



**Memorandum**

Received  
April 23, 2024  
SUP-24-0001  
Planning & Zoning

To: Planners & Engineers Collaborative+  
From: Abdul Amer, PE  
Date: April 22, 2024  
Subject: Trip Generation Memorandum for proposed Mount Pisgah Christian School Expansion Project at 9725 Nesbit Ferry Road in Johns Creek, Georgia | A&R 24-043

The purpose of this memorandum is to estimate the trip generation that will result from the proposed Mount Pisgah Christian School Expansion Project that will be located at 9725 Nesbit Ferry Road in Johns Creek, Georgia. The expansion project will occur to the south of the existing school across from Nesbit Ferry Road and will consist of new academic buildings, student facilities, a performing arts theatre building, and private tennis courts. Additionally, this new plan will be split up into three phases. Phase one will be 23,962 square feet and will include renovations of an existing house (4,662 sf) and proposed curriculum enhancement programs building (19,300 sf). Phase two will be 46,600 square feet and will include a performing arts theatre (25,000 sf), and one academic building (21,600 sf). Phase three will be 53,100 square feet, it will include a natatorium building (31,500 sf) and another academic building (21,600 sf). The total square footage for all three phases will be 123,662. The new academic buildings will allow for the enrollment capacity of high school students to be increased by 250. The location of the proposed site is shown below.



## **METHODOLOGY**

Trip generation estimates for the project were based on the rates and equations published in the 11th edition of the Institute of Transportation Engineers (ITE) Trip Generation Manual. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation referenced is based on the ITE land use categories below.

*Land Use: 532 – Private School (K-12):* A private school (K-12) serves students attending kindergarten through the 12th grade. The school may also offer pre-kindergarten classes and extended care and day care. Students may travel a long distance from their residence to the private school.

The academic building will have a maximum enrollment of 125 students in Phase 2 and an additional 125 students in Phase 3. The Curriculum Enhancement building will have 12 classrooms with an estimated capacity of 15 students in each classroom. ITE Land-Use 532 (*Private School (K-12)*) was used to generate trips for these two categories.

*Land Use: 493 – Athletic Club:* An athletic club is a privately-owned facility that offers comprehensive athletic facilities. An athletic club typically has courts for racquet sports; a basketball court; a sauna or spa; and fitness, exercise, and weightlifting rooms. They often provide a swimming pool or whirlpool.

The Natatorium building in phase 3 will have one swimming pool and will be used by students during weekdays as an after-school sports meet. Since ITE does not give trip generation rates for Natatorium, we used ITE trip-generation rates for land-use 493 - *Athletic Club*.

*Land Use: 560 – Church:* A church is a building in which public worship services are held. A church houses an assembly hall or sanctuary. It may also house meeting rooms, classrooms, and, occasionally, dining, catering, or event facilities.

Performing Arts Theatre will be used for theater classes, after school meetings, in school events and potential after school performances. The theatre will have a maximum capacity of 543 seats. Due to lack of trip generation rates by ITE for this land-use, we utilized the land-use Church with 543 seat capacity to estimate the projected trips. Traffic from the performing arts theatre is not expected to peak during adjacent street peak hour.

*Land Use: 490 – Tennis Courts:* The school will have six private tennis courts for public use.

*Land Use: 210 – Single-Family Detached Housing:* A single-family detached housing site includes any single-family detached home on an individual lot. A typical site surveyed is a suburban subdivision.

The existing house will mainly be used as a residence for the school president. Occasional events, maybe once or twice a semester to be held after school hours at the president's residence. We used ITE trip-generation rates for this of land-use 210 – Single-Family Detached Housing.

Trip Generation is given in Table 1 on the next page.

**TABLE 1 – TRIP GENERATION**

Land Use	Size	PHASE I (0-5 Years)							PHASE 1 + PHASE 2 (6-10 Years)							PHASE 1 + PHASE 2 + PHASE 3 (11-15 Years)						
		AM Peak Hour			PM Peak Hour		24-Hr 2-Way	AM Peak Hour			PM Peak Hour		24-Hr 2-Way	AM Peak Hour			PM Peak Hour			24-Hr 2-Way		
		Enter	Exit	Total	Enter	Exit		Total	Enter	Exit	Total	Enter		Exit	Total	Enter	Exit	Total	Enter		Exit	Total
Academic Buildings Land Use: 532	125 Students in Phase 2 250 Students in Phase 3	-	-	-	-	-	-	-	62	37	99	9	12	21	310	124	74	198	18	25	43	620
Curriculum Enhancement Building Land Use: 532	180 Students in Phase 1	90	52	142	13	18	31	446	90	52	142	13	18	31	446	90	52	142	13	18	31	446
Natorium Land Use: 493	31,500 sf	-	-	-	-	-	-	-	-	-	-	-	-	-	-	61	39	100	123	75	198	198
Performing Arts Land Use: 560	543 Seats	-	-	-	-	-	-	-	23	15	38	24	30	54	489	23	15	38	24	30	54	489
Existing House Land Use: 210	1 Single-family	-	1	1	1	-	1	15	-	1	1	1	-	1	15	-	1	1	1	-	1	15
Tennis Courts Land Use: 490	6	-	-	-	-	-	-	-	13	12	25	12	13	25	182	13	12	25	12	13	25	182
<b>TOTAL</b>		<b>90</b>	<b>53</b>	<b>143</b>	<b>14</b>	<b>18</b>	<b>32</b>	<b>461</b>	<b>188</b>	<b>117</b>	<b>305</b>	<b>59</b>	<b>73</b>	<b>132</b>	<b>1442</b>	<b>311</b>	<b>193</b>	<b>504</b>	<b>191</b>	<b>161</b>	<b>352</b>	<b>1950</b>

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