



LEE'S SUMMIT MISSOURI

DEVELOPMENT REVIEW FORM TRANSPORTATION IMPACT

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|------------------------|--------------------------|----------------------|---------------------------|
| DATE: | June 6, 2016 | CONDUCTED BY: | Michael K Park, PE, PTOE |
| SUBMITTAL DATE: | May 24, 2016 | PHONE: | 816.969.1800 |
| APPLICATION #: | PL2016088 | EMAIL: | Michael.Park@cityofls.net |
| PROJECT NAME: | QUIKTRIP (M-150 HIGHWAY) | PROJECT TYPE: | Prel Dev Plan (PDP) |

SURROUNDING ENVIRONMENT (*Streets, Developments*)

The proposed commercial redevelopment is located at the northeast corner of Market Street and Missouri 150 Highway (M-150 Highway). The property is bordered by M-150 Highway to the south, undeveloped property to the north and existing commercial development to the east and west.

ALLOWABLE ACCESS

The proposed redevelopment will be accessed from existing driveways along Market Street and M-150 Highway. There is an existing right-in/right-out driveway along M-150 Highway, restricted by a raised median along M-150 Highway. A westbound right-turn lane is pending construction at the intersection of Market Street and M-150 Highway that will also accommodate this right-in/right-out access. There are also two full access driveways along Market Street, neither exhibit any right-turn lanes or left-turn lanes. The northern driveway along Market Street aligns with Summitcrest Drive. This driveway is about 250 feet from M-150 Highway. The southern driveway along Market Street is located between Summitcrest Drive and M-150 Highway. Improved site circulation and driveway access is proposed, but there is no new access to the public street network. Sight distance is adequate the driveway locations.

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

Market Street is a two-lane undivided commercial collector street with varying roadway conditions. Market Street has an urban section with curb and gutter, sidewalk, turn lanes, and a 35 mph speed limit that is owned and maintained by the City near the proposed redevelopment site. This section of Market Street extends from M-150 Highway north approximately 1/3rd mile. Market Street has a rural section with grass shoulder (interim road width between 22 feet and 24 feet) and a 45 mph speed limit that is owned and maintained by MoDOT north of the aforementioned City's section. Market Street has pending improvements in association with on-going development (i.e. Wal-Mart) that include widening, curb, turn lanes, sidewalk, etc. Summitcrest Drive is a two lane 25 mph local commercial street extending west from Market Street to Hollywood Drive, about 250 feet north of M-150 Highway. M-150 Highway is a state owned and maintained four-lane median divided highway with curb and gutter, sidewalks, street lighting, and a posted speed limit of 35 mph in the vicinity of the project. The intersection of M-150 Highway and Market Street is traffic signal controlled with multiple turn lanes in each direction of traffic. This intersection also has pending improvements in association with approved development.

ACCESS MANAGEMENT CODE COMPLIANCE?Yes No

All criteria in the Access Management Code have been satisfied to the extent reasonably applicable in consideration of redevelopment circumstances with exception of the southern driveway along Market Street. This driveway is located less than 150 feet from the traffic signal controlled intersection of M-150 Highway and Market Street and about 100 feet from the intersection of Summitcrest Drive and Market Street, which also provides direct, full access to the property.

The Access Management Code requires at least 300 feet of driveway/intersection separation along commercial collectors (i.e. Market Street). Although existing Summitcrest Drive/northern site access is less than 300 feet from the intersection of M-150 Highway, the existing location with approximately 250 feet of separation is acceptable to avoid significant adverse impacts to adjacent property. A similar case cannot be justified for the southern site access that is located less than 150 feet from M-150 Highway.

The Access Management Code requires left-turn lanes at all driveways along commercial collectors that permit the left-turn ingress. There are no left-turn lanes for those driveways along Market Street. A left-turn lane for the Summitcrest Drive/northern site access is pending with the improvements to Market Street. A left-turn lane cannot be provided for the southern site access along Market Street due to constraints of limited intersection separation and rights-of-ways.

Driveways should not be located within the intersection functional area according to the Access Management Code. Intersection functional area includes the space between stop lines and the space before and after stop lines necessary for traffic to react, decelerate, accelerate, wait in queues, merge and stop in response to traffic in front of them. A southbound functional area (upstream) of 315 feet just north of M-150 Highway is desired and 215 feet is limiting based on a 30 mph speed (Market Street has a 35 mph speed limit). This area may be extended based on vehicle queues, which are known to extend beyond 150 feet from M-150 Highway. A northbound functional area (downstream) of 200 feet just north of M-150 Highway is based on a minimum stopping sight distance for 30 mph. The southern site access, located less than 150 feet from M-150 Highway is in conflict with the upstream and downstream minimum or limiting functional area. The intersection of Summitcrest Drive/northern site access may not avoid the desired functional area, but does clear the calculated limiting conditions.

The southern site access along Market Street should be removed in the interest of public safety, traffic operations, and compliance with the Access Management Code. Site access is maintained from Market Street and M-150 Highway.

TRIP GENERATION

| Time Period | Total | In | Out |
|--------------------|--------------|-----------|------------|
| Weekday | 1,246 | 623 | 623 |
| A.M. Peak Hour | 60 | 30 | 30 |
| P.M. Peak Hour | 76 | 38 | 38 |

The trip generation estimates noted above represent the net impact of vehicle trips associated with the proposed redevelopment (e.g. trips derived from the building expansion).

TRANSPORTATION IMPACT STUDY REQUIRED?

Yes

No

The proposed redevelopment will not likely generate more than 100 new vehicle trips to the surrounding street system during any given peak hour as a minimum condition for a transportation impact study. Furthermore, a percentage of trips generated are considered "pass-by", not new to the adjacent roadways as a result of the project. A traffic impact study was completed for property development (i.e. Wal-Mart) in the near vicinity of the project a few years ago. That traffic impact study, December 18, 2012, by Peters and Associates, had shown adequate existing traffic operations and forecasted adequate traffic operations at the intersection of Market Street and M-150 Highway with pending improvements (e.g. construction of additional lanes and traffic signal modifications). The study recommended continued monitoring of the intersection for traffic conflicts, especially the southbound left-turn movement that had shown long vehicle queues. The existing southern driveway on Market Street is within the functional area of the Market Street and M-150 Highway intersection and in direct conflict with the southbound left-turn movement noted in the referenced study. Driveways within the functional area of a traffic signal controlled intersection pose operational delays and additional safety risk due to limited space for acceleration and deceleration prior to encounters with slow or stopped traffic intending to use such driveways. With the proposed reconfiguration of the site and access improvements to Market Street, staff recommends removal of the southern driveway. Site access to M-150 Highway and site access to Market Street that aligns with Summitcrest Drive would remain with good traffic circulation on the property and around the building. Similar site design, access and traffic circulation exist (and/or are planned) at other C-Store/Gas Station locations in Lee's Summit.

LIVABLE STREETS (Resolution 10-17)

COMPLIANT

EXCEPTIONS

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, and accessibility. No exceptions to the Livable Streets Policy adopted by Resolution 10-17 have been proposed.

RECOMMENDATION:

APPROVAL

DENIAL

N/A

STIPULATIONS

Recommendations for Approval refer only to the transportation impact and do not constitute an endorsement from City Staff.

Staff recommends approval of the proposed preliminary development plan subject to removal of the southern driveway along Market Street.