

Figure 1 - Existing Peak-hour Traffic Volumes

Percent distribution of the existing peak-hour volumes, AM and PM, can be seen in Figure 2. This existing distribution is the example by which future, post construction, distribution is derived.

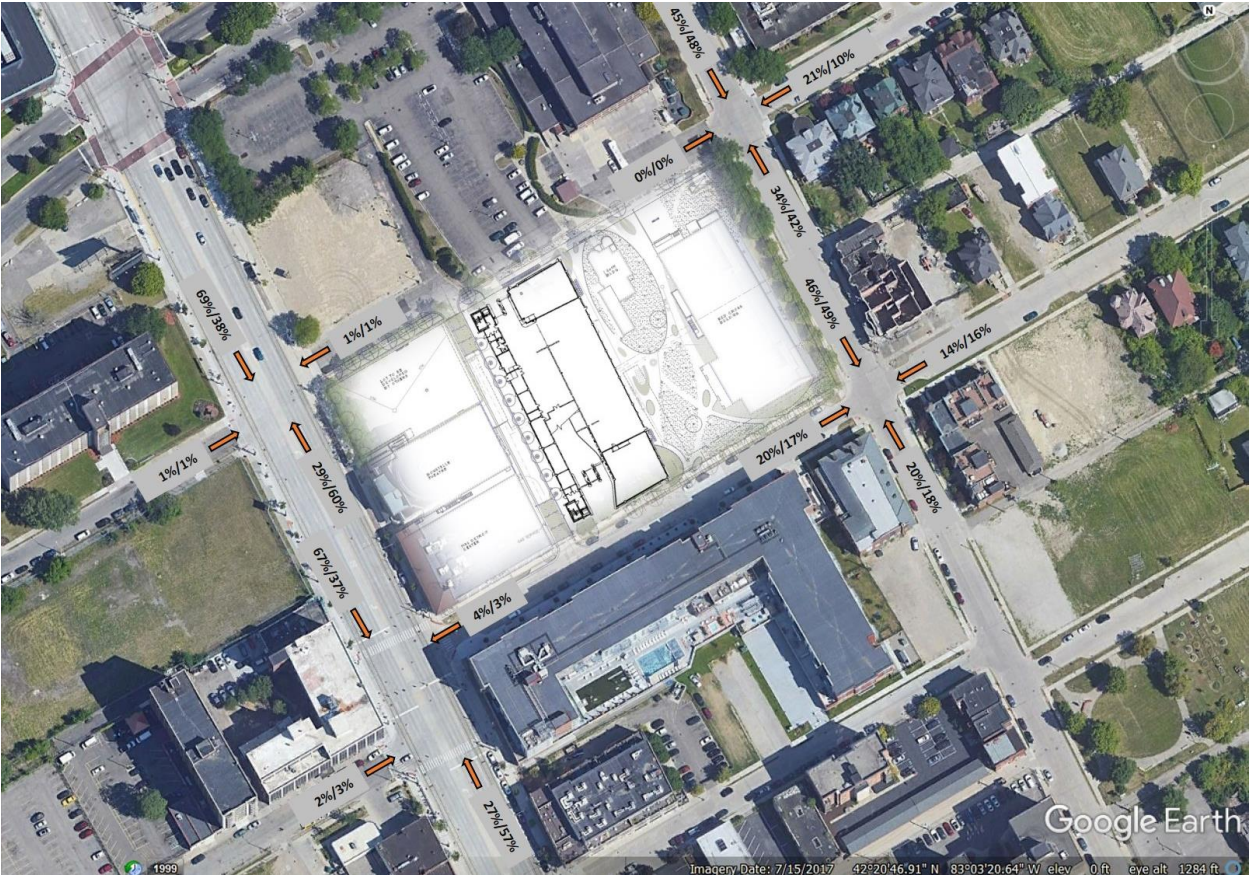


Figure 2 - Existing Percent Distribution

Figure 3 illustrates the development's utility and ability service the immediately surrounding area relative to other parking opportunities.

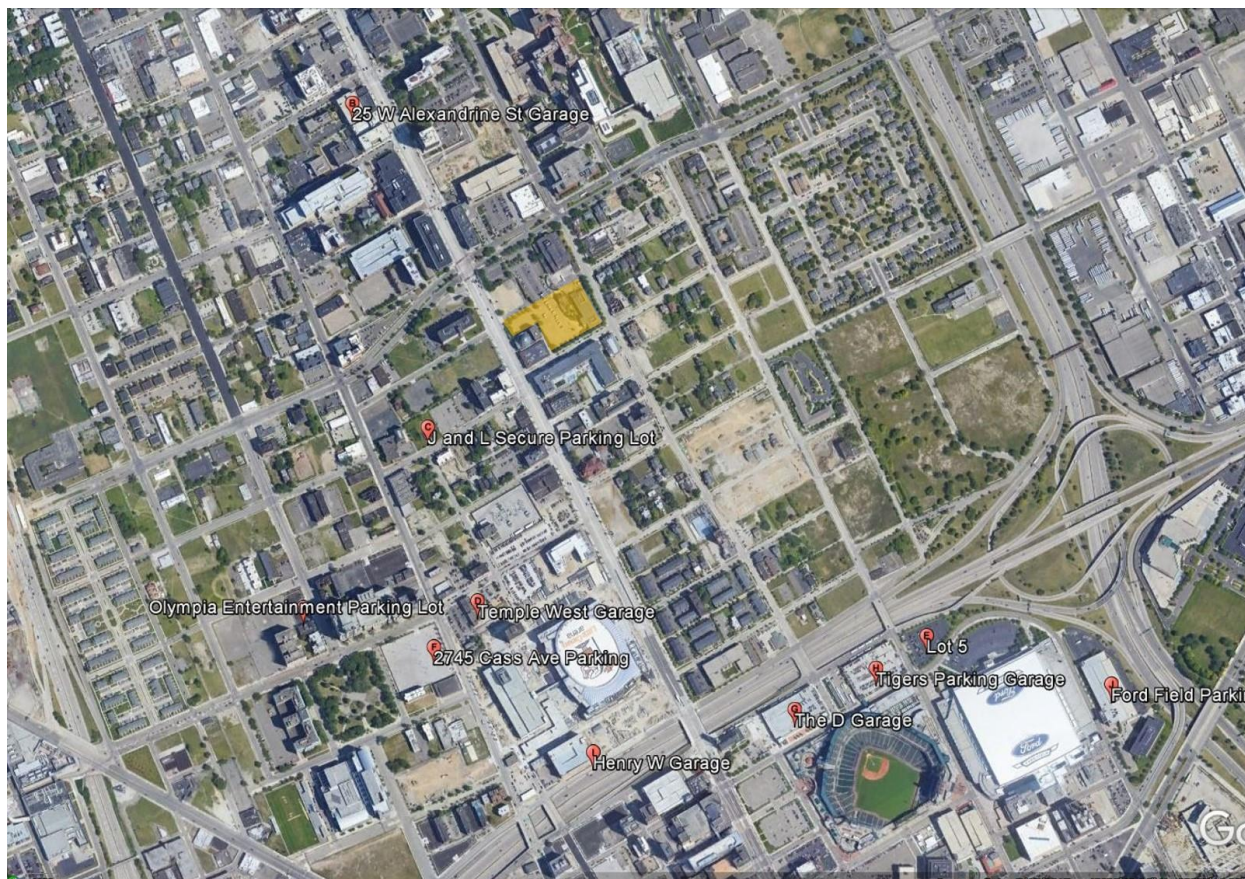


Figure 3 - Surrounding Similar Land Uses

Land Use and Routes

The proposed site, seen highlighted in yellow in Figure 3, is .4 miles from the next closest similar land use, J and L secure Parking lot on Peterboro Street. Other very near parking opportunities in the area exist including the Alexandrine Street Garage, Temple West Garage and 2745 Cass Ave Parking. The purpose of Figure 3 is to demonstrate that there are a variety of similar parking opportunities in the surrounding area and that additional opportunity realized by the proposed development will not necessarily generate new traffic to the area but more evenly distribute the existing demand.

It is anticipated that the public access portion of the development will provide access to trip generators that may include but are not limited to; Whole Foods, The Scott, and the Grey Ghost. The private access drive from Eliot should serve only those employees or patrons of the ground-level retail portion of the development.

Figure 4 is an illustration of a variety of the most common direct routes from each cardinal direction; assuming traffic volumes from the west come from the Lodge Freeway, vehicles from the east are coming from the I-75 at Mack interchange, and vehicles from the north and south are from Woodward Ave.

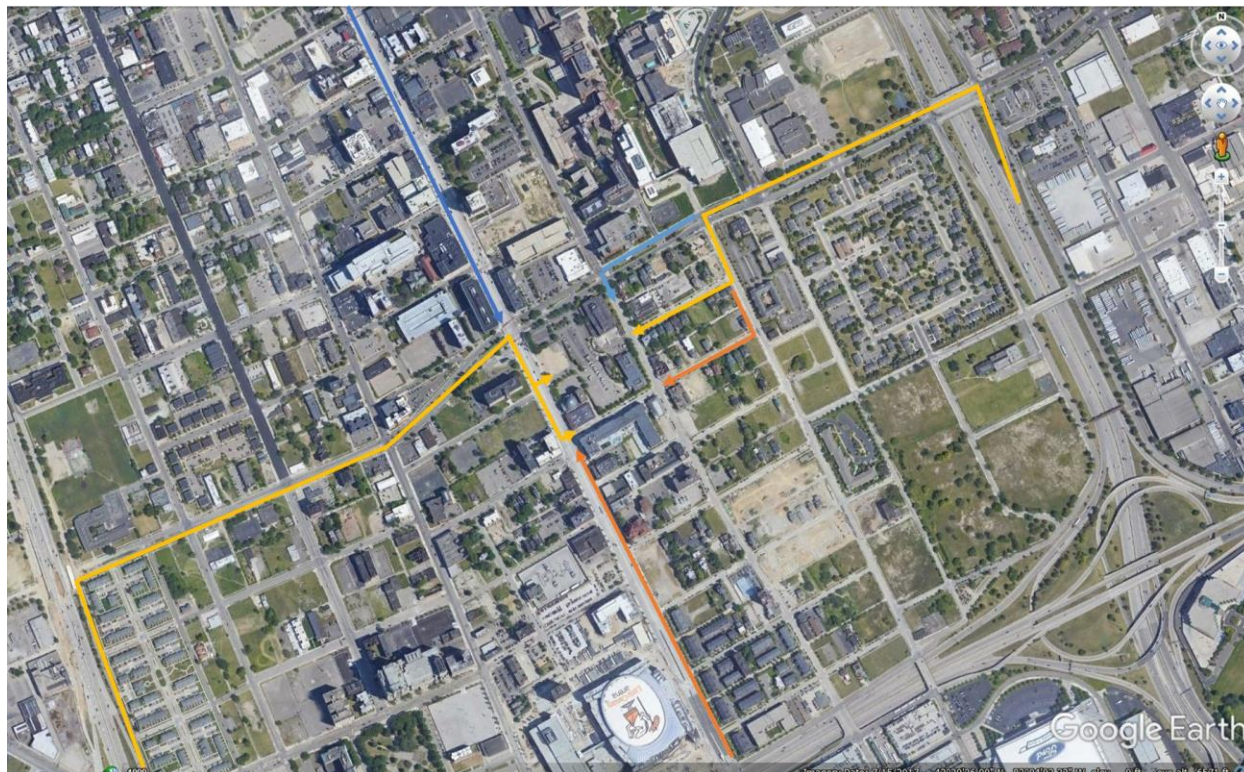


Figure 4 - Probable Direct Routes

With the assumption that the new parking structure is not generating more traffic volume but works to redistribute traffic already existing on the surrounding roadway network, the maximum envelope redistribution 544 spaces in the peak-hour (with temporal priority), a potential new volume distribution for the AM may look like Figure 5.

Future Condition

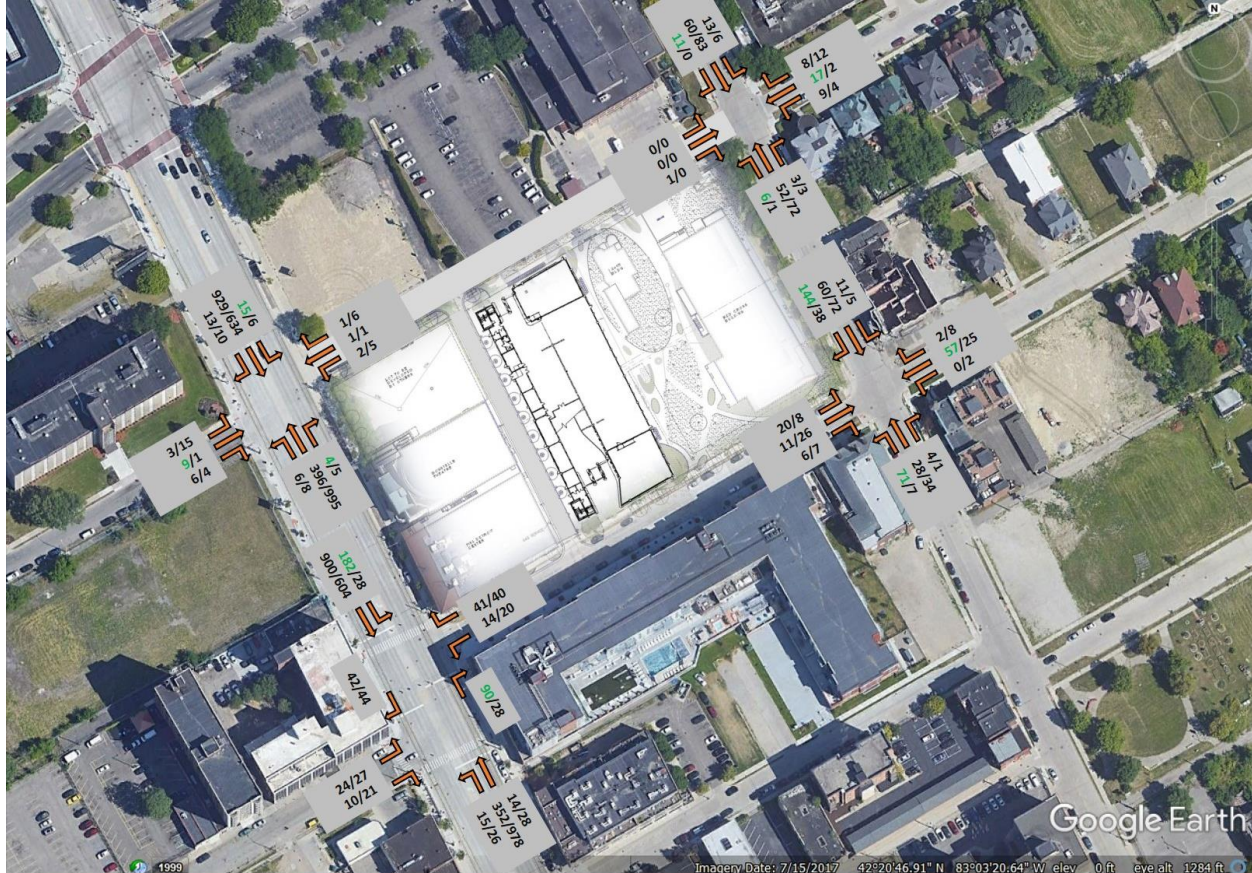


Figure 5 - Maximum AM Peak-Hour Turning Movements

In Figure 5, increased turning movements to satisfy the assumption of full occupancy in a signal AM peak period are highlighted in green. The directional distribution is based on the existing directional distribution and AM peak-hour traffic patterns. In this Figure, the AM peak-hour is considered the worst possible scenario due to the nature of ingress and egress of parking structures. Frequently, traffic arrives in a condensed timeframe e.g. motorists arriving for work or an event, whereas egress tends to be a more gradual process with a less pronounced peak-hour due in large part to dissipation of vehicles exiting throughout the day for various reasons.

The volumes highlighted in green, however increased, do not exceed the capacity for the associated intersections to function regularly. That is to say, the most heavily traveled routes (Woodward Avenue, specifically) are capable of functioning normally with the redistribution or re-direction of mostly existing volumes or what would have normally been 'pass-by' trips and are strictly a function of the new destination. Additionally, it is important to consider that the above illustrates the worst possible scenario and is highly unlikely to occur under normal circumstances.

Level of Service Analyses

Level of Service (LOS) analyses were conducted for both the existing and future conditions at each of the 4 intersections surrounding the proposed development in accordance with the 6th Edition of the Highway Capacity Manual. The method uses the calculated control delay and assigns a letter grade to indicate how the intersection

movements are performing with A being little to no delay and F indicating significant delay and failure to advance vehicles.

In the Highway Capacity Manual's table of level of service for both signalized and two-way stop-controlled (TWSC) intersections and a general description of the flow condition and can be seen below;

Table 1 - HCM Control Delay and LOS

Signalized		TWSC		General Description
Control Delay Per Vehicle(s)	LOS	Control Delay Per Vehicle(s)	LOS	
≤10	A	≤10	A	Free Flow
10 to 20	B	10 to 15	B	Stable flow (slight delay)
20 to 35	C	15 to 25	C	Stable flow (acceptable delay)
35 to 55	D	25 to 35	D	Approaching unstable flow (tolerable delay)
55 to 80	E	35 to 50	E	Unstable flow (intolerable delay)
>80	F	>50	F	Forced flow (queues fail to clear)

The results of the analysis of the intersections evaluated can be seen below;

Table 2 - Intersection Specific Calculated LOS by Movement

	Existing Condition				Future Condition			
	EB	WB	NB	SB	EB	WB	NB	SB
Woodward Avenue at Erskine/Peterboro Streets	A	A	A	B	A	A	A	B
Woodward Avenue at Eliot/Stimpson Streets	D	C	A	A	D	C	A	A
John R Road at Eliot Street	A	A	A	A	A	A	A	A
John R Road at Erskine Street	A	A	A	A	B ↓	B ↓	A	A

As indicated above, under the maximum envelope scenario, the LOS sees very little change. Only the intersection of John R Road at Eliot Street is reduced from the existing LOS 'A' to a LOS 'B'. It is generally accepted that a LOS of D or greater requires no action. As indicated in the above table, none of the approaches exceed the acceptable threshold for delay and any increase in traffic volume associated with the proposed development have no effect on the existing condition. Reports on the intersections as generated by Synchro 10 can be found in Appendix B.

In-line Summary of Responses

Responses to community concern are written in-line, italicized, below;

1. Erskine traffic levels are already at capacity and increased traffic will cause significant delay and undue hardship for the surrounding area.
2. On-street parking on both sides of Erskine limits sight distance and reduces visibility for all road users (vehicular, pedestrian, and bicycle). What can be done to improve this?

The intersection of Erskine Street with Woodward Avenue operates with high levels of service, well within the acceptable range for delay, and a future condition such that the parking structure reaches full occupancy in the AM peak-hour does not decrease the existing level of service.

3. The offset intersection of Woodward Avenue (M-1) with Peterboro/Erskine confuses motorists.

The intersection of Woodward Avenue with Peterboro/Erskine falls under the jurisdiction of the State of Michigan. The layout meets minimum design criteria, operates as intended, and is a common layout for offset intersections throughout the City of Detroit. Realignment of the intersection is not advisable and will not be considered at this time.

4. On-street parking on both sides of Erskine limits sight distance and reduces visibility for all road users (vehicular, pedestrian, and bicycle). What can be done to improve this?

A variety of low-cost options are available to increase the conspicuity of pedestrians and other non-motorized road users on this segment of roadway which include but are not limited to; additional signing, mirrors at driveways, flashing indicators, and sidewalk/roadway paint treatments. A combination of any or all of these mitigation measures will improve safety.

5. Traffic from Little Caesar's Arena will cause congestion and significant delay on event nights.

With an abundance of other more conspicuous parking opportunities owned by Ilitch Holdings and dedicated to Little Caesars Arena in the surrounding area, it is less likely that event-goers will be utilizing the proposed parking structure to attend events at the arena.

In summary, it is not anticipated that the proposed development of a 591-space parking structure with ground-level retail attractions will have a negative or undue influence on the surrounding roadway network and that the existing condition is sufficient to support such a development.