



## REPORT

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Subject: Knox and American II Development Trip Generation Review

### INTRODUCTION

The planned Knox and American II Development, located at 1801 American Boulevard West, includes 99 apartment units and a total of 156 parking spaces of which 50 spaces are within the garage and 23 spaces are located along 80<sup>th</sup> ½ Street. This site is within Sub-Area D of the Penn-American District Plan area, which was first identified in 2008. As part of previous planning efforts, various land use redevelopment assumptions and development densities were evaluated from a traffic operation and/or parking perspective, which are documented within the following studies:

- *Penn-American District Plan - Traffic Operations Analysis, dated September 3, 2008*
- *Penn-American Phase II Traffic Study Update, dated August 5, 2013*
- *Penn-American Phase III Parking Study, dated July 20, 2018; Addendum - October 3, 2018*

Thus, TC2 was asked to review the previous traffic studies, land use, and trip generation assumptions, develop a trip generation estimate for the proposed development, and qualitatively assess any potential traffic impacts or considerations as they relate to the previous planning efforts and site configuration. The following information provides a summary of the review findings.

### BACKGROUND

As noted earlier, the proposed Knox and American II Development is within Sub-Area D of the 2008 Penn-American District Plan. The previous plan assumed complete redevelopment of Sub-Area D and evaluated different development intensities (i.e., floor area ratios (FAR) of 1.0 and 1.5). In general, the previous study included and evaluated the following development assumptions within Sub-Area D:

- 60,000 to 90,000 SF of Office
- 40,000 to 60,000 SF of Retail
- 408 to 612 Units of Residential

The 2013 traffic study update focused on redevelopment of Sub-Area E, which concluded that the newly proposed redevelopment generated approximately 20 to 25% less p.m. peak hour trips than originally planned. The subsequent 2018 parking studies focused on redevelopment of Sub-Area D, which included the existing Red Lobster restaurant, 248 residential units, and either a 124-room hotel or an additional 200-seat restaurant. However, a trip generation assessment was not completed as part of the 2018 studies given the development was less than originally envisioned. It is important to note that from the 2018 study, only the residential units were constructed, and the Red Lobster remains active. The location of the proposed Knox and American II development is currently vacant.

## TRIP GENERATION COMPARISON

To illustrate how previous planning efforts relate to the proposed development, a detailed trip generation comparison was developed. This comparison, shown in Table 1, includes the previous land use scenarios evaluated as part of the *Penn-American District Plan – Traffic Operations Analysis as well as the trip generation of the proposed development*. Note that the trip generation estimates are based only on the p.m. peak hour and a daily basis, which is consistent with previous planning efforts. No multimodal or multi-use reductions were applied.

Table 1 Sub-Area D Trip Generation Comparison

Land Use (ITE Code)	Size	P.M. Peak Hour		Daily
		In	Out	
Pre-2008 Study – Sub-Area D				
Existing Estimated from Study Report - Table 1		133	133	3,892
2008 Study – Sub-Area D *				
Office (710)	60,000 SF	15	74	662
Retail (820)	40,000 SF	72	78	1,718
Residential (230)	408 units	142	70	2,390
Sub-Area D Total		229	222	4,770
2023 Sub-Area D with the Knox and American II Development				
Restaurant (932) – Red Lobster	8,500 SF	47	30	910
Residential (221) – Knox and American II	99 units	24	15	450
Residential (221) – District Apartments	248 units	59	38	1,126
Sub-Area D Total		130	83	2,486
Change from 2008 Study (+/-)		(-99)	(-139)	(-2,284)

\* Trip Generation represents the smaller of the redevelopment scenarios (i.e., FAR 1.0).

Results of the trip generation comparison indicate that with the proposed Knox and American II Development, Sub-Area D is estimated to generate a total of 213 p.m. peak hour and 2,486 daily trips. This level of p.m. peak hour trip generation represents a 20% reduction from pre-2008 conditions, as well as nearly a 50% reduction from the assumed land use within the 2008 study for Sub-Area D. The difference is primarily related to redevelopment within this sub-area being less intense than previously planned. Note that even with redevelopment of the Red Lobster site, the overall trip generation for Sub-Area D would be less than previously proposed/evaluated.

## CONCLUSIONS

The Knox and American II Development is expected to generate 39 p.m. peak hour and 450 daily trips. At this level of trip generation, along with the ability for residents to utilize multiple roadways to access American Boulevard and/or Knox Avenue, the overall impact to adjacent roadway network and intersection capacity is expected to be minimal. Thus, no infrastructure changes are needed from an intersection capacity perspective to accommodate the proposed Knox and American II Development.