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## TECHNICAL MEMORANDUM

**To:** Michael Fiocco  
Land Development Manager  
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**From:** Christa Greene, PE *Christa*

**Subject:** Cole Park Veterinary Hospital Trip Generation Analysis

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### BACKGROUND

The Cole Park Veterinary Hospital is proposed to be constructed at the southwest quadrant of US 15-501 and Woodbridge Drive in Chatham County. This 8,400 square foot facility will have a full movement access on Woodbridge Drive. Woodbridge Drive is currently an unsignalized T-intersection at US-15-501. There are signalized intersections on US-15-501 approximately 1,700 feet north and south of Woodbridge Drive. The purpose of this Technical Memorandum is to identify the amount of traffic this facility will generate and the amount of traffic currently existing US 15-501.

### TRIP GENERATION

Trip generation estimates were developed using Land Use Code 640 (Animal Hospital / Veterinary Clinic) in *Trip Generation, 8<sup>th</sup> Edition* published by the Institute of Transportation Engineers in 2008. This land use code is new in the 2008 edition and only provides estimates for AM and PM peak hour traffic volumes. Land Use Code 720 (Medical / Dental Office Building) will be used to estimate the total number of daily trips.

The following table summarizes the estimated trip generation for the proposed development.

**Table 1**  
**Cole Park Veterinary Hospital**  
**ITE Traffic Generation**

Land Use (Code)	Density	Daily Trips	AM		PM	
			IN	OUT	IN	OUT
Animal Hospital / Veterinary Hospital (640)	8400 sf	129*	24	10	16	24

\* daily trips estimated from Land Use Code 720 (Medical / Dental Office Building) since no daily calculation is available for Land Use Code 640

This table indicates that the proposed development will generate approximately 129 daily trips with 34 trips in the AM peak hour and 40 trips in the PM peak hour.

With the construction of the proposed Cole Park Veterinary Hospital, two single family dwelling units will be removed from the development site. The trips that would be generated by these dwelling units are illustrated in Table 2.

**Table 2**  
**Existing Conditions**  
**ITE Traffic Generation**

Land Use (Code)	Density	Daily Trips	AM		PM	
			IN	OUT	IN	OUT
Single Family Dwelling Unit (210)	2 units	19	1	1	1	1

Considering the proposed land use and the existing land use, the overall expected increase in the number of daily trips for this development is 110 trips per day.

### EXISTING TRAFFIC VOLUMES

According to the 2007 Average Annual Daily Traffic Volumes collected by NCDOT, US 15-501 currently carries approximately 21,000 trips per day in the vicinity of the proposed development. A four lane divided facility of this type has the capacity to carry over 30,000 vehicles per day and still operate at a level of service D or better. Therefore, it appears that there is sufficient capacity on the adjacent roadway to accommodate the additional traffic volumes.

### CONCLUSION

As shown in this **Technical Memorandum**, the Cole Park Veterinary Hospital is expected to add approximately 110 trips per day to a facility that carries approximately 21,000 vehicles per day. This is an overall increase of approximately 0.5% per day. Additionally, there is extra capacity on US 15-501 to accommodate the proposed development traffic.

Feel free to call me at 919-210-5116 or e-mail me at [christa@greenetransportation.com](mailto:christa@greenetransportation.com) if you have any questions regarding this trip generation summary.

cc: Project File

