RAMEY KEMP & ASSOCIATES, INC.
5808 Faringdon Place, Suite 100
Raleigh, NC 27609

Phone - 919-872-5115 Fax - 919-878-5416 www.rameykemp.com

April 17, 2008

Mr. Steve O'Neal Chatham Development Corporation 6208 Fayetteville Road, Suite 104 Durham, North Carolina 27713

Subject: Proposed PortSide Boat & RV Storage

Dear Mr. O'Neal:

This letter summarizes our review of the anticipated impact of traffic generated by the proposed PortSide Boat & RV Storage facility. The facility is proposed along the south side of US 64, approximately one (1) mile west of the US 64 and NC 751 intersection in Chatham County, North Carolina. A review of the preliminary site plan indicates that the site is expected to consist of approximately 75,500 square feet of RV and boat storage space. Access to the facility is proposed via one (1) right-in entrance driveway and one (1) right-out exit driveway along US 64.

## **Existing Traffic**

The existing (2007) traffic volumes along US 64 in the vicinity of the proposed site were based on a review of the North Carolina Department of Transportation (NCDOT) Average Daily Traffic (ADT) maps. A review of the 2003, 2004 and 2005 maps indicates an ADT of 16,000, 17,000 and 18,000 vehicles per day (vpd), respectively, along US 64. Traffic volumes were projected to the existing year 2008 by applying an annual compounded growth rate of 6%, which corresponds to the historical growth rate experienced along this section of US 64. Utilizing a 6% growth rate for three (3) years yields a 2008 ADT of approximately 21,000 vpd. It is assumed that approximately 10 percent of the daily traffic occurs during the AM peak hour and PM peak hour and a 50/50 directional distribution was assumed. Thus, approximately 1,050 vehicles per hour (vph) would be expected along each direction of US 64, in the vicinity of the proposed site, during both the AM and PM peak hours. It should be noted that these peak hour volumes are for a typical weekday. Weekend volumes would be expected to be significantly lower along US 64.

## **Site Trip Generation**

As indicated, the proposed site is expected to consist of approximately 75,500 square feet of RV and boat storage space. The Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 7<sup>th</sup> Edition does not have a specific land use for this type of development. A review of similar land uses shows that Land Use 151 – Mini-Warehouse is most similar to the proposed site. It should be noted however, that Land Use 151 is likely to generate more weekday peak hour trips than the proposed site. Due to the nature of the development, it is likely that the majority of the traffic utilizing the site will be experienced during the weekend, particularly Saturday

mornings and Sunday evenings when traffic along US 64 is much lower than on a weekday. Furthermore, it would also be expected that traffic associated with the proposed site would be generated on a seasonal basis, with minimal traffic occurring during the winter months. However, in order to provide a worse-case scenario for trip generation purposes, the weekday volumes are considered. Table 1 provides a summary of the resultant trips expected to be generated by the subject site during the typical weekday AM and PM peak hours.

TABLE 1
Trip Generation

ITE LAND USE (Code)	SIZE	AVERAGE DAILY TRAFFIC (vpd)	WEEKDAY AM PEAK HOUR (vph)		WEEKDAY PM PEAK HOUR (vph)	
			Entering	Exiting	Entering	Exiting
Mini-Warehouse (151)	75,500 square feet	189	7	5	10	10

As shown in Table 1, at full build-out, it is estimated that the proposed site will generate approximately 189 total site trips (95 entering and 94 exiting) during an average 24-hour weekday period. Of this total, approximately 12 total site trips (7 entering and 5 exiting) are expected to occur during the weekday AM peak hour while approximately 20 total site trips (10 entering and 10 exiting) are expected to occur during the weekday PM peak hour.

Additionally, a turning movement count was conducted at the driveway of a similar facility along US 64 from April 11, 2008 to April 13, 2008. The results of the count indicate that the highest number of vehicles entering and exiting the facility was nine (9), which occurred during a period of clear weather when it would be expected that site traffic would be the heaviest. These results further indicate that the proposed type of facility does not generate a significant number of vehicle trips.

#### **Site Trip Distribution**

As indicated, access to the site is proposed via one (1) right-in entrance driveway and one (1) right-out exit driveway along US 64. Thus, all site traffic will enter and exit the site from/to eastbound US 64. Due to the low number of projected trips, the directional distribution is relatively insignificant although a portion of the site traffic will be required to make a U-turn maneuver at an adjacent median break in order to either enter or exit the site from/to westbound US 64. Again, it should be noted that the U-turn maneuvers would be expected to be completed with minimal conflicts with US 64 traffic since, as noted, the peak periods for site traffic will be during the weekend hours when US 64 traffic is lower.

# **Combined Traffic**

For the purpose of this preliminary traffic assessment, it is assumed that the proposed site will be built-out in 2009. Thus, applying a 6% growth rate to the existing (2008) traffic volumes, an ADT of approximately 22,000 vpd along US 64 is estimated for combined (2009) traffic conditions. Assuming similar assumptions for peak hour and directional distribution, it can be assumed that approximately 1,100 vph can be expected along each direction of US 64 during both the weekday AM and PM peak hours. As shown on Table 1, a minimal amount of traffic is expected to be generated by the proposed site during the AM and PM peak hours thus, the impact to US 64 traffic is expected to be insignificant, even during the weekday peak hours when US 64 is heaviest.



## **Conclusions and Recommendations**

The majority of traffic expected to be generated by the site will occur during the non-peak hours for US 64 traffic, most notably during the Saturday morning and Sunday evening hours. Additionally, the site traffic will typically occur on a seasonal basis, with minimal traffic generated during the cold weather months. It should also be noted that the preliminary site plan indicates that a separate right-turn lane along US 64 into the site is currently proposed which will provide for a safe ingress into the site and will allow for site traffic to be removed from the US 64 traffic flow. Thus, it is my professional opinion that the proposed PortSide Boat & RV Storage facility will have negligible impact to traffic along US 64.

If you should have any questions or comments relative to this preliminary traffic assessment, please feel free to contact me at (919) 872-5115.

Sincerely yours,

Ramey Kemp & Associates, Inc.

Jason Hamilton, P.E., PTOE Transportation Manager

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