



April 26, 2013

■  
P.O. Box 33068  
Raleigh, North Carolina  
27636-3068

Angela Birchett  
Chatham County Planning Department  
12 East Street  
Pittsboro, NC 27312

Re: Polks Village Trip Generation – Alternate Scenario

Dear Ms. Birchett:

Kimley-Horn and Associates, Inc. previously performed a trip generation analysis for the Polks Village development as part of the petitioned to amend the list of allowable land uses for the site. The results of that analysis were summarized in a letter to Mr. Jeff Loflin, the NCDOT District Engineer, dated February 28, 2013. It is our understanding that the applicant may pursue an alternate development scenario with a slightly different mix of land uses. Therefore, we have performed an additional trip generation comparison of this alternate set of land uses versus the land uses from the Polks Landing TIA dated January 11, 2008.

The land uses studied in the January 2008 TIA consisted of a 5,000 square foot (SF) day care center; 49,000 SF of general office space; 32,200 SF of general retail space; a drive-through pharmacy; a drive-in bank; and a drive-through fast-food restaurant. The potential alternate development scenario would consist of a 96-bed assisted living facility, a 10,000 SF day care center, 9,600 SF of general office space, 14,000 SF of medical office space, 9,000 SF of general retail space, a 7,380 SF auto parts sales store, and a 30,000 SF grocery store.

The traffic generation potential of the alternate land uses was determined using the traffic generation rates published in the *ITE Trip Generation Handbook* (Institute of Transportation Engineers, Ninth Edition, 2012) and is included in Table 1. Detailed trip generation calculations are attached. Internal capture was applied using ITE methodology and was capped at 10 percent as in the January 2008 TIA. Pass-by rates were also applied based on ITE methodology. It should be noted that with change in uses, the pass-by capture for the site has also decreased.

Table 1 ITE Traffic Generation (Vehicles) – Alternate Land Use Scenario							
LUC	Land Use	24 Hour		AM Peak		PM Peak	
		In	Out	In	Out	In	Out
254	Assisted Living (96 beds)	139	139	8	5	9	12
565	Day Care Center (10,000 SF)	371	371	65	57	58	65
710	General Office (9,600 SF)	53	53	13	2	2	12
720	Medical Office (14,000 SF)	179	179	26	7	14	36
820	Shopping Center (9,000 SF)	710	710	22	14	57	62
843	Auto Parts Sales (7,380 SF)	224	224	8	8	21	22
850	Supermarket (30,000 SF)	1,700	1,700	63	39	163	157
Subtotal		3,376	3,376	205	132	324	366
Internal Capture		338	338	0	0	34	34
Pass-by Capture		785	785	0	0	78	79
Net New External Traffic		2,253	2,253	205	132	212	253

Table 2 compares the potential trip generation of the proposed land uses with those included in the January 2008 TIA.

Table 2 Traffic Generation Comparison						
Scenario	24 Hour		AM Peak		PM Peak	
	In	Out	In	Out	In	Out
Net New External Traffic – From TIA	2,471	2,471	281	167	232	331
Net New External Traffic – Alternate Land Use Scenario	2,253	2,253	205	132	212	253
Difference	-218	-218	-76	-35	-20	-78
Percent Change	-8.8%		-24.8%		-17.4%	

Table 2 shows that when compared to the land uses from the TIA, the trip generation potential of the alternate land uses results in a net decrease of 218 daily trips in and 218 daily trips out on a typical weekday (almost 9% decrease) with 76 fewer trips entering and 35 fewer trips exiting during the AM peak hour (approximately 25% decrease) and 20 fewer trips entering and 78 fewer trips exiting during the PM peak hour (approximately 17% decrease).

It should be noted that the trip generation potential of the alternate land uses is also lower than that of the land uses proposed in the Trip Generation letter to Mr. Reuben Blakley dated October 14, 2010 and approved by the District office on December 2, 2010.

Based on this comparison of the trip generation potential of this alternate set of land uses versus those analyzed in the January 11, 2008 TIA, there are no requested changes to the required improvements for the Polks Village development.

Please feel free to contact me with any questions or comments.

Sincerely,

KIMLEY-HORN AND ASSOCIATES, INC.  
NC License #F-0102

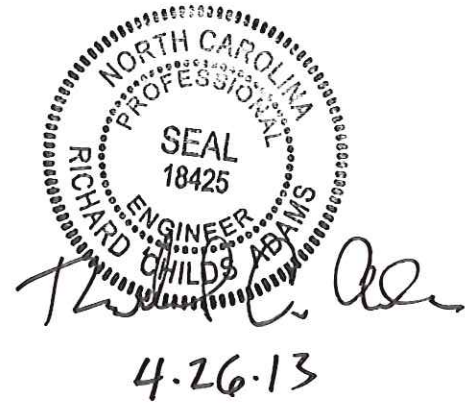


Richard C. Adams, P.E.  
Vice President

RCA/jtf

Attachments: Trip Generation

CC: Brantley Powell, HBP Properties, LLC



**Polks Village**

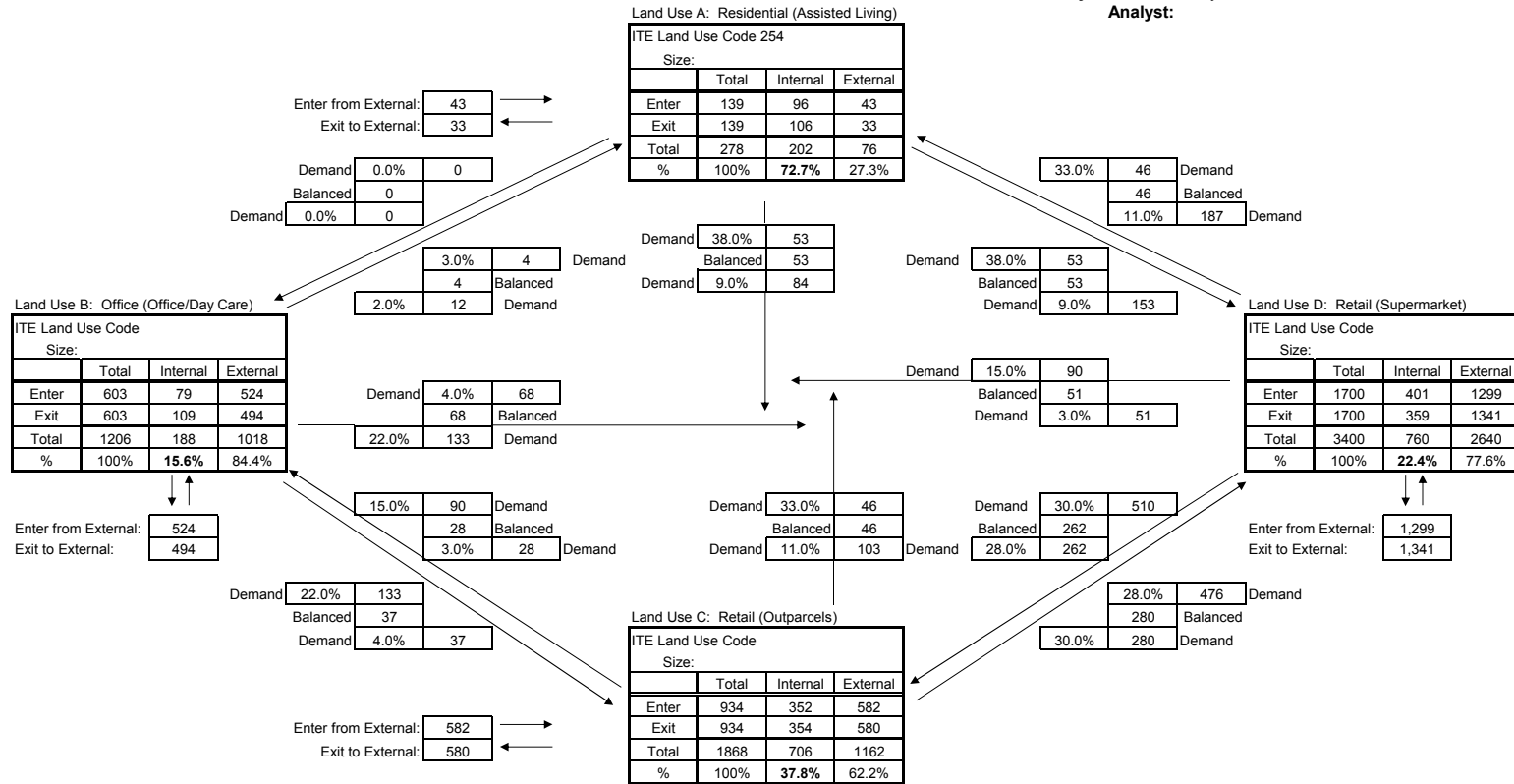
**Trip Generation Comparison - Alternate Land Use Scenario**

Land Use	Intensity		Daily			AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out	Total	In	Out
254 Assisted Living	96	beds	278	139	139	13	8	5	21	9	12
565 Day Care Center	10,000	s.f.	742	371	371	122	65	57	123	58	65
710 General Office Building <sup>1</sup>	9,600	s.f.	106	53	53	15	13	2	14	2	12
720 Medical Office Building	14,000	s.f.	358	179	179	33	26	7	50	14	36
820 Shopping Center	9,000	s.f.	1,420	710	710	36	22	14	119	57	62
843 Automobile Parts Sales	7,380	s.f.	448	224	224	16	8	8	43	21	22
850 Supermarket	30,000	s.f.	3,400	1,700	1,700	102	63	39	320	163	157
<b>Subtotal</b>			<b>6,752</b>	<b>3,376</b>	<b>3,376</b>	<b>337</b>	<b>205</b>	<b>132</b>	<b>690</b>	<b>324</b>	<b>366</b>
<i>Internal Capture</i>											
Assisted Living			28	14	14	0	0	0	2	1	1
Day Care Center			74	37	37	0	0	0	12	6	6
General Office Building			11	6	5	0	0	0	1	1	0
Medical Office Building			36	18	18	0	0	0	5	2	3
Shopping Center			142	71	71	0	0	0	12	6	6
Automobile Parts Sales			45	22	23	0	0	0	4	2	2
Supermarket			340	170	170	0	0	0	32	16	16
<b>Internal Capture Total</b>	<b>10.00%</b>		<b>676</b>	<b>338</b>	<b>338</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>68</b>	<b>34</b>	<b>34</b>
<b>Driveway Volumes</b>			<b>6,076</b>	<b>3,038</b>	<b>3,038</b>	<b>337</b>	<b>205</b>	<b>132</b>	<b>622</b>	<b>290</b>	<b>332</b>
<i>Pass-By Traffic (ITE)</i>											
	<u>AM</u>	<u>PM</u>									
Shopping Center	0%	34%	360	180	180	0	0	0	36	17	19
Automobile Parts Sales	0%	43%	170	85	85	0	0	0	17	8	9
Supermarket	0%	36%	1,040	520	520	0	0	0	104	53	51
<i>Subtotal</i>	<b>22.75%</b>		<b>1,570</b>	<b>785</b>	<b>785</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>157</b>	<b>78</b>	<b>79</b>
10% Adjacent Street Traffic			2,980	1,490	1,490	281	141	141	298	149	149
Pass-By Total:	<b>22.75%</b>		<b>1,570</b>	<b>785</b>	<b>785</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>157</b>	<b>78</b>	<b>79</b>
<b>Total Net New External Trips</b>			<b>4,506</b>	<b>2,253</b>	<b>2,253</b>	<b>337</b>	<b>205</b>	<b>132</b>	<b>465</b>	<b>212</b>	<b>253</b>
<b>Total Net New External Trips From 2008 TIA</b>			<b>4,942</b>	<b>2,471</b>	<b>2,471</b>	<b>448</b>	<b>281</b>	<b>167</b>	<b>563</b>	<b>232</b>	<b>331</b>
<b>Difference vs. 2008 TIA</b>			<b>-436</b>	<b>-218</b>	<b>-218</b>	<b>-111</b>	<b>-76</b>	<b>-35</b>	<b>-98</b>	<b>-20</b>	<b>-78</b>
<b>Percent Difference</b>			<b>-8.8%</b>	<b>-8.8%</b>	<b>-8.8%</b>	<b>-24.8%</b>	<b>-27.0%</b>	<b>-21.0%</b>	<b>-17.4%</b>	<b>-8.6%</b>	<b>-23.6%</b>
<b>Total Net New External Trips From 2010 Site Plan</b>			<b>4,938</b>	<b>2,469</b>	<b>2,469</b>	<b>401</b>	<b>261</b>	<b>140</b>	<b>466</b>	<b>196</b>	<b>270</b>
<b>Difference vs. 2010 Site Plan</b>			<b>-432</b>	<b>-216</b>	<b>-216</b>	<b>-64</b>	<b>-56</b>	<b>-8</b>	<b>-1</b>	<b>16</b>	<b>-17</b>
<b>Percent Difference</b>			<b>-8.7%</b>	<b>-8.7%</b>	<b>-8.7%</b>	<b>-16.0%</b>	<b>-21.5%</b>	<b>-5.7%</b>	<b>-0.2%</b>	<b>8.2%</b>	<b>-6.3%</b>

<sup>1</sup> For the Office Space land use (less than 50,000 s.f.), the peak hour rates were used.

**ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET**  
 (Source: Chapter 7, ITE Trip Generation Handbook, October 1998)

**Project Number:**  
**Project Name:** Polks Village  
**Scenario:** Daily  
**Analysis Period:** Daily  
**Analyst:**

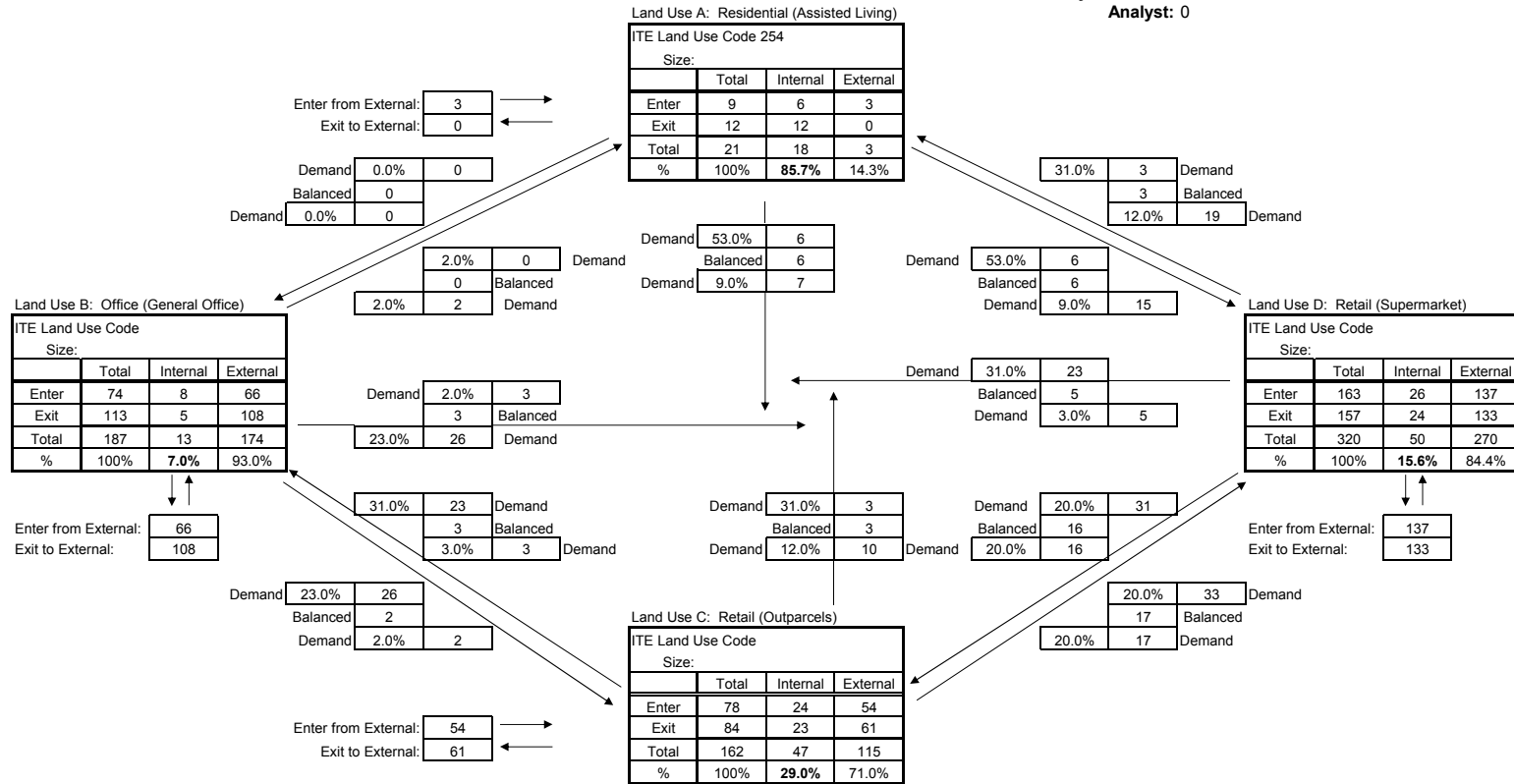


NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT					
Category	Land Use				Total
	A	B	C	D	
Enter	43	524	582	1,299	2,448
Exit	33	494	580	1,341	2,448
Total	76	1,018	1,162	2,640	4,896
Single Use Trip Gen Estimate	278	1,206	1,868	3,400	6,752

ITE Overall Internal Capture Rate = **27.49%**

**ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET**  
 (Source: Chapter 7, ITE Trip Generation Handbook, October 1998)

**Project Number:** 000000000  
**Project Name:** Polks Village  
**Scenario:** PM peak hour  
**Analysis Period:** PM Peak  
**Analyst:** 0



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT					
Category	Land Use				Total
	A	B	C	D	
Enter	3	66	54	137	260
Exit	0	108	61	133	302
<b>Total</b>	<b>3</b>	<b>174</b>	<b>115</b>	<b>270</b>	<b>562</b>
Single Use Trip Gen Estimate	21	187	162	320	690

**ITE Overall Internal Capture Rate = 18.55%**