

DATE:	April 19, 2022	CONDUCTED BY:	Brad Cooley, PE	
SUBMITTAL DATE:	April 4, 2022	PHONE:	816.969.1800	
APPLICATION #:	PL2022079	EMAIL:	Brad.Cooley@cityofls.net	
PROJECT NAME:	WHATABURGER		PROJECT TYPE: Prel Dev Plan (PDP)	

SURROUNDING ENVIRONMENT (Streets, Developments)

The proposed development is generally located in the northwest quadrant of MO-291 and MO-150. The project site is bound by MO-150 to the south, SW Hollywood Dr. to the west, SW Summitcrest Dr. to the north, and an existing fast-food restaurant to the east (Arby's). All property near SW Market St. is currently occupied by commercial development. The subject property is currently zoned agriculture (AG), with Commercial to the south and east, and Mixeduse to the west (Aldersgate United Methodist and Residences at Echelon).

The subject development proposes a single building with a drive-through approximately 3,800 s.f. within the undeveloped parcel.

ALLOWABLE ACCESS

The proposed development is planned to be accessed from two new curb cuts along Summitcrest Drive; one approximately 100' east of Hollywood and the second approximately 185' east of the first driveway. The primary access to the site will be along MO-150 at Hollywood with a right-in-right-out (RIRO) restricted intersection.

EXISTING STREET CHARACTERISTICS (Lanes, Speed limits, Sight Distance, Medians)

MO-150 is a four-lane median-separated highway that generally runs east/west with a posted speed limit of 35-mph. This section of MO-150 is constructed with sidewalk on both sides and paved shoulds on both sides east of Market Street. This section of MO-150 is also considered as a bike route with "Share the Road" signs throughout.

SW Hollywood Drive is two-lane local road with a posted speed limit of 25-mph. Hollywood Dr. extends north, from a yield-controlled RIRO intersection with MO-150, approximately 1,000', where the road is terminated. Hollywood Dr. also intersects SW Summitcrest Dr and SW Kenbridge Xing approximately 300' and 950' north of MO-150, respectively. Both intersections are stop-controlled on the side street of Hollywood. Hollywood Dr. is constructed with sidewalks on both sides.

SW Summitcrest Drive is also a two-lane undivided local road with a 25-mph speed limit. Summitcrest Drive extends from Hollywood Dr. on the west to Market St. on the east within the project area.

Market Street in the vicinity of the proposed development is a three-lane undivided, 35-mph, commercial collector generally running north-south owned and maintained by the City to a point north of the project vicinity and south from the intersection of MO-150, which both are owned

and maintained by MoDOT. Generally, Market St. provides one travel lane in each direction with a two-way left-turn center lane. Market St. is constructed with sidewalks on both sides of the street and intersects MO-150 at a signal. The south leg of the signalized intersection (northbound) is constructed with; one left-turn lane, one through lane, and one channelized right-turn lane. The north leg (southbound) consists of; two left-turn lanes and one shared through/right-turn lane. The west leg (eastbound) consists of; one left-turn lane, three through lanes, and a channelized right-turn lane. The east leg (westbound) consists of; one left-turn lane, two through lanes, and a channelized right-turn lane. The intersection of Market St. and Summitcrest Dr. is stop-controlled on Summitcrest Dr.

Sight distance is adequate for all the aforementioned street intersections.

ACCESS MANAGEMENT CODE COMPLIANCE? YES 🖂

All criteria in the Access Management Code criteria have been met.

TRIP GENERATION

Time Period	Total	In	Out
Weekday	1754	877	877
A.M. Peak Hour	167	85	82
P.M. Peak Hour	123	64	59

Trip generation shown was estimated for the proposed development based on multiple ITE Codes. The code used is for Fast-Food Restaurant with Drive-Through Window - 934 (3,751 sf).

YES	\square	No
TES		INO

No

The proposed development will likely generate more than 100 peak hour trips along the adjacent street network during a weekday peak hour, meeting the minimum requirement for a traffic impact study in the Access Management Code.

A traffic impact study was completed for the preliminary development plan by CBB, dated February 10, 2022. The study considered the traffic impact of the proposed commercial development consisting of a 3,751 sf., fast-food restaurant. The City has completed a review of the traffic study and concur with the study findings and recommendations.

The traffic study evaluated the subject property with a base condition, that included the approved nearby development along Market St. (Market Street Center), and the build condition. At the time of this study there were no additional approved developments to include. Therefore, and appropriately, the base and build scenarios were the only two scenarios reviewed for the subject development.

Intersection analysis compares proposed development conditions to existing conditions and all operations based on City and MoDOT established performance goals for measuring adequate infrastructure. The City has adopted a level of service (LOS) standard "C" for overall traffic signal operations; where individual traffic movements may be at LOS D or worse. Level of Service for stop controlled movements should be at least "D", but LOS E and LOS F may be acceptable. MoDOT has a similar performance standard, but LOS D is an acceptable benchmark for signal operations on their system. These performance goals, or minimum conditions of adequate infrastructure, help to identify public improvement needs associated with development for safer

and efficient travel. Level of Service is an industry accepted standard measure of traffic performance based on experienced or calculated delay and driver/user comfort rated on a scale from A to F, where A represents the best and F the worst. Other improvement needs may be identified based on vehicle queuing and minimum code criteria, guidelines and standards that address transportation operations and safety (e.g. turn lanes, sight distance, intersection spacing, alignment, etc.).

An assessment of the base and build conditions indicated acceptable levels of service for all studied intersections except for certain movements and intersections as noted below:

- Market Street and QuickTrip Drive, LOS D A.M. Peak Hour (Build)
- Market Street and QuickTrip Drive, LOS F P.M. Peak Hour (Base and Build)

In conclusion, the TIS recommends a northbound left-turn lane on Market Street at Summitcrest Drive with minor signal timing modifications. Per the study, the northbound left turn lane is warranted in existing conditions and will continue to be warranted with this project.

In review of the study, staff acknowledges that the turn lane is warranted. However, staff believes that the inclusion of the recommended turn lane could cause driver confusion with southbound left-turn traffic. However, the recommended improvements, as outlined in the submitted traffic study, are subject to MoDOT's review and implementation.

LIVABLE STREETS (Resolution 10-17)		
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The proposed development plan includes all Livable Streets elements identified in the City's adopted Comprehensive Plan, associated Greenway Master Plan and Bicycle Transportation Plan attachments, and elements otherwise required by ordinances and standards, including but not limited to sidewalk, landscaping, parking, and accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 have been proposed.

RECOMMENDATION:	Approval 🔀		N/A 🗌	
Recommendations for A	pproval refer only to the tra	ansportation impact a	and do not constitute an	endorsement from
City Staff.				

Staff recommends approval of the proposed preliminary development plan subject to the conditions noted below:

1. The Traffic Impact Study and development plans are subject to the review and approval of MoDOT. Furthermore, any improvements within state's rights-of-way (e.g. MO-150/Market St.) may be waived or modified or other improvements added at the discretion of MoDOT for MoDOT's approval of permitted work. The listed recommendations applicable to MoDOT ROW are based on MoDOT's review and comment of the development plan and associated traffic impact study. Any condition modified or provided by MoDOT, shall be documented to the City in substitute for the satisfaction of these conditions.