veh/h	158			447			216			342		
Approach Delay, s/veh	14.1			21.7			17.8			18.1		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	20.3	5.6	23.0	7.5	21.6	8.5	20.1				
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3				
Max Green Setting (Gmax), s	10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7				
Max Q Clear Time (g_c+I1), s	4.8	6.0	2.4	2.7	3.3	8.2	4.3	11.4				
Green Ext Time (p_c), s	0.1	2.1	0.0	0.4	0.0	3.0	0.1	3.5				
Intersection Summary												
HCM 7th Control Delay, s/veh	18.9											
HCM 7th LOS	B											

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	30	25	15	140	270	55	145	5	115	100	110
Future Volume (veh/h)	95	30	25	15	140	270	55	145	5	115	100	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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			
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	32	26	16	147	284	58	153	5	121	105	116
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	433	573	486	505	481	407	421	468	15	492	229	253
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
Prop Arrive On Green	0.07	0.31	0.31	0.02	0.26	0.26	0.05	0.26	0.26	0.07	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.0	14.2	14.2	15.3	18.0	24.0	14.5	0.0	19.1	14.1	0.0	20.2
Ln Grp LOS	B	B	B	B	B	C	B		B	B		C
Approach Vol, veh/h	158				447				216			
Approach Delay, s/veh	14.1				21.7				17.8			
Approach LOS	B				C				B			
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	3.0	1.1	4.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	8.8	20.3	5.6	23.0	7.5	21.6	8.5	20.1				
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3				
Max Green (Gmax), s	10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7				
Max Allow Headway (MAH), s	3.8	9.1	3.8	6.6	3.8	9.3	3.8	6.4				
Max Q Clear (g_c+I1), s	4.8	6.0	2.4	2.7	3.3	8.2	4.3	11.4				
Green Ext Time (g_e), s	0.1	2.1	0.0	0.4	0.0	3.0	0.1	3.5				
Prob of Phs Call (p_c)	0.86	1.00	0.23	1.00	0.61	1.00	0.80	1.00				
Prob of Max Out (p_x)	0.15	0.09	0.00	0.00	0.01	0.26	0.07	0.09				
Left-Turn Movement Data												
Assigned Mvmt	1		3		5		7					
Mvmt Sat Flow, veh/h	1781		1781		1781		1781					
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		1801		1870		812		1870				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		59		1585		897		1585				
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

AM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	121	0	16	0	58	0	100	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	2.8	0.0	0.4	0.0	1.3	0.0	2.3	0.0
Cycle Q Clear Time (g_c), s	2.8	0.0	0.4	0.0	1.3	0.0	2.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1228	0	1345	0	1160	0	957	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	14.8	0.0	15.0	0.0	15.2	0.0
Perm LT Serve Time (g_u), s	11.0	0.0	14.8	0.0	10.1	0.0	11.2	0.0
Perm LT Q Serve Time (g_ps), s	0.4	0.0	0.0	0.0	0.3	0.0	0.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	492	0	505	0	421	0	433	0
V/C Ratio (X)	0.25	0.00	0.03	0.00	0.14	0.00	0.23	0.00
Avail Cap (c_a), veh/h	684	0	795	0	652	0	634	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	13.9	0.0	15.2	0.0	14.3	0.0	13.8	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.1	0.0	0.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	14.1	0.0	15.3	0.0	14.5	0.0	14.0	0.0
1st-Term Q (Q1), veh/ln	1.0	0.0	0.1	0.0	0.5	0.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	1.8	0.0	0.3	0.0	0.9	0.0	1.5	0.0
%ile Storage Ratio (RQ%)	0.18	0.00	0.09	0.00	0.24	0.00	0.51	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	32	0	0	0	147
Grp Sat Flow (s), veh/h/ln	0	0	0	1870	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	3.7
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	3.7
Lane Grp Cap (c), veh/h	0	0	0	573	0	0	0	481
V/C Ratio (X)	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.31
Avail Cap (c_a), veh/h	0	0	0	963	0	0	0	963
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.1	0.0	0.0	0.0	17.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	14.2	0.0	0.0	0.0	18.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.4

# HCM 7th Signalized Intersection Capacity Analysis 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes  
AM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	2.7
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	158	0	26	0	221	0	284
Grp Sat Flow (s), veh/h/ln	0	1860	0	1585	0	1709	0	1585
Q Serve Time (g_s), s	0.0	4.0	0.0	0.7	0.0	6.2	0.0	9.4
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	0.7	0.0	6.2	0.0	9.4
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	1.00	0.00	0.52	0.00	1.00
Lane Grp Cap (c), veh/h	0	483	0	486	0	481	0	407
V/C Ratio (X)	0.00	0.33	0.00	0.05	0.00	0.46	0.00	0.70
Avail Cap (c_a), veh/h	0	796	0	816	0	732	0	816
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.3	0.0	14.1	0.0	17.1	0.0	19.4
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.1	0.0	3.1	0.0	4.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.1	0.0	14.2	0.0	20.2	0.0	24.0
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.2	0.0	2.1	0.0	3.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.4	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	3.2	0.0	0.4	0.0	4.6	0.0	6.4
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.14	0.00	0.10	0.00	2.17
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary





















HCM 7th Control Delay, s/veh	18.9
HCM 7th LOS	B

# HCM 7th Signalized Intersection Summary

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes





















PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	110	200	60	110	90	180	960	45	105	930	50
Future Volume (veh/h)	70	110	200	60	110	90	180	960	45	105	930	50
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	116	211	63	116	95	189	1011	47	111	979	53
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	128	232	156	199	163	358	1874	87	330	1789	97
Arrive On Green	0.05	0.21	0.21	0.04	0.21	0.21	0.07	0.54	0.54	0.05	0.52	0.52
Sat Flow, veh/h	1781	594	1081	1781	951	779	1781	3458	161	1781	3428	186
Grp Volume(v), veh/h	74	0	327	63	0	211	189	520	538	111	507	525
Grp Sat Flow(s),veh/h/ln	1781	0	1676	1781	0	1730	1781	1777	1841	1781	1777	1837
Q Serve(g_s), s	3.9	0.0	22.8	3.3	0.0	13.2	5.8	22.7	22.7	3.4	22.9	22.9
Cycle Q Clear(g_c), s	3.9	0.0	22.8	3.3	0.0	13.2	5.8	22.7	22.7	3.4	22.9	22.9
Prop In Lane	1.00		0.65	1.00		0.45	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	256	0	360	156	0	361	358	963	998	330	927	958
V/C Ratio(X)	0.29	0.00	0.91	0.41	0.00	0.58	0.53	0.54	0.54	0.34	0.55	0.55
Avail Cap(c_a), veh/h	332	0	391	286	0	447	411	963	998	493	927	958
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	35.6	0.0	46.0	37.3	0.0	42.8	14.6	17.8	17.8	14.1	19.2	19.2
Incr Delay (d2), s/veh	0.6	0.0	25.4	1.7	0.0	3.2	1.2	2.2	2.1	0.6	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(95%),veh/ln	3.1	0.0	17.6	2.7	0.0	9.9	4.1	14.6	15.0	2.5	14.8	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.2	0.0	71.4	39.0	0.0	46.0	15.8	20.0	19.9	14.7	21.5	21.5
LnGrp LOS	D		E	D		D	B	B	B	B	C	C
Approach Vol, veh/h	401				274				1247			
Approach Delay, s/veh	64.9				44.4				19.3			
Approach LOS	E				D				B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	71.0	8.2	31.8	11.4	68.6	8.9	31.0				
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	16.5	43.0	13.5	28.0	11.5	48.0	10.5	31.0				
Max Q Clear Time (g_c+I1), s	5.4	24.7	5.3	24.8	7.8	24.9	5.9	15.2				
Green Ext Time (p_c), s	0.2	14.1	0.1	0.9	0.2	16.7	0.0	1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	28.1											
HCM 7th LOS	C											

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes  
PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	110	200	60	110	90	180	960	45	105	930	50
Future Volume (veh/h)	70	110	200	60	110	90	180	960	45	105	930	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	116	211	63	116	95	189	1011	47	111	979	53
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	256	128	232	156	199	163	358	1874	87	330	1789	97
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
Prop Arrive On Green	0.05	0.21	0.21	0.04	0.21	0.21	0.07	0.54	0.54	0.05	0.52	0.52
Unsig. Movement Delay												
Ln Grp Delay, s/veh	36.2	0.0	71.4	39.0	0.0	46.0	15.8	20.0	19.9	14.7	21.5	21.5
Ln Grp LOS	D		E	D		D	B	B	B	B	C	C
Approach Vol, veh/h	401			274			1247			1143		
Approach Delay, s/veh	64.9			44.4			19.3			20.8		
Approach LOS	E			D			B			C		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0				
Phs Duration (G+Y+Rc), s	9.0	71.0	8.2	31.8	11.4	68.6	8.9	31.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green (Gmax), s	16.5	43.0	13.5	28.0	11.5	48.0	10.5	31.0				
Max Allow Headway (MAH), s	3.8	9.1	3.8	7.3	3.8	9.1	3.8	7.3				
Max Q Clear (g_c+I1), s	5.4	24.7	5.3	24.8	7.8	24.9	5.9	15.2				
Green Ext Time (g_e), s	0.2	14.1	0.1	0.9	0.2	16.7	0.0	1.8				
Prob of Phs Call (p_c)	0.98	1.00	0.88	1.00	1.00	1.00	0.92	1.00				
Prob of Max Out (p_x)	0.00	0.84	0.00	1.00	1.00	0.75	0.36	0.08				
Left-Turn Movement Data												
Assigned Mvmt	1		3		5		7					
Mvmt Sat Flow, veh/h	1781		1781		1781		1781					
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		3458		594		3428		951				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		161		1081		186		779				
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				



# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes

PM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	111	0	63	0	189	0	74	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	3.4	0.0	3.3	0.0	5.8	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	3.4	0.0	3.3	0.0	5.8	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	533	0	1053	0	547	0	1171	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	62.6	0.0	25.0	0.0	63.5	0.0	25.0	0.0
Perm LT Serve Time (g_u), s	42.3	0.0	2.9	0.0	39.7	0.0	11.9	0.0
Perm LT Q Serve Time (g_ps), s	5.3	0.0	1.4	0.0	12.6	0.0	0.9	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	330	0	156	0	358	0	256	0
V/C Ratio (X)	0.34	0.00	0.41	0.00	0.53	0.00	0.29	0.00
Avail Cap (c_a), veh/h	493	0	286	0	411	0	332	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	14.1	0.0	37.3	0.0	14.6	0.0	35.6	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.7	0.0	1.2	0.0	0.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	14.7	0.0	39.0	0.0	15.8	0.0	36.2	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	1.4	0.0	2.2	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.5	0.0	2.7	0.0	4.1	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.42	0.00	0.51	0.00	0.25	0.00	0.33	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	520	0	0	0	507	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	22.7	0.0	0.0	0.0	22.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	22.7	0.0	0.0	0.0	22.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	963	0	0	0	927	0	0
V/C Ratio (X)	0.00	0.54	0.00	0.00	0.00	0.55	0.00	0.00
Avail Cap (c_a), veh/h	0	963	0	0	0	927	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	17.8	0.0	0.0	0.0	19.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.2	0.0	0.0	0.0	2.3	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.0	0.0	0.0	0.0	21.5	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.9	0.0	0.0	0.0	9.1	0.0	0.0

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

Existing (2025) Traffic Volumes

PM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.53	0.00	1.00	0.00	1.53	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	14.6	0.0	0.0	0.0	14.8	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.43	0.00	0.00	0.00	0.50	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	538	0	327	0	525	0	211
Grp Sat Flow (s), veh/h/ln	0	1841	0	1676	0	1837	0	1730
Q Serve Time (g_s), s	0.0	22.7	0.0	22.8	0.0	22.9	0.0	13.2
Cycle Q Clear Time (g_c), s	0.0	22.7	0.0	22.8	0.0	22.9	0.0	13.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.09	0.00	0.65	0.00	0.10	0.00	0.45
Lane Grp Cap (c), veh/h	0	998	0	360	0	958	0	361
V/C Ratio (X)	0.00	0.54	0.00	0.91	0.00	0.55	0.00	0.58
Avail Cap (c_a), veh/h	0	998	0	391	0	958	0	447
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.8	0.0	46.0	0.0	19.2	0.0	42.8
Incr Delay (d2), s/veh	0.0	2.1	0.0	25.4	0.0	2.2	0.0	3.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.9	0.0	71.4	0.0	21.5	0.0	46.0
1st-Term Q (Q1), veh/ln	0.0	9.3	0.0	9.4	0.0	9.4	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	2.5	0.0	0.6	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.52	0.00	1.48	0.00	1.52	0.00	1.67
%ile Back of Q (95%), veh/ln	0.0	15.0	0.0	17.6	0.0	15.2	0.0	9.9
%ile Storage Ratio (RQ%)	0.00	0.45	0.00	0.67	0.00	0.51	0.00	0.19
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Intersection Summary





















HCM 7th Control Delay, s/veh	28.1
HCM 7th LOS	C

# HCM 7th Signalized Intersection Summary

## 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour






















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	35	70	270	25	85	45	965	145	90	1065	45
Future Volume (veh/h)	35	35	70	270	25	85	45	965	145	90	1065	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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	37	74	284	26	89	47	1016	153	95	1121	47
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	59	106	380	97	332	287	1773	267	301	2043	86
Arrive On Green	0.07	0.07	0.07	0.16	0.26	0.26	0.02	0.57	0.57	0.04	0.59	0.59
Sat Flow, veh/h	676	881	1585	1781	371	1271	1781	3097	466	1781	3475	146
Grp Volume(v), veh/h	74	0	74	284	0	115	47	582	587	95	573	595
Grp Sat Flow(s),veh/h/ln	1557	0	1585	1781	0	1642	1781	1777	1786	1781	1777	1844
Q Serve(g_s), s	4.6	0.0	5.5	17.1	0.0	6.7	1.3	25.0	25.1	2.6	23.5	23.6
Cycle Q Clear(g_c), s	5.5	0.0	5.5	17.1	0.0	6.7	1.3	25.0	25.1	2.6	23.5	23.6
Prop In Lane	0.50		1.00	1.00		0.77	1.00		0.26	1.00		0.08
Lane Grp Cap(c), veh/h	149	0	106	380	0	428	287	1017	1023	301	1044	1084
V/C Ratio(X)	0.50	0.00	0.70	0.75	0.00	0.27	0.16	0.57	0.57	0.32	0.55	0.55
Avail Cap(c_a), veh/h	351	0	317	569	0	821	374	1017	1023	361	1044	1084
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	0.99	0.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	0.0	54.8	40.6	0.0	35.2	12.3	16.3	16.3	12.9	15.0	15.0
Incr Delay (d2), s/veh	2.5	0.0	8.0	2.9	0.0	0.3	0.3	2.3	2.3	0.6	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(95%),veh/ln	4.1	0.0	4.3	12.2	0.0	4.9	0.9	15.6	15.7	1.9	14.7	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	57.3	0.0	62.8	43.5	0.0	35.6	12.6	18.7	18.7	13.5	17.1	17.1
LnGrp LOS	E		E	D		D	B	B	B	B	B	B
Approach Vol, veh/h	148				399				1216			
Approach Delay, s/veh	60.0				41.2				18.4			
Approach LOS	E				D				B			
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	8.0	74.7	23.3	14.0	6.1	76.5	37.3					
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	6.0					
Max Green Setting (Gmax), s	8.5	36.0	32.5	24.0	8.5	36.0	60.0					
Max Q Clear Time (g_c+I1), s	4.6	27.1	19.1	7.5	3.3	25.6	8.7					
Green Ext Time (p_c), s	0.1	4.8	0.7	0.5	0.0	5.3	0.7					
Intersection Summary												
HCM 7th Control Delay, s/veh			22.8									
HCM 7th LOS			C									

# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	35	70	270	25	85	45	965	145	90	1065	45
Future Volume (veh/h)	35	35	70	270	25	85	45	965	145	90	1065	45
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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 <sub>pbT</sub> )	1.00		1.00	1.00		1.00	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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	37	74	284	26	89	47	1016	153	95	1121	47
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	90	59	106	380	97	332	287	1773	267	301	2043	86
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
Prop Arrive On Green	0.07	0.07	0.07	0.16	0.26	0.26	0.02	0.57	0.57	0.04	0.59	0.59
Unsig. Movement Delay												
Ln Grp Delay, s/veh	57.3	0.0	62.8	43.5	0.0	35.6	12.6	18.7	18.7	13.5	17.1	17.1
Ln Grp LOS	E		E	D		D	B	B	B	B	B	B
Approach Vol, veh/h		148			399			1216			1263	
Approach Delay, s/veh		60.0			41.2			18.4			16.8	
Approach LOS		E			D			B			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6		8			
Case No		1.1	4.0	1.2	7.3	1.1	4.0		4.0			
Phs Duration (G+Y+Rc), s		8.0	74.7	23.3	14.0	6.1	76.5		37.3			
Change Period (Y+Rc), s		3.5	6.0	3.5	6.0	3.5	6.0		6.0			
Max Green (Gmax), s		8.5	36.0	32.5	24.0	8.5	36.0		60.0			
Max Allow Headway (MAH), s		3.8	5.2	3.8	4.7	3.8	5.1		5.4			
Max Q Clear (g <sub>c</sub> +I1), s		4.6	27.1	19.1	7.5	3.3	25.6		8.7			
Green Ext Time (g <sub>e</sub> ), s		0.1	4.8	0.7	0.5	0.0	5.3		0.7			
Prob of Phs Call (p <sub>c</sub> )		0.96	1.00	1.00	1.00	0.79	1.00		1.00			
Prob of Max Out (p <sub>x</sub> )		0.88	0.72	0.00	0.00	0.14	0.63		0.00			
Left-Turn Movement Data												
Assigned Mvmt		1		3	7	5						
Mvmt Sat Flow, veh/h		1781		1781	676	1781						
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3097		881		3475		371			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			466		1585		146		1271			
Left Lane Group Data												
Assigned Mvmt		1	0	3	7	5	0	0	0			

# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L+TL (Pr/Pm)			
Lanes in Grp	1	0	1	1	1	0	0	0
Grp Vol (v), veh/h	95	0	284	74	47	0	0	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	1557	1781	0	0	0
Q Serve Time (g_s), s	2.6	0.0	17.1	4.6	1.3	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.6	0.0	17.1	5.5	1.3	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	480	0	1282	1298	481	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	69.0	0.0	10.0	8.0	68.7	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	43.6	0.0	2.5	8.0	47.0	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	6.3	0.0	2.1	4.6	2.4	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.50	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	301	0	380	149	287	0	0	0
V/C Ratio (X)	0.32	0.00	0.75	0.50	0.16	0.00	0.00	0.00
Avail Cap (c_a), veh/h	361	0	569	351	374	0	0	0
Upstream Filter (I)	1.00	0.00	0.99	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	12.9	0.0	40.6	54.7	12.3	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	2.9	2.5	0.3	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	13.5	0.0	43.5	57.3	12.6	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.0	0.0	7.4	2.2	0.5	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.3	0.1	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.59	1.80	1.80	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	1.9	0.0	12.2	4.1	0.9	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.24	0.00	6.91	0.52	0.17	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	582	0	0	0	573	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	25.0	0.0	0.0	0.0	23.5	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	25.0	0.0	0.0	0.0	23.5	0.0	0.0
Lane Grp Cap (c), veh/h	0	1017	0	0	0	1044	0	0
V/C Ratio (X)	0.00	0.57	0.00	0.00	0.00	0.55	0.00	0.00
Avail Cap (c_a), veh/h	0	1017	0	0	0	1044	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	16.3	0.0	0.0	0.0	15.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.3	0.0	0.0	0.0	2.1	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	0.0	0.0	17.1	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.6	0.0	0.0	0.0	9.0	0.0	0.0

# HCM 7th Signalized Intersection Capacity Analysis 200: Calumet Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.51	0.00	1.00	0.00	1.53	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	15.6	0.0	0.0	0.0	14.7	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.84	0.00	0.00	0.00	0.40	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	587	0	74	0	595	0	115
Grp Sat Flow (s), veh/h/ln	0	1786	0	1585	0	1844	0	1642
Q Serve Time (g_s), s	0.0	25.1	0.0	5.5	0.0	23.6	0.0	6.7
Cycle Q Clear Time (g_c), s	0.0	25.1	0.0	5.5	0.0	23.6	0.0	6.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.26	0.00	1.00	0.00	0.08	0.00	0.77
Lane Grp Cap (c), veh/h	0	1023	0	106	0	1084	0	428
V/C Ratio (X)	0.00	0.57	0.00	0.70	0.00	0.55	0.00	0.27
Avail Cap (c_a), veh/h	0	1023	0	317	0	1084	0	821
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	16.3	0.0	54.8	0.0	15.0	0.0	35.2
Incr Delay (d2), s/veh	0.0	2.3	0.0	8.0	0.0	2.0	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.7	0.0	62.8	0.0	17.1	0.0	35.6
1st-Term Q (Q1), veh/ln	0.0	9.7	0.0	2.2	0.0	9.3	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.2	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.51	0.00	1.80	0.00	1.52	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	15.7	0.0	4.3	0.0	15.1	0.0	4.9
%ile Storage Ratio (RQ%)	0.00	0.84	0.00	0.54	0.00	0.41	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary























HCM 7th Control Delay, s/veh	22.8
HCM 7th LOS	C

# HCM 7th Signalized Intersection Summary

## 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	105	40	15	50	115	40	125	30	300	120	155
Future Volume (veh/h)	125	105	40	15	50	115	40	125	30	300	120	155
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	111	42	16	53	121	42	132	32	316	126	163
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	463	466	395	385	349	296	448	363	88	610	269	348
Arrive On Green	0.08	0.25	0.25	0.02	0.19	0.19	0.04	0.25	0.25	0.16	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1454	353	1781	740	958
Grp Volume(v), veh/h	132	111	42	16	53	121	42	0	164	316	0	289
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1807	1781	0	1698
Q Serve(g_s), s	3.4	2.8	1.2	0.4	1.4	4.0	1.0	0.0	4.5	7.3	0.0	7.9
Cycle Q Clear(g_c), s	3.4	2.8	1.2	0.4	1.4	4.0	1.0	0.0	4.5	7.3	0.0	7.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.56
Lane Grp Cap(c), veh/h	463	466	395	385	349	296	448	0	451	610	0	617
V/C Ratio(X)	0.28	0.24	0.11	0.04	0.15	0.41	0.09	0.00	0.36	0.52	0.00	0.47
Avail Cap(c_a), veh/h	628	924	783	661	924	783	684	0	742	644	0	697
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	18.0	17.4	19.1	20.5	21.5	15.5	0.0	18.6	12.0	0.0	14.7
Incr Delay (d2), s/veh	0.3	0.3	0.1	0.0	0.2	0.9	0.1	0.0	0.5	0.7	0.0	0.6
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(95%),veh/ln	2.3	2.1	0.8	0.3	1.1	2.6	0.7	0.0	3.2	4.5	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.8	18.3	17.5	19.2	20.7	22.4	15.6	0.0	19.1	12.7	0.0	15.2
LnGrp LOS	B	B	B	B	C	C	B		B	B		B
Approach Vol, veh/h	285			190			206			605		
Approach Delay, s/veh	17.5			21.7			18.4			13.9		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	20.3	5.7	20.3	7.0	27.1	9.4	16.5				
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3				
Max Green Setting (Gmax), s	10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7				
Max Q Clear Time (g_c+I1), s	9.3	6.5	2.4	4.8	3.0	9.9	5.4	6.0				
Green Ext Time (p_c), s	0.1	0.8	0.0	0.7	0.0	1.5	0.1	0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.6											
HCM 7th LOS	B											

























# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	105	40	15	50	115	40	125	30	300	120	155
Future Volume (veh/h)	125	105	40	15	50	115	40	125	30	300	120	155
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	111	42	16	53	121	42	132	32	316	126	163
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	463	466	395	385	349	296	448	363	88	610	269	348
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
Prop Arrive On Green	0.08	0.25	0.25	0.02	0.19	0.19	0.04	0.25	0.25	0.16	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.8	18.3	17.5	19.2	20.7	22.4	15.6	0.0	19.1	12.7	0.0	15.2
Ln Grp LOS	B	B	B	B	C	C	B		B	B		B
Approach Vol, veh/h	285			190			206			605		
Approach Delay, s/veh	17.5			21.7			18.4			13.9		
Approach LOS	B			C			B			B		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	3.0	1.1	4.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	13.9	20.3	5.7	20.3	7.0	27.1	9.4	16.5				
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3				
Max Green (Gmax), s	10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7				
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.8	3.8	5.3	3.8	4.3				
Max Q Clear (g_c+I1), s	9.3	6.5	2.4	4.8	3.0	9.9	5.4	6.0				
Green Ext Time (g_e), s	0.1	0.8	0.0	0.7	0.0	1.5	0.1	0.6				
Prob of Phs Call (p_c)	0.99	1.00	0.23	1.00	0.50	1.00	0.89	1.00				
Prob of Max Out (p_x)	1.00	0.00	0.00	0.00	0.00	0.00	0.03	0.28	0.00			
Left-Turn Movement Data												
Assigned Mvmt	1		3		5		7					
Mvmt Sat Flow, veh/h	1781		1781		1781		1781					
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		1454		1870		740		1870				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		353		1585		958		1585				
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	316	0	16	0	42	0	132	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	7.3	0.0	0.4	0.0	1.0	0.0	3.4	0.0
Cycle Q Clear Time (g_c), s	7.3	0.0	0.4	0.0	1.0	0.0	3.4	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1222	0	1234	0	1090	0	1211	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	17.0	0.0	11.2	0.0	15.0	0.0	12.5	0.0
Perm LT Serve Time (g_u), s	10.5	0.0	11.2	0.0	14.0	0.0	9.8	0.0
Perm LT Q Serve Time (g_ps), s	2.3	0.0	0.0	0.0	0.0	0.0	0.3	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	610	0	385	0	448	0	463	0
V/C Ratio (X)	0.52	0.00	0.04	0.00	0.09	0.00	0.28	0.00
Avail Cap (c_a), veh/h	644	0	661	0	684	0	628	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	12.0	0.0	19.1	0.0	15.5	0.0	16.4	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.1	0.0	0.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.7	0.0	19.2	0.0	15.6	0.0	16.8	0.0
1st-Term Q (Q1), veh/ln	2.4	0.0	0.2	0.0	0.4	0.0	1.2	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	4.5	0.0	0.3	0.0	0.7	0.0	2.3	0.0
%ile Storage Ratio (RQ%)	0.45	0.00	0.10	0.00	0.19	0.00	0.78	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	111	0	0	0	53
Grp Sat Flow (s), veh/h/ln	0	0	0	1870	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	1.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	1.4
Lane Grp Cap (c), veh/h	0	0	0	466	0	0	0	349
V/C Ratio (X)	0.00	0.00	0.00	0.24	0.00	0.00	0.00	0.15
Avail Cap (c_a), veh/h	0	0	0	924	0	0	0	924
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	18.0	0.0	0.0	0.0	20.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	18.3	0.0	0.0	0.0	20.7
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.6

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

Existing (2025) Traffic Volumes

PM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	2.1	0.0	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	164	0	42	0	289	0	121
Grp Sat Flow (s), veh/h/ln	0	1807	0	1585	0	1698	0	1585
Q Serve Time (g_s), s	0.0	4.5	0.0	1.2	0.0	7.9	0.0	4.0
Cycle Q Clear Time (g_c), s	0.0	4.5	0.0	1.2	0.0	7.9	0.0	4.0
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	0.56	0.00	1.00
Lane Grp Cap (c), veh/h	0	451	0	395	0	617	0	296
V/C Ratio (X)	0.00	0.36	0.00	0.11	0.00	0.47	0.00	0.41
Avail Cap (c_a), veh/h	0	742	0	783	0	697	0	783
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.6	0.0	17.4	0.0	14.7	0.0	21.5
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.1	0.0	0.6	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.1	0.0	17.5	0.0	15.2	0.0	22.4
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	0.4	0.0	2.6	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	3.2	0.0	0.8	0.0	4.9	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.26	0.00	0.11	0.00	0.88
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Intersection Summary

HCM 7th Control Delay, s/veh	16.6
HCM 7th LOS	B

DATA FROM ITE TRIP GENERATION MANUAL, 11<sup>TH</sup> EDITION

# Land Use: 720

## Medical-Dental Office Building

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### Description

A medical-dental office building is a facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care. One or more private physicians or dentists generally operate this type of facility. General office building (Land Use 710) and clinic (Land Use 630) are related uses.

### Land Use Subcategory

Analysis of medical-dental office building data found that trip generation rates are measurably different for sites located within or adjacent to a hospital campus and sites that are stand-alone. Data plots are presented for these two land use subcategories.

### Additional Data

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), California, Connecticut, Kentucky, Maryland, Minnesota, New Jersey, New York, Ohio, Oregon, Pennsylvania, South Dakota, Texas, Virginia, Washington, and Wisconsin.

### Source Numbers

104, 109, 120, 157, 184, 209, 211, 253, 287, 294, 295, 304, 357, 384, 404, 407, 423, 444, 509, 601, 715, 867, 879, 901, 902, 908, 959, 972

# Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday

Setting/Location: General Urban/Suburban

Number of Studies: 6

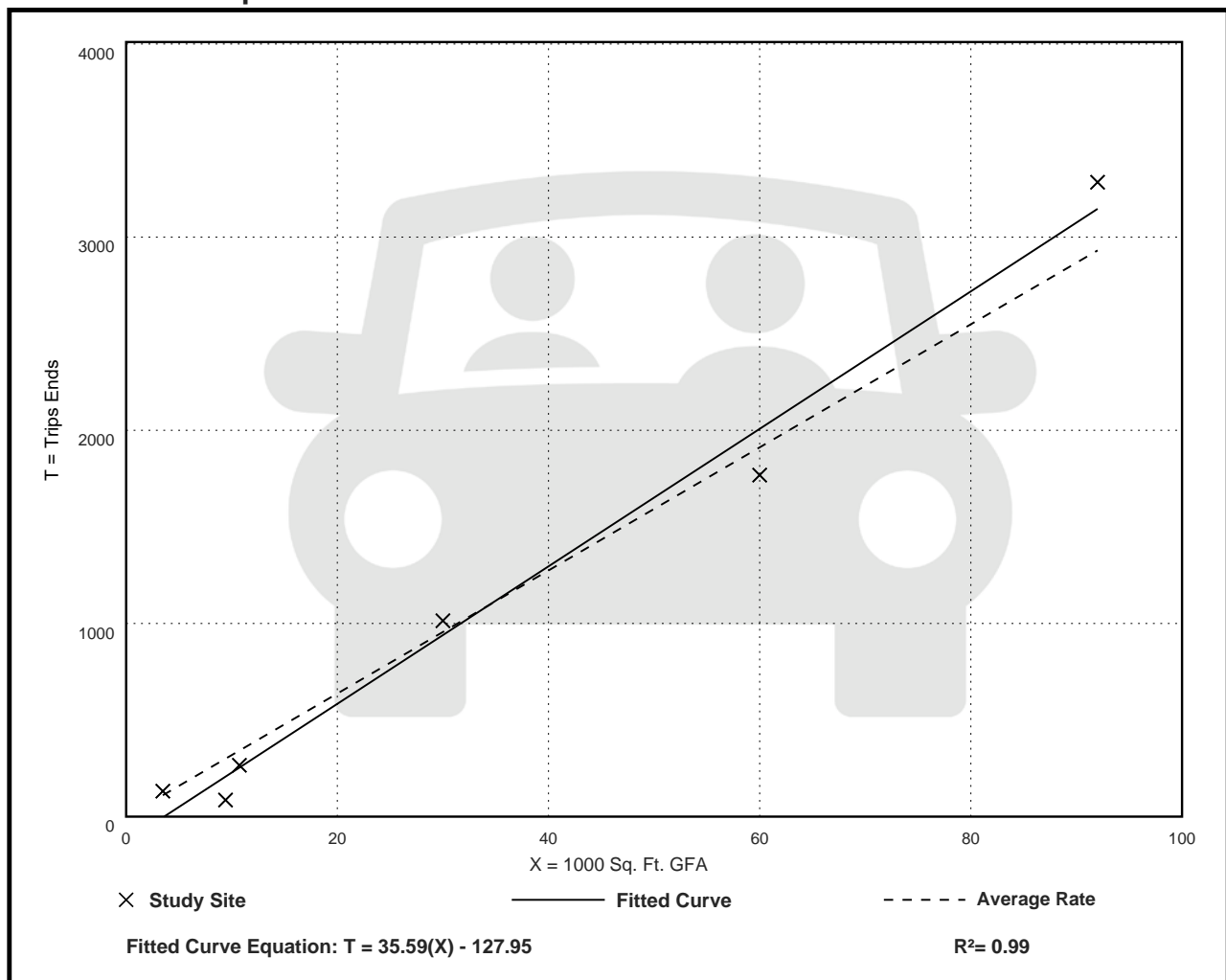
Avg. 1000 Sq. Ft. GFA: 34

Directional Distribution: 50% entering, 50% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
31.86	9.14 - 37.99	6.54

## Data Plot and Equation



# Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 7 and 9 a.m.

Setting/Location: General Urban/Suburban

Number of Studies: 8

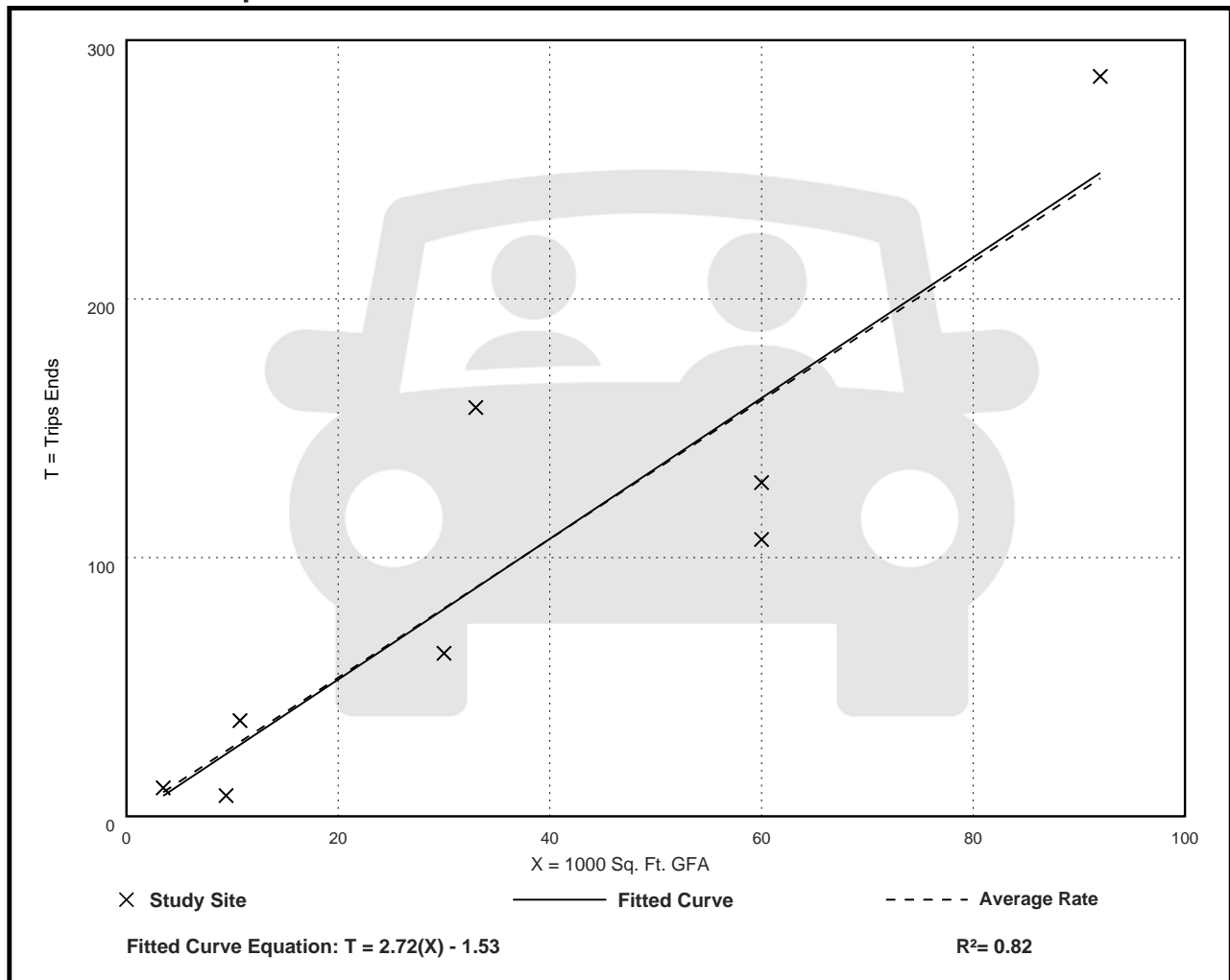
Avg. 1000 Sq. Ft. GFA: 37

Directional Distribution: 81% entering, 19% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.68	0.85 - 4.79	1.03

## Data Plot and Equation





# Medical-Dental Office Building Within/Near Hospital Campus (720)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA

On a: Weekday,

Peak Hour of Adjacent Street Traffic,

One Hour Between 4 and 6 p.m.

Setting/Location: General Urban/Suburban

Number of Studies: 10

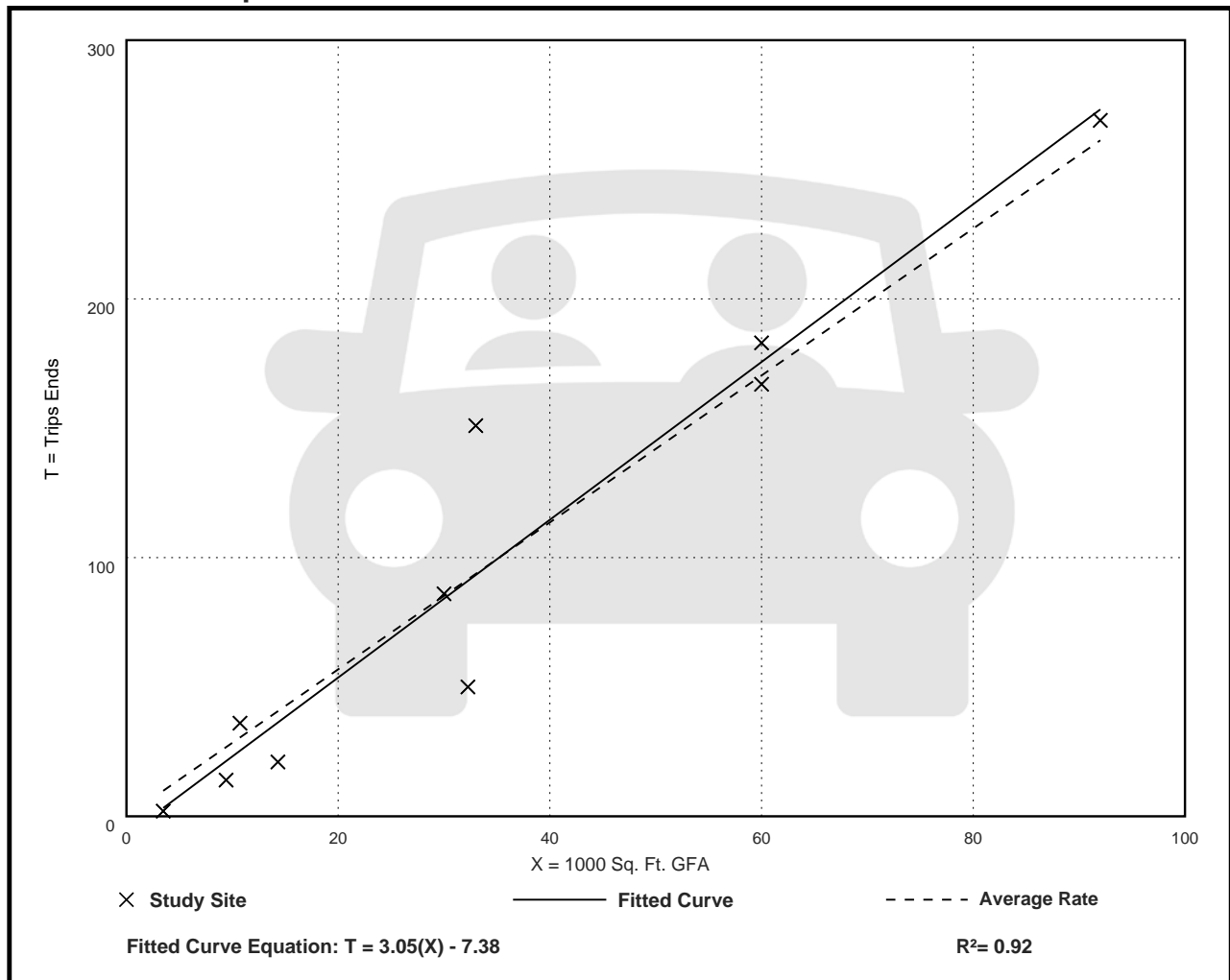
Avg. 1000 Sq. Ft. GFA: 35

Directional Distribution: 25% entering, 75% exiting

## Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
2.84	0.58 - 4.58	0.84

## Data Plot and Equation























## FUTURE YEAR (2026) BUILD CAPACITY REPORTS

# HCM 7th Signalized Intersection Summary

## 100: Calumet Avenue & Fisher Street

# Future (2026) Traffic Projections

AM Peak Hour




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	80	160	80	85	125	145	840	105	125	1050	40
Future Volume (veh/h)	95	80	160	80	85	125	145	840	105	125	1050	40
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	100	84	168	84	89	132	153	884	111	132	1105	42
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	2	2	2	2	2	2	2	3	2
Cap, veh/h	210	97	195	180	113	168	331	1843	231	376	1994	76
Arrive On Green	0.06	0.18	0.18	0.05	0.17	0.17	0.05	0.58	0.58	0.05	0.58	0.58
Sat Flow, veh/h	1781	557	1113	1781	680	1009	1781	3177	399	1781	3463	132
Grp Volume(v), veh/h	100	0	252	84	0	221	153	494	501	132	562	585
Grp Sat Flow(s),veh/h/ln	1781	0	1670	1781	0	1689	1781	1777	1799	1781	1763	1832
Q Serve(g_s), s	6.0	0.0	19.1	5.0	0.0	16.3	4.6	21.0	21.0	3.9	25.8	25.9
Cycle Q Clear(g_c), s	6.0	0.0	19.1	5.0	0.0	16.3	4.6	21.0	21.0	3.9	25.8	25.9
Prop In Lane	1.00		0.67	1.00		0.60	1.00		0.22	1.00		0.07
Lane Grp Cap(c), veh/h	210	0	292	180	0	282	331	1031	1043	376	1015	1055
V/C Ratio(X)	0.48	0.00	0.86	0.47	0.00	0.78	0.46	0.48	0.48	0.35	0.55	0.55
Avail Cap(c_a), veh/h	247	0	398	231	0	403	384	1031	1043	518	1015	1055
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	42.3	0.0	52.1	43.0	0.0	51.9	13.6	15.9	15.9	12.1	17.2	17.2
Incr Delay (d2), s/veh	1.7	0.0	18.0	1.9	0.0	10.8	1.0	1.6	1.6	0.6	2.2	2.1
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(95%),veh/ln	4.9	0.0	14.4	4.1	0.0	12.3	3.3	13.6	13.7	2.8	16.1	16.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.9	0.0	70.1	44.9	0.0	62.7	14.6	17.5	17.5	12.7	19.4	19.3
LnGrp LOS	D		E	D		E	B	B	B	B	B	B
Approach Vol, veh/h	352		305			1148			1279			
Approach Delay, s/veh	62.7		57.8			17.1			18.6			
Approach LOS	E		E			B			B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	81.4	10.2	28.8	10.2	80.8	11.3	27.7				
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	16.5	53.0	10.5	31.0	10.5	59.0	10.5	31.0				
Max Q Clear Time (g_c+I1), s	5.9	23.0	7.0	21.1	6.6	27.9	8.0	18.3				
Green Ext Time (p_c), s	0.2	19.8	0.0	1.7	0.1	23.0	0.0	1.7				
Intersection Summary												
HCM 7th Control Delay, s/veh	27.0											
HCM 7th LOS	C											

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

# Future (2026) Traffic Projections

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	80	160	80	85	125	145	840	105	125	1050	40
Future Volume (veh/h)	95	80	160	80	85	125	145	840	105	125	1050	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	100	84	168	84	89	132	153	884	111	132	1105	42
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	2	2	2	2	2	2	2	3	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	210	97	195	180	113	168	331	1843	231	376	1994	76
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
Prop Arrive On Green	0.06	0.18	0.18	0.05	0.17	0.17	0.05	0.58	0.58	0.05	0.58	0.58
Unsig. Movement Delay												
Ln Grp Delay, s/veh	43.9	0.0	70.1	44.9	0.0	62.7	14.6	17.5	17.5	12.7	19.4	19.3
Ln Grp LOS	D		E	D		E	B	B	B	B	B	B
Approach Vol, veh/h	352			305			1148			1279		
Approach Delay, s/veh	62.7			57.8			17.1			18.6		
Approach LOS	E			E			B			B		
Timer:												
	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0				
Phs Duration (G+Y+Rc), s	9.6	81.4	10.2	28.8	10.2	80.8	11.3	27.7				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green (Gmax), s	16.5	53.0	10.5	31.0	10.5	59.0	10.5	31.0				
Max Allow Headway (MAH), s	3.8	9.2	3.8	7.3	3.8	9.1	3.8	7.3				
Max Q Clear (g_c+I1), s	5.9	23.0	7.0	21.1	6.6	27.9	8.0	18.3				
Green Ext Time (g_e), s	0.2	19.8	0.0	1.7	0.1	23.0	0.0	1.7				
Prob of Phs Call (p_c)	0.99	1.00	0.95	1.00	1.00	1.00	0.97	1.00				
Prob of Max Out (p_x)	0.00	0.62	1.00	0.52	0.85	0.71	1.00	0.23				
Left-Turn Movement Data												
Assigned Mvmt	1		3		5		7					
Mvmt Sat Flow, veh/h	1781		1781		1781		1781					
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		3177		557		3463		680				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		399		1113		132		1009				
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

Future (2026) Traffic Projections  
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Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	132	0	84	0	153	0	100	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	3.9	0.0	5.0	0.0	4.6	0.0	6.0	0.0
Cycle Q Clear Time (g_c), s	3.9	0.0	5.0	0.0	4.6	0.0	6.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	566	0	1128	0	490	0	1160	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	74.8	0.0	21.7	0.0	74.8	0.0	21.7	0.0
Perm LT Serve Time (g_u), s	54.4	0.0	3.7	0.0	49.0	0.0	5.4	0.0
Perm LT Q Serve Time (g_ps), s	6.2	0.0	1.4	0.0	11.7	0.0	1.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	376	0	180	0	331	0	210	0
V/C Ratio (X)	0.35	0.00	0.47	0.00	0.46	0.00	0.48	0.00
Avail Cap (c_a), veh/h	518	0	231	0	384	0	247	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	12.1	0.0	43.0	0.0	13.6	0.0	42.3	0.0
Incr Delay (d2), s/veh	0.6	0.0	1.9	0.0	1.0	0.0	1.7	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.7	0.0	44.9	0.0	14.6	0.0	43.9	0.0
1st-Term Q (Q1), veh/ln	1.5	0.0	2.2	0.0	1.7	0.0	2.6	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.1	0.0	0.1	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.8	0.0	4.1	0.0	3.3	0.0	4.9	0.0
%ile Storage Ratio (RQ%)	0.47	0.00	0.78	0.00	0.20	0.00	0.52	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	494	0	0	0	562	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1763	0	0
Q Serve Time (g_s), s	0.0	21.0	0.0	0.0	0.0	25.8	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	21.0	0.0	0.0	0.0	25.8	0.0	0.0
Lane Grp Cap (c), veh/h	0	1031	0	0	0	1015	0	0
V/C Ratio (X)	0.00	0.48	0.00	0.00	0.00	0.55	0.00	0.00
Avail Cap (c_a), veh/h	0	1031	0	0	0	1015	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	15.9	0.0	0.0	0.0	17.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.6	0.0	0.0	0.0	2.2	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.5	0.0	0.0	0.0	19.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	8.3	0.0	0.0	0.0	10.1	0.0	0.0

# HCM 7th Signalized Intersection Capacity Analysis

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2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.56	0.00	1.00	0.00	1.50	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	13.6	0.0	0.0	0.0	16.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.40	0.00	0.00	0.00	0.55	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	501	0	252	0	585	0	221
Grp Sat Flow (s), veh/h/ln	0	1799	0	1670	0	1832	0	1689
Q Serve Time (g_s), s	0.0	21.0	0.0	19.1	0.0	25.9	0.0	16.3
Cycle Q Clear Time (g_c), s	0.0	21.0	0.0	19.1	0.0	25.9	0.0	16.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.22	0.00	0.67	0.00	0.07	0.00	0.60
Lane Grp Cap (c), veh/h	0	1043	0	292	0	1055	0	282
V/C Ratio (X)	0.00	0.48	0.00	0.86	0.00	0.55	0.00	0.78
Avail Cap (c_a), veh/h	0	1043	0	398	0	1055	0	403
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	15.9	0.0	52.1	0.0	17.2	0.0	51.9
Incr Delay (d2), s/veh	0.0	1.6	0.0	18.0	0.0	2.1	0.0	10.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.5	0.0	70.1	0.0	19.3	0.0	62.7
1st-Term Q (Q1), veh/ln	0.0	8.4	0.0	7.9	0.0	10.5	0.0	6.9
2nd-Term Q (Q2), veh/ln	0.0	0.5	0.0	1.5	0.0	0.6	0.0	0.8
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.55	0.00	1.54	0.00	1.49	0.00	1.59
%ile Back of Q (95%), veh/ln	0.0	13.7	0.0	14.4	0.0	16.6	0.0	12.3
%ile Storage Ratio (RQ%)	0.00	0.41	0.00	0.55	0.00	0.56	0.00	0.23
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary





















HCM 7th Control Delay, s/veh	27.0
HCM 7th LOS	C

# HCM 7th Signalized Intersection Summary

## 200: Calumet Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	35	55	140	60	110	105	1070	150	80	940	85
Future Volume (veh/h)	70	35	55	140	60	110	105	1070	150	80	940	85
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	74	37	58	147	63	116	111	1126	158	84	989	89
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	2	2	2	2	2	2	2	3	2
Cap, veh/h	135	47	157	240	127	234	367	1986	278	295	2055	185
Arrive On Green	0.10	0.10	0.10	0.09	0.22	0.22	0.04	0.63	0.63	0.03	0.63	0.63
Sat Flow, veh/h	900	473	1585	1781	590	1085	1781	3130	438	1781	3271	294
Grp Volume(v), veh/h	111	0	58	147	0	179	111	638	646	84	533	545
Grp Sat Flow(s),veh/h/ln	1373	0	1585	1781	0	1675	1781	1777	1791	1781	1763	1803
Q Serve(g_s), s	10.1	0.0	4.4	9.3	0.0	12.2	2.9	26.6	26.8	2.2	20.9	21.0
Cycle Q Clear(g_c), s	10.3	0.0	4.4	9.3	0.0	12.2	2.9	26.6	26.8	2.2	20.9	21.0
Prop In Lane	0.67		1.00	1.00		0.65	1.00		0.24	1.00		0.16
Lane Grp Cap(c), veh/h	182	0	157	240	0	360	367	1127	1137	295	1107	1132
V/C Ratio(X)	0.61	0.00	0.37	0.61	0.00	0.50	0.30	0.57	0.57	0.28	0.48	0.48
Avail Cap(c_a), veh/h	299	0	293	526	0	773	416	1127	1137	356	1107	1132
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	0.97	0.00	0.97	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	0.0	54.8	45.6	0.0	44.8	9.9	13.5	13.6	11.1	12.9	12.9
Incr Delay (d2), s/veh	3.3	0.0	1.5	2.4	0.0	1.0	0.5	2.1	2.1	0.5	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(95%),veh/ln	6.7	0.0	3.3	7.6	0.0	8.8	2.0	16.1	16.3	1.5	13.1	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	60.7	0.0	56.2	48.0	0.0	45.9	10.4	15.6	15.6	11.7	14.4	14.3
LnGrp LOS	E		E	D		D	B	B	B	B	B	B
Approach Vol, veh/h	169			326			1395			1162		
Approach Delay, s/veh	59.1			46.8			15.2			14.2		
Approach LOS	E			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	7.5	88.5	15.1	18.9	8.4	87.7	34.0					
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	6.0					
Max Green Setting (Gmax), s	8.5	46.0	32.5	24.0	8.5	46.0	60.0					
Max Q Clear Time (g_c+I1), s	4.2	28.8	11.3	12.3	4.9	23.0	14.2					
Green Ext Time (p_c), s	0.1	8.2	0.4	0.6	0.1	7.5	1.1					
Intersection Summary												
HCM 7th Control Delay, s/veh	20.6											
HCM 7th LOS	C											






















# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

Future (2026) Traffic Projections

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	35	55	140	60	110	105	1070	150	80	940	85
Future Volume (veh/h)	70	35	55	140	60	110	105	1070	150	80	940	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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					
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870
Adj Flow Rate, veh/h	74	37	58	147	63	116	111	1126	158	84	989	89
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	2	2	2	2	2	2	2	3	2
Opposing Right Turn Influence	Yes				Yes				Yes			
Cap, veh/h	135	47	157	240	127	234	367	1986	278	295	2055	185
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
Prop Arrive On Green	0.10	0.10	0.10	0.09	0.22	0.22	0.04	0.63	0.63	0.03	0.63	0.63
Unsig. Movement Delay												
Ln Grp Delay, s/veh	60.7	0.0	56.2	48.0	0.0	45.9	10.4	15.6	15.6	11.7	14.4	14.3
Ln Grp LOS	E		E	D		D	B	B	B	B	B	B
Approach Vol, veh/h	169				326		1395			1162		
Approach Delay, s/veh	59.1				46.8		15.2			14.2		
Approach LOS	E				D		B			B		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	8					
Case No	1.1	4.0	1.2	7.3	1.1	4.0	4.0					
Phs Duration (G+Y+Rc), s	7.5	88.5	15.1	18.9	8.4	87.7	34.0					
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	6.0					
Max Green (Gmax), s	8.5	46.0	32.5	24.0	8.5	46.0	60.0					
Max Allow Headway (MAH), s	3.8	5.2	3.8	5.0	3.8	5.1	5.3					
Max Q Clear (g_c+I1), s	4.2	28.8	11.3	12.3	4.9	23.0	14.2					
Green Ext Time (g_e), s	0.1	8.2	0.4	0.6	0.1	7.5	1.1					
Prob of Phs Call (p_c)	0.95	1.00	1.00	1.00	0.98	1.00	1.00					
Prob of Max Out (p_x)	0.54	0.42	0.00	0.02	1.00	0.17	0.00					
Left-Turn Movement Data												
Assigned Mvmt	1	3		7	5							
Mvmt Sat Flow, veh/h	1781	1781		900	1781							
Through Movement Data												
Assigned Mvmt	2		4		6		8					
Mvmt Sat Flow, veh/h	3130		473		3271		590					
Right-Turn Movement Data												
Assigned Mvmt	12		14		16		18					
Mvmt Sat Flow, veh/h	438		1585		294		1085					
Left Lane Group Data												
Assigned Mvmt	1	0	3	7	5	0	0	0				

# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

AM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L+TL (Pr/Pm)			
Lanes in Grp	1	0	1	1	1	0	0	0
Grp Vol (v), veh/h	84	0	147	111	111	0	0	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	1373	1781	0	0	0
Q Serve Time (g_s), s	2.2	0.0	9.3	10.1	2.9	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.2	0.0	9.3	10.3	2.9	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	430	0	1301	1224	523	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	81.7	0.0	14.9	12.9	81.7	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	55.7	0.0	2.6	12.9	60.7	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	6.3	0.0	1.6	10.1	5.6	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.67	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	295	0	240	182	367	0	0	0
V/C Ratio (X)	0.28	0.00	0.61	0.61	0.30	0.00	0.00	0.00
Avail Cap (c_a), veh/h	356	0	526	299	416	0	0	0
Upstream Filter (I)	1.00	0.00	0.97	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	11.1	0.0	45.6	57.4	9.9	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	2.4	3.3	0.5	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	11.7	0.0	48.0	60.7	10.4	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	0.8	0.0	4.1	3.6	1.1	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.78	1.80	1.80	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	1.5	0.0	7.6	6.7	2.0	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.20	0.00	4.29	0.84	0.36	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### Middle Lane Group Data

Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	638	0	0	0	533	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1763	0	0
Q Serve Time (g_s), s	0.0	26.6	0.0	0.0	0.0	20.9	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	26.6	0.0	0.0	0.0	20.9	0.0	0.0
Lane Grp Cap (c), veh/h	0	1127	0	0	0	1107	0	0
V/C Ratio (X)	0.00	0.57	0.00	0.00	0.00	0.48	0.00	0.00
Avail Cap (c_a), veh/h	0	1127	0	0	0	1107	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	13.5	0.0	0.0	0.0	12.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.0	0.0	1.5	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.6	0.0	0.0	0.0	14.4	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.0	0.0	0.0	0.0	7.9	0.0	0.0

# HCM 7th Signalized Intersection Capacity Analysis 200: Calumet Avenue & Fran Lin Parkway

Future (2026) Traffic Projections  
AM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.5	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.50	0.00	1.00	0.00	1.57	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	16.1	0.0	0.0	0.0	13.1	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.86	0.00	0.00	0.00	0.36	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	646	0	58	0	545	0	179
Grp Sat Flow (s), veh/h/ln	0	1791	0	1585	0	1803	0	1675
Q Serve Time (g_s), s	0.0	26.8	0.0	4.4	0.0	21.0	0.0	12.2
Cycle Q Clear Time (g_c), s	0.0	26.8	0.0	4.4	0.0	21.0	0.0	12.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.24	0.00	1.00	0.00	0.16	0.00	0.65
Lane Grp Cap (c), veh/h	0	1137	0	157	0	1132	0	360
V/C Ratio (X)	0.00	0.57	0.00	0.37	0.00	0.48	0.00	0.50
Avail Cap (c_a), veh/h	0	1137	0	293	0	1132	0	773
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.97
Uniform Delay (d1), s/veh	0.0	13.6	0.0	54.8	0.0	12.9	0.0	44.8
Incr Delay (d2), s/veh	0.0	2.1	0.0	1.5	0.0	1.5	0.0	1.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	15.6	0.0	56.2	0.0	14.3	0.0	45.9
1st-Term Q (Q1), veh/ln	0.0	10.2	0.0	1.8	0.0	8.1	0.0	5.1
2nd-Term Q (Q2), veh/ln	0.0	0.7	0.0	0.1	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.50	0.00	1.80	0.00	1.56	0.00	1.71
%ile Back of Q (95%), veh/ln	0.0	16.3	0.0	3.3	0.0	13.3	0.0	8.8
%ile Storage Ratio (RQ%)	0.00	0.88	0.00	0.41	0.00	0.37	0.00	0.29
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary






















HCM 7th Control Delay, s/veh	20.6
HCM 7th LOS	C

# HCM 7th Signalized Intersection Summary

## 300: Columbia Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

AM Peak Hour























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	30	25	15	145	275	55	145	5	115	100	115
Future Volume (veh/h)	95	30	25	15	145	275	55	145	5	115	100	115
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	32	26	16	153	289	58	153	5	121	105	121
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	432	580	491	510	487	413	414	466	15	489	222	256
Arrive On Green	0.07	0.31	0.31	0.02	0.26	0.26	0.05	0.26	0.26	0.07	0.28	0.28
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1801	59	1781	793	913
Grp Volume(v), veh/h	100	32	26	16	153	289	58	0	158	121	0	226
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1860	1781	0	1706
Q Serve(g_s), s	2.3	0.7	0.7	0.4	3.8	9.6	1.3	0.0	4.0	2.8	0.0	6.4
Cycle Q Clear(g_c), s	2.3	0.7	0.7	0.4	3.8	9.6	1.3	0.0	4.0	2.8	0.0	6.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.03	1.00		0.54
Lane Grp Cap(c), veh/h	432	580	491	510	487	413	414	0	481	489	0	478
V/C Ratio(X)	0.23	0.06	0.05	0.03	0.31	0.70	0.14	0.00	0.33	0.25	0.00	0.47
Avail Cap(c_a), veh/h	631	958	812	797	958	812	643	0	792	680	0	726
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.7	14.0	14.0	15.2	17.3	19.4	14.5	0.0	17.4	14.0	0.0	17.3
Incr Delay (d2), s/veh	0.3	0.1	0.1	0.0	0.8	4.5	0.2	0.0	1.8	0.3	0.0	3.3
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(95%),veh/ln	1.5	0.5	0.4	0.3	2.8	6.5	0.9	0.0	3.2	1.8	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	14.0	14.1	14.1	15.2	18.0	23.9	14.6	0.0	19.2	14.3	0.0	20.7
LnGrp LOS	B	B	B	B	B	C	B		B	B		C
Approach Vol, veh/h	158			458			216			347		
Approach Delay, s/veh	14.0			21.7			18.0			18.4		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	20.3	5.6	23.3	7.5	21.6	8.5	20.4				
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3				
Max Green Setting (Gmax), s	10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7				
Max Q Clear Time (g_c+I1), s	4.8	6.0	2.4	2.7	3.3	8.4	4.3	11.6				
Green Ext Time (p_c), s	0.1	2.1	0.0	0.4	0.0	3.0	0.1	3.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	19.0											
HCM 7th LOS	B											

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	30	25	15	145	275	55	145	5	115	100	115
Future Volume (veh/h)	95	30	25	15	145	275	55	145	5	115	100	115
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	100	32	26	16	153	289	58	153	5	121	105	121
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	432	580	491	510	487	413	414	466	15	489	222	256
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
Prop Arrive On Green	0.07	0.31	0.31	0.02	0.26	0.26	0.05	0.26	0.26	0.07	0.28	0.28
Unsig. Movement Delay												
Ln Grp Delay, s/veh	14.0	14.1	14.1	15.2	18.0	23.9	14.6	0.0	19.2	14.3	0.0	20.7
Ln Grp LOS	B	B	B	B	B	C	B		B	B		C
Approach Vol, veh/h		158			458			216			347	
Approach Delay, s/veh		14.0			21.7			18.0			18.4	
Approach LOS		B			C			B			B	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6	7	8			
Case No		1.1	4.0	1.1	3.0	1.1	4.0	1.1	3.0			
Phs Duration (G+Y+Rc), s		8.8	20.3	5.6	23.3	7.5	21.6	8.5	20.4			
Change Period (Y+Rc), s		4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3			
Max Green (Gmax), s		10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7			
Max Allow Headway (MAH), s		3.8	9.1	3.8	6.6	3.8	9.3	3.8	6.4			
Max Q Clear (g_c+I1), s		4.8	6.0	2.4	2.7	3.3	8.4	4.3	11.6			
Green Ext Time (g_e), s		0.1	2.1	0.0	0.4	0.0	3.0	0.1	3.6			
Prob of Phs Call (p_c)		0.86	1.00	0.23	1.00	0.61	1.00	0.80	1.00			
Prob of Max Out (p_x)		0.15	0.10	0.00	0.00	0.01	0.28	0.07	0.10			
Left-Turn Movement Data												
Assigned Mvmt		1		3		5		7				
Mvmt Sat Flow, veh/h		1781		1781		1781		1781				
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			1801		1870		793		1870			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			59		1585		913		1585			
Left Lane Group Data												
Assigned Mvmt		1	0	3	0	5	0	7	0			

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

AM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	121	0	16	0	58	0	100	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	2.8	0.0	0.4	0.0	1.3	0.0	2.3	0.0
Cycle Q Clear Time (g_c), s	2.8	0.0	0.4	0.0	1.3	0.0	2.3	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1228	0	1345	0	1155	0	947	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	15.0	0.0	15.1	0.0	15.0	0.0	15.5	0.0
Perm LT Serve Time (g_u), s	11.0	0.0	15.1	0.0	9.9	0.0	11.3	0.0
Perm LT Q Serve Time (g_ps), s	0.4	0.0	0.0	0.0	0.3	0.0	0.5	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	489	0	510	0	414	0	432	0
V/C Ratio (X)	0.25	0.00	0.03	0.00	0.14	0.00	0.23	0.00
Avail Cap (c_a), veh/h	680	0	797	0	643	0	631	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	14.0	0.0	15.2	0.0	14.5	0.0	13.7	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.2	0.0	0.3	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	14.3	0.0	15.2	0.0	14.6	0.0	14.0	0.0
1st-Term Q (Q1), veh/ln	1.0	0.0	0.1	0.0	0.5	0.0	0.8	0.0
2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	1.8	0.0	0.3	0.0	0.9	0.0	1.5	0.0
%ile Storage Ratio (RQ%)	0.18	0.00	0.09	0.00	0.24	0.00	0.51	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	32	0	0	0	153
Grp Sat Flow (s), veh/h/ln	0	0	0	1870	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	3.8
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	0.7	0.0	0.0	0.0	3.8
Lane Grp Cap (c), veh/h	0	0	0	580	0	0	0	487
V/C Ratio (X)	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.31
Avail Cap (c_a), veh/h	0	0	0	958	0	0	0	958
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	14.0	0.0	0.0	0.0	17.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.8
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	14.1	0.0	0.0	0.0	18.0
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	0.3	0.0	0.0	0.0	1.5

# HCM 7th Signalized Intersection Capacity Analysis 300: Columbia Avenue & Fran Lin Parkway

Future (2026) Traffic Projections  
AM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	0.5	0.0	0.0	0.0	2.8
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.08
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	158	0	26	0	226	0	289
Grp Sat Flow (s), veh/h/ln	0	1860	0	1585	0	1706	0	1585
Q Serve Time (g_s), s	0.0	4.0	0.0	0.7	0.0	6.4	0.0	9.6
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	0.7	0.0	6.4	0.0	9.6
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.03	0.00	1.00	0.00	0.54	0.00	1.00
Lane Grp Cap (c), veh/h	0	481	0	491	0	478	0	413
V/C Ratio (X)	0.00	0.33	0.00	0.05	0.00	0.47	0.00	0.70
Avail Cap (c_a), veh/h	0	792	0	812	0	726	0	812
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	17.4	0.0	14.0	0.0	17.3	0.0	19.4
Incr Delay (d2), s/veh	0.0	1.8	0.0	0.1	0.0	3.3	0.0	4.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.2	0.0	14.1	0.0	20.7	0.0	23.9
1st-Term Q (Q1), veh/ln	0.0	1.5	0.0	0.2	0.0	2.2	0.0	3.1
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.4	0.0	0.5
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	3.2	0.0	0.4	0.0	4.8	0.0	6.5
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.14	0.00	0.11	0.00	2.21
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary





















HCM 7th Control Delay, s/veh	19.0
HCM 7th LOS	B

# HCM 7th Signalized Intersection Summary

## 100: Calumet Avenue & Fisher Street

# Future (2026) Traffic Projections

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	110	200	60	110	90	180	1005	45	105	950	50
Future Volume (veh/h)	70	110	200	60	110	90	180	1005	45	105	950	50
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	116	211	63	116	95	189	1058	47	111	1000	53
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	128	232	156	199	163	352	1878	83	315	1791	95
Arrive On Green	0.05	0.21	0.21	0.04	0.21	0.21	0.07	0.54	0.54	0.05	0.52	0.52
Sat Flow, veh/h	1781	594	1081	1781	951	779	1781	3466	154	1781	3433	182
Grp Volume(v), veh/h	74	0	327	63	0	211	189	542	563	111	518	535
Grp Sat Flow(s),veh/h/ln	1781	0	1676	1781	0	1730	1781	1777	1843	1781	1777	1838
Q Serve(g_s), s	3.9	0.0	22.8	3.3	0.0	13.2	5.8	24.1	24.2	3.4	23.6	23.6
Cycle Q Clear(g_c), s	3.9	0.0	22.8	3.3	0.0	13.2	5.8	24.1	24.2	3.4	23.6	23.6
Prop In Lane	1.00		0.65	1.00		0.45	1.00		0.08	1.00		0.10
Lane Grp Cap(c), veh/h	256	0	360	156	0	361	352	963	999	315	927	959
V/C Ratio(X)	0.29	0.00	0.91	0.41	0.00	0.58	0.54	0.56	0.56	0.35	0.56	0.56
Avail Cap(c_a), veh/h	332	0	391	286	0	447	405	963	999	479	927	959
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	35.6	0.0	46.0	37.3	0.0	42.8	14.9	18.1	18.1	14.5	19.4	19.4
Incr Delay (d2), s/veh	0.6	0.0	25.4	1.7	0.0	3.2	1.3	2.4	2.3	0.7	2.4	2.3
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(95%),veh/ln	3.1	0.0	17.6	2.7	0.0	9.9	4.2	15.3	15.8	2.5	15.2	15.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.2	0.0	71.4	39.0	0.0	46.0	16.1	20.5	20.4	15.2	21.8	21.7
LnGrp LOS	D		E	D		D	B	C	C	B	C	C
Approach Vol, veh/h	401			274			1294			1164		
Approach Delay, s/veh	64.9			44.4			19.8			21.1		
Approach LOS	E			D			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.0	71.0	8.2	31.8	11.4	68.6	8.9	31.0				
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	16.5	43.0	13.5	28.0	11.5	48.0	10.5	31.0				
Max Q Clear Time (g_c+I1), s	5.4	26.2	5.3	24.8	7.8	25.6	5.9	15.2				
Green Ext Time (p_c), s	0.2	13.5	0.1	0.9	0.2	16.6	0.0	1.8				
Intersection Summary												
HCM 7th Control Delay, s/veh	28.2											
HCM 7th LOS	C											























# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

# Future (2026) Traffic Projections

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	110	200	60	110	90	180	1005	45	105	950	50
Future Volume (veh/h)	70	110	200	60	110	90	180	1005	45	105	950	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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		
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	116	211	63	116	95	189	1058	47	111	1000	53
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	256	128	232	156	199	163	352	1878	83	315	1791	95
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
Prop Arrive On Green	0.05	0.21	0.21	0.04	0.21	0.21	0.07	0.54	0.54	0.05	0.52	0.52
Unsig. Movement Delay												
Ln Grp Delay, s/veh	36.2	0.0	71.4	39.0	0.0	46.0	16.1	20.5	20.4	15.2	21.8	21.7
Ln Grp LOS	D		E	D		D	B	C	C	B	C	C
Approach Vol, veh/h	401			274			1294			1164		
Approach Delay, s/veh	64.9			44.4			19.8			21.1		
Approach LOS	E			D			B			C		
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	4.0	1.1	4.0	1.1	4.0				
Phs Duration (G+Y+Rc), s	9.0	71.0	8.2	31.8	11.4	68.6	8.9	31.0				
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	3.5	6.0				
Max Green (Gmax), s	16.5	43.0	13.5	28.0	11.5	48.0	10.5	31.0				
Max Allow Headway (MAH), s	3.8	9.1	3.8	7.3	3.8	9.1	3.8	7.3				
Max Q Clear (g_c+I1), s	5.4	26.2	5.3	24.8	7.8	25.6	5.9	15.2				
Green Ext Time (g_e), s	0.2	13.5	0.1	0.9	0.2	16.6	0.0	1.8				
Prob of Phs Call (p_c)	0.98	1.00	0.88	1.00	1.00	1.00	0.92	1.00				
Prob of Max Out (p_x)	0.00	0.88	0.00	1.00	1.00	0.77	0.36	0.08				
Left-Turn Movement Data												
Assigned Mvmt	1		3		5		7					
Mvmt Sat Flow, veh/h	1781		1781		1781		1781					
Through Movement Data												
Assigned Mvmt		2		4		6		8				
Mvmt Sat Flow, veh/h		3466		594		3433		951				
Right-Turn Movement Data												
Assigned Mvmt		12		14		16		18				
Mvmt Sat Flow, veh/h		154		1081		182		779				
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

# Future (2026) Traffic Projections

PM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	111	0	63	0	189	0	74	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	3.4	0.0	3.3	0.0	5.8	0.0	3.9	0.0
Cycle Q Clear Time (g_c), s	3.4	0.0	3.3	0.0	5.8	0.0	3.9	0.0
Perm LT Sat Flow (s_l), veh/h/ln	510	0	1053	0	536	0	1171	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	62.6	0.0	25.0	0.0	63.5	0.0	25.0	0.0
Perm LT Serve Time (g_u), s	40.9	0.0	2.9	0.0	39.0	0.0	11.9	0.0
Perm LT Q Serve Time (g_ps), s	6.0	0.0	1.4	0.0	13.4	0.0	0.9	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	315	0	156	0	352	0	256	0
V/C Ratio (X)	0.35	0.00	0.41	0.00	0.54	0.00	0.29	0.00
Avail Cap (c_a), veh/h	479	0	286	0	405	0	332	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	14.5	0.0	37.3	0.0	14.9	0.0	35.6	0.0
Incr Delay (d2), s/veh	0.7	0.0	1.7	0.0	1.3	0.0	0.6	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	15.2	0.0	39.0	0.0	16.1	0.0	36.2	0.0
1st-Term Q (Q1), veh/ln	1.3	0.0	1.4	0.0	2.2	0.0	1.7	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	2.5	0.0	2.7	0.0	4.2	0.0	3.1	0.0
%ile Storage Ratio (RQ%)	0.42	0.00	0.51	0.00	0.25	0.00	0.33	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T		T		T		T	
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	542	0	0	0	518	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	24.1	0.0	0.0	0.0	23.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	24.1	0.0	0.0	0.0	23.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	963	0	0	0	927	0	0
V/C Ratio (X)	0.00	0.56	0.00	0.00	0.00	0.56	0.00	0.00
Avail Cap (c_a), veh/h	0	963	0	0	0	927	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	18.1	0.0	0.0	0.0	19.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.4	0.0	0.0	0.0	2.4	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.5	0.0	0.0	0.0	21.8	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	9.5	0.0	0.0	0.0	9.4	0.0	0.0

# HCM 7th Signalized Intersection Capacity Analysis

## 100: Calumet Avenue & Fisher Street

# Future (2026) Traffic Projections

PM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	0.0	0.0	0.6	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.52	0.00	1.00	0.00	1.52	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	15.3	0.0	0.0	0.0	15.2	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.46	0.00	0.00	0.00	0.51	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		T+R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	563	0	327	0	535	0	211
Grp Sat Flow (s), veh/h/ln	0	1843	0	1676	0	1838	0	1730
Q Serve Time (g_s), s	0.0	24.2	0.0	22.8	0.0	23.6	0.0	13.2
Cycle Q Clear Time (g_c), s	0.0	24.2	0.0	22.8	0.0	23.6	0.0	13.2
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.08	0.00	0.65	0.00	0.10	0.00	0.45
Lane Grp Cap (c), veh/h	0	999	0	360	0	959	0	361
V/C Ratio (X)	0.00	0.56	0.00	0.91	0.00	0.56	0.00	0.58
Avail Cap (c_a), veh/h	0	999	0	391	0	959	0	447
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.1	0.0	46.0	0.0	19.4	0.0	42.8
Incr Delay (d2), s/veh	0.0	2.3	0.0	25.4	0.0	2.3	0.0	3.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	20.4	0.0	71.4	0.0	21.7	0.0	46.0
1st-Term Q (Q1), veh/ln	0.0	9.8	0.0	9.4	0.0	9.7	0.0	5.6
2nd-Term Q (Q2), veh/ln	0.0	0.6	0.0	2.5	0.0	0.6	0.0	0.3
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.51	0.00	1.48	0.00	1.51	0.00	1.67
%ile Back of Q (95%), veh/ln	0.0	15.8	0.0	17.6	0.0	15.6	0.0	9.9
%ile Storage Ratio (RQ%)	0.00	0.47	0.00	0.67	0.00	0.53	0.00	0.19
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary





















HCM 7th Control Delay, s/veh	28.2
HCM 7th LOS	C

# HCM 7th Signalized Intersection Summary

## 200: Calumet Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

PM Peak Hour





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	45	90	275	30	85	50	975	145	90	1080	55
Future Volume (veh/h)	70	45	90	275	30	85	50	975	145	90	1080	55
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	47	95	289	32	89	53	1026	153	95	1137	58
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	62	164	376	129	358	259	1667	248	276	1897	97
Arrive On Green	0.10	0.10	0.10	0.16	0.29	0.29	0.03	0.54	0.54	0.04	0.55	0.55
Sat Flow, veh/h	866	596	1585	1781	437	1215	1781	3102	462	1781	3440	175
Grp Volume(v), veh/h	121	0	95	289	0	121	53	587	592	95	587	608
Grp Sat Flow(s),veh/h/ln	1462	0	1585	1781	0	1652	1781	1777	1787	1781	1777	1839
Q Serve(g_s), s	9.4	0.0	6.9	16.7	0.0	6.7	1.6	27.4	27.5	2.9	26.6	26.6
Cycle Q Clear(g_c), s	9.7	0.0	6.9	16.7	0.0	6.7	1.6	27.4	27.5	2.9	26.6	26.6
Prop In Lane	0.61		1.00	1.00		0.74	1.00		0.26	1.00		0.10
Lane Grp Cap(c), veh/h	200	0	164	376	0	486	259	955	960	276	980	1014
V/C Ratio(X)	0.61	0.00	0.58	0.77	0.00	0.25	0.20	0.62	0.62	0.34	0.60	0.60
Avail Cap(c_a), veh/h	340	0	317	571	0	826	341	955	960	333	980	1014
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	0.99	0.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.5	0.0	51.3	37.7	0.0	32.2	14.8	19.2	19.2	15.3	18.0	18.0
Incr Delay (d2), s/veh	2.9	0.0	3.2	3.4	0.0	0.3	0.4	3.0	3.0	0.7	2.7	2.6
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(95%),veh/ln	6.7	0.0	5.1	12.0	0.0	4.9	1.2	17.2	17.3	2.1	16.6	17.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.5	0.0	54.5	41.1	0.0	32.5	15.1	22.1	22.2	16.0	20.7	20.7
LnGrp LOS	E		D	D		C	B	C	C	B	C	C
Approach Vol, veh/h	216			410			1232			1290		
Approach Delay, s/veh	55.0			38.6			21.9			20.4		
Approach LOS	E			D			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	8.2	70.5	22.9	18.4	6.5	72.2	41.3					
Change Period (Y+Rc), s	3.5	6.0	3.5	6.0	3.5	6.0	6.0					
Max Green Setting (Gmax), s	8.5	36.0	32.5	24.0	8.5	36.0	60.0					
Max Q Clear Time (g_c+I1), s	4.9	29.5	18.7	11.7	3.6	28.6	8.7					
Green Ext Time (p_c), s	0.1	3.8	0.7	0.7	0.0	4.3	0.8					
Intersection Summary												
HCM 7th Control Delay, s/veh	25.7											
HCM 7th LOS	C											

# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

Future (2026) Traffic Projections

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	45	90	275	30	85	50	975	145	90	1080	55
Future Volume (veh/h)	70	45	90	275	30	85	50	975	145	90	1080	55
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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 <sub>pbT</sub> )	1.00		1.00	1.00		1.00	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	
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	74	47	95	289	32	89	53	1026	153	95	1137	58
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	138	62	164	376	129	358	259	1667	248	276	1897	97
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
Prop Arrive On Green	0.10	0.10	0.10	0.16	0.29	0.29	0.03	0.54	0.54	0.04	0.55	0.55
Unsig. Movement Delay												
Ln Grp Delay, s/veh	55.5	0.0	54.5	41.1	0.0	32.5	15.1	22.1	22.2	16.0	20.7	20.7
Ln Grp LOS	E		D	D		C	B	C	C	B	C	C
Approach Vol, veh/h		216			410			1232			1290	
Approach Delay, s/veh		55.0			38.6			21.9			20.4	
Approach LOS		E			D			C			C	
Timer:		1	2	3	4	5	6	7	8			
Assigned Phs		1	2	3	4	5	6		8			
Case No		1.1	4.0	1.2	7.3	1.1	4.0		4.0			
Phs Duration (G+Y+Rc), s		8.2	70.5	22.9	18.4	6.5	72.2		41.3			
Change Period (Y+Rc), s		3.5	6.0	3.5	6.0	3.5	6.0		6.0			
Max Green (Gmax), s		8.5	36.0	32.5	24.0	8.5	36.0		60.0			
Max Allow Headway (MAH), s		3.8	5.2	3.8	4.8	3.8	5.1		5.4			
Max Q Clear (g <sub>c</sub> +I1), s		4.9	29.5	18.7	11.7	3.6	28.6		8.7			
Green Ext Time (g <sub>e</sub> ), s		0.1	3.8	0.7	0.7	0.0	4.3		0.8			
Prob of Phs Call (p <sub>c</sub> )		0.96	1.00	1.00	1.00	0.83	1.00		1.00			
Prob of Max Out (p <sub>x</sub> )		1.00	0.89	0.00	0.02	0.22	0.83		0.00			
Left-Turn Movement Data												
Assigned Mvmt		1		3	7	5						
Mvmt Sat Flow, veh/h		1781		1781	866	1781						
Through Movement Data												
Assigned Mvmt			2		4		6		8			
Mvmt Sat Flow, veh/h			3102		596		3440		437			
Right-Turn Movement Data												
Assigned Mvmt			12		14		16		18			
Mvmt Sat Flow, veh/h			462		1585		175		1215			
Left Lane Group Data												
Assigned Mvmt		1	0	3	7	5	0	0	0			

# HCM 7th Signalized Intersection Capacity Analysis

## 200: Calumet Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

PM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L+TL (Pr/Pm)			
Lanes in Grp	1	0	1	1	1	0	0	0
Grp Vol (v), veh/h	95	0	289	121	53	0	0	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	1462	1781	0	0	0
Q Serve Time (g_s), s	2.9	0.0	16.7	9.4	1.6	0.0	0.0	0.0
Cycle Q Clear Time (g_c), s	2.9	0.0	16.7	9.7	1.6	0.0	0.0	0.0
Perm LT Sat Flow (s_l), veh/h/ln	476	0	1246	1291	468	0	0	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	64.7	0.0	14.4	12.4	64.5	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	37.0	0.0	2.7	12.4	39.6	0.0	0.0	0.0
Perm LT Q Serve Time (g_ps), s	6.9	0.0	2.7	9.4	3.2	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.61	1.00	0.00	0.00	0.00
Lane Grp Cap (c), veh/h	276	0	376	200	259	0	0	0
V/C Ratio (X)	0.34	0.00	0.77	0.61	0.20	0.00	0.00	0.00
Avail Cap (c_a), veh/h	333	0	571	340	341	0	0	0
Upstream Filter (I)	1.00	0.00	0.99	1.00	1.00	0.00	0.00	0.00
Uniform Delay (d1), s/veh	15.3	0.0	37.7	52.5	14.8	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	0.0	3.4	2.9	0.4	0.0	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	16.0	0.0	41.1	55.5	15.1	0.0	0.0	0.0
1st-Term Q (Q1), veh/ln	1.1	0.0	7.2	3.6	0.6	0.0	0.0	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.4	0.2	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.59	1.80	1.80	0.00	0.00	0.00
%ile Back of Q (95%), veh/ln	2.1	0.0	12.0	6.7	1.2	0.0	0.0	0.0
%ile Storage Ratio (RQ%)	0.27	0.00	6.78	0.84	0.21	0.00	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	1	0	0	0	1	0	0
Grp Vol (v), veh/h	0	587	0	0	0	587	0	0
Grp Sat Flow (s), veh/h/ln	0	1777	0	0	0	1777	0	0
Q Serve Time (g_s), s	0.0	27.4	0.0	0.0	0.0	26.6	0.0	0.0
Cycle Q Clear Time (g_c), s	0.0	27.4	0.0	0.0	0.0	26.6	0.0	0.0
Lane Grp Cap (c), veh/h	0	955	0	0	0	980	0	0
V/C Ratio (X)	0.00	0.62	0.00	0.00	0.00	0.60	0.00	0.00
Avail Cap (c_a), veh/h	0	955	0	0	0	980	0	0
Upstream Filter (I)	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d1), s/veh	0.0	19.2	0.0	0.0	0.0	18.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	3.0	0.0	0.0	0.0	2.7	0.0	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.1	0.0	0.0	0.0	20.7	0.0	0.0
1st-Term Q (Q1), veh/ln	0.0	10.8	0.0	0.0	0.0	10.4	0.0	0.0

# HCM 7th Signalized Intersection Capacity Analysis 200: Calumet Avenue & Fran Lin Parkway

Future (2026) Traffic Projections  
PM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.0	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.48	0.00	1.00	0.00	1.49	0.00	1.00
%ile Back of Q (95%), veh/ln	0.0	17.2	0.0	0.0	0.0	16.6	0.0	0.0
%ile Storage Ratio (RQ%)	0.00	0.92	0.00	0.00	0.00	0.46	0.00	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		T+R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	592	0	95	0	608	0	121
Grp Sat Flow (s), veh/h/ln	0	1787	0	1585	0	1839	0	1652
Q Serve Time (g_s), s	0.0	27.5	0.0	6.9	0.0	26.6	0.0	6.7
Cycle Q Clear Time (g_c), s	0.0	27.5	0.0	6.9	0.0	26.6	0.0	6.7
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.26	0.00	1.00	0.00	0.10	0.00	0.74
Lane Grp Cap (c), veh/h	0	960	0	164	0	1014	0	486
V/C Ratio (X)	0.00	0.62	0.00	0.58	0.00	0.60	0.00	0.25
Avail Cap (c_a), veh/h	0	960	0	317	0	1014	0	826
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	0.99
Uniform Delay (d1), s/veh	0.0	19.2	0.0	51.3	0.0	18.0	0.0	32.2
Incr Delay (d2), s/veh	0.0	3.0	0.0	3.2	0.0	2.6	0.0	0.3
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	22.2	0.0	54.5	0.0	20.7	0.0	32.5
1st-Term Q (Q1), veh/ln	0.0	10.9	0.0	2.7	0.0	10.8	0.0	2.7
2nd-Term Q (Q2), veh/ln	0.0	0.8	0.0	0.1	0.0	0.7	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.48	0.00	1.80	0.00	1.48	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	17.3	0.0	5.1	0.0	17.1	0.0	4.9
%ile Storage Ratio (RQ%)	0.00	0.93	0.00	0.64	0.00	0.47	0.00	0.16
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary























HCM 7th Control Delay, s/veh	25.7
HCM 7th LOS	C

# HCM 7th Signalized Intersection Summary

## 300: Columbia Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	110	40	15	50	115	40	125	30	305	120	160
Future Volume (veh/h)	130	110	40	15	50	115	40	125	30	305	120	160
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		1.00	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	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	137	116	42	16	53	121	42	132	32	321	126	168
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	2	2	2	2	2	2	2	2	2
Cap, veh/h	464	465	394	380	343	291	445	362	88	613	265	353
Arrive On Green	0.08	0.25	0.25	0.02	0.18	0.18	0.04	0.25	0.25	0.16	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	1454	353	1781	727	969
Grp Volume(v), veh/h	137	116	42	16	53	121	42	0	164	321	0	294
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	0	1807	1781	0	1696
Q Serve(g_s), s	3.6	3.0	1.2	0.4	1.4	4.1	1.0	0.0	4.5	7.4	0.0	8.0
Cycle Q Clear(g_c), s	3.6	3.0	1.2	0.4	1.4	4.1	1.0	0.0	4.5	7.4	0.0	8.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.20	1.00		0.57
Lane Grp Cap(c), veh/h	464	465	394	380	343	291	445	0	450	613	0	618
V/C Ratio(X)	0.30	0.25	0.11	0.04	0.15	0.42	0.09	0.00	0.36	0.52	0.00	0.48
Avail Cap(c_a), veh/h	623	922	781	655	922	781	681	0	741	642	0	695
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	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	18.1	17.5	19.3	20.7	21.8	15.5	0.0	18.7	12.0	0.0	14.7
Incr Delay (d2), s/veh	0.4	0.3	0.1	0.0	0.2	0.9	0.1	0.0	0.5	0.7	0.0	0.6
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(95%),veh/ln	2.4	2.2	0.8	0.3	1.1	2.6	0.7	0.0	3.2	4.6	0.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	16.8	18.4	17.6	19.4	20.9	22.7	15.6	0.0	19.2	12.7	0.0	15.3
LnGrp LOS	B	B	B	B	C	C	B		B	B		B
Approach Vol, veh/h	295			190			206			615		
Approach Delay, s/veh	17.5			21.9			18.5			13.9		
Approach LOS	B			C			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	20.3	5.7	20.3	7.0	27.3	9.6	16.4				
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3				
Max Green Setting (Gmax), s	10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7				
Max Q Clear Time (g_c+l1), s	9.4	6.5	2.4	5.0	3.0	10.0	5.6	6.1				
Green Ext Time (p_c), s	0.1	0.7	0.0	0.7	0.0	1.5	0.1	0.6				
Intersection Summary												
HCM 7th Control Delay, s/veh	16.6											
HCM 7th LOS	B											

























# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

PM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	110	40	15	50	115	40	125	30	305	120	160
Future Volume (veh/h)	130	110	40	15	50	115	40	125	30	305	120	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, 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		1.00	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					
Lanes Open During Work Zone												
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	137	116	42	16	53	121	42	132	32	321	126	168
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	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes				Yes				Yes			
Cap, veh/h	464	465	394	380	343	291	445	362	88	613	265	353
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
Prop Arrive On Green	0.08	0.25	0.25	0.02	0.18	0.18	0.04	0.25	0.25	0.16	0.36	0.36
Unsig. Movement Delay												
Ln Grp Delay, s/veh	16.8	18.4	17.6	19.4	20.9	22.7	15.6	0.0	19.2	12.7	0.0	15.3
Ln Grp LOS	B	B	B	B	C	C	B		B	B		B
Approach Vol, veh/h	295				190				206			
Approach Delay, s/veh	17.5				21.9				18.5			
Approach LOS	B				C				B			
Timer:	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Case No	1.1	4.0	1.1	3.0	1.1	4.0	1.1	3.0				
Phs Duration (G+Y+Rc), s	14.0	20.3	5.7	20.3	7.0	27.3	9.6	16.4				
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3				
Max Green (Gmax), s	10.5	24.7	10.5	29.7	10.5	24.7	10.5	29.7				
Max Allow Headway (MAH), s	3.8	5.2	3.8	4.8	3.8	5.3	3.8	4.3				
Max Q Clear (g_c+I1), s	9.4	6.5	2.4	5.0	3.0	10.0	5.6	6.1				
Green Ext Time (g_e), s	0.1	0.7	0.0	0.7	0.0	1.5	0.1	0.6				
Prob of Phs Call (p_c)	1.00	1.00	0.23	1.00	0.50	1.00	0.90	1.00				
Prob of Max Out (p_x)	1.00	0.00	0.00	0.00	0.00	0.00	0.03	0.33	0.00			
Left-Turn Movement Data												
Assigned Mvmt	1		3		5		7					
Mvmt Sat Flow, veh/h	1781		1781		1781		1781					
Through Movement Data												
Assigned Mvmt	2			4			6			8		
Mvmt Sat Flow, veh/h	1454			1870			727			1870		
Right-Turn Movement Data												
Assigned Mvmt	12			14			16			18		
Mvmt Sat Flow, veh/h	353			1585			969			1585		
Left Lane Group Data												
Assigned Mvmt	1	0	3	0	5	0	7	0				

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

PM Peak Hour

Lane Assignment	L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)		L (Pr/Pm)	
Lanes in Grp	1	0	1	0	1	0	1	0
Grp Vol (v), veh/h	321	0	16	0	42	0	137	0
Grp Sat Flow (s), veh/h/ln	1781	0	1781	0	1781	0	1781	0
Q Serve Time (g_s), s	7.4	0.0	0.4	0.0	1.0	0.0	3.6	0.0
Cycle Q Clear Time (g_c), s	7.4	0.0	0.4	0.0	1.0	0.0	3.6	0.0
Perm LT Sat Flow (s_l), veh/h/ln	1222	0	1228	0	1085	0	1211	0
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	17.0	0.0	11.1	0.0	15.0	0.0	12.5	0.0
Perm LT Serve Time (g_u), s	10.5	0.0	11.1	0.0	13.9	0.0	9.6	0.0
Perm LT Q Serve Time (g_ps), s	2.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap (c), veh/h	613	0	380	0	445	0	464	0
V/C Ratio (X)	0.52	0.00	0.04	0.00	0.09	0.00	0.30	0.00
Avail Cap (c_a), veh/h	642	0	655	0	681	0	623	0
Upstream Filter (I)	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Uniform Delay (d1), s/veh	12.0	0.0	19.3	0.0	15.5	0.0	16.4	0.0
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.1	0.0	0.4	0.0
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	12.7	0.0	19.4	0.0	15.6	0.0	16.8	0.0
1st-Term Q (Q1), veh/ln	2.4	0.0	0.2	0.0	0.4	0.0	1.3	0.0
2nd-Term Q (Q2), veh/ln	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	1.80	0.00	1.80	0.00	1.80	0.00	1.80	0.00
%ile Back of Q (95%), veh/ln	4.6	0.0	0.3	0.0	0.7	0.0	2.4	0.0
%ile Storage Ratio (RQ%)	0.46	0.00	0.10	0.00	0.19	0.00	0.82	0.00
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>Middle Lane Group Data</b>								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment	T				T			
Lanes in Grp	0	0	0	1	0	0	0	1
Grp Vol (v), veh/h	0	0	0	116	0	0	0	53
Grp Sat Flow (s), veh/h/ln	0	0	0	1870	0	0	0	1870
Q Serve Time (g_s), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	1.4
Cycle Q Clear Time (g_c), s	0.0	0.0	0.0	3.0	0.0	0.0	0.0	1.4
Lane Grp Cap (c), veh/h	0	0	0	465	0	0	0	343
V/C Ratio (X)	0.00	0.00	0.00	0.25	0.00	0.00	0.00	0.15
Avail Cap (c_a), veh/h	0	0	0	922	0	0	0	922
Upstream Filter (I)	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	0.0	0.0	18.1	0.0	0.0	0.0	20.7
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.2
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	0.0	0.0	18.4	0.0	0.0	0.0	20.9
1st-Term Q (Q1), veh/ln	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.6

# HCM 7th Signalized Intersection Capacity Analysis

## 300: Columbia Avenue & Fran Lin Parkway

# Future (2026) Traffic Projections

PM Peak Hour

2nd-Term Q (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.80	0.00	1.00	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	0.0	0.0	2.2	0.0	0.0	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.00	0.00	0.07	0.00	0.00	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Right Lane Group Data

Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment	T+R		R		T+R		R	
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	164	0	42	0	294	0	121
Grp Sat Flow (s), veh/h/ln	0	1807	0	1585	0	1696	0	1585
Q Serve Time (g_s), s	0.0	4.5	0.0	1.2	0.0	8.0	0.0	4.1
Cycle Q Clear Time (g_c), s	0.0	4.5	0.0	1.2	0.0	8.0	0.0	4.1
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.20	0.00	1.00	0.00	0.57	0.00	1.00
Lane Grp Cap (c), veh/h	0	450	0	394	0	618	0	291
V/C Ratio (X)	0.00	0.36	0.00	0.11	0.00	0.48	0.00	0.42
Avail Cap (c_a), veh/h	0	741	0	781	0	695	0	781
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	18.7	0.0	17.5	0.0	14.7	0.0	21.8
Incr Delay (d2), s/veh	0.0	0.5	0.0	0.1	0.0	0.6	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	19.2	0.0	17.6	0.0	15.3	0.0	22.7
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	0.4	0.0	2.7	0.0	1.4
2nd-Term Q (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.80	0.00	1.80	0.00	1.80	0.00	1.80
%ile Back of Q (95%), veh/ln	0.0	3.2	0.0	0.8	0.0	5.0	0.0	2.6
%ile Storage Ratio (RQ%)	0.00	0.12	0.00	0.26	0.00	0.11	0.00	0.89
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

## Intersection Summary

HCM 7th Control Delay, s/veh	16.6
HCM 7th LOS	B

DATA FROM ITE PARKING GENERATION MANUAL, 6<sup>TH</sup> EDITION

# Land Use: 720 Medical-Dental Office Building

## Description

A medical-dental office building is a facility or clinic with one or more tenants that provide diagnoses and outpatient care on a routine basis. Tenants range from individual private physicians and dentists to large medical practices. Patient visits are by appointment only. Walk-in clinic (Land Use 630) and urgent care center (Land Use 660) are related uses.

## Land Use Subcategory

Data are separated into two subcategories for this land use:

- Located within or adjacent to a hospital campus
- Located in a standalone setting

## Time-of-Day Distribution for Parking Demand

The following table presents a time-of-day distribution of parking demand on a weekday at 14 standalone study sites and five study sites located within or adjacent to a hospital campus.

Hour Beginning	Percent of Weekday Peak Parking Demand	
	Standalone	Hospital Campus
12:00–4:00 a.m.	—	—
5:00 a.m.	—	—
6:00 a.m.	—	—
7:00 a.m.	17	—
8:00 a.m.	47	65
9:00 a.m.	82	79
10:00 a.m.	96	100
11:00 a.m.	100	73
12:00 p.m.	88	48
1:00 p.m.	87	71
2:00 p.m.	92	98
3:00 p.m.	90	90
4:00 p.m.	86	81
5:00 p.m.	55	65
6:00 p.m.	—	—
7:00 p.m.	—	—
8:00 p.m.	—	—
9:00 p.m.	—	—
10:00 p.m.	—	—
11:00 p.m.	—	—

## **Additional Data**

The average parking supply ratio for the 15 study sites with parking supply information and located within a hospital campus is 4.7 spaces per 1,000 square feet GFA. The average peak parking occupancy at these 15 sites is 76 percent.

The average parking supply ratio for the 33 study sites with parking supply information and located as a standalone building is 4.6 spaces per 1,000 square feet GFA. The average peak parking occupancy at these 33 sites is 49 percent.

For four study sites, parking demand data were collected on a Saturday as well as a weekday. For those sites, peak Saturday parking demand averages 22 percent of the peak weekday parking demand.

The sites were surveyed in the 1990s, the 2000s, the 2010s, and the 2020s in California, Georgia, Hawaii, Maine, Maryland, Minnesota, New Jersey, New York, North Carolina, Oregon, Tennessee, Texas, Virginia, and Washington.

## **Source Numbers**

120, 121, 173, 217, 218, 224, 310, 315, 428, 433, 527, 530, 531, 532, 553, 555, 564, 618, 619, 620, 621, 624, 634

# Medical-Dental Office Building - Hospital Campus (720)

Peak Period Parking Demand vs: 1000 Sq. Ft. GFA

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban

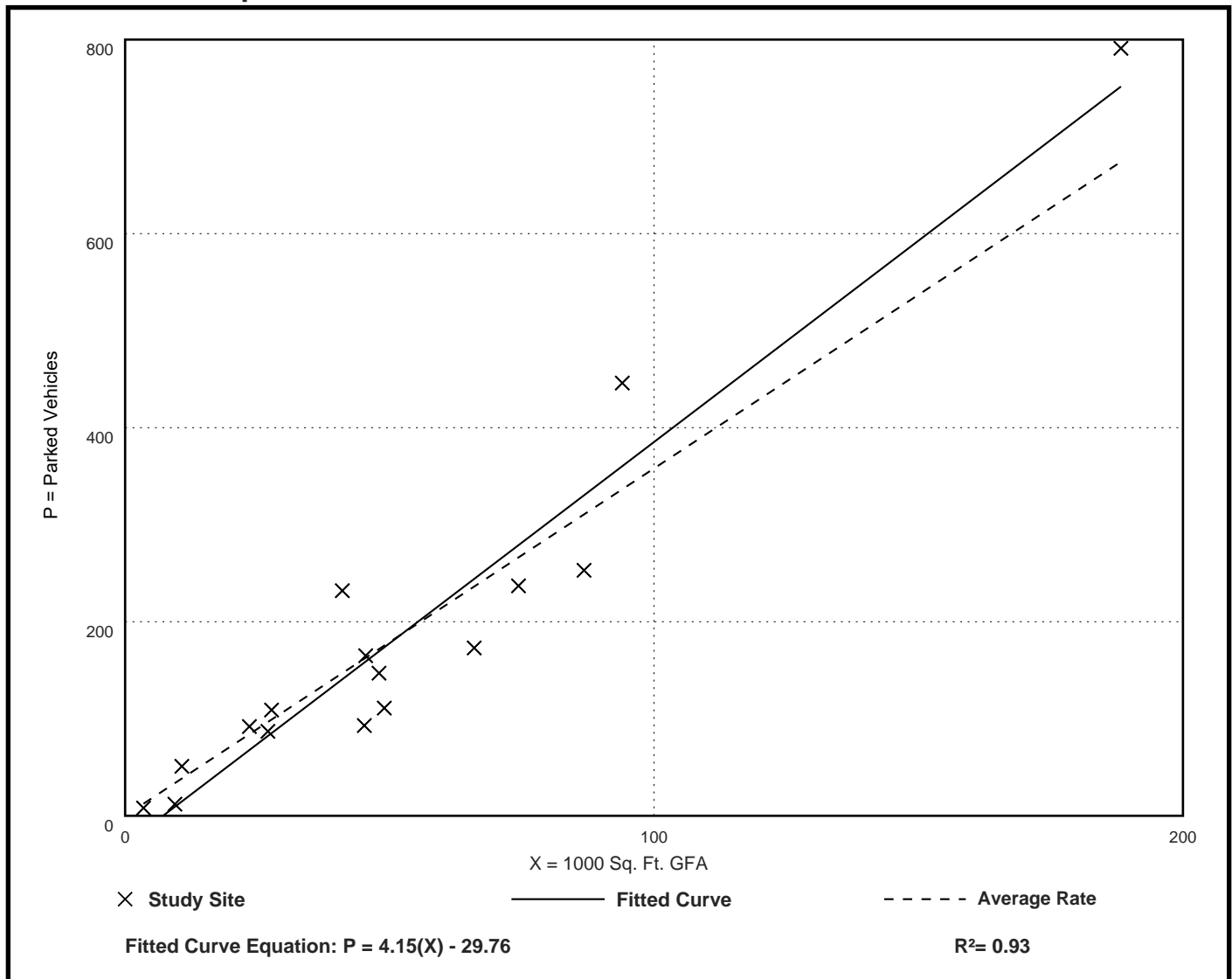
Number of Studies: 16

Avg. 1000 Sq. Ft. GFA: 53

## Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
3.58	1.27 - 5.65	2.80 / 4.75	***	0.99 ( 28% )

## Data Plot and Equation





# Medical-Dental Office Building - Hospital Campus (720)

## Peak Period Parking Demand vs: Employees

On a: Weekday (Monday - Friday)

Setting/Location: General Urban/Suburban

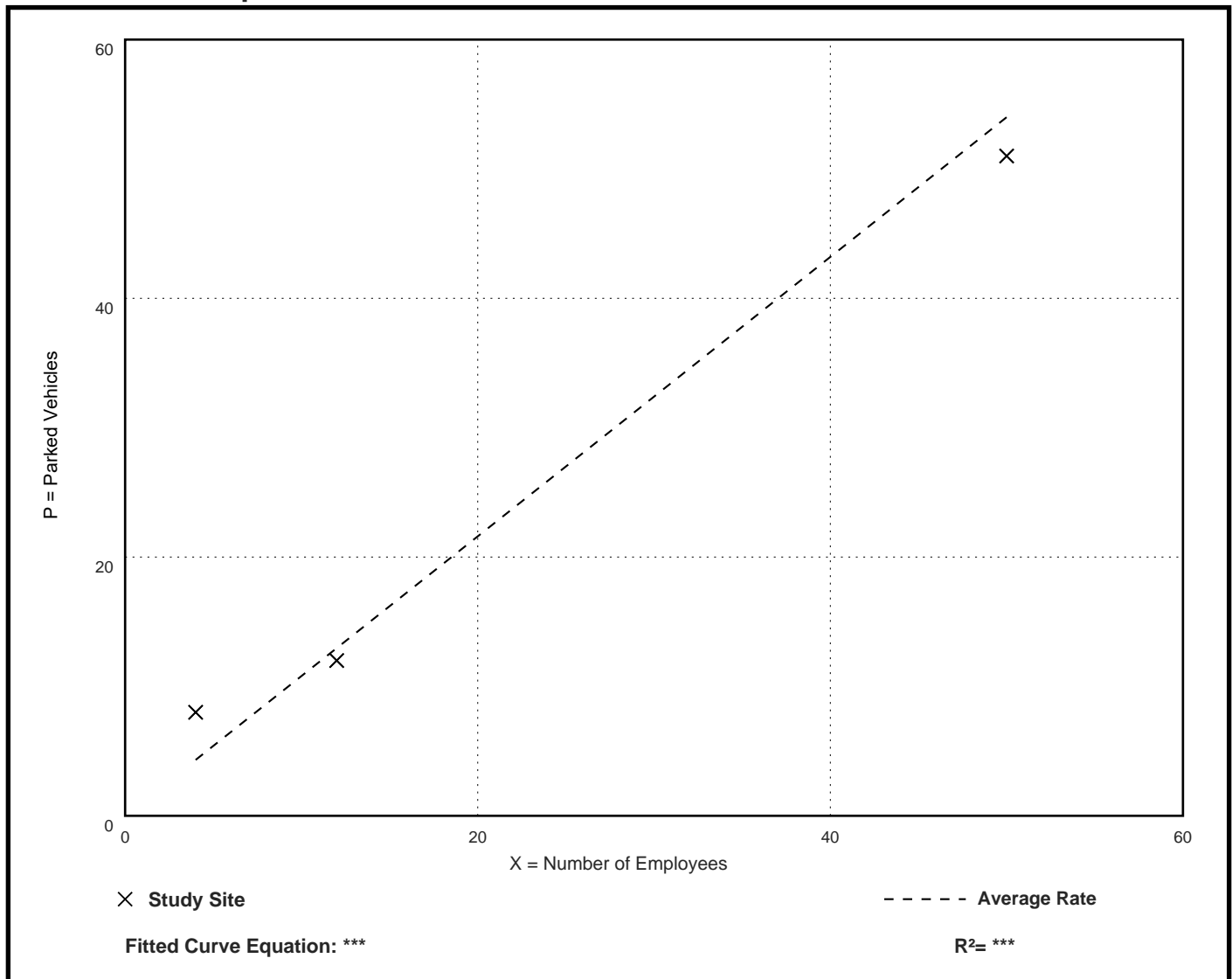
Number of Studies: 3

Avg. Num. of Employees: 22

## Peak Period Parking Demand per Employee

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.08	1.00 - 2.00	1.01 / 2.00	***	0.29 ( 27% )

## Data Plot and Equation



# Medical-Dental Office Building - Hospital Campus (720)

Peak Period Parking Demand vs: 1000 Sq. Ft. GFA

On a: Weekday (Monday - Friday)

Setting/Location: Dense Multi-Use Urban

Number of Studies: 2

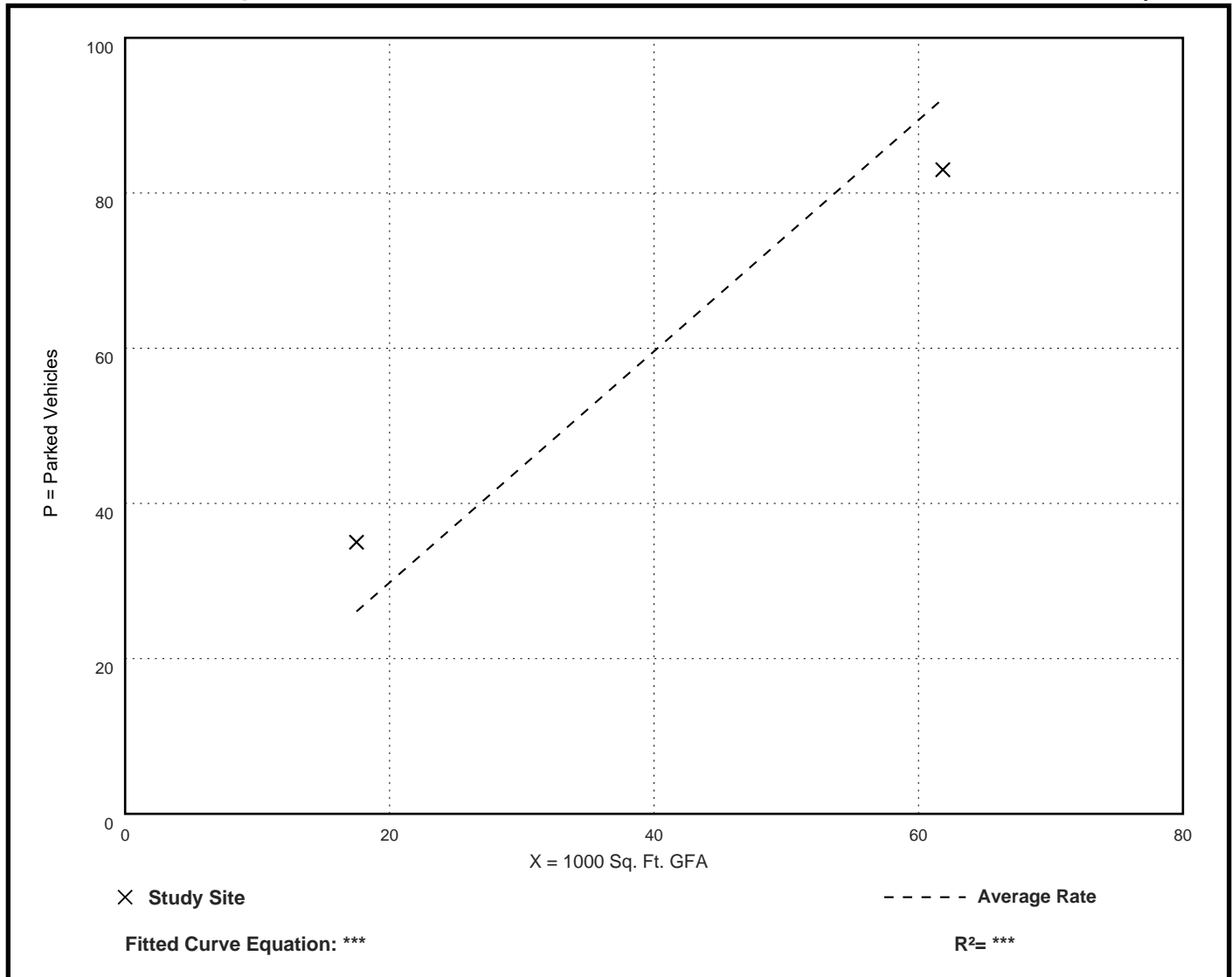
Avg. 1000 Sq. Ft. GFA: 40

## Peak Period Parking Demand per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	33rd / 85th Percentile	95% Confidence Interval	Standard Deviation (Coeff. of Variation)
1.49	1.34 - 2.00	*** / ***	***	*** ( *** )

## Data Plot and Equation

Caution – Small Sample Size





# Kimley»Horn

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