

## Memo

To: Joshua Langen, AICP – Senior Planner, Town of Kannapolis

From: Greg Welsh, PE – Senior Project Manager, Burton Engineering

Re: **Rezoning Traffic Information for Proposed Kannapolis Logistics Park**

Date: October 4, 2016

The following information is being provided for the rezoning case for the proposed Kannapolis Logistics Park Project. The provided information follows the requirements set out in the City of Kannapolis Development Ordinance (Appendix B, Section B.11).

1. Site Description – The development site is located on the north side of Davidson Highway (NC Highway 73) approximately 1,500 feet west of Kannapolis Parkway in the City of Kannapolis, Cabarrus County, North Carolina. The site is partially bounded to the north by Macedonia Church Road and Barr Road. Davidson Highway is a 2-lane undivided roadway with a speed limit of 55 miles per hour. Macedonia Church Road and Barr Road are also 2-lane undivided roadways, both having a speed limit of 45 miles per hour. This project includes a proposed realignment of Macedonia Church Road west of Barr Road.

The main entrance to the site will be off Davidson Highway. The drive entrance will align with the proposed signalized intersection currently being studied for a mixed used development located in the southwest quadrant of Davidson Highway/Kannapolis Parkway intersection. Additional unsignalized access points will be located on Davidson Highway west of the main entrance and two entrances off of Macedonia Church Road. A conceptual site plan is attached for reference.

The proposed development consists of a 1,210,000 square foot warehouse / distribution facility with approximately 180 available dock positions, approximately 650 trailer parking spaces, and approximately 950 employee parking spaces. For the purpose of this analysis, the office component of the project is assumed to be minimum (10,000 SF) which is typical for distribution facilities of this nature. This project is consistent with the City's Future Land Use Plan for the area and with other recent projects in the vicinity having direct access to Kannapolis Parkway and/or Davidson Highway.

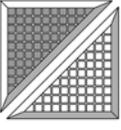
2. Study Area – At the conclusion of the rezoning phase and during the design phase of the project, Burton Engineering anticipates including the following intersections in the Traffic Impact Study:

- Davidson Highway and Kannapolis Parkway
  - Davidson Highway and Odell School Road
  - Macedonia Church Road and Kannapolis Parkway
  - Trinity Church Road and Kannapolis Parkway
3. Existing Traffic Conditions – For the purpose of the rezoning application, the existing traffic volumes for Davidson Highway (NC Highway 73) were extrapolated from NCDOT's Highway 73 Corridor Study prepared in 2003. Since this study was prepared, numerous improvements have been made including widening of I-85, significant I-85 interchange improvements (specifically Kannapolis Parkway and Highway 73 interchanges), construction of Kannapolis Parkway, and completion of I-485. The average daily traffic volume on Davidson Highway is estimated to be 19,000 vehicles per day (interpolated from projected data). Davidson Highway (Highway 73) is planned to be upgraded to a 4 lane divided highway (refer to State Transportation Improvement Program number R-5706). Funding for this particular project has not yet been allocated.

Existing traffic volumes and capacities for Kannapolis Parkway, Macedonia Church Road, and Barr Road were obtained from the NCDOT's 2014 AADF Traffic Volume. The 2014 average daily traffic volume for Kannapolis Parkway just north of Trinity Church Road was 14,000. Kannapolis Parkway is a four-lane divided facility with a capacity of approximately 40,000 vehicles per day. The 2014 average daily traffic volume for Macedonia Church Road and Barr Road were 2,500 VPD and 1,900 VPD, respectively.

The Davidson Highway / Kannapolis Parkway intersection and Macedonia Church Road / Kannapolis Parkway intersection are both signalized. Burton Engineering anticipated that as part of the design phase of this project, the timing of these signalized intersections will be evaluated.

4. Horizon Year and Background Traffic Growth – The proposed project is contemplated as a single-phased project but the possibility exists that the developer could split the building in multiple phases. For the purchase of this analysis, it is assumed that the project will be built as one phase. Further discussions between the developer, City Planning, and the NCDOT will occur during the design phase to better understand the timing of this project relative to other public and private road improvement projects.
5. Trip Generation, Trip Reduction, and Trip Distribution – The following table (Table 1) summarizes the estimated average weekday trips for the proposed industrial development:



Description/ITE Code	Units	Expected Units	Total Generated Trips				Total Distribution of Generated Trips				
			Daily	AM Hour	PM Hour	Hour	AM In	AM Out	Pass-By	PM In	PM Out
Warehousing 150	KSP <sup>2</sup>	1200.0	4,272	360	384	284	76	0	96	288	0
General Office 710	KSP <sup>2</sup>	10.0	110	16	15	14	2	0	3	12	0
<b>TOTAL NEW TRIPS</b>			<b>4,382</b>	<b>376</b>	<b>399</b>	<b>298</b>	<b>77</b>	<b>0</b>	<b>99</b>	<b>300</b>	<b>0</b>

Table 1 – Trip Generation Table for Kannapolis Logistics Park

Note: Traffic distributions will be provided to the City of Kannapolis and the NCDOT to review and approve during the scoping process for the Traffic Impact Study.

6. Traffic Assignment – Study area intersection traffic volumes for the no-build and build out scenarios will be calculated and illustrated in figures in the Traffic Impact Study.
7. Impact Analysis – The impact of the proposed development on the study area intersections will be identified in the Traffic Impact Study.
8. Mitigation / Alternatives – The Traffic Impact Study will identify alternatives for achieving the traffic service standards listed in Article 14 of the City of Kannapolis UDO and in addition shall:
  - Identify right-of-way abandonment and right-of-way dedication required for realignment of Macedonia Church Road and proposed and/or future widening of Davidson Highway to implement mitigation strategies.
  - Identify suggested phasing of improvements where needed to maintain compliance with traffic services standards; and
  - Identify the anticipated costs of recommended improvements.

Overall, our findings indicate that the proposed project is consistent with the City's Future Land Use Plan for the area. Furthermore, it can be shown that area roads have excess capacity or can be widened to provide the capacity necessary to support the proposed project. Specific improvements that will be constructed by the developer to mitigate the additional traffic will be addressed in the Traffic Impact Study.

Please feel free to contact me if you have any questions regarding this traffic information.

Burton Engineering Associates, Inc.



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