

May 1, 2019

Michael Parks, P.E.
City of Lee's Summit
220 SE Green Street
Lee's Summit, MO 64063

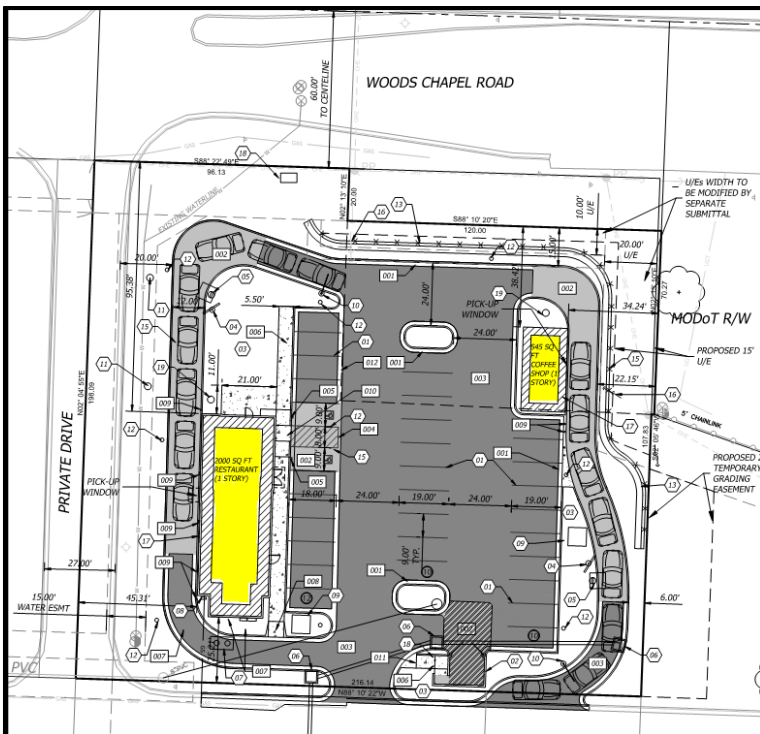
**Subject: 851 Woods Chapel Lee's Summit, MO
Traffic Compliance Letter – Chapel Ridge “Pad A”**

Mr. Parks:

We have completed a trip generation comparison between a previously approved development plan and a new proposed site plan for Chapel Ridge “Pad A”. Information we have been provided indicates the previously approved development plan included a proposed 6,100 square foot restaurant with drive-through in the project area.

The proposed development plan includes a 2,000 square foot fast food restaurant with drive-through and a 545 square foot coffee shop with drive-through and no interior seating. The proposed development plan can be seen in Figure 1.

Figure 1 – Proposed Development Plan



Trip Generation

Vehicle trips were generated using the 10th edition of the Trip Generation Manual published by the Institute of Transportation Engineers (ITE). For this analysis, ITE land use code 934 “Fast-Food Restaurant with Drive-Through Window” was used for both restaurants. ITE land use code 938 “Coffee/Donut Shop with Drive-Through window and No Interior Seating” was chosen for the proposed coffee shop.

There is limited amount of published ITE trip generation data available for coffee shops with drive-throughs and no seating (Code 938). All data points were collected on shops of the same square footage (100 square feet as indicated in the ITE Manual). This skews the data if square footage is the independent variable used for a trip generation. Instead, the number of drive-through windows should be used. The businesses studied by ITE had a very low square footage and it is assumed that these businesses had one drive-through window. For the AM peak hour, we found the average trip generation for the six highest ITE data points to be 38.16 trips per drive-through window. For the PM peak hour, the average trip generation for the four ITE data points is 7.5 trips per drive-through window. The results of the Trip Generation can be seen in Table 1.

Table 1 – Trip Generation

Land Use	ITE Code	Peak Hour	Unit	Value	Avg. Trip Gen	Direction Distribution		Trip Ends		
						In	Out	Total	Entering	Exiting
Previously Approved Development Plan										
Resturant with Drive Thru	934	AM	1000 SQ FT	6.1	40.19	51%	49%	245	125	120
	934	PM	1000 SQ FT	6.1	32.67	52%	48%	199	103	96
Proposed Development Plan										
Resturant with Drive Thru	934	AM	1000 SQ FT	2	40.19	51%	49%	80	41	39
	934	PM	1000 SQ FT	2	32.67	52%	48%	65	34	31
Coffee Shop without Seating	938	AM	# Drive Thrus	1	38.16	50%	50%	38	19	19
	938	PM	# Drive Thrus	1	7.5	50%	50%	8	4	4
Total		AM						118	60	58
		PM						73	38	35
						Change from Approved Use	AM	-127	-65	-62
							PM	-126	-65	-61

The proposed development plan is expected to generate less trips than the previously approved plan. Table 1 indicates 127 less vehicle trips during the AM peak hour, and 126 less vehicle trips during the PM peak hour.

Conclusion

As identified by the trip generation comparison, the proposed development plan is expected to generate less trips than the previously approved plan. A decrease of more than 100 vehicle trips per peak hour is anticipated. The proposed smaller fast-food restaurant and coffee shop without seating should not create any adverse impact to the existing street network.

If you have any further questions, please contact me at 913-663-1900 or by email at jay.odell@ibhc.com

Sincerely,

Jay O'Dell, P.E.

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