

# WELLS + ASSOCIATES

## MEMORANDUM



**To:** Robert A. Gibson  
Arlington County Department of Environmental Services

**From:** Christopher Kabatt P.E.  
Kevin Berger

**Re:** Pentagon Centre PDSP Amendment

**Subject:** Trip Generation Comparison  
Arlington County, Virginia

**Date:** June 12, 2014  
Revised April 2, 2015

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### Introduction

Wells + Associates has been requested to prepare a trip generation comparison analysis for the Pentagon Centre phased development site plan (PDSP) amendment proposal compared to the approved PDSP. The site is located in Pentagon City in Arlington County, and is bounded by 12<sup>th</sup> Street South to the north, South Hayes Street to the west, South Fern Street to the east, and 15<sup>th</sup> Street South to the south. The parcel is presently developed with 337,900 square feet of retail space.

Pentagon Centre was originally approved as a PDSP (Site Plan #297) on July 21, 2008 by the Arlington County Board. The approved PDSP has a mix of uses including 776,982 square feet of office, 327,070 square feet of retail, 600 residential dwelling units, and 250 hotel rooms, for a total development size of 1,829,520 square feet. The Applicants, PL Pentagon LLC and Kimco Realty Corporation, requested a PDSP Amendment and Major Site Plan Amendment which would result in an alteration to the proportions of land uses and a slight increase in the overall development size. The proposed PDSP includes 609,200 square feet of office, 369,230 square feet of retail, 714 residential dwelling units (695,000 square feet), and 160 hotel rooms (156,200 square feet), for a total development size of 1,829,630 square feet.

### Trip Generation Analysis

A trip generation estimate comparing the existing use and the two PDSP programs by phase was performed using standardized rates and/or equations used by the Institute of Transportation Engineers (ITE) Trip Generation, 9<sup>th</sup> Edition and non-auto



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### MEMORANDUM

mode splits based on the 2005 Development-Related Ridership Survey Final Report published by the Washington Metropolitan Area Transit Authority, March 2006. The results of these calculations are presented in the attached tables. Table 1 shows a summary of the comparison by phase for the proposed and approved plans. Tables 2 through 7 show the trip generation estimates and comparison to the existing retail center for each phase of the proposed and approved PDSPs.

**Existing.** As shown in Table 2, the existing retail center generates 172 AM peak hour trips (107 in, 65 out); 718 PM peak hour trips (344 in, 374 out); 1,023 Saturday mid-day peak hour trips (532 in, 491 out); and 558 Sunday mid-day peak hour trips (273 in, 285 out). Additionally, the retail center generates 7,942 weekday daily trips; 10,545 Saturday daily trips; and 4,520 Sunday daily trips.

**Phase 1.** Phase 1 of the proposed PDSP includes 357,800 square feet of retail, the majority of which is the existing shops and Costco, and 714 residential units in two buildings. The approved PDSP includes 358,795 square feet of retail, of which the majority is the existing shops and Costco, and 489,911 square feet of office. Table 1 summarizes the Phase 1 proposed and approved trip generation comparison. Tables 2 and 5 show the trip generation estimates for each use and the comparison to the existing retail center.

As shown in Table 1, compared to the approved PDSP, Phase 1 of the proposed PDSP will generate 205 fewer AM peak hour trips; 151 fewer PM peak hour trips; 55 additional Saturday mid-day peak hour trips; and 125 additional Sunday mid-day peak hour trips. Also, the proposed PDSP will generate 340 fewer weekday daily trips, 1,791 additional Saturday daily trips and 1,770 additional Sunday daily trips compared to the approved PDSP.

In addition to the existing uses, Phase 1 of the proposed PDSP will add 173 AM peak hour trips, 217 PM peak hour trips, 209 Saturday mid-day peak hour trips, and 202 Sunday mid-day peak hour trips to the road network. Also, the proposed PDSP will generate 2,348, 2,849, and 2,328 weekday, Saturday, and Sunday daily trips, respectively, in addition to the existing retail uses.

Comparatively, Phase 1 of the approved PDSP will add 378 AM peak hour trips, 368 PM peak hour trips, 154 Saturday mid-day peak hour trips, and 77 Sunday mid-day peak hour trips beyond those generated by the existing retail uses. Also, the proposed PDSP will generate 2,688, 1,058, and 558 weekday, Saturday, and Sunday daily trips, respectively, in addition to the existing retail uses.

**Phase 2.** Phase 2 of the proposed PDSP includes 344,130 square feet of retail (including the existing Costco which remains), 714 residential units in two buildings, and 406,200 square feet of office in two buildings. The approved PDSP includes



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### MEMORANDUM

423,195 square feet of retail (similar to the proposed such that the existing Costco remains), 489,911 square feet of office, and 144 residential dwelling units. Table 1 summarizes the Phase 2 proposed and trip generation comparison. Tables 3 and 6 show the trip generation estimates for each use and the comparison to the existing retail center.

As shown in Table 1, compared to the approved PDSP, Phase 2 of the proposed PDSP will generate 37 additional AM peak hour trips; 15 fewer PM peak hour trips; 32 fewer Saturday mid-day peak hour trips; and 3 fewer Sunday mid-day peak hour trips. Also, the proposed PDSP will generate 118 additional weekday daily trips, 462 additional Saturday daily trips and 579 additional Sunday daily trips compared to the approved PDSP.

In addition to the existing uses, Phase 2 of the proposed PDSP will add 483 additional AM peak hour trips, 486 PM peak hour trips, 227 Saturday mid-day peak hour trips, and 215 Sunday mid-day peak hour trips. Also, the proposed PDSP will generate 4,199, 3,122, and 2,377 weekday, Saturday, and Sunday daily trips, respectively, in addition to the existing retail uses.

Comparatively Phase 2 of the approved PDSP will add 446 AM peak hour trips, 501 PM peak hour trips, 309 Saturday mid-day peak hour trips, and 218 Sunday mid-day peak hour trips. Also, the proposed PDSP will generate 4,081, 2,660, and 1,798 weekday, Saturday, and Sunday daily trips, respectively, in addition to the existing retail uses.

**Phase 3 - Build-out.** Phase 3 of the proposed PDSP includes 369,230 square feet of retail, 714 residential units in two buildings, 609,200 square feet of office in two buildings, and 160 hotel rooms. The approved PDSP includes 327,070 square feet of retail, 600 residential units, 776,982 square feet of office, and 250 hotel rooms. Table 1 summarizes the Phase 3 proposed and approved trip generation comparison. Tables 4 and 7 show the trip generation estimates for each use and the comparison to the existing retail center.

As shown in Table 1, compared to the approved PDSP, Phase 3 of the proposed PDSP will generate 95 fewer AM peak hour trips; 67 fewer PM peak hour trips; 6 additional Saturday mid-day peak hour trips; and 32 additional Sunday mid-day peak hour trips. Also, the proposed PDSP will generate 350 fewer weekday daily trips, 271 additional Saturday daily trips and 270 additional Sunday daily trips compared to the approved PDSP.

In addition to the existing uses, Phase 3 of the proposed PDSP will add 702 AM peak hour trips, 740 PM peak hour trips, 487 Saturday mid-day peak hour trips, and 363 Sunday mid-day peak hour trips. Also, the proposed PDSP will generate 6,624, 5,186,



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### MEMORANDUM

and 3,779 weekday, Saturday and Sunday daily trips, respectively in addition to the existing retail uses.

Comparatively Phase 3 of the approved PDSP will add 797 AM peak hour trips, 807 PM peak hour trips, 481 Saturday mid-day peak hour trips, and 331 Sunday mid-day peak hour trips. Also, the proposed PDSP will generate 6,974, 4,915, and 3,509 weekday, Saturday, and Sunday daily trips, respectively, in addition to the existing retail uses.

### **Conclusion**

In summary, Phase 1 of the proposed PDSP will generate fewer weekday peak hour and daily trips compared to the approved PDSP because of the shift of residential units to the earlier phase compared to the office use as envisioned with the approved PDSP. On Saturdays and Sundays, Phase 1 of the proposed PDSP will generate additional trips during peak hours and on a daily basis. The number of trips generated with Phase 2 of the proposed PDSP varies nominally compared to the number of trips generated with Phase 2 of the approved PDSP. Phase 3, project build-out, of the proposed PDSP will generate fewer AM and PM weekday peak hour trips and daily trips, and a nominal increase in Saturday and Sunday peak hour and daily trips, compared to the approved PDSP.

It is concluded from this analysis that the proposed PDSP for Pentagon Centre would result in overall improved impact to the surrounding road network compared to the approved PDSP during the weekday commuter peak hours and on a daily basis. With the nominal increase in Saturday and Sunday peak hour trips an insignificant impact is anticipated to the adjacent road network.

Questions regarding this document should be directed to Wells + Associates.

CC: Geoffrey Glazer  
Jonathan McGowan  
Evan Pritchard, Esq.

Table I  
 Pentagon Centre PDSP - Proposed versus Approved by Phase  
 Site Trip Generation Summary (1)

Land Use	AM Peak Hour			PM Peak Hour			Saturday Mid-Day Peak Hour			Sunday Mid-Day Peak Hour			Weekday Daily Trips	Saturday Daily Trips	Sunday Daily Trips
	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
<b>Phase One</b>															
Proposed Trips	146	199	345	481	454	935	644	588	1,232	372	388	760	10,290	13,394	6,848
Approved Trips	437	113	550	417	669	1,086	615	562	1,177	314	321	635	10,630	11,603	5,078
<b>Proposed Trips minus Approved Trips</b>	<b>(291)</b>	<b>86</b>	<b>(205)</b>	<b>64</b>	<b>(215)</b>	<b>(151)</b>	<b>29</b>	<b>26</b>	<b>55</b>	<b>58</b>	<b>67</b>	<b>125</b>	<b>(340)</b>	<b>1,791</b>	<b>1,770</b>
<b>Phases One and Two</b>															
Proposed Trips	421	234	655	521	683	1,204	681	619	1,300	382	391	773	12,141	13,667	6,897
Approved Trips	465	153	618	488	731	1,219	696	636	1,332	384	392	776	12,023	13,205	6,318
<b>Proposed Trips minus Approved Trips</b>	<b>(44)</b>	<b>81</b>	<b>37</b>	<b>33</b>	<b>(48)</b>	<b>(15)</b>	<b>(15)</b>	<b>(17)</b>	<b>(32)</b>	<b>(2)</b>	<b>(1)</b>	<b>(3)</b>	<b>118</b>	<b>462</b>	<b>579</b>
<b>Phases One, Two, and Three</b>															
Proposed Trips	585	289	874	608	850	1,458	795	715	1,510	452	469	921	14,566	15,731	8,299
Approved Trips	678	291	969	605	920	1,525	795	709	1,504	437	452	889	14,916	15,460	8,029
<b>Proposed Trips minus Approved Trips</b>	<b>(93)</b>	<b>(2)</b>	<b>(95)</b>	<b>3</b>	<b>(70)</b>	<b>(67)</b>	<b>0</b>	<b>6</b>	<b>6</b>	<b>15</b>	<b>17</b>	<b>32</b>	<b>(350)</b>	<b>271</b>	<b>270</b>

Notes:

(1) Based on ITE Trip Generation 9th Edition rates and/or equations.

Table 2  
 Pentagon Centre PDSP - Proposed Phase One  
 Site Trip Generation Summary (1)

Land Use	ITE Code	Size	Units	AM Peak Hour			PM Peak Hour			Saturday Mid-Day Peak Hour			Sunday Mid-Day Peak Hour			Weekday Daily Trips	Saturday Daily Trips	Sunday Daily Trips
				IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
<b>Existing Uses</b>																		
Retail	820	337,900 SF		201	123	324	650	705	1,355	1,003	926	1,929	516	538	1,054	14,985	19,897	8,279
Non-Auto Mode Share Reduction	47%			(94)	(58)	(152)	(306)	(331)	(637)	(471)	(435)	(906)	(243)	(253)	(496)	(7,043)	(9,352)	(4,009)
Retail Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
Non-Residential Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
<b>Existing Trips</b>				<b>107</b>	<b>65</b>	<b>172</b>	<b>344</b>	<b>374</b>	<b>718</b>	<b>532</b>	<b>491</b>	<b>1,023</b>	<b>273</b>	<b>285</b>	<b>558</b>	<b>7,942</b>	<b>10,545</b>	<b>4,520</b>
<hr/>																		
<b>Proposed PDSP</b>																		
Retail	820	357,800 SF		213	130	343	676	732	1,408	1,041	961	2,002	547	569	1,116	15,553	20,628	9,031
Non-Auto Mode Share Reduction	47%			(100)	(61)	(161)	(318)	(344)	(662)	(489)	(452)	(941)	(257)	(267)	(524)	(7,310)	(9,695)	(4,245)
Retail Subtotal				113	69	182	358	388	746	552	509	1,061	290	302	592	8,243	10,933	4,786
Non-Residential Subtotal				113	69	182	358	388	746	552	509	1,061	290	302	592	8,243	10,933	4,786
Multi-Family Residential <sup>(2)</sup>	220	714 DU		71	283	354	267	143	410	200	171	371	178	186	364	4,450	5,349	4,483
Non-Auto Mode Share Reduction	54%			(38)	(153)	(191)	(144)	(77)	(221)	(108)	(92)	(200)	(96)	(100)	(196)	(2,403)	(2,888)	(2,421)
Residential Subtotal				33	130	163	123	66	189	92	79	171	82	86	168	2,047	2,461	2,062
<b>Proposed PDSP Trips</b>				<b>146</b>	<b>199</b>	<b>345</b>	<b>481</b>	<b>454</b>	<b>935</b>	<b>644</b>	<b>588</b>	<b>1,232</b>	<b>372</b>	<b>388</b>	<b>760</b>	<b>10,290</b>	<b>13,394</b>	<b>6,848</b>
<hr/>																		
<b>Proposed Trips minus Existing Trips</b>				<b>39</b>	<b>134</b>	<b>173</b>	<b>137</b>	<b>80</b>	<b>217</b>	<b>112</b>	<b>97</b>	<b>209</b>	<b>99</b>	<b>103</b>	<b>202</b>	<b>2,348</b>	<b>2,849</b>	<b>2,328</b>

Notes:

(1) Based on ITE Trip Generation 9th Edition rates and/or equations.

(2) Saturday and Sunday peak hour directional distributions are not available for LUC 220 and are instead based on directional distributions of LUC 230 (Residential Condominium/Townhome).

(3) Assumptions:

Non-auto mode split:  
 Retail 47%    Office 46%    Residential 54%    Hotel 0%

Transit reductions based on 2005 Development-Related Ridership Survey Final Report: Washington Metropolitan Area Transit Authority, March 2006.

Table 3  
 Pentagon Centre PDSP - Proposed Phases One and Two  
 Site Trip Generation Summary (1)

Land Use	ITE Code	Size	Units	AM Peak Hour			PM Peak Hour			Saturday, Mid-Day Peak Hour			Sunday, Mid-Day Peak Hour			Weekday Daily Trips	Saturday Daily Trips	Sunday Daily Trips
				IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
<b>Existing Uses</b>																		
Retail	820	337,900 SF		201	123	324	650	705	1,355	1,003	926	1,929	516	538	1,054	14,985	19,897	8,229
Non-Auto Mode Share Reduction	47%			(94)	(58)	(152)	(306)	(331)	(637)	(471)	(435)	(906)	(243)	(253)	(496)	(7,043)	(9,352)	(4,009)
Retail Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
Non-Residential Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
<b>Existing Trips</b>				<b>107</b>	<b>65</b>	<b>172</b>	<b>344</b>	<b>374</b>	<b>718</b>	<b>532</b>	<b>491</b>	<b>1,023</b>	<b>273</b>	<b>285</b>	<b>558</b>	<b>7,942</b>	<b>10,545</b>	<b>4,520</b>
<b>Proposed PDSP</b>																		
Office	710	406,200 SF		517	70	587	91	442	533	95	80	175	38	27	65	3,809	999	427
Non-Auto Mode Share Reduction	46%			(238)	(32)	(270)	(42)	(203)	(245)	(44)	(37)	(81)	(17)	(12)	(29)	(1,752)	(460)	(196)
Office Subtotal				279	38	317	49	239	288	51	43	94	21	15	36	2,057	539	231
Retail	820	344,130 SF		205	125	330	658	713	1,371	1,015	937	1,952	526	548	1,074	15,164	20,127	8,686
Non-Auto Mode Share Reduction	47%			(96)	(59)	(155)	(309)	(335)	(644)	(477)	(440)	(917)	(247)	(258)	(505)	(7,127)	(9,460)	(4,082)
Retail Subtotal				109	66	175	349	378	727	538	497	1,035	279	290	569	8,037	10,667	4,604
Non-Residential Subtotal				388	104	492	398	617	1,015	589	540	1,129	300	305	605	10,094	11,206	4,835
Multi-Family Residential (2)	220	714 DU		71	283	354	267	143	410	200	171	371	178	186	364	4,450	5,349	4,483
Non-Auto Mode Share Reduction	54%			(38)	(153)	(191)	(144)	(77)	(221)	(108)	(92)	(200)	(96)	(100)	(196)	(2,403)	(2,888)	(2,421)
Residential Subtotal				33	130	163	123	66	189	92	79	171	82	86	168	2,047	2,461	2,062
<b>Proposed PDSP Trips</b>				<b>421</b>	<b>234</b>	<b>655</b>	<b>521</b>	<b>683</b>	<b>1,204</b>	<b>681</b>	<b>619</b>	<b>1,300</b>	<b>382</b>	<b>391</b>	<b>773</b>	<b>12,141</b>	<b>13,667</b>	<b>6,897</b>
<b>Proposed Trips minus Existing Trips</b>				<b>314</b>	<b>169</b>	<b>483</b>	<b>177</b>	<b>309</b>	<b>486</b>	<b>149</b>	<b>128</b>	<b>277</b>	<b>109</b>	<b>106</b>	<b>215</b>	<b>4,199</b>	<b>3,122</b>	<b>2,377</b>

Notes:

(1) Based on ITE Trip Generation 9th Edition rates and/or equations.

(2) Saturday and Sunday peak hour directional distributions are not available for LUC 220 and are instead based on directional distributions of LUC 230 (Residential Condominium/Townhome).

(3) Assumptions:

Retail 47%    Office 46%    Residential 54%    Hotel 0%  
 Non-auto mode split: 47%    46%    54%    0%  
 Transit reductions based on 2005 Development-Related Ridership Survey Final Report: Washington Metropolitan Area Transit Authority, March 2006.

Table 4  
 Pentagon Centre PDSP - Proposed Phases One, Two, and Three  
 Site Trip Generation Summary (1)

Land Use	ITE Code	Size	Units	AM Peak Hour			PM Peak Hour			Saturday, Mid-Day, Peak Hour			Sunday, Mid-Day, Peak Hour			Weekday Daily Trips	Saturday Daily Trips	Sunday Daily Trips
				IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
<b>Existing Uses</b>																		
Retail	820	337,900 SF		201	123	324	650	705	1,355	1,003	926	1,929	516	538	1,054	14,985	19,897	8,529
Non-Auto Mode Share Reduction	47%			(94)	(58)	(152)	(306)	(331)	(637)	(471)	(435)	(906)	(243)	(253)	(496)	(7,043)	(9,352)	(4,009)
Retail Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
Non-Residential Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
<b>Existing Trips</b>				<b>107</b>	<b>65</b>	<b>172</b>	<b>344</b>	<b>374</b>	<b>718</b>	<b>532</b>	<b>491</b>	<b>1,023</b>	<b>273</b>	<b>285</b>	<b>558</b>	<b>7,942</b>	<b>10,545</b>	<b>4,520</b>
<b>Proposed PDSP</b>																		
Office	710	609,200 SF		715	97	812	129	632	761	141	121	262	56	41	97	5,183	1,499	640
Non-Auto Mode Share Reduction	46%			(329)	(45)	(374)	(59)	(291)	(350)	(65)	(56)	(121)	(26)	(19)	(45)	(2,384)	(690)	(294)
Office Subtotal				386	52	438	70	341	411	76	65	141	30	22	52	2,799	809	346
Retail	820	369,230 SF		219	135	354	690	747	1,437	1,063	981	2,044	564	588	1,152	15,874	21,040	9,319
Non-Auto Mode Share Reduction	47%			(103)	(63)	(166)	(324)	(351)	(675)	(500)	(461)	(961)	(265)	(276)	(541)	(7,461)	(9,889)	(4,380)
Retail Subtotal				116	72	188	366	396	762	563	520	1,083	299	312	611	8,413	11,151	4,939
Hotel	310	160 Rooms		50	35	85	49	47	96	64	51	115	41	49	90	1,307	1,310	952
Non-Auto Mode Share Reduction	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hotel Subtotal				50	35	85	49	47	96	64	51	115	41	49	90	1,307	1,310	952
Non-Residential Subtotal				552	159	711	485	784	1,269	703	636	1,339	370	383	753	12,519	13,270	6,237
Multi-Family Residential <sup>(2)</sup>	220	714 DU		71	283	354	267	143	410	200	171	371	178	186	364	4,450	5,349	4,483
Non-Auto Mode Share Reduction	54%			(38)	(153)	(191)	(144)	(77)	(221)	(108)	(92)	(200)	(96)	(100)	(196)	(2,403)	(2,888)	(2,421)
Residential Subtotal				33	130	163	123	66	189	92	79	171	82	86	168	2,047	2,461	2,062
<b>Proposed PDSP Trips</b>				<b>585</b>	<b>289</b>	<b>874</b>	<b>608</b>	<b>850</b>	<b>1,458</b>	<b>795</b>	<b>715</b>	<b>1,510</b>	<b>452</b>	<b>469</b>	<b>921</b>	<b>14,566</b>	<b>15,731</b>	<b>8,299</b>
<b>Proposed Trips minus Existing Trips</b>				<b>478</b>	<b>224</b>	<b>702</b>	<b>264</b>	<b>476</b>	<b>740</b>	<b>263</b>	<b>224</b>	<b>487</b>	<b>179</b>	<b>184</b>	<b>363</b>	<b>6,624</b>	<b>5,186</b>	<b>3,779</b>

Notes:

(1) Based on ITE Trip Generation 9th Edition rates and/or equations.

(2) Saturday and Sunday peak hour directional distributions are not available for LUC 220 and are instead based on directional distributions of LUC 230 (Residential Condominium/Townhome).

(3) Assumptions:

Non-auto mode split:  
 Transit reductions based on 2005 Development-Related Ridership Survey Final Report: Washington Metropolitan Area Transit Authority, March 2006.

Retail 47%  
 Office 46%  
 Residential 54%  
 Hotel 0%



Table 5  
 Pentagon Centre PDSP - Approved Phase One  
 Site Trip Generation Summary (1)

Land Use	ITE Code	Size	Units	AM Peak Hour			PM Peak Hour			Saturday Mid-Day Peak Hour			Sunday Mid-Day Peak Hour			Weekday Daily Trips	Saturday Daily Trips	Sunday Daily Trips
				IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
<b>Existing Uses</b>																		
Retail	820	337,900 SF		201	123	324	650	705	1,355	1,003	926	1,929	516	538	1,054	14,985	19,897	8,529
Non-Auto Mode Share Reduction	47%			(94)	(58)	(152)	(306)	(331)	(637)	(471)	(435)	(906)	(243)	(253)	(496)	(7,043)	(9,352)	(4,009)
Retail Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
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<b>Existing Trips</b>				<b>107</b>	<b>65</b>	<b>172</b>	<b>344</b>	<b>374</b>	<b>718</b>	<b>532</b>	<b>491</b>	<b>1,023</b>	<b>273</b>	<b>285</b>	<b>558</b>	<b>7,942</b>	<b>10,545</b>	<b>4,520</b>
<hr/>																		
<b>Approved PDSP</b>																		
Office	710	489,911 SF		600	82	682	107	520	627	114	97	211	45	33	78	4,392	1,205	514
Non-Auto Mode Share Reduction	46%			(276)	(38)	(314)	(49)	(239)	(288)	(52)	(45)	(97)	(21)	(15)	(36)	(2,020)	(554)	(236)
Office Subtotal				324	44	368	58	281	339	62	52	114	24	18	42	2,372	651	278
Retail	820	358,795 SF		213	131	344	677	733	1,410	1,043	963	2,006	548	571	1,119	15,581	20,664	9,056
Non-Auto Mode Share Reduction	47%			(100)	(62)	(162)	(318)	(345)	(663)	(490)	(453)	(943)	(258)	(268)	(526)	(7,323)	(9,712)	(4,256)
Retail Subtotal				113	69	182	359	388	747	553	510	1,063	290	303	593	8,258	10,952	4,800
Non-Residential Subtotal				437	113	550	417	669	1,086	615	562	1,177	314	321	635	10,630	11,603	5,078
<b>Approved PDSP Trips</b>				<b>437</b>	<b>113</b>	<b>550</b>	<b>417</b>	<b>669</b>	<b>1,086</b>	<b>615</b>	<b>562</b>	<b>1,177</b>	<b>314</b>	<b>321</b>	<b>635</b>	<b>10,630</b>	<b>11,603</b>	<b>5,078</b>
<hr/>																		
<b>Approved Trips minus Existing Trips</b>				<b>330</b>	<b>48</b>	<b>378</b>	<b>73</b>	<b>295</b>	<b>368</b>	<b>83</b>	<b>71</b>	<b>154</b>	<b>41</b>	<b>36</b>	<b>77</b>	<b>2,688</b>	<b>1,058</b>	<b>558</b>

Notes:

- (1) Based on ITE Trip Generation 9th Edition rates and/or equations.
- (2) Saturday and Sunday peak hour directional distributions are not available for LUC 220 and are instead based on directional distributions of LUC 230 (Residential Condominium/Townhome).
- (3) Assumptions:

Non-auto mode split:  
 Transit reductions based on 2005 Development-Related Ridership Survey Final Report, Washington Metropolitan Area Transit Authority, March 2006.

Retail	47%	Office	46%	Residential	54%	Hotel	0%
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Table 6  
 Pentagon Centre PDSP - Approved Phases One and Two  
 Site Trip Generation Summary (1)

Land Use	ITE Code	Size	Units	AM Peak Hour			PM Peak Hour			Saturday, Mid-Day Peak Hour			Sunday, Mid-Day Peak Hour			Weekday Daily Trips	Saturday Daily Trips	Sunday Daily Trips
				IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
<b>Existing Uses</b>																		
Retail	820	337,900 SF		201	123	324	650	705	1,355	1,003	926	1,929	516	538	1,054	14,985	19,897	8,239
Non-Auto Mode Share Reduction	47%			(94)	(58)	(152)	(306)	(331)	(637)	(471)	(435)	(906)	(243)	(253)	(496)	(7,043)	(9,352)	(4,009)
Retail Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
Non-Residential Subtotal				107	65	172	344	374	718	532	491	1,023	273	285	558	7,942	10,545	4,520
<b>Existing Trips</b>				<b>107</b>	<b>65</b>	<b>172</b>	<b>344</b>	<b>374</b>	<b>718</b>	<b>532</b>	<b>491</b>	<b>1,023</b>	<b>273</b>	<b>285</b>	<b>558</b>	<b>7,942</b>	<b>10,545</b>	<b>4,520</b>
<b>Approved PDSP</b>																		
Office	710	489,911 SF		600	82	682	107	520	627	114	97	211	45	33	78	4,392	1,205	514
Non-Auto Mode Share Reduction	46%			(276)	(38)	(314)	(49)	(239)	(288)	(52)	(45)	(97)	(21)	(15)	(36)	(2,020)	(554)	(236)
Office Subtotal				324	44	368	58	281	339	62	52	114	24	18	42	2,372	651	278
Retail	820	423,195 SF		252	154	406	756	819	1,575	1,161	1,072	2,233	647	673	1,320	17,346	22,928	10,681
Non-Auto Mode Share Reduction	47%			(118)	(72)	(190)	(355)	(385)	(740)	(546)	(504)	(1,050)	(304)	(316)	(620)	(8,153)	(10,776)	(5,020)
Retail Subtotal				134	82	216	401	434	835	615	568	1,183	343	357	700	9,193	12,152	5,661
Non-Residential Subtotal				458	126	584	459	715	1,174	677	620	1,297	367	375	742	11,565	12,803	5,939
Multi-Family Residential (2)	220	144 DU		15	59	74	63	34	97	41	34	75	36	37	73	996	874	823
Non-Auto Mode Share Reduction	54%			(8)	(32)	(40)	(34)	(18)	(52)	(22)	(18)	(40)	(19)	(20)	(39)	(538)	(472)	(444)
Residential Subtotal				7	27	34	29	16	45	19	16	35	17	17	34	458	402	379
<b>Approved PDSP Trips</b>				<b>465</b>	<b>153</b>	<b>618</b>	<b>488</b>	<b>731</b>	<b>1,219</b>	<b>696</b>	<b>636</b>	<b>1,332</b>	<b>384</b>	<b>392</b>	<b>776</b>	<b>12,023</b>	<b>13,205</b>	<b>6,318</b>
<b>Approved Trips minus Existing Trips</b>				<b>358</b>	<b>88</b>	<b>446</b>	<b>144</b>	<b>357</b>	<b>501</b>	<b>164</b>	<b>145</b>	<b>309</b>	<b>111</b>	<b>107</b>	<b>218</b>	<b>4,081</b>	<b>2,660</b>	<b>1,798</b>

Notes:

(1) Based on ITE Trip Generation 9th Edition rates and/or equations.

(2) Saturday and Sunday peak hour directional distributions are not available for LUC 220 and are instead based on directional distributions of LUC 230 (Residential Condominium/Townhome).

(3) Assumptions:

Non-auto mode split:  
 Transit reductions based on 2005 Development-Related Ridership Survey Final Report, Washington Metropolitan Area Transit Authority, March 2006.

Retail	47%	Office	46%	Residential	54%	Hotel	0%
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Table 7  
 Pentagon Centre PDSP - Approved Phases One, Two, and Three  
 Site Trip Generation Summary (1)

Land Use	ITE Code	Size	Units	AM Peak Hour			PM Peak Hour			Saturday, Mid-Day Peak Hour			Sunday, Mid-Day Peak Hour			Weekday Daily Trips	Saturday Daily Trips	Sunday Daily Trips
				IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL	IN	OUT	TOTAL			
<b>Existing Uses</b>																		
Retail	820	337,900 SF		201	123	324	324	324	324	324	324	324	324	324	324	324	324	324
Non-Auto Mode Share Reduction	47%			(94)	(58)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)	(152)
Retail Subtotal				107	65	172	172	172	172	172	172	172	172	172	172	172	172	172
Non-Residential Subtotal				107	65	172	172	172	172	172	172	172	172	172	172	172	172	172
<b>Existing Trips</b>				<b>107</b>	<b>65</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>	<b>172</b>
<b>Approved PDSP</b>																		
Office	710	776,982 SF		869	118	987	987	987	987	987	987	987	987	987	987	987	987	987
Non-Auto Mode Share Reduction	46%			(400)	(54)	(454)	(454)	(454)	(454)	(454)	(454)	(454)	(454)	(454)	(454)	(454)	(454)	(454)
Office Subtotal				469	64	533	533	533	533	533	533	533	533	533	533	533	533	533
Retail	820	327,070 SF		195	119	314	314	314	314	314	314	314	314	314	314	314	314	314
Non-Auto Mode Share Reduction	47%			(92)	(56)	(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)	(148)
Retail Subtotal				103	63	166	166	166	166	166	166	166	166	166	166	166	166	166
Hotel	310	250 Rooms		78	55	133	133	133	133	133	133	133	133	133	133	133	133	133
Non-Auto Mode Share Reduction	0%			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hotel Subtotal				78	55	133	133	133	133	133	133	133	133	133	133	133	133	133
Non-Residential Subtotal				650	182	832	832	832	832	832	832	832	832	832	832	832	832	832
Multi-Family Residential (2)	220	600 DU		60	238	298	298	298	298	298	298	298	298	298	298	298	298	298
Non-Auto Mode Share Reduction	54%			(32)	(129)	(161)	(161)	(161)	(161)	(161)	(161)	(161)	(161)	(161)	(161)	(161)	(161)	(161)
Residential Subtotal				28	109	137	137	137	137	137	137	137	137	137	137	137	137	137
<b>Approved PDSP Trips</b>				<b>678</b>	<b>291</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>	<b>969</b>
<b>Approved Trips minus Existing Trips</b>				<b>571</b>	<b>226</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>	<b>797</b>
<b>Notes:</b>																		

(1) Based on ITE Trip Generation 9th Edition rates and/or equations.  
 (2) Saturday and Sunday peak hour directional distributions are not available for LUC 220 and are instead based on directional distributions of LUC 230 (Residential Condominium/Townhome).

(3) Assumptions:

Non-auto mode split:  
 Transit reductions based on 2005 Development-Related Ridership Survey Final Report: Washington Metropolitan Area Transit Authority, March 2006.

Retail 47%  
 Office 46%  
 Residential 54%  
 Hotel 0%