



Memorandum

To: Kenneth Reiter
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P.O. Box 1622
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Date: January 26, 2022

Project #: 38208.01

From: Andrew Topp, PE, PTOE

Re: The ArtsCenter Trip Generation Memorandum
Carrboro, NC

There are plans to renovate the existing office building at 400 Roberson Street in Carrboro, North Carolina. The building is proposed be converted into a new community center for The ArtsCenter. This memorandum summarizes the expected number of vehicular trips that the existing office use generates during a typical weekday and compares them to the projected number of site trips for the new community center.

Existing Land Use

The building at 400 Roberson Street is a 17,143 square foot (sf) office building. The expected number of daily and peak hour site trips were calculated for the office building using the *ITE Trip Generation Manual, 10th Edition*. Land Use Code (LUC) 710 (General Office) was used based on North Carolina Department of Transportation (NCDOT) guidance. The trip generation summary for the existing office use is summarized in Table 1.

Table 1: Trip Generation Results – Office Use

Land Use Code ^{1, 2}	Land Use	Unit	ADT	AM Peak Hour			PM Peak Hour		
				Enter	Exit	Total	Enter	Exit	Total
710	General Office	17,143 sf	192	31	4	35	15	69	84

Notes:

1. Land Use Code and trip generation rates are determined based on *ITE Trip Generation, 10th Edition*
2. Total site trips are determined based on the suggested method in the NCDOT Rate Vs Equation Spreadsheet

As reported in Table 1, the existing office use generates approximately 192 daily site trips with 35 trips (31 entering, 4 exiting) occurring during the AM peak hour and 84 trips (15 entering, 69 exiting) occurring during the PM peak hour.

Proposed Community Center

The existing office building is proposed to be converted to a new community center for The ArtsCenter. The land uses presented within the *ITE Trip Generation Manual, 10th Edition* were reviewed to determine if an existing use could be used for the proposed community center. However, it was determined that there were not any land uses that appropriately matched the future uses that are planned for the building. Employee and visitor data was obtained from The ArtsCenter based on their existing site and was utilized to project the number of daily and peak hour site trips for the new community center. The following trip characteristics for The ArtsCenter were assumed for the trip generation calculations.

- › Approximately 10 employees enter during the AM peak hour and leave during the PM peak hour.
- › Approximately 10 visitors enter during the AM peak hour and exit during the PM peak hour, along with sporadic activity during the day.
- › Approximately 50 students are dropped off by school bus in the mid-afternoon and are then picked up during the PM peak hour. Based on guidance from the ArtsCenter approximately 15% of parents that pick-up students pick up two (2) students (siblings or carpool) while the other parents pick up only one (1) student.
- › Approximately 10% of all employees and visitors will travel to and from the ArtsCenter via some form of transportation that is not a passenger car (i.e., bus, bicycle, walking, etc.)
- › The building’s AM peak hour will be after the adjacent street’s AM peak hour (approx. 7:30-8:30 AM) as the building opens at 9:00 AM.
- › Occasional special events occur at the facility over the course of the year, however, are typically at 8:00 PM, after the area’s PM peak hour or on weekends.

The site trip information from The ArtsCenter is summarized into trip generation calculations within Table 2.

Table 2: Trip Generation Results – The ArtsCenter

Trip Category	ADT	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Employees	30	10	0	10	0	10	10
Day-time Visitors	60	10	0	10	0	10	10
Student Visitors	90	0	0	0	43	43	86
Total	180	20	0	20	43	63	106
<i>Total with 10% Reduction</i>	<i>162</i>	<i>18</i>	<i>0</i>	<i>18</i>	<i>39</i>	<i>57</i>	<i>95</i>

As reported in Table 2, The ArtsCenter is expected to generate approximately 162 daily site trips with 18 trips (18 entering, 0 exiting) occurring during the AM peak hour and 95 trips (39 entering, 57 exiting) occurring during the PM peak hour.

Conclusions

The projected number of daily and AM peak hour trips for The ArtsCenter is expected to be lower than the existing office use at 400 Roberson Street, but the projected number of PM peak hour trips for the new use are expected to be slightly higher than the existing office use. Over the course of an entire weekday, the traffic generated by the new community center is expected to be similar or lower than the current office use, and will access the site via Roberson Street, which connects to both S Greensboro Street and E Main Street. Its location in downtown is well served by transit, sidewalks, the Libba Cotton Bikeway, and is walking distance to numerous residential areas, which will help encourage use of alternative travel modes. As a result, the adjacent roadway system should not be impacted by the change in use within this building.