



December 18, 2017

Mr. Austin Davis, Member
Wild Pines Ventures, LLC
107 Layton Street, Suite A
Dodge City, KS 67801

SUBJECT: Proposed Tommy's Express Car Wash Facility
Lawrence, Kansas

Dear Mr. Davis:

creating remarkable solutions
for a higher quality of life

As requested, GBA's traffic engineers have prepared this letter report to address the City of Lawrence's minimum traffic impact data requirements in association with your proposed Tommy's Express Car Wash facility. Based upon the City's Ordinance #7650, a minimum amount of traffic data is required to be collected in order to address the following seven (7) items. The following paragraphs provide our responses to these criteria:

(1) Identify the specific development plan under study and any existing development on and/or approved plans for the site (land use types and intensities and the arrangement of buildings, parking and access). Also, identify land uses (including types and the arrangement of buildings, parking and access) on property abutting the proposed development site, including property across public streets.

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The proposed car wash facility will redevelop a vacant Applebee's restaurant outparcel within the large existing shopping center located on the northwest corner of the intersection of West 6th Street with Monterey Way. The redevelopment parcel is in the extreme southeast corner of the shopping center. The shopping center also contains a Hy-Vee grocery store as its primary tenant, which is located in the northwest corner of the site, a related convenience store / gas station, located in the southwest corner, and a strip of connected retail space along the northern edge of the site that is connected to the east side of the grocery store. The strip retail space is currently occupied by a liquor store, three restaurants, two specialty retailers, a shipping store, three salons, and a tax preparer's office. Access for the proposed redevelopment parcel will be maintained through the internal parking lots of the existing shopping center.

Located on the southwest corner of the West 6th Street and Monterey Way intersection is a bank facility with drive-through lanes. Access to this bank is provided via a right-in / right-out (RIRO) drive onto West 6th Street and a full access driveway onto Monterey Way.

On the northeast corner of the West 6th Street / Monterey Way intersection is a small office building, with access provided via two full access driveways onto Monterey Way. On the southeast corner of the intersection is a veterinary hospital and another small office building. These buildings share two full access driveways onto West 7th Street to the south, and also one full access driveway onto Comet Lane to the east of the site. Both West 7th Street and Comet Lane are local streets.

To the west of the existing shopping center are two banking facilities (one with drive-through lanes) and three small office buildings. This office park development shares the western full access driveway onto West 6th Street with the existing shopping center. The office park also has an additional full access drive onto Eldridge Street (a local street) to the west of the site.

Located to the north and northwest of the existing shopping center is are multi-family apartment complexes, which share the shopping center's northernmost full access drive from its rear parking areas / loading docks onto Monterey Way. Primary access for these apartment complexes is provided via two full access driveways onto Eldridge Street (a local roadway) to the west.

(2) Identify the land uses shown in Horizon 2020 for the proposed development site under study, as well as the ultimate arterial and collector street network in the vicinity of the site (at least the first arterial or collector street in each direction around the site).

The Horizon 2020 plan identifies the land use as "Office and/or Commercial." Along the south frontage of the proposed redevelopment site, West 6th Street is identified as a Principal Arterial within the City of Lawrence. To the east of the redevelopment site, Monterey Way is identified as a Major Collector. Located about one-half mile to the west of Monterey Way and the proposed redevelopment site, South Folks Road is also identified as a Major Collector. Approximately one-quarter mile to the north of the existing shopping center, Trail Road is identified as a Major Collector roadway as well.

(3) Identify the functional classification of the public street(s) bordering the site and those streets on which access for the development is proposed. The functional classification is shown on the Major Thoroughfares Plan, adopted as a part of Transportation 2025 and Figure 14 in Horizon 2020.

Immediately adjacent to the proposed redevelopment site on the south, West 6th Street is identified as a Principal Arterial. Along the eastern frontage of the site, Monterey Way is identified as a Major Collector. Located about 500 feet to the west of the existing shopping center, Eldridge Street is identified as a Collector roadway. There is no public street immediately bordering the existing shopping center on its north side.

Access to proposed redevelopment site is already possible via two full access driveways serving the existing shopping center onto West 6th Street, which are located approximately 600 feet and 950 feet, respectively, to the west of the Monterey Way intersection. In addition, there are also two full access driveways from the shopping center onto Monterey Way that provide access to the proposed redevelopment site. These two accesses are located approximately 440 feet and 600 feet to the north of West 6th Street.

(4) Identify allowable access to the development site as defined by criteria included in the adopted Access Management Plans for arterial and collector streets in Lawrence. This list includes, but is not limited to: W. 6th Street, 31st Street, and the 23rd Street Corridor study and shall include any adopted access management plans.

The existing shopping center and the proposed redevelopment site are not covered by any of the City's specific access management plans. It appears that the West 6th Street Access Management Plan covers the corridor only to the west of South Folks Road. Therefore, the general access management plan adopted for the entire City shall apply in this case.

The Lawrence Access Management Plan specifies that full access driveways should be positioned at least 600 feet away from any primary intersections, and right-turn lanes should preferably be at least 300 feet in length. The first full access driveway to the west of Monterey Way currently meets both criteria. The second full access driveway is located outside of any primary intersection influence areas, but lacks an exclusive right turn lane. However, the Lawrence Access Management Plan notes that this turn lane provision is not mandatory.

The full access driveways onto Monterey Way are located approximately 440 feet and 600 feet, respectively, to the north of West 6th Street. Based on the currently posted speed limit and functional classification of this street, the intersection influence area extends approximately 410 feet to the north of West 6th Street, meaning both existing driveways are already in full compliance with the access management criteria.

(5) Document current public street characteristics adjacent to the site, including the nearest arterial and collector streets [number and type of lanes, speed limits or 85th-percentile speeds, and sight distances along the public street(s) from the proposed access(es)].

Along the south frontage of the proposed redevelopment site, West 6th Street is a 66-foot wide roadway, measured edge-to-edge of traveled way. West 6th Street is a five-lane arterial that provides two 12-foot wide eastbound lanes, two 12-foot wide westbound lanes, and an 18-foot wide center two-way left-turn lane (TWLTL). To the west of the existing shopping center's second full access driveway, West 6th Street narrows to a 60-foot width, with only a 12-foot wide TWLTL. Additionally, at the first full access driveway west of Monterey Way, a 310-foot long exclusive westbound right-turn lane provides access into the combined shopping center and proposed redevelopment site. West 6th Street currently has a posted speed limit of 45 miles per hour (mph). All necessary access for the proposed redevelopment site onto this adjacent public street is already existing, and adequate intersection sight distance in excess of 600 feet is provided looking to both the east and to the west.

Through the existing shopping center's northernmost full access driveway, Monterey Way is currently a 27-foot wide, two-lane collector roadway with 13.5-foot wide travel lanes. Monterey Way tapers to 31.5 feet in width, measured edge-to-edge, at the north edge of the southern full access driveway, with two 11-foot travel lanes and a 9.5-foot striped center median. To the south of the southern full access drive, Monterey Way provides a 36-foot wide, two-lane collector roadway cross-section, with two 11-foot travel lanes and a 14-foot wide TWLTL. Monterey Way currently has a posted speed limit of 35 mph. Again, all necessary access for the proposed redevelopment site onto this adjacent public street is already existing, and adequate intersection sight distance in excess of 500 feet is provided looking to both the north and to the south.

(6) Compare proposed access with AASHTO established design criteria (driveway spacing, alignment with other streets and driveways, city driveway standards, and minimum sight distances.) Assess the feasibility of access connections to abutting properties, including shared access with the public street system.

There is no additional access being proposed to serve the proposed redevelopment site. The proposed redevelopment site will use the existing shopping center driveways only to access the adjacent public streets. Direct access to the proposed redevelopment site is internal to the existing shopping center via its current parking lots and drive aisles.

(7) Estimate the number of trips generated by existing and proposed development on the site for a typical weekday and weekday peak hours using the latest edition of Trip Generation published by the Institute of Transportation Engineers. Local trip generation characteristics may be used if deemed to be properly collected and consistent with the subject development application. The Public Works Director shall make such determination. Calculate the net difference in trips between existing and proposed uses. If the development site already has an approved plan, also estimate the number of trips that would be generated by the approved land uses. If the development application is proposing a land use DIFFERENT THAN indicated in Horizon 2020 and Transportation 2025, also estimate the number of trips that would be generated by the land use indicated in Horizon 2020 or Transportation 2025.

Using the current edition (i.e., 10th Ed.) of the Institute of Transportation Engineers' (ITE) Trip Generation Manual, the trip generation for the previous Applebee's casual restaurant was estimated using the criteria for ITE Land Use Code 932 (High-Turnover Sit-Down Restaurant). The existing restaurant building, which measures approximately 6,000-square feet (SF) in gross leasable area (GLA) based on available aerial

photography, would be expected to generate a total of 59 trips (i.e., 37 inbound trips and 22 outbound trips) during the critical P.M. peak traffic hour.

The proposed Tommy's Express Car Wash facility, which is planned to be approximately 4,500 SF in size, would be expected to generate about 64 total trips (i.e., 32 inbound trips and 32 outbound trips) during this same critical P.M. peak traffic hour, based upon its proposed square footage and available data for ITE Land Use Code 948. The available ITE trip generation data also indicates that a single-tunnel car wash facility like the one being proposed could be expected to generate up to 78 total trips (i.e., 39 inbound trips and 39 outbound trips) during an evening peak traffic hour.

We also understand that the proposed car wash facility is expected to have an operational capacity of up to 600 sales per day, and that the anticipated hours of operation are from 7:00 a.m. until 9:00 p.m. With these 14 hours of daily operation, the average number of car washes per hour would be 43 vph (i.e., 86 total trips in/out for the facility). The following table summarizes these estimated trip generation comparisons:

Ex. / Prop. Tenant (ITE Land Use Code)	Independent Variable	P.M. Peak Hour Trips			Net Increase in Peak Hour Trips
		IN	OUT	TOTAL	
Existing Applebee's (932)	6,000 SF (GLA)	37	22	59	n/a
Proposed Car Wash (948)	4,500 SF	32	32	64	+5
Proposed Car Wash (948)	1 Tunnel	39	39	78	+19
Proposed Car Wash (n/a)	600 vpd in Est. Sales	43	43	86	+27

Therefore, based upon these various trip generation estimate methods, the expected net increase in the trip generation levels between the existing and proposed land uses is between five and twenty-seven additional trips.

Per the City of Lawrence's criteria, when a proposed development generates 100 or more trips in its critical peak hour, additional traffic engineering analysis may be required, including such items as trip distribution, expansion of the study area, and/or other appropriate and pertinent transportation information necessary to complete a comprehensive impact study. However, based upon the completed trip generation estimates for the proposed Tommy's Express Car Wash facility, these additional traffic engineering analyses should not be expected to be required by the City since the specified 100 vph threshold is not satisfied during the critical P.M. peak traffic hour.

We appreciate the opportunity to be of service to you on this very important project. If you should have any questions or need additional information, please do not hesitate to contact us.

Sincerely,

GEORGE BUTLER ASSOCIATES, INC.



David J. Mennenga, P.E., PTOE
 Firm Associate - Traffic Engineering