

## Memorandum

**To:** Carl Delorenzo  
**From:** MuniCap, Inc.  
**Date:** November 13, 2015  
**Re:** Affordable Housing Fiscal Impact Sensitivities

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This memo provides a summary of several scenarios of fiscal impact analyses requested by the Howard County Council (the “Council”) following a work session on October 19, 2015 regarding the joint recommendation on affordable housing for the Downtown Columbia Plan. A summary of the requested sensitivities and comparisons to the base scenario follows.

### **Requested Sensitivities**

Council has requested five additional fiscal impact sensitivities, in addition to the two base case scenarios, as more thoroughly described below. Base case Scenario A represents the proposed affordable housing joint recommendations inclusive of the additional density bonus. Base case Scenario B represents the approved Downtown Columbia Plan development excluding the additional density bonus. Each of the sensitivities identified below is a variation from either Scenario A or Scenario B.

#### *Student Generation Sensitivities*

The Howard County Department of Planning and Zoning, Division of Research in conjunction with the Howard County Public School System has evaluated a range of student generation factors for estimating the potential students generated by the plan development. In a memorandum to the Council dated November 2, 2015, the Department of Planning and Zoning identified both an expected student yield ratio and an alternative, higher yield ratio for estimating a range of potential impacts. The expected student yield is based on recent student yield data obtain from Montgomery County for multi-family high-rise buildings. The higher yield data is based on the Howard County-wide five year average yields for newly constructed multi-family units. The table below shows the student yields identified in the November 2 memo.

	Student Yields	
	Expected (1)	County Avg (2)
Elementary School	0.060	0.101
Middle School	0.025	0.045
High School	0.033	0.036
<b>Total</b>	<b>0.118</b>	<b>0.182</b>

(1) Based on Montgomery County student generation rates for multi-family high-rise units 5-stories or more, 2013 analysis. (rental and condo apts.)

(2) Based on 2009 to 2014 average Howard Countywide yields from newly constructed multi-family units. (rental and condo apts.)

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For purposes of preparing the base case Scenarios A and B, MuniCap applied the expected yield of 0.118 to the fiscal impact analyses. Two additional sensitivities have been prepared using the assumptions from both Scenarios A and B and applying the higher student yield of 0.182 as follows:

- Scenario A-1 updates the base case Scenario A, inclusive of the joint housing recommendations and additional density bonus, and assumes the higher student yield of 0.182.
- Scenario B-1 updates the base case Scenario B, based on the approved Downtown Plan and excluding the additional density bonus, and also assumes the higher student yield of 0.182.

Table A compares the estimated units, student yields, projected students, and net fiscal impacts for the four scenarios. The exhibits attached to this memo also show the net fiscal impacts for each scenario projected over the 35 year period shown in the fiscal impact analyses.

**Table A – Comparison of Student Sensitivity Impacts**

Scenario	Units	Student Yields	Projected Students <sup>1</sup>	Net Fiscal Impacts after Capital Costs <sup>2</sup>
Scenario A (Base Case - Joint Recommendation)	6,750	0.118	797	\$1,049,614,587
Scenario A-1 (Updated Student Yield)	6,750	0.182	1,229	\$803,907,387
Scenario B (Base Case - Adopted Plan)	5,500	0.118	649	\$1,042,370,967
Scenario B-1 (Updated Student Yield)	5,500	0.182	1,001	\$841,984,362

<sup>1</sup>Represents the total projected students at full build-out.

<sup>2</sup>Represents the cumulative fiscal impacts, including inflation, after operating expenditures and capital expenditures.

### *Unit Mix Sensitivities*

Three additional scenarios have been prepared that estimate the fiscal impacts to Howard County assuming there are varying residential unit mixes. The three sensitivities are as follows:

- Scenario A-2 updates the base case Scenario A, based on the joint recommendations and including the additional density bonus, and also assumes a varying affordable mix as follows:

	<u>Base Case</u>	<u>Scenario A-2</u>
Market Rental	5,231	5,393
15% Affordable Rental:		
80% AMI	180	269
60% AMI	610	269
40% AMI	0	270
30% AMI	180	0
Market For-Sale	549	467
15% Affordable For-Sale:		
80% AMI	0	82
Total units	6,750	6,750

Scenario A-2 also differs from base case Scenario A under the assumption that state funding for affordable housing subsidies, PILOT, or abatements are not available.

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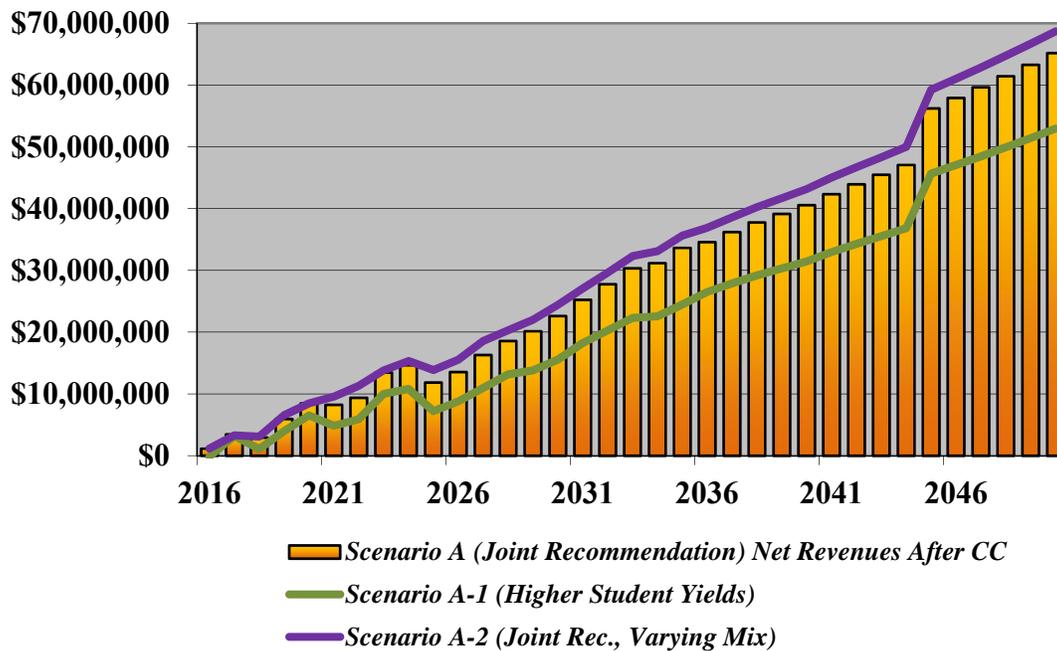
- Scenario B-2 updates the base case Scenario B, based on the approved Downtown Plan and excluding the additional density bonus, and also assumes a varying affordable mix as follows:

	<u>Base Case</u>	<u>Scenario B-2</u>
Market Rental	4,126	4,331
15% Affordable Rental:		
80% AMI	180	207
60% AMI	480	207
40% AMI	0	206
30% AMI	165	0
Market For-Sale	549	467
15% Affordable For-Sale:		
80% AMI	0	82
Total units	5,500	5,500

- Scenario B-3 updates the base case Scenario B, based on the approved Downtown Plan and excluding the additional density bonus, and assumes 220 apartment units on the Flier Building site are constructed.

Charts 1 and 2 and Table B compares the net cumulative fiscal impacts for the additional sensitivities to the base case scenarios. There are no proposed changes to the commercial under each scenario.

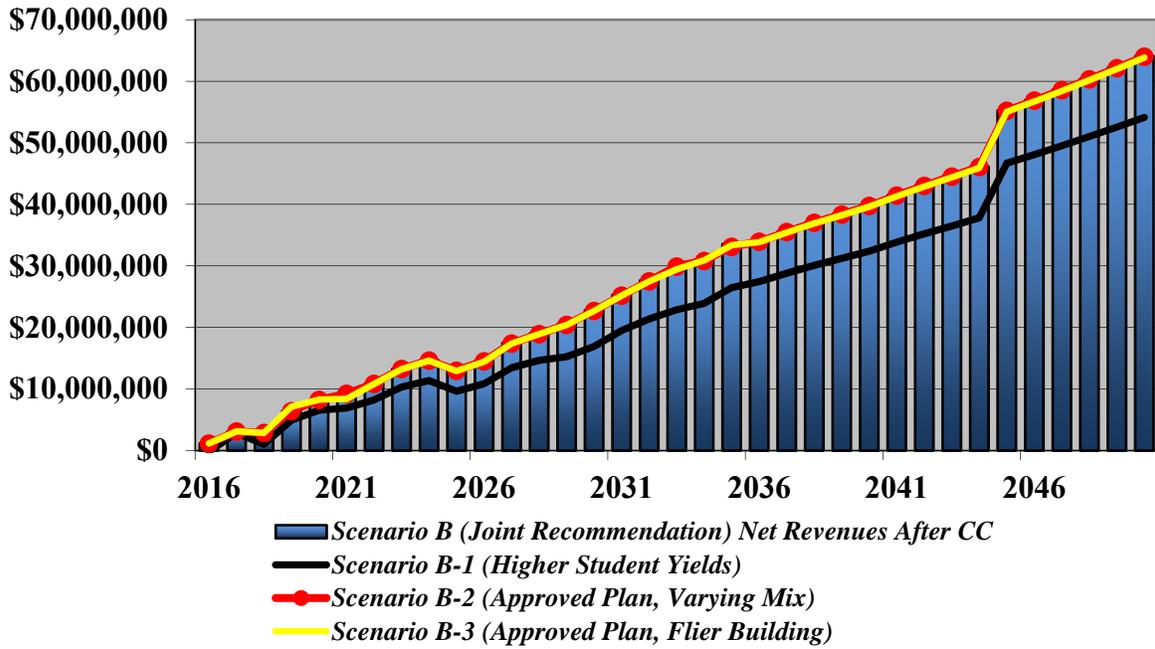
**Chart 1**  
**Comparison of Scenario A Net Fiscal Impacts**



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Chart 2  
Comparison of Scenario B Net Fiscal Impacts



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**Table B – Comparison of Net Fiscal Impacts**

	<b>Scenario A (Joint Rec.)</b>	<b>Scenario A-1 (High St. Yield)</b>	<b>Scenario A-2 (AMI Mix)</b>	<b>Scenario B (Approved Plan)</b>	<b>Scenario B-1 (High St. Yield)</b>	<b>Scenario B-2 (AMI Mix)</b>	<b>Scenario B-3 (Flier Building)</b>
Projected net operating impact	\$1,236,948,099	\$1,015,756,981	\$1,306,007,825	\$1,219,233,266	\$1,038,797,288	\$1,217,042,384	\$1,215,816,255
Projected capital costs	(\$187,333,512)	(\$211,849,594)	(\$187,300,999)	(\$176,862,299)	(\$196,812,926)	(\$176,826,263)	(\$178,696,332)
Projected net fiscal surplus	\$1,049,614,587	\$803,907,387	\$1,118,706,826	\$1,042,370,967	\$841,984,362	\$1,040,216,121	\$1,037,119,923
<sup>1</sup> Represents the net fiscal impact, including inflation, and after operating expenditures and capital expenditures.							

The exhibits attached to this memo also show the net fiscal impacts for each scenario projected over the 35 year period shown in the fiscal impact analyses.

## **Exhibits**

**Exhibit A:** Net Fiscal Impacts from Base Case Scenario A (Joint Recommendations Including Additional Density)

**Exhibit A-1:** Net Fiscal Impacts from Scenario A-1 (Joint Recommendations Including Additional Density and with Higher Student Yields)

**Exhibit A-2:** Net Fiscal Impacts from Base Case Scenario A-2 (Joint Recommendations Including Additional Density and Varying AMI Mix)

**Exhibit B:** Net Fiscal Impacts from Base Case Scenario B (Approved Downtown Plan Development Excluding Additional Density)

**Exhibit B-1:** Net Fiscal Impacts from Base Case Scenario B-1 (Approved Downtown Plan Development Excluding Additional Density and with Higher Student Yields)

**Exhibit B-2:** Net Fiscal Impacts from Base Case Scenario B-2 (Approved Downtown Plan Development Excluding Additional Density and Varying AMI Mix)

**Exhibit B-3:** Net Fiscal Impacts from Base Case Scenario B-3 (Approved Downtown Plan Development Excluding Additional Density and Including Flier Building Units)

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**Downtown Columbia**  
**Howard County, Maryland**

**Exhibit A: Net Revenues Versus Total Projected County Capital Costs (Base Case Scenario A)**

Tax Year Beginning	Inflation Factor	Total Projected County Revenues (Schedule XIII)	County Operating Expenditures (Schedule XIV)	Net Fiscal County Impacts from Operations	Estimated Capital Costs (Schedule XVII-I)	Net Howard County Surplus/(Deficit)	Projected Coverage
1-Jul-16	100%	\$4,298,415	(\$1,075,731)	\$3,222,684	(\$2,079,077)	\$1,143,607	136%
1-Jul-17	103%	\$4,795,385	(\$1,334,418)	\$3,460,967	\$0	\$3,460,967	359%
1-Jul-18	106%	\$8,295,403	(\$2,824,966)	\$5,470,438	(\$2,543,682)	\$2,926,755	155%
1-Jul-19	109%	\$12,924,604	(\$4,722,548)	\$8,202,056	(\$2,252,381)	\$5,949,675	185%
1-Jul-20	113%	\$16,407,899	(\$6,235,739)	\$10,172,160	(\$1,706,248)	\$8,465,912	207%
1-Jul-21	116%	\$20,805,620	(\$8,803,108)	\$12,002,511	(\$3,767,414)	\$8,235,097	166%
1-Jul-22	119%	\$23,635,765	(\$11,107,375)	\$12,528,390	(\$3,156,593)	\$9,371,797	166%
1-Jul-23	123%	\$29,142,431	(\$13,146,613)	\$15,995,818	(\$2,523,959)	\$13,471,859	186%
1-Jul-24	127%	\$32,744,027	(\$15,473,169)	\$17,270,859	(\$2,618,469)	\$14,652,390	181%
1-Jul-25	130%	\$36,957,803	(\$17,961,362)	\$18,996,440	(\$7,149,416)	\$11,847,024	147%
1-Jul-26	134%	\$40,763,252	(\$20,246,326)	\$20,516,927	(\$6,981,335)	\$13,535,592	150%
1-Jul-27	138%	\$46,878,115	(\$22,833,674)	\$24,044,441	(\$7,747,140)	\$16,297,301	153%
1-Jul-28	143%	\$51,190,610	(\$25,128,977)	\$26,061,634	(\$7,503,830)	\$18,557,804	157%
1-Jul-29	147%	\$56,910,731	(\$27,983,409)	\$28,927,322	(\$8,777,680)	\$20,149,641	155%
1-Jul-30	151%	\$63,220,593	(\$31,109,402)	\$32,111,192	(\$9,505,693)	\$22,605,499	156%
1-Jul-31	156%	\$67,936,503	(\$33,801,256)	\$34,135,247	(\$8,898,234)	\$25,237,013	159%
1-Jul-32	160%	\$73,725,982	(\$36,617,413)	\$37,108,569	(\$9,339,232)	\$27,769,338	160%
1-Jul-33	165%	\$79,692,335	(\$39,572,118)	\$40,120,216	(\$9,782,340)	\$30,337,877	161%
1-Jul-34	170%	\$84,146,256	(\$42,695,247)	\$41,451,009	(\$10,275,834)	\$31,175,175	159%
1-Jul-35	175%	\$90,224,146	(\$45,886,454)	\$44,337,692	(\$10,690,039)	\$33,647,653	159%
1-Jul-36	181%	\$89,846,734	(\$47,263,048)	\$42,583,687	(\$8,003,753)	\$34,579,934	163%
1-Jul-37	186%	\$92,893,669	(\$48,680,939)	\$44,212,729	(\$8,003,753)	\$36,208,977	164%
1-Jul-38	192%	\$95,856,810	(\$50,141,367)	\$45,715,442	(\$7,943,919)	\$37,771,523	165%
1-Jul-39	197%	\$98,735,397	(\$51,645,608)	\$47,089,788	(\$7,943,919)	\$39,145,869	166%
1-Jul-40	203%	\$101,697,459	(\$53,194,977)	\$48,502,482	(\$7,943,919)	\$40,558,563	166%
1-Jul-41	209%	\$104,748,382	(\$54,790,826)	\$49,957,556	(\$7,626,819)	\$42,330,738	168%
1-Jul-42	216%	\$107,890,834	(\$56,434,551)	\$51,456,283	(\$7,522,945)	\$43,933,338	169%
1-Jul-43	222%	\$111,127,559	(\$58,127,587)	\$52,999,972	(\$7,522,945)	\$45,477,027	169%
1-Jul-44	229%	\$114,461,386	(\$59,871,415)	\$54,589,971	(\$7,522,945)	\$47,067,026	170%
1-Jul-45	236%	\$117,895,227	(\$61,667,557)	\$56,227,670	\$0	\$56,227,670	191%
1-Jul-46	243%	\$121,432,084	(\$63,517,584)	\$57,914,500	\$0	\$57,914,500	191%
1-Jul-47	250%	\$125,075,047	(\$65,423,112)	\$59,651,935	\$0	\$59,651,935	191%
1-Jul-48	258%	\$128,827,298	(\$67,385,805)	\$61,441,493	\$0	\$61,441,493	191%
1-Jul-49	265%	\$132,692,117	(\$69,407,379)	\$63,284,738	\$0	\$63,284,738	191%
1-Jul-50	273%	\$136,672,880	(\$71,489,600)	\$65,183,280	\$0	\$65,183,280	191%
<b>Total</b>		<b>\$2,524,548,761</b>	<b>(\$1,287,600,662)</b>	<b>\$1,236,948,099</b>	<b>(\$187,333,512)</b>	<b>\$1,049,614,587</b>	

**Downtown Columbia**  
**Howard County, Maryland**

**Exhibit A-1: Net Revenues Versus Total Projected County Capital Costs (Base Case Scenario A/Higher Student Yield)**

Tax Year Beginning	Inflation Factor	Total Projected County Revenues (Schedule XIII)	County Operating Expenditures (Schedule XIV)	Net Fiscal County Impacts from Operations	Estimated Capital Costs (Schedule XVII-I)	Net Howard County Surplus/(Deficit)	Projected Coverage
1-Jul-16	100%	\$4,298,415	(\$1,327,747)	\$2,970,669	(\$3,115,591)	(\$144,922)	97%
1-Jul-17	103%	\$4,795,385	(\$1,593,994)	\$3,201,391	\$0	\$3,201,391	301%
1-Jul-18	106%	\$8,295,403	(\$3,399,797)	\$4,895,606	(\$3,808,265)	\$1,087,341	115%
1-Jul-19	109%	\$12,924,604	(\$5,586,385)	\$7,338,219	(\$3,370,105)	\$3,968,114	144%
1-Jul-20	113%	\$16,407,899	(\$7,330,762)	\$9,077,137	(\$2,550,501)	\$6,526,636	166%
1-Jul-21	116%	\$20,805,620	(\$10,373,827)	\$10,431,792	(\$5,588,792)	\$4,843,001	130%
1-Jul-22	119%	\$23,635,765	(\$13,086,320)	\$10,549,445	(\$4,641,775)	\$5,907,670	133%
1-Jul-23	123%	\$29,142,431	(\$15,466,326)	\$13,676,106	(\$3,681,326)	\$9,994,780	152%
1-Jul-24	127%	\$32,744,027	(\$18,152,315)	\$14,591,713	(\$3,810,557)	\$10,781,156	149%
1-Jul-25	130%	\$36,957,803	(\$21,087,780)	\$15,870,022	(\$8,658,426)	\$7,211,596	124%
1-Jul-26	134%	\$40,763,252	(\$23,765,116)	\$16,998,136	(\$8,209,363)	\$8,788,773	127%
1-Jul-27	138%	\$46,878,115	(\$26,793,107)	\$20,085,008	(\$9,125,281)	\$10,959,727	131%
1-Jul-28	143%	\$51,190,610	(\$29,467,222)	\$21,723,388	(\$8,573,305)	\$13,150,083	135%
1-Jul-29	147%	\$56,910,731	(\$32,817,026)	\$24,093,705	(\$10,279,807)	\$13,813,898	132%
1-Jul-30	151%	\$63,220,593	(\$36,491,293)	\$26,729,301	(\$11,164,281)	\$15,565,020	133%
1-Jul-31	156%	\$67,936,503	(\$39,628,746)	\$28,307,758	(\$10,066,878)	\$18,240,879	137%
1-Jul-32	160%	\$73,725,982	(\$42,912,393)	\$30,813,589	(\$10,542,936)	\$20,270,654	138%
1-Jul-33	165%	\$79,692,335	(\$46,357,394)	\$33,334,941	(\$11,022,155)	\$22,312,786	139%
1-Jul-34	170%	\$84,146,256	(\$50,000,216)	\$34,146,041	(\$11,576,062)	\$22,569,978	137%
1-Jul-35	175%	\$90,224,146	(\$53,736,191)	\$36,487,956	(\$12,029,273)	\$24,458,683	137%
1-Jul-36	181%	\$89,846,734	(\$55,348,276)	\$34,498,458	(\$8,003,753)	\$26,494,706	142%
1-Jul-37	186%	\$92,893,669	(\$57,008,725)	\$35,884,944	(\$8,003,753)	\$27,881,191	143%
1-Jul-38	192%	\$95,856,810	(\$58,718,986)	\$37,137,824	(\$7,943,919)	\$29,193,904	144%
1-Jul-39	197%	\$98,735,397	(\$60,480,556)	\$38,254,841	(\$7,943,919)	\$30,310,922	144%
1-Jul-40	203%	\$101,697,459	(\$62,294,973)	\$39,402,486	(\$7,943,919)	\$31,458,567	145%
1-Jul-41	209%	\$104,748,382	(\$64,163,822)	\$40,584,561	(\$7,626,819)	\$32,957,742	146%
1-Jul-42	216%	\$107,890,834	(\$66,088,736)	\$41,802,098	(\$7,522,945)	\$34,279,153	147%
1-Jul-43	222%	\$111,127,559	(\$68,071,398)	\$43,056,160	(\$7,522,945)	\$35,533,216	147%
1-Jul-44	229%	\$114,461,386	(\$70,113,540)	\$44,347,845	(\$7,522,945)	\$36,824,900	147%
1-Jul-45	236%	\$117,895,227	(\$72,216,947)	\$45,678,281	\$0	\$45,678,281	163%
1-Jul-46	243%	\$121,432,084	(\$74,383,455)	\$47,048,629	\$0	\$47,048,629	163%
1-Jul-47	250%	\$125,075,047	(\$76,614,959)	\$48,460,088	\$0	\$48,460,088	163%
1-Jul-48	258%	\$128,827,298	(\$78,913,407)	\$49,913,891	\$0	\$49,913,891	163%
1-Jul-49	265%	\$132,692,117	(\$81,280,810)	\$51,411,307	\$0	\$51,411,307	163%
1-Jul-50	273%	\$136,672,880	(\$83,719,234)	\$52,953,647	\$0	\$52,953,647	163%
<b>Total</b>		<b>\$2,524,548,761</b>	<b>(\$1,508,791,780)</b>	<b>\$1,015,756,981</b>	<b>(\$211,849,594)</b>	<b>\$803,907,387</b>	

**Downtown Columbia**  
**Howard County, Maryland**

**Exhibit A-2: Net Revenues Versus Total Projected County Capital Costs (Base Case Scenario A/Varying AMI)**

Tax Year Beginning	Inflation Factor	Total Projected County Revenues (Schedule XIII)	County Operating Expenditures (Schedule XIV)	Net Fiscal County Impacts from Operations	Estimated Capital Costs (Schedule XVII-I)	Net Howard County Surplus/(Deficit)	Projected Coverage
1-Jul-16	100%	\$4,307,989	(\$1,075,731)	\$3,232,258	(\$2,079,077)	\$1,153,181	137%
1-Jul-17	103%	\$4,637,593	(\$1,334,418)	\$3,303,175	\$0	\$3,303,175	348%
1-Jul-18	106%	\$8,447,509	(\$2,824,966)	\$5,622,543	(\$2,543,682)	\$3,078,861	157%
1-Jul-19	109%	\$13,004,205	(\$4,546,226)	\$8,457,979	(\$1,911,104)	\$6,546,875	201%
1-Jul-20	113%	\$16,638,837	(\$6,191,133)	\$10,447,704	(\$1,970,917)	\$8,476,787	204%
1-Jul-21	116%	\$20,410,402	(\$8,199,755)	\$12,210,647	(\$2,666,239)	\$9,544,408	188%
1-Jul-22	119%	\$24,405,528	(\$10,310,150)	\$14,095,378	(\$2,801,268)	\$11,294,110	186%
1-Jul-23	123%	\$29,141,462	(\$12,492,589)	\$16,648,874	(\$2,834,487)	\$13,814,387	190%
1-Jul-24	127%	\$33,243,417	(\$14,971,655)	\$18,271,762	(\$2,941,834)	\$15,329,928	186%
1-Jul-25	130%	\$37,212,898	(\$17,053,277)	\$20,159,621	(\$6,315,499)	\$13,844,122	159%
1-Jul-26	134%	\$41,539,082	(\$19,246,321)	\$22,292,761	(\$6,773,128)	\$15,519,633	160%
1-Jul-27	138%	\$47,484,255	(\$21,619,496)	\$25,864,759	(\$7,292,064)	\$18,572,695	164%
1-Jul-28	143%	\$52,095,206	(\$24,051,928)	\$28,043,278	(\$7,753,840)	\$20,289,438	164%
1-Jul-29	147%	\$58,094,851	(\$27,052,810)	\$31,042,041	(\$9,051,430)	\$21,990,611	161%
1-Jul-30	151%	\$64,560,551	(\$30,335,008)	\$34,225,543	(\$9,803,476)	\$24,422,067	161%
1-Jul-31	156%	\$69,472,633	(\$33,193,278)	\$36,279,356	(\$9,220,395)	\$27,058,961	164%
1-Jul-32	160%	\$75,498,537	(\$36,186,532)	\$39,312,005	(\$9,686,097)	\$29,625,908	165%
1-Jul-33	165%	\$81,683,635	(\$39,296,755)	\$42,386,880	(\$10,088,640)	\$32,298,240	165%
1-Jul-34	170%	\$86,196,246	(\$42,556,204)	\$43,640,043	(\$10,545,457)	\$33,094,586	162%
1-Jul-35	175%	\$92,508,658	(\$45,897,122)	\$46,611,536	(\$10,987,449)	\$35,624,087	163%
1-Jul-36	181%	\$92,158,682	(\$47,274,036)	\$44,884,646	(\$8,003,753)	\$36,880,894	167%
1-Jul-37	186%	\$95,283,875	(\$48,692,257)	\$46,591,619	(\$8,003,753)	\$38,587,866	168%
1-Jul-38	192%	\$98,323,652	(\$50,153,024)	\$48,170,628	(\$7,943,919)	\$40,226,708	169%
1-Jul-39	197%	\$101,277,917	(\$51,657,615)	\$49,620,302	(\$7,943,919)	\$41,676,383	170%
1-Jul-40	203%	\$104,316,254	(\$53,207,343)	\$51,108,911	(\$7,943,919)	\$43,164,992	171%
1-Jul-41	209%	\$107,445,742	(\$54,803,564)	\$52,642,178	(\$7,626,819)	\$45,015,360	172%
1-Jul-42	216%	\$110,669,114	(\$56,447,671)	\$54,221,444	(\$7,522,945)	\$46,698,499	173%
1-Jul-43	222%	\$113,989,188	(\$58,141,101)	\$55,848,087	(\$7,522,945)	\$48,325,142	174%
1-Jul-44	229%	\$117,408,863	(\$59,885,334)	\$57,523,529	(\$7,522,945)	\$50,000,585	174%
1-Jul-45	236%	\$120,931,129	(\$61,681,894)	\$59,249,235	\$0	\$59,249,235	196%
1-Jul-46	243%	\$124,559,063	(\$63,532,351)	\$61,026,712	\$0	\$61,026,712	196%
1-Jul-47	250%	\$128,295,835	(\$65,438,321)	\$62,857,514	\$0	\$62,857,514	196%
1-Jul-48	258%	\$132,144,710	(\$67,401,471)	\$64,743,239	\$0	\$64,743,239	196%
1-Jul-49	265%	\$136,109,051	(\$69,423,515)	\$66,685,536	\$0	\$66,685,536	196%
1-Jul-50	273%	\$140,192,323	(\$71,506,220)	\$68,686,102	\$0	\$68,686,102	196%
<b>Total</b>		<b>\$2,583,688,893</b>	<b>(\$1,277,681,068)</b>	<b>\$1,306,007,825</b>	<b>(\$187,300,999)</b>	<b>\$1,118,706,826</b>	

**Downtown Columbia**  
**Howard County, Maryland**

**Exhibit B: Net Revenues Versus Total Projected County Capital Costs (Base Case Scenario B)**

Tax Year Beginning	Inflation Factor	Total Projected County Revenues (Schedule XIII)	County Operating Expenditures (Schedule XIV)	Net Fiscal County Impacts from Operations	Estimated Capital Costs (Schedule XVII-I)	Net Howard County Surplus/(Deficit)	Projected Coverage
1-Jul-16	100%	\$4,307,291	(\$1,075,731)	\$3,231,560	(\$2,079,077)	\$1,152,483	137%
1-Jul-17	103%	\$4,436,869	(\$1,334,418)	\$3,102,450	\$0	\$3,102,450	332%
1-Jul-18	106%	\$8,239,911	(\$2,824,966)	\$5,414,945	(\$2,543,682)	\$2,871,263	153%
1-Jul-19	109%	\$12,289,430	(\$4,335,877)	\$7,953,553	(\$1,503,966)	\$6,449,587	210%
1-Jul-20	113%	\$15,593,101	(\$5,757,814)	\$9,835,287	(\$1,550,989)	\$8,284,298	213%
1-Jul-21	116%	\$18,993,200	(\$7,530,277)	\$11,462,924	(\$2,223,712)	\$9,239,211	195%
1-Jul-22	119%	\$22,622,294	(\$9,390,734)	\$13,231,560	(\$2,339,186)	\$10,892,374	193%
1-Jul-23	123%	\$26,950,093	(\$11,308,840)	\$15,641,253	(\$2,354,616)	\$13,286,637	197%
1-Jul-24	127%	\$30,647,554	(\$13,508,541)	\$17,139,012	(\$2,443,777)	\$14,695,235	192%
1-Jul-25	130%	\$34,168,543	(\$15,295,102)	\$18,873,441	(\$5,841,704)	\$13,031,737	162%
1-Jul-26	134%	\$38,008,085	(\$17,176,699)	\$20,831,386	(\$6,278,383)	\$14,553,003	162%
1-Jul-27	138%	\$43,498,924	(\$19,221,321)	\$24,277,603	(\$6,778,631)	\$17,498,972	167%
1-Jul-28	143%	\$47,584,338	(\$21,307,349)	\$26,276,989	(\$7,218,570)	\$19,058,418	167%
1-Jul-29	147%	\$52,965,837	(\$23,943,203)	\$29,022,634	(\$8,494,902)	\$20,527,732	163%
1-Jul-30	151%	\$58,890,764	(\$26,840,940)	\$32,049,824	(\$9,225,495)	\$22,824,328	163%
1-Jul-31	156%	\$63,231,598	(\$29,294,480)	\$33,937,117	(\$8,619,120)	\$25,317,997	167%
1-Jul-32	160%	\$68,558,657	(\$31,861,866)	\$36,696,791	(\$9,060,813)	\$27,635,979	168%
1-Jul-33	165%	\$73,656,770	(\$34,556,930)	\$39,099,840	(\$9,504,423)	\$29,595,417	167%
1-Jul-34	170%	\$78,244,459	(\$37,336,828)	\$40,907,630	(\$9,853,464)	\$31,054,166	166%
1-Jul-35	175%	\$82,542,874	(\$39,692,186)	\$42,850,688	(\$9,303,282)	\$33,547,406	168%
1-Jul-36	181%	\$82,832,968	(\$40,882,952)	\$41,950,016	(\$7,921,763)	\$34,028,253	170%
1-Jul-37	186%	\$85,612,942	(\$42,109,440)	\$43,503,501	(\$7,921,763)	\$35,581,738	171%
1-Jul-38	192%	\$88,313,766	(\$43,372,723)	\$44,941,043	(\$7,872,847)	\$37,068,196	172%
1-Jul-39	197%	\$90,967,652	(\$44,673,905)	\$46,293,746	(\$7,872,847)	\$38,420,900	173%
1-Jul-40	203%	\$93,696,681	(\$46,014,122)	\$47,682,559	(\$7,872,847)	\$39,809,712	174%
1-Jul-41	209%	\$96,507,582	(\$47,394,546)	\$49,113,036	(\$7,613,604)	\$41,499,432	175%
1-Jul-42	216%	\$99,402,809	(\$48,816,382)	\$50,586,427	(\$7,522,945)	\$43,063,482	176%
1-Jul-43	222%	\$102,384,893	(\$50,280,874)	\$52,104,019	(\$7,522,945)	\$44,581,075	177%
1-Jul-44	229%	\$105,456,440	(\$51,789,300)	\$53,667,140	(\$7,522,945)	\$46,144,195	178%
1-Jul-45	236%	\$108,620,133	(\$53,342,979)	\$55,277,154	\$0	\$55,277,154	204%
1-Jul-46	243%	\$111,878,737	(\$54,943,268)	\$56,935,469	\$0	\$56,935,469	204%
1-Jul-47	250%	\$115,235,099	(\$56,591,566)	\$58,643,533	\$0	\$58,643,533	204%
1-Jul-48	258%	\$118,692,152	(\$58,289,313)	\$60,402,839	\$0	\$60,402,839	204%
1-Jul-49	265%	\$122,252,917	(\$60,037,993)	\$62,214,924	\$0	\$62,214,924	204%
1-Jul-50	273%	\$125,920,504	(\$61,839,133)	\$64,081,372	\$0	\$64,081,372	204%
<b>Total</b>		<b>\$2,333,205,867</b>	<b>(\$1,113,972,601)</b>	<b>\$1,219,233,266</b>	<b>(\$176,862,299)</b>	<b>\$1,042,370,967</b>	

**Downtown Columbia**  
**Howard County, Maryland**

**Exhibit B-1: Net Revenues Versus Total Projected County Capital Costs (Base Case Scenario B/Higher Student Yield)**

Tax Year Beginning	Inflation Factor	Total Projected County Revenues (Schedule XIII)	County Operating Expenditures (Schedule XIV)	Net Fiscal County Impacts from Operations	Estimated Capital Costs (Schedule XVII-I)	Net Howard County Surplus/(Deficit)	Projected Coverage
1-Jul-16	100%	\$4,307,291	(\$1,327,747)	\$2,979,544	(\$3,115,591)	(\$136,046)	97%
1-Jul-17	103%	\$4,436,869	(\$1,593,994)	\$2,842,874	\$0	\$2,842,874	278%
1-Jul-18	106%	\$8,239,911	(\$3,399,797)	\$4,840,114	(\$3,808,265)	\$1,031,849	114%
1-Jul-19	109%	\$12,289,430	(\$5,109,127)	\$7,180,302	(\$2,249,115)	\$4,931,188	167%
1-Jul-20	113%	\$15,593,101	(\$6,740,871)	\$8,852,230	(\$2,318,492)	\$6,533,738	172%
1-Jul-21	116%	\$18,993,200	(\$8,801,152)	\$10,192,048	(\$3,286,182)	\$6,905,866	157%
1-Jul-22	119%	\$22,622,294	(\$10,965,812)	\$11,656,481	(\$3,433,530)	\$8,222,952	157%
1-Jul-23	123%	\$26,950,093	(\$13,196,258)	\$13,753,836	(\$3,444,890)	\$10,308,946	162%
1-Jul-24	127%	\$30,647,554	(\$15,725,620)	\$14,921,933	(\$3,566,758)	\$11,355,175	159%
1-Jul-25	130%	\$34,168,543	(\$17,795,025)	\$16,373,518	(\$6,731,451)	\$9,642,067	139%
1-Jul-26	134%	\$38,008,085	(\$19,974,440)	\$18,033,644	(\$7,194,822)	\$10,838,822	140%
1-Jul-27	138%	\$43,498,924	(\$22,332,500)	\$21,166,424	(\$7,722,564)	\$13,443,860	145%
1-Jul-28	143%	\$47,584,338	(\$24,748,255)	\$22,836,083	(\$8,190,821)	\$14,645,262	144%
1-Jul-29	147%	\$52,965,837	(\$27,828,211)	\$25,137,626	(\$9,896,887)	\$15,240,739	140%
1-Jul-30	151%	\$58,890,764	(\$31,220,686)	\$27,670,078	(\$10,780,937)	\$16,889,140	140%
1-Jul-31	156%	\$63,231,598	(\$34,063,929)	\$29,167,668	(\$9,681,524)	\$19,486,144	145%
1-Jul-32	160%	\$68,558,657	(\$37,040,459)	\$31,518,199	(\$10,155,089)	\$21,363,110	145%
1-Jul-33	165%	\$73,656,770	(\$40,164,922)	\$33,491,848	(\$10,631,527)	\$22,860,320	145%
1-Jul-34	170%	\$78,244,459	(\$43,384,033)	\$34,860,426	(\$10,967,945)	\$23,892,481	144%
1-Jul-35	175%	\$82,542,874	(\$46,088,268)	\$36,454,607	(\$9,992,031)	\$26,462,576	147%
1-Jul-36	181%	\$82,832,968	(\$47,470,916)	\$35,362,053	(\$7,921,763)	\$27,440,289	150%
1-Jul-37	186%	\$85,612,942	(\$48,895,043)	\$36,717,899	(\$7,921,763)	\$28,796,135	151%
1-Jul-38	192%	\$88,313,766	(\$50,361,894)	\$37,951,872	(\$7,872,847)	\$30,079,025	152%
1-Jul-39	197%	\$90,967,652	(\$51,872,751)	\$39,094,900	(\$7,872,847)	\$31,222,054	152%
1-Jul-40	203%	\$93,696,681	(\$53,428,934)	\$40,267,747	(\$7,872,847)	\$32,394,901	153%
1-Jul-41	209%	\$96,507,582	(\$55,031,802)	\$41,475,780	(\$7,613,604)	\$33,862,176	154%
1-Jul-42	216%	\$99,402,809	(\$56,682,756)	\$42,720,053	(\$7,522,945)	\$35,197,108	155%
1-Jul-43	222%	\$102,384,893	(\$58,383,239)	\$44,001,655	(\$7,522,945)	\$36,478,710	155%
1-Jul-44	229%	\$105,456,440	(\$60,134,736)	\$45,321,704	(\$7,522,945)	\$37,798,760	156%
1-Jul-45	236%	\$108,620,133	(\$61,938,778)	\$46,681,356	\$0	\$46,681,356	175%
1-Jul-46	243%	\$111,878,737	(\$63,796,941)	\$48,081,796	\$0	\$48,081,796	175%
1-Jul-47	250%	\$115,235,099	(\$65,710,849)	\$49,524,250	\$0	\$49,524,250	175%
1-Jul-48	258%	\$118,692,152	(\$67,682,175)	\$51,009,978	\$0	\$51,009,978	175%
1-Jul-49	265%	\$122,252,917	(\$69,712,640)	\$52,540,277	\$0	\$52,540,277	175%
1-Jul-50	273%	\$125,920,504	(\$71,804,019)	\$54,116,485	\$0	\$54,116,485	175%
<b>Total</b>		<b>\$2,333,205,867</b>	<b>(\$1,294,408,579)</b>	<b>\$1,038,797,288</b>	<b>(\$196,812,926)</b>	<b>\$841,984,362</b>	

**Downtown Columbia**  
**Howard County, Maryland**

**Exhibit B-2: Net Revenues Versus Total Projected County Capital Costs (Base Case Scenario B/Varying AMI)**

Tax Year Beginning	Inflation Factor	Total Projected County Revenues (Schedule XIII)	County Operating Expenditures (Schedule XIV)	Net Fiscal County Impacts from Operations	Estimated Capital Costs (Schedule XVII-I)	Net Howard County Surplus/(Deficit)	Projected Coverage
1-Jul-16	100%	\$4,309,755	(\$1,075,731)	\$3,234,024	(\$2,079,077)	\$1,154,947	137%
1-Jul-17	103%	\$4,436,466	(\$1,334,418)	\$3,102,048	\$0	\$3,102,048	332%
1-Jul-18	106%	\$8,242,503	(\$2,824,966)	\$5,417,537	(\$2,543,682)	\$2,873,855	154%
1-Jul-19	109%	\$12,252,960	(\$4,332,784)	\$7,920,176	(\$1,497,979)	\$6,422,197	210%
1-Jul-20	113%	\$15,553,068	(\$5,751,441)	\$9,801,627	(\$1,544,813)	\$8,256,814	213%
1-Jul-21	116%	\$18,960,995	(\$7,517,150)	\$11,443,845	(\$2,210,807)	\$9,233,039	195%
1-Jul-22	119%	\$22,551,647	(\$9,363,692)	\$13,187,954	(\$2,312,529)	\$10,875,425	193%
1-Jul-23	123%	\$26,862,694	(\$11,267,061)	\$15,595,633	(\$2,326,914)	\$13,268,720	198%
1-Jul-24	127%	\$30,515,746	(\$13,451,164)	\$17,064,582	(\$2,415,004)	\$14,649,578	192%
1-Jul-25	130%	\$34,011,311	(\$15,221,229)	\$18,790,082	(\$5,806,349)	\$12,983,732	162%
1-Jul-26	134%	\$37,837,599	(\$17,085,392)	\$20,752,207	(\$6,240,811)	\$14,511,396	162%
1-Jul-27	138%	\$43,255,764	(\$19,111,601)	\$24,144,163	(\$6,738,818)	\$17,405,346	167%
1-Jul-28	143%	\$47,286,988	(\$21,178,193)	\$26,108,796	(\$7,176,488)	\$18,932,308	167%
1-Jul-29	147%	\$52,684,316	(\$23,793,542)	\$28,890,774	(\$8,450,524)	\$20,440,250	163%
1-Jul-30	151%	\$58,474,601	(\$26,643,971)	\$31,830,630	(\$9,127,098)	\$22,703,532	163%
1-Jul-31	156%	\$62,681,488	(\$29,029,856)	\$33,651,632	(\$8,479,384)	\$25,172,248	167%
1-Jul-32	160%	\$67,958,779	(\$31,525,705)	\$36,433,074	(\$8,912,736)	\$27,520,337	168%
1-Jul-33	165%	\$73,410,296	(\$34,145,178)	\$39,265,118	(\$9,347,899)	\$29,917,218	169%
1-Jul-34	170%	\$77,505,960	(\$36,893,447)	\$40,612,514	(\$9,784,927)	\$30,827,587	166%
1-Jul-35	175%	\$82,998,129	(\$39,692,186)	\$43,305,943	(\$10,185,919)	\$33,120,025	166%
1-Jul-36	181%	\$82,741,781	(\$40,882,952)	\$41,858,829	(\$7,921,763)	\$33,937,066	170%
1-Jul-37	186%	\$85,541,841	(\$42,109,440)	\$43,432,400	(\$7,921,763)	\$35,510,637	171%
1-Jul-38	192%	\$88,266,923	(\$43,372,723)	\$44,894,199	(\$7,872,847)	\$37,021,353	172%
1-Jul-39	197%	\$90,918,496	(\$44,673,905)	\$46,244,591	(\$7,872,847)	\$38,371,744	173%
1-Jul-40	203%	\$93,646,051	(\$46,014,122)	\$47,631,928	(\$7,872,847)	\$39,759,081	174%
1-Jul-41	209%	\$96,455,432	(\$47,394,546)	\$49,060,886	(\$7,613,604)	\$41,447,282	175%
1-Jul-42	216%	\$99,349,095	(\$48,816,382)	\$50,532,713	(\$7,522,945)	\$43,009,768	176%
1-Jul-43	222%	\$102,329,568	(\$50,280,874)	\$52,048,694	(\$7,522,945)	\$44,525,749	177%
1-Jul-44	229%	\$105,399,455	(\$51,789,300)	\$53,610,155	(\$7,522,945)	\$46,087,210	178%
1-Jul-45	236%	\$108,561,439	(\$53,342,979)	\$55,218,460	\$0	\$55,218,460	204%
1-Jul-46	243%	\$111,818,282	(\$54,943,268)	\$56,875,013	\$0	\$56,875,013	204%
1-Jul-47	250%	\$115,172,830	(\$56,591,566)	\$58,581,264	\$0	\$58,581,264	204%
1-Jul-48	258%	\$118,628,015	(\$58,289,313)	\$60,338,702	\$0	\$60,338,702	204%
1-Jul-49	265%	\$122,186,856	(\$60,037,993)	\$62,148,863	\$0	\$62,148,863	204%
1-Jul-50	273%	\$125,852,461	(\$61,839,133)	\$64,013,329	\$0	\$64,013,329	204%
<b>Total</b>		<b>\$2,328,659,589</b>	<b>(\$1,111,617,205)</b>	<b>\$1,217,042,384</b>	<b>(\$176,826,263)</b>	<b>\$1,040,216,121</b>	

**Downtown Columbia**  
**Howard County, Maryland**

**Exhibit B-3: Net Revenues Versus Total Projected County Capital Costs (Base Case Scenario B/Flier Building)**

Tax Year Beginning	Inflation Factor	Total Projected County Revenues (Schedule XIII)	County Operating Expenditures (Schedule XIV)	Net Fiscal County Impacts from Operations	Estimated Capital Costs (Schedule XVII-I)	Net Howard County Surplus/(Deficit)	Projected Coverage
1-Jul-16	100%	\$4,302,163	(\$1,075,731)	\$3,226,432	(\$2,079,077)	\$1,147,355	136%
1-Jul-17	103%	\$4,431,587	(\$1,334,418)	\$3,097,169	\$0	\$3,097,169	332%
1-Jul-18	106%	\$8,228,215	(\$2,824,966)	\$5,403,249	(\$2,543,682)	\$2,859,567	153%
1-Jul-19	109%	\$12,960,183	(\$4,335,877)	\$8,624,306	(\$1,503,966)	\$7,120,340	222%
1-Jul-20	113%	\$15,573,098	(\$5,757,814)	\$9,815,285	(\$1,550,989)	\$8,264,296	213%
1-Jul-21	116%	\$20,244,839	(\$8,252,263)	\$11,992,576	(\$3,631,207)	\$8,361,369	170%
1-Jul-22	119%	\$23,281,693	(\$10,134,379)	\$13,147,313	(\$2,353,616)	\$10,793,697	186%
1-Jul-23	123%	\$27,638,467	(\$12,074,795)	\$15,563,672	(\$2,369,047)	\$13,194,625	191%
1-Jul-24	127%	\$31,366,047	(\$14,297,475)	\$17,068,572	(\$2,458,207)	\$14,610,365	187%
1-Jul-25	130%	\$34,904,190	(\$16,107,704)	\$18,796,486	(\$5,885,392)	\$12,911,094	159%
1-Jul-26	134%	\$38,761,267	(\$18,013,679)	\$20,747,588	(\$6,319,165)	\$14,428,424	159%
1-Jul-27	138%	\$44,270,032	(\$20,083,410)	\$24,186,622	(\$6,816,014)	\$17,370,607	165%
1-Jul-28	143%	\$48,373,770	(\$22,195,301)	\$26,178,468	(\$7,253,047)	\$18,925,421	164%
1-Jul-29	147%	\$53,773,997	(\$24,857,793)	\$28,916,204	(\$8,526,283)	\$20,389,922	161%
1-Jul-30	151%	\$59,718,066	(\$27,782,968)	\$31,935,098	(\$9,253,728)	\$22,681,370	161%
1-Jul-31	156%	\$64,078,463	(\$30,264,769)	\$33,813,694	(\$8,644,451)	\$25,169,243	165%
1-Jul-32	160%	\$69,425,515	(\$32,861,264)	\$36,564,251	(\$9,083,280)	\$27,480,972	166%
1-Jul-33	165%	\$74,544,057	(\$35,586,310)	\$38,957,748	(\$9,524,027)	\$29,433,721	165%
1-Jul-34	170%	\$79,152,851	(\$38,397,089)	\$40,755,762	(\$9,870,226)	\$30,885,536	164%
1-Jul-35	175%	\$83,475,111	(\$40,784,255)	\$42,690,857	(\$9,317,712)	\$33,373,145	167%
1-Jul-36	181%	\$83,793,172	(\$42,007,782)	\$41,785,390	(\$7,936,193)	\$33,849,197	168%
1-Jul-37	186%	\$86,601,952	(\$43,268,016)	\$43,333,936	(\$7,936,193)	\$35,397,743	169%
1-Jul-38	192%	\$89,332,447	(\$44,566,056)	\$44,766,390	(\$7,885,356)	\$36,881,035	170%
1-Jul-39	197%	\$92,016,893	(\$45,903,038)	\$46,113,855	(\$7,885,356)	\$38,228,499	171%
1-Jul-40	203%	\$94,777,399	(\$47,280,129)	\$47,497,270	(\$7,885,356)	\$39,611,915	172%
1-Jul-41	209%	\$97,620,721	(\$48,698,533)	\$48,922,188	(\$7,615,930)	\$41,306,259	173%
1-Jul-42	216%	\$100,549,343	(\$50,159,489)	\$50,389,854	(\$7,522,945)	\$42,866,909	174%
1-Jul-43	222%	\$103,565,823	(\$51,664,274)	\$51,901,550	(\$7,522,945)	\$44,378,605	175%
1-Jul-44	229%	\$106,672,798	(\$53,214,202)	\$53,458,596	(\$7,522,945)	\$45,935,651	176%
1-Jul-45	236%	\$109,872,982	(\$54,810,628)	\$55,062,354	\$0	\$55,062,354	200%
1-Jul-46	243%	\$113,169,172	(\$56,454,947)	\$56,714,225	\$0	\$56,714,225	200%
1-Jul-47	250%	\$116,564,247	(\$58,148,595)	\$58,415,651	\$0	\$58,415,651	200%
1-Jul-48	258%	\$120,061,174	(\$59,893,053)	\$60,168,121	\$0	\$60,168,121	200%
1-Jul-49	265%	\$123,663,009	(\$61,689,845)	\$61,973,165	\$0	\$61,973,165	200%
1-Jul-50	273%	\$127,372,900	(\$63,540,540)	\$63,832,359	\$0	\$63,832,359	200%
<b>Total</b>		<b>\$2,364,137,644</b>	<b>(\$1,148,321,388)</b>	<b>\$1,215,816,255</b>	<b>(\$178,696,332)</b>	<b>\$1,037,119,923</b>	