

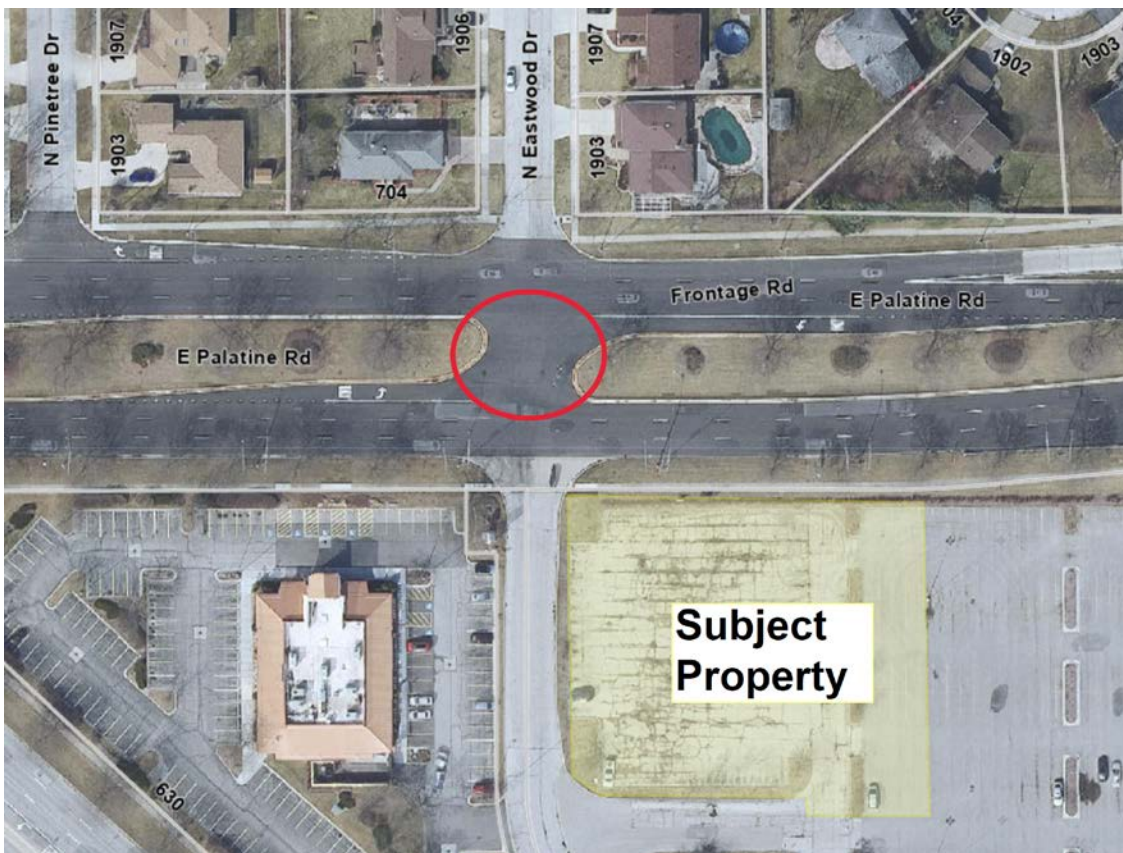


# Memorandum

To: Charles Witherington-Perkins, Director of Planning and Community Development  
From: Sam Hubbard, Development Planner  
Date: 1/28/2022  
Re: Village Board Meeting on February 7, 2022 - PC #21-018: Southpoint PUD Amendment -  
Chipotle Outlot

## Background:

During review of application PC #21-018 (Southpoint PUD Amendment for the Chipotle Outlot), a resident reached out to the Village two days prior to the public hearing with concerns about the intersection of Palatine Road and the "Ring Road" access drive into Southpoint. This intersection provides non signalized full access via a "pass-through" (shown below in red):



Specifically, the resident was concerned with traffic safety at this intersection and inquired about possible improvements, such as a traffic signal, closure of the pass-through, and/or restrictions for no left turns. The specific concerns are outlined within the "Public Comments" document transmitted to the Village Board as part of this project.

Additionally, during the public hearing, similar concerns were echoed by two residents that reside in the neighborhood north of the subject property. As Palatine Road is under the jurisdiction of IDOT, the Village reached out to IDOT to understand their perspective on possible improvements to this intersection. Additionally, the petitioner was made aware of these concerns and their traffic consultant prepared a supplemental evaluation of this intersection (attached to this document).

In coordination with IDOT, an analysis of this intersection shows that it does not meet IDOT warrants for a traffic signal. Furthermore, review of historical crash data over the last five years shows that the frequency and severity of crashes in this location is not high compared to similar locations statewide. The expected traffic from the proposed development is not anticipated to have a significant impact on the existing functionality of the intersection. However, IDOT has agreed to install new yield and one-way signs in the median for both approaches to Palatine Road, which should help to improve traffic safety at the pass-through.

**Recommendation:** Based upon the above, it is recommended that the Village Board adopt the recommendation of the Plan Commission and approve the application subject to the conditions of approval as recommended by both the Plan Commission and the Staff Development Committee. No modifications to the plans or conditions of approval are recommended.

MEMORANDUM TO: Richard Silverman  
MJK Real Estate Holding Company

FROM: Javier Millan  
Principal

Luay Aboona PE, PTOE  
Principal

DATE: January 30, 2022

SUBJECT: Traffic Signal Warrant Evaluation  
Palatine Road and Eastwood Drive/Southpoint Access Drive  
Arlington Heights, Illinois

This memorandum summarizes the methodologies, results, and findings of a traffic signal warrant evaluation conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for the intersection of Palatine Road with Eastwood Drive/Southpoint Access Drive in Arlington Heights, Illinois.

The purpose of this evaluation was to determine if the future peak hour volumes of traffic utilizing the Southpoint access drive opposite Eastwood Drive warrant and/or trigger the need for a traffic signal to safely accommodate traffic turning in and out of the intersection.

## Traffic Signal Warrant Evaluation

The installation of a traffic signal requires the satisfaction of one or more of the nine warrants from the Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 2009. Installation of a traffic signal requires that one or more of the nine signal warrants outlined in the MUTCD is met. Of the volume warrants that can be applied in establishing the justification for a traffic signal and given Palatine Road's designation as a Strategic Regional Arterial (SRA) route, only Warrant 1, Eight-Hour Vehicular Volume was considered.

**Warrant 1**, Eight-Hour Vehicular Volume states that the minimum vehicular volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volumes on a major street are so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street. Given that Palatine Road provides two or more lanes, the required vehicles per hour on the major street is 600 (total of both approaches) and the required vehicles per hour on the minor street (one direction only) is 150 for Condition A. For Condition B, the required number of vehicles per hour on the major street is 900 (total of both approaches) and the required number of vehicles per hour on the minor street (one direction only) is 75. However, for Strategic Regional Arterial (SRA) routes like Palatine Road, the requirements on the minor street for Condition B shall be increased from 75 vehicles per hour to 100 for a single-lane minor approach and from 100 vehicles per hour to 150 for a two or more lane minor approach. Furthermore, based on the Illinois Department of Transportation (IDOT) guidelines, and the fact that an exclusive right-turn lane is provided on the Southpoint access drive, the right-turn volume from the minor approach will be reduced by 75 percent.

It is important to note that even if the volumes would warrant the need for a traffic signal, IDOT guidelines require the installation of new traffic signals to be located ¼ mile (1,320 feet) from other traffic signals. Given that this intersection is located approximately 680 feet east of the signalized intersection of Palatine Road with Rand Road, a traffic signal will not meet this spacing requirement and, as such, will not be allowed by IDOT.

**Table 1** shows the projected two-way traffic volumes along Palatine Road and the future outbound traffic volumes at the Southpoint access drive. As can be seen from Table 1, the peak hour volumes of the Southpoint shopping center taking into account the existing traffic volumes, the new development traffic, and full occupancy of the current vacancies, is short of meeting the requirements by approximately 100 vehicles or more. Given that none of the peak hours will meet the traffic volume requirements, the rest of the hours during the weekday or a Saturday will not meet the requirements. As such, based on the results of the warrant evaluation, a traffic signal is not warranted under future conditions.

## Crash Analysis

KLOA, Inc. also obtained crash data for the most recent available past five years (2016 to 2020) for the intersection of Palatine Road with Eastwood Drive/Southpoint shopping center access drive.

A review of the crash data revealed a total of 12 crashes over the past five years for an average crash rate of 2.4 per year. Further, no fatalities were reported during the review period. A summary of the crash data is shown in **Table 2**.<sup>1</sup>

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<sup>1</sup> IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in previous years since data prior to 2015 was physically located by bureau personnel.

Table 1  
 FUTURE CONDITIONS SIGNAL WARRANT EVALUATION

Time	Palatine Road Two-Way Traffic	Shopping Center Outbound Traffic								Meets Warrant 1A	Meets Warrant 1B
		Existing Traffic		Site Traffic/Vacancies		Future Traffic			Total		
		Left/Through	Right	Left/Through	Right	Left/Through	Right	Reduced Right <sup>1</sup>			
12:00 PM (Weekday)	2,112	13	17	24	51	37	68	17	54	No	No
4:45 P.M. (Weekday)	2,928	12	26	11	32	23	58	15	38	No	No
12:00 PM (Saturday)	2,542	15	16	21	50	36	66	17	53	No	No

1 – Following IDOT’s requirements, the outbound right-turn movement at any minor street approach with an exclusive right-turn lane has to be reduced by 75 percent.

Table 2  
 PALATINE ROAD WITH EASTWOOD DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency							Total
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	
2016	3	0	0	0	0	1	0	4
2017	0	0	0	0	0	2	0	2
2018	0	0	0	0	0	0	0	0
2019	0	0	1	0	1	1	0	3
2020	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>3</u>	<u>0</u>	<u>3</u>
<b>Total</b>	<b>3</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>7</b>	<b>0</b>	<b>12</b>
<b>Average</b>	<b>&lt;1.0</b>	<b>0</b>	<b>&lt;1.0</b>	<b>0</b>	<b>&lt;1.0</b>	<b>1.4</b>	<b>0</b>	<b>2.4</b>

## Conclusion

Based on the results of the signal warrant evaluation, a traffic signal at the intersection of Palatine Road with Eastview Drive/Southpoint Access Drive is not warranted under existing conditions and will not be warranted under future conditions following the MUTCD guidelines for signal warrants and taking into account Palatine Road's designation as an SRA route. Furthermore, based on the crash data provided by IDOT and given the traffic volumes, the intersection is not a high crash location.