CASE #PL2020-190

STS
Swing Traffic Solutions

September 30, 2020

To: **Brady Busselman, PE, Sambatek**

From: **Vernon Swing, PE**

Re: **Trip Generation Study – Valley West Shopping Center Redevelopment, Bloomington, MN**

Per your request, Swing Traffic Solutions, LLC has conducted a trip generation analysis for the proposed Valley West Shopping Center Redevelopment in Bloomington, MN. The proposed redevelopment will replace the existing 8,104 square foot Goodyear Tire store and 13,014 square foot Planet Fitness. The new development will include a 1,900 foot Dunkin Donut restaurant including a drive through window, a 6,000 square foot sit-down restaurant and a 5,000 square foot small office/retail space for potential insurance sales or cell phone sales, etc. This memorandum identifies the anticipated site generated traffic for the proposed uses and compares the findings with the trip generation for the existing uses within the Valley West Shopping Center that are being replaced.

Trip Generation

The trip generation for the proposed Dunkin Donuts, sit-down restaurant, and small office/retail space development has been estimated based on the methodology described by the Institute of Transportation Engineers (ITE) in *Trip Generation*, 10th Edition. The proposed uses correspond with ITE Land Use Codes 937 - Coffee Donut Shop with Drive-Through Window, 931 - Quality Sit-down Restaurant, and 712 – Small Office. Table 1 summarizes the findings.

Table 1
Trip Generation – Proposed Uses

Land Use	ITE Code	AM Peak Hour		PM Peak Hour		Daily Trips
		Enter	Exit	Enter	Exit	
Dunkin Donuts	937	86 Trips	83 Trips	41 Trips	41 Trips	1,559 Trips
Sit-Down Restaurant	931	3 Trips	1 Trips	29 Trips	18 Trips	498 Trips
Small Office/Retail	712	8 Trips	2 trips	4 Trips	8 Trips	81 Trips
TOTAL Trips		**97 Trips**	**83 Trips**	**74 Trips**	**67 Trips**	**2,138 Trips**

As shown in Table 1, the new uses on site are estimated to generate 183 trips, 97 trips entering and 86 trips exiting trips during the morning traffic peak, and 141 trips, 74 entering and 67 trips exiting during the afternoon traffic peak hour, and 2,138 trips per day.

It is noted, different developments generate trips with different purposes, for example an office development generates trips that are destined to the office while a convenience store generates trips that are on their way to a primary destination, but stop as they are passing by for gas or convenience items making trips referred to as pass-by trips. Or shopping centers with restaurants, banks and large

retail anchors generate trips individually that they share with the neighboring developments. In other words, a visitor to Home Depot may also visit the coffee outlot and eat at the bagel restaurant outlot. In this case adjustments could be considered, however, adjustments were not made so as to understand the total trips that the new uses will be generating.

To compare the estimated trips for the proposed uses with the trips from the current uses ITE methodology was again. Table 2 summarizes the trip generation for the existing land uses with Land Use Codes 848 – Tire Store, and 492 – Health/Fitness Club.

Table 2
Trip Generation – Existing Uses

Land Use	ITE Code	AM Peak Hour		PM Peak Hour		Daily Trips
		Enter	Exit	Enter	Exit	
Goodyear Tire	848	14 Trips	8 Trips	14 Trips	18 Trips	231 Trips
Planet Fitness	492	9 Trips	8 Trips	26 Trips	19 Trips	No data
TOTAL Trips		**23 Trips**	**16 Trips**	**40 Trips**	**37 Trips**	**237* Trips**

As shown in Table 2, the existing uses on site are estimated to generate 39 trips, 23 trips entering and 16 trips exiting trips during the morning traffic peak, and 77 trips, 40 entering and 37 trips exiting during the afternoon traffic peak hour, and 237 trips per day. The daily trip total does not include an estimate for planet fitness as ITE does not have data for daily numbers, however, one could assume the daily numbers for Planet Fitness are approximately ten times greater than the PM peak numbers or approximately 450 trips for a total of 781 trips per for the current uses.

Again, the trips destined to the existing uses could be adjusted for pass-by and share traffic, but adjustments were not made so as to understand the total trips that the current uses generate.

Comparing the information in Tables 1 and 2 suggests the proposed new land uses will generate 144 additional trips in the AM traffic peak, 64 additional trips during the PM traffic peak, and 1,357 additional trips during per day. It is noted these numbers are not necessarily new trips on the road as the new uses are likely to generate a large number of trips from traffic that is already passing the site or is visiting other uses on site.

In conclusion, the development will generate more peak hour traffic than currently visits the site.

Please contact Vernon Swing at vswingtraffic@gmail.com or 612-968-4142 with any questions.