



ACAMPORA TRAFFIC, LLC



Memorandum

Date: April 4, 2024

Subject: Trip Generation Study for Proposed Commercial Center
McEver Road at Lights Ferry Road, Hall County, Georgia

The trip generation was calculated for a proposed commercial center in Hall County. The site is located in the northeast corner of McEver Road at Lights Ferry Road, as shown in Figure 1. Vehicular access is proposed at one location on McEver Road and two locations on Lights Ferry Road. A future interparcel connection to adjacent property to the northeast is also proposed.



Figure 1 – Site Location Map

McEver at Lights Ferry Commercial Center, Hall County
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The site will be developed with a strip retail center that will include 9,450 ft² of retail shops, a 6,156 ft² convenience with gasoline pumps with 4 pumps (8 fueling positions), a 2,625 ft² quick service restaurant, 2,400 ft² of office, and a car wash. To the rear of the site will be a 71,550 ft² three-story self-storage facility. The site plan is presented in Figure 2.

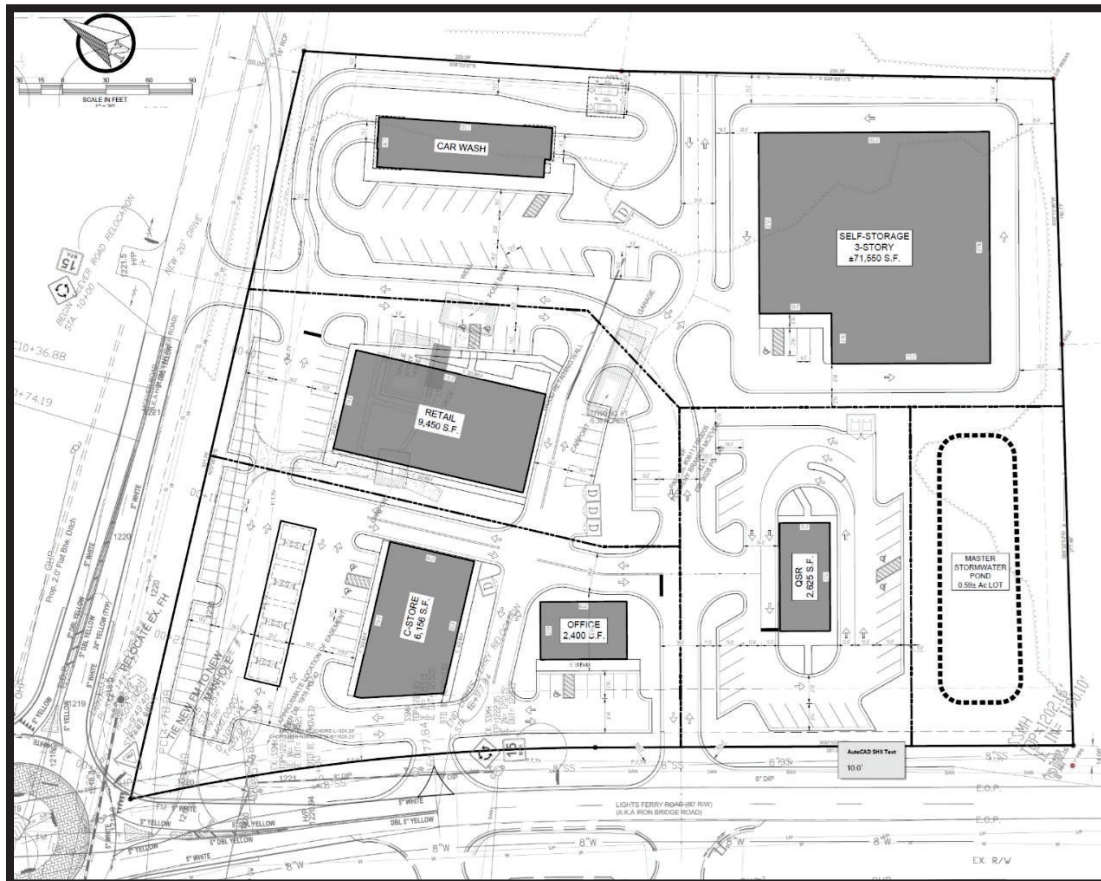


Figure 2 – Proposed Site Plan

The volume of traffic that will be generated by the commercial development was calculated using the equations and rates in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (the current edition). ITE Land Use 822 – Strip Retail Plaza (less than 40,000 ft²) was chosen for the retail shops. ITE Land Use 945 – Convenience Store / Gas Station (GFA 5.5-10ksf) was chosen for the convenience store with gasoline pumps. ITE Land Use 934 – Fast Food Restaurant with Drive-Through Window was chosen for the quick service restaurant. ITE Land Use 712 – Small Office Building was chosen for the office building. ITE Land Use 948 – Automated Car Wash was chosen as representative of the car wash. ITE Land Use 151 – Mini Warehouse was selected for the self-storage facility.

Data for the car wash land use was somewhat limited. There was no data for the a.m. peak or 24-hour period. To estimate the trips in those time periods, a similar land use was chosen – ITE Land Use 947 – Self Service Car Wash.

The average number of stalls (five) was assumed for that use. While the uses are not exactly the same, they are closely related and, therefore, Land Use 947 is expected to generate trips of a comparable magnitude, during the a.m. and 24-hour periods, to Land Use 948.

Adjustments were made to the various retail use trips to account for the effect of pass-by trips. Pass-by trips are trips that are already driving by the property but will be intercepted by the retail in this project. These trips are new to the project driveways, but do not represent new trips to the adjacent roadways since they are currently passing the site. The ITE *Trip Generation Manual* provides tables with average pass-by percentages for some of the ITE land uses. Where there was not an exact match in land use, the most similar land use was chosen to supply the pass-by data. The ITE Land Use Code for the use selected is included in the rows with the pass-by data. For the Car Wash, the percentages were estimated based on the data from the other land uses.

The trip generation for the proposed development is presented in Table 1.

Table 1 – Proposed McEver at Lights Ferry Commercial Center Trip Generation

Land Use	ITE Code	Size	A.M. Peak Hour			P.M. Peak Hour			24-Hour
			In	Out	Total	In	Out	Total	2-Way
Strip Retail Shops	822	9,450 ft ²	17	11	28	37	38	75	628
-pass-by	821	30/40/30%	-5	-3	-8	-15	-15	-30	-188
C-Store w/ Gas Pumps	945	8 fueling pos	126	127	253	108	107	215	2,766
	945	60/56/50%	-76	-76	-152	-60	-60	-120	-1,384
Fast Food Restaurant	934	2,625 ft ²	60	57	117	45	42	87	1,226
	934	50/55/40%	-30	-29	-59	-25	-23	-48	-490
Carwash	948	4,164 ft ²	20	20	40	30	29	59	270
	est	20/30/20%	<u>-4</u>	<u>-4</u>	<u>-8</u>	<u>-9</u>	<u>-9</u>	<u>-18</u>	<u>-54</u>
Total Retail Gross Trips			223	215	438	220	216	436	4,890
Total Retail Pass-by Trips			<u>-115</u>	<u>-112</u>	<u>-227</u>	<u>-109</u>	<u>-107</u>	<u>-216</u>	<u>-2,116</u>
Total Retail New Trips			108	103	211	111	109	220	2,774
Office	712	2,400 ft ²	3	1	4	2	3	5	36
Self-Storage	151	71,550 ft ²	<u>4</u>	<u>2</u>	<u>6</u>	<u>5</u>	<u>6</u>	<u>11</u>	<u>104</u>
Total Project Gross Trips			230	218	448	227	225	452	5,030
Total Project New Trips			115	106	221	118	118	236	2,914

The proposed commercial will generate 448 gross/driveway trips in the a.m. peak hour, 452 gross/driveway trips in the p.m. peak hour, and 5,030 gross/driveway trips in a 24-hour period. With the pass-by adjustments applied, the project will generate 221 new trips to the adjacent intersection and roadways in the a.m. peak hour, 236 new trips to the adjacent intersection and roadways in the p.m. peak hour, and 2,914 new trips to the adjacent intersection and roadways in a 24-hour period.

The project's trips were assigned to the three project accesses – one full-movement access on McEver Road and one full-movement access and one right-in/right-out (RIRO) access on Lights Ferry Road. No trips were assigned to the future interparcel connection. No traffic volume counts were collected for this study on McEver Road or Lights Ferry Road, and, so, the proportion of pass-by trips at each access was unknown. Therefore, for this study, the pass-by trips were assigned to each driveway in the same proportion as the new trip distribution percentages. Figure 3 presents the project's trips entering and exiting each access, as well as the new project trips that will travel through the roundabout intersection of McEver Road at Lights Ferry Road. Note that at each access there will be reductions in the through flows on McEver Road and Lights Ferry Road to reflect the effect of pass-by trips, which are not shown in Figure 3 (only the volumes entering and exiting each driveway are depicted). At the roundabout intersection of McEver Road at Lights Ferry Road, the pass-by trips that will be subtracted from the through volumes at each driveway, are removed and only the new project trips are shown. This is why the volumes shown in Figure 3 do not balance between the project driveways and the roundabout.



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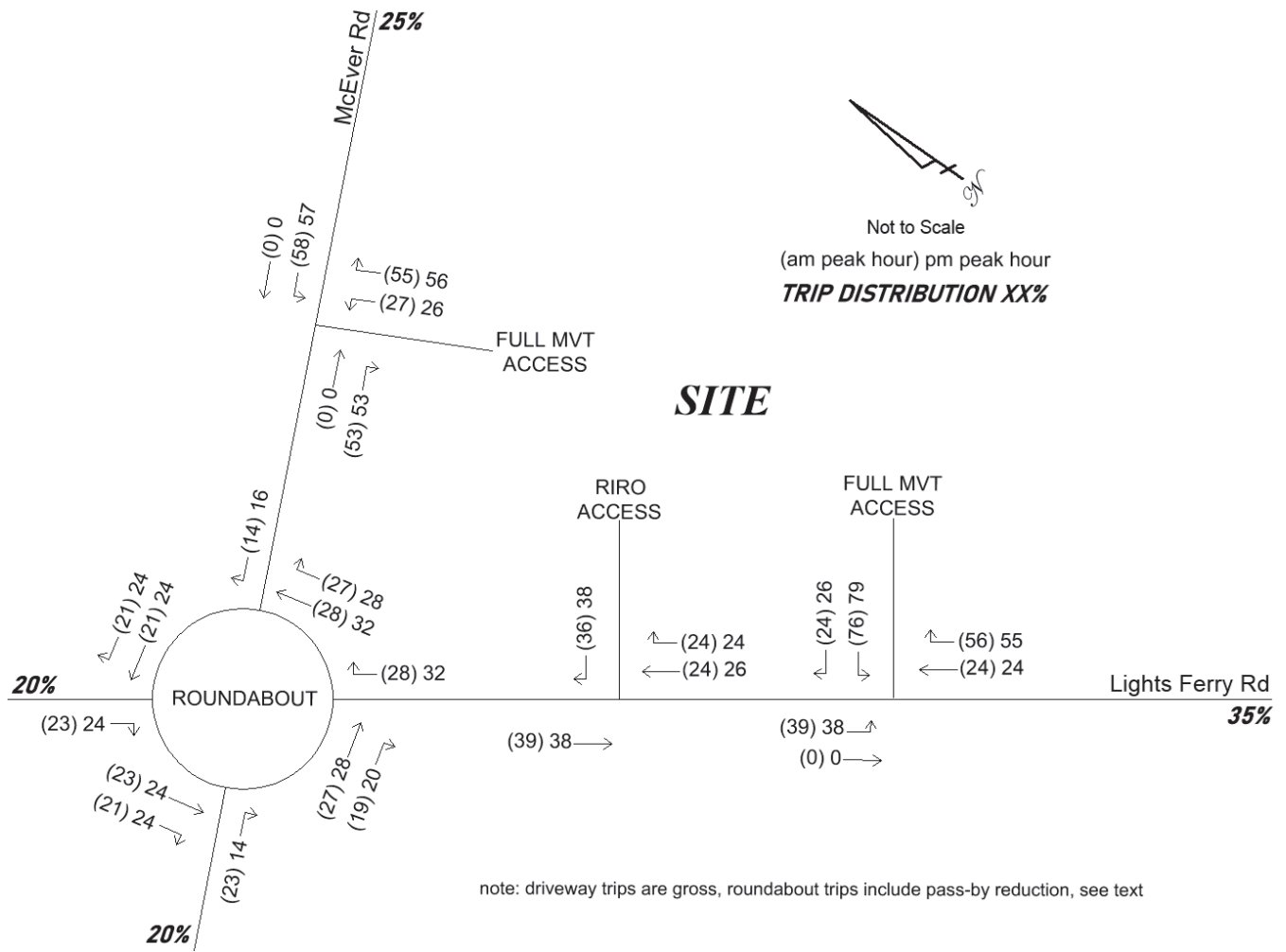


Figure 3 – Project Trips