HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
3430 Courthouse Drive ▪ Ellicott City, Maryland 21043 ▪ 410-313-2350
Voice/Relay

Valdis Lazdins, Director

FAX 410-313-3467

March 31, 2016

TECHNICAL STAFF REPORT

Planning Board Meeting of April 14, 2016
County Council Hearing to be Scheduled

Case No./Petitioner: Valdis Lazdins, Director, Department of Planning and Zoning

Request: On behalf of the County Executive, the Department of Planning and Zoning has submitted this document to help explain and summarize proposed ways to implement affordable housing in Downtown Columbia. It further serves as a request to the Planning Board to review and make recommendations to the County Council on the following: the Downtown Columbia Plan (GPA 2016-03), *PlanHoward* 2030 (GPA 2016-03), Zoning Regulation Amendment 170 (ZRA-170), and a Development Rights and Responsibilities Agreement (DRRA).

Recommendation: Approval

I. Overview

As Downtown Columbia develops into a premier urban center, there are increasing needs to achieve a full spectrum of housing options. This technical staff report reviews and analyzes a comprehensive package of legislation submitted by the Department of Planning and Zoning (DPZ) on behalf of the County Executive to the Planning Board. The review and analysis seeks to determine if the legislative package, herein referred to as the GPA 2016-03 Package, is consistent with Howard County's current General Plan and if it will successfully implement affordable housing in Downtown Columbia. The GPA 2016-03 Package includes:

1. Downtown Columbia Plan amendments (GPA 2016-03);
2. *PlanHoward 2030* amendments (GPA 2016-03);
3. Zoning Regulation Amendment 170 (ZRA-170); and,
4. A Development Rights and Responsibilities Agreement (DRRA) petitioned by Howard Research and Development (HRD) to Howard County.

Before assessing each of these four legislative items for consistency with the General Plan, it is important to articulate Howard County's current vision for affordable housing as stated in the current General Plan and provide a brief history on the steps that led to the submission of the GPA 2016-03 Package. **Subsections A, B, and C** below provide this detail.

A. Requirements

Howard County's population continues to increase and become more socioeconomically diverse. Understanding these circumstances, *PlanHoward 2030* establishes key initiatives to enhance the high quality of life for all Howard County residents. One critical initiative is affordable housing. *PlanHoward 2030* states, "The County will continue to develop new models to provide sustainably affordable housing in mixed income communities, and to educate both home-seekers and the general public on the many benefits of compact, mixed-use, mixed income, location efficient homes."

In equal measure, the Downtown Columbia Plan, which is a component of *PlanHoward 2030*, embraces the diversity of Howard County residents and seeks to reinforce this. The Downtown Columbia Plan emphasizes the need to:

> Recognize and celebrate the original vision of Jim Rouse to create a socially responsible city for people of all ages, incomes and backgrounds. The establishment of an ongoing mechanism to provide a full spectrum of housing into the future is an important social responsibility shared by us all. Of related but equal importance is encouraging within downtown Columbia itself the diversity of people that exists elsewhere in Columbia today. Realizing this diversity will be important to the social and economic success of the downtown…

B. Background

A full spectrum of housing is a requirement of Howard County's plan for Downtown Columbia. To implement this vision the County Council adopted Council Bill No. 24-2012 establishing a Downtown Columbia Community Housing Foundation (DCCHF). The DCCHF administers a housing fund financed with contributions from Community Developer Howard Research and Development (HRD) as well as other developers and property owners. The bill recognized the Columbia Downtown Housing Corporation (CDHC) as the DCCHF under the Downtown Columbia Plan.

In March 2014 the CDHC reported that legislative changes were necessary to realize the Plan's affordable housing goals. In October 2014 the County Council passed Council Resolution No. 120-2014 requesting the CDHC to recommend any changes believed necessary and appropriate to the County Council and County Executive. In February 2015 the CDHC presented its recommendations and in June 2015 representatives of HRD submitted an analysis of the CDHC's recommendations and presented an alternative means of achieving a full spectrum of housing in Downtown Columbia. From June through August 2015 representatives of CDHC, HRD, the Howard County Housing Commission, and the County Executive's Office met to modify the recommendations. In September 2015 the four parties presented a draft set of the modified recommendations, herein referred to as the Joint Recommendations, to the County Council and argued they had the best prospects for realizing affordable housing in Downtown Columbia. The County Council then studied the Joint Recommendations' projected impacts through a series of analyses and work sessions between October and November 2015.

C. Joint Recommendations

Following the County Council's work sessions on the analysis of Joint Recommendations, CDHC, HRD, the Howard County Housing Commission, and the County Executive's Office made further modifications. Key aspects of the Joint Recommendations are as follows:

1. **Downtown Net New Residential Units**

   The Joint Recommendations reflect a residential component of 6,400 total net new units developed in Downtown Columbia by multiple landowners with a mix of affordable and market rate units, as follows:

Residential Unit Type	Units
Market Rate Units	
Market rental	4,011
Parcels C&D multifamily (Metropolitan)	817
Market for-sale (current estimate)	322
Market (LIHTC/Commission-owned projects)	350
Subtotal	*5,500**
	Affordable Units
Very Low Income	200
Low Income	500
Middle Income	200
Subtotal	*900***
Total Units	**6,400**

** Current zoning per the Downtown Columbia Plan*

*** Compares to 468 units under the proposed new baseline MIHU requirement, equal to 10% of the remaining 4,683 net new downtown units.*

   It is important to note that the Joint Recommendations include an additional 220 units (110 affordable, 110 market rate) at the Columbia Flier building given its close proximity to Downtown Columbia and its ability to serve workforce housing needs at Howard Community College and Howard County General Hospital. This building is not within the boundaries of Downtown Columbia and must first be approved as a residential site by the Zoning Board before it requires any consideration by the Planning Board. It is, as a result, not included in the GPA 2016-03 Package.

2. **Affordable Units**

   As shown in the table above, the Joint Recommendations envisions up to 900 affordable units in Downtown Columbia (1,010 in total with the inclusion of the Columbia Flier Building) for a spectrum of Very Low Income, Low Income, and Middle Income households. A breakdown of the units by type, location, and income distribution are provided in the following table.

Type	Site	Max. Income Served	# Affordable Units	% of Total Units
Very Low*	All HRD Sites	Housing Choice Voucher (0% to 50% Howard County AMI)	200	
Low/LIHTC**	Banneker Fire Station	60% Baltimore region AMI (approx. 50% Howard County AMI)	100	
Low/LIHTC**	Temporary Fire Station		90	
Low/LIHTC**	Toby's		100	
Low/LIHTC**	Library		150	
Low/LIHTC**	Transit Center		60	
Middle****	All HRD Sites	80% Howard County AMI	200	
Affordable Units in Downtown Columbia******			**900**	**14.1%**
Low/LIHTC**	Flier Building***	60% Baltimore region AMI (approx. 50% Howard County AMI)	110	
Total Affordable Units in the Joint Recommendations			**1,010**	**15.3%**

LIHTC = Low Income Housing Tax Credits
AMI = Average Median Income
** Housing Commission to master lease; CDHC to pay utility allowance*
*** Covenants to be placed on all LIHTC sites*
**** HRD to fund the purchase of the Columbia Flier building by the Housing Commission; Howard County to retain option on portion of building for additional public use*
***** 40-year restriction*

3. **Development Phasing**

The Downtown Columbia Plan's Phasing Progression Chart breaks the development of Downtown Columbia into three phases. The chart regulates the mix of development by requiring minimum levels of commercial and residential by phase. The Joint Recommendations express interest in ensuring that construction of affordable units keeps pace with that of market rate units. As a result, the Joint Recommendations propose amending the chart to include minimum affordability levels of residential development for each phase, through to full development. Specifically, at least 5 percent of the sum of cumulative market and affordable units in Phase I and 10 percent of the sum of cumulative market and affordable units in Phase II must be affordable units before moving onto the subsequent phase.

4. **Housing Fund**

The Joint Recommendations propose amending developer contributions follows:

- Developers of residential rental units shall not be required to pay into the Fund administered by the CDHC beyond building permits for the first 817 units issued for the Metropolitan and Parcel C;

- Developers of residential for-sale units have the option to pay a fee-in-lieu based upon the square foot size of the unit; and,
- Commercial occupants shall continue to pay the annual five cents ($0.05) per square foot fee to the Fund.

5. **Low Income Housing Tax Credit (LIHTC) Projects**

The Joint Recommendations emphasize the important role tax credit projects play in the development of affordable housing. Incorporating LIHTC projects in Downtown Columbia maximizes the use of federal and state resources to finance affordable housing development. The restrictive covenants placed on LIHTC projects assure the development of affordable housing in Downtown Columbia on these parcels. Finally, projects developed by the Howard County Housing Commission will generate a cash flow that allows for long-term, self-sustaining reinvestment in affordable housing in Downtown Columbia and the county as a whole.

As shown in **Subsection C.2** above, the Joint Recommendations lay out a plan for six LIHTC projects, five in Downtown Columbia and one at the Columbia Flier building site. HRD is responsible for providing land, financing, or a combination of both in order to facilitate the Commission's development of each of the six LIHTC projects. For any LIHTC project developed by HRD, the Housing Commission shall be granted a right of first offer to purchase the project after the 15-year tax credit compliance period. Per the Joint Recommendations as modified during the negotiations referenced in **Subsection C** above, HRD shall contribute an additional $3.2 million to cover land costs and financing gaps. It is important to note that any LIHTC project will have to come before the Planning Board and be approved by the Board pursuant to the Downtown revitalization process.

6. **Residential Development Limits**

Howard County's zoning regulations shall be amended to exclude all affordable units from the 5,500 unit maximum number of net new dwelling units permitted Downtown. It should also be noted that the proposed units at the Columbia Flier building will not be incorporated into the Downtown Columbia boundaries and will remain subject to current New Town Zoning District requirements. It is important to note that CDHC did not take a position on this specific density provision but recognizes that density modifications are an important tool used by jurisdictions to facilitate affordable housing in urban environments.

7. **Parking Ratios**

Existing parking ratios for Downtown Columbia shall be modified to reflect a more urban standard and align with Transportation Demand Management (TDM) planning, as follows:

Land Use	Visitor	Unit	Space/Unit Ratio
Studio and one-bedroom units	0.15	1.15	**1.3**
Two- and three-bedroom units	0.15	1.50	**1.65**

It is important to note that CDHC did not take a position on this specific level of parking ratio reduction but recognizes that parking modifications are an important tool used by jurisdictions to facilitate affordable housing in urban environments.

II. Description of the GPA 2016-03 Package

The Joint Recommendations form the basis of the GPA 2016-03 Package being submitted to the Planning Board. The amendments to the four documents (the Downtown Columbia Plan, *PlanHoward 2030*, ZRA-170, DRRA) on which the Planning Board is making a recommendation to the County Council capture the intent of the Joint Recommendations.

The leading document is the Downtown Columbia Plan. The Petitioner's proposal encourages the creation of a full spectrum of housing through comprehensive options to meet affordable housing needs and adds in the following implementation tools:

- At least 10% of all downtown dwelling units should be affordable, as defined by Howard County's Moderate Income Housing Unit (MIHU) program. To ensure that affordable housing is created concurrent with market rate housing the plan recommends a minimum amount of affordable dwelling units for each development phase that must be realized before the next phase can begin;

- That a dedicated trust fund be established and managed by DCCHF. Currently, a developer is required to make a one-time payment per unit for all residential dwellings. The amendment reflects the intent to modify the requirement so that it only applies to residential units offered for sale. Revenues collected to date shall remain in the fund. Fees for commercial properties will continue to be collected; and,

- The option for developers to propose innovative approaches to exceeding the minimum affordability requirement through a Development Rights and Responsibilities Agreement (DRRA).

The Downtown Columbia Plan continues to recommend the development of 5,500 residential units, but the proposed amendment would exempt affordable units. As a result, an amendment to *PlanHoward 2030* is proposed to reflect the increased density stemming from the exemption.

In turn, the Zoning Regulations will need to be amended to conform to these General Plan Amendments. Specifically, ZRA-170 addresses the residential development limits and parking ratio amendments for Downtown Columbia.

Finally, the Planning Board must also make recommendations on any DRRA petition to the County pursuant to Title 16, Subtitle 17 of the Howard County Code. An agreement between Howard County and HRD, the DRRA implements the majority of the provisions of the Joint Recommendations detailed in **Section I. Overview, C. Joint Recommendations.**

III. Evaluation

All four documents that comprise the GPA 2016-03 Package require review by the Planning Board and are needed to make the Joint Recommendations enforceable. This section evaluates each document.

A. Downtown Columbia Plan and *PlanHoward 2030*

The Downtown Columbia Plan, as a component of the General Plan, was originally adopted on February 1, 2010. An update of the General Plan, known as *PlanHoward 2030,* was adopted in July 2012. Amendments to both *PlanHoward 2030* and the Downtown Columbia Plan are evaluated in this section in order to allow the Planning Board to make an informed recommendation to the County Council.

1. Review of Amendments

The following summarizes GPA 2016-03 revisions to both *PlanHoward 2030* (the General Plan) and the Downtown Columbia Plan, which is incorporated in *PlanHoward 2030* by reference:

a. *PlanHoward 2030,* Chapter 6. Growth

Amount and Phasing of Future Residential Development

Howard County's Adequate Public Facility (APF) Regulations control the pace of residential development to ensure adequacy of school and road capacity in relation to growth. The General Plan sets the pace of growth through an APF Housing Allocation Chart, which distributes housing allocations among various planning areas – one of which is Downtown Columbia. GPA 2016-03 anticipates increased density through the inclusion of additional affordable housing units in Downtown Columbia, as described in the Joint Recommendations. The APF Housing Allocation Chart's twenty year unit total for Downtown Columbia is being adjusted from 3,750 units to 4,519 or an additional 769 units.

b. Downtown Columbia Plan, Chapter 1. Making a Special Place

Section 1.5 Diverse Housing

The Downtown Columbia Plan's vision of a full spectrum of housing is established through a funding program which supports the creation of affordable housing opportunities. GPA 2016-03 revises the program's design to include additional "tools" which advance the Joint Recommendations and encourage a more comprehensive set of options to meet affordable housing needs. The Plan envisions use of the following methods for the development of affordable housing:

i. MIHU Requirement

A minimum of 10 percent (10%) of all residential dwelling units should be designated as affordable as defined by Howard County's MIHU program. To ensure affordable housing is created concurrent with market rate housing in each phase of development, this plan also recommends a minimum number of residential dwelling units in each development phase must be affordable before moving on to a subsequent phase (see **Section I. Overview, C. Joint Recommendations, #3 Development Phasing**).

ii. Dedicated Housing Fund – Downtown Columbia Community Housing Foundation
Under the Downtown Columbia Plan, a developer is required to provide a one-time, per unit payment for all residential unit types (CEPPA 26). The amendment reflects the intent to modify the requirement so that it only applies to residential units offered for-sale as a fee-in-lieu option. Revenues collected to date shall remain in the Fund. The commercial property funding requirement (CEPPA 27) shall also remain.

iii. Innovative Approaches Exceeding Minimum Affordability Requirement
The County may enter into a DRRA with developers in order to further increase the total percentage of affordable units in Downtown beyond the ten percent (10%) minimum affordability requirement, to accelerate the pace of delivery of affordable units in the overall phasing of downtown, and/or to reach deeper into the affordability spectrum by providing more units to lower income households.

c. Downtown Columbia Plan, Chapter 4. Balancing and Phasing Growth
<u>Downtown Revitalization Phasing Program</u>
The Downtown Columbia Plan establishes a Phasing Program which balances minimum and maximum development levels for retail, office/conference, residential and hotel rooms in order to create a mixed-use Downtown. GPA 2016-03 revises the Phasing Program to require minimum percentages of affordable residential dwelling units in each development phase (see **Section I. Overview, C. Joint Recommendations, 3. Development Phasing**) while continuing to recommend the development of 5,500 residential units. The amendment will exempt affordable units from the Phasing Program in order to facilitate the Joint Recommendations.

d. Downtown Columbia Enhancements, Programs and Public Amenities (CEPPAs) Implementation Chart
GPA 2016-03 revises the one-time, per unit payment levels for the Dedicated Housing Fund (CEPPA 26) and modifies the requirement so that it only applies to residential units offered for sale (see **I. Overview, C. Background, #4 Housing Fund**).

2. <u>Evaluation of Amendments</u>
The following policies of *PlanHoward 2030* are directly related to, and implemented by, GPA 2016-03:

Chapter 2. Public Participation
POLICY 2.1 Promote dialog throughout development and implementation of PlanHoward 2030 with a broad range of community participants including those groups who are underrepresented or are part of a special population.
<u>Implementing Actions</u>

- **Involvement**. Engage the full spectrum of the County's population in planning and implementing actions.

Chapter 9. Housing

POLICY 9.2 Expand full spectrum housing for residents at diverse income levels and life stages, and for individuals with disabilities, by encouraging high quality, mixed income, multigenerational, well designed, and sustainable communities.

<u>Implementing Actions</u>

- **Range of Affordable Options**. Continue to expand current options for full spectrum, affordable housing through affordable housing requirements in additional zoning districts; increased regulatory flexibility to provide low and middle alternatives to moderate income housing; institution of density or other incentives; use of fee-in-lieu option; accessory apartments establishment of public, private, and nonprofit partnerships; and promotion of business community support for workforce housing.
- **Diverse Rental Opportunities**. Work with developers to provide increased full spectrum rental choice for all incomes, ages and abilities throughout Howard County, especially in areas designated for increased density and revitalization.

Chapter 10. Community Design

POLICY 10.2 Focus growth in Downtown Columbia, Route 1 and Route 40 Corridors, and some Columbia Village Centers, as well as some older commercial or industrial areas which have redevelopment potential.

<u>Implementing Actions</u>

- **Monitor Redevelopment**. Monitor and, as needed, refine the redevelopment goals and strategies for Route 1, Route 40, Downtown, and Columbia Village Centers.

POLICY 10.4 Review and update all County development regulations to respond to County General Plan development goals and changing market conditions, and to improve the efficiency of the County's review process.

<u>Implementing Actions</u>

- **Zoning Regulation Review**. Develop Zoning Regulations that better address infill and redevelopment goals and issues.

It cannot be overstated how critically important it is for Downton Columbia's housing program to reflect the broad interests of stakeholders engaged in Downtown's revitalization. GPA 2016-03 relies on the Joint Recommendations, developed by CDHC, HRD, Howard County Housing Commission and County Executive, as a basis of advancing a full spectrum housing vision for Downtown. As such, the amendment is consistent with Policy 2.1 of *PlanHoward 2030* policy (Policy 2.1) which promotes broad community participation in implementation efforts.

GPA 2016-03 provides consistency with Policy 9.2 of *PlanHoward 2030*. Revisions to the Downtown Columbia Plan's affordable housing program are designed to encourage a more comprehensive set of options which facilitate the advancement of a full spectrum of housing through the addition of minimum requirements for affordable unit counts, continuing Downtown's existing housing fund and supporting public/private strategies which yield affordable units exceeding minimum requirements and available to a greater range of income levels. Further, the policies informing the Downtown Columbia Plan – to provide a real city and the best, socially responsible environment for the growth of people – provide continuity with Columbia's founding vision. While implicit, these principles are also more fully advanced by the amendment.

The Joint Recommendations informing this amendment and subsequently incorporated into HRD's DRRA petition contemplate additional housing units in Downtown above the proposed minimum 10 percent MIHU requirement. The APF Housing Allocation Chart has been modified to reflect increased density anticipated with future affordable housing units. The continued targeted growth in Downtown Columbia, which supports the policies of previous General Plans, and continued by Policy 10.2 in *PlanHoward 2030*, is consistent with the designation of Downtown as the urban center of Columbia and Howard County.

Finally, the associated Zoning Regulation Amendment (ZRA-170) includes reduced bulk parking requirements. Exhibit A1, *Affordable Housing and Parking Standards Research*, provides an analysis of current literature, professional design industry methodologies, jurisdictional standards, and project case studies regarding residential parking. Reduced residential parking requirements fulfill the Downtown Columbia Plan objectives to transition downtown from a suburban auto-oriented to a multi-modal, mixed-use urban activity center. Further, reduced parking requirements and associated costs promote affordable housing and align with Transportation Demand Management (TDM) planning. For these reasons, the amendments are consistent with Policy 10.4 of *PlanHoward 2030.*

3. Planning Studies

At the request of the County Executive and County Council, county agencies prepared a series of analyses to more fully understand the implications of the Joint Recommendations. These analyses were conducted prior to the final revisions to the Joint Recommendations as outlined in **Section I. Overview, C. Joint Recommendations**. Each study, and its purpose, is referenced below and included with this amendment as an attachment.

a. Fiscal Impact Analyses Comparing Approved Development Columbia Plan and Proposed Affordable Housing Joint Recommendations Study

Purpose: An assessment of the fiscal impacts to Howard County resulting from the proposed Downtown Columbia Plan development with and without the proposed affordable housing Joint Recommendations.

b. Board of Education 2015 Feasibility Study Update

Purpose: An assessment of the effects of additional residential units resulting from the proposed Joint Recommendations on school capacity. DPZ's Research Division also conducted a study of anticipated impacts from this proposal. It was confirmed during a County Council work session that DPZ's study was more accurate. Howard County Public School System staff stated during this work session that its impact analysis has a propensity to overstate the number of students generated over a long-term time horizon.

c. HRD Values Analysis

Purpose: An assessment of the fiscal impacts to HRD resulting from the proposed Joint Recommendations.

d. Affordable Housing and Parking Standards Research Study

Purpose: An assessment of current literature, professional design industry methodologies, jurisdictional standards, and project case studies regarding parking.

e. Updated Traffic Assessment of Downtown Columbia

Purpose: An assessment of the effects of additional affordable residential units resulting from the proposed Joint Recommendations and total Downtown development program on road capacity.

B. Zoning Regulation Amendment 170 (ZRA-170)

This proposed amendment would impact Section 125.0.A.9. of the Zoning Regulations, which governs Downtown Columbia Revitalization, and would require at least 10 percent MIHUs in each Downtown Columbia Revitalization development. It also contains alternate methods to provide affordable housing. Accordingly, proposed revisions to Sections 125.0.H.g. of the Zoning Regulations would require Site Development Plans (SDPs) to satisfy the proposed MIHU requirements.

Additionally, ZRA-170 eliminates the exemption of MIHUs from height limitations and from providing public art. Also, included in the proposed amendment is an update to residential parking requirements associated with Downtown Columbia Revitalization.

The proposed text is attached as Exhibit C (CAPITALS indicates text to be added; text in [[brackets]] indicates text to be deleted). The Petitioner proposes to add two sections and revise three sections in the Zoning Regulations as described below:

1. Review of Existing Regulations

a. Moderate Income Housing Units

Howard County Zoning Regulations currently do not include provisions for MIHUs in Section 125.0.A.9 related to Downtown Columbia. However, as discussed in **Section I. Overview, C. Joint Recommendations, 4. Housing Fund**, the Downtown Columbia Plan requires developers to pay a fee to DCCHF for new dwelling units and commercial development. Howard County Zoning Regulations also include a requirement to provide MIHUs in 16 Zoning Districts as described below:

- MXD, RH-ED, R-ED, RSI, POR, CCT, CEF, RSA-8, R-SC, R-12, R-20, RR, RC, RA-15 zones require 10% of the residential dwelling units to be MIHUs; and,

- TOD and CAC zones require 15% of the residential dwelling units to be MIHU's.

Regulations governing MIHUs are in Section 13.400 et seq. of the Howard County Code. MIHU law (specifically Section 13.402) discusses development procedures, MIHU agreements and options for alternative compliance.

b. Art

Sec. 125.0.A.9.f.(2) requires all Downtown Revitalization Development, except for certain exemptions provided in Sec. 125.0.A.9.f.(2)(e), to provide public art equivalent in value to 1 percent of the building construction cost. Pursuant to Sec. 125.0.A.9.f.(2)(e), MIHUs are currently exempt, but ZRA-170 removes this exemption.

c. Height

Sec. 125.0.A.9.f.(1) requires all Downtown Revitalization Development, except for certain exemptions provided in Sec. 125.0.A.9.f.(2)(e), to conform to the building heights shown on the Downtown Maximum Building Height Plan and not exceed twenty stories. Pursuant to Sec. 125.0.A.9.f.(2)(e), MIHUs are currently exempt, but ZRA-170 removes this exemption.

d. Parking

Sec. 133.0.F.3.a. (Table 1) establishes parking requirements for Downtown Columbia Revitalization. The requirement for all residential land use is currently 1.65 parking spaces per dwelling unit. ZRA-170 divides the residential category into separate categories and reduces the ratio for studio and one bedroom units to 1.3 spaces per dwelling unit.

2. Evaluation of Proposal

a. Section 125.0.A.9.f.(2)(e)(i)

The current subsection exempts MIHUs from maximum height limits and a requirement to provide public art. The proposed changes require buildings containing MIHUs to comply with height limitations and to provide public art.

The elimination of this section is necessary to ensure that buildings containing MIHUs comply with height limitations and provide art and cultural amenities. DPZ staff supports this amendment to implement Policy 8.11 of *Plan Howard 2030*.

b. **<u>Section 125.0.A.9.f.(3)</u>**

The proposed amendment defines "affordable dwelling units" located in Downtown Columbia and exempts them from the maximum number of net new dwelling units established by Section 125.0.A.9.c.(1). "Affordable dwelling units" are defined as units restricted not less than 40 years to be available to households that earn less than 80 percent of Howard County Area Median Income (HC AMI).

This section provides a density bonus for affordable housing; traditionally found in Inclusionary Housing Ordinances to help offset developer costs. DPZ supports this approach to provide a market-based solution that financially encourages the creation of affordable housing.

Further, a fiscal analysis was conducted to measure the fiscal impact from the proposed increased density in Downtown Columbia. The analysis shows that the increase in density is a fiscal benefit to the County, primarily resulting from the increased number of market rate units that would be provided. Furthermore, DPZ recommends the increase in density under this proposal given that it aligns well with the stated objectives in the Downtown Columbia plan to create a vibrant and active city center in the heart of Columbia. Impacts on schools and roads from the increase in density have also been studied, and in both cases, mitigation of these impacts can be addressed with proper infrastructure planning , design and implementation. These studies are provided as attachment to this technical staff report.

c. **<u>Section 125.0.A.9.f(4)</u>**

The proposed amendment requires at least 10 percent MIHUs in each Downtown Revitalization development in accordance with the affordability levels established through the MIHU program.

Affordable housing requirements for new developments in Downtown Columbia are consistent with the objectives of *PlanHoward 2030* and the Downtown Columbia Plan. Furthermore, a 10 percent MIHU requirement currently exists in the MXD, RH-ED, R-ED, RSI, POR, CCT, CEF, RSA-8, R-SC, R-12, R-20, RR, RC, and RA-15 Zoning Districts. Affordability levels and requirements are contained in the MIHU provisions of the Housing Code. The proposed affordable housing requirement in ZRA-170 is consistent with this established approach.

d. **Section 125.0.A.9.f(4)(I)**

This section allows a developer to pay an in-lieu fee to DCCHF for for-sale units. It references Title 28, Subtitle 1 of the Howard County Code, which provides details regarding the fee. The Downtown Columbia Plan describes a Phasing Plan for the fees to be paid by these units, and establishes fee amounts as required by Downtown CEPPAs.

e. **Section 125.0.A.9.f(4)(II)**

This section allows the affordable housing requirement to be achieved through a Development Rights and Responsibility Agreement (DRRA), as permitted by Section 16.1700 et seq. of the Howard County Code. The agreement between the County and a developer must comply with the intent of Zoning Regulations and Housing Code and can be met through creative public and private financing. The benefits of the specific DRRA proposed as part of the Joint Recommendations are described in more detail in **Section I. Overview, C. Joint Recommendations**.

f. **Section 125.0.H.3.g**
The proposed amendment requires that SDPs associated with Downtown Revitalization comply with the requirements of Section 125.0.A.9.f.(4).

g. **133.0.F.3.a. (Exhibit C, Table 1)**
The proposed amendment divides the residential category into separate categories; one for studio and one bedroom units and another for units with two or more bedrooms, and reduces the parking ratios for studio and one bedroom units from 1.65 parking spaces per unit to 1.3.

C. Development Rights and Responsibilities Agreement (DRRA)

HRD petitioned Howard County with a DRRA, which outlines its obligations to provide affordable housing under the Joint Recommendations. The Planning Board's review of a DRRA petition must include a recommendation as to its consistency with the General Plan, which in this case is both the Downtown Columbia Plan and *PlanHoward 2030* as amended by the GPA 2016-03 Package.

The DRRA is found to be consistent with the Downtown Columbia Plan and *PlanHoward 2030* in a number of ways. First, it fully aligns with the Joint Recommendations that establishes a process by which 900 affordable units shall be built to serve a wide range of incomes. Second, the 900 affordable unit count exceeds the count generated from the minimum 10 percent requirement and adheres to the General Plan's vision for affordable housing, a vision that is articulated throughout this technical staff report. Third, it is found to be consistent given the Downtown Columbia Plan's expressed intent for developers to propose innovative approaches to exceeding the minimum affordability requirement through a DRRA. Further analysis is provided in **Section IV** below.

IV. Comparison to GPA 2016-02

GPA 2016-02 and its accompanying General Plan amendments (hereafter the "GPA 2016-02 Package") represent another legislative package being proposed to the Planning Board. However, there is less of a guarantee that the units forecasted in the GPA 2016-02 Package can be realized, nor would it as effectively meet the affordable housing goals of the Downtown Columbia Plan in terms of unit counts, speed of delivery, full spectrum affordability and other General Plan goals. The objectives of the GPA 2016-02 Package are commendable and align with the affordable housing goals of the Downtown Columbia Plan, but the GPA 2016-03 Package generates a greater number of units across a wider range of incomes.

Credit is due to the GPA 2016-02 Package for advancing the process to implement affordable housing in Downtown Columbia, and many of its components are similar to the GPA 2016-03 Package reviewed in this report. Nonetheless, the Joint Recommendations outline a full spectrum housing program that relies upon desirable unit, land, and financial commitments. These commitments and their acceptance by the organizations responsible for producing affordable housing in Downtown Columbia create the greatest likelihood that units will be constructed in a manner envisioned by the Downtown Columbia Plan and *PlanHoward 2030*.

The following matrix compares the current affordable housing program (i.e. 2010 DCP), the GPA 2016-03 Package, and the GPA 2016-02 Package in order to evaluate the policy implications contemplated by each strategy. In total, the GPA 2016-03 Package that incorporates the Joint Recommendations largely through the DRRA has the potential to produce approximately 900 affordable units for individuals/households with incomes up to 80 percent of HC AMI. This equates to over 14 percent of all residential units in Downtown Columbia as presented in **Section I. Overview, C. Joint Recommendations, 2. Affordable Units.**

DCP Affordable Housing Amendment Comparison				
Affordable Housing Program	2010 DCP (current law)	GPA 2016-03 Package without the DRRA	GPA 2016-03 Package with the DRRA	GPA 2016-02 Package
Initial Fund	•	•	•	•
Ongoing Developer Fees	•	•	•	
Multiple Developers of Affordable Units			•	
Stakeholder Consensus			•	
Provides Land for LIHTC Projects			•	
Provides for Housing Commission Ownership			•	
Imposes Phasing Requirements for Affordable Units			•	
Minimum Affordable Unit Requirement		10%	>10%	15%
Potential Affordable Units*		468	900	702
HC AMI Range		60%	0% - 80%	40% - 80%

** Applies minimum requirement across remaining 4,683 units in Downtown Revitalization. Excludes units at the Columbia Flier building.*

The GPA 2016-03 Package serves the needs of potential affordable housing occupants to a greater extent because it proposes the development of more affordable units serving a broader range of incomes and has a higher likelihood of being successfully implemented. This is due in large part to the DRRA measure, which serves as a mechanism to invite multi-faceted approaches to producing affordable housing, which is particularly critical in Downtown Columbia given its large-scale buildout potential. In this case, it would be risky to rely exclusively on an inclusionary requirement imposed on nearly one developer to produce a sufficient quantity of affordable units. Additional details on the comparison of the two packages are provided below.

A. Greater Number of Affordable Units

Under the GPA 2016-02 Package, the projected number of rental dwelling units in Downtown Columbia that will be affordable to households of low or moderate income at full build-out is 702.

Under the Joint Recommendations, the projected number of such units is 900, or 1,010 if the Columbia Flier building is included (28% and 44% more units, respectively).

B. Wider Range of Incomes Served

GPA 2016-02 Package proposes equal distribution of units affordable to incomes at 40, 60, and 80 percent of the HC AMI. The GPA 2016-03 Package, however, requires the inclusion of a broader range of incomes. Units will be made affordable to households with incomes ranging from zero to 80 percent of HC AMI with the majority of those units serving incomes ranging from zero to approximately 50 percent of HC AMI.

Number of Units	Affordability (HC AMI)
200	0% to 50%
500	50%
200	80%

C. Greater Financial Feasibility

The GPA 2016-02 Package does not address its financial feasibility. An analysis of the proposals in the GPA 2016-02 Package by Sage Policy Group, Inc. notes that that "compliance would likely bring investment returns to levels that would not support ongoing redevelopment in Downtown Columbia" and that "the return for investors in Downtown Columbia's redevelopment will be reduced enough to frustrate construction." These challenges were considered in the development of the Joint Recommendations, which proposes the use of several public and private financing tools, including the federal Low-Income Housing Tax Credit program and the Housing Choice Voucher program, and by maintaining and supplementing existing and future fee payments by developers as a source of gap financing. Any opportunity to maximize the use of outside funding sources should be encouraged.

D. Long-Term Investment in Affordable Housing

Because the GPA 2016-03 Package provides for five LIHTC projects (six when including the Columbia Flier building) that would either be owned by the Howard County Housing Commission, or in which it will have an option and the right of first offer to purchase; the units in these developments can be kept affordable in perpetuity. Moreover, these developments will generate substantial cash flow for the Howard County Housing Commission which will then be used to create more affordable housing opportunities in Downtown and throughout Howard County.

E. Better Fiscal Impact for the County

As shown in the Fiscal Study (Exhibit A2), the GPA 2016-03 Package results in a better fiscal outcome for Howard County than either the current Downtown Columbia Plan or the GPA 2016-02 Package. Over the projected 35 year period analyzed, the GPA 2016-03 Package results in net fiscal benefit to the County of approximately $9.4 million favorable in comparison to the GPA 2016-02 Package, and approximately $7.2 million favorable to the current approved plan. At buildout, the GPA 2016-03 Package produces an annual net fiscal benefit to Howard County which is approximately $1.2 million favorable when compared to the GPA 2016-02 Package, and approximately $1.1 million favorable when compared to the current approved plan. It is important to note that the fiscal impact analysis also accounts for capital costs, including the cost to provide school facilities for students living within the new housing units.

F. Diversified Production of Affordable Units

Under the GPA 2016-02 Package, the production of affordable housing units in Downtown Columbia is solely dependent on the private sector, since affordable units are only produced as inclusionary units within market rate projects. Under the GPA 2016-03 Package, while 400 units are created through inclusionary zoning within market rate, private sector developments, land and funding are also provided to the Howard County Housing Commission to develop as many as 500 low income units (up to 610 units when the Flier site is included). This diversified approach provides more certainty that affordable units will be developed downtown, and furthermore, will be developed earlier in the course of full buildout, and less dependent on market conditions.

V. RECOMMENDATION

The Department of Planning and Zoning recommends approval and adoption of all four documents that comprise the GPA 2016-03 Package to implement a full-spectrum of housing in Downtown Columbia as described herein.

______________________________ 3-31-16
Valdis Lazdins, Director Date

VI. Exhibit

- **Exhibit A:** Downtown Columbia Plan Amendments
  - **Sub- Exhibit:**
    - **Exhibit A1**- Parking Study
    - **Exhibit A2** - Fiscal Study
      - **Exhibit A2.1** – Student Yield Scenarios for Fiscal Study
    - **Exhibit A3** - Schools Studies
    - **Exhibit A4** - Roads Study
    - **Exhibit A5** - Values Analysis
- **Exhibit B:** *PlanHoward 2030* Amendments
- **Exhibit C:** Zoning Regulations Amendment 170 (ZRA-170)
- **Exhibit D:** Development Rights and Responsibilities Agreement (DRRA).

Attachment A - Downtown Columbia Plan Amendments (GPA 2016-03)

Public Hearing ____________
Council Action ____________
Executive Action ____________
Effective Date ____________

County Council Of Howard County, Maryland

2016 Legislative Session   Legislative Day No. ____

Bill No. _____ -2016

Introduced by the Chairperson at the request of the County Executive

AN ACT amending the *Downtown Columbia Plan* to revise the Downtown Columbia affordable housing program; setting forth methods for the development of affordable housing; revising the Downtown Revitalization Phasing Progression to reflect the timing of affordable housing development; amending certain Community Enhancements, Programs and Public Amenities to reflect the methods for the development of affordable housing; and generally relating to planning, zoning and land use in Howard County.

Introduced and read first time ____________________, 2016. Ordered posted and hearing scheduled.

By order ____
Jessica Feldmark, Administrator

Having been posted and notice of time & place of hearing & title of Bill having been published according to Charter, the Bill was read for a second time at a public hearing on ______________________, 2016.

By order ____
Jessica Feldmark, Administrator

This Bill was read the third time on ___________, 2016 and Passed ___, Passed with amendments _______, Failed _______.

By order ____
Jessica Feldmark, Administrator

Sealed with the County Seal and presented to the County Executive for approval this ____day of ____________, 2016 at ___ a.m./p.m.

By order ____
Jessica Feldmark, Administrator

Approved/Vetoed by the County Executive __________________, 2016

____
Allan H. Kittleman, County Executive

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; ~~Strike-out~~ indicates material deleted by amendment; Underlining indicates material added by amendment

WHEREAS, the Downtown Columbia Plan, adopted as an amendment to General Plan 2000 and included in *PlanHoward 2030* by reference, envisioned a full spectrum housing program for Downtown Columbia; and

WHEREAS, this Act amends certain provisions of the Downtown Columbia Plan in order to accomplish the goals of providing a broad spectrum of affordable housing in Downtown Columbia.

NOW, THEREFORE,

Section 1. Be It Enacted *by the County Council of Howard County, Maryland, that the Downtown Columbia Plan is hereby amended as follows and as more specifically shown in the attached pages:*

1. *Section 1.5, Diverse Housing, is amended as shown in the attached Exhibit A;*
2. *Section 4.1, General Plan, is amended as shown in the attached Exhibit B; and*
3. *Remove the existing Downtown Revitalization Phasing Progression, as shown in Section 4.2, Phasing on page 73 of the adopted Downtown Columbia Plan, and substitute the attached revised Downtown Revitalization Phasing Progression as shown in the attached Exhibit C;*
4. *The Downtown Columbia Community Enhancements, Programs and Public Amenities (CEPPAs) Implementation Chart are amended as shown in the attached Exhibit D.*

Section 2. And Be It Further Enacted *by the County Council of Howard County, Maryland that the Director of the Department of Planning and Zoning may correct obvious errors, capitalization, spelling, grammar, headings and similar matters and may publish this amendment to PlanHoward 2030 by adding or amending covers, title pages, a table of contents, and graphics to improve readability.*

Section 3. And Be It Further Enacted *by the County Council of Howard County, Maryland, that this amendment be attached to and made part of PlanHoward 2030.*

Section 4. And Be It Further Enacted *by the County Council of Howard County, Maryland, that this Act shall become effective 61 days after its enactment.*

EXHIBIT A

1.5 DIVERSE HOUSING

This Plan recognizes and celebrates the original vision of Jim Rouse to create a socially responsible city for people of all ages, incomes and backgrounds. The establishment of an ongoing mechanism to provide a full spectrum of housing into the future is an important social responsibility shared by us all. Of related but equal importance is encouraging within downtown Columbia itself the diversity of people that exists elsewhere in Columbia today. Realizing this diversity will be important to the social and economic success of the downtown, where the mixing of individuals with different backgrounds and incomes will result in an ongoing exchange of ideas in an environment where residents, workers and visitors will have an opportunity to learn from one another and grow together as a community.

Downtown Columbia: A Community Vision recaptures the spirit of the Rouse vision for a complete city in which different types of people live together to create a fully realized community. In such respect, this Plan also recognizes the enrichment a community can experience through the diversity of its people. This Plan strives to achieve this objective through the provision of expanded residential opportunities for in-town living in both housing form and affordability, and through the establishment of a [[community housing fund]] BASELINE MODERATE INCOME HOUSING UNIT REQUIREMENT, A COMMUNITY HOUSING FUND, AND THE FLEXIBILITY FOR DEVELOPERS TO PROPOSE A MIX OF AFFORDABLE HOUSING POLICIES THAT EXCEED THE MINIMUM REQUIREMENTS, which will be used to help meet the affordable housing needs of the community.

Background

The need for affordable housing exists today and will likely continue to grow into the future. Significantly, however, what at times can be overlooked is the important relationship between reasonable opportunities for affordable housing and the economic health of the County. *General Plan 2000* recognized this significance and identified the important relationship between the need for affordable housing and the County's employment growth, and its demand for [[low]]LOW- and moderate-income workers. In this regard, *General Plan 2000* recognized that to the degree [[low]]LOW- and moderate-income workers can be housed in the County, the County's economic development prospects are improved. In addition, General Plan 2000 further recognized that by providing more affordable housing it becomes possible for residents' children and parents, as well as teachers, firemen and policemen to live in the County. The accommodation of work force housing is a goal shared by all.

General Plan 2000 (Policy 4.2) recommends providing affordable housing for existing low- and moderate-income residents and for the diverse labor force needed for continuing economic growth. Policy 4.2 also recommends that new funding sources be identified to enable the Office of Housing and Community Development to expand the supply of affordable housing to serve low- or moderate-income households, including seniors and persons with disabilities. In a similar context, *Downtown Columbia: A Community Vision* expands upon these objectives and suggests that new models for developing affordable housing in combination with mixed-use development should generate new and innovative techniques for achieving these objectives. *PLANHOWARD 2030* EXPANDS ON *GENERAL PLAN 2000* AFFORDABLE HOUSING POLICY EMPHASIZING THE MOST DOMINANT IMPEDIMENT TO ACHIEVING AFFORDABLE HOUSING CHOICE IS AN INADEQUATE SUPPLY OF HOUSING AVAILABLE TO HOUSEHOLDS BELOW THE MEDIAN AREA INCOME LEVEL. POLICY 9.2 CALLS FOR EXPANDING FULL SPECTRUM HOUSING FOR RESIDENTS AT DIVERSE INCOME LEVELS AND LIFE STAGES, AND FOR INDIVIDUALS WITH DISABILITIES, BY ENCOURAGING HIGH QUALITY, MIXED INCOME, MULTIGENERATIONAL, WELL-DESIGNED, AND SUSTAINABLE COMMUNITIES. It is with these policy statements in mind that this Plan proposes a means of providing a full spectrum of housing for Downtown Columbia.

[[Downtown Columbia Community Housing Foundation]] DOWNTOWN COLUMBIA AFFORDABLE HOUSING PROGRAM

THE DOWNTOWN COLUMBIA PLAN RECOMMENDATIONS FOR THE CREATION OF FULL SPECTRUM HOUSING SERVING DOWNTOWN COLUMBIA ARE DESIGNED TO ENCOURAGE A COMPREHENSIVE SET OF OPTIONS TO MEET AFFORDABLE HOUSING NEEDS. THE PLAN ENVISIONS USE OF THE FOLLOWING METHODS FOR THE DEVELOPMENT OF AFFORDABLE HOUSING:

1. A MINIMUM OF 10% OF ALL RESIDENTIAL DWELLING UNITS SHOULD BE DESIGNATED AS AFFORDABLE AS DEFINED BY HOWARD COUNTY'S MODERATE INCOME HOUSING UNIT ("MIHU")PROGRAM;
2. A DEDICATED TRUST FUND BE ESTABLISHED AND MANAGED BY THE DOWNTOWN COLUMBIA COMMUNITY HOUSING FOUNDATION ("DCCHF"); AND
3. THE OPTION FOR DEVELOPERS TO PROPOSE INNOVATIVE APPROACHES TO EXCEEDING THE MINIMUM AFFORDABILITY REQUIREMENT THROUGH A DEVELOPMENT RIGHTS AND RESPONSIBILITIES AGREEMENT ("DRRA").

THIS PLAN RECOMMENDS AMENDING THE DOWNTOWN REVITALIZATION PROVISIONS OF THE ZONING REGULATIONS (WHICH GOVERN REDEVELOPMENT IN DOWNTOWN COLUMBIA) TO REQUIRE THAT AFFORDABLE HOUSING BE PROVIDED IN DOWNTOWN COLUMBIA IN CONNECTION WITH THESE THREE METHODS, AND ARE DESCRIBED IN MORE DETAIL BELOW.

METHODS FOR THE DEVELOPMENT OF AFFORDABLE HOUSING

<u>METHOD 1: A MINIMUM OF 10% OF ALL RESIDENTIAL DWELLING UNITS SHOULD BE DESIGNATED AS AFFORDABLE AS DEFINED BY HOWARD COUNTY'S MODERATE INCOME HOUSING UNIT PROGRAM</u>

TO ENSURE AFFORDABLE HOUSING IS CREATED WITHIN EACH DOWNTOWN RESIDENTIAL DEVELOPMENT, THIS PLAN

RECOMMENDS THAT THE ZONING REGULATIONS REQUIRE AT LEAST 10% OF ALL UNITS OFFERED IN EACH DEVELOPMENT EXCLUDING THE METROPOLITAN AND PARCEL C MUST BE PROVIDED AS MIHUS PURSUANT TO THE MIHU LAW OF THE HOWARD COUNTY CODE.

TO ENSURE AFFORDABLE HOUSING IS CREATED CONCURRENT WITH MARKET RATE HOUSING IN EACH PHASE OF DEVELOPMENT, THIS PLAN ALSO RECOMMENDS A MINIMUM NUMBER OF RESIDENTIAL DWELLING UNITS IN EACH DEVELOPMENT PHASE MUST BE AFFORDABLE BEFORE MOVING ON TO A SUBSEQUENT PHASE. THESE MINIMUMS PROVIDE A BASELINE FOR ESTABLISHING AFFORDABLE HOUSING IN PROPORTION TO MARKET RATE HOUSING AND WILL APPLY TO ALL PROPERTY OWNERS.

METHOD 2: A DEDICATED TRUST FUND BE ESTABLISHED AND MANAGED BY THE DOWNTOWN COLUMBIA COMMUNITY HOUSING FOUNDATION

A full spectrum housing program for Downtown Columbia should establish a flexible model that aspires to make new housing in downtown affordable to individuals earning across all income levels. In order to create an effective, flexible means of providing a full spectrum of housing for Downtown Columbia, GGP will establish the DCCHF[[Downtown Columbia Community Housing Foundation ("DCCHF")]], as detailed below. [[The intent of this full spectrum housing program for Downtown Columbia is to satisfy all affordable housing requirements for downtown.]]

- **Initial Source Fund**

GGP will establish the DCCHF at its expense and will contribute $1.5 million to the DCCHF upon issuance of the first building permit for new housing in Downtown Columbia. GGP will contribute an additional $1.5 million upon issuance of a building permit for the 400th new residential unit in Downtown Columbia. Each payment will be contingent on expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit.

- **Ongoing Developer Contributions - DWELLING UNITS OFFERED FOR SALE**

INSTEAD OF PROVIDING MODERATE INCOME HOUSING UNITS AS REQUIRED BY THE ZONING REGULATIONS, EACH [[Each]] developer OF FOR-SALE DWELLING UNITS MAY [[will]] provide a one-time, per unit payment to the DCCHF in the following amounts, to be imposed upon the issuance of any building permit for a building containing FOR-SALE dwelling units. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit:

1. $2.00 PER SQUARE FOOT [[$2,000/unit]] for each NET NEW DWELLING unit up to and including the 1,500th NET NEW DWELLING unit.
2. $7.00 PER SQUARE FOOT [[$7,000/unit]] for each NET NEW DWELLING unit between the 1,501th unit up to and including the 3,500th NET NEW DWELLING unit.
3. $9.00 PER SQUARE FOOT [[$9,000/unit]] for each NET NEW DWELLING unit [[between]] ABOVE AND INCLUDING the 3,501st NET NEW DWELLING unit [[up to and including the 5,500th unit]].

The amounts to be paid under 1, 2 and 3 above will be subject to annual adjustment based on a builder's index, land value or other index provided in the implementing legislation. AFFORDABLE UNITS SHALL BE EXCLUDED FROM THE COMPUTATION SET FORTH UNDER 1, 2, AND 3 ABOVE.

Each owner of property developed with commercial uses pursuant to the Downtown Revitalization Zoning Regulations shall provide an annual payment to the DCCHF in the amount of five cents ($0.05) per square foot of Gross Leasable Area for office and retail uses, and five cents ($0.05) per square foot of net floor area for hotels. The payment will be made annually by the property owner, with the initial payment being made prior to the issuance of an occupancy permit for net new commercial development on the property. The amount of the charge will be subject to annual adjustment based on a builder's index, land value, or other index provided in the implementing legislation.

- **DCCHF Notice of Sale**

The [[DHCCF]]DCCHF should be notified by the developer or joint venture, via first class mail, of land for or all residential units offered for initial sale in each new residential or mixed use building in Downtown Columbia. No later than 10 days after the sale of rental housing, the owner must provide written notice of the sale. The DCCHF also should be notified by the developer, via first-class mail, of all apartment units offered for rental in each new residential or mixed-use building containing rental units. In support of these objectives, GGP should involve DCCHF in meaningful discussion with land purchasers in Downtown Columbia in order to encourage full spectrum housing in each and every neighborhood.

- **DCCHF Organizational Structure**

It is anticipated that Howard County, in consultation with GGP, will determine, by legislation, the organizational entity, organizational structure, membership, functions, and implementation of the DCCHF. The legislation should provide that, in order to be eligible to receive the funds provided for in this Plan, the DCCHF must be a non-profit entity organized for the purpose of providing full spectrum, below market housing in Downtown Columbia. Use of DCCHF funds is limited to providing full spectrum, below market housing in Downtown Columbia, which may include, but is not limited to, funding new construction; acquiring housing units; preserving existing homes; financing rehabilitation of rental housing; developing senior, family or special needs housing; providing predevelopment, bridge, acquisition and permanent financing; offering eviction prevention and foreclosure assistance.

Method 3: the option for developers to propose innovative approaches to exceeding the minimum affordability requirement through a Development Rights and Responsibilities Agreement, which is a County vehicle used for promoting above minimum compliance with existing zoning law.

DRRAs are a County vehicle used for promoting above minimum compliance with existing zoning law. In order to further increase the total percentage of affordable units in Downtown Columbia beyond 10%, the County can determine that the purposes of the MIHU law will be served to a greater extent by entering into a DRRA with the developers of residential property in Downtown Columbia.

Examples of mechanisms developers are encouraged to consider when pursuing a DRRA petition to the County include: designation of units to a broader income spectrum; the formation of public, private and nonprofit partnerships; the use of Low Income Housing Tax Credits; land dedication and land exchanges; and other conditions, restrictions and enhancements.

EXHIBIT B

4.1 GENERAL PLAN

General Plan 2000 addresses Downtown Columbia under Policy 5.5: Encourage Downtown Columbia's continuing evolution and growth as the County's urban center. This Plan builds on and reinforces this policy as discussed in detail in the following sections. The successful evolution and growth of Downtown Columbia as recommended in *Downtown Columbia: A Community Vision* and *General Plan 2000* will depend on not only the addition of jobs and housing, but on the provision of a variety of high quality amenities and services that will attract new businesses, employees and homeowners to live, work and invest in downtown. Although most of the enhancements, amenities and services recommended by this Plan will be provided through private investment, a small portion of the public infrastructure (such as public parking garages) may be financed through alternative public or private mechanisms, such as, without limitation, tax increment financing (TIF) or Revenue Authority bonds. *PLANHOWARD 2030* BUILDS UPON THE VISION FOR DOWNTOWN COLUMBIA AS A TARGETED GROWTH AND REVITALIZATION AREA AND ESTABLISHES POLICY 10.2 FOR CONTINUED FOCUS ON ITS GROWTH AS AN EMERGING URBAN DOWNTOWN COMMUNITY.

More Downtown Columbia Residential Units

This Plan recognizes the need for additional housing in Downtown Columbia and recommends development of 5,500 additional units, EXCLUDING AFFORDABLE UNITS. This additional housing will be fundamental to the economic future of Columbia. The additional people living downtown will also be needed to provide an active pedestrian environment after normal office hours as well as customers for shops, restaurants and other entertainment uses. Additional housing will also help populate the streets downtown, enhancing the safety of residents, workers and visitors.

Development of additional housing units in downtown must provide increased housing opportunities for residents at different income levels and should provide a range of housing choices. Housing types could include among other possibilities, high and mid-rise multifamily; mixed-use high rise multifamily located above retail or office uses; loft-style housing located above retail or office space; single family attached housing; livework housing with office or retail uses within a single housing unit; student housing; and mixed-income housing.

This Plan also recommends development of 640 additional hotel rooms in Downtown Columbia. With the recommended increases in commercial and residential uses, additional hotel resources will be necessary to serve the present and future needs of the community. The addition of a convention/conference center and exhibit space also will add to the demand for quality hospitality accommodations and services. Depending on market conditions, a variety of hotel product types could be desirable and should be permitted. Hotel uses should be available to serve all of the needs of Downtown Columbia's residents, businesses and visitors.

The remainder of Section 4.1 is omitted

EXHIBIT C

PROPOSED CHART UNDER AFFORDABLE HOUSING JOINT RECOMMENTATION PROPOSAL

DOWNTOWN REVITALIZATION PHASING PROGRESSION													
PHASE I					PHASE II CUMMULATIVE					PHASE III COMPLETION			TOTAL
Use Type	Min		Max		Use Type	Min		Max		Use Type	Up To		
	Units	SF	Units	SF		Units	SF	Units	SF		Units	SF	
Retail		300,000		676,446	Retail		429,270		1,100,000	Retail		820,730	1,250,000
Office/Conf*		1,000,000		1,531,991	Office/Conf*		1,868,956		2,756,375	Office/Conf*		2,431,044	4,300,000
Hotel Rms**	100		640		Hotel Rms**	200***		540***		Hotel Rms**	440		640
Residential - Market Rate**	656		2,296		Residential - Market**	1,442		4,700		Residential - Market**	4,058		5,500

*Office/conference includes hotel conference/banquet space greater than 20 sq ft per hotel room.

** For zoning and phasing purposes, hotel rooms and residential development are tracked by unit. Actual square footage of hotel and residential development will be calculated for CEPPA compliance.
At least 5% of the sum of cumulative market and affordable units in Phase I and 10% of the sum of cumulative market and affordable units in Phase II must be affordable units before moving onto the subsequent phase.

*** The minimum number of hotel rooms required in Phase II is 100 unless more than 540 rooms were constructed in Phase I; the maximum number of hotel rooms for Phase II will be the difference between 640 and the number of rooms constructed in Phase I.

EXHIBIT D

DOWNTOWN COMMUNITY ENHANCEMENTS, PROGRAMS AND PUBLIC AMENITIES (CEPPAs) IMPLEMENTATION CHART

The Downtown CEPPA Implementation Chart identifies the timing and implementation of the various specific CEPPAs to be provided. The Downtown Columbia Plan anticipates that GGP, as the principal property owner, will undertake many of the CEPPAs. However, the responsibility lies with all property owners undertaking development or redevelopment in Downtown Columbia. Moreover, in the event of any future fragmentation of ownership of GGP's holdings, the CEPPAs must still be provided in accordance with the benchmarks established in this chart. Under such circumstances, the required CEPPAs could be funded by the developer(s) of individual parcels, a cooperative of developers or otherwise. In no case shall the obligation to provide a CEPPA be triggered: (i) by the development or construction of downtown arts, cultural and community uses, downtown community commons, or downtown parkland; or (ii) when the development of an individual parcel of land shown on a plat or deed recorded among the County Land Records as of April 6, 2010 consists only of up to a total of 10,000 square feet of commercial floor area and no other development.* The timing and implementation of other amenities discussed in this Plan or shown in concept on the exhibits to this Plan will be governed by the zoning regulation recommended by this Plan.

If a specific CEPPA identified in the Downtown CEPPA Implementation chart cannot be provided because: (i) the consent of the owner of the land on which the CEPPA is to be located or from whom access is required cannot reasonably be obtained; (ii) all necessary permits or approvals cannot reasonably be obtained from applicable governmental authorities; or (iii) factors exist that are beyond the reasonable control of the petitioner, then the Planning Board shall: (i) require the petitioner to post security with the County in an amount sufficient to cover the cost of the original CEPPA; or (ii) approve an alternate CEPPA comparable to the original and appropriate timing for such alternate CEPPA or alternative timing for the original CEPPA. In approving an alternate comparable CEPPA or timing, the Planning Board must conclude the alternate comparable CEPPA and/or timing: (i) does not result in piecemeal development inconsistent with the Plan; (ii) advances the public interest; and (iii) conforms to the goals of the Downtown Plan.

Additionally, because development phasing is inextricably linked to market forces and third party approvals, it will be important for the zoning to provide sufficient flexibility to consider a Final Development Plan which takes advantage of major or unique employment, economic development or evolving land use concepts or opportunities, and to consider a Final Development Plan amendment that adjusts the location, timing or schedule of CEPPAs and/or the residential and commercial phasing balance to take advantage of these opportunities.

PRIOR TO SUBMISSION OF THE FIRST FINAL DEVELOPMENT PLAN

1. GGP completed at its expense an environmental assessment of the three sub-watersheds of Symphony Stream, Wilde Lake and Lake Kittamaqundi located upstream of the Merriweather & Crescent Environmental Enhancements Study area. GGP participated with Howard County and The Columbia Association in a joint application to the Maryland Department of Natural Resources for Local implementation grant funding from the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund.

2. GGP will commission at GGP's expense (i) the preparation of the Land Framework component of the Downtown Columbia Sustainability Program and (ii) a detailed outline for the Community Framework component of the Sustainability Program (Community Framework Outline). The Sustainability Program must be developed around the Sustainability Framework document referenced with this Plan. The Howard County Environmental Sustainability Board must be provided with a copy of the Sustainability Program, and will be invited to provide comments to the Design Advisory Panel concurrent with the Design Advisory Panel's review of the Downtown-wide Design Guidelines (Guidelines).

3. GGP will commission at GGP's expense in consultation with Howard County a study evaluating a new Downtown Columbia Route 29 interchange between Route 175 and Broken Land Parkway and options for a connection over Route 29 connecting Downtown Columbia to Oakland Mills, including potential bicycle, transit and multimodal improvements. The study will evaluate alternative alignments and geometry, capacity analysis, preliminary environmental assessments, right of way impacts, multimodal opportunities, interaction and options with regard to the Oakland Mills bridge connection, preliminary costs, design and implementation schedule. Once the study is completed, GGP will suggest funding mechanism(s) for the potential implementation of its recommendation(s).

   If the study concludes that enhancing the existing pedestrian bridge is not recommended, then the funding for the renovation of the existing bridge should be used for the alternative connection recommended by the study. In addition, the pathways described in CEPPA No. 12 should be realigned to match the recommended connection.

4. GGP will prepare at its expense Downtown-wide Design Guidelines inclusive of sustainability provisions from the Sustainability Program and a Comprehensive Signage Plan for Downtown for approval by the County Council.

PRIOR TO APPROVAL OF THE FIRST FINAL DEVELOPMENT PLAN

5. GGP will commission at GGP's expense and in consultation with Howard County one or more feasibility studies for the following: (i) a new Broken Land Parkway/Route 29 north/south collector road connection to Little Patuxent Parkway and (ii) a new Downtown transit center and Downtown Circulator Shuttle.

   With regard to the collector road, the feasibility study will evaluate alternative alignments and geometry, capacity analysis, preliminary environmental assessments, right of way impacts, preliminary costs, design and phasing of construction for this connection.

   With regard to the transit center, the study will evaluate both long and short term transit expectations and needs both locally and regionally so that an appropriate location and facility program can be determined. Consideration shall be given to how the facility will operate initially as a free standing building, and in the future as a mixed use component of the Downtown Plan. Recommendations will be provided with regard to goals, management and operations.

   With regard to the Shuttle, the study will evaluate and determine appropriate levels of service and phasing in of service at various levels of development. As part of this, the study should examine the relationship between the shuttle and both long and short term, local and regional transit expectations and needs. The shuttle feasibility study will also analyze equipment recommendations, routes and stops, proposed vehicle types, and operational and capital costs. The feasibility study shall include an evaluation and recommendations regarding ownership, capital and operational funding opportunities, responsibilities and accountability to provide guidance to the Downtown Columbia Partnership and the County.

6. GGP and Howard County will jointly determine the functions, organizational structure, implementation phasing schedule consistent with the redevelopment phasing schedule, potential funding sources and projected funding needs of the Downtown Columbia Partnership, prior to GGP's establishment of this Partnership. The Downtown Columbia Partnership's role in promoting Downtown Columbia is outlined in Section 5.2 of the Plan.

One of the primary responsibilities of the Downtown Columbia Partnership shall be the transportation initiatives outlined in the shuttle feasibility study and the promotion and implementation of the TDMP. As such, at least fifty percent (50%) of the revenue collected pursuant to CEPPA No. 25 shall be utilized for the implementation of transportation initiatives in the shuttle feasibility study or other direct transit services downtown.

GGP will provide the Partnership's initial operating funding as necessary to fund the initial efforts of the Partnership until other sources of funding and/or sufficient developer contributions are available to operate the Partnership. Funding provided by GGP to support initial start-up costs shall be in addition to funding provided for by CEPPA No. 23 and 25. However, after issuance of a building permit for the 500,000 square-foot of new commercial uses, GGP's obligation as described in the previous two sentences shall end and thereafter the property owners developing pursuant to Section 125.A.9 of the Howard County Zoning Regulations, including but not limited to GGP, will contribute toward funding the permanent ongoing operations of the Downtown Columbia Partnership as set forth in CEPPA No. 25.

PRIOR TO APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN

7. GGP will submit a phasing schedule for implementation of the restoration work on GGP's property and a Site Development Plan for the first phase of the environmental restoration work as described in CEPPA No. 15.

8. GGP, in collaboration with the County, will establish the Downtown Arts and Culture Commission, an independent nonprofit organization, to promote and support Merriweather Post Pavilion's revitalization in accordance with this Plan and the development of Downtown Columbia as an artistic and cultural center.

PRIOR TO ISSUANCE OF THE FIRST BUILDING PERMIT

9. To facilitate the renovation of the Banneker Fire Station, GGP and the County shall cooperate to identify a site for the development of a temporary fire station while the Banneker Fire station is being renovated. GGP shall make the site available at no cost to the County on an interim basis but not longer than 30 months. GGP shall not be responsible for the development or construction costs associated with the temporary fire station. [[In the alternative, if prior to the issuance of the first building permit the County determines a new

location for a fire station in Downtown Columbia is necessary and desirable, then GGP shall provide, subject to all applicable laws and a mutual agreement between the parties, a new location for a fire station within the Crescent Neighborhood as shown on Exhibit C by fee transfer at no cost to the County or by a long-term lease for a nominal sum.]]

UPON ISSUANCE OF THE FIRST BUILDING PERMIT

10. GGP shall contribute $1.5 million in initial funding for the Downtown Columbia Community Housing Fund. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit.

UPON ISSUANCE OF THE BUILDING PERMIT FOR THE 400TH RESIDENTIAL UNIT

11. GGP shall contribute $1.5 million in additional funding for the Downtown Columbia Community Housing Fund. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit.

PRIOR TO ISSUANCES OF A BUILDING PERMIT FOR THE 500,000TH SF OF DEVELOPMENT

12. GGP will complete at its expense (i) the pedestrian and bicycle pathway from the existing Route 29 pedestrian bridge to Oakland Mills Village Center and to Blandair Park; (ii) the pedestrian and bicycle pathway from the existing Route 29 pedestrian bridge to the Crescent and Merriweather-Symphony Woods neighborhoods, inclusive of the pathway located between the Town Center Apartments and Route 29; and (iii) the pedestrian and bicycle pathway from the Crescent and Merriweather-Symphony Woods neighborhoods to Howard Community College and Howard County General Hospital.* The scope and design of new pedestrian and bicycle pathways in the Plan will be guided by the new Downtown-wide Design Guidelines, Adequate Public Facilities Ordinance, and as delineated in this Plan and its Exhibit I.

    GGP will develop at its expense recommended maintenance standards and responsibilities for a heightened level of design and security for the new pathway improvements. When GGP submits the first Site Development Plan under this Plan, GGP will also submit a Site Development Plan to facilitate implementation of these pathway improvements.

In addition, GGP along with the County and community will develop a scope of work for renovation of the existing Route 29 pedestrian bridge and will solicit a minimum of two proposals from separate architectural design consulting firms for alternative design improvements to the bridge structure to enhance its appearance and pedestrian safety. The consultant responses will be provided to the County for its selection, in consultation with GGP, of appropriate near-term improvements to retrofit the existing bridge. GGP will contribute up to $500,000 towards the implementation of the selected improvements. If enhancement of the bridge is not recommended by the study in CEPPA No. 3, GGP shall either post security or cash with the County in the amount of $500,000 to be used in accordance with CEPPA No. 3.

13. GGP will enter into and record in the land records of Howard County, Maryland, a declaration of restrictive covenants that shall (1) prohibit the demolition of the former Rouse Company Headquarters building, and (2) prohibit the exterior alteration of the former Rouse Company Headquarters building, except as provided for in the Downtown-wide Design Guidelines. GGP shall provide a copy of the recorded declaration to the County. The declaration of restrictive covenants will not prohibit interior alterations or future adaptive reuse that would better integrate the building into its surroundings and activate the adjacent pedestrian spaces as described in the Downtown-wide Design Guidelines and this Plan or prohibit reconstruction of the building in the event of casualty.

PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE 1,300,00TH SF OF DEVELOPMENT

14. GGP in cooperation with Howard Transit shall identify a location in Downtown Columbia for a new Howard County Transit Center consistent with the recommendation(s) of the feasibility study (See CEPPA No. 5). GGP shall provide a location either by fee transfer at no cost or a long-term lease for a nominal sum subject to all applicable laws and regulations. Any contract of sale or lease may provide for the retention of air and subsurface development rights by GGP and allow for the co-location of public facilities or private development on the same parcel provided that any other use of any portion of the property does not interfere with the County's ability to use, construct, or finance the facility in the manner most advantageous to the County.

15. GGP will complete, at GGP's expense, environmental restoration projects, including stormwater management retrofit, stream corridor restoration, wetland enhancement, reforestation and forest restoration, on its property and on property included within GGP's construction plans for the Merriweather-Symphony Woods and Crescent areas, as identified in the Land Framework of the Sustainability Program as referenced in Section 3.1 of this Plan.

16. GGP will complete Phase I of the Merriweather Post Pavilion redevelopment program based on the redevelopment program scope and phasing outlined below.

    The redevelopment program will generally follow the evaluation and conclusions outlined in the October 2004 Ziger/Sneed LLP Merriweather Post Pavilion Study, Section III “Evaluation of the Site and Structures” and Section IV “Conclusions” included in the 2004 Merriweather Citizens Advisory Panel report to Howard County. Final design and scope will be determined by GGP’s consultants, program and industry needs, operator recommendations, site and facility conditions and code requirements. Major components of the redevelopment program will include new handicapped parking accommodation; entrance and access modifications; restroom, concession and box office renovations and or replacement; utility systems replacement and additions; new roofs over the loge seating areas; reconfigured and replacement seating; renovated and new administration, back of house dressing and catering areas; code upgrades including fire suppression systems and handicapped ramps and pathway access.

    After development of preliminary renovation drawings, contractor input and schedule development, the program will be divided into three distinct phases to allow uninterrupted seasonal performances, staging and construction phasing.

PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN FOR THE 1,375TH NEW RESIDENTIAL UNIT

17. GGP shall, if deemed necessary by the Board of Education, reserve an adequate school site or provide an equivalent location within Downtown Columbia.

PRIOR TO ISSURANCE OF A BUILDING PERMIT FOR THE 2,600,000TH SF OF DEVELOPMENT

18. GGP will construct at its expense, the Wilde Lake to Downtown Columbia pedestrian and bicycle pathway. The scope and design of new pedestrian and bicycle pathways in the Plan will be guided by the new Downtown-wide Design Guidelines, Adequate Public Facilities Ordinance, and as delineated in this Plan and its Exhibit.

19. GGP will construct at its expense the Lakefront Terrace (steps to the Lake) amenity space and pedestrian promenade (see Item 9, on Plan Exhibit G) connecting the Symphony Overlook Neighborhood to the Lakefront and Lakefront pathway. The final design of the Lakefront Terrace will be determined at the time of Site Development Plan review.

20. GGP will complete Phase II redevelopment of Merriweather Post Pavilion based on the redevelopment program scope and phasing as outlined in CEPPA No. 16.

PRIOR TO ISSURANCE OF A BUILDING PERMIT FOR THE 3,900,000TH SF OF DEVELOPMENT

21. GGP will complete Phase III redevelopment of Merriweather Post Pavilion based on the redevelopment program scope and phasing as outlined in CEPPA No. 16.

22. At least one Downtown Neighborhood Square as defined in the Zoning Regulations shall be completed and deeded to Howard County for public land.

PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE 5,000,000TH SF OF DEVELOPMENT

23. GGP will provide $1,000,000 towards the initial funding of a Downtown Circulator Shuttle.

24. Transfer of ownership of Merriweather Post Pavilion to the Downtown Arts and Culture Commission for zero dollar consideration.

PRIOR TO THE APPROVAL OF EACH FINAL DEVELOPMENT PLAN

25. Each owner of property developed with commercial uses pursuant to the Downtown Revitalization Zoning Regulations shall participate as a member in the Downtown Columbia Partnership established pursuant to CEPPA No.6 and provide an annual per-square-foot charge in an amount of twenty-five cents ($0.25) per square foot of Gross Leasable Area for office and retail uses and twenty-five cents ($0.25) per square foot of net floor area for hotels to the Downtown Columbia Partnership. Each Final Development Plan shall show a consistent means of calculating and providing this charge, and require that the first annual charge be paid prior to issuance of occupancy permits for those buildings constructed pursuant to that Final Development Plan and subsequent Site Development Plans under Downtown Revitalization. This per-square-foot charge shall be calculated at the time of Site Development Plan approval and shall include an annual CPI escalator to be specified in each Site Development Plan.

UPON ISSUANCE OF ANY BUILDING PERMIT FOR A BULDING CONTAINING DWELLING UNITS OFFERED FOR SALE

26. INSTEAD OF PROVIDING MODERATE INCOME HOUSING UNITS AS REQUIRED BY THE ZONING REGULATIONS, EACH DEVELOPER OF FOR-SALE DWELLING UNITS MAY PROVIDE [[To fulfill an affordable housing obligation, each developer will provide]] a one-time, per unit payment to the DCCHF in the following amounts, to be imposed upon the issuance of any building permit for a building containing FOR-SALE dwelling units. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an

appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit:

1). $2.00 PER SQUARE FOOT [[$2,000/unit]] for each NET NEW DWELLING unit up to and including the 1,500th NET NEW DWELLING unit.
2). $7.00 PER SQUARE FOOT [[$7,000/unit]] for each NET NEW DWELLING unit between the 1,501th unit up to and including the 3,500th NET NEW DWELLING unit.
3). $9.00 PER SQUARE FOOT [[$9,000/unit]] for each NET NEW DWELLING unit ABOVE AND INCLUDING [[between]] the 3,501st NET NEW DWELLING unit [[up to and including the 5,500th unit]].

The amounts to be paid under 1), 2) and 3) above will be subject to annual adjustment based on a builder's index, land value or other index provided in the implementing legislation. AFFORDABLE UNITS SHALL BE EXCLUDED FROM THE COMPUTATION SET FORTH UNDER 1, 2, AND 3 ABOVE.

ADDITIONAL CEPPA CONTRIBUTION

27. Each owner of property developed with commercial uses pursuant to the Downtown Revitalization Zoning Regulations shall provide an annual payment to the DCCHF in the amount of five cents ($0.05) per square foot of Gross Leasable Area for office and retail uses, and five cents ($0.05) per square foot of net floor area for hotels. The payment will be made annually by the property owner, with the initial payment being made prior to the issuance of an occupancy permit for net new commercial development on the property. The amount of the charge will be subject to annual adjustment based on a builder's index, land value, or other index provided in the implementing legislation.

Howard County

Internal Memorandum

Subject: Affordable Housing and Parking Standards Research

To: Carl DeLorenzo, Policy Director
Dept. of County Administration

Through: Valdis Lazdins, Director
Dept. of Planning and Zoning

From: Randy Clay, AICP, Planner
Division of Comprehensive and Community Planning

Date: October 8, 2015
Revised: November 9, 2015

Overview

This memo summarizes and helps inform the County's discussion on affordable housing and parking. It reflects the scope of current literature, professional design industry methodologies, jurisdictional standards, and project case studies regarding parking. It includes a comprehensive view of current trends and practices at a local, regional and national level.

Recommendation

Given the breadth of regional and national scale parking research completed for downtown Columbia, it is appropriate to consider a parking ratio of 1.3 spaces per unit for studio and one bedroom residential units. For two and three bedroom units the ratio should remain at the current 1.65 spaces. However, given the potential for evolving conditions to affect the demand for parking in downtown Columbia, detailed analyses should still be allowed to test reduced parking standards on a case by case basis.

Further, since the costs associated with parking can impact housing affordability, many communities have sought to balance housing costs with the demand for parking. Some jurisdictions have either eliminated or reduced parking requirements for affordable housing. For example, Montgomery County, Maryland allows for a 0.50 special use reduction of its baseline parking minimum for its moderately priced dwelling units (MPDUs) and workforce housing.[1] This is a policy decision that warrants discussion since a reduction in parking for affordable units could result in an undersupply of residential parking with spill-over impacts to surrounding neighborhoods.

Finally, given the relatively early point in downtown Columbia's transition from a suburban, auto-oriented town center to a pedestrian-oriented, mixed-use urban activity center, an additional CEPPA requirement should be provided for a Downtown Parking Assessment commensurate with the start of the Phase II Cumulative Phasing Progression when a critical mass of development is available for reliable study of land use parking demand. The assessment should provide both quantitative and qualitative metrics for analyzing parking demand across all land use types including specific residential parking utilization yields by housing unit type, tenure and occupancy density as well as necessary adjustments for influencing occupational and socio-demographic factors. Transportation Demand Management Planning (TDMP) will also need consideration as an influencing variable.

[1] Montgomery (Maryland), County of. 2015. Montgomery County Code, Article 59-6 General Development Requirements, Section 6.2.3 Parking Requirements.

DID YOU KNOW

1. American Planning Association Planning Advisory Service. 2009. PAS Essential Info Packet 24: "Parking Solutions."

According to the American Planning Association, parking requirements typically range from one to two spaces per unit. Some codes have different requirements based on dwelling type – either multi- or single-family. Others make further distinctions based on the number of bedrooms, where the project is located in the community, or whether the units serve senior, low-income, or other special populations. Vehicle ownership rates tend to vary based on these factors, influencing parking demand. Studies indicate that in many cases parking requirements are not fixed and are subject to case-by-case review. Additionally, communities with Transportation Demand Management (TDM) ordinances often reference access to transit access as a key factor when considering parking reductions.

Source: https://www.planning.org/pas/infopackets/subscribers/eip24.htm

2. American Association of State Highway and Transportation Officials in Cooperation with the Federal Highway Administration. 2014. Strategic Issues Facing Transportation, NCHRP Report 750, Volume 6: The Effects of Socio-Demographics on Future Travel Demand.

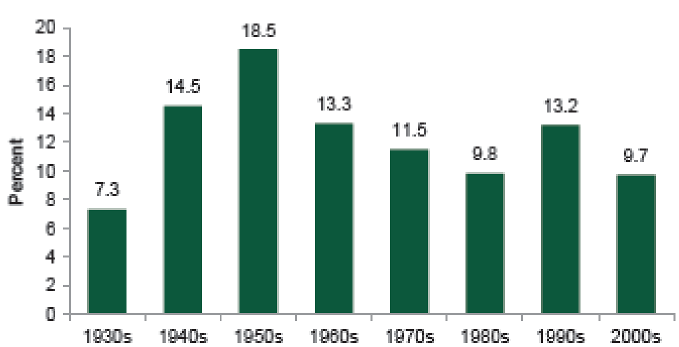
This report presents the results of research on how socio-demographic changes over the next 30 to 50 years may impact travel demand at the U.S. regional level to help transportation decision makers understand how population may change over time and how those changes could affect the ways people travel and the kinds of transportation modes and infrastructure that will be needed. The following bullets highlight key trends, drivers and projected impacts on travel demand:

1. **Trend 1: The Next 100 Million**

   The United States is growing more slowly.

   - **Drivers**: Population growing but aging, declining fertility rates among white women, extended life span, and less immigration.
   - **Impact on Travel Demand**: Overall increase in total VMT due to population growth; VMT per capita appears to be declining.

The 2000s marked the lowest decennial rate of population growth since the Depression (see Figure 3-2). Between 2000 and 2010, the U.S. population grew by 27.3 million (about 10 percent).



Source: Brookings Institution 2010.

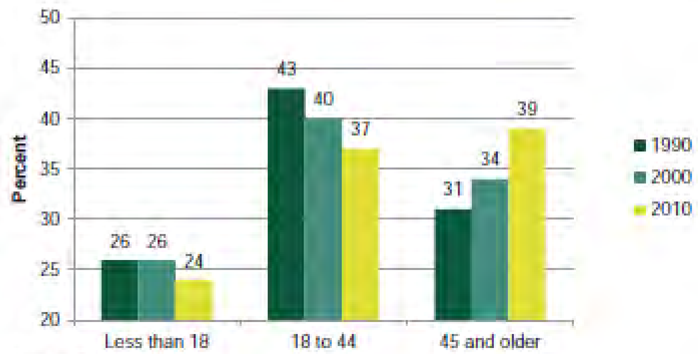
Figure 3-2. Population growth by decade, 1930s–2000s.

2. **Trend 2: The Graying of America**

   America is becoming "grayer." The population age 65 and older will significantly increase as the Baby Boom generation enters this demographic group.

   - **Drivers**: Population aging, extended life spans, "boom-and-bust" birth rate patterns.
   - **Impact on Travel Demand**: Decreased per capita VMT, decreased work trips, increased vehicle age, decreased auto ownership, increased carpooling, decreased transit use.

Population aging is evident in the increasing share of the population in the older age categories as the Baby Boom generation becomes older (see Figure 3-3).



Source: Brownell et al. 2013.

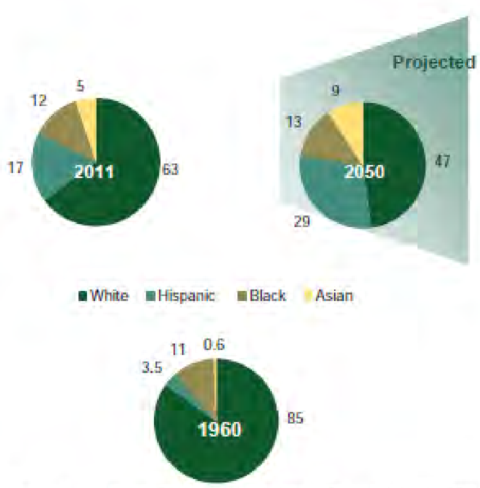
Figure 3-3. Percentage of U.S. population by age group, 1990–2010.

3. **Trend 3: The Browning of America**

   America is becoming "browner." The white population has grown more slowly than every other racial group in the second half of the 20th century.

   - **Drivers**: Structural changes in population distribution by race/ethnicity, relatively high fertility rates among Hispanic women, continuing immigration in younger age groups.
   - **Impact on Travel Demand**: Increase in VMT per capita, increase in auto age, greater public transit use.

White non-Hispanics accounted for a majority of the U.S. population in 2010, but their share has declined over time as the shares of other groups, particularly Hispanics and Asian/Pacific Islander populations, have grown significantly faster (see Figure 3-4).



Source: Census Bureau 2011 Population Estimates (Passel and Cohn 2008).

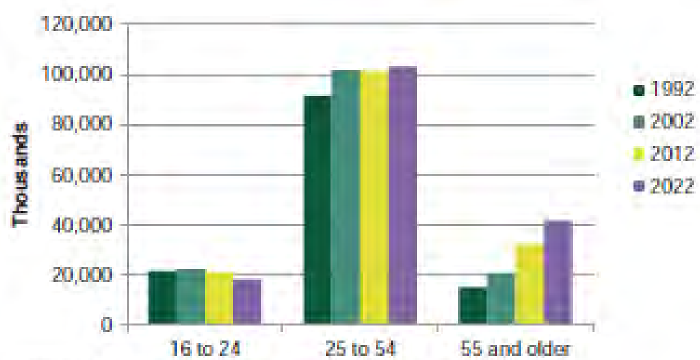
Figure 3-4. Population by race and ethnicity, actual and projected (% of total).

4. **Trend 4: The Changing American Workforce**

   America's workforce is growing older, more female, and more diverse.

   - **Drivers**: Boom-and-bust birth rate patterns, population aging, female work participation patterns, female longevity, structural changes in racial/ethnic distribution of labor force, immigration.
   - **Impact on Travel Demand**: Decreased VMT per capita, increased work-related VMT, lower growth in work-related VMT, increased carpooling.

The population will continue to exhibit structural changes that will have significant impacts on the U.S. workforce (see Figure 3-5). For example, according to the BLS, the share of 16–24-year-olds in the workforce is declining—from 17 percent in 1992 to 16 percent in 2012 to a projected 14 percent in 2022. Even more significant declines are observed among 25–54-year-olds, who represent the prime age group for workers.



Source: BLS, Monthly Labor Review, December 2013 (Toossi 2013).

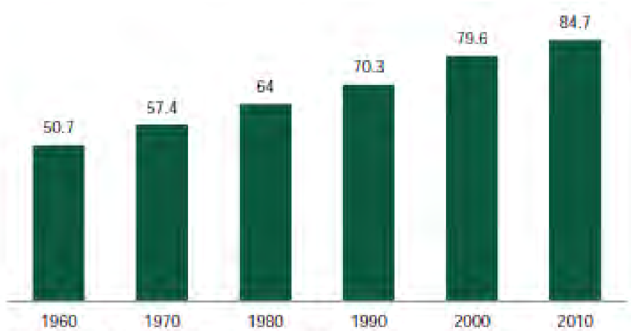
Figure 3-5. Civilian labor force by age.

5. **Trend 5: The Blurring of City and Suburb**

   The differentiation between cities and suburbs is fading.

   - **Drivers**: Population growth, housing starts, population aging, age structure, household structure.
   - **Impact on Travel Demand**: Decreased VMT per capita, increased non-motorized trips, increased transit trips.

U.S. population density, defined as the number of people per square mile of land area, increased from 50.7 in 1960 to 87.4 in 2010 (see Figure 3-6). Over the same period, central cities have become less dense, and the density of suburbs has changed very little (Census 2012, Hobbs and Stoops 2002).



Source: Census 2012 and Hobbs and Stoops 2002

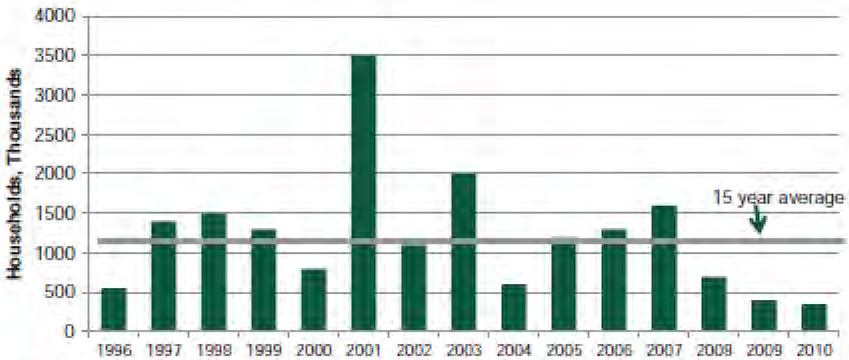
Figure 3-6. Number of people per square mile of U.S. land area.

6. **Trend 6: Slow Growth in Households**

   The rate of new household formation has plunged since 2006, creating more single households and also more multigenerational and larger households.

   - **Drivers**: Poor labor market, aging population, lifestyle choices of Millennials.
   - **Impact on Travel Demand**: Decreased per capita VMT, decreased auto ownership among young people, increased carpooling, increased public transit use.

Between 2006 and 2010, an average of 850,000 households were formed per year, compared with an average of 1.68 million per year over the previous five years (see Figure 3-7). In fact, household formation during 2006–2011 appears to have been far lower than in any five-year period over the past 40 years (Paciorek 2013).



Source: Federal Reserve Board of Cleveland, Economic Commentary, No. 2012-12, 2012 (Dunne 2012).

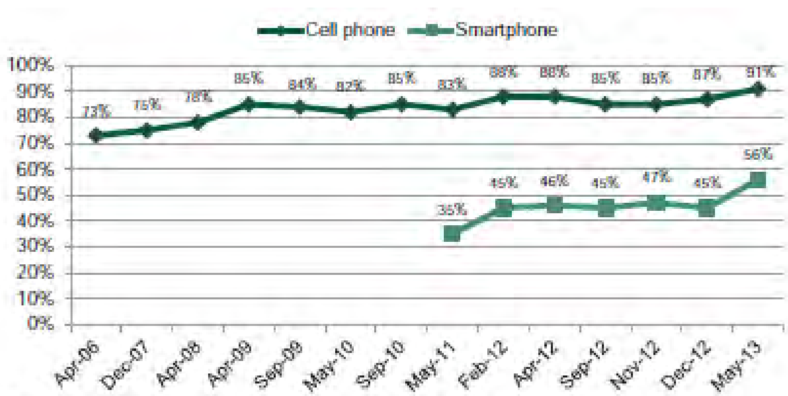
Figure 3-7. Net new households, 1996–2010.

7. **Trend 7: The Generation C**

   Mobile broadband will become increasingly more important and ubiquitous, creating a new Generation C.

   - **Drivers**: Technology evolution, lifestyle choices, age structure.
   - **Impact on Travel Demand**: Reduced VMT per capita for some trip purposes, decreased car ownership.

The growing influence of digital and mobile devices in the way people live, work, and socialize has spawned a new generation. Generation C is not necessarily a demographic group, as it is a lifestyle segment. Trend data indicate that these alternative means of communication have thrived among mobile phone users. A 2013 Pew Research Center survey found that 91 percent of American adults own a cell phone and 56 percent of adults own a smartphone (Pew 2013a) (Figure 3-8).



Source: Pew 2013b.

Figure 3-8. Percentage of American adults by cell phone and smartphone ownership.

8. Trend 8: The Salience of Environmental Concerns

The generational divide over the nation's energy and environmental priorities is still strong but will decrease over time.

- **Drivers**: Age structure, population aging.
- **Impact on Travel Demand**: Lower car ownership, more transit and nonvehicle travel by younger generations due to elderly population shrinking.

According to a 2011 Pew Research Center poll, different generations of Americans have starkly different views on some of the social issues facing the United States today (Pew 2011). With respect to another policy that addressed tax incentives for buying hybrid/electric vehicles, 69 percent of Millennials favored the policy, compared with 67 percent of Gen X'ers, 56 percent of Baby Boomers, and 38 percent of Depression era respondents (Figure 3-9).

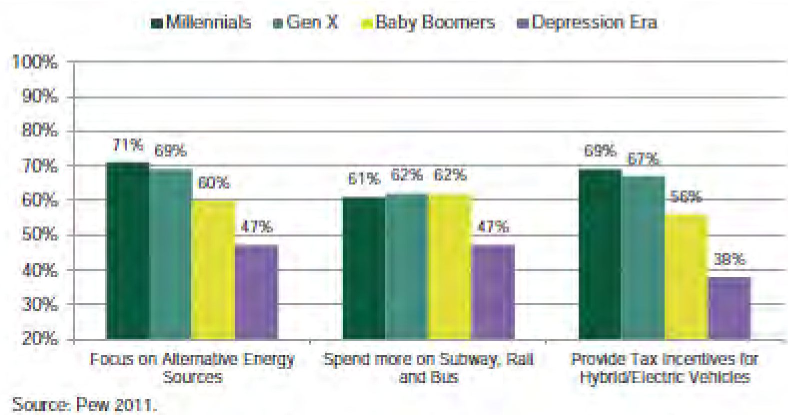


Figure 3-9. Generational differences in views on energy and environmental priorities: percentage in agreement.

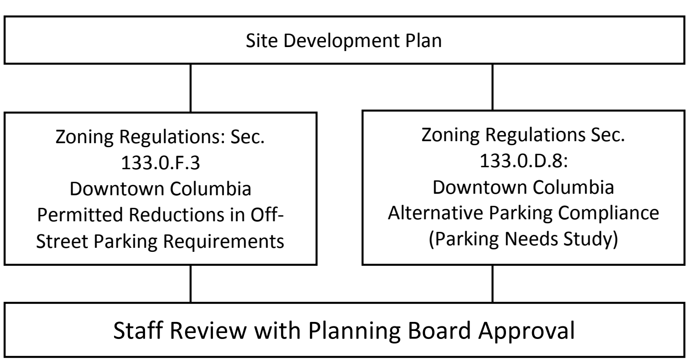
Source: http://www.trb.org/Main/Blurbs/171200.aspx

LOCAL

1. Downtown Columbia Parking Review Process

Site Development Plans (SDP) for Downtown Columbia apply either parking standards based on the provisions of the Howard County Zoning Regulations (Sec. 133.0.F.3), which utilize a shared parking methodology, or an alternative shared parking methodology (Sec. 133.0.D.8), which requires a Parking Needs Study.

Figure 1. Downtown Columbia Parking Review Flow Chart



The current Howard County Zoning Ordinance requires 1.5 paces/unit plus 0.15 paces/unit for visitors for all types of residential; the total requirement is 1.65 per unit.

Table 1. Howard County Shared Parking Methodology Base Parking Ratios

Land Use	Weekday		Weekend		Unit
	Visitor	Employee	Visitor	Employee	
General Retail/Personal Service	2.90	0.70	3.20	0.80	/ksf GLA
Shopping Center	3.20	0.80	3.60	0.90	/ksf GLA
Restaurants, standard, and beverage establishments	15.25	2.75	17.00	3.00	
Fast Food Restaurant	12.75	2.25	12.00	2.00	/ksf GLA
Cinema	0.19	0.01	0.26	0.01	/seat
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat
Health Club	6.60	0.40	5.50	0.25	/ksf GLA
Hotel	0.90	0.25	1.00	0.18	/room
Restaurant/Lounge	10.00		10.00		/ksf GLA
Conference Ctr./Banquet (20 to 50 sq ft/guest room)	30.00		30.00		/ksf GLA
Convention Space (>50 sq ft/guest room)	20.00		10.00		/ksf GLA
Residential(1)	0.15	1.50	0.15	1.50	/unit
General Office up to 100 ksf	0.275	3.30	0.028	0.33	/ksf GLA
General Office over 100 ksf	0.20	2.60	0.02	0.26	/ksf GLA
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GLA

Note(s): (1) 1.0 space reserved for residents' sole use; remainder may be shared.

(2) For all other land uses, data from the current edition of "Parking Generation" (ITE), "Shared Parking" (ULI), the Howard County Zoning Regulations or other applicable sources may be used.

Source: Howard County Zoning Regulations, Section 133.0, Off-Street Parking and Loading Facilities

2. Local Case Studies

Burgess Mill Phase I: Unit and Parking Counts

Burgess Mills Station was developed by the Howard County Housing Commission in 2014 as a mixed-income rental community. Phase I included 198 units - both apartments and townhouses. Current parking ratios are:

Table 2. Burgess Mill Phase 1 Parking Ratio

Garden Apartments	G1	G2	G3	G4	G5	G6	Sub Total		
Units	24	23	12	12	22	21	114		
Manor Houses	M1	M2	M3	M4	M5	M6			
Units	9	9	9	9	9	11	56		
Stacked Town	T1	T2	T3	T4	-	-			
	6	6	10	6	-	-	28		
								Market	Affordable
Total Units							198	91	107
Total Parking							383		
Parking Ratio							1.93		

Source: Howard County Planning and Zoning

Monarch Mill: Unit and Parking Counts

Monarch Mills was developed by the Howard County Housing Commission in 2012 as a mixed-income rental community. It includes 269 garden style apartments.

Table 3. Monarch Mill Parking Ratio

Building	Bldg A	Bldg B	Bldg C	Bldg D	Bldg E	Bldg F	Bldg G	Bldg H	Bldg I	Bldg J	Total	Market	Affordable
Units	32	24	32	12	12	45	24	24	32	32	269	153	116
Total Parking											580		
Parking Ratio											2.16		

Source: Howard County Planning and Zoning

Downtown Columbia and Surrounding Village Residential Development Unit Types

A review of recently approved residential developments within Downtown Columbia and surrounding villages indicates a range in unit type programing. Parcel D (The Metropolitan) includes an approximate 60:40 unit ratio between 1 bedroom and 2 and 3 bedroom types. Parcel C-1 (North Building) provides an approximate 40:60 unit ratio between studio and 1 bedroom and 2 and 3 bedroom types and Parcel C-2 (South Building) offers a very different program with an approximate 85:15 unit ratio between studio and 1 bedroom and 2 and 3 bedroom types. The Wilde Lake Apartments development offers the most even unit distribution with a 45:55 unit ratio between 1 bedroom and 2 and 3 bedroom types.

Table 1. Approved Downtown Columbia and Surrounding Villages Residential Development Unit Types

The Metropolitan: SDP-13-007

Unit Type	Level 1	Mezzanine	Level 2	Level 3	Level 4	Level 5	Level 6	Total Units	% Total	% Unit Type
I Bed Junior	6	-	9	9	9	15	0	48	13%	62%
1 Bed	9	-	36	36	36	30	0	147	39%	
1 Bed Den	3	-	6	6	6	6	2	29	8%	
I Bed Loft	13	-	0	0	0	0	0	13	3%	
2 Bed	10	-	22	22	22	22	7	105	28%	38%
2 Bed Loft	4	-	0	0	0	0	0	4	1%	
3 Bed	0	-	5	5	5	5	2	22	6%	
3 Bed Den	0	-	2	2	2	2	4	12	3%	
Total	45	-	80	80	80	80	15	380	100%	100%

Parcel C-1 North Building: SDP-14-024

Unit Type	Level 1	Mezzanine	Level 2	Level 3	Level 4	Level 5	Level 6	Total Units	% Total	% Unit Type
Studio	2	-	0	0	0	0	-	2	1%	42%
1 Bed	9	-	14	14	14	14	-	65	38%	
1 Bed Den	0	-	2	1	1	1	-	5	3%	
2 Bed	6	-	18	19	19	20	-	82	48%	58%
2 Bed Den	0	-	1	1	1	1	-	4	2%	
3 Bed	1	-	3	3	3	2	-	12	7%	
Total	18	-	38	38	38	38	-	170	100%	100%

Parcel C-2 South Building: SDP-14-024

Unit Type	Level 1	Mezzanine	Level 2	Level 3	Level 4	Level 5	Level 6	Total Units	% Total	% Unit Type
Studio	-	3	4	4	4	4	-	19	7%	84%
1 Bed Junior	-	3	4	4	4	4	8	27	10%	
1 Bed	-	6	34	33	33	33	12	151	57%	
1 Bed Den	-	2	6	6	6	6	2	28	10%	
2 Bed	-	1	4	5	6	6	3	25	9%	16%
2 Bed Den	-	0	3	3	2	3	2	13	5%	
3 Bed	-	0	1	1	1	0	1	4	1%	
Total	-	15	56	56	56	56	28	267	100%	100%

Wilde Lake Apartments: SDP-13-046

Unit Type	Level 1	Mezzanine	Level 2	Level 3	Level 4	Level 5	Level 6	Total Units	% Total	% Unit Type
Studio	-	-	-	-	-	-	-	-	0%	45%
I bed	17	-	20	22	22	22	-	103	45%	
2 Bed	15	-	24	26	26	26	-	117	51%	55%
3 Bed	2		2	2	2	2	-	10	4%	
Total	34		46	50	50	50	-	230	100%	100%

Source: Howard County Department of Licenses and Permits

Maple Lawn Farms
The Amended Comprehensive and Subdivision Sketch Plan for Maple Lawn Farms in Fulton was approved January 25, 2007 by the Planning Board. The following parking standards are included as part of the development criteria:

- No less than two parking spaces shall be provided for each Single Family Detached dwelling unit.
- No less than one parking space shall be provided for each accessory dwelling unit.
- No less than two parking spaces shall be provided for each Single Family Attached, Lille-Work, Semi-Detached, and Two-Family dwelling unit.
- No less than one and one-half parking spaces shall be provided for each apartment unit.
- Reductions in parking requirements are permitted pursuant to the Howard County Zoning Regulations Section 133.E.1 (Shared Parking).

Localized Multifamily Parking Demand
The Howard Hughes Corporation (HHC) studied 15 comparable multi-family developments across the Washington metropolitan area to supplement its analysis of parking demand for the Metropolitan. The study identified total units and parking spaces and the occupancy rates for both. The survey indicates in a suburban, but transitional urbanizing area, the average residential parking ratio is 1.52 spaces/unit.

Table 4 Washington Metropolitan Area Residential Parking Space Survey

Residential Parking Space Survey
Recent Suburban Rental Communities - Baltimore/Washington, D.C. Region

Project	Type	Submarket	Jurisdiction	Units	Residential Parking Spaces*	Parking Supply Ratio	Parking Occupancy**	Resident Occupancy***	Leasing Status	Parking Type
The Metropolitan Downtown Columbia	Mid-Rise	Columbia	Howard	380	591	1.555				Multi-Level Structured
Crosswinds at Annapolis Town Center	Mid-Rise	Annapolis	Anne Arundel	215	300	1.40	90%	94%	Stabilized	Multi-Level Structured
Mariner Bay at Annapolis Town Center	High-Rise	Annapolis	Anne Arundel	208	364	1.75	90%	92%	Stabilized	Multi-Level Structured
Flats 170 at Academy Yard	Mid-Rise	Odenton	Anne Arundel	369	579	1.57	75%	74%	Lease-Up	Multi-Level Structured
Jazz at the Quarter	Mid-Rise	Towson	Baltimore	280	318	1.14	90%	96%	Stabilized	Multi-Level Structured
Renaissance at the Quarter	Mid-Rise	Towson	Baltimore	150	222	1.48	90%	96%	Stabilized	Multi-Level Structured
Palisades at Towson	High-Rise	Towson	Baltimore	357	515	1.44	WND	95%	Stabilized	Multi-Level Structured
Towson Promenade	Mid-Rise	Towson	Baltimore	379	645	1.70	95%	92%	Stabilized	Multi-Level Structured
Avalon Mosaic	Mid-Rise	Dunn Loring/Merrifield	Fairfax	531	767	1.44	WND	56%	Lease-Up	Multi-Level Structured
The Metropolitan at Lorton Station	Mid-Rise	Lorton	Fairfax	251	429	1.71	75%	96%	Stabilized	Multi-Level Structured
The Metropolitan at Reston Town Center	High-Rise	Reston	Fairfax	288	460	1.60	75%	96%	Stabilized	Sub-Terranean
Avalon Park Crest	Mid-Rise	Tysons	Fairfax	354	720	2.03	85%	96%	Stabilized	Sub-Terranean
Archstone Gaithersburg Station	Mid-Rise	Gaithersburg	Montgomery	389	536	1.38	88%	96%	Stabilized	Multi-Level Structured
Cadence at Crown	Mid-Rise	Gaithersburg	Montgomery	540	703	1.30	90%	23%	Lease-Up	Multi-Level Structured
Paramount	Mid-Rise	Gaithersburg	Montgomery	224	335	1.50	100%	83%	Lease-Up	Multi-Level Structured
Gables Upper Rock	Mid-Rise	North Rockville	Montgomery	275	412	1.50	95%	96%	Stabilized	Sub-Terranean
			Totals	4,810	7,305	1.52				
			Averages	321	487	1.52				

**Includes visitor parking*
***Parking occupancies compiled via phone survey with property management; for properties in lease-up, parking occupancies are based on % of resident occupants requiring parking*
****Resident occupancies compiled from Axiometrics*

REGIONAL

1. Alexandria, Virginia applies variable parking ratios for residential development as described in its City Code:

Alexandria (Virginia), City of. 2015. Code of Ordinances. Article VIII: Off-Street Parking and Loading, Section 8-200: General Parking Regulations.

iii. *Optional parking ratio for affordable housing.* If a multifamily building includes income-restricted units, the parking ratio for such units may be as follows:

a. Three-quarters of a parking space per unit if the affordable housing unit is income-restricted for households earning at or below 60 percent of Area Median Income for Washington-Arlington-Alexandria, DC-VA-MD-WV;

b. Sixty-five hundredths of a parking space per unit if the affordable housing unit is income-restricted for households earning at or below 50 percent of Area Median Income for Washington-Arlington-Alexandria, DC-VA-MD-WV; and

c. Five-tenths of a parking space per unit if the affordable housing unit is income-restricted for households earning at or below 30 percent of Area Median Income for Washington-Arlington-Alexandria, DC-VA-MD-WV;

d. The above parking ratios may be reduced by the following percentages if the applicant can show, to the satisfaction of the director, that the multifamily dwelling in which the units are located complies with any of the following:

   A. Ten percent if the multifamily dwelling is within the Metro Half-Mile Walkshed or Bus Rapid Transit Half-Mile Walkshed, as shown on the maps titled "City of Alexandria Metro Station Walkshed Map" and "City of Alexandria Bus Rapid Transit Walkshed Map";

   B. Five percent if the multifamily dwelling is within one-quarter of a mile of four or more active bus routes;

   C. Ten percent if the multifamily dwelling has a walkability index score of 90—100 or five percent if the multifamily dwelling has a walkability index score of 80—89; or

   D. Five percent if the multifamily dwelling includes 20 percent or more studio units.

Source: https://www.municode.com/library/va/alexandria/codes/zoning?nodeId=ARTVIIIOREPALO_S8-200GEPARE.

2. Arlington, Virginia allows reduced parking for affordable housing:

Arlington (Virginia), County of. 2014. Neighborhood Form Based Code. Part 9: Building Use Standards, Section 903: Additional Incentives for Affordable Housing.
A reduced parking ratio is used as a bonus if more than the requested number of affordable units is created:

A. The following incentives are provided in order to encourage property owners to create or preserve AFFFORDABLE HOUSING units beyond the minimum number of AFFORDABLE HOUSING units required in Section on 902.

   1. Reduced parking ratio: If an applicant provides at least 1 percent more AFFORDABLE HOUSING UNITS in excess of the minimum required quantity, the applicant may reduce the minimum parking ratio for all AFFORDABLE HOUSING UNITS within the DEVELOPMENT PROJECT from 1.125 spaces per unit to 0.825spaces per unit, which includes 0.7 space per unit and 0.125 SHARED space per unit.

Source: http://arlingtonva.s3.amazonaws.com/wp-content/uploads /sites/31/2014/06/5_Parts5_10.pdf

3. Baltimore, Maryland allows reduced parking for different types of housing, including public and elderly housing:

Baltimore (Maryland), City of. 2012. Zoning Code. Title 10: Off-Street Parking Regulations, Subtitle 2: Scope and Eligibility, Section 10-207: Exemptions; Special Provisions.
Offers an exemption to the parking minimum for public housing units (could include those within mixed-income developments), and elderly housing.

c. For public housing.
   No more than 1 vehicle parking space need be provided for every 2 dwelling units in dwellings erected or rehabilitated to be sold to, to be developed by, or to be developed for the use of the Housing Authority of Baltimore City for low-rent public housing.

d. For elderly.
   No more than 1 vehicle parking space need be provided for every 4 units designed for occupancy by the elderly in:

1. a federally-assisted private or public housing dwelling; or
2. housing for the elderly

Source: http://archive.baltimorecity.gov/portals/0/charter%20and%20Codes/code/Art%2000%20-%20Zoning.pdf

4. Fairfax, Virginia. Reston Town Center.

Although initial development of Reston Town Center's core began in the 1990s, current parking standards apply to new residential developments. Article 11-103 of the Fairfax County Code requires one in six-tenths (1.6) spaces per unit for multifamily housing in Reston Town Center.
Source: http://www.fairfaxcounty.gov/dpz/zoningordinance/

5. Gaithersburg, Maryland includes parking ratios for multifamily units based on bedroom count:

Gaithersburg, (Maryland) City of. 2015 City Code. Part 1 The Charter, Chapter 24 Zoning, Article XI Off-Street Parking and Loading.

Residential	
Single-family and two-family	2/DU (Dwelling Units)
Multiple-family apartments and apartment hotels:*	
Efficiency	1/DU
1 B.R.	1.25/DU
2 B.R.	1.5/DU
3 B.R. and larger	2/DU *Plus 1 space for each 400 square feet of assembly area required.

Source: https://www.municode.com/library/#!/md/gaithersburg/codes/code_of_ordinances?nodeId=PTIITHCO_CH24ZO_ARTXIOREPALO

6. Montgomery County, Maryland includes parking ratios for multifamily units based on bedroom count and allows parking rate adjustments for specific housing types :

Montgomery (Maryland), County of. 2015. Montgomery County Code, Article 59-6 General Development Requirements, Section 6.2.3 Calculation of Required Parking and Section 6.2.4 Parking Requirements.

I. Adjustments to Vehicle Parking

1. In General
   a. Reduced parking rates under Section 6.2.3.I are not mandatory. The maximum number of parking spaces allowed in a Parking Lot District or Reduced Parking Area is based on the baseline maximum in the parking table under Section 6.2.4.B.
   b. Adjustments under Section 6.2.3.I to the minimum number of required parking spaces must not result in a reduction below 50% of the baseline parking minimum or shared parking model minimum.
2. Special Uses
   a. The parking minimum resulting from a Special Uses adjustment may not be further reduced by additional adjustments under Section 6.2.3.I.
   b. Restricted Housing Types
      The baseline parking minimum in the parking table under Section 6.2.4.B may be reduced for restricted housing types by multiplying the following adjustment factor times the baseline minimum:

Housing Type	Adjustment Factor
MPDUs and Workforce Housing	0.50
Age-Restricted Housing	0.75
Senior Housing	0.50

B. Vehicle Parking Spaces

USE or USE GROUP	Metric	Agricultural, Rural Residential, Residential, and Industrial Zones: Baseline Minimum	Commercial/Residential and Employment Zones: Within a Parking Lot District or Reduced Parking Area: Baseline Minimum	Commercial/Residential and Employment Zones: Within a Parking Lot District or Reduced Parking Area: Baseline Maximum	Commercial/Residential and Employment Zones: Outside a Parking Lot District or Reduced Parking Area: Baseline Minimum
AGRICULTURAL					
Agricultural Auction Facility	1,000 SF of GFA	5.00	--	--	--
Agricultural Processing	1,000 SF of GFA	1.50	--	--	--
Farm Supply, Machinery Sales, Storage, and Service	1,000 SF of GFA, excluding storage area	5.00	1.00	2.00	2.00
NURSERY					
Nursery (Retail)	1,000 SF of Sales Area	6.00	3.00	6.00	6.00
Nursery (Wholesale)	1,000 SF of Total Floor Area	1.50	--	--	--
Slaughterhouse	1,000 SF of GFA	1.50	--	--	--
Winery	1,000 SF of GFA, and If the winery conducts public tours	1.50 10.00	--	--	--
ACCESSORY AGRICULTURAL USES					
Farm Market, On-site	Market	3.00	0.00	0.00	3.00
RESIDENTIAL					
HOUSEHOLD LIVING					
Single-Unit Living Two-Unit Living Townhouse Living	Dwelling Unit	2.00	1.00	2.00	2.00
Multi-Unit Living	Efficiency Dwelling Unit	1.00	1.00	1.00	1.00
	1 Bedroom Dwelling Unit	1.25	1.00	1.25	1.25
	2 Bedroom Dwelling Unit	1.50	1.00	1.50	1.50
	3+ Bedroom Dwelling Unit	2.00	1.00	2.00	2.00

Source: http://library.amlegal.com/nxt/gateway.dll?f=templates&fn=default.htm&vid=amlegal:montgomeryco_md_mc

The Rio Washingtonian is a mixed-use development project located in Gaithersburg in Montgomery County, Maryland. Parking standards are primarily governed by Montgomery County zoning regulations.

7. Rockville, Maryland includes parking ratios for multifamily and live-work units based on bedroom count:

Rockville (Maryland), City of. 2015. City Code, Chapter 25 Zoning Ordinance, Article 16 Parking and Loading.

Use Category	Use	Auto Parking Spaces		Bicycle Parking Spaces			Additional Requirements
		Unit Measure	Base Number Required	Unit Measure	Short Term Space	Long Term Space	
Residential	Dwelling, single unit detached	Per dwelling unit	2	Dwelling unit	0	0	
	Dwelling, single unit semi-detached	Per dwelling unit	2	Dwelling unit	0	0	
	Dwelling, townhouse	For 1 or 2 bedrooms	1.5	Dwelling unit	0	0	
		For 3 or more bedrooms	2				
	Dwelling, single unit attached	Per dwelling unit	2	Dwelling unit	0	0	
	Dwelling, multiple-unit	For 0 (zero) bedrooms	1	Dwelling unit	1 per 50	1 per 3	
		For 1 bedroom	1				
		For 2 or more bedrooms	1.5				
	Live-work unit	For 1 or 2 bedrooms	2	Unit	1 per 5	1 per 3	
		For 3 or more bedrooms	2				

Source: https://www.municode.com/library/#!/md/rockville/codes/code_of_ordinances?nodeId=CICO_CH25ZOOR_ART16PALO

King Farm

Resolution-10-96 for approval of King Farm's concept plan includes the following parking criteria:

> With the exception of multiple (apartment) dwellings which shall be parked at 1.7 spaces for each unit regardless of the number of separate bedrooms, Helios/Towle will provide the required parking under the current Zoning and Planning Ordinance for all uses within the King Farm development, and no waiver of parking requirements is being granted as part of this Concept Plan Application.

Source: http://md-rockville.civicplus.com/DocumentCenter/View/5203

NATIONAL

1. Alexandria, Virginia developed a matrix of mixed-income residential developments from across the U.S. to help inform its comprehensive plans for the Braddock Metro Area. The matrix describes parking demand for various residential projects including project name, total units, affordability breakdown, parking ratios and total parking spaces. Based on this chart, parking for mixed-income housing can range from 0.7 to 1.0 spaces/unit.

Alexandria (Virginia), County of. 2007. "Mixed-Income Housing Matrix: Braddock Metro Area Plan."

Table 5. National Mixed-Income Housing Development Matrix

Project	Location	Site Area	Units	Residential Density	Affordability Breakdown	Parking Ratio	Parking Provided
		acres		*units/acre*		*spaces/unit*	
Auburn Court	Cambridge, MA	2.3 acres	77 *(Phase I)*	33 units/acre	40% low-income, 9% affordable, 51% market-rate	1 space/unit	77 spaces
Franklin Hill	Boston, MA	9.9 acres	378	38 units/acre	97% low-income, 3% market-rate	0.75 spaces/unit	195 surface spaces, 90 garage spaces
Hismen Hin-nu Terrace	Oakland, CA	1.46 acres	92	85 units/acre *(mixed-use portion)* ; 65 units/acre overall	100% affordable (50-60% AMI)	< 1 space/unit	119 total spaces (89 residential)
Langham Court	Boston, MA	1 acre	89	89/units/acre	1/3 low-income, 1/3 affordable, 1/3 market-rate	0.7 spaces/unit	51 garage spaces
Maverick Landing	Boston, MA		396	44 units/acre	77% low-income, 23% market-rate		
Parkside of Old Town (Cabrini Green Phase I	Chicago, IL	19 acres *(Phase I)*	760 *(Phase I)*	40 units/acre	30% low-income, 20% affordable, 50% market-rate		
Quinnipiac Terrace	New Haven, CT	15 acres	226	20-30 units/acre	60% affordable, 40% market-rate	1 space/unit	233 surface spaces
Tent City	Boston, MA	3 acres	269	89 units/acre	1/4 low-income, 1/2 affordable, 1/4 market-rate	0.7 spaces/unit	698 garage spaces
Townhomes On Capitol Hill (Ellen Wilson)	Washington, DC	5 acres	147	29 units/acre	91% low-income and affordable, 9% market-rate		

2. Bertolet, Dan. 2012. “Final Right-Size Parking Technical Memo – Work Order #2, Task 4.” King County Metro Transit.

This extensive memo discusses “right-sizing” parking standards in the Seattle metropolitan area. The following are key highlights on affordable housing and how urbanizing suburban areas are addressing parking needs:

- Precedents: Many cities have made incremental reductions over time to parking minimums focused on increasing residential densities. Shoup (2011) reviewed national newspaper articles discussing the removal of downtown off-street parking requirements and noted that: “A search of newspaper articles found 129 reports of cities that have removed off-street parking requirements in their downtowns since 2005. Although newspaper articles don't represent what all cities are doing, they do include many comments on why cities are changing their policies. At least in downtown business districts, some elected officials think that parking requirements put the brakes on what they want to happen and accelerate what they want to prevent. Some of the reasons given for removing parking requirements are "to promote the creation of downtown apartments" (Greenfield, Massachusetts), "to see more affordable housing" (Miami), "to meet the needs of smaller businesses" (Muskegon, Michigan), "to give business owners more flexibility while creating a vibrant downtown" (Sandpoint, Idaho), and "to prevent ugly, auto-oriented townhouses" (Seattle).
- In the Seattle area, suburban communities seeking to urbanize downtown areas have made use of maximums. Bellevue applied a parking maximum in its downtown districts of 2 per unit, downtown Renton has a maximum of 1.75 per dwelling unit, while in Redmond there is a 2.25 stall per unit maximum in downtown zones.

Source:
http://metro.kingcounty.gov/programs-projects/right-size-parking/pdf/rsp-technical-policy-memo-final-09-17-12.pdf.

3. Denver (Colorado), City and County of. 2010. Municipal Code. Article 10: General Design Standards, Division 10.4: Parking and Loading, Section 10.4.5.2: Alternative Minimum Vehicle Parking Ratios.

Denver’s Code includes provisions for reducing parking ratios to 0.25 spaces/unit for specific housing types:

A. Alternative Minimum Vehicle Parking Ratios Allowed The Zoning Administrator shall allow an applicant to apply an alternative minimum vehicle parking ratio upon finding that the additional requirements and special review process stated in the following table have been met:

TYPE OF ALTERNATIVE	APPLICABLE ZONE DISTRICTS	APPLICABLE USE	ADDITIONAL REQUIREMENTS	ALTERNATIVE ALLOWED	SPECIAL REVIEW PROCESS
Rooming and Boarding House	All Main Street Zone Districts	Rooming and Boarding House Primary Use	n/a	Alternative minimum vehicle parking ratio of 0.25 vehicle parking spaces per unit	n/a
Senior Housing	All Main Street Zone Districts	Residence for Older Adults Primary Use	n/a	Alternative minimum vehicle parking ratio of 0.25 vehicle parking spaces per unit	n/a
Other Housing	All Main Street Zone Districts	Primary Residential Uses	Other special needs housing with similar reduced parking demands, as approved by the Zoning Administrator	Alternative minimum vehicle parking ratio of 0.25 vehicle parking spaces per unit	n/a

TYPE OF ALTERNATIVE	APPLICABLE ZONE DISTRICTS	APPLICABLE USE	ADDITIONAL REQUIREMENTS	ALTERNATIVE ALLOWED	SPECIAL REVIEW PROCESS
Affordable Housing	All Main Street Zone Districts	Primary Residential Uses	Housing that is affordable for persons with 40 percent area median income and below	Alternative minimum vehicle parking ratio of 0.25 vehicle parking spaces per unit	n/a
Small Dwelling Units	All Main Street Zone Districts	Primary Residential Uses	Dwelling Units that are under 550 square feet in gross floor area may utilize this reduction	Alternative minimum vehicle parking ratio of 0.25 vehicle parking spaces per unit	n/a
Single Room Occupancy (SRO) Hotel	All Zone Districts	Single Room Occupancy (SRO) Hotel Primary Use	n/a	Alternative minimum vehicle parking ratio of 0.25 vehicle parking spaces per unit	n/a

Source: http://www.denvergov.org/Portals/646/documents/Zoning/DZC/Art10_DesignStandards_DZC_071015.pdf

4. Eugene (Oregon), City of. 2012. City Code. Chapter 9: Land Use, Section 9.6410: Motor Vehicle Parking Standards

Includes parking reductions for a range of low-income housing units:

Multiple-Family Subsidized Low-Income Housing in any area (see (5) below)	.67 per dwelling or 3 spaces, whichever is greater
Multiple-Family Subsidized Low-Income Senior Housing in any area (see (5) below)	.33 per dwelling or 3 spaces, whichever is greater
Multiple-Family Subsidized Low-Income Disabled Housing in any area (see (5) below)	.33 per dwelling or 3 spaces, whichever is greater
Multiple-Family Subsidized Low-Income Senior Housing Partial in any area (see (5) below)	.67 per dwelling or 3 spaces, whichever is greater
Multiple-Family Subsidized Low-Income Specialized Housing in any area (see (5) below)	.33 per dwelling or 3 spaces, whichever is greater
Manufactured Home Park	1 per dwelling.
Controlled Income and Rent Housing (CIR) where density is above that usually permitted in the zoning, yet not to exceed 150%	1 per dwelling.

Source: http://www.eugene-or.gov/DocumentCenter/Home/Index/262

5. Greeley (Colorado), City of. 2015. Municipal Code. Title 18: Development Code, Chapter 18.42: Off-Street Parking and Loading Standards, Section 18.42.090: Parking Reduction Options

Allows reductions in required parking for affordable, senior or disabled housing, but requires a parking study. Also allow reductions for projects with a Transportation Demand Management Plan (TDMP) demonstrating a comprehensive approach to reducing parking demand.

1. Parking requirements for housing units specifically designed and intended for senior citizens or those with disabilities that preclude or limit driving and/or affordable housing units may be adjusted on an individual project basis subject to a parking study based on project location and proximity to public services, including but not limited to medical offices, shopping areas, mass transit or alternative modes of transportation, employment, etc.

Source: https://www.municode.com/library/co/greeley/codes/municipal_code?nodeId=TIT18DECO_CH18.42OREPALOST_18.42.090PAREOP

6. Greeley (Colorado), City of. 2015. Municipal Code. Title 18: Development Code, Chapter 18.42: Off-Street Parking and Loading Standards, Section 18.42.090: Parking Reduction Options

California Assembly Bill (AB 744) was passed October 9, 2015 that changes parking minimums for affordable development. AB 744 allows certain mixed-income projects near transit to bypass parking requirements. Under the legislation, projects within one-half mile of a major transit stop and with some affordable housing could go as low as 0.5 parking spaces per bedroom (meaning a building with primarily two-bedroom units would still have roughly one parking space per unit). These projects, however, would only be eligible to reduce their parking to that level if they have at least 20 percent units for low-income people (or at least 11 percent units for residents categorized as "very low-income").

Source: http://www.eastbayexpress.com/SevenDays/archives/2015/09/03/bill-to-boost-affordable-housing-reform-outdated-parking-requirements-heads-to-governors-desk

7. Wilbur Smith Associates. 2011. San Diego Affordable Housing Parking Study. City of San Diego.

In 2011, San Diego conducted a parking demand analysis to evaluate differences between residential unit types and locations with varying levels of transit service. As shown below, the basic ratios for low transit areas range from 0.5 for studios to 1.75 spaces per unit for 3 bedroom family units across all residential categories. In addition, they recommend a factor of 0.20 for visitor and staff parking, making the total ratios 0.7 to 1.95 spaces/unit.

Table 5 San Diego Affordable Housing Parking Demand – Low, Medium and High Transit

Type of project		A. Total units	B. Studio Low/Med/ High	C. 1 BR Low/Med/ High	D. 2 BR Low/Med/ High	E. 3 BR Low/Med/ High	F. Subtotal for units (sum B3 – E3)	G. Visitor parking (G2*A1)	H. Staff parking (H2*A1)	I. Subtotal w/ staff + visitor (F3+G3+H3)	J. Total requirement with vacancy factor adjustment (I3*J2) Vacancy adj./no vacancy adj.
Family Housing	1. Units										
	2. Rate		N/A	1.0/0.6/ 0.33	1.3/1.1/ 0.5	1.75/1.4/0. 75		0.15	0.05		1.1/1.0
	3. Spaces										
Living Unit/ SRO	1. Units										
	2. Rate		0.5/0.3/0.1	N/A	N/A	N/A		0.15	0.05		1.1/1.0
	3. Spaces										
Senior Housing	1. Units										
	2. Rate		0.5/0.3/ 0.1	0.75/0.6/ 0.15	1.0/0.85/0.2	N/A		0.15	0.05		1.1/1.0
	3. Spaces										
Studio – 1 bed-room	1. Units										
	2. Rate		0.5/0.2/ 0.1	0.75/0.5/ 0.1	N/A	N/A		0.15	0.05		1.1/1.0
	3. Spaces										
Special Needs	1. Units										
	2. Rate		0.5/0.2/ 0.1	0.75/0.5/ 0.1	N/A	N/A		0.15	0.10		1.1/1.0
	3. Spaces										

Source: http://www.sandiego.gov/planning/programs/transportation/mobility/pdf/111231sdafhfinal.pdf.

8. Reno (Nevada), City of. 2015. Land Development Code. Chapter 18.12: General Development and Design Standards, Section 18.12.203.

Includes conditions for parking reductions for development meeting certain criteria:

A. Conditions for Parking Reduction.

Parking reductions for residential developments (new development, infill, and acquisition/rehabilitation) that meet the affordability guidelines stated in Section 18.12.201 above will be granted if:

1. The project can demonstrate that either parking cannot be provided in compliance with Section 18.12.1102, as may be modified by other provisions of this title, or additional amenities can be provided with the reduction of parking;
2. The project is within one mile of an employment base of at least 1,500 employees;
3. Availability of public transportation can be demonstrated; and
4. The project is located no closer than one-half mile to another previously approved project that has met the above guidelines and received a parking reduction.

B. Parking Reductions Allowed.

If the above guidelines are met, then parking will be reduced by the following:

1. Each unit dedicated to households earning 60 percent of adjusted median income (AMI) may receive a 20 percent reduction to the parking requirements.
2. Each unit dedicated to households earning 50 percent of AMI may receive a 30 percent reduction to the parking requirements.

Each unit dedicated to households earning 40 percent of AMI or less may receive a 45 percent reduction to the parking requirements.

Source: https://www.municode.com/library/nv/reno/codes/land_development_code?nodeId=LAND_DEVELOPMENT_CODE_CH18.12GEDEDEST_ARTIIDEBOOTINAFHO_S18.12.203PAREAFHOPR

10. San Francisco (California), City of. 2015. “San Francisco General Plan: 2014 Housing Element.”

Parking requirement reductions were introduced by the City of San Francisco to facilitate affordable housing. Providing parking represents a development cost, which can affect housing price. In 2006, San Francisco eliminated minimum parking requirements for downtown residential development, instead establishing a parking maximum that caps the number of parking spaces allowed at one per four dwelling units (or 0.25 spaces per unit). Developers who wish to include additional parking spaces may submit an application for a conditional use permit. If approved, additional parking, up to 0.75 spaces for each one-bedroom or studio unit and up to 1 space for each unit with two or more bedrooms would be allowed. Applications are subject to case-by-case review by the Planning Commission. San Francisco has also prohibited downtown residential developers from requiring buyers to purchase a parking space. Spaces must instead be leased or sold separately from the housing unit, helping to reduce costs for homebuyers without cars.

Source: http://www.sf-planning.org/ftp/general_plan/I1_Housing.htm

11. The Woodlands, Texas. 2015. The Woodlands Commercial Planning and Design Standards.

The Woodlands Commercial District includes minimum parking ratios for multi-family residential land uses:

APPENDIX O – PARKING RATIOS

Commercial Parking Ratios

Land Use	
General Office	3 spaces/1,000 sq. ft.
Convenience Storage (Mini-warehouse)	1 space/4,000 sq. ft.
Bulk Warehouse	
· Office Use	2.5 spaces/1,000 sq. ft.
· Warehouse Use	1 space/7,000 sq. ft.
Medical Office/Clinic	5 spaces/1,000 sq. ft.
Research Laboratory	2.5 spaces/1,000 sq. ft.
Financial Services	4 spaces/1,000 sq. ft.
· Drive-In	8 queue spaces/lane
Hospitality	1.1 spaces/room
· Other uses within hospitality	· If not an accessory use, 80% of parking otherwise required by the Code
Restaurant	

Land Use	Parking Ratio
Multi-family or Condominium	
· Efficiency	1.0 spaces/unit
· One bedroom	1.5 spaces/unit
· Two bedroom	2.0 spaces/unit
· Three bedroom	2.5 spaces/unit
· Each add'l bedroom	0.5 space per bedroom per unit
Duplex or Single Family Attached (Standard)	2 spaces/dwelling unit
Duplex or Single Family Attached (Greater than 4,000 sq. ft. or more than 6 bedrooms)	1 space per bedroom
Single Family Residential	2 spaces/dwelling unit

Source: https://www.thewoodlandstownship-tx.gov/DocumentCenter/Home/View/933

Exhibit A2 - Fiscal Impact Study

Downtown Columbia Plan
Howard County, Maryland

<u>Executive Summary</u>
<u>Fiscal Impact Analyses Comparing Approved Development Columbia Plan and Proposed Affordable Housing Joint Recommendations</u>

(Fiscal Impact Analyses Exclude TIF Evaluation)

PREPARED BY:
MUNICAP, INC.

SEPTEMBER 17, 2015

EXECUTIVE SUMMARY

Purpose of Study

The purpose of these analyses is to estimate the fiscal impacts to Howard County resulting from the proposed Downtown Columbia Plan development with and without the Columbia Downtown Housing Corporation, Housing Commission, and Howard Hughes Corporation proposed affordable housing joint recommendations.

Two scenarios of the fiscal impact to Howard County resulting from the Downtown Columbia Plan have been prepared. Scenario A assumes the Downtown Columbia Plan is developed inclusive of the Columbia Downtown Housing Corporation, Housing Commission, and Howard Hughes Corporation proposed affordable housing joint recommendations, whereas Scenario B assumes the Downtown Columbia Plan is developed as outlined in the *Downtown Columbia Plan,* adopted February 1, 2010 (the "Plan"), inclusive of the intended inclusion of affordable housing. Scenarios A and B are attached hereto as Appendices A and B, respectively. These analyses do not include the impact of the proposed tax increment financing.

Project Description

The proposed Downtown Columbia Plan covers the downtown core area of the 40-year planned community. The plan area is comprised of six neighborhoods, including Warfield, the Mall, the Lakefront and Lakefront Core, the Crescent, Merriweather-Symphony Woods, and Symphony Overlook. Upon completion, the Downtown Columbia Plan contemplates 5,746,450 square feet of commercial space, inclusive of 196,450 square feet of civic and recreational space, 640 hotel rooms, and a residential component comprised of 549 for sale units, of which 88 are proposed to be townhome units and 461 are proposed to be condo units, and rental units comprised of a mix of affordable and market rate mix. Both Scenarios A and B contemplate a residential rental affordable component. The sole difference in the two scenarios lies in the residential rental product mix, more fully described in Tables A and B below. At full build-out, Downtown Columbia will be a diverse, mixed-use, livable, physically distinctive and human-scaled place with a range of housing choice and recreational, civic, cultural and educational amenities.

Table A on the following page illustrates the Downtown Columbia Plan as articulated in the Plan, reflective of the joint recommendations.

Table A
Project Description – Scenario A

Development Type	Units/SF/Rooms[1]	Estimated Assessed Value Per Unit/SF/Room[2]	Total Estimated Assessed Value (2015 Current $)
Residential			
Rental	*(Units)*	*(Per unit)*	
MF rental (market)	4,304	$244,751	$1,053,375,879
MF rental (80% AMI)	180	$163,121	$29,361,836
MF rental (40-60% AMI)	500	$163,121	$81,560,654
MF rental (30% AMI)	180	$163,121	$29,361,836
Flier building (market)	110	$244,751	$26,922,607
Flier building (40-60% AMI)	110	$163,121	$17,943,344
Parcels C&D multi-family (Metropolitan)	817	$244,751	$199,961,548
Sub-total rental	6,201		$1,438,487,704
For Sale			
Condos	461	$302,861	$139,659,028
Townhomes	88	$341,090	$30,015,943
Sub-total residential	6,750		$1,608,162,676
Commercial	*(SF)*	*(Per SF)*	
Office	4,300,000	$244	$1,050,387,790
Retail	628,310	$341	$214,107,410
Restaurant			
Full service	379,902	$341	$129,458,123
Fast food service	241,788	$341	$82,393,409
Sub-total restaurant	621,690		$211,851,532
Civic/recreation[3]	196,450	$0	$0
	(Rooms)	*(Per Room)*	
Hotel	640	$114,212	$73,095,501
Sub-total commercial	5,746,450		$1,549,442,233
Total all development			**$3,157,604,909**

[1]Provided by the Howard Hughes Corporation. Includes the maximum allowable density pursuant to the Plan and including the recent affordable housing proposal.

[2]Estimated by MuniCap, Inc. based on survey of comparable properties.

[3]Assumes the civic/recreation is quasi-public and tax exempt.

Table B on the following page illustrates the Downtown Columbia Plan as articulated in the Plan, reflective of the adopted affordable housing mix.

Table B
Project Description – Scenario B

Development Type	Units/SF/ Rooms[1]	Estimated Assessed Value Per Unit/SF/Room[2]	Total Estimated Assessed Value (2015 Current $)
Residential			
Rental	*(Units)*	*(Per unit)*	
MF rental (market)	3,309	$244,751	$809,848,657
MF rental (80% AMI)	825	$163,121	$134,575,080
MF rental (40-60% AMI)	0	$163,121	$0
MF rental (30% AMI)	0	$163,121	$0
Flier building (market)	0	$244,751	$0
Flier building (40-60% AMI)	0	$163,121	$0
Parcels C&D multi-family (Metropolitan)	817	$244,751	$199,961,548
Sub-total rental	4,951		$1,144,385,285
For Sale			
Condos	461	$302,861	$139,659,028
Townhomes	88	$341,090	$30,015,943
Sub-total residential	5,500		$1,314,060,256
Commercial	*(SF)*	*(Per SF)*	
Office	4,300,000	$244	$1,050,387,790
Retail	628,310	$341	$214,107,410
Restaurant			
Full service	379,902	$341	$129,458,123
Fast food service	241,788	$341	$82,393,409
Sub-total restaurant	621,690		$211,851,532
Civic/recreation[3]	196,450	$0	$0
	(Rooms)	*(Per Room)*	
Hotel	640	$114,212	$73,095,501
Sub-total commercial	5,746,450		$1,549,442,233
Total all development			**$2,863,502,490**

[1]Provided by Howard County. Includes the maximum allowable density pursuant to the Plan and excluding the recent affordable housing proposal by HRD.
[2]Estimated by MuniCap, Inc. based on survey of comparable properties.
[3]Assumes the civic/recreation is quasi-public and tax exempt.

Projection of Impacts

MuniCap, Inc. estimated future impacts on Howard County using a combination of accepted approaches for projecting fiscal impacts. In each case, fiscal impacts are shown only for direct impacts resulting from the project.

To calculate direct employment impacts, MuniCap, Inc. used IMPLAN Professional 3.0 software developed by IMPLAN Group, LLC. IMPLAN is an industry-accepted economic impact assessment software system with which trained users can create local area *Social Accounting Matrices* and develop *Multiplier Models* that can be used to estimate detailed economic impacts of new firms moving into an area, special events such as conventions or professional sports games, recreation and tourism, military base closures, and many more activities. For the inputs used in developing the models, such as square footage and sales revenue, MuniCap, Inc. relied on a variety of sources, which are noted in the accompanying appendices to this report. Finally, MuniCap, Inc. analyzed current commuting trends, reported by the U.S. Census Bureau, among employees in Howard County to estimate the percentage of projected new employees likely to be non-residents and thus represent an additional cost to the County for services above those provided to the current service population.

In estimating the population increase, including new students, MuniCap, Inc. applied the current number of residents and students per household to the proposed housing units, using information from the Howard County Department of Planning and Zoning Division of Research and the *Howard County Public School System Enrollment Report,* dated September 30, 2014, to establish baseline information.

For the calculation of economic benefits, primarily in the form of increased tax revenue, MuniCap, Inc. applied the actual taxing methodology by multiplying the applicable tax rate by the estimated taxable item in question whenever possible. For instance, real property taxes were estimated by multiplying estimated assessed value by the current applicable real property tax rate. Other revenues calculated in this manner include personal property taxes, local recordation taxes, school excise taxes, road excise taxes, transfer taxes, and hotel occupancy taxes. In some instances, revenues were estimated on a per capita basis, typically when the revenue source was not in the form of a tax. In still other cases, revenues that will likely increase as a result from the Downtown Columbia Plan were dismissed altogether, as they represent charges for services that will likely be offset by the cost of providing said services.

To calculate fiscal impacts in the form of additional costs to Howard County, MuniCap, Inc. consulted with various county personnel from a variety of departments, including Howard County Department of Planning and Zoning Division of Research, to determine the most appropriate approach to estimating potential increases. In some cases, expenses were estimated on a per capita basis using residents, employees, or students, while in other cases, another pro rata basis was used, such as road miles or trips. In still other instances, a "case study" approach was taken when it was unlikely that a pro rata approach would produce accurate results. Finally, in cases when a charge for services was eliminated from the estimation of revenues, the corresponding costs for services were also eliminated from the estimation of expenses.

While estimating impacts in future years, MuniCap, Inc. assumed a uniform net annual increase in both revenues and expenses of three percent per year. Tax rates are expressed at their level as of the date of this report.

The specific calculations used to estimate these impacts, along with the sources of the underlying assumptions, are included in the appendices accompanying this report.

Results of the Study

Table C below outlines the projected revenues to Howard County for a period of 35 years, ending in fiscal year 2051. Revenues assume full build-out of the proposed development and are shown prior to excluding revenues available for tax increment financings.

Table C
Projected Tax Revenues

Howard County Tax Revenues	35 Years[1] Scenario A	35 Years[1] Scenario B
Real property tax revenues	$1,627,643,362	$1,499,336,727
Personal income tax revenues	$667,461,428	$570,930,014
Local recordation tax revenues[2]	$22,485,961	$20,662,599
School excise tax revenues[2]	$11,101,803	$8,964,599
Road excise tax revenues[2]	$17,911,755	$15,911,332
Transfer tax revenues[2]	$44,971,922	$41,325,198
Hotel occupancy tax revenues	$33,121,871	$33,121,871
Additional revenues	$318,744,176	$313,129,542
Projected Howard County revenues	**$2,743,442,279**	**$2,503,381,882**

[1]Projected revenues for thirty-five years are shown cumulatively, assuming inflation of three percent annually.
[2]Revenues shown are one time revenues to be collected during build out. School and road excise tax revenues are not general fund revenues but included to offset certain capital expenditures included in Table E.

Table D below outlines the projected net fiscal impact on the Howard County General Fund related to operations for a period of 35 years, ending in fiscal year 2051. The net fiscal impact to the General Fund related to operations is based on the total tax revenues shown in Table C less the projected total operating expenses. Both scenarios result in a positive net fiscal impact to the County's General Fund from operations.

Table D
Projected General Fund Net Impact Related to Operations

Howard County General Fund Impact	35 Years[1] Scenario A	35 Years[1] Scenario B
Projected Howard County revenues	$2,743,442,279	$2,503,381,882
Projected Howard County operating expenditures	($1,341,404,028)	($1,160,777,966)
Projected General Fund net impact from operations	**$1,402,038,251**	**$1,342,603,915**

[1]Projected revenues and expenditures for thirty-five years are shown cumulatively, assuming inflation of three percent annually. Howard County revenues include one-time revenues such as recordation, transfer, and excise tax revenues.

Table E on the following page outlines the projected cumulative capital costs estimated to be incurred as a result of the Downtown Columbia Plan, increased annually for inflation at a rate of three percent.

Table E
Projected Capital Costs

Howard County Capital Costs	35 Years[1] Scenario A	Scenario B
Library, fire department, police command, & arts center	$7,581,976	$6,157,568
Interchange	$143,293,824	$143,040,496
Transit center	$963,693	$884,871
Public schools	$33,731,107	$27,563,216
Projected Howard County capital costs	**$185,570,599**	**$177,646,151**

[1]Projected capital costs for thirty-five years are shown cumulatively, assuming inflation of three percent annually.

The total costs of these facilities do not change under each plan; however, the allocation of the costs between the development in the plan and the County is different under different development scenarios.

Capital costs associated with the library, fire department, police command, and arts center are assumed to be financed by twenty-year general obligation bonds issued by Howard County at a coupon rate of 4.5%. Twenty-five percent (25%) of the arts center capital costs are assumed to be paid with other, non-County, funds. The library, fire department, and arts center capital costs are assumed to be allocable to all residents of the County, while the amount shown in Table E is representative of the costs allocable to the residents of the Downtown Columbia Plan. Similarly, the police command capital costs are assumed to be allocable to the one-third of County residents that will benefit from the new police command facility. The amount shown in Table E represents the cost allocable to the Downtown Columbia Plan.

Capital costs associated with the interchange are assumed to be financed by twenty-year general obligation bonds issued by Howard County at a coupon rate of 4.5%. Additional Maryland State funds may be applied to reduce the total interchange capital costs, if available, but was not assumed in these estimates. The interchange capital costs shown in Table E represent the portion allocable to the Downtown Columbia Plan based on the number of trips generated by new residents within the Downtown Columbia Plan. The projected number of trips for commercial square feet and per residential unit type was provided by the Howard County Department of Planning and Zoning, Division of Research.

Capital costs associated with the transit center are assumed to be financed by twenty-year general obligation bonds issued by Howard County at a coupon rate of 4.5%. The transit center capital costs are assumed to be allocable to the Howard County service population which includes (i) Howard County residents and (ii) total employees who work, but do not live in the County. The amount shown in Table E is representative of the costs allocable to the new Downtown Columbia Plan service population.

Capital costs associated with public schools are assumed to be financed by a contribution by Maryland State in the amount of twenty-five percent (25%) of the overall costs for a new elementary, middle, and high school, while the remaining seventy-five percent (75%) is attributable on a per student basis to the Downtown Columbia Plan. Table E represents the capital costs attributable to the Downtown Columbia Plan.

Table F outlines the projected Howard County General Fund net impact less incurred capital costs. Capital costs and net surplus revenues are shown for a period of 35 years, ending in fiscal year 2051.

Table F
Projected Fiscal Impact

Howard County Fiscal Impact	35 Years[1] Scenario A	Scenario B
Projected General Fund net impact from operations	$1,402,038,251	$1,342,603,915
Projected Howard County capital costs	($185,570,599)	($177,646,151)
Projected Howard County net fiscal impact	**$1,216,467,651**	**$1,164,957,764**

[1]Projected net impact and capital costs for thirty-five years are shown cumulatively, assuming inflation of three percent annually.

Table G shows the projected annual Howard County net fiscal impacts at full build-out of the project, excluding one-time revenues. The numbers are shown in current dollars.

Table G
Annual Net Fiscal Impact at Build-Out

Howard County Net Surplus	Full Build-Out (Current Dollars)[1] Scenario A	Scenario B
Projected Howard County operating revenues	$51,132,880	$46,724,755
Projected Howard County operating expenditures	($25,600,765)	($22,180,050)
Net operating impact	$25,532,115	$24,544,705
Average annual capital costs (40 years)	($3,613,525)	($3,450,725)
Projected Howard County net fiscal impacts	**$21,918,590**	**$21,093,980**

[1]Projected impacts are shown at full build-out, excluding inflation and one-time revenues. Capital costs shown represent the average annual costs over a 40 year period, excluding inflation.

The methods of estimating these fiscal impacts are shown in the subsequent schedules included in the appendices accompanying this summary.

Downtown Columbia
Howard County, Maryland

Fiscal Impact Projections
Appendix A: Howard Hughes Housing Proposal

Prepared By:

MuniCap, Inc.
Public Finance

September 17, 2015

Downtown Columbia
Howard County, Maryland

Fiscal Impact Projections

<u>Table of Contents</u>

Bond Assumptions

DEVELOPMENT ASSUMPTIONS

I.	**Projected Development by Type - Downtown Columbia Plan Proposal**	**1**
II.	**Projected Market Value**	
	A. Comparison of Valuation Methods	**2**
	B. Residential Comparables	**3**
	C. Commercial Comparables	**4**
	D. Income Capitalization - Apartments, Office, Restaurant, & Retail	**5**
	E. Income Capitalization - Hotel	**6**
III.	**Projected Absorption**	
	A. Residential	**7**
	B. Commercial	**9**
IV.	**Total Projected Market Value**	
	A. Residential	**10**
	B. Commercial	**14**

FISCAL IMPACT ANALYSIS

V.	**Projected Real Property Tax Revenues**	**16**
VI.	**Projection of County Personal Income Tax Revenues**	
	A. Rental Residential	**17**
	B. For Sale Residential	**18**
VII.	**Projection of Local Recordation Tax Revenues**	**19**
VIII.	**Projection of School Excise Tax**	**22**
IX.	**Projection of Road Excise Tax**	**23**
X.	**Projection of Transfer Tax Revenues**	**24**
XI.	**Projection of Hotel Occupancy Tax Revenues**	**25**
XII.	**Additional Revenues to Howard County**	
	A. Annual	**26**
	B. 35 Years	**27**

Downtown Columbia
Howard County, Maryland

Fiscal Impact Projections

Table of Contents

XIII.	Total Revenues to Howard County	28
XIV.	Additional Expenditures to Howard County	
	A. Annual	29
	B. 35 Years	31
XV.	Total Projected Revenues Versus Total Projected Expenditures	33
XVI.	Comparison of FY 2016 Budget and Projected Impacts	34
XVII.	Projected County Annual Capital Costs	
	A. Library	35
	B. Fire Department	36
	C. Police Command	37
	D. Interchange	38
	E. Art Center	40
	F. Transit Center	41
	G. Public Schools	
	1. Student Capital Costs	42
	2. Total Student Capital Costs	43
	H. Total Projected County Capital Costs	44
XVIII.	Net Revenues Versus Total Projected County Capital Costs	45

APPENDICES

Appendix A: Revenues and Costs to Howard County (Allocation Factors)	A-1
Appendix B: Projected Residents, Employees, & Service Population	B-1
Appendix C: Projected Students	C-1
Appendix D: Projected Police Operating Costs	
1. Per Capita and Trip Factors	D-1
2. New Non-Residential Trips	D-2
Appendix E: Estimated Downtown Columbia Plan Trips	E-1
Appendix F: Sales Data	F-1
Appendix G: Jobs and Direct Impacts	
1. Office	G-1
2. Retail	G-2
3. Restaurant	G-3
4. Hotel	G-4

Downtown Columbia
Howard County, Maryland

Development Assumptions

Downtown Columbia
Howard County, Maryland

Schedule I: Projected Development by Type - Downtown Columbia Plan Proposal

	Area[1]				Market Value[2]			Total Market
Property Type	Units	Rooms	GSF Per Unit/Space	Gross SF	Per Unit	Per Room	Per GSF	Value (Before Exemptions)[3]
Residential								
Rental								
MF rental (market)	4,304	-	1,180	5,078,564	$244,751	-	$207.42	$1,053,375,879
MF rental (80% AMI)	180	-	1,180	212,400	$163,121	-	$138.24	$29,361,836
MF rental (40-60% AMI)	500	-	1,180	590,000	$163,121	-	$138.24	$81,560,654
MF rental (30% AMI)	180	-	1,180	212,400	$163,121	-	$138.24	$29,361,836
Flier building (market)	110	-	1,180	129,800	$244,751	-	$207.42	$26,922,607
Flier building (40-60% AMI)	110	-	1,180	129,800	$163,121	-	$138.24	$17,943,344
Parcels C&D multi-family (Metropolitan)	817	-	1,180	964,060	$244,751	-	$207.42	$199,961,548
Sub-total rental	6,201			7,317,024				$1,438,487,704
For Sale								
Condos	461	-	1,200	553,358	$302,861	-	$252.38	$139,659,028
Townhomes	88	-	1,500	132,000	$341,090	-	$227.39	$30,015,943
Sub-total residential	6,750			8,002,383				$1,608,162,676
Commercial								
Office	-	-	-	4,300,000	-	-	$244.28	$1,050,387,790
Retail	-	-	-	628,310	-	-	$340.77	$214,107,416
Restaurant								
Full service	-	-	-	379,902	-	-	$340.77	$129,458,084
Fast food service	-	-	-	241,788	-	-	$340.77	$82,393,442
Sub-total restaurant				621,690			$340.77	$211,851,526
Hotel	-	640	-	320,000	-	$114,212	$173.15	$73,095,501
Civic/recreation[4]	-	-	-	196,450	-	-	$0.00	$0
Sub-total commercial				6,066,450				$1,549,442,233
Total projected development	6,750	640		14,068,833				$3,157,604,909

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]I*

17-Sep-15

[1]Projected development provided by Howard Hughes. Includes the maximum allowable density pursuant to the Downtown Columbia Plan and including the recent affordable housing proposal.

[2]See Schedule II-A.

[3]According to Howard County staff, 200 market rate units and 260 affordable (40-60%) units will be owned by the Howard County Housing Commission and exempt from real property taxes. These units will be subject to a PILOT as with other previously executed LIHTC deals. See Schedule IV-A.

[4]Assumes the civic/recreation is quasi-public and tax exempt.

Downtown Columbia
Howard County, Maryland

Schedule II-A: Projected Market Value (Comparison of Valuation Methods)[1]

Property Type	Comparables[2]	Income Capitalization[3]	Developer Estimated Sales Price[4]
Residential			
MF Rental			
Market rate			
Per Unit	$219,956	$196,286	-
Per SF	***$207.42***	$166.34	-
(80% AMI)[5]			
Per Unit	$146,596	$130,821	-
Per SF	***$138.24***	$110.86	-
(40-60% AMI)[5]			
Per Unit	$146,596	$130,821	-
Per SF	***$138.24***	$110.86	-
(30% AMI)[5]			
Per Unit	$146,596	$130,821	-
Per SF	***$138.24***	$110.86	-
Condos			
Market rate			
Per Unit	$396,111	NA	$900,000
Per SF	***$252.38***	NA	$600.00
Townhome			
Market rate			
Per Unit	$425,571	NA	$750,000
Per SF	***$227.39***	NA	$500.00
Commercial			
Office			
Per SF	***$244.28***	$217.58	-
Retail			
Per SF	***$340.77***	$460.60	-
Restaurant			
Per SF	***$340.77***	$460.60	-
Hotel			
Per SF	***$173.15***	$205.43	-
Per Room	***$114,211.72***	$123,258.82	-

MuniCap, Inc. *LTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]II-A*
17-Sep-15

[1]Valuation approach chosen for each type of development is underlined and shown in bold and italics

[2]See Schedules II-B and II-C.

[3]See Schedules II-D and II-E.

[4]Source: The Howard Research and Development Corporation

[5]For comparison approaches to valuation, it is assumed that subsidized apartment units will be valued relative to market rate units in the same manner as the income-capitalization approach. See Schedule II-D.

Downtown Columbia
Howard County, Maryland

Schedule II-B: Projected Market Value (Residential Comparables)

Development Type	Address	City	Year Built	Parcel Number	Assessed Value[1] Land	Building	Total	Area Gross SF	Units	SF/Unit	Assessed Value Per SF/Unit Per SF	Per Unit
Apartments												
Residences at Arundel Preserves	Milestone Parkway	Hanover	2011	04 90231749	$5,902,400	$49,639,900	$55,542,300	233,546	242	965	$238	$229,514
Flats 170	8305 Telegraph Road	Odenton	2013	04 90062382	$18,450,000	$46,550,000	$65,000,000	385,578	369	1,045	$169	$176,152
Crosswinds at Annapolis Town Centre	1903 Towne Centre Boulevard	Annapolis	2013	02 1090235153	$10,750,000	$44,894,200	$55,644,200	223,239	215	1,038	$249	$258,810
Haven at Odenton Gateway	615 Carlton Otto Lane	Odenton	2012	04 52090233379	$12,600,000	$41,667,300	$54,267,300	311,870	252	1,238	$174	$215,346
Sub-total apartments					$47,702,400	$182,751,400	$230,453,800	1,154,233	1,078	1,071	***$207***	$219,956
Condos												
Condos	15000 Pennfield Court Unit 406	Silver Spring	2013	13 03732781	$123,000	$287,000	$410,000	-	-	1,319	$311	$410,000
Condos	15000 Pennfield Court Unit 204	Silver Spring	2013	13 03732520	$148,500	$346,500	$495,000	-	-	1,574	$314	$495,000
Condos	15000 Pennfield Court Unit 401	Silver Spring	2013	13 03732735	$148,500	$346,500	$495,000	-	-	1,563	$317	$495,000
Condos	15000 Pennfield Court Unit 301	Silver Spring	2013	13 03732611	$148,500	$346,500	$495,000	-	-	1,563	$317	$495,000
Condos	10205 Wincopin Circle	Columbia	2005	15-138017	$68,000	$272,000	$340,000	-	-	1,649	$206	$340,000
Condos	10205 Wincopin Circle	Columbia	2005	15-137894	$64,000	$256,000	$320,000	-	-	1,649	$194	$320,000
Condos	10205 Wincopin Circle	Columbia	2005	15-138149	$74,000	$296,000	$370,000	-	-	1,649	$224	$370,000
Condos	10205 Wincopin Circle	Columbia	2005	15-137762	$64,000	$256,000	$320,000	-	-	1,649	$194	$320,000
Condos	10205 Wincopin Circle	Columbia	2005	15-138009	$64,000	$256,000	$320,000	-	-	1,649	$194	$320,000
Sub-total condos					$902,500	$2,662,500	$3,565,000			1,585	***$252***	$396,111
Townhomes												
Townhomes	5959 Charles Crossing	Ellicott City	2013	01-323008	$142,500	$317,100	$459,600	-	-	2,000	$230	$459,600
Townhomes	5916 Charles Crossing	Ellicott City	2011	01-318438	$142,500	$292,200	$434,700	-	-	2,036	$214	$434,700
Townhomes	5921 Charles Crossing	Ellicott City	2011	01-315463	$142,500	$214,500	$357,000	-	-	1,616	$221	$357,000
Townhomes	5975 Charles Crossing	Ellicott City	2014	01-323075	$142,500	$314,200	$456,700	-	-	2,000	$228	$456,700
Townhomes	6003 Charles Crossing	Ellicott City	2014	01-323466	$142,500	$332,900	$475,400	-	-	2,000	$238	$475,400
Townhomes	7470 Singers Way	Elkridge	2014	01-594839	$110,000	$183,400	$293,400	-	-	1,424	$206	$293,400
Townhomes	5858 Duncan Drive	Ellicott City	2014	01-593558	$142,500	$359,700	$502,200	-	-	1,966	$255	$502,200
Sub-total townhomes					$965,000	$2,014,000	$2,979,000			1,863	***$227***	$425,571

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]II-B*

17-Sep-15

[1]Assessed values based on information provided by Maryland State Department of Assessments and Taxation. Values used on Schedule I are shown in bold, italics, and underlined.

Downtown Columbia
Howard County, Maryland

Schedule II-C: Projected Market Value (Commercial Comparables)

Development			Year	Parcel	Assessed Value[1]			Area		Assessed Value	
Type	Address	City	Built	Number	Land	Building	Total	SF	Rooms	Per SF	Per Room
Office											
Johns Hopkins APL	11101 Johns Hopkins Road	Laurel	2012	5371767	$6,713,500	$44,035,400	$50,748,900	211,144	-	$240	-
Maple Lawn Office	8160 Maple Lawn Boulevard	Fulton	2012	5443016	$1,221,500	$20,566,300	$21,787,800	104,796	-	$208	-
National Business Park	322 Sentinel Way	Annapolis Jct	2009	04 49990220569	$7,247,800	$27,617,200	$34,865,000	135,000	-	$258	-
National Business Park	318 Sentinel Way	Annapolis Jct	2007	04 499 90218043	$4,371,000	$30,859,400	$35,230,400	130,200	-	$271	-
Sub-total					$19,553,800	$123,078,300	$142,632,100	581,140		***$244***	
Retail/Restaurant											
Retail	8201 Snowden River Parkway	Columbia	2009	16219444	$494,900	$510,600	$1,005,500	5,420	-	$186	-
Restaurant/Retail	8180 Maple Lawn Boulevard	Fulton	2005	5439035	$1,404,800	$2,276,500	$3,681,300	20,688	-	$178	-
Restaurant/Retail	8191 Maple Lawn Boulevard	Fulton	2006	5438969	$1,326,400	$1,945,600	$3,272,000	12,480	-	$262	-
Annapolis Town Center - ground floor retail	1905 Towne Centre Boulevard	Annapolis	2008	02 010 90228913	$4,728,000	$18,013,400	$22,741,400	53,037	-	$429	-
Annapolis Town Center - ground floor retail	1915 Towne Centre Boulevard	Annapolis	2008	02 010 90227609	$1,200,000	$19,725,900	$20,925,900	48,803	-	$429	-
Annapolis Town Center - ground floor retail	1910 Towne Centre Boulevard	Annapolis	2009	02 010 90228914	$7,283,000	$26,639,100	$33,922,100	84,175	-	$403	-
Victorias	8203 Snowden River Parkway	Columbia	2001	16214183	$443,300	$884,600	$1,327,900	6,689	-	$199	-
Bertucci's	9081 Snowden River Parkway	Columbia	1993	06539297	$2,432,400	$1,135,900	$3,568,300	7,597	-	$470	-
Red Lobster	9011 Snowden Square Drive	Columbia	1995	06539343	$2,236,000	$827,900	$3,063,900	8,670	-	$353	-
Lonestar Steakhouse	8900 Stanford Boulevard	Columbia	1996	16191167	$1,555,000	$1,153,600	$2,708,600	6,830	-	$397	-
Cheesecake Factory, Unos, Champs, PF Chang[2]	Mall at Columbia	Columbia	2001	-	-	-	-	32,753	-	$444	-
Sub-total					$23,103,800	$73,113,100	$96,216,900	287,142		***$341***	
Hotel/Conference Center											
Residence Inn Columbia	4950 Beaver Run	Ellicott City	1998	02-389568	$1,572,500	$8,766,800	$10,339,300	73,800	108	$140	$95,734
Hampton Inn & Suites Columbia/South	7045 Minstrel Wa	Columbia	2013	16-218324	$1,156,500	$8,980,500	$10,137,000	67,016	124	$151	$81,750
Marriott BWI	1743 W Nursery Road	Linthicum	1988	05-000-90046373	$5,381,600	$29,895,000	$35,276,600	221,656	309	$159	$114,164
Hilton Garden Inn	8241 SE Snowden River Parkway	Columbia	2003	16-21410	$1,050,600	$8,230,900	$9,281,500	57,968	98	$160	$94,709
SpringHill Suites Columbia	7055 Minstrel Way	Columbia	2009	16-218316	$882,000	$11,925,300	$12,807,300	66,228	117	$193	$109,464
Hotel at Arundel Preserve	7795 Arundel Mills Boulevard	Hanover	2011	04-000-90231748	$812,200	$27,484,200	$28,296,400	140,000	150	$202	$188,643
Westin BWI	1110 Old Elkridge Landing	Linthicum	2007	05-000-90005032	7074600	22830100	29904700	145226	260	$206	$115,018
Sub-total					$17,930,000	$118,112,800	$136,042,800	771,894		***$173***	***$114,212***

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]II-C*
17-Sep-15

[1]Assessed values based on information provided by Maryland State Department of Assessments and Taxation. Values used on Schedule I are shown in bold, italics, and underlined.

[2]Represents the approximate assessed value of four restaurants as provided by Howard County Office of the Maryland State Department of Assessments and Taxation. Restaurants are part of larger mall parcel and values need to be extracted from overall value.

Downtown Columbia
Howard County, Maryland

Schedule II-D: Projected Market Value - (Income Capitalization -Apartments, Office, Restaurant, & Retail)[1]

	Multi-Family Rental			
	Market	Subsidized[4]	Office	Retail/Restaurant
Monthly rent per square foot	$2.20	$2.20		
Annual rent per square foot[1]	$26.40	$26.40	$34.00	$55.00
Net square feet per unit	1,000	1,000		
Monthly rent per unit[1]	$2,200	$2,200		
Annual rent per unit	$26,400	$26,400		
Occupancy[1]	90%	90%	95%	95%
Effective rent per square foot	$23.76	$23.76	$32.30	$52.25
Effective rent per unit	$23,760	$23,760		
Expense ratio[1]	37.0%	47.00%	37%	8%
Expenses	($8,791.20)	($11,167.20)	($11.90)	($12.50)
Net operating income per square foot	$14.97	$12.59	$20.40	$39.75
Net operating income per unit	$14,969	$12,593		
Capitalization rate[2]	6.500%	8.500%	8.250%	7.504%
Tax rate[3]	1.126%	1.126%	1.126%	1.126%
Fully loaded capitalization rate	7.626%	9.626%	9.376%	8.630%
Value per net square foot	$196.29	$130.82	$217.58	$460.60
Value per unit	$196,286	$130,821		
Value per gross square foot	$166.34	$110.86		

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]II-D*
17-Sep-15

[1]Rent and expense assumptions based on information provided by The Howard Research and Development Corporation. Occupancy assumption provided by Maryland State Department of Assessments and Taxation.

[2]Capitalization rates provided by the Maryland State Department of Assessments and Taxation.

[3]Includes the fiscal year 2016 Howard County ($1.014) and Maryland State ($0.112) tax rate.

[4]Based on conversations with and Taxation Supervisor of Assessments for Howard County (Maryland Department of Assessments and Taxation), it is expected that subsidized apartment units will be assessed at a lower rate than market apartments based on increased capitalization rates and expense assumptions. It is assumed that subsidized units will be adjusted uniformly, regardless of the size of the subsidy or income thresholds.

Downtown Columbia
Howard County, Maryland

Schedule II-E: Projected Market Value (Income Capitalization - Hotel)

	Limited Service Hotel
Income Capitalization	
Average daily rate per room[1]	$56.25
Gross annual income	$20,532.00
Assumed occupancy[1]	95.0%
Effective gross income per room	$19,506.00
Assumed expense ratio[1]	32%
Less: assumed expenses	($6,162.00)
Net operating income per room	$13,344.00
Capitalization rate[2]	9.70%
Tax rate[3]	1.126%
Fully loaded capitalization rate	10.83%
Total estimated value per room	$123,258.82

MuniCap, Inc. *)15\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]II-E*
17-Sep-15

[1]Assumptions provided by The Howard Research and Development Corporation.

[2]Represents the average overall capitalization rate for the limited service hotel as provided in the *PwC Real Estate Investor Survey for First Quarter 2015.*

[3]Includes the fiscal year 2016 Howard County ($1.014) and Maryland State ($0.112) tax rate.

Downtown Columbia
Howard County, Maryland

Schedule III-A: Projected Absorption - Residential[1]

			Multi-Family Rental															
		Tax	Market Rate (Units)		80% AMI (Units)		40-60% AMI (Units)		30% AMI (Units)		Flier Building (Market) (Units)		Flier Building (40-60%) (Units)		Metropolitan (Units)		Total Rental (Units)	
Year Ending	Assessed As Of Date	Year Beginning	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative
31-Dec-15	1-Jan-16	1-Jul-16	0	0	0	0	0	0	0	0	0	0	0	0	380	380	380	380
31-Dec-16	1-Jan-17	1-Jul-17	0	0	0	0	0	0	0	0	0	0	0	0	0	380	0	380
31-Dec-17	1-Jan-18	1-Jul-18	0	0	0	0	0	0	0	0	0	0	0	0	437	817	437	817
31-Dec-18	1-Jan-19	1-Jul-19	428	428	15	15	80	80	15	15	0	0	0	0	0	817	538	1,355
31-Dec-19	1-Jan-20	1-Jul-20	600	1,028	20	35	0	80	20	35	0	0	0	0	0	817	640	1,995
31-Dec-20	1-Jan-21	1-Jul-21	248	1,276	0	35	210	290	0	35	110	110	110	110	0	817	678	2,673
31-Dec-21	1-Jan-22	1-Jul-22	384	1,660	14	49	0	290	14	49	0	110	0	110	0	817	412	3,085
31-Dec-22	1-Jan-23	1-Jul-23	302	1,962	10	59	0	290	10	59	0	110	0	110	0	817	322	3,407
31-Dec-23	1-Jan-24	1-Jul-24	310	2,272	17	76	0	290	17	76	0	110	0	110	0	817	344	3,751
31-Dec-24	1-Jan-25	1-Jul-25	460	2,731	17	93	150	440	17	93	0	110	0	110	0	817	644	4,394
31-Dec-25	1-Jan-26	1-Jul-26	307	3,038	18	111	60	500	18	111	0	110	0	110	0	817	403	4,797
31-Dec-26	1-Jan-27	1-Jul-27	874	3,912	35	146	0	500	35	146	0	110	0	110	0	817	944	5,741
31-Dec-27	1-Jan-28	1-Jul-28	310	4,221	17	163	0	500	17	163	0	110	0	110	0	817	344	6,084
31-Dec-28	1-Jan-29	1-Jul-29	83	4,304	17	180	0	500	17	180	0	110	0	110	0	817	117	6,201
31-Dec-29	1-Jan-30	1-Jul-30	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-30	1-Jan-31	1-Jul-31	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-31	1-Jan-32	1-Jul-32	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-32	1-Jan-33	1-Jul-33	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-33	1-Jan-34	1-Jul-34	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-34	1-Jan-35	1-Jul-35	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-35	1-Jan-36	1-Jul-36	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-36	1-Jan-37	1-Jul-37	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-37	1-Jan-38	1-Jul-38	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-38	1-Jan-39	1-Jul-39	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-39	1-Jan-40	1-Jul-40	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-40	1-Jan-41	1-Jul-41	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-41	1-Jan-42	1-Jul-42	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-42	1-Jan-43	1-Jul-43	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-43	1-Jan-44	1-Jul-44	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-44	1-Jan-45	1-Jul-45	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-45	1-Jan-46	1-Jul-46	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-46	1-Jan-47	1-Jul-47	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-47	1-Jan-48	1-Jul-48	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-48	1-Jan-49	1-Jul-49	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
31-Dec-49	1-Jan-50	1-Jul-50	0	4,304	0	180	0	500	0	180	0	110	0	110	0	817	0	6,201
Total			4,304		180		500		180		110		110		817		6,201	

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IIIA*
17-Sep-15

[1]Development source: Howard Hughes.

Downtown Columbia
Howard County, Maryland

Schedule III-A: Projected Absorption - Residential, continued[1]

			For Sale			
		Tax	Condos (Units)		Townhomes (Units)	
Year Ending	Assessed As Of Date	Year Beginning	Annual	Cumulative	Annual	Cumulative
31-Dec-15	1-Jan-16	1-Jul-16	0	0	0	0
31-Dec-16	1-Jan-17	1-Jul-17	0	0	0	0
31-Dec-17	1-Jan-18	1-Jul-18	0	0	0	0
31-Dec-18	1-Jan-19	1-Jul-19	0	0	0	0
31-Dec-19	1-Jan-20	1-Jul-20	0	0	0	0
31-Dec-20	1-Jan-21	1-Jul-21	84	84	88	88
31-Dec-21	1-Jan-22	1-Jul-22	0	84	0	88
31-Dec-22	1-Jan-23	1-Jul-23	150	234	0	88
31-Dec-23	1-Jan-24	1-Jul-24	0	234	0	88
31-Dec-24	1-Jan-25	1-Jul-25	0	234	0	88
31-Dec-25	1-Jan-26	1-Jul-26	0	234	0	88
31-Dec-26	1-Jan-27	1-Jul-27	0	234	0	88
31-Dec-27	1-Jan-28	1-Jul-28	0	234	0	88
31-Dec-28	1-Jan-29	1-Jul-29	227	461	0	88
31-Dec-29	1-Jan-30	1-Jul-30	0	461	0	88
31-Dec-30	1-Jan-31	1-Jul-31	0	461	0	88
31-Dec-31	1-Jan-32	1-Jul-32	0	461	0	88
31-Dec-32	1-Jan-33	1-Jul-33	0	461	0	88
31-Dec-33	1-Jan-34	1-Jul-34	0	461	0	88
31-Dec-34	1-Jan-35	1-Jul-35	0	461	0	88
31-Dec-35	1-Jan-36	1-Jul-36	0	461	0	88
31-Dec-36	1-Jan-37	1-Jul-37	0	461	0	88
31-Dec-37	1-Jan-38	1-Jul-38	0	461	0	88
31-Dec-38	1-Jan-39	1-Jul-39	0	461	0	88
31-Dec-39	1-Jan-40	1-Jul-40	0	461	0	88
31-Dec-40	1-Jan-41	1-Jul-41	0	461	0	88
31-Dec-41	1-Jan-42	1-Jul-42	0	461	0	88
31-Dec-42	1-Jan-43	1-Jul-43	0	461	0	88
31-Dec-43	1-Jan-44	1-Jul-44	0	461	0	88
31-Dec-44	1-Jan-45	1-Jul-45	0	461	0	88
31-Dec-45	1-Jan-46	1-Jul-46	0	461	0	88
31-Dec-46	1-Jan-47	1-Jul-47	0	461	0	88
31-Dec-47	1-Jan-48	1-Jul-48	0	461	0	88
31-Dec-48	1-Jan-49	1-Jul-49	0	461	0	88
31-Dec-49	1-Jan-50	1-Jul-50	0	461	0	88
Total			461		88	

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IIIA.2*

17-Sep-15

[1]Development source: Howard Hughes. For sale residential assumes 88 townhomes and same condo to overall mix percentage based on proposal provided by HHC.

Downtown Columbia
Howard County, Maryland

Schedule III-B: Projected Absorption - Commercial[1]

Year Ending	Assessed As Of Date	Tax Year Beginning	Office (SF) Annual	Office (SF) Cumulative	Retail (SF) Annual	Retail (SF) Cumulative	Restaurant - Full Service (SF) Annual	Restaurant - Full Service (SF) Cumulative	Restaurant - Fast Food (SF) Annual	Restaurant - Fast Food (SF) Cumulative	Hotel (Rooms) Annual	Hotel (Rooms) Cumulative	Civic/Recreation (SF) Annual	Civic/Recreation (SF) Cumulative
31-Dec-15	1-Jan-16	1-Jul-16	0	0	0	0	0	0	0	0	0	0	0	0
31-Dec-16	1-Jan-17	1-Jul-17	204,000	204,000	0	0	9,000	9,000	0	0	0	0	0	0
31-Dec-17	1-Jan-18	1-Jul-18	125,000	329,000	5,000	5,000	0	9,000	0	0	0	0	0	0
31-Dec-18	1-Jan-19	1-Jul-19	614,000	943,000	58,900	63,900	27,000	36,000	21,000	21,000	0	0	25,000	25,000
31-Dec-19	1-Jan-20	1-Jul-20	480,600	1,423,600	50,905	114,805	15,000	51,000	10,000	31,000	300	300	0	25,000
31-Dec-20	1-Jan-21	1-Jul-21	280,000	1,703,600	51,351	166,156	32,890	83,890	21,079	52,079	0	300	20,000	45,000
31-Dec-21	1-Jan-22	1-Jul-22	300,000	2,003,600	51,351	217,506	32,890	116,780	21,079	73,158	0	300	0	45,000
31-Dec-22	1-Jan-23	1-Jul-23	384,150	2,387,750	51,351	268,857	32,890	149,671	21,079	94,236	170	470	0	45,000
31-Dec-23	1-Jan-24	1-Jul-24	145,000	2,532,750	51,351	320,207	32,890	182,561	21,079	115,315	0	470	151,450	196,450
31-Dec-24	1-Jan-25	1-Jul-25	362,050	2,894,800	51,351	371,558	32,890	215,451	21,079	136,394	0	470	0	196,450
31-Dec-25	1-Jan-26	1-Jul-26	261,000	3,155,800	51,351	422,908	32,890	248,341	21,079	157,473	0	470	0	196,450
31-Dec-26	1-Jan-27	1-Jul-27	269,200	3,425,000	51,351	474,259	32,890	281,231	21,079	178,552	170	640	0	196,450
31-Dec-27	1-Jan-28	1-Jul-28	300,000	3,725,000	51,351	525,609	32,890	314,122	21,079	199,630	0	640	0	196,450
31-Dec-28	1-Jan-29	1-Jul-29	175,000	3,900,000	51,351	576,960	32,890	347,012	21,079	220,709	0	640	0	196,450
31-Dec-29	1-Jan-30	1-Jul-30	400,000	4,300,000	51,351	628,310	32,890	379,902	21,079	241,788	0	640	0	196,450
31-Dec-30	1-Jan-31	1-Jul-31	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-31	1-Jan-32	1-Jul-32	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-32	1-Jan-33	1-Jul-33	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-33	1-Jan-34	1-Jul-34	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-34	1-Jan-35	1-Jul-35	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-35	1-Jan-36	1-Jul-36	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-36	1-Jan-37	1-Jul-37	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-37	1-Jan-38	1-Jul-38	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-38	1-Jan-39	1-Jul-39	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-39	1-Jan-40	1-Jul-40	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-40	1-Jan-41	1-Jul-41	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-41	1-Jan-42	1-Jul-42	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-42	1-Jan-43	1-Jul-43	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-43	1-Jan-44	1-Jul-44	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-44	1-Jan-45	1-Jul-45	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-45	1-Jan-46	1-Jul-46	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-46	1-Jan-47	1-Jul-47	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-47	1-Jan-48	1-Jul-48	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-48	1-Jan-49	1-Jul-49	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-49	1-Jan-50	1-Jul-50	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
Total			4,300,000		628,310		379,902		241,788		640		196,450	

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IIIB

17-Sep-15

[1]Development source: Howard Hughes and Downtown Columbia Plan.

Downtown Columbia
Howard County, Maryland

Schedule IV-A: Total Projected Market Value - Residential

	Tax		Multi-Family Rental (Market Rate)						Multi-Family Rental (Market Rate) - PILOT[5]				Multi-Family Rental (80% AMI)			
Assessed As Of Date	Year Beginning	Inflation Factor	Units[1]	Less: Exempt Units[2]	Net Units	Value Per Unit[3]	Phase-In Percent[4]	Projected Market Value	Units[2]	PILOT Value Per Unit[5]	Phase-In Percent[4]	Projected Market Value	Units[1]	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value
1-Jan-16	1-Jul-16	100%	0	0	0	$244,751	0%	$0	0	$110,138	0%	$0	0	$163,121	0%	$0
1-Jan-17	1-Jul-17	103%	0	0	0	$252,094	0%	$0	0	$113,442	0%	$0	0	$168,015	0%	$0
1-Jan-18	1-Jul-18	106%	0	0	0	$259,656	0%	$0	0	$116,845	0%	$0	0	$173,055	0%	$0
1-Jan-19	1-Jul-19	109%	428	0	428	$267,446	80%	$91,573,511	0	$120,351	0%	$0	15	$178,247	80%	$2,138,965
1-Jan-20	1-Jul-20	113%	1,028	0	1,028	$275,469	83%	$234,406,078	0	$123,961	0%	$0	35	$183,594	83%	$5,324,240
1-Jan-21	1-Jul-21	116%	1,276	(200)	1,076	$283,733	89%	$271,778,826	200	$127,680	80%	$20,428,809	35	$189,102	90%	$5,925,206
1-Jan-22	1-Jul-22	119%	1,660	(200)	1,460	$292,245	92%	$390,673,739	200	$131,510	87%	$22,795,146	49	$194,775	92%	$8,738,922
1-Jan-23	1-Jul-23	123%	1,962	(200)	1,762	$301,013	93%	$495,828,334	200	$135,456	93%	$25,285,078	59	$200,619	93%	$11,060,774
1-Jan-24	1-Jul-24	127%	2,272	(200)	2,072	$310,043	94%	$602,682,671	200	$139,519	100%	$27,903,889	76	$206,637	93%	$14,533,483
1-Jan-25	1-Jul-25	130%	2,731	(200)	2,531	$319,345	94%	$759,394,151	200	$143,705	100%	$28,741,006	93	$212,836	93%	$18,445,813
1-Jan-26	1-Jul-26	134%	3,038	(200)	2,838	$328,925	95%	$886,364,749	200	$148,016	100%	$29,603,236	111	$219,221	94%	$22,799,025
1-Jan-27	1-Jul-27	138%	3,912	(200)	3,712	$338,793	93%	$1,174,051,849	200	$152,457	100%	$30,491,333	146	$225,798	93%	$30,588,108
1-Jan-28	1-Jul-28	143%	4,221	(200)	4,021	$348,956	95%	$1,333,874,092	200	$157,030	100%	$31,406,073	163	$232,572	94%	$35,754,066
1-Jan-29	1-Jul-29	147%	4,304	(200)	4,104	$359,425	97%	$1,433,325,204	200	$161,741	100%	$32,348,255	180	$239,549	96%	$41,202,452
1-Jan-30	1-Jul-30	151%	4,304	(200)	4,104	$370,208	99%	$1,507,567,240	200	$166,594	100%	$33,318,703	180	$246,736	98%	$43,573,510
1-Jan-31	1-Jul-31	156%	4,304	(200)	4,104	$381,314	100%	$1,562,764,381	200	$171,591	100%	$34,318,264	180	$254,138	99%	$45,456,760
1-Jan-32	1-Jul-32	160%	4,304	(200)	4,104	$392,753	100%	$1,611,808,362	200	$176,739	100%	$35,347,812	180	$261,762	100%	$47,117,127
1-Jan-33	1-Jul-33	165%	4,304	(200)	4,104	$404,536	100%	$1,660,162,613	200	$182,041	100%	$36,408,247	180	$269,615	100%	$48,530,640
1-Jan-34	1-Jul-34	170%	4,304	(200)	4,104	$416,672	100%	$1,709,967,491	200	$187,502	100%	$37,500,494	180	$277,703	100%	$49,986,560
1-Jan-35	1-Jul-35	175%	4,304	(200)	4,104	$429,172	100%	$1,761,266,516	200	$193,128	100%	$38,625,509	180	$286,034	100%	$51,486,156
1-Jan-36	1-Jul-36	181%	4,304	(200)	4,104	$442,047	100%	$1,814,104,511	200	$198,921	100%	$39,784,274	180	$294,615	100%	$53,030,741
1-Jan-37	1-Jul-37	186%	4,304	(200)	4,104	$455,309	100%	$1,868,527,647	200	$204,889	100%	$40,977,802	180	$303,454	100%	$54,621,663
1-Jan-38	1-Jul-38	192%	4,304	(200)	4,104	$468,968	100%	$1,924,583,476	200	$211,036	100%	$42,207,136	180	$312,557	100%	$56,260,313
1-Jan-39	1-Jul-39	197%	4,304	(200)	4,104	$483,037	100%	$1,982,320,980	200	$217,367	100%	$43,473,350	180	$321,934	100%	$57,948,123
1-Jan-40	1-Jul-40	203%	4,304	(200)	4,104	$497,528	100%	$2,041,790,610	200	$223,888	100%	$44,777,551	180	$331,592	100%	$59,686,566
1-Jan-41	1-Jul-41	209%	4,304	(200)	4,104	$512,454	100%	$2,103,044,328	200	$230,604	100%	$46,120,877	180	$341,540	100%	$61,477,163
1-Jan-42	1-Jul-42	216%	4,304	(200)	4,104	$527,828	100%	$2,166,135,658	200	$237,523	100%	$47,504,504	180	$351,786	100%	$63,321,478
1-Jan-43	1-Jul-43	222%	4,304	(200)	4,104	$543,663	100%	$2,231,119,728	200	$244,648	100%	$48,929,639	180	$362,340	100%	$65,221,123
1-Jan-44	1-Jul-44	229%	4,304	(200)	4,104	$559,973	100%	$2,298,053,320	200	$251,988	100%	$50,397,528	180	$373,210	100%	$67,177,756
1-Jan-45	1-Jul-45	236%	4,304	(200)	4,104	$576,772	100%	$2,366,994,919	200	$259,547	100%	$51,909,454	180	$384,406	100%	$69,193,089
1-Jan-46	1-Jul-46	243%	4,304	(200)	4,104	$594,075	100%	$2,438,004,767	200	$267,334	100%	$53,466,737	180	$395,938	100%	$71,268,882
1-Jan-47	1-Jul-47	250%	4,304	(200)	4,104	$611,897	100%	$2,511,144,910	200	$275,354	100%	$55,070,740	180	$407,816	100%	$73,406,948
1-Jan-48	1-Jul-48	258%	4,304	(200)	4,104	$630,254	100%	$2,586,479,257	200	$283,614	100%	$56,722,862	180	$420,051	100%	$75,609,157
1-Jan-49	1-Jul-49	265%	4,304	(200)	4,104	$649,162	100%	$2,664,073,635	200	$292,123	100%	$58,424,548	180	$432,652	100%	$77,877,431
1-Jan-50	1-Jul-50	273%	4,304	(200)	4,104	$668,636	100%	$2,743,995,844	200	$300,886	100%	$60,177,284	180	$445,632	100%	$80,213,754

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IV-A

17-Sep-15

[1]See Schedule III-A.

[2]According to Howard County staff, certain units are to be built by the Howard County Housing Commission and as a result, will be exempt from real property tax revenues. Furthermore, those units to be exempt will pay a PILOT payment to the County equal to 45% of their estimated tax value.

[3]See Schedule I. Values are assumed to increase with inflation factor shown.

[4]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

[5]According to the Howard County Housing Commission, exempt units are subject to a PILOT equal to 45% of the estimated value. PILOT percentage is based on previously executed LIHTC deals within the County.

Schedule IV-A: Total Projected Market Value - Residential, continued

	Tax		Multi-Family Rental (40-60% AMI)						Multi-Family Rental (40-60% AMI) - PILOT			
Assessed As Of Date	Year Beginning	Inflation Factor	Units[1]	Less: Exempt Units[2]	Net Units	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value	Units[1]	PILOT Value Per Unit[5]	Phase-In Percent[3]	Projected Market Value
1-Jan-16	1-Jul-16	100%	0	0	0	$163,121	0%	$0	0	$73,405	0%	$0
1-Jan-17	1-Jul-17	103%	0	0	0	$168,015	0%	$0	0	$75,607	0%	$0
1-Jan-18	1-Jul-18	106%	0	0	0	$173,055	0%	$0	0	$77,875	0%	$0
1-Jan-19	1-Jul-19	109%	80	0	80	$178,247	80%	$11,407,812	0	$80,211	0%	$0
1-Jan-20	1-Jul-20	113%	80	0	80	$183,594	87%	$12,729,217	0	$82,618	0%	$0
1-Jan-21	1-Jul-21	116%	290	(200)	90	$189,102	77%	$13,111,093	200	$85,096	80%	$13,615,366
1-Jan-22	1-Jul-22	119%	290	(200)	90	$194,775	84%	$14,673,078	200	$87,649	87%	$15,192,479
1-Jan-23	1-Jul-23	123%	290	(200)	90	$200,619	84%	$15,247,016	200	$90,278	93%	$16,851,965
1-Jan-24	1-Jul-24	127%	290	(200)	90	$206,637	100%	$18,597,347	200	$92,987	100%	$18,597,347
1-Jan-25	1-Jul-25	130%	440	(200)	240	$212,836	88%	$44,695,625	200	$95,776	100%	$19,155,268
1-Jan-26	1-Jul-26	134%	500	(260)	240	$219,221	92%	$48,228,708	260	$98,650	95%	$24,465,108
1-Jan-27	1-Jul-27	138%	500	(260)	240	$225,798	96%	$51,933,549	260	$101,609	97%	$25,605,498
1-Jan-28	1-Jul-28	143%	500	(260)	240	$232,572	100%	$55,817,276	260	$104,657	98%	$26,792,292
1-Jan-29	1-Jul-29	147%	500	(260)	240	$239,549	100%	$57,491,794	260	$107,797	100%	$28,027,250
1-Jan-30	1-Jul-30	151%	500	(260)	240	$246,736	100%	$59,216,548	260	$111,031	100%	$28,868,067
1-Jan-31	1-Jul-31	156%	500	(260)	240	$254,138	100%	$60,993,044	260	$114,362	100%	$29,734,109
1-Jan-32	1-Jul-32	160%	500	(260)	240	$261,762	100%	$62,822,836	260	$117,793	100%	$30,626,132
1-Jan-33	1-Jul-33	165%	500	(260)	240	$269,615	100%	$64,707,521	260	$121,327	100%	$31,544,916
1-Jan-34	1-Jul-34	170%	500	(260)	240	$277,703	100%	$66,648,746	260	$124,966	100%	$32,491,264
1-Jan-35	1-Jul-35	175%	500	(260)	240	$286,034	100%	$68,648,209	260	$128,715	100%	$33,466,002
1-Jan-36	1-Jul-36	181%	500	(260)	240	$294,615	100%	$70,707,655	260	$132,577	100%	$34,469,982
1-Jan-37	1-Jul-37	186%	500	(260)	240	$303,454	100%	$72,828,885	260	$136,554	100%	$35,504,081
1-Jan-38	1-Jul-38	192%	500	(260)	240	$312,557	100%	$75,013,751	260	$140,651	100%	$36,569,204
1-Jan-39	1-Jul-39	197%	500	(260)	240	$321,934	100%	$77,264,164	260	$144,870	100%	$37,666,280
1-Jan-40	1-Jul-40	203%	500	(260)	240	$331,592	100%	$79,582,088	260	$149,216	100%	$38,796,268
1-Jan-41	1-Jul-41	209%	500	(260)	240	$341,540	100%	$81,969,551	260	$153,693	100%	$39,960,156
1-Jan-42	1-Jul-42	216%	500	(260)	240	$351,786	100%	$84,428,638	260	$158,304	100%	$41,158,961
1-Jan-43	1-Jul-43	222%	500	(260)	240	$362,340	100%	$86,961,497	260	$163,053	100%	$42,393,730
1-Jan-44	1-Jul-44	229%	500	(260)	240	$373,210	100%	$89,570,342	260	$167,944	100%	$43,665,542
1-Jan-45	1-Jul-45	236%	500	(260)	240	$384,406	100%	$92,257,452	260	$172,983	100%	$44,975,508
1-Jan-46	1-Jul-46	243%	500	(260)	240	$395,938	100%	$95,025,176	260	$178,172	100%	$46,324,773
1-Jan-47	1-Jul-47	250%	500	(260)	240	$407,816	100%	$97,875,931	260	$183,517	100%	$47,714,516
1-Jan-48	1-Jul-48	258%	500	(260)	240	$420,051	100%	$100,812,209	260	$189,023	100%	$49,145,952
1-Jan-49	1-Jul-49	265%	500	(260)	240	$432,652	100%	$103,836,575	260	$194,694	100%	$50,620,330
1-Jan-50	1-Jul-50	273%	500	(260)	240	$445,632	100%	$106,951,672	260	$200,534	100%	$52,138,940

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IV-A.2*
17-Sep-15

[1]See Schedule III-A.

[2]According to Howard County staff, certain units are to be built by the Howard County Housing Commission and as a result, will be exempt from real property tax revenues.

[3]See Schedule I. Values are assumed to increase with inflation factor shown.

[4]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

[5]According to the Howard County Housing Commission, exempt units are subject to a PILOT equal to 45% of the estimated value. PILOT percentage is based on previously executed LIHTC deals within the County.

Downtown Columbia
Howard County, Maryland

Schedule IV-A: Total Projected Market Value - Residential, continued

	Tax		Multi-Family Rental (30% AMI)				Multi-Family Rental (Flier Bldg. Market Rate)				Multi-Family Rental (Flier Bldg. 40-60% AMI)			
Assessed	Year	Inflation		Value Per	Phase-In	Projected		Value Per	Phase-In	Projected		Value Per	Phase-In	Projected
As Of Date	Beginning	Factor	Units[1]	Unit[2]	Percent[3]	Market Value	Units[1]	Unit[2]	Percent[3]	Market Value	Units[1]	Unit[2]	Percent[3]	Market Value
1-Jan-16	1-Jul-16	100%	0	$163,121	0%	$0	0	$244,751	0%	$0	0	$163,121	0%	$0
1-Jan-17	1-Jul-17	103%	0	$168,015	0%	$0	0	$252,094	0%	$0	0	$168,015	0%	$0
1-Jan-18	1-Jul-18	106%	0	$173,055	0%	$0	0	$259,656	0%	$0	0	$173,055	0%	$0
1-Jan-19	1-Jul-19	109%	15	$178,247	80%	$2,138,965	0	$267,446	0%	$0	0	$178,247	0%	$0
1-Jan-20	1-Jul-20	113%	35	$183,594	83%	$5,324,240	0	$275,469	0%	$0	0	$183,594	0%	$0
1-Jan-21	1-Jul-21	116%	35	$189,102	90%	$5,925,206	110	$283,733	80%	$24,968,545	110	$189,102	80%	$16,641,003
1-Jan-22	1-Jul-22	119%	49	$194,775	92%	$8,738,922	110	$292,245	87%	$27,860,734	110	$194,775	87%	$18,568,586
1-Jan-23	1-Jul-23	123%	59	$200,619	93%	$11,060,774	110	$301,013	93%	$30,903,984	110	$200,619	93%	$20,596,846
1-Jan-24	1-Jul-24	127%	76	$206,637	93%	$14,533,483	110	$310,043	100%	$34,104,754	110	$206,637	100%	$22,730,091
1-Jan-25	1-Jul-25	130%	93	$212,836	93%	$18,445,813	110	$319,345	100%	$35,127,896	110	$212,836	100%	$23,411,994
1-Jan-26	1-Jul-26	134%	111	$219,221	94%	$22,799,025	110	$328,925	100%	$36,181,733	110	$219,221	100%	$24,114,354
1-Jan-27	1-Jul-27	138%	146	$225,798	93%	$30,588,108	110	$338,793	100%	$37,267,185	110	$225,798	100%	$24,837,784
1-Jan-28	1-Jul-28	143%	163	$232,572	94%	$35,754,066	110	$348,956	100%	$38,385,201	110	$232,572	100%	$25,582,918
1-Jan-29	1-Jul-29	147%	180	$239,549	96%	$41,202,452	110	$359,425	100%	$39,536,757	110	$239,549	100%	$26,350,406
1-Jan-30	1-Jul-30	151%	180	$246,736	98%	$43,573,510	110	$370,208	100%	$40,722,859	110	$246,736	100%	$27,140,918
1-Jan-31	1-Jul-31	156%	180	$254,138	99%	$45,456,760	110	$381,314	100%	$41,944,545	110	$254,138	100%	$27,955,145
1-Jan-32	1-Jul-32	160%	180	$261,762	100%	$47,117,127	110	$392,753	100%	$43,202,882	110	$261,762	100%	$28,793,800
1-Jan-33	1-Jul-33	165%	180	$269,615	100%	$48,530,640	110	$404,536	100%	$44,498,968	110	$269,615	100%	$29,657,614
1-Jan-34	1-Jul-34	170%	180	$277,703	100%	$49,986,560	110	$416,672	100%	$45,833,937	110	$277,703	100%	$30,547,342
1-Jan-35	1-Jul-35	175%	180	$286,034	100%	$51,486,156	110	$429,172	100%	$47,208,955	110	$286,034	100%	$31,463,762
1-Jan-36	1-Jul-36	181%	180	$294,615	100%	$53,030,741	110	$442,047	100%	$48,625,224	110	$294,615	100%	$32,407,675
1-Jan-37	1-Jul-37	186%	180	$303,454	100%	$54,621,663	110	$455,309	100%	$50,083,981	110	$303,454	100%	$33,379,905
1-Jan-38	1-Jul-38	192%	180	$312,557	100%	$56,260,313	110	$468,968	100%	$51,586,500	110	$312,557	100%	$34,381,303
1-Jan-39	1-Jul-39	197%	180	$321,934	100%	$57,948,123	110	$483,037	100%	$53,134,095	110	$321,934	100%	$35,412,742
1-Jan-40	1-Jul-40	203%	180	$331,592	100%	$59,686,566	110	$497,528	100%	$54,728,118	110	$331,592	100%	$36,475,124
1-Jan-41	1-Jul-41	209%	180	$341,540	100%	$61,477,163	110	$512,454	100%	$56,369,961	110	$341,540	100%	$37,569,378
1-Jan-42	1-Jul-42	216%	180	$351,786	100%	$63,321,478	110	$527,828	100%	$58,061,060	110	$351,786	100%	$38,696,459
1-Jan-43	1-Jul-43	222%	180	$362,340	100%	$65,221,123	110	$543,663	100%	$59,802,892	110	$362,340	100%	$39,857,353
1-Jan-44	1-Jul-44	229%	180	$373,210	100%	$67,177,756	110	$559,973	100%	$61,596,979	110	$373,210	100%	$41,053,073
1-Jan-45	1-Jul-45	236%	180	$384,406	100%	$69,193,089	110	$576,772	100%	$63,444,888	110	$384,406	100%	$42,284,665
1-Jan-46	1-Jul-46	243%	180	$395,938	100%	$71,268,882	110	$594,075	100%	$65,348,235	110	$395,938	100%	$43,553,205
1-Jan-47	1-Jul-47	250%	180	$407,816	100%	$73,406,948	110	$611,897	100%	$67,308,682	110	$407,816	100%	$44,859,802
1-Jan-48	1-Jul-48	258%	180	$420,051	100%	$75,609,157	110	$630,254	100%	$69,327,942	110	$420,051	100%	$46,205,596
1-Jan-49	1-Jul-49	265%	180	$432,652	100%	$77,877,431	110	$649,162	100%	$71,407,780	110	$432,652	100%	$47,591,764
1-Jan-50	1-Jul-50	273%	180	$445,632	100%	$80,213,754	110	$668,636	100%	$73,550,014	110	$445,632	100%	$49,019,516

[1]See Schedule III-A.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Schedule IV-A: Total Projected Market Value - Residential, continued

	Tax		Multi-Family Rental (Metropolitan)				For Sale Condos				For Sale Townhomes				Total Projected
Assessed	Year	Inflation		Value Per	Phase-In	Projected		Value Per	Phase-In	Projected		Value Per	Phase-In	Projected	Residential
As Of Date	Beginning	Factor	Units[1]	Unit[2]	Percent[3]	Market Value	Units[1]	Unit[2]	Percent[3]	Market Value	Units[1]	Unit[2]	Percent[3]	Market Value	Market Value
1-Jan-16	1-Jul-16	100%	380	$244,751	80%	$74,404,297	0	$302,861	0%	$0	0	$341,090	0%	$0	$74,404,297
1-Jan-17	1-Jul-17	103%	380	$252,094	87%	$83,022,795	0	$311,947	0%	$0	0	$351,323	0%	$0	$83,022,795
1-Jan-18	1-Jul-18	106%	817	$259,656	86%	$182,867,285	0	$321,305	0%	$0	0	$361,863	0%	$0	$182,867,285
1-Jan-19	1-Jul-19	109%	817	$267,446	93%	$202,920,196	0	$330,945	0%	$0	0	$372,719	0%	$0	$310,179,447
1-Jan-20	1-Jul-20	113%	817	$275,469	96%	$217,033,143	0	$340,873	0%	$0	0	$383,900	0%	$0	$474,816,917
1-Jan-21	1-Jul-21	116%	817	$283,733	100%	$231,810,239	84	$351,099	80%	$23,593,864	88	$395,417	80%	$27,837,364	$655,635,519
1-Jan-22	1-Jul-22	119%	817	$292,245	100%	$238,764,546	84	$361,632	87%	$26,326,820	88	$407,280	87%	$31,061,859	$803,394,831
1-Jan-23	1-Jul-23	123%	817	$301,013	100%	$245,927,482	234	$372,481	85%	$73,900,253	88	$419,498	93%	$34,454,769	$981,117,276
1-Jan-24	1-Jul-24	127%	817	$310,043	100%	$253,305,307	234	$383,656	91%	$82,102,287	88	$432,083	100%	$38,023,299	$1,127,113,958
1-Jan-25	1-Jul-25	130%	817	$319,345	100%	$260,904,466	234	$395,165	96%	$88,517,008	88	$445,045	100%	$39,163,998	$1,336,003,039
1-Jan-26	1-Jul-26	134%	817	$328,925	100%	$268,731,600	234	$407,020	100%	$95,242,720	88	$458,397	100%	$40,338,918	$1,498,869,176
1-Jan-27	1-Jul-27	138%	817	$338,793	100%	$276,793,548	234	$419,231	100%	$98,100,001	88	$472,149	100%	$41,549,085	$1,821,806,049
1-Jan-28	1-Jul-28	143%	817	$348,956	100%	$285,097,354	234	$431,808	100%	$101,043,001	88	$486,313	100%	$42,795,558	$2,012,301,897
1-Jan-29	1-Jul-29	147%	817	$359,425	100%	$293,650,275	461	$444,762	90%	$184,890,052	88	$500,903	100%	$44,079,425	$2,222,104,321
1-Jan-30	1-Jul-30	151%	817	$370,208	100%	$302,459,783	461	$458,105	93%	$197,373,439	88	$515,930	100%	$45,401,807	$2,329,216,384
1-Jan-31	1-Jul-31	156%	817	$381,314	100%	$311,533,577	461	$471,848	97%	$210,439,429	88	$531,408	100%	$46,763,862	$2,417,359,877
1-Jan-32	1-Jul-32	160%	817	$392,753	100%	$320,879,584	461	$486,003	100%	$224,111,742	88	$547,350	100%	$48,166,777	$2,499,994,180
1-Jan-33	1-Jul-33	165%	817	$404,536	100%	$330,505,971	461	$500,583	100%	$230,835,094	88	$563,770	100%	$49,611,781	$2,574,994,005
1-Jan-34	1-Jul-34	170%	817	$416,672	100%	$340,421,150	461	$515,601	100%	$237,760,147	88	$580,683	100%	$51,100,134	$2,652,243,825
1-Jan-35	1-Jul-35	175%	817	$429,172	100%	$350,633,785	461	$531,069	100%	$244,892,952	88	$598,104	100%	$52,633,138	$2,731,811,140
1-Jan-36	1-Jul-36	181%	817	$442,047	100%	$361,152,799	461	$547,001	100%	$252,239,740	88	$616,047	100%	$54,212,132	$2,813,765,474
1-Jan-37	1-Jul-37	186%	817	$455,309	100%	$371,987,382	461	$563,411	100%	$259,806,932	88	$634,528	100%	$55,838,496	$2,898,178,439
1-Jan-38	1-Jul-38	192%	817	$468,968	100%	$383,147,004	461	$580,313	100%	$267,601,140	88	$653,564	100%	$57,513,651	$2,985,123,792
1-Jan-39	1-Jul-39	197%	817	$483,037	100%	$394,641,414	461	$597,723	100%	$275,629,175	88	$673,171	100%	$59,239,061	$3,074,677,505
1-Jan-40	1-Jul-40	203%	817	$497,528	100%	$406,480,657	461	$615,655	100%	$283,898,050	88	$693,366	100%	$61,016,233	$3,166,917,831
1-Jan-41	1-Jul-41	209%	817	$512,454	100%	$418,675,076	461	$634,124	100%	$292,414,991	88	$714,167	100%	$62,846,720	$3,261,925,365
1-Jan-42	1-Jul-42	216%	817	$527,828	100%	$431,235,328	461	$653,148	100%	$301,187,441	88	$735,592	100%	$64,732,121	$3,359,783,126
1-Jan-43	1-Jul-43	222%	817	$543,663	100%	$444,172,388	461	$672,742	100%	$310,223,064	88	$757,660	100%	$66,674,085	$3,460,576,620
1-Jan-44	1-Jul-44	229%	817	$559,973	100%	$457,497,560	461	$692,925	100%	$319,529,756	88	$780,390	100%	$68,674,307	$3,564,393,919
1-Jan-45	1-Jul-45	236%	817	$576,772	100%	$471,222,487	461	$713,712	100%	$329,115,649	88	$803,802	100%	$70,734,537	$3,671,325,736
1-Jan-46	1-Jul-46	243%	817	$594,075	100%	$485,359,161	461	$735,124	100%	$338,989,118	88	$827,916	100%	$72,856,573	$3,781,465,509
1-Jan-47	1-Jul-47	250%	817	$611,897	100%	$499,919,936	461	$757,177	100%	$349,158,792	88	$852,753	100%	$75,042,270	$3,894,909,474
1-Jan-48	1-Jul-48	258%	817	$630,254	100%	$514,917,534	461	$779,893	100%	$359,633,556	88	$878,336	100%	$77,293,538	$4,011,756,758
1-Jan-49	1-Jul-49	265%	817	$649,162	100%	$530,365,060	461	$803,290	100%	$370,422,562	88	$904,686	100%	$79,612,344	$4,132,109,461
1-Jan-50	1-Jul-50	273%	817	$668,636	100%	$546,276,012	461	$827,388	100%	$381,535,239	88	$931,826	100%	$82,000,714	$4,256,072,745

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IVA.4*

17-Sep-15

[1]See Schedule III-A.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Schedule IV-B: Total Projected Market Value - Commercial

	Tax		Office				Retail				Restaurant - Full Service			
Assessed As Of Date	Year Beginning	Inflation Factor	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value
1-Jan-16	1-Jul-16	100%	0	$244	0%	$0	0	$341	0%	$0	0	$341	0%	$0
1-Jan-17	1-Jul-17	103%	204,000	$252	80%	$41,061,857	0	$351	0%	$0	9,000	$351	80%	$2,527,129
1-Jan-18	1-Jul-18	106%	329,000	$259	84%	$71,733,454	5,000	$362	80%	$1,446,079	9,000	$362	87%	$2,819,855
1-Jan-19	1-Jul-19	109%	943,000	$267	84%	$210,854,718	63,900	$372	81%	$19,159,445	36,000	$372	83%	$11,170,964
1-Jan-20	1-Jul-20	113%	1,423,600	$275	87%	$340,171,638	114,805	$384	84%	$36,987,231	51,000	$384	87%	$17,029,018
1-Jan-21	1-Jul-21	116%	1,703,600	$283	91%	$436,834,475	166,156	$395	87%	$57,348,877	83,890	$395	88%	$29,040,426
1-Jan-22	1-Jul-22	119%	2,003,600	$292	94%	$546,671,799	217,506	$407	91%	$80,156,249	116,780	$407	90%	$42,649,380
1-Jan-23	1-Jul-23	123%	2,387,750	$300	94%	$676,642,108	268,857	$419	92%	$104,069,516	149,671	$419	91%	$57,213,307
1-Jan-24	1-Jul-24	127%	2,532,750	$309	96%	$752,726,511	320,207	$432	94%	$129,358,259	182,561	$432	93%	$73,127,533
1-Jan-25	1-Jul-25	130%	2,894,800	$319	96%	$885,241,896	371,558	$445	94%	$156,070,665	215,451	$445	94%	$89,945,122
1-Jan-26	1-Jul-26	134%	3,155,800	$328	97%	$999,850,057	422,908	$458	95%	$184,269,392	248,341	$458	95%	$107,705,950
1-Jan-27	1-Jul-27	138%	3,425,000	$338	97%	$1,119,980,067	474,259	$472	96%	$214,019,579	281,231	$472	95%	$126,451,478
1-Jan-28	1-Jul-28	143%	3,725,000	$348	97%	$1,257,883,373	525,609	$486	96%	$245,388,935	314,122	$486	96%	$146,224,802
1-Jan-29	1-Jul-29	147%	3,900,000	$359	98%	$1,365,696,170	576,960	$500	96%	$278,447,834	347,012	$500	96%	$167,070,719
1-Jan-30	1-Jul-30	151%	4,300,000	$369	97%	$1,543,235,380	628,310	$515	97%	$313,269,418	379,902	$515	97%	$189,035,789
1-Jan-31	1-Jul-31	156%	4,300,000	$381	98%	$1,611,732,615	628,310	$531	98%	$328,119,939	379,902	$531	98%	$198,199,170
1-Jan-32	1-Jul-32	160%	4,300,000	$392	99%	$1,675,110,940	628,310	$547	99%	$341,707,545	379,902	$547	99%	$206,543,196
1-Jan-33	1-Jul-33	165%	4,300,000	$404	100%	$1,736,130,972	628,310	$563	100%	$353,886,935	379,902	$563	100%	$213,974,488
1-Jan-34	1-Jul-34	170%	4,300,000	$416	100%	$1,788,214,901	628,310	$580	100%	$364,503,543	379,902	$580	100%	$220,393,723
1-Jan-35	1-Jul-35	175%	4,300,000	$428	100%	$1,841,861,348	628,310	$598	100%	$375,438,650	379,902	$598	100%	$227,005,534
1-Jan-36	1-Jul-36	181%	4,300,000	$441	100%	$1,897,117,189	628,310	$615	100%	$386,701,809	379,902	$615	100%	$233,815,700
1-Jan-37	1-Jul-37	186%	4,300,000	$454	100%	$1,954,030,704	628,310	$634	100%	$398,302,864	379,902	$634	100%	$240,830,171
1-Jan-38	1-Jul-38	192%	4,300,000	$468	100%	$2,012,651,625	628,310	$653	100%	$410,251,949	379,902	$653	100%	$248,055,077
1-Jan-39	1-Jul-39	197%	4,300,000	$482	100%	$2,073,031,174	628,310	$673	100%	$422,559,508	379,902	$673	100%	$255,496,729
1-Jan-40	1-Jul-40	203%	4,300,000	$497	100%	$2,135,222,109	628,310	$693	100%	$435,236,293	379,902	$693	100%	$263,161,631
1-Jan-41	1-Jul-41	209%	4,300,000	$511	100%	$2,199,278,773	628,310	$713	100%	$448,293,382	379,902	$713	100%	$271,056,480
1-Jan-42	1-Jul-42	216%	4,300,000	$527	100%	$2,265,257,136	628,310	$735	100%	$461,742,183	379,902	$735	100%	$279,188,174
1-Jan-43	1-Jul-43	222%	4,300,000	$543	100%	$2,333,214,850	628,310	$757	100%	$475,594,449	379,902	$757	100%	$287,563,819
1-Jan-44	1-Jul-44	229%	4,300,000	$559	100%	$2,403,211,296	628,310	$780	100%	$489,862,282	379,902	$780	100%	$296,190,734
1-Jan-45	1-Jul-45	236%	4,300,000	$576	100%	$2,475,307,634	628,310	$803	100%	$504,558,151	379,902	$803	100%	$305,076,456
1-Jan-46	1-Jul-46	243%	4,300,000	$593	100%	$2,549,566,863	628,310	$827	100%	$519,694,895	379,902	$827	100%	$314,228,749
1-Jan-47	1-Jul-47	250%	4,300,000	$611	100%	$2,626,053,869	628,310	$852	100%	$535,285,742	379,902	$852	100%	$323,655,612
1-Jan-48	1-Jul-48	258%	4,300,000	$629	100%	$2,704,835,485	628,310	$878	100%	$551,344,315	379,902	$878	100%	$333,365,280
1-Jan-49	1-Jul-49	265%	4,300,000	$648	100%	$2,785,980,550	628,310	$904	100%	$567,884,644	379,902	$904	100%	$343,366,239
1-Jan-50	1-Jul-50	273%	4,300,000	$667	100%	$2,869,559,966	628,310	$931	100%	$584,921,183	379,902	$931	100%	$353,667,226

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IVB*
17-Sep-15

[1]See Schedule III-B.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Schedule IV-B: Total Projected Market Value - Commercial, continued

	Tax		Restaurant - Fast Food				Hotel				Civic/Recreation				Total Projected
Assessed As Of Date	Year Beginning	Inflation Factor	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value	Rooms[1]	Value Per Room[2]	Phase-In Percent[3]	Projected Market Value	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value	Commercial Market Value
1-Jan-16	1-Jul-16	100%	0	$341	0%	$0	0	$114,212	0%	$0	0	$0	0%	$0	$0
1-Jan-17	1-Jul-17	103%	0	$351	0%	$0	0	$117,638	0%	$0	0	$0	0%	$0	$43,588,986
1-Jan-18	1-Jul-18	106%	0	$362	0%	$0	0	$121,167	0%	$0	0	$0	0%	$0	$75,999,389
1-Jan-19	1-Jul-19	109%	21,000	$372	80%	$6,255,740	0	$124,802	0%	$0	25,000	$0	80%	$0	$247,440,867
1-Jan-20	1-Jul-20	113%	31,000	$384	85%	$10,048,655	300	$128,546	80%	$30,851,111	25,000	$0	87%	$0	$435,087,652
1-Jan-21	1-Jul-21	116%	52,079	$395	87%	$17,828,156	300	$132,403	87%	$34,424,698	45,000	$0	87%	$0	$575,476,633
1-Jan-22	1-Jul-22	119%	73,158	$407	89%	$26,637,174	300	$136,375	93%	$38,184,935	45,000	$0	94%	$0	$734,299,536
1-Jan-23	1-Jul-23	123%	94,236	$419	91%	$35,960,889	470	$140,466	93%	$61,243,180	45,000	$0	97%	$0	$935,129,000
1-Jan-24	1-Jul-24	127%	115,315	$432	93%	$46,138,882	470	$144,680	95%	$64,720,182	196,450	$0	85%	$0	$1,066,071,368
1-Jan-25	1-Jul-25	130%	136,394	$445	94%	$56,895,190	470	$149,020	98%	$68,350,686	196,450	$0	90%	$0	$1,256,503,558
1-Jan-26	1-Jul-26	134%	157,473	$458	95%	$68,255,351	470	$153,491	100%	$72,140,771	196,450	$0	95%	$0	$1,432,221,521
1-Jan-27	1-Jul-27	138%	178,552	$472	95%	$80,245,916	640	$158,096	95%	$95,806,014	196,450	$0	100%	$0	$1,636,503,054
1-Jan-28	1-Jul-28	143%	199,630	$486	96%	$92,894,486	640	$162,839	96%	$100,525,698	196,450	$0	100%	$0	$1,842,917,293
1-Jan-29	1-Jul-29	147%	220,709	$500	96%	$106,229,748	640	$167,724	98%	$105,442,338	196,450	$0	100%	$0	$2,022,886,809
1-Jan-30	1-Jul-30	151%	241,788	$515	97%	$120,281,521	640	$172,755	100%	$110,563,504	196,450	$0	100%	$0	$2,276,385,612
1-Jan-31	1-Jul-31	156%	241,788	$531	98%	$126,128,132	640	$177,938	100%	$113,880,409	196,450	$0	100%	$0	$2,378,060,266
1-Jan-32	1-Jul-32	160%	241,788	$547	99%	$131,448,850	640	$183,276	100%	$117,296,821	196,450	$0	100%	$0	$2,472,107,352
1-Jan-33	1-Jul-33	165%	241,788	$563	100%	$136,183,805	640	$188,775	100%	$120,815,726	196,450	$0	100%	$0	$2,560,991,927
1-Jan-34	1-Jul-34	170%	241,788	$580	100%	$140,269,319	640	$194,438	100%	$124,440,198	196,450	$0	100%	$0	$2,637,821,684
1-Jan-35	1-Jul-35	175%	241,788	$598	100%	$144,477,399	640	$200,271	100%	$128,173,404	196,450	$0	100%	$0	$2,716,956,335
1-Jan-36	1-Jul-36	181%	241,788	$615	100%	$148,811,721	640	$206,279	100%	$132,018,606	196,450	$0	100%	$0	$2,798,465,025
1-Jan-37	1-Jul-37	186%	241,788	$634	100%	$153,276,073	640	$212,467	100%	$135,979,164	196,450	$0	100%	$0	$2,882,418,976
1-Jan-38	1-Jul-38	192%	241,788	$653	100%	$157,874,355	640	$218,841	100%	$140,058,539	196,450	$0	100%	$0	$2,968,891,545
1-Jan-39	1-Jul-39	197%	241,788	$673	100%	$162,610,585	640	$225,407	100%	$144,260,295	196,450	$0	100%	$0	$3,057,958,291
1-Jan-40	1-Jul-40	203%	241,788	$693	100%	$167,488,903	640	$232,169	100%	$148,588,104	196,450	$0	100%	$0	$3,149,697,040
1-Jan-41	1-Jul-41	209%	241,788	$713	100%	$172,513,570	640	$239,134	100%	$153,045,747	196,450	$0	100%	$0	$3,244,187,951
1-Jan-42	1-Jul-42	216%	241,788	$735	100%	$177,688,977	640	$246,308	100%	$157,637,119	196,450	$0	100%	$0	$3,341,513,590
1-Jan-43	1-Jul-43	222%	241,788	$757	100%	$183,019,646	640	$253,697	100%	$162,366,233	196,450	$0	100%	$0	$3,441,758,998
1-Jan-44	1-Jul-44	229%	241,788	$780	100%	$188,510,236	640	$261,308	100%	$167,237,220	196,450	$0	100%	$0	$3,545,011,767
1-Jan-45	1-Jul-45	236%	241,788	$803	100%	$194,165,543	640	$269,147	100%	$172,254,337	196,450	$0	100%	$0	$3,651,362,120
1-Jan-46	1-Jul-46	243%	241,788	$827	100%	$199,990,509	640	$277,222	100%	$177,421,967	196,450	$0	100%	$0	$3,760,902,984
1-Jan-47	1-Jul-47	250%	241,788	$852	100%	$205,990,224	640	$285,538	100%	$182,744,626	196,450	$0	100%	$0	$3,873,730,074
1-Jan-48	1-Jul-48	258%	241,788	$878	100%	$212,169,931	640	$294,105	100%	$188,226,964	196,450	$0	100%	$0	$3,989,941,976
1-Jan-49	1-Jul-49	265%	241,788	$904	100%	$218,535,029	640	$302,928	100%	$193,873,773	196,450	$0	100%	$0	$4,109,640,235
1-Jan-50	1-Jul-50	273%	241,788	$931	100%	$225,091,080	640	$312,016	100%	$199,689,986	196,450	$0	100%	$0	$4,232,929,442

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IVB.2*

17-Sep-15

[1]See Schedule III-B.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Fiscal Impact Analysis

Downtown Columbia
Howard County, Maryland

Schedule V: Projected Real Property Tax Revenues

Tax Year Beginning	Inflation Factor	Total Projected Assessed Value Proposed Downtown Columbia Plan[1] Residential	Commercial	Total	FY 16 Howard County Tax Rate Per $100 A.V[2]	Projected Real Property Tax Revenues
1-Jul-16	100%	$74,404,297	$0	$74,404,297	$1.014	$754,460
1-Jul-17	103%	$83,022,795	$43,588,986	$126,611,781	$1.014	$1,283,843
1-Jul-18	106%	$182,867,285	$75,999,389	$258,866,674	$1.014	$2,624,908
1-Jul-19	109%	$310,179,447	$247,440,867	$557,620,314	$1.014	$5,654,270
1-Jul-20	113%	$474,816,917	$435,087,652	$909,904,569	$1.014	$9,226,432
1-Jul-21	116%	$655,635,519	$575,476,633	$1,231,112,153	$1.014	$12,483,477
1-Jul-22	119%	$803,394,831	$734,299,536	$1,537,694,367	$1.014	$15,592,221
1-Jul-23	123%	$981,117,276	$935,129,000	$1,916,246,276	$1.014	$19,430,737
1-Jul-24	127%	$1,127,113,958	$1,066,071,368	$2,193,185,325	$1.014	$22,238,899
1-Jul-25	130%	$1,336,003,039	$1,256,503,558	$2,592,506,597	$1.014	$26,288,017
1-Jul-26	134%	$1,498,869,176	$1,432,221,521	$2,931,090,697	$1.014	$29,721,260
1-Jul-27	138%	$1,821,806,049	$1,636,503,054	$3,458,309,103	$1.014	$35,067,254
1-Jul-28	143%	$2,012,301,897	$1,842,917,293	$3,855,219,191	$1.014	$39,091,923
1-Jul-29	147%	$2,222,104,321	$2,022,886,809	$4,244,991,131	$1.014	$43,044,210
1-Jul-30	151%	$2,329,216,384	$2,276,385,612	$4,605,601,996	$1.014	$46,700,804
1-Jul-31	156%	$2,417,359,877	$2,378,060,266	$4,795,420,142	$1.014	$48,625,560
1-Jul-32	160%	$2,499,994,180	$2,472,107,352	$4,972,101,532	$1.014	$50,417,110
1-Jul-33	165%	$2,574,994,005	$2,560,991,927	$5,135,985,932	$1.014	$52,078,897
1-Jul-34	170%	$2,652,243,825	$2,637,821,684	$5,290,065,510	$1.014	$53,641,264
1-Jul-35	175%	$2,731,811,140	$2,716,956,335	$5,448,767,475	$1.014	$55,250,502
1-Jul-36	181%	$2,813,765,474	$2,798,465,025	$5,612,230,499	$1.014	$56,908,017
1-Jul-37	186%	$2,898,178,439	$2,882,418,976	$5,780,597,414	$1.014	$58,615,258
1-Jul-38	192%	$2,985,123,792	$2,968,891,545	$5,954,015,337	$1.014	$60,373,716
1-Jul-39	197%	$3,074,677,505	$3,057,958,291	$6,132,635,797	$1.014	$62,184,927
1-Jul-40	203%	$3,166,917,831	$3,149,697,040	$6,316,614,871	$1.014	$64,050,475
1-Jul-41	209%	$3,261,925,365	$3,244,187,951	$6,506,113,317	$1.014	$65,971,989
1-Jul-42	216%	$3,359,783,126	$3,341,513,590	$6,701,296,716	$1.014	$67,951,149
1-Jul-43	222%	$3,460,576,620	$3,441,758,998	$6,902,335,618	$1.014	$69,989,683
1-Jul-44	229%	$3,564,393,919	$3,545,011,767	$7,109,405,686	$1.014	$72,089,374
1-Jul-45	236%	$3,671,325,736	$3,651,362,120	$7,322,687,857	$1.014	$74,252,055
1-Jul-46	243%	$3,781,465,509	$3,760,902,984	$7,542,368,493	$1.014	$76,479,617
1-Jul-47	250%	$3,894,909,474	$3,873,730,074	$7,768,639,547	$1.014	$78,774,005
1-Jul-48	258%	$4,011,756,758	$3,989,941,976	$8,001,698,734	$1.014	$81,137,225
1-Jul-49	265%	$4,132,109,461	$4,109,640,235	$8,241,749,696	$1.014	$83,571,342
1-Jul-50	273%	$4,256,072,745	$4,232,929,442	$8,489,002,187	$1.014	$86,078,482
Total						$1,627,643,362

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]V*
17-Sep-15

[1]See Schedules IV-A and IV-B.

[2]Represents the Fiscal Year 2016 Howard County Real Property Tax Rate. Source: *Howard County, Maryland FY 2016 Approved Operating Budget.*

Downtown Columbia
Howard County, Maryland

Schedule VI-A: Projection of County Personal Income Tax Revenues - Rental Residential

	MF Rental	80% AMI[8]	40-60% AMI[8]	30% AMI[8]	Total
Total monthly rent payment[1]	$2,200	-	-	-	-
Assumed affordability ratio[2]	36%	-	-	-	-
Monthly income	$6,111	$4,889	$3,056	$1,833	-
Gross income	$73,333	$58,667	$36,667	$22,000	-
Less: standard state deduction[3]	$4,000	$4,000	$4,000	$4,000	-
Number of exemptions[4]	1.84	1.84	1.84	1.84	-
Standard exemption amount	$3,200	$3,200	$3,200	$3,200	-
Less: sub-total exemption adjustment of AGI[5]	$5,888	$5,888	$5,888	$5,888	-
Total adjustments - net taxable income	$63,445	$48,779	$26,779	$12,112	-
Howard County income tax rate[6]	3.2%	3.2%	3.2%	3.2%	-
Income tax per unit	$2,030	$1,561	$857	$388	-
Total units	5,231	180	610	180	6,201
Total estimated income tax[7]	$10,619,973	$280,965	$522,720	$69,765	$11,493,423

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]VI-A*
17-Sep-15

[1]See Schedule II-D for market rate rents.

[2]Based on information provided in Federal Housing Administration Debt Ratio's Guidelines.

[3]Standard state deduction: Assumes the average of filing single and joint, or $4,000. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[4]Represents the average household size for renter occupied units in Howard County. See Appendix A.

[5]Assumes 2015 exemption amount of $3,200. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[6]Source: *Fiscal Year 2016 Howard County Approved Operating Budget.*

[7]Figure assumes full build out and is expressed in current dollars.

[8]AMI unit incomes are assumed to be adjusted proportionately based on the market rate income. For example, 80% AMI unit monthly income is assumed to be 80% of the market rate monthly income.

Downtown Columbia
Howard County, Maryland

Schedule VI-B: Projection of County Personal Income Tax Revenues - For Sale Residential

	Condos	Townhomes	Total
Market value[1]	$302,861	$341,090	-
Assumed down payment	20%	20%	-
Less: down payment	($60,572)	($68,218)	-
Loan amount	$242,289	$272,872	-
Loan interest rate[2]	5.06%	5.06%	-
Mortgage payment[3]	$1,310	$1,476	-
Interest portion	$424	$478	-
Private mortgage insurance (PMI)[4]	$303	$341	-
Property taxes[5]	$284	$320	-
Insurance[6]	$53	$53	-
Total monthly payment	$1,950	$2,190	-
Assumed affordability ratio[7]	29%	29%	-
Monthly income	$6,725	$7,551	-
Gross income	$80,701	$90,611	-
Monthly mortgage deduction[8]	$708	$798	-
Less: annual mortgage deduction[8]	$8,499	$9,572	-
Less: standard state deduction[8]	-	-	-
Number of exemptions[9]	1.84	2.54	-
Less: adjustment of AGI[10]	$5,888	$8,128	-
Total adjustments - net income	$66,314	$72,911	-
Howard County income tax rate[11]	3.2%	3.2%	-
Sub-total income tax per unit	$2,122	$2,333	-
Total units[1]	461	88	549
Total income tax[12]	$978,545	$205,316	$1,183,861

MuniCap, Inc. *)NSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]VI-B*

17-Sep-15

[1]See Schedule I.

[2]Loan amount assumes thirty years and conventional fixed-rate mortgage loan rate over a ten-year annual average. Based on information reported by Freddie M

[3]Includes principal and interest. Assumes 30 year fixed rate mortgage loan.

[4]Assumes an annual rate of 1.5%. Based on information reported by the Federal Housing Administration.

[5]Represents total residential real property tax obligation, including both Howard County ($1.014) and State ($0.112) tax rates.

[6]Based on the 2008 average annual insurance value of $637 for the State of Maryland as reported by the Insurance Information Institute.

[7]Based on information provided in Federal Housing Administration Debt Ratio's Guidelines.

[8]Monthly mortgage deduction assumes first years mortgage interest and property tax payments. Assumes residents of for sale homes take the mortgage deduction rather the standard state deduction. Standard state deduction assumes $4,000 for 2014 tax year. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[9]See Appendix A.

[10]Assumes 2015 exemption amount of $3,200. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[11]Source: *Fiscal Year 2016 Howard County Approved Operating Budget.*

[12]Figure assumes full build out and is expressed in current dollars.

Downtown Columbia
Howard County, Maryland

Schedule VII: Projection of Local Recordation Tax Revenues

Tax Year Beginning	Inflation Factor	MF Rental (Market) Value Per Unit[1]	MF Rental (Market) Initial Unit Sale[2]	MF Rental (Market) Projected Market Value	MF Rental (Subsidized) Value Per Unit[1]	MF Rental (Subsidized) Initial Unit Sale[2]	MF Rental (Subsidized) Projected Market Value
1-Jul-16	100%	$244,751	380	$93,005,371	$163,121	0	$0
1-Jul-17	103%	$252,094	0	$0	$168,015	0	$0
1-Jul-18	106%	$259,656	437	$113,469,808	$173,055	0	$0
1-Jul-19	109%	$267,446	428	$114,466,888	$178,247	110	$19,607,176
1-Jul-20	113%	$275,469	600	$165,281,628	$183,594	40	$7,343,779
1-Jul-21	116%	$283,733	358	$101,576,579	$189,102	320	$60,512,737
1-Jul-22	119%	$292,245	384	$112,222,259	$194,775	28	$5,453,710
1-Jul-23	123%	$301,013	302	$90,905,875	$200,619	20	$4,012,373
1-Jul-24	127%	$310,043	310	$96,010,049	$206,637	34	$7,025,665
1-Jul-25	130%	$319,345	460	$146,792,027	$212,836	184	$39,161,881
1-Jul-26	134%	$328,925	307	$100,870,286	$219,221	96	$21,045,254
1-Jul-27	138%	$338,793	874	$295,991,795	$225,798	70	$15,805,863
1-Jul-28	143%	$348,956	310	$108,060,156	$232,572	34	$7,907,447
1-Jul-29	147%	$359,425	83	$29,665,000	$239,549	34	$8,144,671
1-Jul-30	151%	$370,208	0	$0	$246,736	0	$0
1-Jul-31	156%	$381,314	0	$0	$254,138	0	$0
1-Jul-32	160%	$392,753	0	$0	$261,762	0	$0
1-Jul-33	165%	$404,536	0	$0	$269,615	0	$0
1-Jul-34	170%	$416,672	0	$0	$277,703	0	$0
1-Jul-35	175%	$429,172	0	$0	$286,034	0	$0
1-Jul-36	181%	$442,047	0	$0	$294,615	0	$0
1-Jul-37	186%	$455,309	0	$0	$303,454	0	$0
1-Jul-38	192%	$468,968	0	$0	$312,557	0	$0
1-Jul-39	197%	$483,037	0	$0	$321,934	0	$0
1-Jul-40	203%	$497,528	0	$0	$331,592	0	$0
1-Jul-41	209%	$512,454	0	$0	$341,540	0	$0
1-Jul-42	216%	$527,828	0	$0	$351,786	0	$0
1-Jul-43	222%	$543,663	0	$0	$362,340	0	$0
1-Jul-44	229%	$559,973	0	$0	$373,210	0	$0
1-Jul-45	236%	$576,772	0	$0	$384,406	0	$0
1-Jul-46	243%	$594,075	0	$0	$395,938	0	$0
1-Jul-47	250%	$611,897	0	$0	$407,816	0	$0
1-Jul-48	258%	$630,254	0	$0	$420,051	0	$0
1-Jul-49	265%	$649,162	0	$0	$432,652	0	$0
1-Jul-50	273%	$668,636	0	$0	$445,632	0	$0
Total			5,231			970	

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]VII*

17-Sep-15

[1]See Schedule I.

[2]See Schedule III-A. Assumes apartment development is not resolc

Downtown Columbia
Howard County, Maryland

Schedule VII: Projection of Local Recordation Tax Revenues, continued

Tax Year Beginning	Inflation Factor	Condo: Value Per Unit[1]	Condo: Initial Unit Sale[2]	Condo: Unit Resales[3]	Condo: Total Sales	Condo: Projected Market Value	Townhouse: Value Per Unit[1]	Townhouse: Initial Unit Sale[2]	Townhouse: Unit Resales[3]	Townhouse: Total Sales	Townhouse: Projected Market Value
1-Jul-16	100%	$302,861	0	0	0	$0	$341,090	0	0	0	$0
1-Jul-17	103%	$311,947	0	0	0	$0	$351,323	0	0	0	$0
1-Jul-18	106%	$321,305	0	0	0	$0	$361,863	0	0	0	$0
1-Jul-19	109%	$330,945	0	0	0	$0	$372,719	0	0	0	$0
1-Jul-20	113%	$340,873	0	0	0	$0	$383,900	0	0	0	$0
1-Jul-21	116%	$351,099	84	0	84	$29,492,331	$395,417	88	0	88	$34,796,705
1-Jul-22	119%	$361,632	0	6	6	$2,025,140	$407,280	0	6	6	$2,389,374
1-Jul-23	123%	$372,481	150	6	156	$57,958,061	$419,498	0	6	6	$2,461,055
1-Jul-24	127%	$383,656	0	16	16	$5,985,027	$432,083	0	6	6	$2,534,887
1-Jul-25	130%	$395,165	0	16	16	$6,164,577	$445,045	0	6	6	$2,610,933
1-Jul-26	134%	$407,020	0	16	16	$6,349,515	$458,397	0	6	6	$2,689,261
1-Jul-27	138%	$419,231	0	16	16	$6,540,000	$472,149	0	6	6	$2,769,939
1-Jul-28	143%	$431,808	0	16	16	$6,736,200	$486,313	0	6	6	$2,853,037
1-Jul-29	147%	$444,762	227	16	243	$107,957,986	$500,903	0	6	6	$2,938,628
1-Jul-30	151%	$458,105	0	31	31	$14,083,121	$515,930	0	6	6	$3,026,787
1-Jul-31	156%	$471,848	0	31	31	$14,505,614	$531,408	0	6	6	$3,117,591
1-Jul-32	160%	$486,003	0	31	31	$14,940,783	$547,350	0	6	6	$3,211,118
1-Jul-33	165%	$500,583	0	31	31	$15,389,006	$563,770	0	6	6	$3,307,452
1-Jul-34	170%	$515,601	0	31	31	$15,850,676	$580,683	0	6	6	$3,406,676
1-Jul-35	175%	$531,069	0	31	31	$16,326,197	$598,104	0	6	6	$3,508,876
1-Jul-36	181%	$547,001	0	31	31	$16,815,983	$616,047	0	6	6	$3,614,142
1-Jul-37	186%	$563,411	0	31	31	$17,320,462	$634,528	0	6	6	$3,722,566
1-Jul-38	192%	$580,313	0	31	31	$17,840,076	$653,564	0	6	6	$3,834,243
1-Jul-39	197%	$597,723	0	31	31	$18,375,278	$673,171	0	6	6	$3,949,271
1-Jul-40	203%	$615,655	0	31	31	$18,926,537	$693,366	0	6	6	$4,067,749
1-Jul-41	209%	$634,124	0	31	31	$19,494,333	$714,167	0	6	6	$4,189,781
1-Jul-42	216%	$653,148	0	31	31	$20,079,163	$735,592	0	6	6	$4,315,475
1-Jul-43	222%	$672,742	0	31	31	$20,681,538	$757,660	0	6	6	$4,444,939
1-Jul-44	229%	$692,925	0	31	31	$21,301,984	$780,390	0	6	6	$4,578,287
1-Jul-45	236%	$713,712	0	31	31	$21,941,043	$803,802	0	6	6	$4,715,636
1-Jul-46	243%	$735,124	0	31	31	$22,599,275	$827,916	0	6	6	$4,857,105
1-Jul-47	250%	$757,177	0	31	31	$23,277,253	$852,753	0	6	6	$5,002,818
1-Jul-48	258%	$779,893	0	31	31	$23,975,570	$878,336	0	6	6	$5,152,903
1-Jul-49	265%	$803,290	0	31	31	$24,694,837	$904,686	0	6	6	$5,307,490
1-Jul-50	273%	$827,388	0	31	31	$25,435,683	$931,826	0	6	6	$5,466,714
Total			461					88			

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]VII.2*

17-Sep-15

[1]See Schedule I.

[2]See Schedule III-A.

[3]Assumes for sale residential units are resold, on average, every 15 years.

Downtown Columbia
Howard County, Maryland

Schedule VII: Projection of Local Recordation Tax Revenues, continued

Tax Year Beginning	Inflation Factor	Office			Retail			Restaurant			Hotel			Flier Building Sale[3]	Total Projected Recorded Market Value	Local Recordation Tax Rate[3] ($2.50 Per $500)	Local Recordation Tax Revenues
		Value Per SF[1]	Initial SF Sale[2]	Projected Market Value	Value Per SF[1]	Initial SF Sale[2]	Projected Market Value	Value Per SF[1]	Initial SF Sale[2]	Projected Market Value	Value Per Room[1]	Initial Room Sale[2]	Projected Market Value				
1-Jul-16	100%	$244	0	$0	$341	0	$0	$341	0	$0	$114,212	0	$0	$2,800,000	$95,805,371	$2.50	$479,027
1-Jul-17	103%	$252	204,000	$51,327,322	$351	0	$0	$351	9,000	$3,158,912	$117,638	0	$0	$0	$54,486,233	$2.50	$272,431
1-Jul-18	106%	$259	125,000	$32,394,082	$362	5,000	$1,807,599	$362	0	$0	$121,167	0	$0	$0	$147,671,489	$2.50	$738,357
1-Jul-19	109%	$267	614,000	$163,893,321	$372	58,900	$21,932,326	$372	48,000	$17,873,543	$124,802	0	$0	$0	$337,773,254	$2.50	$1,688,866
1-Jul-20	113%	$275	480,600	$132,133,785	$384	50,905	$19,523,922	$384	25,000	$9,588,411	$128,546	300	$38,563,889	$0	$372,435,414	$2.50	$1,862,177
1-Jul-21	116%	$283	280,000	$79,291,268	$395	51,351	$20,285,632	$395	53,969	$21,320,049	$132,403	0	$0	$0	$347,275,302	$2.50	$1,736,377
1-Jul-22	119%	$292	300,000	$87,503,578	$407	51,351	$20,894,201	$407	53,969	$21,959,651	$136,375	0	$0	$0	$252,447,913	$2.50	$1,262,240
1-Jul-23	123%	$300	384,150	$115,409,782	$419	51,351	$21,521,027	$419	53,969	$22,618,440	$140,466	170	$23,879,222	$0	$338,765,834	$2.50	$1,693,829
1-Jul-24	127%	$309	145,000	$44,869,064	$432	51,351	$22,166,658	$432	53,969	$23,296,994	$144,680	0	$0	$0	$201,888,342	$2.50	$1,009,442
1-Jul-25	130%	$319	362,050	$115,394,413	$445	51,351	$22,831,657	$445	53,969	$23,995,903	$149,020	0	$0	$0	$356,951,393	$2.50	$1,784,757
1-Jul-26	134%	$328	261,000	$85,682,862	$458	51,351	$23,516,607	$458	53,969	$24,715,781	$153,491	0	$0	$0	$264,869,566	$2.50	$1,324,348
1-Jul-27	138%	$338	269,200	$91,026,058	$472	51,351	$24,222,105	$472	53,969	$25,457,254	$158,096	170	$26,876,274	$0	$488,689,289	$2.50	$2,443,446
1-Jul-28	143%	$348	300,000	$104,483,848	$486	51,351	$24,948,769	$486	53,969	$26,220,972	$162,839	0	$0	$0	$281,210,429	$2.50	$1,406,052
1-Jul-29	147%	$359	175,000	$62,777,379	$500	51,351	$25,697,232	$500	53,969	$27,007,601	$167,724	0	$0	$0	$264,188,497	$2.50	$1,320,942
1-Jul-30	151%	$369	400,000	$147,795,886	$515	51,351	$26,468,149	$515	53,969	$27,817,829	$172,755	0	$0	$0	$219,191,772	$2.50	$1,095,959
1-Jul-31	156%	$381	0	$0	$531	0	$0	$531	0	$0	$177,938	0	$0	$0	$17,623,205	$2.50	$88,116
1-Jul-32	160%	$392	0	$0	$547	0	$0	$547	0	$0	$183,276	0	$0	$0	$18,151,901	$2.50	$90,760
1-Jul-33	165%	$404	0	$0	$563	0	$0	$563	0	$0	$188,775	0	$0	$0	$18,696,458	$2.50	$93,482
1-Jul-34	170%	$416	0	$0	$580	0	$0	$580	0	$0	$194,438	0	$0	$0	$19,257,352	$2.50	$96,287
1-Jul-35	175%	$428	0	$0	$598	0	$0	$598	0	$0	$200,271	0	$0	$0	$19,835,073	$2.50	$99,175
1-Jul-36	181%	$441	0	$0	$615	0	$0	$615	0	$0	$206,279	0	$0	$0	$20,430,125	$2.50	$102,151
1-Jul-37	186%	$454	0	$0	$634	0	$0	$634	0	$0	$212,467	0	$0	$0	$21,043,029	$2.50	$105,215
1-Jul-38	192%	$468	0	$0	$653	0	$0	$653	0	$0	$218,841	0	$0	$0	$21,674,319	$2.50	$108,372
1-Jul-39	197%	$482	0	$0	$673	0	$0	$673	0	$0	$225,407	0	$0	$0	$22,324,549	$2.50	$111,623
1-Jul-40	203%	$497	0	$0	$693	0	$0	$693	0	$0	$232,169	0	$0	$0	$22,994,285	$2.50	$114,971
1-Jul-41	209%	$511	0	$0	$713	0	$0	$713	0	$0	$239,134	0	$0	$0	$23,684,114	$2.50	$118,421
1-Jul-42	216%	$527	0	$0	$735	0	$0	$735	0	$0	$246,308	0	$0	$0	$24,394,637	$2.50	$121,973
1-Jul-43	222%	$543	0	$0	$757	0	$0	$757	0	$0	$253,697	0	$0	$0	$25,126,477	$2.50	$125,632
1-Jul-44	229%	$559	0	$0	$780	0	$0	$780	0	$0	$261,308	0	$0	$0	$25,880,271	$2.50	$129,401
1-Jul-45	236%	$576	0	$0	$803	0	$0	$803	0	$0	$269,147	0	$0	$0	$26,656,679	$2.50	$133,283
1-Jul-46	243%	$593	0	$0	$827	0	$0	$827	0	$0	$277,222	0	$0	$0	$27,456,379	$2.50	$137,282
1-Jul-47	250%	$611	0	$0	$852	0	$0	$852	0	$0	$285,538	0	$0	$0	$28,280,071	$2.50	$141,400
1-Jul-48	258%	$629	0	$0	$878	0	$0	$878	0	$0	$294,105	0	$0	$0	$29,128,473	$2.50	$145,642
1-Jul-49	265%	$648	0	$0	$904	0	$0	$904	0	$0	$302,928	0	$0	$0	$30,002,327	$2.50	$150,012
1-Jul-50	273%	$667	0	$0	$931	0	$0	$931	0	$0	$312,016	0	$0	$0	$30,902,397	$2.50	$154,512
Total			4,300,000			628,310			621,690			640					$22,485,961

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]VII.3

17-Sep-15

[1]See Schedule I.

[2]See Schedule III-B. Assumes apartment/commercial development is not resold.

[3]Source: *Howard County, Maryland Fiscal Year 2016 Approved Operating Budget* . Recordation tax is computed at the rate of $2.50 per $500 of consideration.

Downtown Columbia
Howard County, Maryland

Schedule VIII: Projection of School Excise Tax

Tax		Rental Units			Condo Units			Townhome Units				School	Total
Year Beginning	Inflation Factor	Gross SF Per Unit[1]	Units[2]	Projected SF	Gross SF Per Unit[1]	Units[2]	Projected SF	Gross SF Per Unit[1]	Units[2]	Projected SF	Total SF	Excise Tax Per SF[3]	Projected School Excise Tax
1-Jul-16	100%	1,180	437	515,660	1,200	0	0	1,500	0	0	515,660	$1.25	$644,575
1-Jul-17	103%	1,180	538	634,840	1,200	0	0	1,500	0	0	634,840	$1.29	$817,357
1-Jul-18	106%	1,180	640	755,200	1,200	0	0	1,500	0	0	755,200	$1.33	$1,001,490
1-Jul-19	109%	1,180	678	800,040	1,200	84	100,800	1,500	88	132,000	1,032,840	$1.37	$1,410,765
1-Jul-20	113%	1,180	412	486,160	1,200	0	0	1,500	0	0	486,160	$1.41	$683,972
1-Jul-21	116%	1,180	322	379,960	1,200	150	180,000	1,500	0	0	559,960	$1.45	$811,434
1-Jul-22	119%	1,180	344	405,527	1,200	0	0	1,500	0	0	405,527	$1.49	$605,275
1-Jul-23	123%	1,180	644	759,527	1,200	0	0	1,500	0	0	759,527	$1.54	$1,167,652
1-Jul-24	127%	1,180	403	475,147	1,200	0	0	1,500	0	0	475,147	$1.58	$752,377
1-Jul-25	130%	1,180	944	1,113,527	1,200	0	0	1,500	0	0	1,113,527	$1.63	$1,816,125
1-Jul-26	134%	1,180	344	405,527	1,200	0	0	1,500	0	0	405,527	$1.68	$681,242
1-Jul-27	138%	1,180	117	137,511	1,200	227	272,558	1,500	0	0	410,069	$1.73	$709,540
1-Jul-28	143%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.78	$0
1-Jul-29	147%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.84	$0
1-Jul-30	151%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.89	$0
1-Jul-31	156%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.95	$0
1-Jul-32	160%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.01	$0
1-Jul-33	165%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.07	$0
1-Jul-34	170%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.13	$0
1-Jul-35	175%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.19	$0
1-Jul-36	181%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.26	$0
1-Jul-37	186%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.33	$0
1-Jul-38	192%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.40	$0
1-Jul-39	197%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.47	$0
1-Jul-40	203%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.54	$0
1-Jul-41	209%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.62	$0
1-Jul-42	216%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.70	$0
1-Jul-43	222%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.78	$0
1-Jul-44	229%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.86	$0
1-Jul-45	236%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.95	$0
1-Jul-46	243%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.03	$0
1-Jul-47	250%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.13	$0
1-Jul-48	258%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.22	$0
1-Jul-49	265%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.32	$0
1-Jul-50	273%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.41	$0
Total			5,821	6,868,624		461	553,358		88	132,000	7,553,983		$11,101,803

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]VIII*
17-Sep-15

[1]See Schedule I.

[2]Excise tax is assumed to be collected at time of permitting; therefore, units are shown at the start of construction, two years prior to completion. See Schedule III-A. Assumes Phase I of Metropolitan units have already paid excise tax revenues.

[3]Represents the FY 16 school facilities surcharge. Rate assumes three percent annual inflation and is based on information provided by Howard County Department of Planning and Zoning, Division of Research.

Downtown Columbia
Howard County, Maryland

Schedule IX: Projection of Road Excise Tax

Tax Year Beginning	Inflation Factor	Residential (Rental/FS) Square Feet[1]	Office Square Feet[2]	Restaurant/ Retail Square Feet[2]	Hotel/ Conference Square Feet[2]	Total Square Feet	Road Excise Tax Per SF[3]	Total Projected Road Excise Tax
1-Jul-16	100%	515,660	125,000	5,000	0	645,660	$1.17	$755,422
1-Jul-17	103%	634,840	614,000	106,900	0	1,355,740	$1.21	$1,633,802
1-Jul-18	106%	755,200	480,600	75,905	16,500	1,328,205	$1.24	$1,648,638
1-Jul-19	109%	1,032,840	280,000	105,320	0	1,418,160	$1.28	$1,813,104
1-Jul-20	113%	486,160	300,000	105,320	0	891,480	$1.32	$1,173,941
1-Jul-21	116%	559,960	384,150	105,320	9,350	1,058,780	$1.36	$1,436,076
1-Jul-22	119%	405,527	145,000	105,320	0	655,846	$1.40	$916,244
1-Jul-23	123%	759,527	362,050	105,320	0	1,226,896	$1.44	$1,765,445
1-Jul-24	127%	475,147	261,000	105,320	0	841,466	$1.48	$1,247,155
1-Jul-25	130%	1,113,527	269,200	105,320	9,350	1,497,396	$1.53	$2,285,902
1-Jul-26	134%	405,527	300,000	105,320	0	810,846	$1.57	$1,274,960
1-Jul-27	138%	410,069	175,000	105,320	0	690,389	$1.62	$1,118,122
1-Jul-28	143%	0	400,000	105,320	0	505,320	$1.67	$842,944
1-Jul-29	147%	0	0	0	0	0	$1.72	$0
1-Jul-30	151%	0	0	0	0	0	$1.77	$0
1-Jul-31	156%	0	0	0	0	0	$1.82	$0
1-Jul-32	160%	0	0	0	0	0	$1.88	$0
1-Jul-33	165%	0	0	0	0	0	$1.93	$0
1-Jul-34	170%	0	0	0	0	0	$1.99	$0
1-Jul-35	175%	0	0	0	0	0	$2.05	$0
1-Jul-36	181%	0	0	0	0	0	$2.11	$0
1-Jul-37	186%	0	0	0	0	0	$2.18	$0
1-Jul-38	192%	0	0	0	0	0	$2.24	$0
1-Jul-39	197%	0	0	0	0	0	$2.31	$0
1-Jul-40	203%	0	0	0	0	0	$2.38	$0
1-Jul-41	209%	0	0	0	0	0	$2.45	$0
1-Jul-42	216%	0	0	0	0	0	$2.52	$0
1-Jul-43	222%	0	0	0	0	0	$2.60	$0
1-Jul-44	229%	0	0	0	0	0	$2.68	$0
1-Jul-45	236%	0	0	0	0	0	$2.76	$0
1-Jul-46	243%	0	0	0	0	0	$2.84	$0
1-Jul-47	250%	0	0	0	0	0	$2.93	$0
1-Jul-48	258%	0	0	0	0	0	$3.01	$0
1-Jul-49	265%	0	0	0	0	0	$3.10	$0
1-Jul-50	273%	0	0	0	0	0	$3.20	$0
Total		7,553,983	4,096,000	1,241,000	35,200	12,926,183		$17,911,755

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]IX*

17-Sep-15

[1]See Schedule VIII.

[2]Excise tax is assumed to be collected at time of permitting; therefore, development is shown at the start of construction. Assumes start of construction is two years prior to completion. See Schedule III-B.

[3]Source: Howard County Department of Planning and Zoning, Division of Research.

Downtown Columbia
Howard County, Maryland

Schedule X: Projection of Transfer Tax Revenues

Tax Year Beginning	Inflation Factor	Total Projected Transfer Value[1]	Transfer Tax Rate[2]	Transfer Tax Revenues
1-Jul-16	100%	$95,805,371	1.00%	$958,054
1-Jul-17	103%	$54,486,233	1.00%	$544,862
1-Jul-18	106%	$147,671,489	1.00%	$1,476,715
1-Jul-19	109%	$337,773,254	1.00%	$3,377,733
1-Jul-20	113%	$372,435,414	1.00%	$3,724,354
1-Jul-21	116%	$347,275,302	1.00%	$3,472,753
1-Jul-22	119%	$252,447,913	1.00%	$2,524,479
1-Jul-23	123%	$338,765,834	1.00%	$3,387,658
1-Jul-24	127%	$201,888,342	1.00%	$2,018,883
1-Jul-25	130%	$356,951,393	1.00%	$3,569,514
1-Jul-26	134%	$264,869,566	1.00%	$2,648,696
1-Jul-27	138%	$488,689,289	1.00%	$4,886,893
1-Jul-28	143%	$281,210,429	1.00%	$2,812,104
1-Jul-29	147%	$264,188,497	1.00%	$2,641,885
1-Jul-30	151%	$219,191,772	1.00%	$2,191,918
1-Jul-31	156%	$17,623,205	1.00%	$176,232
1-Jul-32	160%	$18,151,901	1.00%	$181,519
1-Jul-33	165%	$18,696,458	1.00%	$186,965
1-Jul-34	170%	$19,257,352	1.00%	$192,574
1-Jul-35	175%	$19,835,073	1.00%	$198,351
1-Jul-36	181%	$20,430,125	1.00%	$204,301
1-Jul-37	186%	$21,043,029	1.00%	$210,430
1-Jul-38	192%	$21,674,319	1.00%	$216,743
1-Jul-39	197%	$22,324,549	1.00%	$223,245
1-Jul-40	203%	$22,994,285	1.00%	$229,943
1-Jul-41	209%	$23,684,114	1.00%	$236,841
1-Jul-42	216%	$24,394,637	1.00%	$243,946
1-Jul-43	222%	$25,126,477	1.00%	$251,265
1-Jul-44	229%	$25,880,271	1.00%	$258,803
1-Jul-45	236%	$26,656,679	1.00%	$266,567
1-Jul-46	243%	$27,456,379	1.00%	$274,564
1-Jul-47	250%	$28,280,071	1.00%	$282,801
1-Jul-48	258%	$29,128,473	1.00%	$291,285
1-Jul-49	265%	$30,002,327	1.00%	$300,023
1-Jul-50	273%	$30,902,397	1.00%	$309,024
Total				$44,971,922

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]X.2*

17-Sep-15

[1]See value as estimated on Schedule VII.

[2]A 1% transfer tax is levied on all property transfers in Howard County and is dedicated as follows: 25% for school land acquisition and construction, 25% for park construction and development, 25% for agricultural land preservation, 12.5% for housing and community development, and 12.5% for the fire and rescue services. For purposes of this fiscal analysis, revenues are shown to off-set costs/capital costs included in this analysis. Based on assumptions in the Downtown Columbia Fiscal Impact Analysis Costs and Revenues Assumptions Document, Howard County Department of Planning and Zoning, Division of Research, October 23, 2009.

Downtown Columbia
Howard County, Maryland

Schedule XI: Projection of Hotel Occupancy Tax Revenues

Type	Average Rate Per Night[1]	Assumed Occupancy[1]	Days Per Year	Annual Occupancy Revenue Per Room	Number of Rooms[2]	Annual Occupancy Revenue	Hotel Occupancy Tax Rate[3]	Total County Occupancy Tax Revenues
Hotels	$56	95%	365	$19,506	640	$12,483,840	5.0%	$624,192

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XI*
17-Sep-15

[1]See Schedule II-E.
[2]See Schedule I.

[3]Represents the portion of the hotel/motel tax allocated to the general fund. The FY 2016 rate is 7% of which 5% is available to the general fund. Source: *FY 2016 Howard County Approved Operating Budget.*

Downtown Columbia
Howard County, Maryland

Schedule XII-A: Additional Revenues to Howard County (Annual)

Annual Revenues[1]	Current County Revenues[2]	Basis for Projecting Revenues[3]	Current County Service Factors[4]	Revenues by Factor: Per Capita	Per Employee	Per Capita/Employee	Per Non. Gov. Emp.	Projected Increase in Service Factor[5]	Total Additional Revenues[6]
Property taxes									
Corporate property tax (FY 15)	$39,959,467	Per non-gov. employee	140,924	-	-	-	$283.55	18,457	$5,233,631
Personal/merchants property tax (FY 15)	$1,428,792	Per non-gov. employee	140,924	-	-	-	$10.14	18,457	$187,134
Other local taxes									
Admission and amusement tax	$2,700,000	Per capita	309,284	$8.73	-	-	-	11,345	$99,040
State shared taxes									
Highway users' tax	$1,531,600	Per capita	309,284	$4.95	-	-	-	11,345	$56,182
Licenses and permits									
Traders	$450,000	Per employee	157,997	-	$2.85	-	-	20,693	$58,938
Sign permits	$278,100	Per capita	309,284	$0.90	-	-	-	11,345	$10,201
Dog, cat, and animal licenses	$60,500	Per capita	309,284	$0.20	-	-	-	11,345	$2,219
Marriage license surcharge	$62,800	Per capita	309,284	$0.20	-	-	-	11,345	$2,304
Distilled spirits license fee	$3,500	Per capita	309,284	$0.01	-	-	-	11,345	$128
Marriage licenses	$9,000	Per capita	309,284	$0.03	-	-	-	11,345	$330
Revenues from other agencies									
Government participation	$2,200,000	Per capita	309,284	$7.11	-	-	-	11,345	$80,700
Charges for services									
CATV franchise fee (FY 15)	$5,100,000	Per capita	309,284	$16.49	-	-	-	11,345	$187,076
Court costs	$133,900	Per capita	309,284	$0.43	-	-	-	11,345	$4,912
Sale- Tax certificate	$295,000	Per capita	309,284	$0.95	-	-	-	11,345	$10,821
Police records check	$38,000	Per capita	309,284	$0.12	-	-	-	11,345	$1,394
Civil marriages	$9,500	Per capita	309,284	$0.03	-	-	-	11,345	$348
Other charges for services	$150,300	Per capita	309,284	$0.49	-	-	-	11,345	$5,513
Fines and forfeitures									
False alarm fees and fines	$320,000	Per capita	309,284	$1.03	-	-	-	11,345	$11,738
Other fines and forfeitures	$58,000	Per capita	309,284	$0.19	-	-	-	11,345	$2,128
Court awards	$33,000	Per capita and employee	426,805	-	-	$0.08	-	26,737	$2,067
Parking violations	$181,200	Per capita and employee	426,805	-	-	$0.42	-	26,737	$11,351
Redlight	$2,300,000	Per capita and employee	426,805	-	-	$5.39	-	26,737	$144,083
Other fines and forfeitures	$1,115,000	Per capita	309,284	$3.61	-	-	-	11,345	$40,900
Total projected annual revenues	$59,167,659			$45.48	$2.85	$5.89	$293.69		$6,153,140

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XII-A*
17-Sep-15

[1]Not all sources of revenues are expected to be impacted. Only revenues projected to be impacted are included.

[2]Source: *Howard County, Maryland Approved Fiscal Year 2016 Budget Revenue Report.*

[3]Method of apportioning costs: Per non-government employee revenues are calculated by taking current revenues and apportioning them among current non-government employees. It is assumed that this same ratio applies for this analysis. Per capita revenues are calculated by taking current revenues and apportioning them among the current permanent population. Per employee revenues are calculated by taking current revenues and apportioning them among current total employees. Per capita and employee revenues are calculated by taking current revenues and apportioning them among the current service population (i.e. total permanent population and employees who do not reside in the County).

[4]Represents the current statistics for the County. See Appendix A.

[5]Represents the proposed increase to the County as a result of the new development. See Appendix A.

[6]Represents the total increase in revenues as a result of the proposed development on an annual basis. Figures assume full build out and are expressed in current dollars.

Downtown Columbia
Howard County, Maryland

Schedule XII-B: Additional Revenues to Howard County (35 Years)

		Projected Additional Revenues to Howard County												
Tax Year Beginning	Inflation Factor	Anticipated Population[1]	Revenues Per Capita[2]	Total Revenues	Anticipated Employees[1]	Revenues Per Employee[2]	Total Employee Revenues	Anticipated Svc. Population[1]	Cost Per Capita & Employee[2]	Total Service Population	Anticipated Non-gov. Emp.[1]	Revenues Per Non-gov. Emp.[2]	Total Revenues	Total
1-Jul-16	100%	629	$45.48	$28,618	0	$2.85	$0	629	$5.89	$3,707	0	$293.69	$0	$32,324
1-Jul-17	103%	629	$46.84	$29,476	784	$2.93	$2,300	1,212	$6.07	$7,356	699	$302.50	$211,540	$250,673
1-Jul-18	106%	1,353	$48.25	$65,275	1,235	$3.02	$3,732	2,272	$6.25	$14,197	1,102	$311.58	$343,263	$426,466
1-Jul-19	109%	2,244	$49.69	$111,506	3,841	$3.11	$11,953	5,101	$6.44	$32,833	3,426	$320.93	$1,099,386	$1,255,679
1-Jul-20	113%	3,304	$51.18	$169,099	5,853	$3.21	$18,763	7,657	$6.63	$50,769	5,221	$330.55	$1,725,695	$1,964,326
1-Jul-21	116%	4,809	$52.72	$253,528	7,304	$3.30	$24,117	10,242	$6.83	$69,943	6,515	$340.47	$2,218,163	$2,565,752
1-Jul-22	119%	5,491	$54.30	$298,183	8,826	$3.40	$30,017	12,056	$7.03	$84,803	7,873	$350.68	$2,760,771	$3,173,773
1-Jul-23	123%	6,300	$55.93	$352,389	10,675	$3.50	$37,394	14,241	$7.24	$103,173	9,522	$361.20	$3,439,235	$3,932,191
1-Jul-24	127%	6,870	$57.61	$395,746	11,648	$3.61	$42,027	15,534	$7.46	$115,917	10,390	$372.04	$3,865,395	$4,419,086
1-Jul-25	130%	7,935	$59.34	$470,866	13,390	$3.72	$49,760	17,895	$7.69	$137,545	11,943	$383.20	$4,576,638	$5,234,809
1-Jul-26	134%	8,602	$61.12	$525,746	14,774	$3.83	$56,550	19,591	$7.92	$155,099	13,178	$394.70	$5,201,148	$5,938,544
1-Jul-27	138%	10,165	$62.95	$639,891	16,216	$3.94	$63,932	22,227	$8.15	$181,241	14,464	$406.54	$5,880,034	$6,765,098
1-Jul-28	143%	10,734	$64.84	$695,989	17,738	$4.06	$72,030	23,928	$8.40	$200,966	15,821	$418.73	$6,624,879	$7,593,864
1-Jul-29	147%	11,345	$66.78	$757,667	18,817	$4.18	$78,706	25,342	$8.65	$219,226	16,784	$431.30	$7,238,904	$8,294,502
1-Jul-30	151%	11,345	$68.79	$780,397	20,693	$4.31	$89,149	26,737	$8.91	$238,236	18,457	$444.24	$8,199,394	$9,307,176
1-Jul-31	156%	11,345	$70.85	$803,809	20,693	$4.44	$91,824	26,737	$9.18	$245,383	18,457	$457.56	$8,445,375	$9,586,391
1-Jul-32	160%	11,345	$72.98	$827,923	20,693	$4.57	$94,578	26,737	$9.45	$252,744	18,457	$471.29	$8,698,737	$9,873,983
1-Jul-33	165%	11,345	$75.17	$852,761	20,693	$4.71	$97,416	26,737	$9.74	$260,327	18,457	$485.43	$8,959,699	$10,170,202
1-Jul-34	170%	11,345	$77.42	$878,344	20,693	$4.85	$100,338	26,737	$10.03	$268,136	18,457	$499.99	$9,228,490	$10,475,308
1-Jul-35	175%	11,345	$79.74	$904,694	20,693	$4.99	$103,348	26,737	$10.33	$276,181	18,457	$514.99	$9,505,344	$10,789,567
1-Jul-36	181%	11,345	$82.14	$931,835	20,693	$5.14	$106,449	26,737	$10.64	$284,466	18,457	$530.44	$9,790,505	$11,113,254
1-Jul-37	186%	11,345	$84.60	$959,790	20,693	$5.30	$109,642	26,737	$10.96	$293,000	18,457	$546.35	$10,084,220	$11,446,652
1-Jul-38	192%	11,345	$87.14	$988,584	20,693	$5.46	$112,931	26,737	$11.29	$301,790	18,457	$562.74	$10,386,747	$11,790,052
1-Jul-39	197%	11,345	$89.75	$1,018,241	20,693	$5.62	$116,319	26,737	$11.63	$310,844	18,457	$579.63	$10,698,349	$12,143,753
1-Jul-40	203%	11,345	$92.44	$1,048,788	20,693	$5.79	$119,809	26,737	$11.97	$320,169	18,457	$597.02	$11,019,299	$12,508,066
1-Jul-41	209%	11,345	$95.22	$1,080,252	20,693	$5.96	$123,403	26,737	$12.33	$329,774	18,457	$614.93	$11,349,878	$12,883,308
1-Jul-42	216%	11,345	$98.07	$1,112,660	20,693	$6.14	$127,105	26,737	$12.70	$339,667	18,457	$633.37	$11,690,375	$13,269,807
1-Jul-43	222%	11,345	$101.02	$1,146,039	20,693	$6.33	$130,918	26,737	$13.09	$349,857	18,457	$652.37	$12,041,086	$13,667,901
1-Jul-44	229%	11,345	$104.05	$1,180,421	20,693	$6.52	$134,846	26,737	$13.48	$360,353	18,457	$671.95	$12,402,319	$14,077,938
1-Jul-45	236%	11,345	$107.17	$1,215,833	20,693	$6.71	$138,891	26,737	$13.88	$371,164	18,457	$692.10	$12,774,388	$14,500,276
1-Jul-46	243%	11,345	$110.38	$1,252,308	20,693	$6.91	$143,058	26,737	$14.30	$382,299	18,457	$712.87	$13,157,620	$14,935,285
1-Jul-47	250%	11,345	$113.70	$1,289,878	20,693	$7.12	$147,350	26,737	$14.73	$393,767	18,457	$734.25	$13,552,348	$15,383,343
1-Jul-48	258%	11,345	$117.11	$1,328,574	20,693	$7.33	$151,770	26,737	$15.17	$405,580	18,457	$756.28	$13,958,919	$15,844,844
1-Jul-49	265%	11,345	$120.62	$1,368,431	20,693	$7.55	$156,324	26,737	$15.62	$417,748	18,457	$778.97	$14,377,686	$16,320,189
1-Jul-50	273%	11,345	$124.24	$1,409,484	20,693	$7.78	$161,013	26,737	$16.09	$430,280	18,457	$802.34	$14,809,017	$16,809,794
Total				$27,173,025			$3,047,765			$8,208,540			$280,314,846	$318,744,176

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XII-B

17-Sep-15

[1]See Appendix B.

[2]See Schedule XII-A.

Downtown Columbia
Howard County, Maryland

Schedule XIII: Total Revenues to Howard County

Tax Year Beginning	Inflation Factor	Real Property Tax Revenues (See Schedule V)	Personal Income Tax Revenues (See Schedules VI-A/VI-B)	Local Recordation Tax Revenues (See Schedule VII)	School Excise Tax Revenues (See Schedule VIII)	Road Excise Tax Revenues (See Schedule IX)	Transfer Tax Revenues (See Schedule X)	Hotel Occupancy Tax Revenues (See Schedule XI)	Additional Tax Revenues (See Schedule XII-B)	Total Projected Revenues
1-Jul-16	100%	$754,460	$704,337	$479,027	$644,575	$755,422	$958,054	$0	$32,324	$4,328,199
1-Jul-17	103%	$1,283,843	$725,467	$272,431	$817,357	$1,633,802	$544,862	$0	$250,673	$5,528,436
1-Jul-18	106%	$2,624,908	$1,606,547	$738,357	$1,001,490	$1,648,638	$1,476,715	$0	$426,466	$9,523,122
1-Jul-19	109%	$5,654,270	$2,744,403	$1,688,866	$1,410,765	$1,813,104	$3,377,733	$0	$1,255,679	$17,944,819
1-Jul-20	113%	$9,226,432	$4,161,872	$1,862,177	$683,972	$1,173,941	$3,724,354	$329,313	$1,964,326	$23,126,386
1-Jul-21	116%	$12,483,477	$6,188,232	$1,736,377	$811,434	$1,436,076	$3,472,753	$339,192	$2,565,752	$29,033,292
1-Jul-22	119%	$15,592,221	$7,285,716	$1,262,240	$605,275	$916,244	$2,524,479	$349,368	$3,173,773	$31,709,316
1-Jul-23	123%	$19,430,737	$8,629,795	$1,693,829	$1,167,652	$1,765,445	$3,387,658	$563,763	$3,932,191	$40,571,071
1-Jul-24	127%	$22,238,899	$9,695,612	$1,009,442	$752,377	$1,247,155	$2,018,883	$580,676	$4,419,086	$41,962,129
1-Jul-25	130%	$26,288,017	$11,543,137	$1,784,757	$1,816,125	$2,285,902	$3,569,514	$598,096	$5,234,809	$53,120,357
1-Jul-26	134%	$29,721,260	$12,892,463	$1,324,348	$681,242	$1,274,960	$2,648,696	$616,039	$5,938,544	$55,097,552
1-Jul-27	138%	$35,067,254	$15,700,406	$2,443,446	$709,540	$1,118,122	$4,886,893	$864,028	$6,765,098	$67,554,786
1-Jul-28	143%	$39,091,923	$17,079,617	$1,406,052	$0	$842,944	$2,812,104	$889,949	$7,593,864	$69,716,452
1-Jul-29	147%	$43,044,210	$18,617,019	$1,320,942	$0	$0	$2,641,885	$916,647	$8,294,502	$74,835,206
1-Jul-30	151%	$46,700,804	$19,175,530	$1,095,959	$0	$0	$2,191,918	$944,146	$9,307,176	$79,415,533
1-Jul-31	156%	$48,625,560	$19,750,796	$88,116	$0	$0	$176,232	$972,471	$9,586,391	$79,199,566
1-Jul-32	160%	$50,417,110	$20,343,320	$90,760	$0	$0	$181,519	$1,001,645	$9,873,983	$81,908,335
1-Jul-33	165%	$52,078,897	$20,953,619	$93,482	$0	$0	$186,965	$1,031,694	$10,170,202	$84,514,860
1-Jul-34	170%	$53,641,264	$21,582,228	$96,287	$0	$0	$192,574	$1,062,645	$10,475,308	$87,050,306
1-Jul-35	175%	$55,250,502	$22,229,694	$99,175	$0	$0	$198,351	$1,094,524	$10,789,567	$89,661,815
1-Jul-36	181%	$56,908,017	$22,896,585	$102,151	$0	$0	$204,301	$1,127,360	$11,113,254	$92,351,669
1-Jul-37	186%	$58,615,258	$23,583,483	$105,215	$0	$0	$210,430	$1,161,181	$11,446,652	$95,122,219
1-Jul-38	192%	$60,373,716	$24,290,987	$108,372	$0	$0	$216,743	$1,196,016	$11,790,052	$97,975,886
1-Jul-39	197%	$62,184,927	$25,019,717	$111,623	$0	$0	$223,245	$1,231,897	$12,143,753	$100,915,162
1-Jul-40	203%	$64,050,475	$25,770,309	$114,971	$0	$0	$229,943	$1,268,854	$12,508,066	$103,942,617
1-Jul-41	209%	$65,971,989	$26,543,418	$118,421	$0	$0	$236,841	$1,306,919	$12,883,308	$107,060,896
1-Jul-42	216%	$67,951,149	$27,339,720	$121,973	$0	$0	$243,946	$1,346,127	$13,269,807	$110,272,723
1-Jul-43	222%	$69,989,683	$28,159,912	$125,632	$0	$0	$251,265	$1,386,511	$13,667,901	$113,580,904
1-Jul-44	229%	$72,089,374	$29,004,709	$129,401	$0	$0	$258,803	$1,428,106	$14,077,938	$116,988,331
1-Jul-45	236%	$74,252,055	$29,874,851	$133,283	$0	$0	$266,567	$1,470,949	$14,500,276	$120,497,981
1-Jul-46	243%	$76,479,617	$30,771,096	$137,282	$0	$0	$274,564	$1,515,078	$14,935,285	$124,112,921
1-Jul-47	250%	$78,774,005	$31,694,229	$141,400	$0	$0	$282,801	$1,560,530	$15,383,343	$127,836,308
1-Jul-48	258%	$81,137,225	$32,645,056	$145,642	$0	$0	$291,285	$1,607,346	$15,844,844	$131,671,398
1-Jul-49	265%	$83,571,342	$33,624,407	$150,012	$0	$0	$300,023	$1,655,566	$16,320,189	$135,621,540
1-Jul-50	273%	$86,078,482	$34,633,140	$154,512	$0	$0	$309,024	$1,705,233	$16,809,794	$139,690,186
Total		$1,627,643,362	$667,461,428	$22,485,961	$11,101,803	$17,911,755	$44,971,922	$33,121,871	$318,744,176	$2,743,442,279

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XIII*

17-Sep-15

Downtown Columbia
Howard County, Maryland

Schedule XIV-A: Additional Expenditures to Howard County (Annual)

Annual Expenses[1]	Current County Expenditures[2]	Basis for Projecting Expenses[3]	Current County Service Factors[4]	Total Costs: Per Capita	Total Costs: Per Capita & Employee	Total Costs: Per Student	Total Costs: Per Road Mile	Total Costs: Trips	Projected Increase in Service Factor[5]	Total Additional Expenditures[6]
Education										
Howard County Public Schools	$544,144,625	Per student	52,511	-	-	$10,362.49	-	-	742	$7,686,060
HCPSS - debt service (capital costs)	$44,662,265	Case study (see Appendix E)	-	-	-	-	-	-	-	$0
Howard Community College	$31,000,287	Per capita	309,284	$100.23	-	-	-	-	11,345	$1,137,141
HCC - debt service (capital costs)	$7,496,675	Per capita	309,284	$24.24	-	-	-	-	11,345	$274,990
Howard County Library	$18,841,541	Per capita	309,284	$60.92	-	-	-	-	11,345	$691,138
Public safety										
Department of Police[7]	$104,298,710	Per capita and trips[8]	-	$219.20	-	-	-	$55.78	-	$6,601,303
Animal Control Division	$1,674,925	Per capita	309,284	$5.42	-	-	-	-	11,345	$61,439
Department of Corrections	$16,695,475	Per capita	309,284	$53.98	-	-	-	-	11,345	$612,417
Public facilities										
Director's Office	$4,938,480	Per capita and employee	426,805	-	$11.57	-	-	-	26,737	$309,371
Engineering Administration	$545,253	Per capita and employee	426,805	-	$1.28	-	-	-	26,737	$34,157
Engineering Transportation	$1,314,274	Per capita and employee	426,805	-	$3.08	-	-	-	26,737	$82,333
Engineering Construction Inspection	$2,890,379	Per capita and employee	426,805	-	$6.77	-	-	-	26,737	$181,068
Engineering Survey	$942,726	Per capita and employee	426,805	-	$2.21	-	-	-	26,737	$59,057
Highways Administration	$993,669	Per road mile	1,116	-	-	-	$890.38	-	1.120	$997
Highways Maintenance Division	$16,613,818	Per road mile	1,116	-	-	-	$14,886.93	-	1.120	$16,673
Highway Traffic Engineering Division	$1,710,666	Per road mile	1,116	-	-	-	$1,532.85	-	1.120	$1,717
Facilities Administration	$7,432,636	Per capita	309,284	$24.03	-	-	-	-	11,345	$272,641
Facilities Maintenance	$8,590,356	Per capita	309,284	$27.77	-	-	-	-	11,345	$315,108
Soil Conservation District	$808,515	Per capita and employee	426,805	-	$1.89	-	-	-	26,737	$50,649
Community services										
Department of Recreation and Parks	$19,603,223	Per capita	309,284	$63.38	-	-	-	-	11,345	$719,078
Citizen Services	$10,890,875	Per capita	309,284	$35.21	-	-	-	-	11,345	$399,495
Transportation Services/Coordination	$8,535,494	Per capita	309,284	$27.60	-	-	-	-	11,345	$313,096
Health and Mental Hygiene	$8,180,645	Per capita	309,284	$26.45	-	-	-	-	11,345	$300,079
Social Services	$569,741	Per capita	309,284	$1.84	-	-	-	-	11,345	$20,899
Community Service Partnerships	$10,449,401	Per capita	309,284	$33.79	-	-	-	-	11,345	$383,301
Sub-total expenses				$704.06	$26.80	$10,362.49	$17,310.17	$55.78		$20,524,209

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XIVA

17-Sep-15

[1] Not all County expenses are assumed to be impacted. Only the expenses projected to increase are included.

[2] Source: *Howard County, Maryland Approved Operating Budget, Fiscal Year 2016.*

[3] Method of apportioning costs: Per student expenditures are calculated by taking current expenses and apportioning them among current students. Per capita expenditures are calculated by taking current costs and apportioning them among the current permanent population. Per capita and employee expenditures are calculated by taking current costs and apportioning them among the current service population (i.e. total permanent population and employees who do not reside in the County). Per road mile expenditures are calculated by taking current costs and apportioning them among current road miles within the County.

[4] Represents the current statistics for the County. See Appendix A.

[5] Represents the annual proposed increase to the County as a result of the new development. See Appendix A.

[6] Represents the total increase in expenditures as a result of the proposed development on an annual basis. Figures assume full build out and are expressed in current dollars.

[7] Per capita and trip expenditures are calculated by taking the current police costs and apportioning them amount the current population and current amount of trips in the County. See Appendices D-1 and D-2 for total County trips, costs per capita, per trip factors and projected trips.

Downtown Columbia
Howard County, Maryland

Schedule XIV-A: Additional Expenditures to Howard County (Annual), continued

				Total Costs					Projected	
	Current County	Basis for	Current County	Per	Per Capita &	Per	Per Road		Increase in	Total Additional
Annual Expenses[1]	Expenditures[2]	Projecting Expenses[3]	Service Factors[4]	Capita	Employee	Student	Mile	Trips	Service Factors[5]	Expenditures[6]
General government										
Office of the County Executive	$1,714,020	Per capita and employee	426,805	-	$4.02	-	-	-	26,737	$107,375
Staff Services	$2,768,703	Per capita and employee	426,805	-	$6.49	-	-	-	26,737	$173,445
Environmental Sustainability	$456,841	Per capita and employee	426,805	-	$1.07	-	-	-	26,737	$28,619
Office of Human Rights	$724,371	Per capita and employee	426,805	-	$1.70	-	-	-	26,737	$45,378
Workforce Development	$220,978	Per capita and employee	426,805	-	$0.52	-	-	-	26,737	$13,843
Office of Human Resources	$1,941,311	Per capita and employee	426,805	-	$4.55	-	-	-	26,737	$121,613
Office of Purchasing	$1,322,025	Per capita and employee	426,805	-	$3.10	-	-	-	26,737	$82,818
Central Mail Service	$843,137	Per capita and employee	426,805	-	$1.98	-	-	-	26,737	$52,818
Public Information	$1,075,574	Per capita and employee	426,805	-	$2.52	-	-	-	26,737	$67,379
Director's Office - Finance	$2,487,846	Per capita and employee	426,805	-	$5.83	-	-	-	26,737	$155,851
Bureau of Accounting	$2,349,641	Per capita and employee	426,805	-	$5.51	-	-	-	26,737	$147,193
Bureau of Revenue and Cust. Svc.	$1,700,995	Per capita and employee	426,805	-	$3.99	-	-	-	26,737	$106,559
Water & Sewer Billing	$551,554	Per capita and employee	426,805	-	$1.29	-	-	-	26,737	$34,552
Bureau of Disbursements	$948,688	Per capita and employee	426,805	-	$2.22	-	-	-	26,737	$59,431
Office of Law	$3,873,274	Per capita and employee	426,805	-	$9.08	-	-	-	26,737	$242,641
Economic Development Authority	$2,475,191	Per capita and employee	426,805	-	$5.80	-	-	-	26,737	$155,058
Cable Administration	$272,321	Per capita and employee	426,805	-	$0.64	-	-	-	26,737	$17,060
Legislative & judicial										
County Council	$2,864,314	Per capita and employee	426,805	-	$6.71	-	-	-	26,737	$179,435
Zoning Board	$122,874	Per capita and employee	426,805	-	$0.29	-	-	-	26,737	$7,697
Board of Appeals	$101,945	Per capita and employee	426,805	-	$0.24	-	-	-	26,737	$6,386
Other legislative and judicial	$22,912,295	Per capita	309,284	$74.08	-	-	-	-	11,345	$840,460
Non-Departmental Expenses										
GC bonds - community renewal	$365,937	Per capita	309,284	$1.18	-	-	-	-	11,345	$13,423
GC bonds - fire department	$1,965,699	Case Study (See XVII-B)	-	-	-	-	-	-	-	$0
GC bonds - general county	$28,282,186	Per capita and employee	426,805	-	$66.26	-	-	-	26,737	$1,771,736
GC bonds - police department	$608,315	Case Study (See XVII-C)	-	-	-	-	-	-	-	$0
GC bonds - recreation and parks	$3,765,829	Per capita	309,284	$12.18	-	-	-	-	11,345	$138,137
GC bonds - storm drain	$2,277,341	Per capita and employee	426,805	-	$5.34	-	-	-	26,737	$142,664
Excise bonds	$5,826,232	Per capita and employee	426,805	-	$13.65	-	-	-	26,737	$364,984
Total expenses	$968,644,091			$791.50	$179.57	$10,362.49	$17,310.17	$55.78		$25,600,765

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XIVA.2*

17-Sep-15

[1]Not all County expenses are assumed to be impacted. Only the expenses projected to increase are included.

[2]Source: *Howard County, Maryland Approved Operating Budget, Fiscal Year 2016.*

[3]Method of apportioning costs: Per student expenditures are calculated by taking current expenses and apportioning them among current students. Per capita expenditures are calculated by taking current costs and apportioning them among the current permanent population. Per capita and employee expenditures are calculated by taking current costs and apportioning them among the current service population (i.e. total permanent population and employees who do not reside in the County). Per road mile expenditures are calculated by taking current costs and apportioning them among current road miles within the County.

[4]Represents the current statistics for the County. See Appendix A.

[5]Represents the annual proposed increase to the County as a result of the new development. See Appendix A.

[6]Represents the total increase in expenditures as a result of the proposed development on an annual basis. Figures assume full build out and are expressed in current dollars.

Downtown Columbia
Howard County, Maryland

Schedule XIV-B: Additional Expenditures to Howard County (35 Years)

Tax Year Beginning	Inflation Factor	Additional Expenditures to Howard County								
		Anticipated Students[1]	Cost Per Student[2]	Student Costs	Anticipated Population[3]	Cost Per Capita[2]	Total Per Capita Costs	Anticipated Service Population[3]	Cost Per Capita & Employee[2]	Total Service Population
1-Jul-16	100%	41	$10,362	$428,820	629	$792	$498,078	629	$180	$112,999
1-Jul-17	103%	41	$10,673	$441,685	629	$815	$513,020	1,212	$185	$224,250
1-Jul-18	106%	89	$10,994	$978,112	1,353	$840	$1,136,083	2,272	$191	$432,767
1-Jul-19	109%	148	$11,323	$1,670,871	2,244	$865	$1,940,727	5,101	$196	$1,000,852
1-Jul-20	113%	217	$11,663	$2,533,867	3,304	$891	$2,943,101	7,657	$202	$1,547,605
1-Jul-21	116%	312	$12,013	$3,746,864	4,809	$918	$4,412,565	10,242	$208	$2,132,084
1-Jul-22	119%	357	$12,373	$4,414,423	5,491	$945	$5,189,755	12,056	$214	$2,585,072
1-Jul-23	123%	410	$12,745	$5,225,067	6,300	$973	$6,133,194	14,241	$221	$3,145,048
1-Jul-24	127%	447	$13,127	$5,873,097	6,870	$1,003	$6,887,812	15,534	$227	$3,533,540
1-Jul-25	130%	518	$13,521	$6,997,027	7,935	$1,033	$8,195,249	17,895	$234	$4,192,809
1-Jul-26	134%	561	$13,926	$7,817,612	8,602	$1,064	$9,150,409	19,591	$241	$4,727,934
1-Jul-27	138%	664	$14,344	$9,526,217	10,165	$1,096	$11,137,070	22,227	$249	$5,524,801
1-Jul-28	143%	702	$14,774	$10,364,941	10,734	$1,128	$12,113,422	23,928	$256	$6,126,090
1-Jul-29	147%	742	$15,218	$11,287,238	11,345	$1,162	$13,186,910	25,342	$264	$6,682,713
1-Jul-30	151%	742	$15,674	$11,625,855	11,345	$1,197	$13,582,517	26,737	$272	$7,262,202
1-Jul-31	156%	742	$16,144	$11,974,630	11,345	$1,233	$13,989,992	26,737	$280	$7,480,068
1-Jul-32	160%	742	$16,629	$12,333,869	11,345	$1,270	$14,409,692	26,737	$288	$7,704,470
1-Jul-33	165%	742	$17,128	$12,703,885	11,345	$1,308	$14,841,983	26,737	$297	$7,935,604
1-Jul-34	170%	742	$17,641	$13,085,002	11,345	$1,347	$15,287,242	26,737	$306	$8,173,672
1-Jul-35	175%	742	$18,171	$13,477,552	11,345	$1,388	$15,745,860	26,737	$315	$8,418,882
1-Jul-36	181%	742	$18,716	$13,881,879	11,345	$1,430	$16,218,236	26,737	$324	$8,671,448
1-Jul-37	186%	742	$19,277	$14,298,335	11,345	$1,472	$16,704,783	26,737	$334	$8,931,592
1-Jul-38	192%	742	$19,856	$14,727,285	11,345	$1,517	$17,205,926	26,737	$344	$9,199,540
1-Jul-39	197%	742	$20,451	$15,169,104	11,345	$1,562	$17,722,104	26,737	$354	$9,475,526
1-Jul-40	203%	742	$21,065	$15,624,177	11,345	$1,609	$18,253,767	26,737	$365	$9,759,792
1-Jul-41	209%	742	$21,697	$16,092,902	11,345	$1,657	$18,801,380	26,737	$376	$10,052,585
1-Jul-42	216%	742	$22,348	$16,575,689	11,345	$1,707	$19,365,421	26,737	$387	$10,354,163
1-Jul-43	222%	742	$23,018	$17,072,960	11,345	$1,758	$19,946,384	26,737	$399	$10,664,788
1-Jul-44	229%	742	$23,709	$17,585,149	11,345	$1,811	$20,544,776	26,737	$411	$10,984,731
1-Jul-45	236%	742	$24,420	$18,112,703	11,345	$1,865	$21,161,119	26,737	$423	$11,314,273
1-Jul-46	243%	742	$25,152	$18,656,084	11,345	$1,921	$21,795,952	26,737	$436	$11,653,702
1-Jul-47	250%	742	$25,907	$19,215,767	11,345	$1,979	$22,449,831	26,737	$449	$12,003,313
1-Jul-48	258%	742	$26,684	$19,792,240	11,345	$2,038	$23,123,326	26,737	$462	$12,363,412
1-Jul-49	265%	742	$27,485	$20,386,007	11,345	$2,099	$23,817,026	26,737	$476	$12,734,314
1-Jul-50	273%	742	$28,309	$20,997,587	11,345	$2,162	$24,531,536	26,737	$491	$13,116,344
Total				$404,694,501			$472,936,247			$250,222,982

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XIV-B

17-Sep-15

[1]See Appendix C.

[2]See Schedule XIV-A.

[3]See Appendix B.

Downtown Columbia
Howard County, Maryland

Schedule XIV-B: Additional Expenditures to Howard County (35 Years), continued

Tax Year Beginning	Inflation Factor	Additional Expenditures to Howard County: Anticipated Road Miles[1]	Cost Per Road Mile[2]	Total Road Costs	Anticipated Trips[3]	Cost Per Trip[2]	Total Trip Costs	Total County Costs
1-Jul-16	100%	0.00	$17,310	$0	0	$56	$0	$1,039,897
1-Jul-17	103%	0.00	$17,829	$0	2,064	$57	$118,555	$1,297,510
1-Jul-18	106%	0.00	$18,364	$0	3,317	$59	$196,270	$2,743,232
1-Jul-19	109%	0.00	$18,915	$0	11,814	$61	$720,069	$5,332,518
1-Jul-20	113%	0.00	$19,483	$0	19,206	$63	$1,205,782	$8,230,355
1-Jul-21	116%	0.00	$20,067	$0	24,503	$65	$1,584,444	$11,875,956
1-Jul-22	119%	1.12	$20,669	$23,150	29,546	$67	$1,967,875	$14,180,274
1-Jul-23	123%	1.12	$21,289	$23,844	36,118	$69	$2,477,738	$17,004,891
1-Jul-24	127%	1.12	$21,928	$24,559	43,046	$71	$3,041,612	$19,360,620
1-Jul-25	130%	1.12	$22,586	$25,296	48,657	$73	$3,541,239	$22,951,621
1-Jul-26	134%	1.12	$23,263	$26,055	53,343	$75	$3,998,773	$25,720,783
1-Jul-27	138%	1.12	$23,961	$26,837	58,863	$77	$4,544,910	$30,759,834
1-Jul-28	143%	1.12	$24,680	$27,642	63,906	$80	$5,082,336	$33,714,432
1-Jul-29	147%	1.12	$25,421	$28,471	67,805	$82	$5,554,200	$36,739,531
1-Jul-30	151%	1.12	$26,183	$29,325	73,764	$84	$6,223,555	$38,723,454
1-Jul-31	156%	1.12	$26,969	$30,205	73,764	$87	$6,410,262	$39,885,158
1-Jul-32	160%	1.12	$27,778	$31,111	73,764	$90	$6,602,570	$41,081,712
1-Jul-33	165%	1.12	$28,611	$32,044	73,764	$92	$6,800,647	$42,314,164
1-Jul-34	170%	1.12	$29,469	$33,006	73,764	$95	$7,004,666	$43,583,589
1-Jul-35	175%	1.12	$30,353	$33,996	73,764	$98	$7,214,806	$44,891,096
1-Jul-36	181%	1.12	$31,264	$35,016	73,764	$101	$7,431,251	$46,237,829
1-Jul-37	186%	1.12	$32,202	$36,066	73,764	$104	$7,654,188	$47,624,964
1-Jul-38	192%	1.12	$33,168	$37,148	73,764	$107	$7,883,814	$49,053,713
1-Jul-39	197%	1.12	$34,163	$38,263	73,764	$110	$8,120,328	$50,525,324
1-Jul-40	203%	1.12	$35,188	$39,411	73,764	$113	$8,363,938	$52,041,084
1-Jul-41	209%	1.12	$36,244	$40,593	73,764	$117	$8,614,856	$53,602,317
1-Jul-42	216%	1.12	$37,331	$41,811	73,764	$120	$8,873,302	$55,210,386
1-Jul-43	222%	1.12	$38,451	$43,065	73,764	$124	$9,139,501	$56,866,698
1-Jul-44	229%	1.12	$39,604	$44,357	73,764	$128	$9,413,686	$58,572,699
1-Jul-45	236%	1.12	$40,793	$45,688	73,764	$131	$9,696,097	$60,329,880
1-Jul-46	243%	1.12	$42,016	$47,058	73,764	$135	$9,986,979	$62,139,776
1-Jul-47	250%	1.12	$43,277	$48,470	73,764	$139	$10,286,589	$64,003,969
1-Jul-48	258%	1.12	$44,575	$49,924	73,764	$144	$10,595,187	$65,924,088
1-Jul-49	265%	1.12	$45,912	$51,422	73,764	$148	$10,913,042	$67,901,811
1-Jul-50	273%	1.12	$47,290	$52,965	73,764	$152	$11,240,433	$69,938,865
Total				$1,046,797			$212,503,502	$1,341,404,028

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XIV-B.2

17-Sep-15

[1]See Appendix A. Roads are expected to increase with absorption.

[2]See Schedule XIV-A.

[3]See Appendix D-2.

Downtown Columbia
Howard County, Maryland

Schedule XV: Total Projected Revenues Versus Total Projected Expenditures

Tax Year Beginning	Inflation Factor	Total County Revenues (Schedule XIII)	Total County Costs (Schedule XIV-B)	Net County General Fund Revenues
1-Jul-16	100%	$4,328,199	($1,039,897)	$3,288,301
1-Jul-17	103%	$5,528,436	($1,297,510)	$4,230,926
1-Jul-18	106%	$9,523,122	($2,743,232)	$6,779,890
1-Jul-19	109%	$17,944,819	($5,332,518)	$12,612,301
1-Jul-20	113%	$23,126,386	($8,230,355)	$14,896,031
1-Jul-21	116%	$29,033,292	($11,875,956)	$17,157,336
1-Jul-22	119%	$31,709,316	($14,180,274)	$17,529,043
1-Jul-23	123%	$40,571,071	($17,004,891)	$23,566,180
1-Jul-24	127%	$41,962,129	($19,360,620)	$22,601,509
1-Jul-25	130%	$53,120,357	($22,951,621)	$30,168,736
1-Jul-26	134%	$55,097,552	($25,720,783)	$29,376,769
1-Jul-27	138%	$67,554,786	($30,759,834)	$36,794,952
1-Jul-28	143%	$69,716,452	($33,714,432)	$36,002,020
1-Jul-29	147%	$74,835,206	($36,739,531)	$38,095,675
1-Jul-30	151%	$79,415,533	($38,723,454)	$40,692,079
1-Jul-31	156%	$79,199,566	($39,885,158)	$39,314,408
1-Jul-32	160%	$81,908,335	($41,081,712)	$40,826,623
1-Jul-33	165%	$84,514,860	($42,314,164)	$42,200,696
1-Jul-34	170%	$87,050,306	($43,583,589)	$43,466,717
1-Jul-35	175%	$89,661,815	($44,891,096)	$44,770,718
1-Jul-36	181%	$92,351,669	($46,237,829)	$46,113,840
1-Jul-37	186%	$95,122,219	($47,624,964)	$47,497,255
1-Jul-38	192%	$97,975,886	($49,053,713)	$48,922,173
1-Jul-39	197%	$100,915,162	($50,525,324)	$50,389,838
1-Jul-40	203%	$103,942,617	($52,041,084)	$51,901,533
1-Jul-41	209%	$107,060,896	($53,602,317)	$53,458,579
1-Jul-42	216%	$110,272,723	($55,210,386)	$55,062,337
1-Jul-43	222%	$113,580,904	($56,866,698)	$56,714,207
1-Jul-44	229%	$116,988,331	($58,572,699)	$58,415,633
1-Jul-45	236%	$120,497,981	($60,329,880)	$60,168,102
1-Jul-46	243%	$124,112,921	($62,139,776)	$61,973,145
1-Jul-47	250%	$127,836,308	($64,003,969)	$63,832,339
1-Jul-48	258%	$131,671,398	($65,924,088)	$65,747,309
1-Jul-49	265%	$135,621,540	($67,901,811)	$67,719,729
1-Jul-50	273%	$139,690,186	($69,938,865)	$69,751,321
Total		$2,743,442,279	($1,341,404,028)	$1,402,038,251

MuniCap, Inc. *:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XV*

17-Sep-15

Downtown Columbia
Howard County, Maryland

Schedule XVI: Comparison of FY 2016 Budget and Projected Impacts

Howard County FY 2016 Budget	Approved FY 2016[1]	Percent of Total	Estimated Impacts from Proposed Development[2]	Percent of Total
General Fund Revenues				
Prior year's funds	$450,000	0%	$0	0%
Property taxes	$490,706,500	48%	$37,438,879	72%
Income taxes	$407,366,530	40%	$12,677,284	25%
Other local taxes	$29,306,613	3%	$892,907	2%
State shared taxes	$1,531,600	0%	$56,182	0%
Licenses and permits	$8,911,600	1%	$74,121	0%
Revenue other agencies	$7,142,000	1%	$80,700	0%
Charges for services	$12,255,200	1%	$210,065	0%
Interest, money/fines	$15,426,700	2%	$212,268	0%
Interfund reimbursements	$39,207,307	4%	$0	0%
Total	$1,012,304,050	100%	$51,642,404	100%
General Fund & Capital Expenditures				
Education	$593,986,453	59%	$40,193,147	60%
Public safety	$120,994,185	12%	$7,275,160	11%
Public facilities	$61,822,759	6%	$1,323,772	2%
Community services	$59,256,478	6%	$2,135,948	3%
Legislative and judicial	$26,001,428	3%	$1,033,979	2%
General government	$26,537,640	3%	$1,611,633	2%
Non-departmental expenses	$123,705,107	12%	$13,424,233	20%
Total	$1,012,304,050	100%	$66,997,871	100%

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVI*

17-Sep-15

[1]Source: *Howard County, Maryland Fiscal Year 2016 Approved Operating Budget Detail.*

[2]Revenues and expenditures are shown at full build-out, excluding inflation. Excludes one-time revenues such as recordation, transfer, and excise tax revenues. Expenses include capital costs estimated on Schedules XVII-A through XVII-H.

Downtown Columbia
Howard County, Maryland

Schedule XVII-A: Projected County Annual Capital Costs - Library[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Capital:			
Building design and construction[1]	$40,000,000	20	$3,075,046
Howard County resident population[2]			309,284
Amortized costs per capita			$9.94

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIA*
17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance. Annual costs are assumed to be amortized over 20 years at 4.5%.

[2]See Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-B: Projected County Annual Capital Costs - Fire Department[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Capital:			
Building design, construction, new fire apparatuses, and temporary site[1]	$20,000,000	20	$1,537,523
Howard County resident population[2]			309,284
Amortized costs per capita			$4.97

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIB*

17-Sep-15

[1]Represents a preliminary cost estimate for both temporary site costs and the new facility. Source: Howard County Department of Finance. Annual costs are assumed to be amortized over 20 years at 4.5%.

[2]See Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-C: Projected County Annual Capital Costs - Police Command[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Capital:			
Building design and construction[1]	$19,000,000	20	$1,460,647
Howard County Downtown Columbia resident population (1/3 of County residents)[2]			103,095
Amortized costs per capita			$14.17

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIC*

17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance. Annual costs are assumed to be amortized over 20 years at 4.5%.

[2]See Appendix A. Assumes 1/3 of the total county population as shown on Appendix A will benefit from the new police command facility.

Downtown Columbia
Howard County, Maryland

Schedule XVII-D.1: Projected County Annual Capital Costs - Interchange[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Building design and construction[1]	$50,000,000		
Break-in access fee estimate[1]	$25,000,000		
Sub-total interchange costs	$75,000,000		
Portion financed by County[2]	100%		
Capital:			
Financed costs[3]	$75,000,000	20	$5,765,711
Per Downtown Columbia Plan development trips[4]			96,208
Costs per trip			$59.93

MuniCap, Inc. *;ULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIID1*

17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Public Works.

[2]Assumes 100% of costs will be paid by Howard County. Additional sources such as state funds may be available to reduce County's share of costs.

[3]Represents a preliminary cost estimate. Source: Howard County Department of Planning and Research, Division of Research. Annual costs are assumed to be amortized over 20 years at 4.5%.

[4]Assumes costs of the interchange are allocated to total new development created as a result of the Downtown Columbia Plan. See Appendix E, Table 1.

Downtown Columbia
Howard County, Maryland

Schedule XVII-D.2: Projected County Annual Capital Costs - Interchange (Projected Trips)[1]

			Rental				For Sale - Condo				For Sale - Townhouse						
Year Ending	Inflation Factor	Total Projected Non-residential Trips[1]	Rental Units[2]	Trips Per Unit[3]	Trip Factor[3]	Sub-Total Trips	Condo Units[2]	Trips Per Unit[3]	Trip Factor[3]	Sub-Total Trips	TH Units[2]	Trips Per Unit[3]	Trip Factor[3]	Sub-Total Trips	Total Projected Trips	Costs Per Trip[4]	Total Estimated Costs
31-Dec-15	100%	0	380	6.72	0.50	1,277	0	5.86	0.50	0	0	5.86	0.50	0	1,277	$0	$0
31-Dec-16	103%	2,064	380	6.72	0.50	1,277	0	5.86	0.50	0	0	5.86	0.50	0	3,340	$0	$0
31-Dec-17	106%	3,317	817	6.72	0.50	2,745	0	5.86	0.50	0	0	5.86	0.50	0	6,062	$0	$0
31-Dec-18	109%	11,814	1,355	6.72	0.50	4,553	0	5.86	0.50	0	0	5.86	0.50	0	16,367	$0	$0
31-Dec-19	113%	19,206	1,995	6.72	0.50	6,703	0	5.86	0.50	0	0	5.86	0.50	0	25,910	$0	$0
31-Dec-20	116%	24,503	2,673	6.72	0.50	8,981	84	5.86	0.50	246	88	5.86	0.50	258	33,988	$0	$0
31-Dec-21	119%	29,546	3,085	6.72	0.50	10,366	84	5.86	0.50	246	88	5.86	0.50	258	40,416	$0	$0
31-Dec-22	123%	36,118	3,407	6.72	0.50	11,448	234	5.86	0.50	686	88	5.86	0.50	258	48,509	$0	$0
31-Dec-23	127%	43,046	3,751	6.72	0.50	12,602	234	5.86	0.50	686	88	5.86	0.50	258	56,592	$0	$0
31-Dec-24	130%	48,657	4,394	6.72	0.50	14,765	234	5.86	0.50	686	88	5.86	0.50	258	64,366	$78	$5,033,052
31-Dec-25	134%	53,343	4,797	6.72	0.50	16,118	234	5.86	0.50	686	88	5.86	0.50	258	70,405	$78	$5,505,289
31-Dec-26	138%	58,863	5,741	6.72	0.50	19,289	234	5.86	0.50	686	88	5.86	0.50	258	79,095	$78	$6,184,822
31-Dec-27	143%	63,906	6,084	6.72	0.50	20,443	234	5.86	0.50	686	88	5.86	0.50	258	85,293	$78	$6,669,470
31-Dec-28	147%	67,805	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	90,249	$78	$7,057,018
31-Dec-29	151%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-30	156%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-31	160%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-32	165%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-33	170%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-34	175%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-35	181%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-36	186%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-37	192%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-38	197%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-39	203%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-40	209%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-41	216%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-42	222%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-43	229%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$78	$7,522,945
31-Dec-44	236%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$0	$0
31-Dec-45	243%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$0	$0
31-Dec-46	250%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$0	$0
31-Dec-47	258%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$0	$0
31-Dec-48	265%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$0	$0
31-Dec-49	273%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$0	$0
31-Dec-50	281%	73,764	6,201	6.72	0.50	20,835	461	5.86	0.50	1,351	88	5.86	0.50	258	96,208	$0	$0
																	$143,293,824

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIID2
17-Sep-15

[1]See Appendix D-2 for an estimate of projected trips from non-residential developmer

[2]See Schedule III-A.

[3]Provided by Howard County Department of Planning and Zoning, Division of Research

[4]Capital costs are assumed to increase with inflation until such time as the costs are incurred (i.e. financed).

Downtown Columbia
Howard County, Maryland

Schedule XVII-E: Projected County Annual Capital Costs - Arts Center[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Building design and construction[1]	$26,000,000		
Portion financed by County[2]	75%		
Capital:			
Financed costs[3]	$19,500,000	20	$1,499,085
Howard County resident population[4]			309,284
Amortized costs per capita			$4.85

MuniCap, Inc. *Ioward County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIE*

17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance.

[2]Assumes 25% of costs will be paid from other sources.

[3]Represents a preliminary cost estimate. Source: Howard County Department of Planning and Research, Division of Research. Annual costs are assumed to be amortized over 20 years at 4.5%.

[4]See Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-F: Projected County Annual Capital Costs - Transit Center[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Building design and construction[1]	$9,500,000		
Portion financed by County[2]	100%		
Capital:			
Financed costs[3]	$9,500,000	20	$730,323
Howard County service population (residents and non-resident employees)[4]			426,805
Amortized costs per service population			$1.71

MuniCap, Inc. *LTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIF*
17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance.

[2]Assumes full amount of costs is allocated to the County. Other sources of funds may be available in the future.

[3]Represents a preliminary cost estimate. Source: Howard County Department of Planning and Research, Division of Research. Annual costs are assumed to be amortized over 20 years at 4.5%.

[4]Assumes transit center costs are apportioned to total residents and employees who work, but do not live in the County. See Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-G.1: Projected County Annual Capital Costs - Student Capital Costs[1]

Table 1: Elementary School Costs Per New Seat

Elementary school costs	$40,540,000
Less: assumed state contribution (25%)[2]	($10,135,000)
Sub-total student elementary school costs	$30,405,000
Seats per elementary school	788
Costs per new elementary school seat	$38,585

Table 2: Middle School Costs Per New Seat

Middle school costs	$41,987,000
Less: assumed state contribution (25%)[2]	($10,496,750)
Sub-total student middle school costs	$31,490,250
Seats per middle school addition	818
Costs per new middle school seat	$38,497

Table 3: High School Costs Per New Seat

High school costs	$70,642,000
Less: assumed state contribution (25%)[2]	($17,660,500)
Sub-total student high school costs	$52,981,500
Seats per high school	1,615
Costs per new high school seat	$32,806

MuniCap, Inc. *2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIG1*
17-Sep-15

[1]Howard County Department of Planning and Zoning, Division of Research compiled from current HCPSS capital budget.

[2]Assumes 25% of total costs is received from State Aid. Source: Howard County Department of Planning and Zoning, Division of Research

Downtown Columbia
Howard County, Maryland

Schedule XVII-G.2: Projected County Annual Capital Costs - Total Student Capital Costs[1]

	Tax		Projected Elementary School Capital Costs			Projected Middle School Capital Costs			Projected Middle School Capital Costs			Total Projected
Year Ending	Year Beginning	Inflation Factor	Elementary School Students[2]	Capital Costs Per Seat[3]	Total Capital Costs	Middle School Students[2]	Capital Costs Per Seat[3]	Total Capital Costs	High School Students[2]	Capital Costs Per Seat[3]	Total Capital Costs	Student Capital Costs
31-Dec-15	1-Jul-16	100%	19	$38,585	$752,176	10	$38,497	$368,644	12	$32,806	$403,906	$1,524,726
31-Dec-16	1-Jul-17	103%	0	$39,743	$0	0	$39,652	$0	0	$33,790	$0	$0
31-Dec-17	1-Jul-18	106%	22	$40,935	$917,682	11	$40,841	$449,758	14	$34,804	$492,779	$1,860,219
31-Dec-18	1-Jul-19	109%	28	$42,163	$1,163,671	14	$42,066	$570,318	17	$35,848	$624,871	$2,358,860
31-Dec-19	1-Jul-20	113%	33	$43,428	$1,425,821	16	$43,328	$698,799	21	$36,923	$765,642	$2,890,262
31-Dec-20	1-Jul-21	116%	45	$44,731	$1,994,333	22	$44,628	$977,428	28	$38,031	$1,070,923	$4,042,683
31-Dec-21	1-Jul-22	119%	21	$46,073	$973,771	10	$45,967	$477,248	13	$39,172	$522,898	$1,973,917
31-Dec-22	1-Jul-23	123%	25	$47,455	$1,189,623	12	$47,346	$583,038	16	$40,347	$638,808	$2,411,468
31-Dec-23	1-Jul-24	127%	18	$48,878	$861,730	9	$48,766	$422,336	11	$41,558	$462,735	$1,746,801
31-Dec-24	1-Jul-25	130%	33	$50,345	$1,662,387	16	$50,229	$814,741	21	$42,804	$892,674	$3,369,802
31-Dec-25	1-Jul-26	134%	21	$51,855	$1,071,159	10	$51,736	$524,978	13	$44,088	$575,194	$2,171,332
31-Dec-26	1-Jul-27	138%	48	$53,411	$2,585,617	24	$53,288	$1,267,218	31	$45,411	$1,388,433	$5,241,268
31-Dec-27	1-Jul-28	143%	18	$55,013	$969,885	9	$54,887	$475,343	11	$46,773	$520,812	$1,966,040
31-Dec-28	1-Jul-29	147%	19	$56,663	$1,072,341	9	$56,534	$525,557	12	$48,177	$575,829	$2,173,727
31-Dec-29	1-Jul-30	151%	0	$58,363	$0	0	$58,230	$0	0	$49,622	$0	$0
31-Dec-30	1-Jul-31	156%	0	$60,114	$0	0	$59,977	$0	0	$51,110	$0	$0
31-Dec-31	1-Jul-32	160%	0	$61,918	$0	0	$61,776	$0	0	$52,644	$0	$0
31-Dec-32	1-Jul-33	165%	0	$63,775	$0	0	$63,629	$0	0	$54,223	$0	$0
31-Dec-33	1-Jul-34	170%	0	$65,688	$0	0	$65,538	$0	0	$55,850	$0	$0
31-Dec-34	1-Jul-35	175%	0	$67,659	$0	0	$67,504	$0	0	$57,525	$0	$0
31-Dec-35	1-Jul-36	181%	0	$69,689	$0	0	$69,529	$0	0	$59,251	$0	$0
31-Dec-36	1-Jul-37	186%	0	$71,780	$0	0	$71,615	$0	0	$61,029	$0	$0
31-Dec-37	1-Jul-38	192%	0	$73,933	$0	0	$73,764	$0	0	$62,859	$0	$0
31-Dec-38	1-Jul-39	197%	0	$76,151	$0	0	$75,976	$0	0	$64,745	$0	$0
31-Dec-39	1-Jul-40	203%	0	$78,435	$0	0	$78,256	$0	0	$66,688	$0	$0
31-Dec-40	1-Jul-41	209%	0	$80,788	$0	0	$80,603	$0	0	$68,688	$0	$0
31-Dec-41	1-Jul-42	216%	0	$83,212	$0	0	$83,022	$0	0	$70,749	$0	$0
31-Dec-42	1-Jul-43	222%	0	$85,708	$0	0	$85,512	$0	0	$72,871	$0	$0
31-Dec-43	1-Jul-44	229%	0	$88,280	$0	0	$88,078	$0	0	$75,057	$0	$0
31-Dec-44	1-Jul-45	236%	0	$90,928	$0	0	$90,720	$0	0	$77,309	$0	$0
31-Dec-45	1-Jul-46	243%	0	$93,656	$0	0	$93,441	$0	0	$79,628	$0	$0
31-Dec-46	1-Jul-47	250%	0	$96,466	$0	0	$96,245	$0	0	$82,017	$0	$0
31-Dec-47	1-Jul-48	258%	0	$99,360	$0	0	$99,132	$0	0	$84,478	$0	$0
31-Dec-48	1-Jul-49	265%	0	$102,340	$0	0	$102,106	$0	0	$87,012	$0	$0
31-Dec-49	1-Jul-50	273%	0	$105,411	$0	0	$105,169	$0	0	$89,623	$0	$0
Total			349			172			221			$33,731,107

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIG2
17-Sep-15

[1]Source: Howard County Department of Planning and Zoning, Division of Research.

[2]Represents the projected students generated by new apartments. See Appendix C.

[3]See Schedule XVII-G.1. Assumes inflation factor shown.

Downtown Columbia
Howard County, Maryland

Schedule XVII-H: Total Projected County Capital Costs[1]

Tax Year Beginning	Inflation Factor	Per Capita Allocation of Capital Costs[1] Library	Fire Department	Police Command	Arts Center	Sub-Total Per Capita Costs	Projected Population[2]	Total Projected Per Capita Costs	Interchange[3]	Transit Center Costs Per Svc. Population[4]	Projected Svc. Population[5]	Transit Center Costs	Public Schools[6]	Total Projected Capital Costs
1-Jul-16	100%	$0	$0	$0	$0	$0	629	$0	$0	$0	629	$0	$1,524,726	$1,524,726
1-Jul-17	103%	$0	$0	$0	$0	$0	629	$0	$0	$0	1,212	$0	$0	$0
1-Jul-18	106%	$0	$5	$0	$0	$5	1,353	$7,135	$0	$0	2,272	$0	$1,860,219	$1,867,355
1-Jul-19	109%	$0	$5	$0	$0	$5	2,244	$11,834	$0	$0	5,101	$0	$2,358,860	$2,370,695
1-Jul-20	113%	$0	$5	$0	$0	$5	3,304	$17,424	$0	$0	7,657	$0	$2,890,262	$2,907,685
1-Jul-21	116%	$12	$5	$16	$0	$33	4,809	$159,776	$0	$0	10,242	$0	$4,042,683	$4,202,460
1-Jul-22	119%	$12	$5	$16	$6	$39	5,491	$214,225	$0	$2.04	12,056	$24,634	$1,973,917	$2,212,776
1-Jul-23	123%	$12	$5	$16	$6	$39	6,300	$245,795	$0	$2.04	14,241	$29,097	$2,411,468	$2,686,360
1-Jul-24	127%	$12	$5	$16	$6	$39	6,870	$267,997	$0	$2.04	15,534	$31,739	$1,746,801	$2,046,537
1-Jul-25	130%	$12	$5	$16	$6	$39	7,935	$309,581	$5,033,052	$2.04	17,895	$36,563	$3,369,802	$8,748,997
1-Jul-26	134%	$12	$5	$16	$6	$39	8,602	$335,595	$5,505,289	$2.04	19,591	$40,029	$2,171,332	$8,052,245
1-Jul-27	138%	$12	$5	$16	$6	$39	10,165	$396,559	$6,184,822	$2.04	22,227	$45,413	$5,241,268	$11,868,063
1-Jul-28	143%	$12	$5	$16	$6	$39	10,734	$418,762	$6,669,470	$2.04	23,928	$48,889	$1,966,040	$9,103,162
1-Jul-29	147%	$12	$5	$16	$6	$39	11,345	$442,594	$7,057,018	$2.04	25,342	$51,778	$2,173,727	$9,725,118
1-Jul-30	151%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-31	156%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-32	160%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-33	165%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-34	170%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-35	175%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-36	181%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-37	186%	$12	$5	$16	$6	$39	11,345	$442,594	$7,522,945	$2.04	26,737	$54,629	$0	$8,020,168
1-Jul-38	192%	$12	$0	$16	$6	$34	11,345	$382,761	$7,522,945	$2.04	26,737	$54,629	$0	$7,960,335
1-Jul-39	197%	$12	$0	$16	$6	$34	11,345	$382,761	$7,522,945	$2.04	26,737	$54,629	$0	$7,960,335
1-Jul-40	203%	$12	$0	$16	$6	$34	11,345	$382,761	$7,522,945	$2.04	26,737	$54,629	$0	$7,960,335
1-Jul-41	209%	$0	$0	$0	$6	$6	11,345	$65,660	$7,522,945	$2.04	26,737	$54,629	$0	$7,643,234
1-Jul-42	216%	$0	$0	$0	$0	$0	11,345	$0	$7,522,945	$0	26,737	$0	$0	$7,522,945
1-Jul-43	222%	$0	$0	$0	$0	$0	11,345	$0	$7,522,945	$0	26,737	$0	$0	$7,522,945
1-Jul-44	229%	$0	$0	$0	$0	$0	11,345	$0	$7,522,945	$0	26,737	$0	$0	$7,522,945
1-Jul-45	236%	$0	$0	$0	$0	$0	11,345	$0	$0	$0	26,737	$0	$0	$0
1-Jul-46	243%	$0	$0	$0	$0	$0	11,345	$0	$0	$0	26,737	$0	$0	$0
1-Jul-47	250%	$0	$0	$0	$0	$0	11,345	$0	$0	$0	26,737	$0	$0	$0
1-Jul-48	258%	$0	$0	$0	$0	$0	11,345	$0	$0	$0	26,737	$0	$0	$0
1-Jul-49	265%	$0	$0	$0	$0	$0	11,345	$0	$0	$0	26,737	$0	$0	$0
1-Jul-50	273%	$0	$0	$0	$0	$0	11,345	$0	$0	$0	26,737	$0	$0	$0
Total								$7,581,976	$143,293,824			$963,693	$33,731,107	$185,570,599

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIIH

17-Sep-15

[1]Capital costs are assumed to increase with inflation until such time as the costs are incurred (i.e. financed). See Schedules XVII-A through XVII-C, and XVII-E for estimated costs per capita.

[2]See Appendix B.

[3]See Schedule XVII-D.1 and XVII-D.2.

[4]See Schedule XVII-F. Capital costs are assumed to increase with inflation until such time as the costs are incurred (i.e. financed).

[5]See Appendix B.

[6]See Schedule XVII-G.

Downtown Columbia
Howard County, Maryland

Schedule XVIII: Net Revenues Versus Total Projected County Capital Costs

Tax Year Beginning	Inflation Factor	Net County Revenues (Schedule XV)	Total Projected County Capital Costs (Schedule XVII-H)	Net Howard County Surplus/(Deficit)
1-Jul-16	100%	$3,288,301	($1,524,726)	$1,763,575
1-Jul-17	103%	$4,230,926	$0	$4,230,926
1-Jul-18	106%	$6,779,890	($1,867,355)	$4,912,535
1-Jul-19	109%	$12,612,301	($2,370,695)	$10,241,606
1-Jul-20	113%	$14,896,031	($2,907,685)	$11,988,346
1-Jul-21	116%	$17,157,336	($4,202,460)	$12,954,877
1-Jul-22	119%	$17,529,043	($2,212,776)	$15,316,267
1-Jul-23	123%	$23,566,180	($2,686,360)	$20,879,820
1-Jul-24	127%	$22,601,509	($2,046,537)	$20,554,972
1-Jul-25	130%	$30,168,736	($8,748,997)	$21,419,739
1-Jul-26	134%	$29,376,769	($8,052,245)	$21,324,524
1-Jul-27	138%	$36,794,952	($11,868,063)	$24,926,889
1-Jul-28	143%	$36,002,020	($9,103,162)	$26,898,859
1-Jul-29	147%	$38,095,675	($9,725,118)	$28,370,557
1-Jul-30	151%	$40,692,079	($8,020,168)	$32,671,910
1-Jul-31	156%	$39,314,408	($8,020,168)	$31,294,240
1-Jul-32	160%	$40,826,623	($8,020,168)	$32,806,454
1-Jul-33	165%	$42,200,696	($8,020,168)	$34,180,528
1-Jul-34	170%	$43,466,717	($8,020,168)	$35,446,548
1-Jul-35	175%	$44,770,718	($8,020,168)	$36,750,550
1-Jul-36	181%	$46,113,840	($8,020,168)	$38,093,672
1-Jul-37	186%	$47,497,255	($8,020,168)	$39,477,087
1-Jul-38	192%	$48,922,173	($7,960,335)	$40,961,838
1-Jul-39	197%	$50,389,838	($7,960,335)	$42,429,503
1-Jul-40	203%	$51,901,533	($7,960,335)	$43,941,198
1-Jul-41	209%	$53,458,579	($7,643,234)	$45,815,346
1-Jul-42	216%	$55,062,337	($7,522,945)	$47,539,392
1-Jul-43	222%	$56,714,207	($7,522,945)	$49,191,262
1-Jul-44	229%	$58,415,633	($7,522,945)	$50,892,688
1-Jul-45	236%	$60,168,102	$0	$60,168,102
1-Jul-46	243%	$61,973,145	$0	$61,973,145
1-Jul-47	250%	$63,832,339	$0	$63,832,339
1-Jul-48	258%	$65,747,309	$0	$65,747,309
1-Jul-49	265%	$67,719,729	$0	$67,719,729
1-Jul-50	273%	$69,751,321	$0	$69,751,321
Total		$1,402,038,251	($185,570,599)	$1,216,467,651

MuniCap, Inc. *ƆNSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]XVIII*
17-Sep-15

Downtown Columbia
Howard County, Maryland

Appendices

Downtown Columbia
Howard County, Maryland

Appendix A: Revenues and Costs to Howard County (Allocation Factors)

Howard County permanent population[1]	309,284
Howard County current employment[2]	157,997
Howard County current non-government employees[2]	140,924
Non-resident workers[2]	117,521
Employee population equivalent[3]	117,521
Total service population	426,805
Percent of newly created Howard County employees assumed to live in Howard County[2]	25.6%
Percent of newly created Howard County employees assumed to live outside Howard County[2]	74.4%
Service population rates	
Resident	1.00
Employee[3]	1.00
Proposed population increase - new households:	
Persons per rental/condo household[4]	1.84
Persons per townhouse household[4]	2.54
Expected population increase[5]	11,345
Expected employee increase[5]	
Projected new employees[6]	20,693
Projected new non-government employees[2]	18,457
Projected non-resident employees	15,392
Projected employee population equivalent[3]	15,392
Total service population increase[5]	26,737
Current students[7]	52,511
Projected student increase[8]	742
Current road miles[9]	1,116
Projected increase in road miles[10]	1.120

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]A.*
17-Sep-15

[1]Source: U.S. Census Bureau: State and County QuickFacts - 2014 estimate.

[2]Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application; 2012 data.

[3]Service rate assumes full-time employees generates costs at the same rate as full-time residents.

[4]Source: Howard County Department of Planning and Zoning Division of Research.

[5]See Appendix B.

[6]See Appendices G-1 through G-4.

[7] Source: *Howard County Public School System Enrollment Report dated September 30, 2014.*

[8]See Appendix C.

[9]Source: *Howard County, Maryland Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2014.*

[10]Based on information provided by HHC. Represents new road miles to be conveyed to Howard County.

Downtown Columbia
Howard County, Maryland

Appendix B: Projected Residents, Employees, & Service Population

	MF Rental					Condos			Townhouse			
Year Ending	Apartment Units[1]	Vacancy Rate[2]	Occupied Units	Residents Per Unit[3]	Sub-total Apt. Residents	Condo Units[1]	Residents Per Unit[3]	Sub-total Condo Residents	Townhouse Units[1]	Residents Per Unit[4]	Sub-total TH Residents	Total Residents
31-Dec-15	380	10%	342	1.84	629	0	1.84	0	0	2.59	0	629
31-Dec-16	380	10%	342	1.84	629	0	1.84	0	0	2.59	0	629
31-Dec-17	817	10%	735	1.84	1,353	0	1.84	0	0	2.59	0	1,353
31-Dec-18	1,355	10%	1,220	1.84	2,244	0	1.84	0	0	2.59	0	2,244
31-Dec-19	1,995	10%	1,796	1.84	3,304	0	1.84	0	0	2.59	0	3,304
31-Dec-20	2,673	10%	2,406	1.84	4,426	84	1.84	155	88	2.59	228	4,809
31-Dec-21	3,085	10%	2,777	1.84	5,109	84	1.84	155	88	2.59	228	5,491
31-Dec-22	3,407	10%	3,066	1.84	5,642	234	1.84	431	88	2.59	228	6,300
31-Dec-23	3,751	10%	3,376	1.84	6,211	234	1.84	431	88	2.59	228	6,870
31-Dec-24	4,394	10%	3,955	1.84	7,277	234	1.84	431	88	2.59	228	7,935
31-Dec-25	4,797	10%	4,317	1.84	7,944	234	1.84	431	88	2.59	228	8,602
31-Dec-26	5,741	10%	5,167	1.84	9,507	234	1.84	431	88	2.59	228	10,165
31-Dec-27	6,084	10%	5,476	1.84	10,076	234	1.84	431	88	2.59	228	10,734
31-Dec-28	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-29	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-30	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-31	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-32	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-33	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-34	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-35	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-36	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-37	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-38	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-39	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-40	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-41	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-42	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-43	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-44	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-45	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-46	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-47	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-48	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-49	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345
31-Dec-50	6,201	10%	5,581	1.84	10,269	461	1.84	848	88	2.59	228	11,345

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]B.1*
17-Sep-15

[1]See Schedule III-A.

[2]See Schedule II-D.

[3]See Appendix A.

[4]Resident per TH unit provided by the Howard County Department of Planning and Zoning Division of Research.

Downtown Columbia
Howard County, Maryland

Appendix B: Projected Residents, Employees, & Service Population, continued

	Projected Employee Increase													
Year Ending	Office SF[1]	Employees Per 1,000 SF[2]	Total Employees	Retail SF[1]	Employees Per 1,000 SF[2]	Total Employees	Restaurant SF[1]	Employees Per 1,000 SF[2]	Total Employees	Hotel Rooms[1]	Employees Per Room[2]	Total Employees	Total Projected Employees	Non-Governmental Projected Employees[3]
31-Dec-15	0	3.54	0	0	1.73	0	0	6.88	0	0	0.17	0	0	0
31-Dec-16	204,000	3.54	722	0	1.73	0	9,000	6.88	62	0	0.17	0	784	699
31-Dec-17	329,000	3.54	1,165	5,000	1.73	9	9,000	6.88	62	0	0.17	0	1,235	1,102
31-Dec-18	943,000	3.54	3,338	63,900	1.73	111	57,000	6.88	392	0	0.17	0	3,841	3,426
31-Dec-19	1,423,600	3.54	5,039	114,805	1.73	199	82,000	6.88	564	300	0.17	51	5,853	5,221
31-Dec-20	1,703,600	3.54	6,031	166,156	1.73	288	135,969	6.88	935	300	0.17	51	7,304	6,515
31-Dec-21	2,003,600	3.54	7,092	217,506	1.73	377	189,938	6.88	1,306	300	0.17	51	8,826	7,873
31-Dec-22	2,387,750	3.54	8,452	268,857	1.73	466	243,907	6.88	1,677	470	0.17	80	10,675	9,522
31-Dec-23	2,532,750	3.54	8,966	320,207	1.73	554	297,876	6.88	2,048	470	0.17	80	11,648	10,390
31-Dec-24	2,894,800	3.54	10,247	371,558	1.73	643	351,845	6.88	2,419	470	0.17	80	13,390	11,943
31-Dec-25	3,155,800	3.54	11,171	422,908	1.73	732	405,814	6.88	2,791	470	0.17	80	14,774	13,178
31-Dec-26	3,425,000	3.54	12,124	474,259	1.73	821	459,783	6.88	3,162	640	0.17	109	16,216	14,464
31-Dec-27	3,725,000	3.54	13,186	525,609	1.73	910	513,752	6.88	3,533	640	0.17	109	17,738	15,821
31-Dec-28	3,900,000	3.54	13,805	576,960	1.73	999	567,721	6.88	3,904	640	0.17	109	18,817	16,784
31-Dec-29	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-30	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-31	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-32	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-33	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-34	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-35	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-36	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-37	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-38	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-39	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-40	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-41	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-42	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-43	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-44	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-45	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-46	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-47	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-48	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-49	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-50	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]B.2*

17-Sep-15

[1]See Schedule III-B.

[2]Jobs were calculated using the IMPLAN software, by IMPLAN Group LLC. See Appendix G.

[3]Private jobs represent approximately 89% of total jobs in Howard County. Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application.

Downtown Columbia
Howard County, Maryland

Appendix B: Projected Residents, Employees, & Service Population, continued

	Total Projected Non-Resident Employee Equivalent[1]						
Year Ending	Total Projected Employees[2]	Employee Equivalent[3]	Total Projected Employee Equiv.[3]	Non-Resident Employees[4]	Total Projected Non-Resident Employee Equiv.[5]	Total Projected Residents[6]	Total Service Population[7]
31-Dec-15	0	1.00	0	74.4%	0	629	629
31-Dec-16	784	1.00	784	74.4%	583	629	1,212
31-Dec-17	1,235	1.00	1,235	74.4%	919	1,353	2,272
31-Dec-18	3,841	1.00	3,841	74.4%	2,857	2,244	5,101
31-Dec-19	5,853	1.00	5,853	74.4%	4,354	3,304	7,657
31-Dec-20	7,304	1.00	7,304	74.4%	5,433	4,809	10,242
31-Dec-21	8,826	1.00	8,826	74.4%	6,565	5,491	12,056
31-Dec-22	10,675	1.00	10,675	74.4%	7,940	6,300	14,241
31-Dec-23	11,648	1.00	11,648	74.4%	8,664	6,870	15,534
31-Dec-24	13,390	1.00	13,390	74.4%	9,960	7,935	17,895
31-Dec-25	14,774	1.00	14,774	74.4%	10,989	8,602	19,591
31-Dec-26	16,216	1.00	16,216	74.4%	12,062	10,165	22,227
31-Dec-27	17,738	1.00	17,738	74.4%	13,194	10,734	23,928
31-Dec-28	18,817	1.00	18,817	74.4%	13,997	11,345	25,342
31-Dec-29	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-30	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-31	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-32	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-33	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-34	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-35	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-36	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-37	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-38	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-39	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-40	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-41	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-42	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-43	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-44	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-45	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-46	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-47	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-48	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-49	20,693	1.00	20,693	74.4%	15,392	11,345	26,737
31-Dec-50	20,693	1.00	20,693	74.4%	15,392	11,345	26,737

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]B.3*
17-Sep-15

[1]Represents the newly created employees who work but do not live in Howard County.
[2]See previous schedule (B-2).
[3]Service rate for employee is assumed to be same as resident population rate.
[4]See Appendix A. Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application.
[5]Projected permanent non-resident employee population equivalent represents total projected employee equivalent multiplied by percent of Howard County employees assumed to reside outside of Howard County.
[6]See previous schedule (B-1).
[7]Total permanent service population increase represents projected permanent non-resident employee population equivalent plus expected population increase.

Downtown Columbia
Howard County, Maryland

Appendix C: Projected Students[1]

Year Ending	Projected Apartments[2]	Vacancy Rate[3]	Occupied Units	ES Per HH[1]	MS Per HH[1]	HS Per HH[1]	Total	ES Per HH[4]	MS Per HH[4]	HS Per HH[4]	Total	Projected For Sale Units[2]	ES Per HH[1]	MS Per HH[1]	HS Per HH[1]	Total	ES Per HH[4]	MS Per HH[4]	HS Per HH[4]	Total	Total Projected Students
	Projected Student Increase from Apartments											Projected Student Increase from For Sale Units									
31-Dec-15	380	10.00%	342	0.057	0.028	0.036	0.121	19	10	12	41	0	0.057	0.028	0.036	0.121	0	0	0	0	41
31-Dec-16	380	10.00%	342	0.057	0.028	0.036	0.121	19	10	12	41	0	0.057	0.028	0.036	0.121	0	0	0	0	41
31-Dec-17	817	10.00%	735	0.057	0.028	0.036	0.121	42	21	26	89	0	0.057	0.028	0.036	0.121	0	0	0	0	89
31-Dec-18	1,355	10.00%	1,220	0.057	0.028	0.036	0.121	70	34	44	148	0	0.057	0.028	0.036	0.121	0	0	0	0	148
31-Dec-19	1,995	10.00%	1,796	0.057	0.028	0.036	0.121	102	50	65	217	0	0.057	0.028	0.036	0.121	0	0	0	0	217
31-Dec-20	2,673	10.00%	2,406	0.057	0.028	0.036	0.121	137	67	87	291	172	0.057	0.028	0.036	0.121	10	5	6	21	312
31-Dec-21	3,085	10.00%	2,777	0.057	0.028	0.036	0.121	158	78	100	336	172	0.057	0.028	0.036	0.121	10	5	6	21	357
31-Dec-22	3,407	10.00%	3,066	0.057	0.028	0.036	0.121	175	86	110	371	322	0.057	0.028	0.036	0.121	18	9	12	39	410
31-Dec-23	3,751	10.00%	3,376	0.057	0.028	0.036	0.121	192	95	122	408	322	0.057	0.028	0.036	0.121	18	9	12	39	447
31-Dec-24	4,394	10.00%	3,955	0.057	0.028	0.036	0.121	225	111	142	479	322	0.057	0.028	0.036	0.121	18	9	12	39	518
31-Dec-25	4,797	10.00%	4,317	0.057	0.028	0.036	0.121	246	121	155	522	322	0.057	0.028	0.036	0.121	18	9	12	39	561
31-Dec-26	5,741	10.00%	5,167	0.057	0.028	0.036	0.121	294	145	186	625	322	0.057	0.028	0.036	0.121	18	9	12	39	664
31-Dec-27	6,084	10.00%	5,476	0.057	0.028	0.036	0.121	312	153	197	663	322	0.057	0.028	0.036	0.121	18	9	12	39	702
31-Dec-28	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-29	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-30	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-31	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-32	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-33	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-34	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-35	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-36	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-37	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-38	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-39	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-40	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-41	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-42	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-43	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-44	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-45	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-46	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-47	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-48	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-49	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742
31-Dec-50	6,201	10.00%	5,581	0.057	0.028	0.036	0.121	318	156	201	675	549	0.057	0.028	0.036	0.121	31	15	20	66	742

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]C

17-Sep-15

[1]Student standing yield generation rates provided by Howard County Department of Planning and Zoning, Division of Research.

[2]See Schedule III-A.

[3]See Schedule II-D.

Downtown Columbia
Howard County, Maryland

Appendix D-1: Projected Police Operating Costs - Per Capita and Trip Factors

Table 1: Current County Trips (Non-Residential)

Development Type[1]	SF[1]	Avg. Weekday Trip Ends Per 1,000 SF[1]	Trip End Factors[2]	Current County Non-residential Trips[1]
Retail/Shopping Center	12,902	68.17	32%	281,426
Office - Gov	4,548	18.31	50%	41,628
Office - Non Gov	29,262	18.31	50%	267,835
Warehousing	16,928	4.96	50%	41,982
Manufacturing	11,295	3.82	50%	21,573
Total				654,445

Table 2: Estimated Per Capita and Per Trip Factors

Type	Basis for Projecting Increase	Proportionate Share of Costs[5]	Current County Costs/Population/Trips	Projected Increase Per Capita/Trips[6]
Total Department of Police Operating Costs[3]			$104,298,710	
Residential[4]	Per capita	65%	309,284	$219
Non-residential	Trips	35%	654,445	$56

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]D-1*
17-Sep-15

[1]Provided by the Howard County Department of Planning and Zoning, Division of Research.

[2]Provided by the Howard County Department of Planning and Zoning, Division of Research. Trip end factors represent the expected stops during a trip (e.g. office employees are assumed to only have two stops, work and home and therefore assume 50%).

[3]Source: *Howard County, Maryland Approved Operating Budget, Fiscal Year 2016.*

[4]See Appendix A.

[5]Prepresents the portion of shared operating costs by resident and trip factors. Based on a review of robbery, burglary and auto thefts within the County. Source: Howard County Police Department.

[6]Represents the portion of operating costs per current allocation factor that will be applied to new resident and increase in trip costs as a result of the proposed development.

Downtown Columbia
Howard County, Maryland

Appendix D-2: Projected Police Operating Costs - New Non-Residential Trips

	Projected Office Trips				Projected Retail/Restaurant Trips				Projected Hotel Trips				Total Projected
Year Ending	Office SF[1]	Trips Per SF[2]	Trip Factor[2]	Total Projected Trips	Rest./Retail SF[1]	Trips Per SF[2]	Trip Factor[2]	Total Projected Trips	Hotel Rooms[1]	Trips Per Room[2]	Trip Factor[2]	Total Projected Trips	Non-residential Trips
31-Dec-15	0	18.31	0.50	0	0	68.17	0.32	0	0	8.92	0.50	0	0
31-Dec-16	204	18.31	0.50	1,867	9	68.17	0.32	196	0	8.92	0.50	0	2,064
31-Dec-17	329	18.31	0.50	3,011	14	68.17	0.32	305	0	8.92	0.50	0	3,317
31-Dec-18	943	18.31	0.50	8,631	146	68.17	0.32	3,183	0	8.92	0.50	0	11,814
31-Dec-19	1,424	18.31	0.50	13,030	222	68.17	0.32	4,838	300	8.92	0.50	1,338	19,206
31-Dec-20	1,704	18.31	0.50	15,593	347	68.17	0.32	7,572	300	8.92	0.50	1,338	24,503
31-Dec-21	2,004	18.31	0.50	18,339	452	68.17	0.32	9,869	300	8.92	0.50	1,338	29,546
31-Dec-22	2,388	18.31	0.50	21,855	558	68.17	0.32	12,167	470	8.92	0.50	2,096	36,118
31-Dec-23	2,533	18.31	0.50	23,182	815	68.17	0.32	17,768	470	8.92	0.50	2,096	43,046
31-Dec-24	2,895	18.31	0.50	26,496	920	68.17	0.32	20,065	470	8.92	0.50	2,096	48,657
31-Dec-25	3,156	18.31	0.50	28,885	1,025	68.17	0.32	22,362	470	8.92	0.50	2,096	53,343
31-Dec-26	3,425	18.31	0.50	31,349	1,130	68.17	0.32	24,660	640	8.92	0.50	2,854	58,863
31-Dec-27	3,725	18.31	0.50	34,095	1,236	68.17	0.32	26,957	640	8.92	0.50	2,854	63,906
31-Dec-28	3,900	18.31	0.50	35,696	1,341	68.17	0.32	29,254	640	8.92	0.50	2,854	67,805
31-Dec-29	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-30	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-31	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-32	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-33	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-34	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-35	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-36	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-37	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-38	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-39	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-40	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-41	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-42	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-43	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-44	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-45	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-46	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-47	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-48	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-49	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-50	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]D-2*
17-Sep-15

[1]Square feet are represented per 1,000. See Schedule III-B

[2]Provided by Howard County Department of Planning and Zoning, Division of Research

Downtown Columbia
Howard County, Maryland

Appendix E: Estimated Downtown Columbia Plan Trips

Table 1: Estimated Downtown Columbia Plan Trips (Full Build-Out)

Development Type	1,000s of SF Rooms/Units[1]	Avg. Weekday Trip Ends Per 1,000 SF/Room/Unit[1]	Trip End Factors[2]	Total Estimated Trips[3]
Commercial	(1,000s of SF)			
Retail/Shopping Center	1,446	68.17	32%	31,552
Office - Gov	0	18.31	50%	0
Office - Non Gov	4,300	18.31	50%	39,358
Warehousing	0	4.96	50%	0
Manufacturing	0	3.82	50%	0
	(rooms)			
Hotel	640	8.92	50%	2,854
Sub-total commercial				73,764
Residential	(units)			
Multi-family rental	6,201	6.72	50%	20,835
Condos	461	5.86	50%	1,351
Townhomes	88	5.86	50%	258
Total estimated trips				96,208

Table 2: Estimated Development Plan Trips (Full Build-Out)

Development Type	1,000s of SF/Units[4]	Avg. Weekday Trip Ends Per 1,000 SF/Room/Unit[1]	Trip End Factors[2]	Total Estimated Trips[5]
Commercial	(1,000s of SF)			
Retail/Shopping Center	1,446	68.17	32%	31,552
Office - Gov	0	18.31	50%	0
Office - Non Gov	4,300	18.31	50%	39,358
Warehousing	0	4.96	50%	0
Manufacturing	0	3.82	50%	0
	(rooms)			
Hotel	640	8.92	50%	2,854
Residential	(units)			
Multi-family rental	6,201	6.72	50%	20,835
Condos	461	5.86	50%	1,351
Townhomes	88	5.86	50%	258
Total estimated trips				96,208

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]E-1.*
17-Sep-15

[1]Provided by the Howard County Department of Planning and Zoning, Division of Research. Represents the proposed Downtown Columbia Plan total development.

[2]Provided by the Howard County Department of Planning and Zoning, Division of Research. Trip end factors represent the expected stops during a trip (e.g. office employees are assumed to only have two stops, work and home and therefore assume 50%).

[3]Represents the total projected trips from the proposed Downtown Columbia Plan development.

[4]See Schedule I. Represents the projected development to be built resulting from the Downtown Columbia Plan.

[5]Represents total estimated trips to be created as a result of the proposed development of the Downtown Columbia Plan; including the HRD proposed affordable housing mix.

Downtown Columbia
Howard County, Maryland

Appendix F: Sales Data

Development Type[1]	Sales PSF	Type of SF	Adjusted Sales PSF[2]	Avg. SF Per Store
Retail				
Ann Taylor	$487	Gross	$487	5,000
Gap	$365	Gross	$365	11,757
Limited Brands	$965	Selling	$724	3,821
GameStop	$967	Gross	$967	1,400
Rite Aid	$556	Selling	$417	10,000
Brown Shoe (Specialty)	$397	Gross	$397	1,200
Zumiez/Blue Tomato	$405	-	$405	2,947
Weighted average sales psf			$462	
Restaurant				
BJs Restaurants	$700	Selling	$525	8,300
Buffalo Wild Wings Grill and Bar	$441	Selling	$331	6,200
Chipotle Mexican Grill	$781	Selling	$586	2,580
Cheesecake Factor	$913	Selling	$685	12,000
Einsteins	$448	Selling	$336	2,150
Kona Grill	$602	Selling	$452	7,191
Panera Bread	$298	Gross	$298	4,500
Texas Roadhouse	$591	Selling	$443	7,100
Weighted average sale per SF			$492	

MuniCap, Inc. *)NSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]F*
17-Sep-15

[1]Based on sales data available for potential tenants. Actual tenants are not yet known. Sales data provided by 2015 Retail Sales Per Square Foot Report prepared by Bizminer.

[2]Assumes 75% of gross square footage is selling space.

Downtown Columbia
Howard County, Maryland

Appendix G-1: Office Jobs and Indirect Impacts

	Total
Office square feet[1]	4,300,000
Office employees per 1,000 sq. ft.[2]	3.54
Total direct office employees (FTE's)	15,221
Office operating revenue	$2,643,614,785
Total labor income	$1,518,997,555
Labor income to wage factor[3]	1.18
Sub-total employee wages	$1,287,176,981
Total office jobs	16,193
Full time equivalent factor[4]	0.94
Total full time equivalent employees ("FTE")	15,221
Total FTE jobs per 1,000 square feet	3.54
Average office income per FTE -- annual	$99,793
Average office wage per FTE -- annual	$84,564
Multiplier for office income[5]	1.3672
Total earnings	$2,076,838,274
Indirect earnings	$557,840,719
Multiplier for office jobs[5]	1.7297
Total jobs	26,329
Indirect jobs	10,136
Multiplier for office output[5]	1.5831
Total economic output	$4,185,003,594
Indirect output	$1,541,388,809

MuniCap, Inc. *y\Columbia Town Center\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]G-1 (Office)*
17-Sep-15

[1]See Schedule I.

[2]Source: *2013 BOMA Experience Exchange Report* for offices located in the Baltimore, MD/Washington D.C. suburban market.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Office income, jobs, and output were calculated using IMPLAN software by MIG, Inc. The software calculates labor income and the number of jobs based on industry multipliers derived from National Income and Product Accounts data published by the U.S. Bureau of Economic Analysis. This data is then indexed to local industry data compiled by the U.S. Census Bureau. For ease of interpretation, multipliers are shown to illustrate the effects office development within Downtown Columbia development will have in Howard County, Maryland. The multiplier for jobs is 1.7297, meaning that for each job at the development, 1.7297 jobs will be created in Howard County, including the job at the development. Similarly, the multiplier for income is 1.3672, meaning that for every $1.00 paid in income at the development, $1.3672 will be paid in Howard County, including the $1.00 at the development. The multiplier for output is 1.5831, meaning that for each dollar of office economic activity at the development, the economic activity in Howard County will be $1.5831, including the $1.00 at the development. Indirect jobs and income have not been converted to FTEs or wages.

Downtown Columbia
Howard County, Maryland

Appendix G-2: Retail Jobs and Indirect Impacts

	Total
Retail square feet[1]	628,310
Sales per square foot[2]	$462
Retail sales	$290,205,113
Total labor income	$42,040,690
Labor income to wage factor[3]	1.21
Sub-total employee wages	$34,698,844
Total retail jobs	1,269
Full time equivalent factor[4]	0.86
Total full time equivalent employees ("FTE")	1,088
Total FTE jobs per 1,000 square feet	1.73
Average retail income per FTE -- annual	$38,640
Average retail wage per FTE -- annual	$31,892
Multiplier for retail income[5]	1.5339
Total earnings	$64,484,871
Indirect earnings	$22,444,181
Multiplier for retail jobs[5]	1.3176
Total jobs	1,672
Indirect jobs	403
Multiplier for retail output[5]	1.6208
Total economic output	$169,569,623
Direct output	$104,618,944
Indirect output	$64,950,679

MuniCap, Inc. *ter\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]G-2 (Retail)*
17-Sep-15

[1]See Schedule I.

[2]See Appendix F.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Retail income, jobs and output were calculated using the IMPLAN software, by MIG. Multipliers function in the same manner as with office impacts.

Downtown Columbia
Howard County, Maryland

Appendix G-3: Restaurant Jobs and Indirect Impacts

	Total
Restaurant square feet[1]	621,690
Sales per square foot[2]	$492
Restaurant sales	$305,663,473
Total labor income	$129,429,397
Labor income to wage factor[3]	1.17
Sub-total employee wages	$110,941,735
Total restaurant jobs	5,458
Full time equivalent factor[4]	0.78
Total full time equivalent employees ("FTE")	4,275
Total FTE jobs per 1,000 square feet	6.88
Average restaurant income per FTE -- annual	$30,276
Average restaurant wage per FTE -- annual	$25,951
Multiplier for restaurant income[5]	1.4273
Total earnings	$184,737,077
Indirect earnings	$55,307,680
Multiplier for restaurant jobs[5]	1.1818
Total jobs	6,450
Indirect jobs	992
Multiplier for restaurant output[5]	1.5200
Total economic output	$464,618,847
Direct output	$305,663,473
Indirect output	$158,955,374

MuniCap, Inc. *enter\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]G-3 (Rest)*
17-Sep-15

[1]See Schedule I.

[2]See Appendix F.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Restaurant income, jobs and output were calculated using the IMPLAN software, by MIG. Multipliers function in the same manner as with office impacts.

Downtown Columbia
Howard County, Maryland

Appendix G-4: Hotel Jobs and Indirect Impacts

	Total
Hotel rooms[1]	640
Average nightly room rate[2]	$56
Average nightly occupancy[2]	95%
Hotel operating revenue	$12,483,840
Total labor income	$3,819,497
Labor income to wage factor[3]	1.16
Sub-total employee wages	$3,291,753
Total hotel jobs	120
Full time equivalent factor[4]	0.91
Total full time equivalent employees ("FTE")	109
Total FTE jobs per room	0.17
Average hotel income per FTE -- annual	$35,041
Average hotel wage per FTE -- annual	$30,200
Multiplier for hotel income[5]	1.5600
Total earnings	$5,958,466
Indirect earnings	$2,138,969
Multiplier for hotel jobs[5]	1.3200
Total jobs	158
Indirect jobs	38
Multiplier for hotel output[5]	1.4600
Total economic output	$18,226,404
Indirect output	$5,742,564

MuniCap, Inc. *er\2015\Fiscal\[CTC FIA (MIHU) 9.17.15v2.xlsx]G-4 (Hotel)*
17-Sep-15

[1]See Schedule I.

[2]See Schedule II-E.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Hotel income, jobs and output were calculated using the IMPLAN software, by MIG. Multipliers function in the same manner as with office impacts.

Downtown Columbia
Howard County, Maryland

Fiscal Impact Projections
Appendix B: Existing Plan Housing Proposal

Prepared By:

MuniCap, Inc.
Public Finance

September 17, 2015

Downtown Columbia
Howard County, Maryland

Fiscal Impact Projections

<u>Table of Contents</u>

Bond Assumptions

DEVELOPMENT ASSUMPTIONS

I.	**Projected Development by Type - Downtown Columbia Plan Proposal**	**1**
II.	**Projected Market Value**	
	A. Comparison of Valuation Methods	**2**
	B. Residential Comparables	**3**
	C. Commercial Comparables	**4**
	D. Income Capitalization - Apartments, Office, Restaurant, & Retail	**5**
	E. Income Capitalization - Hotel	**6**
III.	**Projected Absorption**	
	A. Residential	**7**
	B. Commercial	**9**
IV.	**Total Projected Market Value**	
	A. Residential	**10**
	B. Commercial	**13**

FISCAL IMPACT ANALYSIS

V.	**Projected Real Property Tax Revenues**	**15**
VI.	**Projection of County Personal Income Tax Revenues**	
	A. Rental Residential	**16**
	B. For Sale Residential	**17**
VII.	**Projection of Local Recordation Tax Revenues**	**18**
VIII.	**Projection of School Excise Tax**	**20**
IX.	**Projection of Road Excise Tax**	**21**
X.	**Projection of Transfer Tax Revenues**	**23**
XI.	**Projection of Hotel Occupancy Tax Revenues**	**24**
XII.	**Additional Revenues to Howard County**	
	A. Annual	**25**
	B. 35 Years	**26**

Downtown Columbia
Howard County, Maryland

Fiscal Impact Projections

Table of Contents

XIII.	Total Revenues to Howard County	27
XIV.	Additional Expenditures to Howard County	
	A. Annual	28
	B. 35 Years	30
XV.	Total Projected Revenues Versus Total Projected Expenditures	32
XVI.	Comparison of FY 2016 Budget and Projected Impacts	33
XVII.	Projected County Annual Capital Costs	
	A. Library	34
	B. Fire Department	35
	C. Police Command	36
	D. Interchange	37
	E. Art Center	39
	F. Transit Center	40
	G. Public Schools	
	1. Student Capital Costs	41
	2. Total Student Capital Costs	42
	H. Total Projected County Capital Costs	43
XVIII.	Net Revenues Versus Total Projected County Capital Costs	44

APPENDICES

Appendix A: Revenues and Costs to Howard County (Allocation Factors)	A-1
Appendix B: Projected Residents, Employees, & Service Population	B-1
Appendix C: Projected Students	C-1
Appendix D: Projected Police Operating Costs	
1. Per Capita and Trip Factors	D-1
2. New Non-Residential Trips	D-2
Appendix E: Estimated Downtown Columbia Plan Trips	E-1
Appendix F: Sales Data	F-1
Appendix G: Jobs and Direct Impacts	
1. Office	G-1
2. Retail	G-2
3. Restaurant	G-3
4. Hotel	G-4

Downtown Columbia
Howard County, Maryland

Development Assumptions

Downtown Columbia
Howard County, Maryland

Schedule I: Projected Development by Type - Downtown Columbia Plan Proposal

Property Type	Area[1] Units	Rooms	GSF Per Unit/Space	Gross SF	Market Value[2] Per Unit	Per Room	Per GSF	Total Market Value
Residential								
Rental								
MF rental (market)	3,309	-	1,180	3,904,464	$244,751	-	$207.42	$809,848,657
MF rental (80% AMI)	825	-	1,180	973,500	$163,121	-	$138.24	$134,575,080
MF rental (40-60% AMI)	0	-	-	0	-	-	-	$0
MF rental (30% AMI)	0	-	-	0	-	-	-	$0
Flier building (market)	0	-	-	0	-	-	-	$0
Flier building (40-60% AMI)	0	-	-	0	-	-	-	$0
Parcels C&D multi-family (Metropolitan)	817	-	1,180	964,060	$244,751	-	$207.42	$199,961,548
Sub-total rental	4,951			5,842,024				$1,144,385,285
For Sale								
Condos	461	-	1,200	553,358	$302,861	-	$252.38	$139,659,028
Townhomes	88	-	1,500	132,000	$341,090	-	$227.39	$30,015,943
Sub-total residential	5,500			6,527,383				$1,314,060,256
Commercial								
Office	-	-	-	4,300,000	-	-	$244.28	$1,050,387,790
Retail	-	-	-	628,310	-	-	$340.77	$214,107,416
Restaurant								
Full service	-	-	-	379,902	-	-	$340.77	$129,458,084
Fast food service	-	-	-	241,788	-	-	$340.77	$82,393,442
Sub-total restaurant				621,690			$340.77	$211,851,526
Hotel	-	640	-	320,000	-	$114,212	$173.15	$73,095,501
Civic/recreation[3]	-	-	-	196,450	-	-	$0.00	$0
Sub-total commercial				6,066,450				$1,549,442,233
Total projected development	5,500	640		12,593,833				$2,863,502,490

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]I*
17-Sep-15

[1]Projected development provided by Howard County. Includes the maximum allowable density pursuant to the Downtown Columbia Plan and excluding the recent affordable housing proposal by HRD.
[2]See Schedule II-A.
[3]Assumes the civic/recreation is quasi-public and tax exempt.

Downtown Columbia
Howard County, Maryland

Schedule II-A: Projected Market Value (Comparison of Valuation Methods)[1]

Property Type	Comparables[2]	Income Capitalization[3]	Developer Estimated Sales Price[4]
Residential			
MF Rental			
Market rate			
Per Unit	$219,956	$196,286	-
Per SF	***$207.42***	$166.34	-
(80% AMI)[5]			
Per Unit	$146,596	$130,821	-
Per SF	***$138.24***	$110.86	-
(40-60% AMI)[5]			
Per Unit	$146,596	$130,821	-
Per SF	***$138.24***	$110.86	-
(30% AMI)[5]			
Per Unit	$146,596	$130,821	-
Per SF	***$138.24***	$110.86	-
Condos			
Market rate			
Per Unit	$396,111	NA	$900,000
Per SF	***$252.38***	NA	$600.00
Townhome			
Market rate			
Per Unit	$425,571	NA	$750,000
Per SF	***$227.39***	NA	$500.00
Commercial			
Office			
Per SF	***$244.28***	$217.58	-
Retail			
Per SF	***$340.77***	$460.60	-
Restaurant			
Per SF	***$340.77***	$460.60	-
Hotel			
Per SF	***$173.15***	$205.43	-
Per Room	***$114,211.72***	$123,258.82	-

MuniCap, Inc. *\SULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]II-A*
17-Sep-15

[1]Valuation approach chosen for each type of development is underlined and shown in bold and italics

[2]See Schedules II-B and II-C.

[3]See Schedules II-D and II-E.

[4]Source: The Howard Research and Development Corporation

[5]For comparison approaches to valuation, it is assumed that subsidized apartment units will be valued relative to market rate units in the same manner as the income-capitalization approach. See Schedule II-D.

Downtown Columbia
Howard County, Maryland

Schedule II-B: Projected Market Value (Residential Comparables)

Development Type	Address	City	Year Built	Parcel Number	Assessed Value[1] Land	Assessed Value[1] Building	Assessed Value[1] Total	Area Gross SF	Area Units	Area SF/Unit	Assessed Value Per SF/Unit Per SF	Assessed Value Per SF/Unit Per Unit
Apartments												
Residences at Arundel Preserves	Milestone Parkway	Hanover	2011	04 90231749	$5,902,400	$49,639,900	$55,542,300	233,546	242	965	$238	$229,514
Flats 170	8305 Telegraph Road	Odenton	2013	04 90062382	$18,450,000	$46,550,000	$65,000,000	385,578	369	1,045	$169	$176,152
Crosswinds at Annapolis Town Centre	1903 Towne Centre Boulevard	Annapolis	2013	02 1090235153	$10,750,000	$44,894,200	$55,644,200	223,239	215	1,038	$249	$258,810
Haven at Odenton Gateway	615 Carlton Otto Lane	Odenton	2012	04 52090233379	$12,600,000	$41,667,300	$54,267,300	311,870	252	1,238	$174	$215,346
Sub-total apartments					$47,702,400	$182,751,400	$230,453,800	1,154,233	1,078	1,071	***$207***	$219,956
Condos												
Condos	15000 Pennfield Court Unit 406	Silver Spring	2013	13 03732781	$123,000	$287,000	$410,000	-	-	1,319	$311	$410,000
Condos	15000 Pennfield Court Unit 204	Silver Spring	2013	13 03732520	$148,500	$346,500	$495,000	-	-	1,574	$314	$495,000
Condos	15000 Pennfield Court Unit 401	Silver Spring	2013	13 03732735	$148,500	$346,500	$495,000	-	-	1,563	$317	$495,000
Condos	15000 Pennfield Court Unit 301	Silver Spring	2013	13 03732611	$148,500	$346,500	$495,000	-	-	1,563	$317	$495,000
Condos	10205 Wincopin Circle	Columbia	2005	15-138017	$68,000	$272,000	$340,000	-	-	1,649	$206	$340,000
Condos	10205 Wincopin Circle	Columbia	2005	15-137894	$64,000	$256,000	$320,000	-	-	1,649	$194	$320,000
Condos	10205 Wincopin Circle	Columbia	2005	15-138149	$74,000	$296,000	$370,000	-	-	1,649	$224	$370,000
Condos	10205 Wincopin Circle	Columbia	2005	15-137762	$64,000	$256,000	$320,000	-	-	1,649	$194	$320,000
Condos	10205 Wincopin Circle	Columbia	2005	15-138009	$64,000	$256,000	$320,000	-	-	1,649	$194	$320,000
Sub-total condos					$902,500	$2,662,500	$3,565,000			1,585	***$252***	$396,111
Townhomes												
Townhomes	5959 Charles Crossing	Ellicott City	2013	01-323008	$142,500	$317,100	$459,600	-	-	2,000	$230	$459,600
Townhomes	5916 Charles Crossing	Ellicott City	2011	01-318438	$142,500	$292,200	$434,700	-	-	2,036	$214	$434,700
Townhomes	5921 Charles Crossing	Ellicott City	2011	01-315463	$142,500	$214,500	$357,000	-	-	1,616	$221	$357,000
Townhomes	5975 Charles Crossing	Ellicott City	2014	01-323075	$142,500	$314,200	$456,700	-	-	2,000	$228	$456,700
Townhomes	6003 Charles Crossing	Ellicott City	2014	01-323466	$142,500	$332,900	$475,400	-	-	2,000	$238	$475,400
Townhomes	7470 Singers Way	Elkridge	2014	01-594839	$110,000	$183,400	$293,400	-	-	1,424	$206	$293,400
Townhomes	5858 Duncan Drive	Ellicott City	2014	01-593558	$142,500	$359,700	$502,200	-	-	1,966	$255	$502,200
Sub-total townhomes					$965,000	$2,014,000	$2,979,000			1,863	***$227***	$425,571

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]II-B*

17-Sep-15

[1]Assessed values based on information provided by Maryland State Department of Assessments and Taxation. Values used on Schedule I are shown in bold, italics, and underlined.

Downtown Columbia
Howard County, Maryland

Schedule II-C: Projected Market Value (Commercial Comparables)

Development Type	Address	City	Year Built	Parcel Number	Assessed Value[1] Land	Assessed Value[1] Building	Assessed Value[1] Total	Area SF	Area Rooms	Assessed Value Per SF	Assessed Value Per Room
Office											
Johns Hopkins APL	11101 Johns Hopkins Road	Laurel	2012	5371767	$6,713,500	$44,035,400	$50,748,900	211,144	-	$240	-
Maple Lawn Office	8160 Maple Lawn Boulevard	Fulton	2012	5443016	$1,221,500	$20,566,300	$21,787,800	104,796	-	$208	-
National Business Park	322 Sentinel Way	Annapolis Jct	2009	04 49990220569	$7,247,800	$27,617,200	$34,865,000	135,000	-	$258	-
National Business Park	318 Sentinel Way	Annapolis Jct	2007	04 499 90218043	$4,371,000	$30,859,400	$35,230,400	130,200	-	$271	-
Sub-total					$19,553,800	$123,078,300	$142,632,100	581,140		***$244***	
Retail/Restaurant											
Retail	8201 Snowden River Parkway	Columbia	2009	16219444	$494,900	$510,600	$1,005,500	5,420	-	$186	-
Restaurant/Retail	8180 Maple Lawn Boulevard	Fulton	2005	5439035	$1,404,800	$2,276,500	$3,681,300	20,688	-	$178	-
Restaurant/Retail	8191 Maple Lawn Boulevard	Fulton	2006	5438969	$1,326,400	$1,945,600	$3,272,000	12,480	-	$262	-
Annapolis Town Center - ground floor retail	1905 Towne Centre Boulevard	Annapolis	2008	02 010 90228913	$4,728,000	$18,013,400	$22,741,400	53,037	-	$429	-
Annapolis Town Center - ground floor retail	1915 Towne Centre Boulevard	Annapolis	2008	02 010 90227609	$1,200,000	$19,725,900	$20,925,900	48,803	-	$429	-
Annapolis Town Center - ground floor retail	1910 Towne Centre Boulevard	Annapolis	2009	02 010 90228914	$7,283,000	$26,639,100	$33,922,100	84,175	-	$403	-
Victorias	8203 Snowden River Parkway	Columbia	2001	16214183	$443,300	$884,600	$1,327,900	6,689	-	$199	-
Bertucci's	9081 Snowden River Parkway	Columbia	1993	06539297	$2,432,400	$1,135,900	$3,568,300	7,597	-	$470	-
Red Lobster	9011 Snowden Square Drive	Columbia	1995	06539343	$2,236,000	$827,900	$3,063,900	8,670	-	$353	-
Lonestar Steakhouse	8900 Stanford Boulevard	Columbia	1996	16191167	$1,555,000	$1,153,600	$2,708,600	6,830	-	$397	-
Cheesecake Factory, Unos, Champs, PF Chang[2]	Mall at Columbia	Columbia	2001	-	-	-	-	32,753	-	$444	-
Sub-total					$23,103,800	$73,113,100	$96,216,900	287,142		***$341***	
Hotel/Conference Center											
Residence Inn Columbia	4950 Beaver Run	Ellicott City	1998	02-389568	$1,572,500	$8,766,800	$10,339,300	73,800	108	$140	$95,734
Hampton Inn & Suites Columbia/South	7045 Minstrel Wa	Columbia	2013	16-218324	$1,156,500	$8,980,500	$10,137,000	67,016	124	$151	$81,750
Marriott BWI	1743 W Nursery Road	Linthicum	1988	05-000-90046373	$5,381,600	$29,895,000	$35,276,600	221,656	309	$159	$114,164
Hilton Garden Inn	8241 SE Snowden River Parkway	Columbia	2003	16-21410	$1,050,600	$8,230,900	$9,281,500	57,968	98	$160	$94,709
SpringHill Suites Columbia	7055 Minstrel Way	Columbia	2009	16-218316	$882,000	$11,925,300	$12,807,300	66,228	117	$193	$109,464
Hotel at Arundel Preserve	7795 Arundel Mills Boulevard	Hanover	2011	04-000-90231748	$812,200	$27,484,200	$28,296,400	140,000	150	$202	$188,643
Westin BWI	1110 Old Elkridge Landing	Linthicum	2007	05-000-900050327	7074600	22830100	29904700	145226	260	$206	$115,018
Sub-total					$17,930,000	$118,112,800	$136,042,800	771,894		***$173***	***$114,212***

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]II-C*
17-Sep-15

[1]Assessed values based on information provided by Maryland State Department of Assessments and Taxation. Values used on Schedule I are shown in bold, italics, and underlined.

[2]Represents the approximate assessed value of four restaurants as provided by Howard County Office of the Maryland State Department of Assessments and Taxation. Restaurants are part of larger mall parcel and values need to be extracted from overall value.

Downtown Columbia
Howard County, Maryland

Schedule II-D: Projected Market Value - (Income Capitalization -Apartments, Office, Restaurant, & Retail)[1]

	Multi-Family Rental			
	Market	Subsidized[4]	Office	Retail/Restaurant
Monthly rent per square foot	$2.20	$2.20		
Annual rent per square foot[1]	$26.40	$26.40	$34.00	$55.00
Net square feet per unit	1,000	1,000		
Monthly rent per unit[1]	$2,200	$2,200		
Annual rent per unit	$26,400	$26,400		
Occupancy[1]	90%	90%	95%	95%
Effective rent per square foot	$23.76	$23.76	$32.30	$52.25
Effective rent per unit	$23,760	$23,760		
Expense ratio[1]	37.0%	47.00%	37%	8%
Expenses	($8,791.20)	($11,167.20)	($11.90)	($12.50)
Net operating income per square foot	$14.97	$12.59	$20.40	$39.75
Net operating income per unit	$14,969	$12,593		
Capitalization rate[2]	6.500%	8.500%	8.250%	7.504%
Tax rate[3]	1.126%	1.126%	1.126%	1.126%
Fully loaded capitalization rate	7.626%	9.626%	9.376%	8.630%
Value per net square foot	$196.29	$130.82	$217.58	$460.60
Value per unit	$196,286	$130,821		
Value per gross square foot	$166.34	$110.86		

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]II-D*
17-Sep-15

[1]Rent and expense assumptions based on information provided by The Howard Research and Development Corporation. Occupancy assumption provided by Maryland State Department of Assessments and Taxation.

[2]Capitalization rates provided by the Maryland State Department of Assessments and Taxation.

[3]Includes the fiscal year 2016 Howard County ($1.014) and Maryland State ($0.112) tax rate.

[4]Based on conversations with and Taxation Supervisor of Assessments for Howard County (Maryland Department of Assessments and Taxation), it is expected that subsidized apartment units will be assessed at a lower rate than market apartments based on increased capitalization rates and expense assumptions. It is assumed that subsidized units will be adjusted uniformly, regardless of the size of the subsidy or income thresholds.

Downtown Columbia
Howard County, Maryland

Schedule II-E: Projected Market Value (Income Capitalization - Hotel)

	Limited Service Hotel
Income Capitalization	
Average daily rate per room[1]	$56.25
Gross annual income	$20,532.00
Assumed occupancy[1]	95.0%
Effective gross income per room	$19,506.00
Assumed expense ratio[1]	32%
Less: assumed expenses	($6,162.00)
Net operating income per room	$13,344.00
Capitalization rate[2]	9.70%
Tax rate[3]	1.126%
Fully loaded capitalization rate	10.83%
Total estimated value per room	$123,258.82

MuniCap, Inc. *er\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]II-E*

17-Sep-15

[1]Assumptions provided by The Howard Research and Development Corporation.

[2]Represents the average overall capitalization rate for the limited service hotel as provided in the *PwC Real Estate Investor Survey for First Quarter 2015.*

[3]Includes the fiscal year 2016 Howard County ($1.014) and Maryland State ($0.112) tax rate.

Downtown Columbia
Howard County, Maryland

Schedule III-A: Projected Absorption - Residential[1]

			Multi-Family Rental															
		Tax	Market Rate (Units)		80% AMI (Units)		40-60% AMI (Units)		30% AMI (Units)		Flier Building (Market) (Units)		Flier Building (40-60%) (Units)		Metropolitan (Units)		Total Rental (Units)	
Year Ending	Assessed As Of Date	Year Beginning	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative	Annual	Cumulative
31-Dec-15	1-Jan-16	1-Jul-16	0	0	0	0	0	0	0	0	0	0	0	0	380	380	380	380
31-Dec-16	1-Jan-17	1-Jul-17	0	0	0	0	0	0	0	0	0	0	0	0	0	380	0	380
31-Dec-17	1-Jan-18	1-Jul-18	0	0	0	0	0	0	0	0	0	0	0	0	437	817	437	817
31-Dec-18	1-Jan-19	1-Jul-19	254	254	189	189	0	0	0	0	0	0	0	0	0	817	443	1,260
31-Dec-19	1-Jan-20	1-Jul-20	527	781	93	282	0	0	0	0	0	0	0	0	0	817	620	1,880
31-Dec-20	1-Jan-21	1-Jul-21	353	1,134	93	375	0	0	0	0	0	0	0	0	0	817	446	2,326
31-Dec-21	1-Jan-22	1-Jul-22	0	1,134	0	375	0	0	0	0	0	0	0	0	0	817	0	2,326
31-Dec-22	1-Jan-23	1-Jul-23	243	1,377	69	444	0	0	0	0	0	0	0	0	0	817	312	2,638
31-Dec-23	1-Jan-24	1-Jul-24	277	1,654	49	493	0	0	0	0	0	0	0	0	0	817	326	2,964
31-Dec-24	1-Jan-25	1-Jul-25	277	1,932	49	542	0	0	0	0	0	0	0	0	0	817	326	3,291
31-Dec-25	1-Jan-26	1-Jul-26	277	2,209	49	591	0	0	0	0	0	0	0	0	0	817	326	3,617
31-Dec-26	1-Jan-27	1-Jul-27	772	2,981	136	727	0	0	0	0	0	0	0	0	0	817	908	4,525
31-Dec-27	1-Jan-28	1-Jul-28	277	3,259	49	776	0	0	0	0	0	0	0	0	0	817	326	4,852
31-Dec-28	1-Jan-29	1-Jul-29	50	3,309	49	825	0	0	0	0	0	0	0	0	0	817	99	4,951
31-Dec-29	1-Jan-30	1-Jul-30	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-30	1-Jan-31	1-Jul-31	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-31	1-Jan-32	1-Jul-32	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-32	1-Jan-33	1-Jul-33	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-33	1-Jan-34	1-Jul-34	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-34	1-Jan-35	1-Jul-35	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-35	1-Jan-36	1-Jul-36	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-36	1-Jan-37	1-Jul-37	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-37	1-Jan-38	1-Jul-38	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-38	1-Jan-39	1-Jul-39	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-39	1-Jan-40	1-Jul-40	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-40	1-Jan-41	1-Jul-41	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-41	1-Jan-42	1-Jul-42	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-42	1-Jan-43	1-Jul-43	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-43	1-Jan-44	1-Jul-44	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-44	1-Jan-45	1-Jul-45	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-45	1-Jan-46	1-Jul-46	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-46	1-Jan-47	1-Jul-47	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-47	1-Jan-48	1-Jul-48	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-48	1-Jan-49	1-Jul-49	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
31-Dec-49	1-Jan-50	1-Jul-50	0	3,309	0	825	0	0	0	0	0	0	0	0	0	817	0	4,951
Total			3,309		825		0		0		0		0		817		4,951	

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IIIA*

17-Sep-15

[1]Development source: Howard County.

Downtown Columbia
Howard County, Maryland

Schedule III-A: Projected Absorption - Residential, continued[1]

			For Sale			
		Tax	Condos (Units)		Townhomes (Units)	
Year Ending	Assessed As Of Date	Tax Year Beginning	Annual	Cumulative	Annual	Cumulative
31-Dec-15	1-Jan-16	1-Jul-16	0	0	0	0
31-Dec-16	1-Jan-17	1-Jul-17	0	0	0	0
31-Dec-17	1-Jan-18	1-Jul-18	0	0	0	0
31-Dec-18	1-Jan-19	1-Jul-19	0	0	0	0
31-Dec-19	1-Jan-20	1-Jul-20	0	0	0	0
31-Dec-20	1-Jan-21	1-Jul-21	84	84	88	88
31-Dec-21	1-Jan-22	1-Jul-22	0	84	0	88
31-Dec-22	1-Jan-23	1-Jul-23	150	234	0	88
31-Dec-23	1-Jan-24	1-Jul-24	0	234	0	88
31-Dec-24	1-Jan-25	1-Jul-25	0	234	0	88
31-Dec-25	1-Jan-26	1-Jul-26	0	234	0	88
31-Dec-26	1-Jan-27	1-Jul-27	0	234	0	88
31-Dec-27	1-Jan-28	1-Jul-28	0	234	0	88
31-Dec-28	1-Jan-29	1-Jul-29	227	461	0	88
31-Dec-29	1-Jan-30	1-Jul-30	0	461	0	88
31-Dec-30	1-Jan-31	1-Jul-31	0	461	0	88
31-Dec-31	1-Jan-32	1-Jul-32	0	461	0	88
31-Dec-32	1-Jan-33	1-Jul-33	0	461	0	88
31-Dec-33	1-Jan-34	1-Jul-34	0	461	0	88
31-Dec-34	1-Jan-35	1-Jul-35	0	461	0	88
31-Dec-35	1-Jan-36	1-Jul-36	0	461	0	88
31-Dec-36	1-Jan-37	1-Jul-37	0	461	0	88
31-Dec-37	1-Jan-38	1-Jul-38	0	461	0	88
31-Dec-38	1-Jan-39	1-Jul-39	0	461	0	88
31-Dec-39	1-Jan-40	1-Jul-40	0	461	0	88
31-Dec-40	1-Jan-41	1-Jul-41	0	461	0	88
31-Dec-41	1-Jan-42	1-Jul-42	0	461	0	88
31-Dec-42	1-Jan-43	1-Jul-43	0	461	0	88
31-Dec-43	1-Jan-44	1-Jul-44	0	461	0	88
31-Dec-44	1-Jan-45	1-Jul-45	0	461	0	88
31-Dec-45	1-Jan-46	1-Jul-46	0	461	0	88
31-Dec-46	1-Jan-47	1-Jul-47	0	461	0	88
31-Dec-47	1-Jan-48	1-Jul-48	0	461	0	88
31-Dec-48	1-Jan-49	1-Jul-49	0	461	0	88
31-Dec-49	1-Jan-50	1-Jul-50	0	461	0	88
Total			461		88	

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IIIA.2*

17-Sep-15

[1]Development source: Howard Hughes. For sale residential assumes 88 townhomes and same condo to overall mix percentage based on proposal provided by HRD.

Downtown Columbia
Howard County, Maryland

Schedule III-B: Projected Absorption - Commercial[1]

Year Ending	Assessed As Of Date	Tax Year Beginning	Office (SF) Annual	Office (SF) Cumulative	Retail (SF) Annual	Retail (SF) Cumulative	Restaurant - Full Service (SF) Annual	Restaurant - Full Service (SF) Cumulative	Restaurant - Fast Food (SF) Annual	Restaurant - Fast Food (SF) Cumulative	Hotel (Rooms) Annual	Hotel (Rooms) Cumulative	Civic/Recreation (SF) Annual	Civic/Recreation (SF) Cumulative
31-Dec-15	1-Jan-16	1-Jul-16	0	0	0	0	0	0	0	0	0	0	0	0
31-Dec-16	1-Jan-17	1-Jul-17	204,000	204,000	0	0	9,000	9,000	0	0	0	0	0	0
31-Dec-17	1-Jan-18	1-Jul-18	125,000	329,000	5,000	5,000	0	9,000	0	0	0	0	0	0
31-Dec-18	1-Jan-19	1-Jul-19	614,000	943,000	58,900	63,900	27,000	36,000	21,000	21,000	0	0	25,000	25,000
31-Dec-19	1-Jan-20	1-Jul-20	480,600	1,423,600	50,905	114,805	15,000	51,000	10,000	31,000	300	300	0	25,000
31-Dec-20	1-Jan-21	1-Jul-21	280,000	1,703,600	51,351	166,156	32,890	83,890	21,079	52,079	0	300	20,000	45,000
31-Dec-21	1-Jan-22	1-Jul-22	300,000	2,003,600	51,351	217,506	32,890	116,780	21,079	73,158	0	300	0	45,000
31-Dec-22	1-Jan-23	1-Jul-23	384,150	2,387,750	51,351	268,857	32,890	149,671	21,079	94,236	170	470	0	45,000
31-Dec-23	1-Jan-24	1-Jul-24	145,000	2,532,750	51,351	320,207	32,890	182,561	21,079	115,315	0	470	151,450	196,450
31-Dec-24	1-Jan-25	1-Jul-25	362,050	2,894,800	51,351	371,558	32,890	215,451	21,079	136,394	0	470	0	196,450
31-Dec-25	1-Jan-26	1-Jul-26	261,000	3,155,800	51,351	422,908	32,890	248,341	21,079	157,473	0	470	0	196,450
31-Dec-26	1-Jan-27	1-Jul-27	269,200	3,425,000	51,351	474,259	32,890	281,231	21,079	178,552	170	640	0	196,450
31-Dec-27	1-Jan-28	1-Jul-28	300,000	3,725,000	51,351	525,609	32,890	314,122	21,079	199,630	0	640	0	196,450
31-Dec-28	1-Jan-29	1-Jul-29	175,000	3,900,000	51,351	576,960	32,890	347,012	21,079	220,709	0	640	0	196,450
31-Dec-29	1-Jan-30	1-Jul-30	400,000	4,300,000	51,351	628,310	32,890	379,902	21,079	241,788	0	640	0	196,450
31-Dec-30	1-Jan-31	1-Jul-31	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-31	1-Jan-32	1-Jul-32	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-32	1-Jan-33	1-Jul-33	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-33	1-Jan-34	1-Jul-34	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-34	1-Jan-35	1-Jul-35	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-35	1-Jan-36	1-Jul-36	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-36	1-Jan-37	1-Jul-37	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-37	1-Jan-38	1-Jul-38	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-38	1-Jan-39	1-Jul-39	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-39	1-Jan-40	1-Jul-40	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-40	1-Jan-41	1-Jul-41	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-41	1-Jan-42	1-Jul-42	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-42	1-Jan-43	1-Jul-43	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-43	1-Jan-44	1-Jul-44	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-44	1-Jan-45	1-Jul-45	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-45	1-Jan-46	1-Jul-46	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-46	1-Jan-47	1-Jul-47	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-47	1-Jan-48	1-Jul-48	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-48	1-Jan-49	1-Jul-49	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
31-Dec-49	1-Jan-50	1-Jul-50	0	4,300,000	0	628,310	0	379,902	0	241,788	0	640	0	196,450
Total			4,300,000		628,310		379,902		241,788		640		196,450	

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IIIB

17-Sep-15

[1]Development source: Howard Hughes and Downtown Columbia Plan.

Downtown Columbia
Howard County, Maryland

Schedule IV-A: Total Projected Market Value - Residential

	Tax		Multi-Family Rental (Market Rate)				Multi-Family Rental (80% AMI)				Multi-Family Rental (40-60% AMI)			
Assessed As Of Date	Year Beginning	Inflation Factor	Units[1]	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value	Units[1]	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value	Units[1]	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value
1-Jan-16	1-Jul-16	100%	0	$244,751	0%	$0	0	$163,121	0%	$0	0	$0	0%	$0
1-Jan-17	1-Jul-17	103%	0	$252,094	0%	$0	0	$168,015	0%	$0	0	$0	0%	$0
1-Jan-18	1-Jul-18	106%	0	$259,656	0%	$0	0	$173,055	0%	$0	0	$0	0%	$0
1-Jan-19	1-Jul-19	109%	254	$267,446	80%	$54,345,027	189	$178,247	80%	$26,950,955	0	$0	0%	$0
1-Jan-20	1-Jul-20	113%	781	$275,469	82%	$176,777,884	282	$183,594	84%	$43,732,203	0	$0	0%	$0
1-Jan-21	1-Jul-21	116%	1,134	$283,733	86%	$276,980,606	375	$189,102	88%	$62,668,504	0	$0	0%	$0
1-Jan-22	1-Jul-22	119%	1,134	$292,245	93%	$307,383,781	375	$194,775	95%	$69,417,943	0	$0	0%	$0
1-Jan-23	1-Jul-23	123%	1,377	$301,013	95%	$392,781,608	444	$200,619	95%	$85,062,301	0	$0	0%	$0
1-Jan-24	1-Jul-24	127%	1,654	$310,043	95%	$485,684,763	493	$206,637	96%	$97,946,030	0	$0	0%	$0
1-Jan-25	1-Jul-25	130%	1,932	$319,345	94%	$582,198,753	542	$212,836	96%	$110,901,906	0	$0	0%	$0
1-Jan-26	1-Jul-26	134%	2,209	$328,925	95%	$690,149,017	591	$219,221	97%	$125,263,107	0	$0	0%	$0
1-Jan-27	1-Jul-27	138%	2,981	$338,793	93%	$938,909,462	727	$225,798	95%	$155,800,648	0	$0	0%	$0
1-Jan-28	1-Jul-28	143%	3,259	$348,956	95%	$1,075,380,008	776	$232,572	96%	$173,219,612	0	$0	0%	$0
1-Jan-29	1-Jul-29	147%	3,309	$359,425	97%	$1,153,884,200	825	$239,549	97%	$191,543,494	0	$0	0%	$0
1-Jan-30	1-Jul-30	151%	3,309	$370,208	99%	$1,215,642,338	825	$246,736	99%	$201,138,874	0	$0	0%	$0
1-Jan-31	1-Jul-31	156%	3,309	$381,314	100%	$1,260,440,386	825	$254,138	100%	$208,833,406	0	$0	0%	$0
1-Jan-32	1-Jul-32	160%	3,309	$392,753	100%	$1,299,569,354	825	$261,762	100%	$215,953,497	0	$0	0%	$0
1-Jan-33	1-Jul-33	165%	3,309	$404,536	100%	$1,338,556,435	825	$269,615	100%	$222,432,102	0	$0	0%	$0
1-Jan-34	1-Jul-34	170%	3,309	$416,672	100%	$1,378,713,128	825	$277,703	100%	$229,105,065	0	$0	0%	$0
1-Jan-35	1-Jul-35	175%	3,309	$429,172	100%	$1,420,074,522	825	$286,034	100%	$235,978,217	0	$0	0%	$0
1-Jan-36	1-Jul-36	181%	3,309	$442,047	100%	$1,462,676,758	825	$294,615	100%	$243,057,564	0	$0	0%	$0
1-Jan-37	1-Jul-37	186%	3,309	$455,309	100%	$1,506,557,060	825	$303,454	100%	$250,349,291	0	$0	0%	$0
1-Jan-38	1-Jul-38	192%	3,309	$468,968	100%	$1,551,753,772	825	$312,557	100%	$257,859,769	0	$0	0%	$0
1-Jan-39	1-Jul-39	197%	3,309	$483,037	100%	$1,598,306,385	825	$321,934	100%	$265,595,562	0	$0	0%	$0
1-Jan-40	1-Jul-40	203%	3,309	$497,528	100%	$1,646,255,577	825	$331,592	100%	$273,563,429	0	$0	0%	$0
1-Jan-41	1-Jul-41	209%	3,309	$512,454	100%	$1,695,643,244	825	$341,540	100%	$281,770,332	0	$0	0%	$0
1-Jan-42	1-Jul-42	216%	3,309	$527,828	100%	$1,746,512,541	825	$351,786	100%	$290,223,442	0	$0	0%	$0
1-Jan-43	1-Jul-43	222%	3,309	$543,663	100%	$1,798,907,918	825	$362,340	100%	$298,930,145	0	$0	0%	$0
1-Jan-44	1-Jul-44	229%	3,309	$559,973	100%	$1,852,875,155	825	$373,210	100%	$307,898,050	0	$0	0%	$0
1-Jan-45	1-Jul-45	236%	3,309	$576,772	100%	$1,908,461,410	825	$384,406	100%	$317,134,991	0	$0	0%	$0
1-Jan-46	1-Jul-46	243%	3,309	$594,075	100%	$1,965,715,252	825	$395,938	100%	$326,649,041	0	$0	0%	$0
1-Jan-47	1-Jul-47	250%	3,309	$611,897	100%	$2,024,686,710	825	$407,816	100%	$336,448,512	0	$0	0%	$0
1-Jan-48	1-Jul-48	258%	3,309	$630,254	100%	$2,085,427,311	825	$420,051	100%	$346,541,967	0	$0	0%	$0
1-Jan-49	1-Jul-49	265%	3,309	$649,162	100%	$2,147,990,130	825	$432,652	100%	$356,938,226	0	$0	0%	$0
1-Jan-50	1-Jul-50	273%	3,309	$668,636	100%	$2,212,429,834	825	$445,632	100%	$367,646,373	0	$0	0%	$0

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IV-A
17-Sep-15

[1]See Schedule III-A.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Schedule IV-A: Total Projected Market Value - Residential, continued

	Tax		Multi-Family Rental (30% AMI)				Multi-Family Rental (Flier Bldg. Market Rate)				Multi-Family Rental (Flier Bldg. 40-60% AMI)			
Assessed As Of Date	Year Beginning	Inflation Factor	Units[1]	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value	Units[1]	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value	Units[1]	Value Per Unit[2]	Phase-In Percent[3]	Projected Market Value
1-Jan-16	1-Jul-16	100%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-17	1-Jul-17	103%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-18	1-Jul-18	106%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-19	1-Jul-19	109%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-20	1-Jul-20	113%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-21	1-Jul-21	116%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-22	1-Jul-22	119%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-23	1-Jul-23	123%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-24	1-Jul-24	127%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-25	1-Jul-25	130%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-26	1-Jul-26	134%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-27	1-Jul-27	138%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-28	1-Jul-28	143%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-29	1-Jul-29	147%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-30	1-Jul-30	151%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-31	1-Jul-31	156%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-32	1-Jul-32	160%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-33	1-Jul-33	165%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-34	1-Jul-34	170%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-35	1-Jul-35	175%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-36	1-Jul-36	181%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-37	1-Jul-37	186%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-38	1-Jul-38	192%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-39	1-Jul-39	197%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-40	1-Jul-40	203%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-41	1-Jul-41	209%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-42	1-Jul-42	216%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-43	1-Jul-43	222%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-44	1-Jul-44	229%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-45	1-Jul-45	236%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-46	1-Jul-46	243%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-47	1-Jul-47	250%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-48	1-Jul-48	258%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-49	1-Jul-49	265%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0
1-Jan-50	1-Jul-50	273%	0	$0	0%	$0	0	$0	0%	$0	0	$0	0%	$0

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IVA.2*

17-Sep-15

[1]See Schedule III-A.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Schedule IV-A: Total Projected Market Value - Residential, continued

	Tax		Multi-Family Rental (Metropolitan)				For Sale Condos				For Sale Townhomes				Total Projected
Assessed	Year	Inflation		Value Per	Phase-In	Projected		Value Per	Phase-In	Projected		Value Per	Phase-In	Projected	Residential
As Of Date	Beginning	Factor	Units[1]	Unit[2]	Percent[3]	Market Value	Units[1]	Unit[2]	Percent[3]	Market Value	Units[1]	Unit[2]	Percent[3]	Market Value	Market Value
1-Jan-16	1-Jul-16	100%	380	$244,751	80%	$74,404,297	0	$302,861	0%	$0	0	$341,090	0%	$0	$74,404,297
1-Jan-17	1-Jul-17	103%	380	$252,094	87%	$83,022,795	0	$311,947	0%	$0	0	$351,323	0%	$0	$83,022,795
1-Jan-18	1-Jul-18	106%	817	$259,656	86%	$182,867,285	0	$321,305	0%	$0	0	$361,863	0%	$0	$182,867,285
1-Jan-19	1-Jul-19	109%	817	$267,446	93%	$202,920,196	0	$330,945	0%	$0	0	$372,719	0%	$0	$284,216,178
1-Jan-20	1-Jul-20	113%	817	$275,469	96%	$217,033,143	0	$340,873	0%	$0	0	$383,900	0%	$0	$437,543,230
1-Jan-21	1-Jul-21	116%	817	$283,733	100%	$231,810,239	84	$351,099	80%	$23,593,864	88	$395,417	80%	$27,837,364	$622,890,576
1-Jan-22	1-Jul-22	119%	817	$292,245	100%	$238,764,546	84	$361,632	87%	$26,326,820	88	$407,280	87%	$31,061,859	$672,954,949
1-Jan-23	1-Jul-23	123%	817	$301,013	100%	$245,927,482	234	$372,481	85%	$73,900,253	88	$419,498	93%	$34,454,769	$832,126,414
1-Jan-24	1-Jul-24	127%	817	$310,043	100%	$253,305,307	234	$383,656	91%	$82,102,287	88	$432,083	100%	$38,023,299	$957,061,685
1-Jan-25	1-Jul-25	130%	817	$319,345	100%	$260,904,466	234	$395,165	96%	$88,517,008	88	$445,045	100%	$39,163,998	$1,081,686,131
1-Jan-26	1-Jul-26	134%	817	$328,925	100%	$268,731,600	234	$407,020	100%	$95,242,720	88	$458,397	100%	$40,338,918	$1,219,725,362
1-Jan-27	1-Jul-27	138%	817	$338,793	100%	$276,793,548	234	$419,231	100%	$98,100,001	88	$472,149	100%	$41,549,085	$1,511,152,745
1-Jan-28	1-Jul-28	143%	817	$348,956	100%	$285,097,354	234	$431,808	100%	$101,043,001	88	$486,313	100%	$42,795,558	$1,677,535,534
1-Jan-29	1-Jul-29	147%	817	$359,425	100%	$293,650,275	461	$444,762	90%	$184,890,052	88	$500,903	100%	$44,079,425	$1,868,047,445
1-Jan-30	1-Jul-30	151%	817	$370,208	100%	$302,459,783	461	$458,105	93%	$197,373,439	88	$515,930	100%	$45,401,807	$1,962,016,241
1-Jan-31	1-Jul-31	156%	817	$381,314	100%	$311,533,577	461	$471,848	97%	$210,439,429	88	$531,408	100%	$46,763,862	$2,038,010,659
1-Jan-32	1-Jul-32	160%	817	$392,753	100%	$320,879,584	461	$486,003	100%	$224,111,742	88	$547,350	100%	$48,166,777	$2,108,680,955
1-Jan-33	1-Jul-33	165%	817	$404,536	100%	$330,505,971	461	$500,583	100%	$230,835,094	88	$563,770	100%	$49,611,781	$2,171,941,384
1-Jan-34	1-Jul-34	170%	817	$416,672	100%	$340,421,150	461	$515,601	100%	$237,760,147	88	$580,683	100%	$51,100,134	$2,237,099,625
1-Jan-35	1-Jul-35	175%	817	$429,172	100%	$350,633,785	461	$531,069	100%	$244,892,952	88	$598,104	100%	$52,633,138	$2,304,212,614
1-Jan-36	1-Jul-36	181%	817	$442,047	100%	$361,152,799	461	$547,001	100%	$252,239,740	88	$616,047	100%	$54,212,132	$2,373,338,992
1-Jan-37	1-Jul-37	186%	817	$455,309	100%	$371,987,382	461	$563,411	100%	$259,806,932	88	$634,528	100%	$55,838,496	$2,444,539,162
1-Jan-38	1-Jul-38	192%	817	$468,968	100%	$383,147,004	461	$580,313	100%	$267,601,140	88	$653,564	100%	$57,513,651	$2,517,875,337
1-Jan-39	1-Jul-39	197%	817	$483,037	100%	$394,641,414	461	$597,723	100%	$275,629,175	88	$673,171	100%	$59,239,061	$2,593,411,597
1-Jan-40	1-Jul-40	203%	817	$497,528	100%	$406,480,657	461	$615,655	100%	$283,898,050	88	$693,366	100%	$61,016,233	$2,671,213,945
1-Jan-41	1-Jul-41	209%	817	$512,454	100%	$418,675,076	461	$634,124	100%	$292,414,991	88	$714,167	100%	$62,846,720	$2,751,350,363
1-Jan-42	1-Jul-42	216%	817	$527,828	100%	$431,235,328	461	$653,148	100%	$301,187,441	88	$735,592	100%	$64,732,121	$2,833,890,874
1-Jan-43	1-Jul-43	222%	817	$543,663	100%	$444,172,388	461	$672,742	100%	$310,223,064	88	$757,660	100%	$66,674,085	$2,918,907,600
1-Jan-44	1-Jul-44	229%	817	$559,973	100%	$457,497,560	461	$692,925	100%	$319,529,756	88	$780,390	100%	$68,674,307	$3,006,474,828
1-Jan-45	1-Jul-45	236%	817	$576,772	100%	$471,222,487	461	$713,712	100%	$329,115,649	88	$803,802	100%	$70,734,537	$3,096,669,073
1-Jan-46	1-Jul-46	243%	817	$594,075	100%	$485,359,161	461	$735,124	100%	$338,989,118	88	$827,916	100%	$72,856,573	$3,189,569,145
1-Jan-47	1-Jul-47	250%	817	$611,897	100%	$499,919,936	461	$757,177	100%	$349,158,792	88	$852,753	100%	$75,042,270	$3,285,256,220
1-Jan-48	1-Jul-48	258%	817	$630,254	100%	$514,917,534	461	$779,893	100%	$359,633,556	88	$878,336	100%	$77,293,538	$3,383,813,906
1-Jan-49	1-Jul-49	265%	817	$649,162	100%	$530,365,060	461	$803,290	100%	$370,422,562	88	$904,686	100%	$79,612,344	$3,485,328,324
1-Jan-50	1-Jul-50	273%	817	$668,636	100%	$546,276,012	461	$827,388	100%	$381,535,239	88	$931,826	100%	$82,000,714	$3,589,888,173

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IVA.3
17-Sep-15

[1]See Schedule III-A.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Schedule IV-B: Total Projected Market Value - Commercial

			Office				Retail				Restaurant - Full Service			
Assessed As Of Date	Tax Year Beginning	Inflation Factor	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value	Square Feet[1]	Value Per SF[2]	Phase-In Percent[3]	Projected Market Value
1-Jan-16	1-Jul-16	100%	0	$244	0%	$0	0	$341	0%	$0	0	$341	0%	$0
1-Jan-17	1-Jul-17	103%	204,000	$252	80%	$41,061,857	0	$351	0%	$0	9,000	$351	80%	$2,527,129
1-Jan-18	1-Jul-18	106%	329,000	$259	84%	$71,733,454	5,000	$362	80%	$1,446,079	9,000	$362	87%	$2,819,855
1-Jan-19	1-Jul-19	109%	943,000	$267	84%	$210,854,718	63,900	$372	81%	$19,159,445	36,000	$372	83%	$11,170,964
1-Jan-20	1-Jul-20	113%	1,423,600	$275	87%	$340,171,638	114,805	$384	84%	$36,987,231	51,000	$384	87%	$17,029,018
1-Jan-21	1-Jul-21	116%	1,703,600	$283	91%	$436,834,475	166,156	$395	87%	$57,348,877	83,890	$395	88%	$29,040,426
1-Jan-22	1-Jul-22	119%	2,003,600	$292	94%	$546,671,799	217,506	$407	91%	$80,156,249	116,780	$407	90%	$42,649,380
1-Jan-23	1-Jul-23	123%	2,387,750	$300	94%	$676,642,108	268,857	$419	92%	$104,069,516	149,671	$419	91%	$57,213,307
1-Jan-24	1-Jul-24	127%	2,532,750	$309	96%	$752,726,511	320,207	$432	94%	$129,358,259	182,561	$432	93%	$73,127,533
1-Jan-25	1-Jul-25	130%	2,894,800	$319	96%	$885,241,896	371,558	$445	94%	$156,070,665	215,451	$445	94%	$89,945,122
1-Jan-26	1-Jul-26	134%	3,155,800	$328	97%	$999,850,057	422,908	$458	95%	$184,269,392	248,341	$458	95%	$107,705,950
1-Jan-27	1-Jul-27	138%	3,425,000	$338	97%	$1,119,980,067	474,259	$472	96%	$214,019,579	281,231	$472	95%	$126,451,478
1-Jan-28	1-Jul-28	143%	3,725,000	$348	97%	$1,257,883,373	525,609	$486	96%	$245,388,935	314,122	$486	96%	$146,224,802
1-Jan-29	1-Jul-29	147%	3,900,000	$359	98%	$1,365,696,170	576,960	$500	96%	$278,447,834	347,012	$500	96%	$167,070,719
1-Jan-30	1-Jul-30	151%	4,300,000	$369	97%	$1,543,235,380	628,310	$515	97%	$313,269,418	379,902	$515	97%	$189,035,789
1-Jan-31	1-Jul-31	156%	4,300,000	$381	98%	$1,611,732,615	628,310	$531	98%	$328,119,939	379,902	$531	98%	$198,199,170
1-Jan-32	1-Jul-32	160%	4,300,000	$392	99%	$1,675,110,940	628,310	$547	99%	$341,707,545	379,902	$547	99%	$206,543,196
1-Jan-33	1-Jul-33	165%	4,300,000	$404	100%	$1,736,130,972	628,310	$563	100%	$353,886,935	379,902	$563	100%	$213,974,488
1-Jan-34	1-Jul-34	170%	4,300,000	$416	100%	$1,788,214,901	628,310	$580	100%	$364,503,543	379,902	$580	100%	$220,393,723
1-Jan-35	1-Jul-35	175%	4,300,000	$428	100%	$1,841,861,348	628,310	$598	100%	$375,438,650	379,902	$598	100%	$227,005,534
1-Jan-36	1-Jul-36	181%	4,300,000	$441	100%	$1,897,117,189	628,310	$615	100%	$386,701,809	379,902	$615	100%	$233,815,700
1-Jan-37	1-Jul-37	186%	4,300,000	$454	100%	$1,954,030,704	628,310	$634	100%	$398,302,864	379,902	$634	100%	$240,830,171
1-Jan-38	1-Jul-38	192%	4,300,000	$468	100%	$2,012,651,625	628,310	$653	100%	$410,251,949	379,902	$653	100%	$248,055,077
1-Jan-39	1-Jul-39	197%	4,300,000	$482	100%	$2,073,031,174	628,310	$673	100%	$422,559,508	379,902	$673	100%	$255,496,729
1-Jan-40	1-Jul-40	203%	4,300,000	$497	100%	$2,135,222,109	628,310	$693	100%	$435,236,293	379,902	$693	100%	$263,161,631
1-Jan-41	1-Jul-41	209%	4,300,000	$511	100%	$2,199,278,773	628,310	$713	100%	$448,293,382	379,902	$713	100%	$271,056,480
1-Jan-42	1-Jul-42	216%	4,300,000	$527	100%	$2,265,257,136	628,310	$735	100%	$461,742,183	379,902	$735	100%	$279,188,174
1-Jan-43	1-Jul-43	222%	4,300,000	$543	100%	$2,333,214,850	628,310	$757	100%	$475,594,449	379,902	$757	100%	$287,563,819
1-Jan-44	1-Jul-44	229%	4,300,000	$559	100%	$2,403,211,296	628,310	$780	100%	$489,862,282	379,902	$780	100%	$296,190,734
1-Jan-45	1-Jul-45	236%	4,300,000	$576	100%	$2,475,307,634	628,310	$803	100%	$504,558,151	379,902	$803	100%	$305,076,456
1-Jan-46	1-Jul-46	243%	4,300,000	$593	100%	$2,549,566,863	628,310	$827	100%	$519,694,895	379,902	$827	100%	$314,228,749
1-Jan-47	1-Jul-47	250%	4,300,000	$611	100%	$2,626,053,869	628,310	$852	100%	$535,285,742	379,902	$852	100%	$323,655,612
1-Jan-48	1-Jul-48	258%	4,300,000	$629	100%	$2,704,835,485	628,310	$878	100%	$551,344,315	379,902	$878	100%	$333,365,280
1-Jan-49	1-Jul-49	265%	4,300,000	$648	100%	$2,785,980,550	628,310	$904	100%	$567,884,644	379,902	$904	100%	$343,366,239
1-Jan-50	1-Jul-50	273%	4,300,000	$667	100%	$2,869,559,966	628,310	$931	100%	$584,921,183	379,902	$931	100%	$353,667,226

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IVB*
17-Sep-15

[1]See Schedule III-B.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Schedule IV-B: Total Projected Market Value - Commercial, continued

	Tax		Restaurant - Fast Food				Hotel				Civic/Recreation				Total Projected
Assessed	Year	Inflation	Square	Value Per	Phase-In	Projected		Value Per	Phase-In	Projected	Square	Value Per	Phase-In	Projected	Commercial
As Of Date	Beginning	Factor	Feet[1]	SF[2]	Percent[3]	Market Value	Rooms[1]	Room[2]	Percent[3]	Market Value	Feet[1]	SF[2]	Percent[3]	Market Value	Market Value
1-Jan-16	1-Jul-16	100%	0	$341	0%	$0	0	$114,212	0%	$0	0	$0	0%	$0	$0
1-Jan-17	1-Jul-17	103%	0	$351	0%	$0	0	$117,638	0%	$0	0	$0	0%	$0	$43,588,986
1-Jan-18	1-Jul-18	106%	0	$362	0%	$0	0	$121,167	0%	$0	0	$0	0%	$0	$75,999,389
1-Jan-19	1-Jul-19	109%	21,000	$372	80%	$6,255,740	0	$124,802	0%	$0	25,000	$0	80%	$0	$247,440,867
1-Jan-20	1-Jul-20	113%	31,000	$384	85%	$10,048,655	300	$128,546	80%	$30,851,111	25,000	$0	87%	$0	$435,087,652
1-Jan-21	1-Jul-21	116%	52,079	$395	87%	$17,828,156	300	$132,403	87%	$34,424,698	45,000	$0	87%	$0	$575,476,633
1-Jan-22	1-Jul-22	119%	73,158	$407	89%	$26,637,174	300	$136,375	93%	$38,184,935	45,000	$0	94%	$0	$734,299,536
1-Jan-23	1-Jul-23	123%	94,236	$419	91%	$35,960,889	470	$140,466	93%	$61,243,180	45,000	$0	97%	$0	$935,129,000
1-Jan-24	1-Jul-24	127%	115,315	$432	93%	$46,138,882	470	$144,680	95%	$64,720,182	196,450	$0	85%	$0	$1,066,071,368
1-Jan-25	1-Jul-25	130%	136,394	$445	94%	$56,895,190	470	$149,020	98%	$68,350,686	196,450	$0	90%	$0	$1,256,503,558
1-Jan-26	1-Jul-26	134%	157,473	$458	95%	$68,255,351	470	$153,491	100%	$72,140,771	196,450	$0	95%	$0	$1,432,221,521
1-Jan-27	1-Jul-27	138%	178,552	$472	95%	$80,245,916	640	$158,096	95%	$95,806,014	196,450	$0	100%	$0	$1,636,503,054
1-Jan-28	1-Jul-28	143%	199,630	$486	96%	$92,894,486	640	$162,839	96%	$100,525,698	196,450	$0	100%	$0	$1,842,917,293
1-Jan-29	1-Jul-29	147%	220,709	$500	96%	$106,229,748	640	$167,724	98%	$105,442,338	196,450	$0	100%	$0	$2,022,886,809
1-Jan-30	1-Jul-30	151%	241,788	$515	97%	$120,281,521	640	$172,755	100%	$110,563,504	196,450	$0	100%	$0	$2,276,385,612
1-Jan-31	1-Jul-31	156%	241,788	$531	98%	$126,128,132	640	$177,938	100%	$113,880,409	196,450	$0	100%	$0	$2,378,060,266
1-Jan-32	1-Jul-32	160%	241,788	$547	99%	$131,448,850	640	$183,276	100%	$117,296,821	196,450	$0	100%	$0	$2,472,107,352
1-Jan-33	1-Jul-33	165%	241,788	$563	100%	$136,183,805	640	$188,775	100%	$120,815,726	196,450	$0	100%	$0	$2,560,991,927
1-Jan-34	1-Jul-34	170%	241,788	$580	100%	$140,269,319	640	$194,438	100%	$124,440,198	196,450	$0	100%	$0	$2,637,821,684
1-Jan-35	1-Jul-35	175%	241,788	$598	100%	$144,477,399	640	$200,271	100%	$128,173,404	196,450	$0	100%	$0	$2,716,956,335
1-Jan-36	1-Jul-36	181%	241,788	$615	100%	$148,811,721	640	$206,279	100%	$132,018,606	196,450	$0	100%	$0	$2,798,465,025
1-Jan-37	1-Jul-37	186%	241,788	$634	100%	$153,276,073	640	$212,467	100%	$135,979,164	196,450	$0	100%	$0	$2,882,418,976
1-Jan-38	1-Jul-38	192%	241,788	$653	100%	$157,874,355	640	$218,841	100%	$140,058,539	196,450	$0	100%	$0	$2,968,891,545
1-Jan-39	1-Jul-39	197%	241,788	$673	100%	$162,610,585	640	$225,407	100%	$144,260,295	196,450	$0	100%	$0	$3,057,958,291
1-Jan-40	1-Jul-40	203%	241,788	$693	100%	$167,488,903	640	$232,169	100%	$148,588,104	196,450	$0	100%	$0	$3,149,697,040
1-Jan-41	1-Jul-41	209%	241,788	$713	100%	$172,513,570	640	$239,134	100%	$153,045,747	196,450	$0	100%	$0	$3,244,187,951
1-Jan-42	1-Jul-42	216%	241,788	$735	100%	$177,688,977	640	$246,308	100%	$157,637,119	196,450	$0	100%	$0	$3,341,513,590
1-Jan-43	1-Jul-43	222%	241,788	$757	100%	$183,019,646	640	$253,697	100%	$162,366,233	196,450	$0	100%	$0	$3,441,758,998
1-Jan-44	1-Jul-44	229%	241,788	$780	100%	$188,510,236	640	$261,308	100%	$167,237,220	196,450	$0	100%	$0	$3,545,011,767
1-Jan-45	1-Jul-45	236%	241,788	$803	100%	$194,165,543	640	$269,147	100%	$172,254,337	196,450	$0	100%	$0	$3,651,362,120
1-Jan-46	1-Jul-46	243%	241,788	$827	100%	$199,990,509	640	$277,222	100%	$177,421,967	196,450	$0	100%	$0	$3,760,902,984
1-Jan-47	1-Jul-47	250%	241,788	$852	100%	$205,990,224	640	$285,538	100%	$182,744,626	196,450	$0	100%	$0	$3,873,730,074
1-Jan-48	1-Jul-48	258%	241,788	$878	100%	$212,169,931	640	$294,105	100%	$188,226,964	196,450	$0	100%	$0	$3,989,941,976
1-Jan-49	1-Jul-49	265%	241,788	$904	100%	$218,535,029	640	$302,928	100%	$193,873,773	196,450	$0	100%	$0	$4,109,640,235
1-Jan-50	1-Jul-50	273%	241,788	$931	100%	$225,091,080	640	$312,016	100%	$199,689,986	196,450	$0	100%	$0	$4,232,929,442

[1]See Schedule III-B.

[2]See Schedule I. Values are assumed to increase with inflation factor shown.

[3]Assumes property is initially assessed at 80% of its full market value with the remaining property value phased-in over a three year period. Represents the phase-in of property value beginning with construction build-out through property stabilization.

Downtown Columbia
Howard County, Maryland

Fiscal Impact Analysis

Downtown Columbia
Howard County, Maryland

Schedule V: Projected Real Property Tax Revenues

Tax Year Beginning	Inflation Factor	Total Projected Assessed Value Proposed Downtown Columbia Plan[1] Residential	Commercial	Total	FY 16 Howard County Tax Rate Per $100 A.V[2]	Projected Real Property Tax Revenues
1-Jul-16	100%	$74,404,297	$0	$74,404,297	$1.014	$754,460
1-Jul-17	103%	$83,022,795	$43,588,986	$126,611,781	$1.014	$1,283,843
1-Jul-18	106%	$182,867,285	$75,999,389	$258,866,674	$1.014	$2,624,908
1-Jul-19	109%	$284,216,178	$247,440,867	$531,657,045	$1.014	$5,391,002
1-Jul-20	113%	$437,543,230	$435,087,652	$872,630,882	$1.014	$8,848,477
1-Jul-21	116%	$622,890,576	$575,476,633	$1,198,367,210	$1.014	$12,151,444
1-Jul-22	119%	$672,954,949	$734,299,536	$1,407,254,485	$1.014	$14,269,560
1-Jul-23	123%	$832,126,414	$935,129,000	$1,767,255,413	$1.014	$17,919,970
1-Jul-24	127%	$957,061,685	$1,066,071,368	$2,023,133,053	$1.014	$20,514,569
1-Jul-25	130%	$1,081,686,131	$1,256,503,558	$2,338,189,688	$1.014	$23,709,243
1-Jul-26	134%	$1,219,725,362	$1,432,221,521	$2,651,946,883	$1.014	$26,890,741
1-Jul-27	138%	$1,511,152,745	$1,636,503,054	$3,147,655,798	$1.014	$31,917,230
1-Jul-28	143%	$1,677,535,534	$1,842,917,293	$3,520,452,827	$1.014	$35,697,392
1-Jul-29	147%	$1,868,047,445	$2,022,886,809	$3,890,934,254	$1.014	$39,454,073
1-Jul-30	151%	$1,962,016,241	$2,276,385,612	$4,238,401,853	$1.014	$42,977,395
1-Jul-31	156%	$2,038,010,659	$2,378,060,266	$4,416,070,925	$1.014	$44,778,959
1-Jul-32	160%	$2,108,680,955	$2,472,107,352	$4,580,788,307	$1.014	$46,449,193
1-Jul-33	165%	$2,171,941,384	$2,560,991,927	$4,732,933,310	$1.014	$47,991,944
1-Jul-34	170%	$2,237,099,625	$2,637,821,684	$4,874,921,309	$1.014	$49,431,702
1-Jul-35	175%	$2,304,212,614	$2,716,956,335	$5,021,168,949	$1.014	$50,914,653
1-Jul-36	181%	$2,373,338,992	$2,798,465,025	$5,171,804,017	$1.014	$52,442,093
1-Jul-37	186%	$2,444,539,162	$2,882,418,976	$5,326,958,138	$1.014	$54,015,356
1-Jul-38	192%	$2,517,875,337	$2,968,891,545	$5,486,766,882	$1.014	$55,635,816
1-Jul-39	197%	$2,593,411,597	$3,057,958,291	$5,651,369,888	$1.014	$57,304,891
1-Jul-40	203%	$2,671,213,945	$3,149,697,040	$5,820,910,985	$1.014	$59,024,037
1-Jul-41	209%	$2,751,350,363	$3,244,187,951	$5,995,538,315	$1.014	$60,794,759
1-Jul-42	216%	$2,833,890,874	$3,341,513,590	$6,175,404,464	$1.014	$62,618,601
1-Jul-43	222%	$2,918,907,600	$3,441,758,998	$6,360,666,598	$1.014	$64,497,159
1-Jul-44	229%	$3,006,474,828	$3,545,011,767	$6,551,486,596	$1.014	$66,432,074
1-Jul-45	236%	$3,096,669,073	$3,651,362,120	$6,748,031,194	$1.014	$68,425,036
1-Jul-46	243%	$3,189,569,145	$3,760,902,984	$6,950,472,129	$1.014	$70,477,787
1-Jul-47	250%	$3,285,256,220	$3,873,730,074	$7,158,986,293	$1.014	$72,592,121
1-Jul-48	258%	$3,383,813,906	$3,989,941,976	$7,373,755,882	$1.014	$74,769,885
1-Jul-49	265%	$3,485,328,324	$4,109,640,235	$7,594,968,559	$1.014	$77,012,981
1-Jul-50	273%	$3,589,888,173	$4,232,929,442	$7,822,817,615	$1.014	$79,323,371
Total						$1,499,336,727

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]V*

17-Sep-15

[1]See Schedules IV-A and IV-B.

[2]Represents the Fiscal Year 2016 Howard County Real Property Tax Rate. Source: *Howard County, Maryland FY 2016 Approved Operating Budget.*

Downtown Columbia
Howard County, Maryland

Schedule VI-A: Projection of County Personal Income Tax Revenues - Rental Residential

	MF Rental	80% AMI[8]	40-60% AMI[8]	30% AMI[8]	Total
Total monthly rent payment[1]	$2,200	-	-	-	-
Assumed affordability ratio[2]	36%	-	-	-	-
Monthly income	$6,111	$4,889	$3,056	$1,833	-
Gross income	$73,333	$58,667	$36,667	$22,000	-
Less: standard state deduction[3]	$4,000	$4,000	$4,000	$4,000	-
Number of exemptions[4]	1.84	1.84	1.84	1.84	-
Standard exemption amount	$3,200	$3,200	$3,200	$3,200	-
Less: sub-total exemption adjustment of AGI[5]	$5,888	$5,888	$5,888	$5,888	-
Total adjustments - net taxable income	$63,445	$48,779	$26,779	$12,112	-
Howard County income tax rate[6]	3.2%	3.2%	3.2%	3.2%	-
Income tax per unit	$2,030	$1,561	$857	$388	-
Total units	4,126	825	0	0	4,951
Total estimated income tax[7]	$8,376,546	$1,287,757	$0.00	$0	$9,664,303

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]VI-A*
17-Sep-15

[1]See Schedule II-D for market rate rents.

[2]Based on information provided in Federal Housing Administration Debt Ratio's Guidelines.

[3]Standard state deduction: Assumes the average of filing single and joint, or $4,000. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[4]Represents the average household size for renter occupied units in Howard County. See Appendix A.

[5]Assumes 2015 exemption amount of $3,200. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[6]Source: *Fiscal Year 2016 Howard County Approved Operating Budget.*

[7]Figure assumes full build out and is expressed in current dollars.

[8]AMI unit incomes are assumed to be adjusted proportionately based on the market rate income. For example, 80% AMI unit monthly income is assumed to be 80% of the market rate monthly income.

Downtown Columbia
Howard County, Maryland

Schedule VI-B: Projection of County Personal Income Tax Revenues - For Sale Residential

	Condos	Townhomes	Total
Market value[1]	$302,861	$341,090	-
Assumed down payment	20%	20%	-
Less: down payment	($60,572)	($68,218)	-
Loan amount	$242,289	$272,872	-
Loan interest rate[2]	5.06%	5.06%	-
Mortgage payment[3]	$1,310	$1,476	-
Interest portion	$424	$478	-
Private mortgage insurance (PMI)[4]	$303	$341	-
Property taxes[5]	$284	$320	-
Insurance[6]	$53	$53	-
Total monthly payment	$1,950	$2,190	-
Assumed affordability ratio[7]	29%	29%	-
Monthly income	$6,725	$7,551	-
Gross income	$80,701	$90,611	-
Monthly mortgage deduction[8]	$708	$798	-
Less: annual mortgage deduction[8]	$8,499	$9,572	-
Less: standard state deduction[8]	-	-	-
Number of exemptions[9]	1.84	2.54	-
Less: adjustment of AGI[10]	$5,888	$8,128	-
Total adjustments - net income	$66,314	$72,911	-
Howard County income tax rate[11]	3.2%	3.2%	-
Sub-total income tax per unit	$2,122	$2,333	-
Total units[1]	461	88	549
Total income tax[12]	$978,545	$205,316	$1,183,861

MuniCap, Inc. *·\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]VI-B*

17-Sep-15

[1]See Schedule I.

[2]Loan amount assumes thirty years and conventional fixed-rate mortgage loan rate over a ten-year annual average. Based on information reported by Freddie M

[3]Includes principal and interest. Assumes 30 year fixed rate mortgage loan.

[4]Assumes an annual rate of 1.5%. Based on information reported by the Federal Housing Administration.

[5]Represents total residential real property tax obligation, including both Howard County ($1.014) and State ($0.112) tax rates.

[6]Based on the 2008 average annual insurance value of $637 for the State of Maryland as reported by the Insurance Information Institute.

[7]Based on information provided in Federal Housing Administration Debt Ratio's Guidelines.

[8]Monthly mortgage deduction assumes first years mortgage interest and property tax payments. Assumes residents of for sale homes take the mortgage deduction rather the standard state deduction. Standard state deduction assumes $4,000 for 2014 tax year. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[9]See Appendix A.

[10]Assumes 2015 exemption amount of $3,200. Source: Form 502D for 2015 as provided by Comptroller of Maryland.

[11]Source: *Fiscal Year 2016 Howard County Approved Operating Budget.*

[12]Figure assumes full build out and is expressed in current dollars.

Downtown Columbia
Howard County, Maryland

Schedule VII: Projection of Local Recordation Tax Revenues

Tax		MF Rental (Market)			MF Rental (Subsidized)			Condo					Townhouse				
Year Beginning	Inflation Factor	Value Per Unit[1]	Initial Unit Sale[2]	Projected Market Value	Value Per Unit[1]	Initial Unit Sale[2]	Projected Market Value	Value Per Unit[1]	Initial Unit Sale[2]	Unit Resales[3]	Total Sales	Projected Market Value	Value Per Unit[1]	Initial Unit Sale[2]	Unit Resales[3]	Total Sales	Projected Market Value
1-Jul-16	100%	$244,751	380	$93,005,371	$163,121	0	$0	$302,861	0	0	0	$0	$341,090	0	0	0	$0
1-Jul-17	103%	$252,094	0	$0	$168,015	0	$0	$311,947	0	0	0	$0	$351,323	0	0	0	$0
1-Jul-18	106%	$259,656	437	$113,469,808	$173,055	0	$0	$321,305	0	0	0	$0	$361,863	0	0	0	$0
1-Jul-19	109%	$267,446	254	$67,931,284	$178,247	189	$33,688,694	$330,945	0	0	0	$0	$372,719	0	0	0	$0
1-Jul-20	113%	$275,469	527	$145,172,364	$183,594	93	$17,074,286	$340,873	0	0	0	$0	$383,900	0	0	0	$0
1-Jul-21	116%	$283,733	353	$100,157,912	$189,102	93	$17,586,514	$351,099	84	0	84	$29,492,331	$395,417	88	0	88	$34,796,705
1-Jul-22	119%	$292,245	0	$0	$194,775	0	$0	$361,632	0	6	6	$2,025,140	$407,280	0	6	6	$2,389,374
1-Jul-23	123%	$301,013	243	$73,146,118	$200,619	69	$13,842,686	$372,481	150	6	156	$57,958,061	$419,498	0	6	6	$2,461,055
1-Jul-24	127%	$310,043	277	$86,000,820	$206,637	49	$10,125,222	$383,656	0	16	16	$5,985,027	$432,083	0	6	6	$2,534,887
1-Jul-25	130%	$319,345	277	$88,580,845	$212,836	49	$10,428,979	$395,165	0	16	16	$6,164,577	$445,045	0	6	6	$2,610,933
1-Jul-26	134%	$328,925	277	$91,238,270	$219,221	49	$10,741,849	$407,020	0	16	16	$6,349,515	$458,397	0	6	6	$2,689,261
1-Jul-27	138%	$338,793	772	$261,576,114	$225,798	136	$30,708,534	$419,231	0	16	16	$6,540,000	$472,149	0	6	6	$2,769,939
1-Jul-28	143%	$348,956	277	$96,794,681	$232,572	49	$11,396,027	$431,808	0	16	16	$6,736,200	$486,313	0	6	6	$2,853,037
1-Jul-29	147%	$359,425	50	$18,061,561	$239,549	49	$11,737,908	$444,762	227	16	243	$107,957,986	$500,903	0	6	6	$2,938,628
1-Jul-30	151%	$370,208	0	$0	$246,736	0	$0	$458,105	0	31	31	$14,083,121	$515,930	0	6	6	$3,026,787
1-Jul-31	156%	$381,314	0	$0	$254,138	0	$0	$471,848	0	31	31	$14,505,614	$531,408	0	6	6	$3,117,591
1-Jul-32	160%	$392,753	0	$0	$261,762	0	$0	$486,003	0	31	31	$14,940,783	$547,350	0	6	6	$3,211,118
1-Jul-33	165%	$404,536	0	$0	$269,615	0	$0	$500,583	0	31	31	$15,389,006	$563,770	0	6	6	$3,307,452
1-Jul-34	170%	$416,672	0	$0	$277,703	0	$0	$515,601	0	31	31	$15,850,676	$580,683	0	6	6	$3,406,676
1-Jul-35	175%	$429,172	0	$0	$286,034	0	$0	$531,069	0	31	31	$16,326,197	$598,104	0	6	6	$3,508,876
1-Jul-36	181%	$442,047	0	$0	$294,615	0	$0	$547,001	0	31	31	$16,815,983	$616,047	0	6	6	$3,614,142
1-Jul-37	186%	$455,309	0	$0	$303,454	0	$0	$563,411	0	31	31	$17,320,462	$634,528	0	6	6	$3,722,566
1-Jul-38	192%	$468,968	0	$0	$312,557	0	$0	$580,313	0	31	31	$17,840,076	$653,564	0	6	6	$3,834,243
1-Jul-39	197%	$483,037	0	$0	$321,934	0	$0	$597,723	0	31	31	$18,375,278	$673,171	0	6	6	$3,949,271
1-Jul-40	203%	$497,528	0	$0	$331,592	0	$0	$615,655	0	31	31	$18,926,537	$693,366	0	6	6	$4,067,749
1-Jul-41	209%	$512,454	0	$0	$341,540	0	$0	$634,124	0	31	31	$19,494,333	$714,167	0	6	6	$4,189,781
1-Jul-42	216%	$527,828	0	$0	$351,786	0	$0	$653,148	0	31	31	$20,079,163	$735,592	0	6	6	$4,315,475
1-Jul-43	222%	$543,663	0	$0	$362,340	0	$0	$672,742	0	31	31	$20,681,538	$757,660	0	6	6	$4,444,939
1-Jul-44	229%	$559,973	0	$0	$373,210	0	$0	$692,925	0	31	31	$21,301,984	$780,390	0	6	6	$4,578,287
1-Jul-45	236%	$576,772	0	$0	$384,406	0	$0	$713,712	0	31	31	$21,941,043	$803,802	0	6	6	$4,715,636
1-Jul-46	243%	$594,075	0	$0	$395,938	0	$0	$735,124	0	31	31	$22,599,275	$827,916	0	6	6	$4,857,105
1-Jul-47	250%	$611,897	0	$0	$407,816	0	$0	$757,177	0	31	31	$23,277,253	$852,753	0	6	6	$5,002,818
1-Jul-48	258%	$630,254	0	$0	$420,051	0	$0	$779,893	0	31	31	$23,975,570	$878,336	0	6	6	$5,152,903
1-Jul-49	265%	$649,162	0	$0	$432,652	0	$0	$803,290	0	31	31	$24,694,837	$904,686	0	6	6	$5,307,490
1-Jul-50	273%	$668,636	0	$0	$445,632	0	$0	$827,388	0	31	31	$25,435,683	$931,826	0	6	6	$5,466,714
Total			4,126			825			461					88			

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]VII

17-Sep-15

[1]See Schedule I.

[2]See Schedule III-A. Assumes apartment development is not resolc

[3]Assumes apartment/commercial development is not resold. Assumes for sale residential units are resold, on average, every 15 yea

Downtown Columbia
Howard County, Maryland

Schedule VII: Projection of Local Recordation Tax Revenues, continued

Tax		Office			Retail			Restaurant			Hotel			Total Projected	Local Recordation	Local
Year Beginning	Inflation Factor	Value Per SF[1]	Initial SF Sale[2]	Projected Market Value	Value Per SF[1]	Initial SF Sale[2]	Projected Market Value	Value Per SF[1]	Initial SF Sale[2]	Projected Market Value	Value Per Room[1]	Initial Room Sale[2]	Projected Market Value	Recorded Market Value	Tax Rate[3] ($2.50 Per $500)	Recordation Tax Revenues
1-Jul-16	100%	$244	0	$0	$341	0	$0	$341	0	$0	$114,212	0	$0	$93,005,371	$2.50	$465,027
1-Jul-17	103%	$252	204,000	$51,327,322	$351	0	$0	$351	9,000	$3,158,912	$117,638	0	$0	$54,486,233	$2.50	$272,431
1-Jul-18	106%	$259	125,000	$32,394,082	$362	5,000	$1,807,599	$362	0	$0	$121,167	0	$0	$147,671,489	$2.50	$738,357
1-Jul-19	109%	$267	614,000	$163,893,321	$372	58,900	$21,932,326	$372	48,000	$17,873,543	$124,802	0	$0	$305,319,168	$2.50	$1,526,596
1-Jul-20	113%	$275	480,600	$132,133,785	$384	50,905	$19,523,922	$384	25,000	$9,588,411	$128,546	300	$38,563,889	$362,056,656	$2.50	$1,810,283
1-Jul-21	116%	$283	280,000	$79,291,268	$395	51,351	$20,285,632	$395	53,969	$21,320,049	$132,403	0	$0	$302,930,411	$2.50	$1,514,652
1-Jul-22	119%	$292	300,000	$87,503,578	$407	51,351	$20,894,201	$407	53,969	$21,959,651	$136,375	0	$0	$134,771,944	$2.50	$673,860
1-Jul-23	123%	$300	384,150	$115,409,782	$419	51,351	$21,521,027	$419	53,969	$22,618,440	$140,466	170	$23,879,222	$330,836,391	$2.50	$1,654,182
1-Jul-24	127%	$309	145,000	$44,869,064	$432	51,351	$22,166,658	$432	53,969	$23,296,994	$144,680	0	$0	$194,978,671	$2.50	$974,893
1-Jul-25	130%	$319	362,050	$115,394,413	$445	51,351	$22,831,657	$445	53,969	$23,995,903	$149,020	0	$0	$270,007,309	$2.50	$1,350,037
1-Jul-26	134%	$328	261,000	$85,682,862	$458	51,351	$23,516,607	$458	53,969	$24,715,781	$153,491	0	$0	$244,934,144	$2.50	$1,224,671
1-Jul-27	138%	$338	269,200	$91,026,058	$472	51,351	$24,222,105	$472	53,969	$25,457,254	$158,096	170	$26,876,274	$469,176,279	$2.50	$2,345,881
1-Jul-28	143%	$348	300,000	$104,483,848	$486	51,351	$24,948,769	$486	53,969	$26,220,972	$162,839	0	$0	$273,433,534	$2.50	$1,367,168
1-Jul-29	147%	$359	175,000	$62,777,379	$500	51,351	$25,697,232	$500	53,969	$27,007,601	$167,724	0	$0	$256,178,295	$2.50	$1,280,891
1-Jul-30	151%	$369	400,000	$147,795,886	$515	51,351	$26,468,149	$515	53,969	$27,817,829	$172,755	0	$0	$219,191,772	$2.50	$1,095,959
1-Jul-31	156%	$381	0	$0	$531	0	$0	$531	0	$0	$177,938	0	$0	$17,623,205	$2.50	$88,116
1-Jul-32	160%	$392	0	$0	$547	0	$0	$547	0	$0	$183,276	0	$0	$18,151,901	$2.50	$90,760
1-Jul-33	165%	$404	0	$0	$563	0	$0	$563	0	$0	$188,775	0	$0	$18,696,458	$2.50	$93,482
1-Jul-34	170%	$416	0	$0	$580	0	$0	$580	0	$0	$194,438	0	$0	$19,257,352	$2.50	$96,287
1-Jul-35	175%	$428	0	$0	$598	0	$0	$598	0	$0	$200,271	0	$0	$19,835,073	$2.50	$99,175
1-Jul-36	181%	$441	0	$0	$615	0	$0	$615	0	$0	$206,279	0	$0	$20,430,125	$2.50	$102,151
1-Jul-37	186%	$454	0	$0	$634	0	$0	$634	0	$0	$212,467	0	$0	$21,043,029	$2.50	$105,215
1-Jul-38	192%	$468	0	$0	$653	0	$0	$653	0	$0	$218,841	0	$0	$21,674,319	$2.50	$108,372
1-Jul-39	197%	$482	0	$0	$673	0	$0	$673	0	$0	$225,407	0	$0	$22,324,549	$2.50	$111,623
1-Jul-40	203%	$497	0	$0	$693	0	$0	$693	0	$0	$232,169	0	$0	$22,994,285	$2.50	$114,971
1-Jul-41	209%	$511	0	$0	$713	0	$0	$713	0	$0	$239,134	0	$0	$23,684,114	$2.50	$118,421
1-Jul-42	216%	$527	0	$0	$735	0	$0	$735	0	$0	$246,308	0	$0	$24,394,637	$2.50	$121,973
1-Jul-43	222%	$543	0	$0	$757	0	$0	$757	0	$0	$253,697	0	$0	$25,126,477	$2.50	$125,632
1-Jul-44	229%	$559	0	$0	$780	0	$0	$780	0	$0	$261,308	0	$0	$25,880,271	$2.50	$129,401
1-Jul-45	236%	$576	0	$0	$803	0	$0	$803	0	$0	$269,147	0	$0	$26,656,679	$2.50	$133,283
1-Jul-46	243%	$593	0	$0	$827	0	$0	$827	0	$0	$277,222	0	$0	$27,456,379	$2.50	$137,282
1-Jul-47	250%	$611	0	$0	$852	0	$0	$852	0	$0	$285,538	0	$0	$28,280,071	$2.50	$141,400
1-Jul-48	258%	$629	0	$0	$878	0	$0	$878	0	$0	$294,105	0	$0	$29,128,473	$2.50	$145,642
1-Jul-49	265%	$648	0	$0	$904	0	$0	$904	0	$0	$302,928	0	$0	$30,002,327	$2.50	$150,012
1-Jul-50	273%	$667	0	$0	$931	0	$0	$931	0	$0	$312,016	0	$0	$30,902,397	$2.50	$154,512
Total			4,300,000			628,310			621,690			640				$20,662,599

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]VII.2

17-Sep-15

[1]See Schedule I.

[2]See Schedule III-B. Assumes apartment/commercial development is not resold.

[3]Source: *Howard County, Maryland Fiscal Year 2016 Approved Operating Budget*. Recordation tax is computed at the rate of $2.50 per $500 of consideration.

Downtown Columbia
Howard County, Maryland

Schedule VIII: Projection of School Excise Tax

Tax		Rental Units			Condo Units			Townhome Units				School	Total
Year Beginning	Inflation Factor	Gross SF Per Unit[1]	Units[2]	Projected SF	Gross SF Per Unit[1]	Units[2]	Projected SF	Gross SF Per Unit[1]	Units[2]	Projected SF	Total SF	Excise Tax Per SF[3]	Projected School Excise Tax
1-Jul-16	100%	1,180	437	515,660	1,200	0	0	1,500	0	0	515,660	$1.25	$644,575
1-Jul-17	103%	1,180	443	522,740	1,200	0	0	1,500	0	0	522,740	$1.29	$673,028
1-Jul-18	106%	1,180	620	731,600	1,200	0	0	1,500	0	0	731,600	$1.33	$970,193
1-Jul-19	109%	1,180	446	526,280	1,200	84	100,800	1,500	88	132,000	759,080	$1.37	$1,036,834
1-Jul-20	113%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.41	$0
1-Jul-21	116%	1,180	312	368,160	1,200	150	180,000	1,500	0	0	548,160	$1.45	$794,335
1-Jul-22	119%	1,180	326	385,132	1,200	0	0	1,500	0	0	385,132	$1.49	$574,835
1-Jul-23	123%	1,180	326	385,132	1,200	0	0	1,500	0	0	385,132	$1.54	$592,080
1-Jul-24	127%	1,180	326	385,132	1,200	0	0	1,500	0	0	385,132	$1.58	$609,843
1-Jul-25	130%	1,180	908	1,071,538	1,200	0	0	1,500	0	0	1,071,538	$1.63	$1,747,643
1-Jul-26	134%	1,180	326	385,132	1,200	0	0	1,500	0	0	385,132	$1.68	$646,982
1-Jul-27	138%	1,180	99	117,116	1,200	227	272,558	1,500	0	0	389,675	$1.73	$674,252
1-Jul-28	143%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.78	$0
1-Jul-29	147%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.84	$0
1-Jul-30	151%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.89	$0
1-Jul-31	156%	1,180	0	0	1,200	0	0	1,500	0	0	0	$1.95	$0
1-Jul-32	160%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.01	$0
1-Jul-33	165%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.07	$0
1-Jul-34	170%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.13	$0
1-Jul-35	175%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.19	$0
1-Jul-36	181%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.26	$0
1-Jul-37	186%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.33	$0
1-Jul-38	192%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.40	$0
1-Jul-39	197%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.47	$0
1-Jul-40	203%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.54	$0
1-Jul-41	209%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.62	$0
1-Jul-42	216%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.70	$0
1-Jul-43	222%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.78	$0
1-Jul-44	229%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.86	$0
1-Jul-45	236%	1,180	0	0	1,200	0	0	1,500	0	0	0	$2.95	$0
1-Jul-46	243%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.03	$0
1-Jul-47	250%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.13	$0
1-Jul-48	258%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.22	$0
1-Jul-49	265%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.32	$0
1-Jul-50	273%	1,180	0	0	1,200	0	0	1,500	0	0	0	$3.41	$0
Total			4,571	5,393,624		461	553,358		88	132,000	6,078,983		$8,964,599

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]VIII*

17-Sep-15

[1]See Schedule I.

[2]Excise tax is assumed to be collected at time of permitting; therefore, units are shown at the start of construction, two years prior to completion. See Schedule III-A. Assumes Phase I of Metropolitan units have already paid excise tax revenues.

[3]Represents the FY 16 school facilities surcharge. Rate assumes three percent annual inflation and is based on information provided by Howard County Department of Planning and Zoning, Division of Research.

Downtown Columbia
Howard County, Maryland

Schedule IX: Projection of Road Excise Tax

Tax Year Beginning	Inflation Factor	Residential (Rental/FS) Square Feet[1]	Office Square Feet[2]	Restaurant/ Retail Square Feet[2]	Hotel/ Conference Square Feet[2]	Total Square Feet	Road Excise Tax Per SF[3]	Total Projected Road Excise Tax
1-Jul-16	100%	515,660	125,000	5,000	0	645,660	$1.17	$755,422
1-Jul-17	103%	522,740	614,000	106,900	0	1,243,640	$1.21	$1,498,711
1-Jul-18	106%	731,600	480,600	75,905	16,500	1,304,605	$1.24	$1,619,345
1-Jul-19	109%	759,080	280,000	105,320	0	1,144,400	$1.28	$1,463,104
1-Jul-20	113%	0	300,000	105,320	0	405,320	$1.32	$533,743
1-Jul-21	116%	548,160	384,150	105,320	9,350	1,046,980	$1.36	$1,420,071
1-Jul-22	119%	385,132	145,000	105,320	0	635,452	$1.40	$887,752
1-Jul-23	123%	385,132	362,050	105,320	0	852,502	$1.44	$1,226,710
1-Jul-24	127%	385,132	261,000	105,320	0	751,452	$1.48	$1,113,743
1-Jul-25	130%	1,071,538	269,200	105,320	9,350	1,455,408	$1.53	$2,221,803
1-Jul-26	134%	385,132	300,000	105,320	0	790,452	$1.57	$1,242,892
1-Jul-27	138%	389,675	175,000	105,320	0	669,994	$1.62	$1,085,092
1-Jul-28	143%	0	400,000	105,320	0	505,320	$1.67	$842,944
1-Jul-29	147%	0	0	0	0	0	$1.72	$0
1-Jul-30	151%	0	0	0	0	0	$1.77	$0
1-Jul-31	156%	0	0	0	0	0	$1.82	$0
1-Jul-32	160%	0	0	0	0	0	$1.88	$0
1-Jul-33	165%	0	0	0	0	0	$1.93	$0
1-Jul-34	170%	0	0	0	0	0	$1.99	$0
1-Jul-35	175%	0	0	0	0	0	$2.05	$0
1-Jul-36	181%	0	0	0	0	0	$2.11	$0
1-Jul-37	186%	0	0	0	0	0	$2.18	$0
1-Jul-38	192%	0	0	0	0	0	$2.24	$0
1-Jul-39	197%	0	0	0	0	0	$2.31	$0
1-Jul-40	203%	0	0	0	0	0	$2.38	$0
1-Jul-41	209%	0	0	0	0	0	$2.45	$0
1-Jul-42	216%	0	0	0	0	0	$2.52	$0
1-Jul-43	222%	0	0	0	0	0	$2.60	$0
1-Jul-44	229%	0	0	0	0	0	$2.68	$0
1-Jul-45	236%	0	0	0	0	0	$2.76	$0
1-Jul-46	243%	0	0	0	0	0	$2.84	$0
1-Jul-47	250%	0	0	0	0	0	$2.93	$0
1-Jul-48	258%	0	0	0	0	0	$3.01	$0
1-Jul-49	265%	0	0	0	0	0	$3.10	$0
1-Jul-50	273%	0	0	0	0	0	$3.20	$0
Total		6,078,983	4,096,000	1,241,000	35,200	11,451,183		$15,911,332

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]IX*
17-Sep-15

[1]See Schedule VIII.

[2]Excise tax is assumed to be collected at time of permitting; therefore, development is shown at the start of construction. Assumes start of construction is two years prior to completion. See Schedule III-B.

[3]Source: Howard County Department of Planning and Zoning, Division of Research.

Downtown Columbia
Howard County, Maryland

Schedule X: Projection of Transfer Tax Revenues

Tax		MR Rental (Market Rate)			MF Rental (Subsidized)			Condo					Townhouse				
Year Beginning	Inflation Factor	Value Per Unit[1]	Initial Unit Sale[2]	Projected Market Value	Value Per Unit[1]	Initial Unit Sale[2]	Projected Market Value	Value Per Unit[1]	Initial Unit Sale[2]	Unit Resales[3]	Total Sales	Projected Market Value	Value Per Unit[1]	Initial Unit Sale[2]	Unit Resales[3]	Total Sales	Projected Market Value
1-Jul-16	100%	$244,751	380	$93,005,371	$163,121	0	$0	$302,861	0	0	0	$0	$341,090	0	0	0	$0
1-Jul-17	103%	$252,094	0	$0	$168,015	0	$0	$311,947	0	0	0	$0	$351,323	0	0	0	$0
1-Jul-18	106%	$259,656	437	$113,469,808	$173,055	0	$0	$321,305	0	0	0	$0	$361,863	0	0	0	$0
1-Jul-19	109%	$267,446	254	$67,931,284	$178,247	189	$33,688,694	$330,945	0	0	0	$0	$372,719	0	0	0	$0
1-Jul-20	113%	$275,469	527	$145,172,364	$183,594	93	$17,074,286	$340,873	0	0	0	$0	$383,900	0	0	0	$0
1-Jul-21	116%	$283,733	353	$100,157,912	$189,102	93	$17,586,514	$351,099	84	0	84	$29,492,331	$395,417	88	0	88	$34,796,705
1-Jul-22	119%	$292,245	0	$0	$194,775	0	$0	$361,632	0	6	6	$2,025,140	$407,280	0	6	6	$2,389,374
1-Jul-23	123%	$301,013	243	$73,146,118	$200,619	69	$13,842,686	$372,481	150	6	156	$57,958,061	$419,498	0	6	6	$2,461,055
1-Jul-24	127%	$310,043	277	$86,000,820	$206,637	49	$10,125,222	$383,656	0	16	16	$5,985,027	$432,083	0	6	6	$2,534,887
1-Jul-25	130%	$319,345	277	$88,580,845	$212,836	49	$10,428,979	$395,165	0	16	16	$6,164,577	$445,045	0	6	6	$2,610,933
1-Jul-26	134%	$328,925	277	$91,238,270	$219,221	49	$10,741,849	$407,020	0	16	16	$6,349,515	$458,397	0	6	6	$2,689,261
1-Jul-27	138%	$338,793	772	$261,576,114	$225,798	136	$30,708,534	$419,231	0	16	16	$6,540,000	$472,149	0	6	6	$2,769,939
1-Jul-28	143%	$348,956	277	$96,794,681	$232,572	49	$11,396,027	$431,808	0	16	16	$6,736,200	$486,313	0	6	6	$2,853,037
1-Jul-29	147%	$359,425	50	$18,061,561	$239,549	49	$11,737,908	$444,762	227	16	243	$107,957,986	$500,903	0	6	6	$2,938,628
1-Jul-30	151%	$370,208	0	$0	$246,736	0	$0	$458,105	0	31	31	$14,083,121	$515,930	0	6	6	$3,026,787
1-Jul-31	156%	$381,314	0	$0	$254,138	0	$0	$471,848	0	31	31	$14,505,614	$531,408	0	6	6	$3,117,591
1-Jul-32	160%	$392,753	0	$0	$261,762	0	$0	$486,003	0	31	31	$14,940,783	$547,350	0	6	6	$3,211,118
1-Jul-33	165%	$404,536	0	$0	$269,615	0	$0	$500,583	0	31	31	$15,389,006	$563,770	0	6	6	$3,307,452
1-Jul-34	170%	$416,672	0	$0	$277,703	0	$0	$515,601	0	31	31	$15,850,676	$580,683	0	6	6	$3,406,676
1-Jul-35	175%	$429,172	0	$0	$286,034	0	$0	$531,069	0	31	31	$16,326,197	$598,104	0	6	6	$3,508,876
1-Jul-36	181%	$442,047	0	$0	$294,615	0	$0	$547,001	0	31	31	$16,815,983	$616,047	0	6	6	$3,614,142
1-Jul-37	186%	$455,309	0	$0	$303,454	0	$0	$563,411	0	31	31	$17,320,462	$634,528	0	6	6	$3,722,566
1-Jul-38	192%	$468,968	0	$0	$312,557	0	$0	$580,313	0	31	31	$17,840,076	$653,564	0	6	6	$3,834,243
1-Jul-39	197%	$483,037	0	$0	$321,934	0	$0	$597,723	0	31	31	$18,375,278	$673,171	0	6	6	$3,949,271
1-Jul-40	203%	$497,528	0	$0	$331,592	0	$0	$615,655	0	31	31	$18,926,537	$693,366	0	6	6	$4,067,749
1-Jul-41	209%	$512,454	0	$0	$341,540	0	$0	$634,124	0	31	31	$19,494,333	$714,167	0	6	6	$4,189,781
1-Jul-42	216%	$527,828	0	$0	$351,786	0	$0	$653,148	0	31	31	$20,079,163	$735,592	0	6	6	$4,315,475
1-Jul-43	222%	$543,663	0	$0	$362,340	0	$0	$672,742	0	31	31	$20,681,538	$757,660	0	6	6	$4,444,939
1-Jul-44	229%	$559,973	0	$0	$373,210	0	$0	$692,925	0	31	31	$21,301,984	$780,390	0	6	6	$4,578,287
1-Jul-45	236%	$576,772	0	$0	$384,406	0	$0	$713,712	0	31	31	$21,941,043	$803,802	0	6	6	$4,715,636
1-Jul-46	243%	$594,075	0	$0	$395,938	0	$0	$735,124	0	31	31	$22,599,275	$827,916	0	6	6	$4,857,105
1-Jul-47	250%	$611,897	0	$0	$407,816	0	$0	$757,177	0	31	31	$23,277,253	$852,753	0	6	6	$5,002,818
1-Jul-48	258%	$630,254	0	$0	$420,051	0	$0	$779,893	0	31	31	$23,975,570	$878,336	0	6	6	$5,152,903
1-Jul-49	265%	$649,162	0	$0	$432,652	0	$0	$803,290	0	31	31	$24,694,837	$904,686	0	6	6	$5,307,490
1-Jul-50	273%	$668,636	0	$0	$445,632	0	$0	$827,388	0	31	31	$25,435,683	$931,826	0	6	6	$5,466,714
Total			4,126			825			461					88			

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]X.
17-Sep-15

[1]See Schedule I.

[2]See Schedule III.

[3]Assumes apartment/commercial development is not resold. Assumes for sale residential units are resold, on average, every 15 yea

Downtown Columbia
Howard County, Maryland

Schedule X: Projection of Transfer Tax Revenues, continued

Tax Year Beginning	Inflation Factor	Office Value Per SF[1]	Office Initial SF Sale[2]	Office Projected Market Value	Retail Value Per SF[1]	Retail Initial SF Sale[2]	Retail Projected Market Value	Restaurant Value Per SF[1]	Restaurant Initial SF Sale[2]	Restaurant Projected Market Value	Hotel Value Per Room[1]	Hotel Initial Room Sale[2]	Hotel Projected Market Value	Total Projected Market Value	Transfer Tax Rate[3]	Transfer Tax Revenues
1-Jul-16	100%	$244	0	$0	$341	0	$0	$341	0	$0	$114,212	0	$0	$93,005,371	1.00%	$930,054
1-Jul-17	103%	$252	204,000	$51,327,322	$351	0	$0	$351	9,000	$3,158,912	$117,638	0	$0	$54,486,233	1.00%	$544,862
1-Jul-18	106%	$259	125,000	$32,394,082	$362	5,000	$1,807,599	$362	0	$0	$121,167	0	$0	$147,671,489	1.00%	$1,476,715
1-Jul-19	109%	$267	614,000	$163,893,321	$372	58,900	$21,932,326	$372	48,000	$17,873,543	$124,802	0	$0	$305,319,168	1.00%	$3,053,192
1-Jul-20	113%	$275	480,600	$132,133,785	$384	50,905	$19,523,922	$384	25,000	$9,588,411	$128,546	300	$38,563,889	$362,056,656	1.00%	$3,620,567
1-Jul-21	116%	$283	280,000	$79,291,268	$395	51,351	$20,285,632	$395	53,969	$21,320,049	$132,403	0	$0	$302,930,411	1.00%	$3,029,304
1-Jul-22	119%	$292	300,000	$87,503,578	$407	51,351	$20,894,201	$407	53,969	$21,959,651	$136,375	0	$0	$134,771,944	1.00%	$1,347,719
1-Jul-23	123%	$300	384,150	$115,409,782	$419	51,351	$21,521,027	$419	53,969	$22,618,440	$140,466	170	$23,879,222	$330,836,391	1.00%	$3,308,364
1-Jul-24	127%	$309	145,000	$44,869,064	$432	51,351	$22,166,658	$432	53,969	$23,296,994	$144,680	0	$0	$194,978,671	1.00%	$1,949,787
1-Jul-25	130%	$319	362,050	$115,394,413	$445	51,351	$22,831,657	$445	53,969	$23,995,903	$149,020	0	$0	$270,007,309	1.00%	$2,700,073
1-Jul-26	134%	$328	261,000	$85,682,862	$458	51,351	$23,516,607	$458	53,969	$24,715,781	$153,491	0	$0	$244,934,144	1.00%	$2,449,341
1-Jul-27	138%	$338	269,200	$91,026,058	$472	51,351	$24,222,105	$472	53,969	$25,457,254	$158,096	170	$26,876,274	$469,176,279	1.00%	$4,691,763
1-Jul-28	143%	$348	300,000	$104,483,848	$486	51,351	$24,948,769	$486	53,969	$26,220,972	$162,839	0	$0	$273,433,534	1.00%	$2,734,335
1-Jul-29	147%	$359	175,000	$62,777,379	$500	51,351	$25,697,232	$500	53,969	$27,007,601	$167,724	0	$0	$256,178,295	1.00%	$2,561,783
1-Jul-30	151%	$369	400,000	$147,795,886	$515	51,351	$26,468,149	$515	53,969	$27,817,829	$172,755	0	$0	$219,191,772	1.00%	$2,191,918
1-Jul-31	156%	$381	0	$0	$531	0	$0	$531	0	$0	$177,938	0	$0	$17,623,205	1.00%	$176,232
1-Jul-32	160%	$392	0	$0	$547	0	$0	$547	0	$0	$183,276	0	$0	$18,151,901	1.00%	$181,519
1-Jul-33	165%	$404	0	$0	$563	0	$0	$563	0	$0	$188,775	0	$0	$18,696,458	1.00%	$186,965
1-Jul-34	170%	$416	0	$0	$580	0	$0	$580	0	$0	$194,438	0	$0	$19,257,352	1.00%	$192,574
1-Jul-35	175%	$428	0	$0	$598	0	$0	$598	0	$0	$200,271	0	$0	$19,835,073	1.00%	$198,351
1-Jul-36	181%	$441	0	$0	$615	0	$0	$615	0	$0	$206,279	0	$0	$20,430,125	1.00%	$204,301
1-Jul-37	186%	$454	0	$0	$634	0	$0	$634	0	$0	$212,467	0	$0	$21,043,029	1.00%	$210,430
1-Jul-38	192%	$468	0	$0	$653	0	$0	$653	0	$0	$218,841	0	$0	$21,674,319	1.00%	$216,743
1-Jul-39	197%	$482	0	$0	$673	0	$0	$673	0	$0	$225,407	0	$0	$22,324,549	1.00%	$223,245
1-Jul-40	203%	$497	0	$0	$693	0	$0	$693	0	$0	$232,169	0	$0	$22,994,285	1.00%	$229,943
1-Jul-41	209%	$511	0	$0	$713	0	$0	$713	0	$0	$239,134	0	$0	$23,684,114	1.00%	$236,841
1-Jul-42	216%	$527	0	$0	$735	0	$0	$735	0	$0	$246,308	0	$0	$24,394,637	1.00%	$243,946
1-Jul-43	222%	$543	0	$0	$757	0	$0	$757	0	$0	$253,697	0	$0	$25,126,477	1.00%	$251,265
1-Jul-44	229%	$559	0	$0	$780	0	$0	$780	0	$0	$261,308	0	$0	$25,880,271	1.00%	$258,803
1-Jul-45	236%	$576	0	$0	$803	0	$0	$803	0	$0	$269,147	0	$0	$26,656,679	1.00%	$266,567
1-Jul-46	243%	$593	0	$0	$827	0	$0	$827	0	$0	$277,222	0	$0	$27,456,379	1.00%	$274,564
1-Jul-47	250%	$611	0	$0	$852	0	$0	$852	0	$0	$285,538	0	$0	$28,280,071	1.00%	$282,801
1-Jul-48	258%	$629	0	$0	$878	0	$0	$878	0	$0	$294,105	0	$0	$29,128,473	1.00%	$291,285
1-Jul-49	265%	$648	0	$0	$904	0	$0	$904	0	$0	$302,928	0	$0	$30,002,327	1.00%	$300,023
1-Jul-50	273%	$667	0	$0	$931	0	$0	$931	0	$0	$312,016	0	$0	$30,902,397	1.00%	$309,024
Total			4,300,000			628,310			621,690			640				$41,325,198

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]X.2*

17-Sep-15

[1]See Schedule I.

[2]See Schedule III. Assumes apartment/commercial development is not resold. Assumes for sale residential units are resold, on average, every 15 years.

[3]A 1% transfer tax is levied on all property transfers in Howard County and is dedicated as follows: 25% for school land acquisition and construction, 25% for park construction and development, 25% for agricultural land preservation, 12.5% for housing and community development, and 12.5% for the fire and rescue services. For purposes of this fiscal analysis, revenues are shown to off-set costs/capital costs included in this analysis. Based on assumptions in the Downtown Columbia Fiscal Impact Analysis Costs and Revenues Assumptions Document, Howard County Department of Planning and Zoning, Division of Research, October 23, 2009.

Downtown Columbia
Howard County, Maryland

Schedule XI: Projection of Hotel Occupancy Tax Revenues

Type	Average Rate Per Night[1]	Assumed Occupancy[1]	Days Per Year	Annual Occupancy Revenue Per Room	Number of Rooms[2]	Annual Occupancy Revenue	Hotel Occupancy Tax Rate[3]	Total County Occupancy Tax Revenues
Hotels	$56	95%	365	$19,506	640	$12,483,840	5.0%	$624,192

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XI*
17-Sep-15

[1]See Schedule II-E.
[2]See Schedule I.
[3]Represents the portion of the hotel/motel tax allocated to the general fund. The FY 2016 rate is 7% of which 5% is available to the general fund. Source: *FY 2016 Howard County Approved Operating Budget.*

Downtown Columbia
Howard County, Maryland

Schedule XII-A: Additional Revenues to Howard County (Annual)

Annual Revenues[1]	Current County Revenues[2]	Basis for Projecting Revenues[3]	Current County Service Factors[4]	Revenues by Factor: Per Capita	Per Employee	Per Capita/Employee	Per Non. Gov. Emp.	Projected Increase in Service Factor[5]	Total Additional Revenues[6]
Property taxes									
Corporate property tax (FY 15)	$39,959,467	Per non-gov. employee	140,924	-	-	-	$283.55	18,457	$5,233,631
Personal/merchants property tax (FY 15)	$1,428,792	Per non-gov. employee	140,924	-	-	-	$10.14	18,457	$187,134
Other local taxes									
Admission and amusement tax	$2,700,000	Per capita	309,284	$8.73	-	-	-	9,275	$80,970
State shared taxes									
Highway users' tax	$1,531,600	Per capita	309,284	$4.95	-	-	-	9,275	$45,931
Licenses and permits									
Traders	$450,000	Per employee	157,997	-	$2.85	-	-	20,693	$58,938
Sign permits	$278,100	Per capita	309,284	$0.90	-	-	-	9,275	$8,340
Dog, cat, and animal licenses	$60,500	Per capita	309,284	$0.20	-	-	-	9,275	$1,814
Marriage license surcharge	$62,800	Per capita	309,284	$0.20	-	-	-	9,275	$1,883
Distilled spirits license fee	$3,500	Per capita	309,284	$0.01	-	-	-	9,275	$105
Marriage licenses	$9,000	Per capita	309,284	$0.03	-	-	-	9,275	$270
Revenues from other agencies									
Government participation	$2,200,000	Per capita	309,284	$7.11	-	-	-	9,275	$65,975
Charges for services									
CATV franchise fee (FY 15)	$5,100,000	Per capita	309,284	$16.49	-	-	-	9,275	$152,943
Court costs	$133,900	Per capita	309,284	$0.43	-	-	-	9,275	$4,015
Sale- Tax certificate	$295,000	Per capita	309,284	$0.95	-	-	-	9,275	$8,847
Police records check	$38,000	Per capita	309,284	$0.12	-	-	-	9,275	$1,140
Civil marriages	$9,500	Per capita	309,284	$0.03	-	-	-	9,275	$285
Other charges for services	$150,300	Per capita	309,284	$0.49	-	-	-	9,275	$4,507
Fines and forfeitures									
False alarm fees and fines	$320,000	Per capita	309,284	$1.03	-	-	-	9,275	$9,596
Other fines and forfeitures	$58,000	Per capita	309,284	$0.19	-	-	-	9,275	$1,739
Court awards	$33,000	Per capita and employee	426,805	-	-	$0.08	-	24,667	$1,907
Parking violations	$181,200	Per capita and employee	426,805	-	-	$0.42	-	24,667	$10,472
Redlight	$2,300,000	Per capita and employee	426,805	-	-	$5.39	-	24,667	$132,928
Other fines and forfeitures	$1,115,000	Per capita	309,284	$3.61	-	-	-	9,275	$33,437
Total projected annual revenues	$59,167,659			$45.48	$2.85	$5.89	$293.69		$6,046,809

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XII-A*

17-Sep-15

[1]Not all sources of revenues are expected to be impacted. Only revenues projected to be impacted are included.

[2]Source: *Howard County, Maryland Approved Fiscal Year 2016 Budget Revenue Report.*

[3]Method of apportioning costs: Per non-government employee revenues are calculated by taking current revenues and apportioning them among current non-government employees. It is assumed that this same ratio applies for this analysis. Per capita revenues are calculated by taking current revenues and apportioning them among the current permanent population. Per employee revenues are calculated by taking current revenues and apportioning them among current total employees. Per capita and employee revenues are calculated by taking current revenues and apportioning them among the current service population (i.e. total permanent population and employees who do not reside in the County).

[4]Represents the current statistics for the County. See Appendix A.

[5]Represents the proposed increase to the County as a result of the new development. See Appendix A.

[6]Represents the total increase in revenues as a result of the proposed development on an annual basis. Figures assume full build out and are expressed in current dollars.

Downtown Columbia
Howard County, Maryland

Schedule XII-B: Additional Revenues to Howard County (35 Years)

		Projected Additional Revenues to Howard County												
Tax Year Beginning	Inflation Factor	Anticipated Population[1]	Revenues Per Capita[2]	Total Revenues	Anticipated Employees[1]	Revenues Per Employee[2]	Total Employee Revenues	Anticipated Svc. Population[1]	Cost Per Capita & Employee[2]	Total Service Population	Anticipated Non-gov. Emp.[1]	Revenues Per Non-gov. Emp.[2]	Total Revenues	Total
1-Jul-16	100%	629	$45.48	$28,618	0	$2.85	$0	629	$5.89	$3,707	0	$293.69	$0	$32,324
1-Jul-17	103%	629	$46.84	$29,476	784	$2.93	$2,300	1,212	$6.07	$7,356	699	$302.50	$211,540	$250,673
1-Jul-18	106%	1,353	$48.25	$65,275	1,235	$3.02	$3,732	2,272	$6.25	$14,197	1,102	$311.58	$343,263	$426,466
1-Jul-19	109%	2,087	$49.69	$103,689	3,841	$3.11	$11,953	4,943	$6.44	$31,820	3,426	$320.93	$1,099,386	$1,246,848
1-Jul-20	113%	3,113	$51.18	$159,351	5,853	$3.21	$18,763	7,467	$6.63	$49,506	5,221	$330.55	$1,725,695	$1,953,315
1-Jul-21	116%	4,234	$52.72	$223,234	7,304	$3.30	$24,117	9,667	$6.83	$66,019	6,515	$340.47	$2,218,163	$2,531,533
1-Jul-22	119%	4,234	$54.30	$229,931	8,826	$3.40	$30,017	10,799	$7.03	$75,962	7,873	$350.68	$2,760,771	$3,096,681
1-Jul-23	123%	5,027	$55.93	$281,163	10,675	$3.50	$37,394	12,967	$7.24	$93,947	9,522	$361.20	$3,439,235	$3,851,739
1-Jul-24	127%	5,567	$57.61	$320,735	11,648	$3.61	$42,027	14,232	$7.46	$106,201	10,390	$372.04	$3,865,395	$4,334,358
1-Jul-25	130%	6,108	$59.34	$362,428	13,390	$3.72	$49,760	16,068	$7.69	$123,498	11,943	$383.20	$4,576,638	$5,112,324
1-Jul-26	134%	6,648	$61.12	$406,334	14,774	$3.83	$56,550	17,638	$7.92	$139,632	13,178	$394.70	$5,201,148	$5,803,664
1-Jul-27	138%	8,152	$62.95	$513,188	16,216	$3.94	$63,932	20,214	$8.15	$164,828	14,464	$406.54	$5,880,034	$6,621,982
1-Jul-28	143%	8,693	$64.84	$563,628	17,738	$4.06	$72,030	21,887	$8.40	$183,821	15,821	$418.73	$6,624,879	$7,444,358
1-Jul-29	147%	9,275	$66.78	$619,424	18,817	$4.18	$78,706	23,272	$8.65	$201,319	16,784	$431.30	$7,238,904	$8,138,353
1-Jul-30	151%	9,275	$68.79	$638,007	20,693	$4.31	$89,149	24,667	$8.91	$219,792	18,457	$444.24	$8,199,394	$9,146,341
1-Jul-31	156%	9,275	$70.85	$657,147	20,693	$4.44	$91,824	24,667	$9.18	$226,385	18,457	$457.56	$8,445,375	$9,420,731
1-Jul-32	160%	9,275	$72.98	$676,862	20,693	$4.57	$94,578	24,667	$9.45	$233,177	18,457	$471.29	$8,698,737	$9,703,353
1-Jul-33	165%	9,275	$75.17	$697,167	20,693	$4.71	$97,416	24,667	$9.74	$240,172	18,457	$485.43	$8,959,699	$9,994,454
1-Jul-34	170%	9,275	$77.42	$718,082	20,693	$4.85	$100,338	24,667	$10.03	$247,377	18,457	$499.99	$9,228,490	$10,294,288
1-Jul-35	175%	9,275	$79.74	$739,625	20,693	$4.99	$103,348	24,667	$10.33	$254,799	18,457	$514.99	$9,505,344	$10,603,116
1-Jul-36	181%	9,275	$82.14	$761,814	20,693	$5.14	$106,449	24,667	$10.64	$262,443	18,457	$530.44	$9,790,505	$10,921,210
1-Jul-37	186%	9,275	$84.60	$784,668	20,693	$5.30	$109,642	24,667	$10.96	$270,316	18,457	$546.35	$10,084,220	$11,248,846
1-Jul-38	192%	9,275	$87.14	$808,208	20,693	$5.46	$112,931	24,667	$11.29	$278,425	18,457	$562.74	$10,386,747	$11,586,311
1-Jul-39	197%	9,275	$89.75	$832,454	20,693	$5.62	$116,319	24,667	$11.63	$286,778	18,457	$579.63	$10,698,349	$11,933,901
1-Jul-40	203%	9,275	$92.44	$857,428	20,693	$5.79	$119,809	24,667	$11.97	$295,381	18,457	$597.02	$11,019,299	$12,291,918
1-Jul-41	209%	9,275	$95.22	$883,151	20,693	$5.96	$123,403	24,667	$12.33	$304,243	18,457	$614.93	$11,349,878	$12,660,675
1-Jul-42	216%	9,275	$98.07	$909,645	20,693	$6.14	$127,105	24,667	$12.70	$313,370	18,457	$633.37	$11,690,375	$13,040,496
1-Jul-43	222%	9,275	$101.02	$936,935	20,693	$6.33	$130,918	24,667	$13.09	$322,771	18,457	$652.37	$12,041,086	$13,431,710
1-Jul-44	229%	9,275	$104.05	$965,043	20,693	$6.52	$134,846	24,667	$13.48	$332,454	18,457	$671.95	$12,402,319	$13,834,662
1-Jul-45	236%	9,275	$107.17	$993,994	20,693	$6.71	$138,891	24,667	$13.88	$342,428	18,457	$692.10	$12,774,388	$14,249,702
1-Jul-46	243%	9,275	$110.38	$1,023,814	20,693	$6.91	$143,058	24,667	$14.30	$352,701	18,457	$712.87	$13,157,620	$14,677,193
1-Jul-47	250%	9,275	$113.70	$1,054,528	20,693	$7.12	$147,350	24,667	$14.73	$363,282	18,457	$734.25	$13,552,348	$15,117,508
1-Jul-48	258%	9,275	$117.11	$1,086,164	20,693	$7.33	$151,770	24,667	$15.17	$374,180	18,457	$756.28	$13,958,919	$15,571,034
1-Jul-49	265%	9,275	$120.62	$1,118,749	20,693	$7.55	$156,324	24,667	$15.62	$385,406	18,457	$778.97	$14,377,686	$16,038,165
1-Jul-50	273%	9,275	$124.24	$1,152,312	20,693	$7.78	$161,013	24,667	$16.09	$396,968	18,457	$802.34	$14,809,017	$16,519,310
Total				$22,202,270			$3,047,765			$7,564,661			$280,314,846	$313,129,542

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XII-B*
17-Sep-15

[1]See Appendix B.
[2]See Schedule XII-A.

Downtown Columbia
Howard County, Maryland

Schedule XIII: Total Revenues to Howard County

Tax Year Beginning	Inflation Factor	Real Property Tax Revenues (See Schedule V)	Personal Income Tax Revenues (See Schedules VI-A/VI-B)	Local Recordation Tax Revenues (See Schedule VII)	School Excise Tax Revenues (See Schedule VIII)	Road Excise Tax Revenues (See Schedule IX)	Transfer Tax Revenues (See Schedule X)	Hotel Occupancy Tax Revenues (See Schedule XI)	Additional Tax Revenues (See Schedule XII-B)	Total Projected Revenues
1-Jul-16	100%	$754,460	$741,776	$465,027	$644,575	$755,422	$930,054	$0	$32,324	$4,323,638
1-Jul-17	103%	$1,283,843	$764,029	$272,431	$673,028	$1,498,711	$544,862	$0	$250,673	$5,287,577
1-Jul-18	106%	$2,624,908	$1,691,943	$738,357	$970,193	$1,619,345	$1,476,715	$0	$426,466	$9,547,928
1-Jul-19	109%	$5,391,002	$2,687,642	$1,526,596	$1,036,834	$1,463,104	$3,053,192	$0	$1,246,848	$16,405,218
1-Jul-20	113%	$8,848,477	$4,130,436	$1,810,283	$0	$533,743	$3,620,567	$329,313	$1,953,315	$21,226,135
1-Jul-21	116%	$12,151,444	$5,708,287	$1,514,652	$794,335	$1,420,071	$3,029,304	$339,192	$2,531,533	$27,488,817
1-Jul-22	119%	$14,269,560	$5,879,536	$673,860	$574,835	$887,752	$1,347,719	$349,368	$3,096,681	$27,079,311
1-Jul-23	123%	$17,919,970	$7,196,438	$1,654,182	$592,080	$1,226,710	$3,308,364	$563,763	$3,851,739	$36,313,246
1-Jul-24	127%	$20,514,569	$8,219,409	$974,893	$609,843	$1,113,743	$1,949,787	$580,676	$4,334,358	$38,297,277
1-Jul-25	130%	$23,709,243	$9,297,280	$1,350,037	$1,747,643	$2,221,803	$2,700,073	$598,096	$5,112,324	$46,736,500
1-Jul-26	134%	$26,890,741	$10,432,426	$1,224,671	$646,982	$1,242,892	$2,449,341	$616,039	$5,803,664	$49,306,758
1-Jul-27	138%	$31,917,230	$13,199,116	$2,345,881	$674,252	$1,085,092	$4,691,763	$864,028	$6,621,982	$61,399,343
1-Jul-28	143%	$35,697,392	$14,503,461	$1,367,168	$0	$842,944	$2,734,335	$889,949	$7,444,358	$63,479,607
1-Jul-29	147%	$39,454,073	$15,930,895	$1,280,891	$0	$0	$2,561,783	$916,647	$8,138,353	$68,282,642
1-Jul-30	151%	$42,977,395	$16,408,822	$1,095,959	$0	$0	$2,191,918	$944,146	$9,146,341	$72,764,581
1-Jul-31	156%	$44,778,959	$16,901,086	$88,116	$0	$0	$176,232	$972,471	$9,420,731	$72,337,596
1-Jul-32	160%	$46,449,193	$17,408,119	$90,760	$0	$0	$181,519	$1,001,645	$9,703,353	$74,834,589
1-Jul-33	165%	$47,991,944	$17,930,362	$93,482	$0	$0	$186,965	$1,031,694	$9,994,454	$77,228,901
1-Jul-34	170%	$49,431,702	$18,468,273	$96,287	$0	$0	$192,574	$1,062,645	$10,294,288	$79,545,768
1-Jul-35	175%	$50,914,653	$19,022,322	$99,175	$0	$0	$198,351	$1,094,524	$10,603,116	$81,932,141
1-Jul-36	181%	$52,442,093	$19,592,991	$102,151	$0	$0	$204,301	$1,127,360	$10,921,210	$84,390,106
1-Jul-37	186%	$54,015,356	$20,180,781	$105,215	$0	$0	$210,430	$1,161,181	$11,248,846	$86,921,809
1-Jul-38	192%	$55,635,816	$20,786,204	$108,372	$0	$0	$216,743	$1,196,016	$11,586,311	$89,529,463
1-Jul-39	197%	$57,304,891	$21,409,790	$111,623	$0	$0	$223,245	$1,231,897	$11,933,901	$92,215,347
1-Jul-40	203%	$59,024,037	$22,052,084	$114,971	$0	$0	$229,943	$1,268,854	$12,291,918	$94,981,807
1-Jul-41	209%	$60,794,759	$22,713,647	$118,421	$0	$0	$236,841	$1,306,919	$12,660,675	$97,831,262
1-Jul-42	216%	$62,618,601	$23,395,056	$121,973	$0	$0	$243,946	$1,346,127	$13,040,496	$100,766,199
1-Jul-43	222%	$64,497,159	$24,096,908	$125,632	$0	$0	$251,265	$1,386,511	$13,431,710	$103,789,185
1-Jul-44	229%	$66,432,074	$24,819,815	$129,401	$0	$0	$258,803	$1,428,106	$13,834,662	$106,902,861
1-Jul-45	236%	$68,425,036	$25,564,409	$133,283	$0	$0	$266,567	$1,470,949	$14,249,702	$110,109,947
1-Jul-46	243%	$70,477,787	$26,331,342	$137,282	$0	$0	$274,564	$1,515,078	$14,677,193	$113,413,245
1-Jul-47	250%	$72,592,121	$27,121,282	$141,400	$0	$0	$282,801	$1,560,530	$15,117,508	$116,815,643
1-Jul-48	258%	$74,769,885	$27,934,920	$145,642	$0	$0	$291,285	$1,607,346	$15,571,034	$120,320,112
1-Jul-49	265%	$77,012,981	$28,772,968	$150,012	$0	$0	$300,023	$1,655,566	$16,038,165	$123,929,715
1-Jul-50	273%	$79,323,371	$29,636,157	$154,512	$0	$0	$309,024	$1,705,233	$16,519,310	$127,647,607
Total		$1,499,336,727	$570,930,014	$20,662,599	$8,964,599	$15,911,332	$41,325,198	$33,121,871	$313,129,542	$2,503,381,882

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XIII*

17-Sep-15

Downtown Columbia
Howard County, Maryland

Schedule XIV-A: Additional Expenditures to Howard County (Annual)

Annual Expenses[1]	Current County Expenditures[2]	Basis for Projecting Expenses[3]	Current County Service Factors[4]	Total Costs Per Capita	Per Capita & Employee	Per Student	Per Road Mile	Trips	Projected Increase in Service Factor[5]	Total Additional Expenditures[6]
Education										
Howard County Public Schools	$544,144,625	Per student	52,511	-	-	$10,362.49	-	-	606	$6,275,466
HCPSS - debt service (capital costs)	$44,662,265	Case study (see Appendix E)	-	-	-	-	-	-	-	$0
Howard Community College	$31,000,287	Per capita	309,284	$100.23	-	-	-	-	9,275	$929,660
HCC - debt service (capital costs)	$7,496,675	Per capita	309,284	$24.24	-	-	-	-	9,275	$224,816
Howard County Library	$18,841,541	Per capita	309,284	$60.92	-	-	-	-	9,275	$565,034
Public safety										
Department of Police[7]	$104,298,710	Per capita and trips[8]	-	$219.20	-	-	-	$55.78	-	$6,147,565
Animal Control Division	$1,674,925	Per capita	309,284	$5.42	-	-	-	-	9,275	$50,229
Department of Corrections	$16,695,475	Per capita	309,284	$53.98	-	-	-	-	9,275	$500,676
Public facilities										
Director's Office	$4,938,480	Per capita and employee	426,805	-	$11.57	-	-	-	24,667	$285,419
Engineering Administration	$545,253	Per capita and employee	426,805	-	$1.28	-	-	-	24,667	$31,513
Engineering Transportation	$1,314,274	Per capita and employee	426,805	-	$3.08	-	-	-	24,667	$75,958
Engineering Construction Inspection	$2,890,379	Per capita and employee	426,805	-	$6.77	-	-	-	24,667	$167,049
Engineering Survey	$942,726	Per capita and employee	426,805	-	$2.21	-	-	-	24,667	$54,485
Highways Administration	$993,669	Per road mile	1,116	-	-	-	$890.38	-	1.120	$997
Highways Maintenance Division	$16,613,818	Per road mile	1,116	-	-	-	$14,886.93	-	1.120	$16,673
Highway Traffic Engineering Division	$1,710,666	Per road mile	1,116	-	-	-	$1,532.85	-	1.120	$1,717
Facilities Administration	$7,432,636	Per capita	309,284	$24.03	-	-	-	-	9,275	$222,895
Facilities Maintenance	$8,590,356	Per capita	309,284	$27.77	-	-	-	-	9,275	$257,614
Soil Conservation District	$808,515	Per capita and employee	426,805	-	$1.89	-	-	-	24,667	$46,728
Community services										
Department of Recreation and Parks	$19,603,223	Per capita	309,284	$63.38	-	-	-	-	9,275	$587,876
Citizen Services	$10,890,875	Per capita	309,284	$35.21	-	-	-	-	9,275	$326,604
Transportation Services/Coordination	$8,535,494	Per capita	309,284	$27.60	-	-	-	-	9,275	$255,969
Health and Mental Hygiene	$8,180,645	Per capita	309,284	$26.45	-	-	-	-	9,275	$245,327
Social Services	$569,741	Per capita	309,284	$1.84	-	-	-	-	9,275	$17,086
Community Service Partnerships	$10,449,401	Per capita	309,284	$33.79	-	-	-	-	9,275	$313,364
Sub-total expenses				$704.06	$26.80	$10,362.49	$17,310.17	$55.78		$17,600,723

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XIVA*

17-Sep-15

[1]Not all County expenses are assumed to be impacted. Only the expenses projected to increase are included.

[2]Source: *Howard County, Maryland Approved Operating Budget, Fiscal Year 2016.*

[3]Method of apportioning costs: Per student expenditures are calculated by taking current expenses and apportioning them among current students. Per capita expenditures are calculated by taking current costs and apportioning them among the current permanent population. Per capita and employee expenditures are calculated by taking current costs and apportioning them among the current service population (i.e. total permanent population and employees who do not reside in the County). Per road mile expenditures are calculated by taking current costs and apportioning them among current road miles within the County.

[4]Represents the current statistics for the County. See Appendix A.

[5]Represents the annual proposed increase to the County as a result of the new development. See Appendix A.

[6]Represents the total increase in expenditures as a result of the proposed development on an annual basis. Figures assume full build out and are expressed in current dollars.

[7]Per capita and trip expenditures are calculated by taking the current police costs and apportioning them amount the current population and current amount of trips in the County. See Appendices D-1 and D-2 for total County trips, costs per capita, per trip factors and projected trips.

Downtown Columbia
Howard County, Maryland

Schedule XIV-A: Additional Expenditures to Howard County (Annual), continued

Annual Expenses[1]	Current County Expenditures[2]	Basis for Projecting Expenses[3]	Current County Service Factors[4]	Total Costs Per Capita	Per Capita & Employee	Per Student	Per Road Mile	Trips	Projected Increase in Service Factors[5]	Total Additional Expenditures[6]
General government										
Office of the County Executive	$1,714,020	Per capita and employee	426,805	-	$4.02	-	-	-	24,667	$99,062
Staff Services	$2,768,703	Per capita and employee	426,805	-	$6.49	-	-	-	24,667	$160,017
Environmental Sustainability	$456,841	Per capita and employee	426,805	-	$1.07	-	-	-	24,667	$26,403
Office of Human Rights	$724,371	Per capita and employee	426,805	-	$1.70	-	-	-	24,667	$41,865
Workforce Development	$220,978	Per capita and employee	426,805	-	$0.52	-	-	-	24,667	$12,771
Office of Human Resources	$1,941,311	Per capita and employee	426,805	-	$4.55	-	-	-	24,667	$112,198
Office of Purchasing	$1,322,025	Per capita and employee	426,805	-	$3.10	-	-	-	24,667	$76,406
Central Mail Service	$843,137	Per capita and employee	426,805	-	$1.98	-	-	-	24,667	$48,729
Public Information	$1,075,574	Per capita and employee	426,805	-	$2.52	-	-	-	24,667	$62,163
Director's Office - Finance	$2,487,846	Per capita and employee	426,805	-	$5.83	-	-	-	24,667	$143,785
Bureau of Accounting	$2,349,641	Per capita and employee	426,805	-	$5.51	-	-	-	24,667	$135,797
Bureau of Revenue and Cust. Svc.	$1,700,995	Per capita and employee	426,805	-	$3.99	-	-	-	24,667	$98,309
Water & Sewer Billing	$551,554	Per capita and employee	426,805	-	$1.29	-	-	-	24,667	$31,877
Bureau of Disbursements	$948,688	Per capita and employee	426,805	-	$2.22	-	-	-	24,667	$54,829
Office of Law	$3,873,274	Per capita and employee	426,805	-	$9.08	-	-	-	24,667	$223,856
Economic Development Authority	$2,475,191	Per capita and employee	426,805	-	$5.80	-	-	-	24,667	$143,054
Cable Administration	$272,321	Per capita and employee	426,805	-	$0.64	-	-	-	24,667	$15,739
Legislative & judicial										
County Council	$2,864,314	Per capita and employee	426,805	-	$6.71	-	-	-	24,667	$165,543
Zoning Board	$122,874	Per capita and employee	426,805	-	$0.29	-	-	-	24,667	$7,101
Board of Appeals	$101,945	Per capita and employee	426,805	-	$0.24	-	-	-	24,667	$5,892
Other legislative and judicial	$22,912,295	Per capita	309,284	$74.08	-	-	-	-	9,275	$687,111
Non-Departmental Expenses										
GC bonds - community renewal	$365,937	Per capita	309,284	$1.18	-	-	-	-	9,275	$10,974
GC bonds - fire department	$1,965,699	Case Study (See XVII-B)	-	-	-	-	-	-	-	$0
GC bonds - general county	$28,282,186	Per capita and employee	426,805	-	$66.26	-	-	-	24,667	$1,634,568
GC bonds - police department	$608,315	Case Study (See XVII-C)	-	-	-	-	-	-	-	$0
GC bonds - recreation and parks	$3,765,829	Per capita	309,284	$12.18	-	-	-	-	9,275	$112,933
GC bonds - storm drain	$2,277,341	Per capita and employee	426,805	-	$5.34	-	-	-	24,667	$131,619
Excise bonds	$5,826,232	Per capita and employee	426,805	-	$13.65	-	-	-	24,667	$336,727
Total expenses	$968,644,091			$791.50	$179.57	$10,362.49	$17,310.17	$55.78		$22,180,050

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XIVA.2*

17-Sep-15

[1]Not all County expenses are assumed to be impacted. Only the expenses projected to increase are included.

[2]Source: *Howard County, Maryland Approved Operating Budget, Fiscal Year 2016.*

[3]Method of apportioning costs: Per student expenditures are calculated by taking current expenses and apportioning them among current students. Per capita expenditures are calculated by taking current costs and apportioning them among the current permanent population. Per capita and employee expenditures are calculated by taking current costs and apportioning them among the current service population (i.e. total permanent population and employees who do not reside in the County). Per road mile expenditures are calculated by taking current costs and apportioning them among current road miles within the County.

[4]Represents the current statistics for the County. See Appendix A.

[5]Represents the annual proposed increase to the County as a result of the new development. See Appendix A.

[6]Represents the total increase in expenditures as a result of the proposed development on an annual basis. Figures assume full build out and are expressed in current dollars.

Downtown Columbia
Howard County, Maryland

Schedule XIV-B: Additional Expenditures to Howard County (35 Years), continued

Tax Year Beginning	Inflation Factor	Additional Expenditures to Howard County: Anticipated Road Miles[1]	Cost Per Road Mile[2]	Total Road Costs	Anticipated Trips[3]	Cost Per Trip[2]	Total Trip Costs	Total County Costs
1-Jul-16	100%	0.00	$17,310	$0	0	$56	$0	$1,039,897
1-Jul-17	103%	0.00	$17,829	$0	2,064	$57	$118,555	$1,297,510
1-Jul-18	106%	0.00	$18,364	$0	3,317	$59	$196,270	$2,743,232
1-Jul-19	109%	0.00	$18,915	$0	11,814	$61	$720,069	$5,048,437
1-Jul-20	113%	0.00	$19,483	$0	19,206	$63	$1,205,782	$7,876,151
1-Jul-21	116%	0.00	$20,067	$0	24,503	$65	$1,584,444	$10,775,121
1-Jul-22	119%	1.12	$20,669	$23,150	29,546	$67	$1,967,875	$11,700,158
1-Jul-23	123%	1.12	$21,289	$23,844	36,118	$69	$2,477,738	$14,416,715
1-Jul-24	127%	1.12	$21,928	$24,559	43,046	$71	$3,041,612	$16,634,884
1-Jul-25	130%	1.12	$22,586	$25,296	48,657	$73	$3,541,239	$19,011,219
1-Jul-26	134%	1.12	$23,263	$26,055	53,343	$75	$3,998,773	$21,381,621
1-Jul-27	138%	1.12	$23,961	$26,837	58,863	$77	$4,544,910	$26,155,705
1-Jul-28	143%	1.12	$24,680	$27,642	63,906	$80	$5,082,336	$28,904,745
1-Jul-29	147%	1.12	$25,421	$28,471	67,805	$82	$5,554,200	$31,716,096
1-Jul-30	151%	1.12	$26,183	$29,325	73,764	$84	$6,223,555	$33,549,316
1-Jul-31	156%	1.12	$26,969	$30,205	73,764	$87	$6,410,262	$34,555,795
1-Jul-32	160%	1.12	$27,778	$31,111	73,764	$90	$6,602,570	$35,592,469
1-Jul-33	165%	1.12	$28,611	$32,044	73,764	$92	$6,800,647	$36,660,243
1-Jul-34	170%	1.12	$29,469	$33,006	73,764	$95	$7,004,666	$37,760,051
1-Jul-35	175%	1.12	$30,353	$33,996	73,764	$98	$7,214,806	$38,892,852
1-Jul-36	181%	1.12	$31,264	$35,016	73,764	$101	$7,431,251	$40,059,638
1-Jul-37	186%	1.12	$32,202	$36,066	73,764	$104	$7,654,188	$41,261,427
1-Jul-38	192%	1.12	$33,168	$37,148	73,764	$107	$7,883,814	$42,499,270
1-Jul-39	197%	1.12	$34,163	$38,263	73,764	$110	$8,120,328	$43,774,248
1-Jul-40	203%	1.12	$35,188	$39,411	73,764	$113	$8,363,938	$45,087,475
1-Jul-41	209%	1.12	$36,244	$40,593	73,764	$117	$8,614,856	$46,440,099
1-Jul-42	216%	1.12	$37,331	$41,811	73,764	$120	$8,873,302	$47,833,302
1-Jul-43	222%	1.12	$38,451	$43,065	73,764	$124	$9,139,501	$49,268,301
1-Jul-44	229%	1.12	$39,604	$44,357	73,764	$128	$9,413,686	$50,746,350
1-Jul-45	236%	1.12	$40,793	$45,688	73,764	$131	$9,696,097	$52,268,741
1-Jul-46	243%	1.12	$42,016	$47,058	73,764	$135	$9,986,979	$53,836,803
1-Jul-47	250%	1.12	$43,277	$48,470	73,764	$139	$10,286,589	$55,451,907
1-Jul-48	258%	1.12	$44,575	$49,924	73,764	$144	$10,595,187	$57,115,464
1-Jul-49	265%	1.12	$45,912	$51,422	73,764	$148	$10,913,042	$58,828,928
1-Jul-50	273%	1.12	$47,290	$52,965	73,764	$152	$11,240,433	$60,593,796
Total				$1,046,797			$212,503,502	$1,160,777,966

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XIV-B.2*
17-Sep-15

[1]See Appendix A. Road miles are assumed to be built at the rate of absorption.
[2]See Schedule XIV-A.
[3]See Appendix D-2.

Downtown Columbia
Howard County, Maryland

Schedule XIV-B: Additional Expenditures to Howard County (35 Years)

Tax Year Beginning	Inflation Factor	Additional Expenditures to Howard County: Anticipated Students[1]	Cost Per Student[2]	Student Costs	Anticipated Population[3]	Cost Per Capita[2]	Total Per Capita Costs	Anticipated Service Population[3]	Cost Per Capita & Employee[2]	Total Service Population
1-Jul-16	100%	41	$10,362	$428,820	629	$792	$498,078	629	$180	$112,999
1-Jul-17	103%	41	$10,673	$441,685	629	$815	$513,020	1,212	$185	$224,250
1-Jul-18	106%	89	$10,994	$978,112	1,353	$840	$1,136,083	2,272	$191	$432,767
1-Jul-19	109%	137	$11,323	$1,553,725	2,087	$865	$1,804,661	4,943	$196	$969,982
1-Jul-20	113%	205	$11,663	$2,387,804	3,113	$891	$2,773,449	7,467	$202	$1,509,116
1-Jul-21	116%	274	$12,013	$3,292,914	4,234	$918	$3,885,300	9,667	$208	$2,012,463
1-Jul-22	119%	274	$12,373	$3,391,702	4,234	$945	$4,001,859	10,799	$214	$2,315,573
1-Jul-23	123%	326	$12,745	$4,157,786	5,027	$973	$4,893,541	12,967	$221	$2,863,807
1-Jul-24	127%	362	$13,127	$4,749,090	5,567	$1,003	$5,582,272	14,232	$227	$3,237,351
1-Jul-25	130%	397	$13,521	$5,372,131	6,108	$1,033	$6,307,923	16,068	$234	$3,764,630
1-Jul-26	134%	433	$13,926	$6,028,280	6,648	$1,064	$7,072,089	17,638	$241	$4,256,424
1-Jul-27	138%	532	$14,344	$7,627,621	8,152	$1,096	$8,931,839	20,214	$249	$5,024,499
1-Jul-28	143%	567	$14,774	$8,381,580	8,693	$1,128	$9,809,736	21,887	$256	$5,603,451
1-Jul-29	147%	606	$15,218	$9,215,733	9,275	$1,162	$10,780,845	23,272	$264	$6,136,847
1-Jul-30	151%	606	$15,674	$9,492,205	9,275	$1,197	$11,104,270	24,667	$272	$6,699,960
1-Jul-31	156%	606	$16,144	$9,776,971	9,275	$1,233	$11,437,398	24,667	$280	$6,900,959
1-Jul-32	160%	606	$16,629	$10,070,281	9,275	$1,270	$11,780,520	24,667	$288	$7,107,987
1-Jul-33	165%	606	$17,128	$10,372,389	9,275	$1,308	$12,133,936	24,667	$297	$7,321,227
1-Jul-34	170%	606	$17,641	$10,683,561	9,275	$1,347	$12,497,954	24,667	$306	$7,540,864
1-Jul-35	175%	606	$18,171	$11,004,067	9,275	$1,388	$12,872,892	24,667	$315	$7,767,090
1-Jul-36	181%	606	$18,716	$11,334,190	9,275	$1,430	$13,259,079	24,667	$324	$8,000,102
1-Jul-37	186%	606	$19,277	$11,674,215	9,275	$1,472	$13,656,852	24,667	$334	$8,240,105
1-Jul-38	192%	606	$19,856	$12,024,442	9,275	$1,517	$14,066,557	24,667	$344	$8,487,309
1-Jul-39	197%	606	$20,451	$12,385,175	9,275	$1,562	$14,488,554	24,667	$354	$8,741,928
1-Jul-40	203%	606	$21,065	$12,756,730	9,275	$1,609	$14,923,211	24,667	$365	$9,004,186
1-Jul-41	209%	606	$21,697	$13,139,432	9,275	$1,657	$15,370,907	24,667	$376	$9,274,311
1-Jul-42	216%	606	$22,348	$13,533,615	9,275	$1,707	$15,832,034	24,667	$387	$9,552,541
1-Jul-43	222%	606	$23,018	$13,939,623	9,275	$1,758	$16,306,995	24,667	$399	$9,839,117
1-Jul-44	229%	606	$23,709	$14,357,812	9,275	$1,811	$16,796,205	24,667	$411	$10,134,290
1-Jul-45	236%	606	$24,420	$14,788,547	9,275	$1,865	$17,300,091	24,667	$423	$10,438,319
1-Jul-46	243%	606	$25,152	$15,232,203	9,275	$1,921	$17,819,094	24,667	$436	$10,751,469
1-Jul-47	250%	606	$25,907	$15,689,169	9,275	$1,979	$18,353,667	24,667	$449	$11,074,013
1-Jul-48	258%	606	$26,684	$16,159,844	9,275	$2,038	$18,904,277	24,667	$462	$11,406,233
1-Jul-49	265%	606	$27,485	$16,644,639	9,275	$2,099	$19,471,405	24,667	$476	$11,748,420
1-Jul-50	273%	606	$28,309	$17,143,979	9,275	$2,162	$20,055,547	24,667	$491	$12,100,873
Total				$330,210,073			$386,422,136			$230,595,459

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XIV-B

17-Sep-15

[1]See Appendix C.

[2]See Schedule XIV-A.

[3]See Appendix B.

Downtown Columbia
Howard County, Maryland

Schedule XV: Total Projected Revenues Versus Total Projected Expenditures

Tax Year Beginning	Inflation Factor	Total County Revenues (Schedule XIII)	Total County Costs (Schedule XIV-B)	Net County General Fund Revenues
1-Jul-16	100%	$4,323,638	($1,039,897)	$3,283,741
1-Jul-17	103%	$5,287,577	($1,297,510)	$3,990,068
1-Jul-18	106%	$9,547,928	($2,743,232)	$6,804,696
1-Jul-19	109%	$16,405,218	($5,048,437)	$11,356,781
1-Jul-20	113%	$21,226,135	($7,876,151)	$13,349,984
1-Jul-21	116%	$27,488,817	($10,775,121)	$16,713,697
1-Jul-22	119%	$27,079,311	($11,700,158)	$15,379,154
1-Jul-23	123%	$36,313,246	($14,416,715)	$21,896,531
1-Jul-24	127%	$38,297,277	($16,634,884)	$21,662,393
1-Jul-25	130%	$46,736,500	($19,011,219)	$27,725,281
1-Jul-26	134%	$49,306,758	($21,381,621)	$27,925,137
1-Jul-27	138%	$61,399,343	($26,155,705)	$35,243,637
1-Jul-28	143%	$63,479,607	($28,904,745)	$34,574,862
1-Jul-29	147%	$68,282,642	($31,716,096)	$36,566,546
1-Jul-30	151%	$72,764,581	($33,549,316)	$39,215,265
1-Jul-31	156%	$72,337,596	($34,555,795)	$37,781,801
1-Jul-32	160%	$74,834,589	($35,592,469)	$39,242,120
1-Jul-33	165%	$77,228,901	($36,660,243)	$40,568,658
1-Jul-34	170%	$79,545,768	($37,760,051)	$41,785,718
1-Jul-35	175%	$81,932,141	($38,892,852)	$43,039,289
1-Jul-36	181%	$84,390,106	($40,059,638)	$44,330,468
1-Jul-37	186%	$86,921,809	($41,261,427)	$45,660,382
1-Jul-38	192%	$89,529,463	($42,499,270)	$47,030,194
1-Jul-39	197%	$92,215,347	($43,774,248)	$48,441,099
1-Jul-40	203%	$94,981,807	($45,087,475)	$49,894,332
1-Jul-41	209%	$97,831,262	($46,440,099)	$51,391,162
1-Jul-42	216%	$100,766,199	($47,833,302)	$52,932,897
1-Jul-43	222%	$103,789,185	($49,268,301)	$54,520,884
1-Jul-44	229%	$106,902,861	($50,746,350)	$56,156,511
1-Jul-45	236%	$110,109,947	($52,268,741)	$57,841,206
1-Jul-46	243%	$113,413,245	($53,836,803)	$59,576,442
1-Jul-47	250%	$116,815,643	($55,451,907)	$61,363,735
1-Jul-48	258%	$120,320,112	($57,115,464)	$63,204,648
1-Jul-49	265%	$123,929,715	($58,828,928)	$65,100,787
1-Jul-50	273%	$127,647,607	($60,593,796)	$67,053,811
Total		$2,503,381,882	($1,160,777,966)	$1,342,603,915

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XV*

17-Sep-15

Downtown Columbia
Howard County, Maryland

Schedule XVI: Comparison of FY 2016 Budget and Projected Impacts

Howard County FY 2016 Budget	Approved FY 2016[1]	Percent of Total	Estimated Impacts from Proposed Development[2]	Percent of Total
General Fund Revenues				
Prior year's funds	$450,000	0%	$0	0%
Property taxes	$490,706,500	48%	$34,456,680	74%
Income taxes	$407,366,530	40%	$10,848,164	23%
Other local taxes	$29,306,613	3%	$874,837	2%
State shared taxes	$1,531,600	0%	$45,931	0%
Licenses and permits	$8,911,600	1%	$71,350	0%
Revenue other agencies	$7,142,000	1%	$65,975	0%
Charges for services	$12,255,200	1%	$171,737	0%
Interest, money/fines	$15,426,700	2%	$190,081	0%
Interfund reimbursements	$39,207,307	4%	$0	0%
Total	$1,012,304,050	100%	$46,724,755	100%

General Fund & Capital Expenditures				
Education	$593,986,453	59%	$33,383,246	57%
Public safety	$120,994,185	12%	$6,698,471	11%
Public facilities	$61,822,759	6%	$1,161,050	2%
Community services	$59,256,478	6%	$1,746,226	3%
Legislative and judicial	$26,001,428	3%	$865,647	1%
General government	$26,537,640	3%	$1,486,860	3%
Non-departmental expenses	$123,705,107	12%	$13,220,109	23%
Total	$1,012,304,050	100%	$58,561,609	100%

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVI*
17-Sep-15

[1]Source: *Howard County, Maryland Fiscal Year 2016 Approved Operating Budget Detail.*

[2]Revenues and expenditures are shown at full build-out, excluding inflation. Excludes one-time revenues such as recordation, transfer, and excise tax revenues. Expenses include capital costs estimated on Schedules XVII-A through XVII-H.

Downtown Columbia
Howard County, Maryland

Schedule XVII-A: Projected County Annual Capital Costs - Library[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Capital:			
Building design and construction[1]	$40,000,000	20	$3,075,046
Howard County resident population[2]			309,284
Amortized costs per capita			$9.94

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIA*

17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance. Annual costs are assumed to be amortized over 20 years at 4.5%.

[2]See Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-B: Projected County Annual Capital Costs - Fire Department[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Capital:			
Building design, construction, new fire apparatuses, and temporary site[1]	$20,000,000	20	$1,537,523
Howard County resident population[2]			309,284
Amortized costs per capita			$4.97

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIB*

17-Sep-15

[1]Represents a preliminary cost estimate for both temporary site costs and the new facility. Source: Howard County Department of Finance. Annual costs are assumed to be amortized over 20 years at 4.5%.

[2]See Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-C: Projected County Annual Capital Costs - Police Command[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Capital:			
Building design and construction[1]	$19,000,000	20	$1,460,647
Howard County Downtown Columbia resident population (1/3 of County residents)[2]			103,095
Amortized costs per capita			$14.17

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIC*

17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance. Annual costs are assumed to be amortized over 20 years at 4.5%.

[2]See Appendix A. Assumes 1/3 of the total county population as shown on Appendix A will benefit from the new police command facility.

Downtown Columbia
Howard County, Maryland

Schedule XVII-D.1: Projected County Annual Capital Costs - Interchange[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Building design and construction[1]	$50,000,000		
Break-in access fee estimate[1]	$25,000,000		
Sub-total interchange costs	$75,000,000		
Portion financed by County[2]	100%		
Capital:			
Financed costs[3]	$75,000,000	20	$5,765,711
Per Downtown Columbia Plan development trips[4]			92,008
Costs per trip			$62.67

MuniCap, Inc. *ONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIID1*

17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Public Works.

[2]Assumes 100% of costs will be paid by Howard County. Additional sources such as state funds may be available to reduce County's share of costs.

[3]Represents a preliminary cost estimate. Source: Howard County Department of Planning and Research, Division of Research. Annual costs are assumed to be amortized over 20 years at 4.5%.

[4]Assumes costs of the interchange are allocated to total new development created as a result of the Downtown Columbia Plan. See Appendix E, Table 1.

Schedule XVII-D.2: Projected County Annual Capital Costs - Interchange (Projected Trips)[1]

			Rental				For Sale - Condo				For Sale - Townhouse						
Year Ending	Inflation Factor	Total Projected Non-residential Trips[1]	Rental Units[2]	Trips Per Unit[3]	Trip Factor[3]	Sub-Total Trips	Condo Units[2]	Trips Per Unit[3]	Trip Factor[3]	Sub-Total Trips	TH Units[2]	Trips Per Unit[3]	Trip Factor[3]	Sub-Total Trips	Total Projected Trips	Costs Per Trip[4]	Total Estimated Costs
31-Dec-15	100%	0	380	6.72	0.50	1,277	0	5.86	0.50	0	0	5.86	0.50	0	1,277	$0	$0
31-Dec-16	103%	2,064	380	6.72	0.50	1,277	0	5.86	0.50	0	0	5.86	0.50	0	3,340	$0	$0
31-Dec-17	106%	3,317	817	6.72	0.50	2,745	0	5.86	0.50	0	0	5.86	0.50	0	6,062	$0	$0
31-Dec-18	109%	11,814	1,260	6.72	0.50	4,234	0	5.86	0.50	0	0	5.86	0.50	0	16,047	$0	$0
31-Dec-19	113%	19,206	1,880	6.72	0.50	6,317	0	5.86	0.50	0	0	5.86	0.50	0	25,523	$0	$0
31-Dec-20	116%	24,503	2,326	6.72	0.50	7,815	84	5.86	0.50	246	88	5.86	0.50	258	32,822	$0	$0
31-Dec-21	119%	29,546	2,326	6.72	0.50	7,815	84	5.86	0.50	246	88	5.86	0.50	258	37,865	$0	$0
31-Dec-22	123%	36,118	2,638	6.72	0.50	8,864	234	5.86	0.50	686	88	5.86	0.50	258	45,925	$0	$0
31-Dec-23	127%	43,046	2,964	6.72	0.50	9,960	234	5.86	0.50	686	88	5.86	0.50	258	53,950	$0	$0
31-Dec-24	130%	48,657	3,291	6.72	0.50	11,057	234	5.86	0.50	686	88	5.86	0.50	258	60,658	$82	$4,959,621
31-Dec-25	134%	53,343	3,617	6.72	0.50	12,154	234	5.86	0.50	686	88	5.86	0.50	258	66,440	$82	$5,432,458
31-Dec-26	138%	58,863	4,525	6.72	0.50	15,205	234	5.86	0.50	686	88	5.86	0.50	258	75,011	$82	$6,133,235
31-Dec-27	143%	63,906	4,852	6.72	0.50	16,301	234	5.86	0.50	686	88	5.86	0.50	258	81,151	$82	$6,635,259
31-Dec-28	147%	67,805	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	86,049	$82	$7,035,749
31-Dec-29	151%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-30	156%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-31	160%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-32	165%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-33	170%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-34	175%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-35	181%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-36	186%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-37	192%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-38	197%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-39	203%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-40	209%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-41	216%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-42	222%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-43	229%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$82	$7,522,945
31-Dec-44	236%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$0	$0
31-Dec-45	243%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$0	$0
31-Dec-46	250%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$0	$0
31-Dec-47	258%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$0	$0
31-Dec-48	265%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$0	$0
31-Dec-49	273%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$0	$0
31-Dec-50	281%	73,764	4,951	6.72	0.50	16,635	461	5.86	0.50	1,351	88	5.86	0.50	258	92,008	$0	$0
																	$143,040,496

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIID2*
17-Sep-15

[1]See Appendix D-2 for an estimate of projected trips from non-residential developmer

[2]See Schedule III-A.

[3]Provided by Howard County Department of Planning and Zoning, Division of Research

[4]Capital costs are assumed to increase with inflation until such time as the costs are incurred (i.e. financed).

Downtown Columbia
Howard County, Maryland

Schedule XVII-E: Projected County Annual Capital Costs - Arts Center[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Building design and construction[1]	$26,000,000		
Portion financed by County[2]	75%		
Capital:			
Financed costs[3]	$19,500,000	20	$1,499,085
Howard County resident population[4]			309,284
Amortized costs per capita			$4.85

MuniCap, Inc. *IG\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIE*
17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance.

[2]Assumes 25% of costs will be paid from other sources.

[3]Represents a preliminary cost estimate. Source: Howard County Department of Planning and Research, Division of Research. Annual costs are assumed to be amortized over 20 years at 4.5%.

[4]Se Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-F: Projected County Annual Capital Costs - Transit Center[1]

Costs Type	Total Capital Costs	Amortization Period	First Year Annual Costs
Building design and construction[1]	$9,500,000		
Portion financed by County[2]	100%		
Capital:			
Financed costs[3]	$9,500,000	20	$730,323
Howard County service population (residents and non-resident employees)[4]			426,805
Amortized costs per service population			$1.71

MuniCap, Inc. *NSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIF*

17-Sep-15

[1]Represents a preliminary cost estimate. Source: Howard County Department of Finance.

[2]Assumes full amount of costs is allocated to the County. Other sources of funds may be available in the future.

[3]Represents a preliminary cost estimate. Source: Howard County Department of Planning and Research, Division of Research. Annual costs are assumed to be amortized over 20 years at 4.5%.

[4]Assumes transit center costs are apportioned to total residents and employees who work, but do not live in the County. See Appendix A.

Downtown Columbia
Howard County, Maryland

Schedule XVII-G.1: Projected County Annual Capital Costs - Student Capital Costs[1]

Table 1: Elementary School Costs Per New Seat

Elementary school costs	$40,540,000
Less: assumed state contribution (25%)[2]	($10,135,000)
Sub-total student elementary school costs	$30,405,000
Seats per elementary school	788
Costs per new elementary school seat	$38,585

Table 2: Middle School Costs Per New Seat

Middle school costs	$41,987,000
Less: assumed state contribution (25%)[2]	($10,496,750)
Sub-total student middle school costs	$31,490,250
Seats per middle school addition	818
Costs per new middle school seat	$38,497

Table 3: High School Costs Per New Seat

High school costs	$70,642,000
Less: assumed state contribution (25%)[2]	($17,660,500)
Sub-total student high school costs	$52,981,500
Seats per high school	1,615
Costs per new high school seat	$32,806

MuniCap, Inc. *ıter\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIG1*
17-Sep-15

[1]Howard County Department of Planning and Zoning, Division of Research compiled from current HCPSS capital budget.

[2]Assumes 25% of total costs is received from State Aid. Source: Howard County Department of Planning and Zoning, Division of Research

Schedule XVII-G.2: Projected County Annual Capital Costs - Total Student Capital Costs[1]

Year Ending	Tax Year Beginning	Inflation Factor	Projected Elementary School Capital Costs: Elementary School Students[2]	Capital Costs Per Seat[3]	Total Capital Costs	Projected Middle School Capital Costs: Middle School Students[2]	Capital Costs Per Seat[3]	Total Capital Costs	Projected Middle School Capital Costs: High School Students[2]	Capital Costs Per Seat[3]	Total Capital Costs	Total Projected Student Capital Costs
31-Dec-15	1-Jul-16	100%	19	$38,585	$752,176	10	$38,497	$368,644	12	$32,806	$403,906	$1,524,726
31-Dec-16	1-Jul-17	103%	0	$39,743	$0	0	$39,652	$0	0	$33,790	$0	$0
31-Dec-17	1-Jul-18	106%	22	$40,935	$917,682	11	$40,841	$449,758	14	$34,804	$492,779	$1,860,219
31-Dec-18	1-Jul-19	109%	23	$42,163	$958,190	11	$42,066	$469,612	14	$35,848	$514,532	$1,942,333
31-Dec-19	1-Jul-20	113%	32	$43,428	$1,381,264	16	$43,328	$676,961	20	$36,923	$741,715	$2,799,941
31-Dec-20	1-Jul-21	116%	33	$44,731	$1,461,967	16	$44,628	$716,514	21	$38,031	$785,051	$2,963,532
31-Dec-21	1-Jul-22	119%	0	$46,073	$0	0	$45,967	$0	0	$39,172	$0	$0
31-Dec-22	1-Jul-23	123%	25	$47,455	$1,165,279	12	$47,346	$571,107	16	$40,347	$625,735	$2,362,121
31-Dec-23	1-Jul-24	127%	17	$48,878	$818,393	8	$48,766	$401,097	11	$41,558	$439,463	$1,658,953
31-Dec-24	1-Jul-25	130%	17	$50,345	$842,945	8	$50,229	$413,130	11	$42,804	$452,647	$1,708,722
31-Dec-25	1-Jul-26	134%	17	$51,855	$868,233	8	$51,736	$425,524	11	$44,088	$466,226	$1,759,983
31-Dec-26	1-Jul-27	138%	47	$53,411	$2,488,120	23	$53,288	$1,219,435	29	$45,411	$1,336,078	$5,043,633
31-Dec-27	1-Jul-28	143%	17	$55,013	$921,109	8	$54,887	$451,438	11	$46,773	$494,620	$1,867,166
31-Dec-28	1-Jul-29	147%	18	$56,663	$1,022,101	9	$56,534	$500,935	11	$48,177	$548,851	$2,071,887
31-Dec-29	1-Jul-30	151%	0	$58,363	$0	0	$58,230	$0	0	$49,622	$0	$0
31-Dec-30	1-Jul-31	156%	0	$60,114	$0	0	$59,977	$0	0	$51,110	$0	$0
31-Dec-31	1-Jul-32	160%	0	$61,918	$0	0	$61,776	$0	0	$52,644	$0	$0
31-Dec-32	1-Jul-33	165%	0	$63,775	$0	0	$63,629	$0	0	$54,223	$0	$0
31-Dec-33	1-Jul-34	170%	0	$65,688	$0	0	$65,538	$0	0	$55,850	$0	$0
31-Dec-34	1-Jul-35	175%	0	$67,659	$0	0	$67,504	$0	0	$57,525	$0	$0
31-Dec-35	1-Jul-36	181%	0	$69,689	$0	0	$69,529	$0	0	$59,251	$0	$0
31-Dec-36	1-Jul-37	186%	0	$71,780	$0	0	$71,615	$0	0	$61,029	$0	$0
31-Dec-37	1-Jul-38	192%	0	$73,933	$0	0	$73,764	$0	0	$62,859	$0	$0
31-Dec-38	1-Jul-39	197%	0	$76,151	$0	0	$75,976	$0	0	$64,745	$0	$0
31-Dec-39	1-Jul-40	203%	0	$78,435	$0	0	$78,256	$0	0	$66,688	$0	$0
31-Dec-40	1-Jul-41	209%	0	$80,788	$0	0	$80,603	$0	0	$68,688	$0	$0
31-Dec-41	1-Jul-42	216%	0	$83,212	$0	0	$83,022	$0	0	$70,749	$0	$0
31-Dec-42	1-Jul-43	222%	0	$85,708	$0	0	$85,512	$0	0	$72,871	$0	$0
31-Dec-43	1-Jul-44	229%	0	$88,280	$0	0	$88,078	$0	0	$75,057	$0	$0
31-Dec-44	1-Jul-45	236%	0	$90,928	$0	0	$90,720	$0	0	$77,309	$0	$0
31-Dec-45	1-Jul-46	243%	0	$93,656	$0	0	$93,441	$0	0	$79,628	$0	$0
31-Dec-46	1-Jul-47	250%	0	$96,466	$0	0	$96,245	$0	0	$82,017	$0	$0
31-Dec-47	1-Jul-48	258%	0	$99,360	$0	0	$99,132	$0	0	$84,478	$0	$0
31-Dec-48	1-Jul-49	265%	0	$102,340	$0	0	$102,106	$0	0	$87,012	$0	$0
31-Dec-49	1-Jul-50	273%	0	$105,411	$0	0	$105,169	$0	0	$89,623	$0	$0
Total			285			140			180			$27,563,216

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIG2
17-Sep-15

[1]Source: Howard County Department of Planning and Zoning, Division of Research.

[2]Represents the projected students generated by new apartments. See Appendix C.

[3]See Schedule XVII-G.1. Assumes inflation factor shown.

Downtown Columbia
Howard County, Maryland

Schedule XVII-H: Total Projected County Capital Costs[1]

Tax		Per Capita Allocation of Capital Costs[1]								Transit Center				Total Projected
Year	Inflation		Fire	Police	Arts	Sub-Total Per	Projected	Total Projected		Costs Per	Projected	Transit		Capital
Beginning	Factor	Library	Department	Command	Center	Capita Costs	Population[2]	Per Capita Costs	Interchange[3]	Svc. Population[4]	Svc. Population[5]	Center Costs	Public Schools[6]	Costs
1-Jul-16	100%	$0	$0	$0	$0	$0	629	$0	$0	$0	629	$0	$1,524,726	$1,524,726
1-Jul-17	103%	$0	$0	$0	$0	$0	629	$0	$0	$0	1,212	$0	$0	$0
1-Jul-18	106%	$0	$5	$0	$0	$5	1,353	$7,135	$0	$0	2,272	$0	$1,860,219	$1,867,355
1-Jul-19	109%	$0	$5	$0	$0	$5	2,087	$11,004	$0	$0	4,943	$0	$1,942,333	$1,953,338
1-Jul-20	113%	$0	$5	$0	$0	$5	3,113	$16,419	$0	$0	7,467	$0	$2,799,941	$2,816,360
1-Jul-21	116%	$12	$5	$16	$0	$33	4,234	$140,684	$0	$0	9,667	$0	$2,963,532	$3,104,216
1-Jul-22	119%	$12	$5	$16	$6	$39	4,234	$165,191	$0	$2.04	10,799	$22,065	$0	$187,256
1-Jul-23	123%	$12	$5	$16	$6	$39	5,027	$196,114	$0	$2.04	12,967	$26,495	$2,362,121	$2,584,730
1-Jul-24	127%	$12	$5	$16	$6	$39	5,567	$217,200	$0	$2.04	14,232	$29,078	$1,658,953	$1,905,231
1-Jul-25	130%	$12	$5	$16	$6	$39	6,108	$238,286	$4,959,621	$2.04	16,068	$32,830	$1,708,722	$6,939,458
1-Jul-26	134%	$12	$5	$16	$6	$39	6,648	$259,372	$5,432,458	$2.04	17,638	$36,037	$1,759,983	$7,487,850
1-Jul-27	138%	$12	$5	$16	$6	$39	8,152	$318,037	$6,133,235	$2.04	20,214	$41,301	$5,043,633	$11,536,206
1-Jul-28	143%	$12	$5	$16	$6	$39	8,693	$339,123	$6,635,259	$2.04	21,887	$44,718	$1,867,166	$8,886,267
1-Jul-29	147%	$12	$5	$16	$6	$39	9,275	$361,839	$7,035,749	$2.04	23,272	$47,549	$2,071,887	$9,517,024
1-Jul-30	151%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-31	156%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-32	160%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-33	165%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-34	170%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-35	175%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-36	181%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-37	186%	$12	$5	$16	$6	$39	9,275	$361,839	$7,522,945	$2.04	24,667	$50,400	$0	$7,935,184
1-Jul-38	192%	$12	$0	$16	$6	$34	9,275	$312,923	$7,522,945	$2.04	24,667	$50,400	$0	$7,886,268
1-Jul-39	197%	$12	$0	$16	$6	$34	9,275	$312,923	$7,522,945	$2.04	24,667	$50,400	$0	$7,886,268
1-Jul-40	203%	$12	$0	$16	$6	$34	9,275	$312,923	$7,522,945	$2.04	24,667	$50,400	$0	$7,886,268
1-Jul-41	209%	$0	$0	$0	$6	$6	9,275	$53,679	$7,522,945	$2.04	24,667	$50,400	$0	$7,627,024
1-Jul-42	216%	$0	$0	$0	$0	$0	9,275	$0	$7,522,945	$0	24,667	$0	$0	$7,522,945
1-Jul-43	222%	$0	$0	$0	$0	$0	9,275	$0	$7,522,945	$0	24,667	$0	$0	$7,522,945
1-Jul-44	229%	$0	$0	$0	$0	$0	9,275	$0	$7,522,945	$0	24,667	$0	$0	$7,522,945
1-Jul-45	236%	$0	$0	$0	$0	$0	9,275	$0	$0	$0	24,667	$0	$0	$0
1-Jul-46	243%	$0	$0	$0	$0	$0	9,275	$0	$0	$0	24,667	$0	$0	$0
1-Jul-47	250%	$0	$0	$0	$0	$0	9,275	$0	$0	$0	24,667	$0	$0	$0
1-Jul-48	258%	$0	$0	$0	$0	$0	9,275	$0	$0	$0	24,667	$0	$0	$0
1-Jul-49	265%	$0	$0	$0	$0	$0	9,275	$0	$0	$0	24,667	$0	$0	$0
1-Jul-50	273%	$0	$0	$0	$0	$0	9,275	$0	$0	$0	24,667	$0	$0	$0
Total								$6,157,568	$143,040,496			$884,871	$27,563,216	$177,646,151

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIIH

17-Sep-15

[1]Capital costs are assumed to increase with inflation until such time as the costs are incurred (i.e. financed). See Schedules XVII-A through XVII-C, and XVII-E for estimated costs per capita.

[2]See Appendix B.

[3]See Schedule XVII-D.1 and XVII-D.2.

[4]See Schedule XVII-F. Capital costs are assumed to increase with inflation until such time as the costs are incurred (i.e. financed).

[5]See Appendix B.

[6]See Schedule XVII-G.

Downtown Columbia
Howard County, Maryland

Schedule XVIII: Net Revenues Versus Total Projected County Capital Costs

Tax Year Beginning	Inflation Factor	Net County Revenues (Schedule XV)	Total Projected County Capital Costs (Schedule XVII-H)	Net Howard County Surplus/(Deficit)
1-Jul-16	100%	$3,283,741	($1,524,726)	$1,759,014
1-Jul-17	103%	$3,990,068	$0	$3,990,068
1-Jul-18	106%	$6,804,696	($1,867,355)	$4,937,341
1-Jul-19	109%	$11,356,781	($1,953,338)	$9,403,443
1-Jul-20	113%	$13,349,984	($2,816,360)	$10,533,623
1-Jul-21	116%	$16,713,697	($3,104,216)	$13,609,481
1-Jul-22	119%	$15,379,154	($187,256)	$15,191,898
1-Jul-23	123%	$21,896,531	($2,584,730)	$19,311,802
1-Jul-24	127%	$21,662,393	($1,905,231)	$19,757,161
1-Jul-25	130%	$27,725,281	($6,939,458)	$20,785,823
1-Jul-26	134%	$27,925,137	($7,487,850)	$20,437,286
1-Jul-27	138%	$35,243,637	($11,536,206)	$23,707,431
1-Jul-28	143%	$34,574,862	($8,886,267)	$25,688,595
1-Jul-29	147%	$36,566,546	($9,517,024)	$27,049,522
1-Jul-30	151%	$39,215,265	($7,935,184)	$31,280,081
1-Jul-31	156%	$37,781,801	($7,935,184)	$29,846,617
1-Jul-32	160%	$39,242,120	($7,935,184)	$31,306,936
1-Jul-33	165%	$40,568,658	($7,935,184)	$32,633,474
1-Jul-34	170%	$41,785,718	($7,935,184)	$33,850,534
1-Jul-35	175%	$43,039,289	($7,935,184)	$35,104,106
1-Jul-36	181%	$44,330,468	($7,935,184)	$36,395,284
1-Jul-37	186%	$45,660,382	($7,935,184)	$37,725,198
1-Jul-38	192%	$47,030,194	($7,886,268)	$39,143,926
1-Jul-39	197%	$48,441,099	($7,886,268)	$40,554,832
1-Jul-40	203%	$49,894,332	($7,886,268)	$42,008,065
1-Jul-41	209%	$51,391,162	($7,627,024)	$43,764,138
1-Jul-42	216%	$52,932,897	($7,522,945)	$45,409,952
1-Jul-43	222%	$54,520,884	($7,522,945)	$46,997,939
1-Jul-44	229%	$56,156,511	($7,522,945)	$48,633,566
1-Jul-45	236%	$57,841,206	$0	$57,841,206
1-Jul-46	243%	$59,576,442	$0	$59,576,442
1-Jul-47	250%	$61,363,735	$0	$61,363,735
1-Jul-48	258%	$63,204,648	$0	$63,204,648
1-Jul-49	265%	$65,100,787	$0	$65,100,787
1-Jul-50	273%	$67,053,811	$0	$67,053,811
Total		$1,342,603,915	($177,646,151)	$1,164,957,764

MuniCap, Inc. *:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]XVIII*

17-Sep-15

Downtown Columbia
Howard County, Maryland

Appendices

Downtown Columbia
Howard County, Maryland

Appendix A: Revenues and Costs to Howard County (Allocation Factors)

Howard County permanent population[1]	309,284
Howard County current employment[2]	157,997
Howard County current non-government employees[2]	140,924
Non-resident workers[2]	117,521
Employee population equivalent[3]	117,521
Total service population	426,805
Percent of newly created Howard County employees assumed to live in Howard County[2]	25.6%
Percent of newly created Howard County employees assumed to live outside Howard County[2]	74.4%
Service population rates	
Resident	1.00
Employee[3]	1.00
Proposed population increase - new households:	
Persons per rental/condo household[4]	1.84
Persons per townhouse household[4]	2.54
Expected population increase[5]	9,275
Expected employee increase[5]	
Projected new employees[6]	20,693
Projected new non-government employees[2]	18,457
Projected non-resident employees	15,392
Projected employee population equivalent[3]	15,392
Total service population increase[5]	24,667
Current students[7]	52,511
Projected student increase[8]	606
Current road miles[9]	1,116
Projected increase in road miles[10]	1.120

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]A.*
17-Sep-15

[1]Source: U.S. Census Bureau: State and County QuickFacts - 2014 estimate.

[2]Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application; 2012 data.

[3]Service rate assumes full-time employees generates costs at the same rate as full-time residents.

[4]Source: Howard County Department of Planning and Zoning Division of Research.

[5]See Appendix B.

[6]See Appendices G-1 through G-4.

[7] Source: *Howard County Public School System Enrollment Report dated September 30, 2014.*

[8]See Appendix C.

[9]Source: *Howard County, Maryland Comprehensive Annual Financial Report for the Fiscal Year Ended June 30, 2014.*

[10]Based on information provided by HHC. Represents new road miles to be conveyed to Howard County.

Downtown Columbia
Howard County, Maryland

Appendix B: Projected Residents, Employees, & Service Population

	MF Rental					Condos			Townhouse			
Year Ending	Apartment Units[1]	Vacancy Rate[2]	Occupied Units	Residents Per Unit[3]	Sub-total Apt. Residents	Condo Units[1]	Residents Per Unit[3]	Sub-total Condo Residents	Townhouse Units[1]	Residents Per Unit[4]	Sub-total TH Residents	Total Residents
31-Dec-15	380	10%	342	1.84	629	0	1.84	0	0	2.59	0	629
31-Dec-16	380	10%	342	1.84	629	0	1.84	0	0	2.59	0	629
31-Dec-17	817	10%	735	1.84	1,353	0	1.84	0	0	2.59	0	1,353
31-Dec-18	1,260	10%	1,134	1.84	2,087	0	1.84	0	0	2.59	0	2,087
31-Dec-19	1,880	10%	1,692	1.84	3,113	0	1.84	0	0	2.59	0	3,113
31-Dec-20	2,326	10%	2,093	1.84	3,852	84	1.84	155	88	2.59	228	4,234
31-Dec-21	2,326	10%	2,093	1.84	3,852	84	1.84	155	88	2.59	228	4,234
31-Dec-22	2,638	10%	2,374	1.84	4,369	234	1.84	431	88	2.59	228	5,027
31-Dec-23	2,964	10%	2,668	1.84	4,909	234	1.84	431	88	2.59	228	5,567
31-Dec-24	3,291	10%	2,962	1.84	5,450	234	1.84	431	88	2.59	228	6,108
31-Dec-25	3,617	10%	3,255	1.84	5,990	234	1.84	431	88	2.59	228	6,648
31-Dec-26	4,525	10%	4,073	1.84	7,494	234	1.84	431	88	2.59	228	8,152
31-Dec-27	4,852	10%	4,366	1.84	8,034	234	1.84	431	88	2.59	228	8,693
31-Dec-28	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-29	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-30	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-31	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-32	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-33	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-34	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-35	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-36	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-37	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-38	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-39	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-40	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-41	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-42	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-43	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-44	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-45	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-46	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-47	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-48	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-49	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275
31-Dec-50	4,951	10%	4,456	1.84	8,199	461	1.84	848	88	2.59	228	9,275

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]B.1*
17-Sep-15

[1]See Schedule III-A.

[2]See Schedule II-D.

[3]See Appendix A.

[4]Resident per TH unit provided by the Howard County Department of Planning and Zoning Division of Research.

Downtown Columbia
Howard County, Maryland

Appendix B: Projected Residents, Employees, & Service Population, continued

Year Ending	Office SF[1]	Employees Per 1,000 SF[2]	Total Employees	Retail SF[1]	Employees Per 1,000 SF[2]	Total Employees	Restaurant SF[1]	Employees Per 1,000 SF[2]	Total Employees	Hotel Rooms[1]	Employees Per Room[2]	Total Employees	Total Projected Employees	Non-Governmental Projected Employees[3]
	Projected Employee Increase													
31-Dec-15	0	3.54	0	0	1.73	0	0	6.88	0	0	0.17	0	0	0
31-Dec-16	204,000	3.54	722	0	1.73	0	9,000	6.88	62	0	0.17	0	784	699
31-Dec-17	329,000	3.54	1,165	5,000	1.73	9	9,000	6.88	62	0	0.17	0	1,235	1,102
31-Dec-18	943,000	3.54	3,338	63,900	1.73	111	57,000	6.88	392	0	0.17	0	3,841	3,426
31-Dec-19	1,423,600	3.54	5,039	114,805	1.73	199	82,000	6.88	564	300	0.17	51	5,853	5,221
31-Dec-20	1,703,600	3.54	6,031	166,156	1.73	288	135,969	6.88	935	300	0.17	51	7,304	6,515
31-Dec-21	2,003,600	3.54	7,092	217,506	1.73	377	189,938	6.88	1,306	300	0.17	51	8,826	7,873
31-Dec-22	2,387,750	3.54	8,452	268,857	1.73	466	243,907	6.88	1,677	470	0.17	80	10,675	9,522
31-Dec-23	2,532,750	3.54	8,966	320,207	1.73	554	297,876	6.88	2,048	470	0.17	80	11,648	10,390
31-Dec-24	2,894,800	3.54	10,247	371,558	1.73	643	351,845	6.88	2,419	470	0.17	80	13,390	11,943
31-Dec-25	3,155,800	3.54	11,171	422,908	1.73	732	405,814	6.88	2,791	470	0.17	80	14,774	13,178
31-Dec-26	3,425,000	3.54	12,124	474,259	1.73	821	459,783	6.88	3,162	640	0.17	109	16,216	14,464
31-Dec-27	3,725,000	3.54	13,186	525,609	1.73	910	513,752	6.88	3,533	640	0.17	109	17,738	15,821
31-Dec-28	3,900,000	3.54	13,805	576,960	1.73	999	567,721	6.88	3,904	640	0.17	109	18,817	16,784
31-Dec-29	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-30	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-31	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-32	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-33	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-34	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-35	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-36	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-37	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-38	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-39	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-40	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-41	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-42	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-43	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-44	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-45	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-46	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-47	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-48	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-49	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457
31-Dec-50	4,300,000	3.54	15,221	628,310	1.73	1,088	621,690	6.88	4,275	640	0.17	109	20,693	18,457

MuniCap, Inc.

S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]B.2

17-Sep-15

[1]See Schedule III-B.
[2]Jobs were calculated using the IMPLAN software, by IMPLAN Group LLC. See Appendix G.
[3]Private jobs represent approximately 89% of total jobs in Howard County. Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application.

Appendix B: Projected Residents, Employees, & Service Population, continued

	Total Projected Non-Resident Employee Equivalent[1]						
Year Ending	Total Projected Employees[2]	Employee Equivalent[3]	Total Projected Employee Equiv.[3]	Non-Resident Employees[4]	Total Projected Non-Resident Employee Equiv.[5]	Total Projected Residents[6]	Total Service Population[7]
31-Dec-15	0	1.00	0	74.4%	0	629	629
31-Dec-16	784	1.00	784	74.4%	583	629	1,212
31-Dec-17	1,235	1.00	1,235	74.4%	919	1,353	2,272
31-Dec-18	3,841	1.00	3,841	74.4%	2,857	2,087	4,943
31-Dec-19	5,853	1.00	5,853	74.4%	4,354	3,113	7,467
31-Dec-20	7,304	1.00	7,304	74.4%	5,433	4,234	9,667
31-Dec-21	8,826	1.00	8,826	74.4%	6,565	4,234	10,799
31-Dec-22	10,675	1.00	10,675	74.4%	7,940	5,027	12,967
31-Dec-23	11,648	1.00	11,648	74.4%	8,664	5,567	14,232
31-Dec-24	13,390	1.00	13,390	74.4%	9,960	6,108	16,068
31-Dec-25	14,774	1.00	14,774	74.4%	10,989	6,648	17,638
31-Dec-26	16,216	1.00	16,216	74.4%	12,062	8,152	20,214
31-Dec-27	17,738	1.00	17,738	74.4%	13,194	8,693	21,887
31-Dec-28	18,817	1.00	18,817	74.4%	13,997	9,275	23,272
31-Dec-29	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-30	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-31	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-32	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-33	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-34	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-35	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-36	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-37	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-38	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-39	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-40	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-41	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-42	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-43	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-44	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-45	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-46	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-47	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-48	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-49	20,693	1.00	20,693	74.4%	15,392	9,275	24,667
31-Dec-50	20,693	1.00	20,693	74.4%	15,392	9,275	24,667

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]B.3*
17-Sep-15

[1]Represents the newly created employees who work but do not live in Howard County.
[2]See previous schedule (B-2).
[3]Service rate for employee is assumed to be same as resident population rate.
[4]See Appendix A. Source: U.S. Census Bureau, Center for Economic Studies, OnTheMap Application.
[5]Projected permanent non-resident employee population equivalent represents total projected employee equivalent multiplied by percent of Howard County employees assumed to reside outside of Howard County.
[6]See previous schedule (B-1).
[7]Total permanent service population increase represents projected permanent non-resident employee population equivalent plus expected population increase.

Downtown Columbia
Howard County, Maryland

Appendix C: Projected Students[1]

Year	Projected Student Increase from Apartments											Projected Student Increase from For Sale Units									Total
Ending	Projected Apartments[2]	Vacancy Rate[3]	Occupied Units	ES Per HH[1]	MS Per HH[1]	HS Per HH[1]	Total	ES Per HH[4]	MS Per HH[4]	HS Per HH[4]	Total	Projected For Sale Units[2]	ES Per HH[1]	MS Per HH[1]	HS Per HH[1]	Total	ES Per HH[4]	MS Per HH[4]	HS Per HH[4]	Total	Projected Students
31-Dec-15	380	10.00%	342	0.057	0.028	0.036	0.121	19	10	12	41	0	0.057	0.028	0.036	0.121	0	0	0	0	41
31-Dec-16	380	10.00%	342	0.057	0.028	0.036	0.121	19	10	12	41	0	0.057	0.028	0.036	0.121	0	0	0	0	41
31-Dec-17	817	10.00%	735	0.057	0.028	0.036	0.121	42	21	26	89	0	0.057	0.028	0.036	0.121	0	0	0	0	89
31-Dec-18	1,260	10.00%	1,134	0.057	0.028	0.036	0.121	65	32	41	137	0	0.057	0.028	0.036	0.121	0	0	0	0	137
31-Dec-19	1,880	10.00%	1,692	0.057	0.028	0.036	0.121	96	47	61	205	0	0.057	0.028	0.036	0.121	0	0	0	0	205
31-Dec-20	2,326	10.00%	2,093	0.057	0.028	0.036	0.121	119	59	75	253	172	0.057	0.028	0.036	0.121	10	5	6	21	274
31-Dec-21	2,326	10.00%	2,093	0.057	0.028	0.036	0.121	119	59	75	253	172	0.057	0.028	0.036	0.121	10	5	6	21	274
31-Dec-22	2,638	10.00%	2,374	0.057	0.028	0.036	0.121	135	66	85	287	322	0.057	0.028	0.036	0.121	18	9	12	39	326
31-Dec-23	2,964	10.00%	2,668	0.057	0.028	0.036	0.121	152	75	96	323	322	0.057	0.028	0.036	0.121	18	9	12	39	362
31-Dec-24	3,291	10.00%	2,962	0.057	0.028	0.036	0.121	169	83	107	358	322	0.057	0.028	0.036	0.121	18	9	12	39	397
31-Dec-25	3,617	10.00%	3,255	0.057	0.028	0.036	0.121	186	91	117	394	322	0.057	0.028	0.036	0.121	18	9	12	39	433
31-Dec-26	4,525	10.00%	4,073	0.057	0.028	0.036	0.121	232	114	147	493	322	0.057	0.028	0.036	0.121	18	9	12	39	532
31-Dec-27	4,852	10.00%	4,366	0.057	0.028	0.036	0.121	249	122	157	528	322	0.057	0.028	0.036	0.121	18	9	12	39	567
31-Dec-28	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-29	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-30	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-31	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-32	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-33	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-34	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-35	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-36	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-37	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-38	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-39	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-40	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-41	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-42	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-43	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-44	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-45	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-46	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-47	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-48	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-49	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606
31-Dec-50	4,951	10.00%	4,456	0.057	0.028	0.036	0.121	254	125	160	539	549	0.057	0.028	0.036	0.121	31	15	20	66	606

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]C*
17-Sep-15

[1]Student standing yield generation rates provided by Howard County Department of Planning and Zoning, Division of Research.

[2]See Schedule II-D.

[3]See Schedule III-A.

[4]Represents the total elementary, middle and high school students projected to be generated as a result of the proposed development as shown on Schedule I.

Downtown Columbia
Howard County, Maryland

Appendix D-1: Projected Police Operating Costs - Per Capita and Trip Factors

Table 1: Current County Trips (Non-Residential)

Development Type[1]	SF[1]	Avg. Weekday Trip Ends Per 1,000 SF[1]	Trip End Factors[2]	Current County Non-residential Trips[1]
Retail/Shopping Center	12,902	68.17	32%	281,426
Office - Gov	4,548	18.31	50%	41,628
Office - Non Gov	29,262	18.31	50%	267,835
Warehousing	16,928	4.96	50%	41,982
Manufacturing	11,295	3.82	50%	21,573
Total				654,445

Table 2: Estimated Per Capita and Per Trip Factors

Type	Basis for Projecting Increase	Proportionate Share of Costs[5]	Current County Costs/Population/Trips	Projected Increase Per Capita/Trips[6]
Total Department of Police Operating Costs[3]			$104,298,710	
Residential[4]	Per capita	65%	309,284	$219
Non-residential	Trips	35%	654,445	$56

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]D-1*
17-Sep-15

[1]Provided by the Howard County Department of Planning and Zoning, Division of Research.

[2]Provided by the Howard County Department of Planning and Zoning, Division of Research. Trip end factors represent the expected stops during a trip (e.g. office employees are assumed to only have two stops, work and home and therefore assume 50%).

[3]Source: *Howard County, Maryland Approved Operating Budget, Fiscal Year 2016.*

[4]See Appendix A.

[5]Prepresents the portion of shared operating costs by resident and trip factors. Based on a review of robbery, burglary and auto thefts within the County. Source: Howard County Police Department.

[6]Represents the portion of operating costs per current allocation factor that will be applied to new resident and increase in trip costs as a result of the proposed development.

Downtown Columbia
Howard County, Maryland

Appendix D-2: Projected Police Operating Costs - New Non-Residential Trips

	Projected Office Trips				Projected Retail/Restaurant Trips				Projected Hotel Trips				Total Projected
Year Ending	Office SF[1]	Trips Per SF[2]	Trip Factor[2]	Total Projected Trips	Rest./Retail SF[1]	Trips Per SF[2]	Trip Factor[2]	Total Projected Trips	Hotel Rooms[1]	Trips Per Room[2]	Trip Factor[2]	Total Projected Trips	Non-residential Trips
31-Dec-15	0	18.31	0.50	0	0	68.17	0.32	0	0	8.92	0.50	0	0
31-Dec-16	204	18.31	0.50	1,867	9	68.17	0.32	196	0	8.92	0.50	0	2,064
31-Dec-17	329	18.31	0.50	3,011	14	68.17	0.32	305	0	8.92	0.50	0	3,317
31-Dec-18	943	18.31	0.50	8,631	146	68.17	0.32	3,183	0	8.92	0.50	0	11,814
31-Dec-19	1,424	18.31	0.50	13,030	222	68.17	0.32	4,838	300	8.92	0.50	1,338	19,206
31-Dec-20	1,704	18.31	0.50	15,593	347	68.17	0.32	7,572	300	8.92	0.50	1,338	24,503
31-Dec-21	2,004	18.31	0.50	18,339	452	68.17	0.32	9,869	300	8.92	0.50	1,338	29,546
31-Dec-22	2,388	18.31	0.50	21,855	558	68.17	0.32	12,167	470	8.92	0.50	2,096	36,118
31-Dec-23	2,533	18.31	0.50	23,182	815	68.17	0.32	17,768	470	8.92	0.50	2,096	43,046
31-Dec-24	2,895	18.31	0.50	26,496	920	68.17	0.32	20,065	470	8.92	0.50	2,096	48,657
31-Dec-25	3,156	18.31	0.50	28,885	1,025	68.17	0.32	22,362	470	8.92	0.50	2,096	53,343
31-Dec-26	3,425	18.31	0.50	31,349	1,130	68.17	0.32	24,660	640	8.92	0.50	2,854	58,863
31-Dec-27	3,725	18.31	0.50	34,095	1,236	68.17	0.32	26,957	640	8.92	0.50	2,854	63,906
31-Dec-28	3,900	18.31	0.50	35,696	1,341	68.17	0.32	29,254	640	8.92	0.50	2,854	67,805
31-Dec-29	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-30	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-31	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-32	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-33	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-34	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-35	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-36	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-37	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-38	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-39	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-40	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-41	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-42	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-43	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-44	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-45	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-46	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-47	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-48	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-49	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764
31-Dec-50	4,300	18.31	0.50	39,358	1,446	68.17	0.32	31,552	640	8.92	0.50	2,854	73,764

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]D-2*
17-Sep-15

[1]Square feet are represented per 1,000. See Schedule III-B

[2]Provided by Howard County Department of Planning and Zoning, Division of Research

Downtown Columbia
Howard County, Maryland

Appendix E: Estimated Downtown Columbia Plan Trips

Table 1: Estimated Downtown Columbia Plan Trips (Full Build-Out)

Development Type	1,000s of SF Rooms/Units[1]	Avg. Weekday Trip Ends Per 1,000 SF/Room/Unit[1]	Trip End Factors[2]	Total Estimated Trips[3]
Commercial	(1,000s of SF)			
Retail/Shopping Center	1,446	68.17	32%	31,552
Office - Gov	0	18.31	50%	0
Office - Non Gov	4,300	18.31	50%	39,358
Warehousing	0	4.96	50%	0
Manufacturing	0	3.82	50%	0
	(rooms)			
Hotel	640	8.92	50%	2,854
Sub-total commercial				73,764
Residential	(units)			
Multi-family rental	4,951	6.72	50%	16,635
Condos	461	5.86	50%	1,351
Townhomes	88	5.86	50%	258
Total estimated trips				92,008

Table 2: Estimated Development Plan Trips (Full Build-Out)

Development Type	1,000s of SF/Units[4]	Avg. Weekday Trip Ends Per 1,000 SF/Room/Unit[1]	Trip End Factors[2]	Total Estimated Trips[5]
Commercial	(1,000s of SF)			
Retail/Shopping Center	1,446	68.17	32%	31,552
Office - Gov	0	18.31	50%	0
Office - Non Gov	4,300	18.31	50%	39,358
Warehousing	0	4.96	50%	0
Manufacturing	0	3.82	50%	0
	(rooms)			
Hotel	640	8.92	50%	2,854
Residential	(units)			
Multi-family rental	4,951	6.72	50%	16,635
Condos	461	5.86	50%	1,351
Townhomes	88	5.86	50%	258
Total estimated trips				92,008

MuniCap, Inc. *S:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]E-1.*
17-Sep-15

[1]Provided by the Howard County Department of Planning and Zoning, Division of Research. Represents the proposed Downtown Columbia Plan total development.

[2]Provided by the Howard County Department of Planning and Zoning, Division of Research. Trip end factors represent the expected stops during a trip (e.g. office employees are assumed to only have two stops, work and home and therefore assume 50%).

[3]Represents the total projected trips from the proposed Downtown Columbia Plan development.

[4]See Schedule I. Represents the projected development to be built resulting from the Downtown Columbia Plan.

[5]Represents total estimated trips to be created as a result of the proposed development of the Downtown Columbia Plan; including the HRD proposed affordable housing mix.

Downtown Columbia
Howard County, Maryland

Appendix F: Sales Data

Development Type[1]	Sales PSF	Type of SF	Adjusted Sales PSF[2]	Avg. SF Per Store
Retail				
Ann Taylor	$487	Gross	$487	5,000
Gap	$365	Gross	$365	11,757
Limited Brands	$965	Selling	$724	3,821
GameStop	$967	Gross	$967	1,400
Rite Aid	$556	Selling	$417	10,000
Brown Shoe (Specialty)	$397	Gross	$397	1,200
Zumiez/Blue Tomato	$405	-	$405	2,947
Weighted average sales psf			$462	
Restaurant				
BJs Restaurants	$700	Selling	$525	8,300
Buffalo Wild Wings Grill and Bar	$441	Selling	$331	6,200
Chipotle Mexican Grill	$781	Selling	$586	2,580
Cheesecake Factor	$913	Selling	$685	12,000
Einsteins	$448	Selling	$336	2,150
Kona Grill	$602	Selling	$452	7,191
Panera Bread	$298	Gross	$298	4,500
Texas Roadhouse	$591	Selling	$443	7,100
Weighted average sale per SF			$492	

MuniCap, Inc. *:\CONSULTING\Howard County\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]F*
17-Sep-15

[1]Based on sales data available for potential tenants. Actual tenants are not yet known. Sales data provided by 2015 Retail Sales Per Square Foot Report prepared by Bizminer.

[2]Assumes 75% of gross square footage is selling space.

Downtown Columbia
Howard County, Maryland

Appendix G-1: Office Jobs and Indirect Impacts

	Total
Office square feet[1]	4,300,000
Office employees per 1,000 sq. ft.[2]	3.54
Total direct office employees (FTE's)	15,221
Office operating revenue	$2,643,614,785
Total labor income	$1,518,997,555
Labor income to wage factor[3]	1.18
Sub-total employee wages	$1,287,176,981
Total office jobs	16,193
Full time equivalent factor[4]	0.94
Total full time equivalent employees ("FTE")	15,221
Total FTE jobs per 1,000 square feet	3.54
Average office income per FTE -- annual	$99,793
Average office wage per FTE -- annual	$84,564
Multiplier for office income[5]	1.3672
Total earnings	$2,076,838,274
Indirect earnings	$557,840,719
Multiplier for office jobs[5]	1.7297
Total jobs	26,329
Indirect jobs	10,136
Multiplier for office output[5]	1.5831
Total economic output	$4,185,003,594
Indirect output	$1,541,388,809

MuniCap, Inc. *ounty\Columbia Town Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]G-1 (Office)*
17-Sep-15

[1]See Schedule I.

[2]Source: *2013 BOMA Experience Exchange Repor* t for offices located in the Baltimore, MD/Washington D.C. suburban market.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Office income, jobs, and output were calculated using IMPLAN software by MIG, Inc. The software calculates labor income and the number of jobs based on industry multipliers derived from National Income and Product Accounts data published by the U.S. Bureau of Economic Analysis. This data is then indexed to local industry data compiled by the U.S. Census Bureau. For ease of interpretation, multipliers are shown to illustrate the effects office development within Downtown Columbia development will have in Howard County, Maryland. The multiplier for jobs is 1.7297, meaning that for each job at the development, 1.7297 jobs will be created in Howard County, including the job at the development. Similarly, the multiplier for income is 1.3672, meaning that for every $1.00 paid in income at the development, $1.3672 will be paid in Howard County, including the $1.00 at the development. The multiplier for output is 1.5831, meaning that for each dollar of office economic activity at the development, the economic activity in Howard County will be $1.5831, including the $1.00 at the development. Indirect jobs and income have not been converted to FTEs or wages.

Downtown Columbia
Howard County, Maryland

Appendix G-2: Retail Jobs and Indirect Impacts

	Total
Retail square feet[1]	628,310
Sales per square foot[2]	$462
Retail sales	$290,205,113
Total labor income	$42,040,690
Labor income to wage factor[3]	1.21
Sub-total employee wages	$34,698,844
Total retail jobs	1,269
Full time equivalent factor[4]	0.86
Total full time equivalent employees ("FTE")	1,088
Total FTE jobs per 1,000 square feet	1.73
Average retail income per FTE -- annual	$38,640
Average retail wage per FTE -- annual	$31,892
Multiplier for retail income[5]	1.5339
Total earnings	$64,484,871
Indirect earnings	$22,444,181
Multiplier for retail jobs[5]	1.3176
Total jobs	1,672
Indirect jobs	403
Multiplier for retail output[5]	1.6208
Total economic output	$169,569,623
Direct output	$104,618,944
Indirect output	$64,950,679

MuniCap, Inc. *Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]G-2 (Retail)*
17-Sep-15

[1]See Schedule I.

[2]See Appendix F.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Retail income, jobs and output were calculated using the IMPLAN software, by MIG. Multipliers function in the same manner as with office impacts.

Downtown Columbia
Howard County, Maryland

Appendix G-3: Restaurant Jobs and Indirect Impacts

	Total
Restaurant square feet[1]	621,690
Sales per square foot[2]	$492
Restaurant sales	$305,663,473
Total labor income	$129,429,397
Labor income to wage factor[3]	1.17
Sub-total employee wages	$110,941,735
Total restaurant jobs	5,458
Full time equivalent factor[4]	0.78
Total full time equivalent employees ("FTE")	4,275
Total FTE jobs per 1,000 square feet	6.88
Average restaurant income per FTE -- annual	$30,276
Average restaurant wage per FTE -- annual	$25,951
Multiplier for restaurant income[5]	1.4273
Total earnings	$184,737,077
Indirect earnings	$55,307,680
Multiplier for restaurant jobs[5]	1.1818
Total jobs	6,450
Indirect jobs	992
Multiplier for restaurant output[5]	1.5200
Total economic output	$464,618,847
Direct output	$305,663,473
Indirect output	$158,955,374

MuniCap, Inc. *n Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]G-3 (Rest)*
17-Sep-15

[1]See Schedule I.

[2]See Appendix F.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Restaurant income, jobs and output were calculated using the IMPLAN software, by MIG. Multipliers function in the same manner as with office impacts.

Downtown Columbia
Howard County, Maryland

Appendix G-4: Hotel Jobs and Indirect Impacts

	Total
Hotel rooms[1]	640
Average nightly room rate[2]	$56
Average nightly occupancy[2]	95%
Hotel operating revenue	$12,483,840
Total labor income	$3,819,497
Labor income to wage factor[3]	1.16
Sub-total employee wages	$3,291,753
Total hotel jobs	120
Full time equivalent factor[4]	0.91
Total full time equivalent employees ("FTE")	109
Total FTE jobs per room	0.17
Average hotel income per FTE -- annual	$35,041
Average hotel wage per FTE -- annual	$30,200
Multiplier for hotel income[5]	1.5600
Total earnings	$5,958,466
Indirect earnings	$2,138,969
Multiplier for hotel jobs[5]	1.3200
Total jobs	158
Indirect jobs	38
Multiplier for hotel output[5]	1.4600
Total economic output	$18,226,404
Indirect output	$5,742,564

MuniCap, Inc. *Center\2015\Fiscal\[CTC FIA (Plan) 9.17.15.xlsx]G-4 (Hotel)*
17-Sep-15

[1]See Schedule I.

[2]See Schedule II-E.

[3]Total labor income includes wages an salary, benefits, payroll taxes, and proprietor's income. This factor, provided by MIG, Inc. converts total labor income into direct employee wages and salary.

[4]Total jobs include all full-year employees, including part-time and full-time employees. This factor, provided by MIG, Inc. converts total jobs into total full-time equivalent employees ("FTE's").

[5]Hotel income, jobs and output were calculated using the IMPLAN software, by MIG. Multipliers function in the same manner as with office impacts.

Exhibit A2.1 - Student Yield Scenarios

Howard County

Memorandum

DEPARTMENT OF PLANNING AND ZONING

To:	**Howard County Council**
From:	**Jeff Bronow, Chief of Research Division, DPZ**
Date:	**November 2, 2015**
Subject:	**Updated Student Yield Scenarios for Fiscal Impact Analysis of Downtown Columbia Joint Housing Recommendations**

A question was raised on the difference between the total number of students projected as a result of future development in Downtown Columbia shown in the fiscal study conducted by MuniCap dated September 17, 2015 and in the October 9, 2015 memorandum prepared by the Howard County Public School System (HCPSS). Both of these items were presented during the October 13th County Council work session. The County Council has also requested that a range of student yields be tested. This memorandum responds to the question raised and outlines the scenarios to be tested.

The yields used in both studies (MuniCap's fiscal and the HCPSS memorandum) were based on recent data for the existing apartment units in Downtown Columbia shown in the table on the top of the next page—0.057 for elementary school, 0.028 for middle school, and 0.036 for high school, for a total of 0.121 students per unit. These standing yields were provided to MuniCap from the DPZ Research Division in consultation with the HCPSS Office of Planning, who agreed that these yields were reasonable given they reflect actual yields from apartments in Downtown Columbia now.

It was also stated during the October 13th work session that these yields are *conservative* given that high-rise apartment buildings 5-stories and above to be built in Downtown Columbia (with higher average rents and many studio and 1-bedroom units) will likely generate fewer numbers of students than the existing garden-style apartments. It was stated that the original fiscal impact study conducted on the original Downtown Columbia Plan in 2009 tested a low and high scenario—the low scenario used 0.085 total students per unit (all grades) and a high of 0.167 total students per unit (all grades). This low scenario of 0.085 was based on existing yields in Downtown Columbia at that time *including* condominiums (which generally generate lower yields). That fiscal study assumed 40% condos and 60% rental apartments, so including condos in the yield determination was deemed reasonable. In addition, at that time planners at Fairfax County Schools were contacted to see what they used for yield estimates for buildings 5-stories and above—they used a yield of 0.087, very similar to the existing yields in Downtown Columbia. The high scenario using 0.167 was based on countywide averages for newly constructed rental and condo units in Howard County. Having low and high scenarios is helpful to provide a range of fiscal impacts given the uncertainty of what future yields will actually be. Note that the 0.121 used in MuniCap's recent fiscal study is just about right in the middle of the 0.085 to 0.167 range that had been used in the 2009 fiscal study for the proposed Downtown Columbia Plan.

Columbia Town Center - Standing Student Yields (5 year averages)

Name/Description	Type	Units	Year	Students ES	Students MS	Students HS	Students Total	Yields ES	Yields MS	Yields HS	Yields Overall
Archstone Rentals	Rental Apt	531	9/30/07	30	14	13	**57**	0.056	0.026	0.024	0.107
		531	9/30/08	31	11	15	**57**	0.058	0.021	0.028	0.107
		531	9/30/09	39	16	21	**76**	0.073	0.030	0.040	0.143
		531	9/30/10	43	19	27	**89**	0.081	0.036	0.051	0.168
		531	9/30/11	31	19	27	**77**	0.058	0.036	0.051	0.145
			Average	**35**	**16**	**21**	**71**	**0.066**	**0.030**	**0.039**	**0.134**
Gramercy Rentals	Rental Apt	210	9/30/07	12	5	2	**19**	0.057	0.024	0.010	0.090
		210	9/30/08	5	5	4	**14**	0.024	0.024	0.019	0.067
		210	9/30/09	5	5	8	**18**	0.024	0.024	0.038	0.086
		210	9/30/10	8	3	7	**18**	0.038	0.014	0.033	0.086
		210	9/30/11	9	6	10	**25**	0.043	0.029	0.048	0.119
			Average	**8**	**5**	**6**	**19**	**0.037**	**0.023**	**0.030**	**0.090**
TOTAL RENTALS		741	9/30/07	42	19	15	**76**	0.057	0.026	0.020	0.103
		741	9/30/08	36	16	19	**71**	0.049	0.022	0.026	0.096
		741	9/30/09	44	21	29	**94**	0.059	0.028	0.039	0.127
		741	9/30/10	51	22	34	**107**	0.069	0.030	0.046	0.144
		741	9/30/11	40	25	37	**102**	0.054	0.034	0.050	0.138
			Average	**43**	**21**	**27**	**90**	**0.057**	**0.028**	**0.036**	**0.121**
Whitney Town Center Condos	Condo Apt	108	9/30/07	1	1	0	**2**	0.009	0.009	0.000	0.019
		108	9/30/08	1	1	1	**3**	0.009	0.009	0.009	0.028
		108	9/30/09	0	1	3	**4**	0.000	0.009	0.028	0.037
		108	9/30/10	0	2	2	**4**	0.000	0.019	0.019	0.037
		108	9/30/11	0	2	5	**7**	0.000	0.019	0.046	0.065
			Average	**0**	**1**	**2**	**4**	**0.004**	**0.013**	**0.020**	**0.037**
Lakeside Town Center Condos (New Ryland Condos)	Condo Apt	48	9/30/07	0	0	1	**1**	0.000	0.000	0.021	0.021
		48	9/30/08	1	0	1	**2**	0.021	0.000	0.021	0.042
		48	9/30/09	0	0	1	**1**	0.000	0.000	0.021	0.021
		48	9/30/10	2	0	1	**3**	0.042	0.000	0.021	0.063
		48	9/30/11	0	0	1	**1**	0.000	0.000	0.021	0.021
			Average	**1**	**0**	**1**	**2**	**0.013**	**0.000**	**0.021**	**0.033**
TOTAL CONDOS		156	9/30/07	1	1	1	**3**	0.006	0.006	0.006	0.019
		156	9/30/08	2	1	2	**5**	0.013	0.006	0.013	0.032
		156	9/30/09	0	1	4	**5**	0.000	0.006	0.026	0.032
		156	9/30/10	2	2	3	**7**	0.013	0.013	0.019	0.045
		156	9/30/11	0	2	6	**8**	0.000	0.013	0.038	0.051
			Average	**1**	**1**	**3**	**6**	**0.006**	**0.009**	**0.021**	**0.036**
TOTAL CONDOS AND RENTALS		897	9/30/07	43	20	16	**79**	0.048	0.022	0.018	0.088
		897	9/30/08	38	17	21	**76**	0.042	0.019	0.023	0.085
		897	9/30/09	44	22	33	**99**	0.049	0.025	0.037	0.110
		897	9/30/10	53	24	37	**114**	0.059	0.027	0.041	0.127
		897	9/30/11	40	27	43	**110**	0.045	0.030	0.048	0.123
			Average	**44**	**22**	**30**	**96**	**0.049**	**0.025**	**0.033**	**0.107**

Source: Howard County Public School System - official September 30 student counts.

The table below summarizes the number of students projected using the 0.121 yield rate (0.057 for elementary, 0.028 for middle, and 0.036 for high) in MuniCap's September 17, 2015 fiscal study for the total 6,750 new housing units projected in Downtown Columbia assuming buildout of the joint housing recommendation (5,500 original units in the Downtown Columbia Plan plus the 1,250 addition units resulting from the joint housing recommendation including the Columbia Flier building) compared to the total students projected in the October 9, 2015 memorandum from the HCPSS.

	Total Students at Buildout	
	Fiscal Study (1)	HCPSS (2)
Elementary School	349	890
Middle School	171	600
High School	221	710
Total	**741**	**2,200**

(1) September 17, 2015 fiscal study (MuniCap). Note that Municap applied yields to a 90% occupancy rate for the rental units.

(2) Determined from charts in October 9, 2015 HCPSS memorandum subtracting buildout student totals from the existing base student totals.

The same yields were used in both studies, so why the large discrepancy? The reason is due to the fact that the HCPSS did not maintain the standing yield of 0.121 students per housing unit over time for the new units projected in Downtown Columbia. Rather they used their typical model for feasibility planning that includes the following components: new construction yields (which they applied the standing yield rate to), cohort survival ratios, apartment turnover impacts, birth to kindergarten ratios, estimated preschool move-ins, and net out-of-district impacts. Their model also included existing development already on the ground. This methodology using all these components is currently used by HCPSS for all school districts in the county and is useful to account for existing neighborhood housing turnover—that is, in neighborhoods where there may not be a lot of new construction relative to existing housing, which is typically the norm. Furthermore, it tends to work better for short-term (1 to 2 years) to mid-term (3 to 5 years) capital budget-related impacts. It doesn't work as well when trying to analyze the direct impacts due to a single large development over a longer time-frame, such as what is proposed in Downtown Columbia. For that type of analysis it is best to utilize a standing yield methodology. After observing the results of the two methodologies and further discussions with DPZ planning staff and MuniCap, HCPSS planning staff agreed that the standing yield methodology is the more appropriate methodology to use for the Downtown Columbia analysis.

As suggested by Council members during the October 13th County Council work session it would be prudent to evaluate a range of yields for fiscal impact sensitivity testing. As indicated in the original 2009 fiscal analysis for the Downtown Columbia Plan, studying a range of yields is important because:

> …the economy, societal preferences, and trends can certainly change…For example, it can be argued that as the housing supply becomes more limited as the County approaches "build-out," more pressure will be put on existing and new housing (including multi-family housing) to hold more students given the excellent reputation of the HCPSS. Thus, testing a scenario with higher student yields is prudent, particularly given education takes such a large portion of the operating and capital budgets in Howard County.

The table below summarizes the range of yields to be tested in MuniCap's revised fiscal impact analysis utilizing a standing yield methodology. The expected scenario is based on recent student yield data acquired from Montgomery County. (Please see attached memo from Montgomery County.) Note that the 0.118 countywide average yield rate for multi-family high-rise buildings (5-stories and above) is within 2% of the 0.121 that had been used in MuniCap's September 17th fiscal impact analysis. Since Howard County does not currently have much in the way of high-rise multi-family buildings (5-stories and above), Montgomery County yields were used as a proxy. For a higher yield scenario Howard Countywide 5-year average yields for newly constructed multi-family units were used.

	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
Total	**0.118**	**0.182**

(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.)

As another point of reference, Fairfax County Public Schools were also contacted to learn what yield rates they use. (See attached memo from Fairfax County.) Yield rates in Fairfax for multi-family buildings 5-stories and above are slightly less than those in Montgomery County, ranging from 0.087 to 0.110 students per unit over a seven year sample, with the most recent year being 2013-2014. These yields in Fairfax are used to determine per student proffer dollar contributions that are commonly collected from developers as a condition of rezoning approval. Such proffers are a common practice in Virginia.

It is important to note that the expected yield scenario in this case should be considered the *likely* outcome given the type of housing planned in Downtown Columbia, and the countywide average yield scenario should be considered a high end-point for fiscal impact sensitivity testing—that is, a risk assessment to help garner an understanding of how higher yields may impact the fiscal results. The units in Downtown Columbia will likely consist of a large proportion of studio and one-bedroom units in high-rise buildings, and current empirical evidence shows that this generates lower yields as seen in both Montgomery and Fairfax Counties. The table below shows the expected mix of future units based on recent information provided by Howard Hughes. This unit mix, with 50% of the total planned to be studio and 1-bedroom units and another 40% 2-bedroom units. Only 10% are expected to be 3-bedroom units.

Unit Type	Percent Mix
Studio	15%
1-bedroom	35%
2-bedroom	40%
3-bedroom	10%

Source: Howard Hughes

The tables below summarize the total students generated from the original Downtown Columbia plan of 5,500 units and the joint housing recommendation that would result in 6,750 units for both the expected and the countywide average yield scenarios. These same scenarios will be incorporated into MuniCap's model to test the fiscal impacts of this range.

	Student Totals - **5,500 units**	
	Expected	County Avg
Elementary School	330	556
Middle School	138	248
High School	182	198
Total Students	**649**	**1,001**

	Student Totals - **6,750 units**	
	Expected	County Avg
Elementary School	405	682
Middle School	169	304
High School	223	243
Total Students	**797**	**1,229**

REPORT

HOWARD COUNTY PUBLIC SCHOOL SYSTEM

BOARD OF EDUCATION OF HOWARD COUNTY
MEETING AGENDA ITEM

TITLE: 2015 Feasibility Study Update **DATE:** November 5, 2015

PRESENTER(S): Joel Gallihue, Manager of School Planning

VISION 2018 GOAL: ☒ Students ☒ Staff ☒ Families and Community ☒ Organization

OVERVIEW:

The Board of Education reviews long-term capital planning options and redistricting scenarios through the annual Feasibility Study, last presented on June 11, 2015. This report included housing growth associated with the previously approved Downtown Columbia Plan permitting 5,500 multi-family residential units. Now 1,250 new housing units are proposed by Howard Hughes Corporation and are under discussion. The effect of these units on school capacity has been evaluated by the Office of School Planning in a memorandum. A fiscal impact study being prepared by a consultant for Department of Planning and Zoning (DPZ) will also examine capacity impact. Our analysis of the entire impact shows a need that exceeds one new elementary school, requiring at least one middle school addition, and some high school capacity.

Present requirements of Downtown Columbia call for the developer to provide future school sites if needed but do not require funding from the developer to offset capital needs. Capital funding is expected to come from the additional tax revenue assessed on the new development. The fiscal impact study will show that there will be adequate additional tax revenue to offset the capital and operating expenses needed to accommodate Downtown Development. The HCPSS Office of School Planning will continue to collaborate with the Howard County DPZ to monitor and evaluate this project for capital planning needs. A more detailed update follows with relevant attachments from the Feasibility Study, Columbia Town Center Study, and our memorandum on this topic. The fiscal study for DPZ will be issued early next month.

RECOMMENDATION/FUTURE DIRECTION:
To monitor development and ensure that future capital budgets account for growth. Incorporate any approved changes in the June 2016 Feasibility Study.

SUBMITTED BY:

Joel Gallihue
Manager of School Planning

APPROVAL/CONCURRENCE:

Renee A. Foose, Ed.D.
Superintendent

Camille B. Jones
Chief Operating Officer

Bruce Gist
Executive Director
Facilities, Planning and

Introduction

The 2015 Feasibility Study was presented on June 11, 2015 with a new projection which included housing growth associated with the previously approved Downtown Columbia Plan permitting 5,500 multi-family residential units. (Attachment 1) An additional 1,250 new housing units are now proposed by Howard Hughes Corporation and the proposal is in discussion. The proposed change to the plan would allow a range of affordable and market rate housing units and represents an increase of approximately 23 percent over the originally approved 5,500 new units in this area. Students living in the Town Center are presently assigned to Running Brook Elementary, Wilde Lake Middle, and Wilde Lake High schools. Our currently projected school capacity levels would be insufficient to accommodate the additional student enrollment that would result from the total 6,750 new housing units. Preliminary analysis of the new proposal has been conducted and this document provides an update of the 2015 Feasibility Study. A list of key terms is listed on page 5 of this 2015 Feasibility Study Update.

History

Feasibility Study

The Feasibility Study is an annual report to inform the Board of the long term planning process and facilitate discussion of decisions that may lay ahead. The annual Feasibility Study was presented to the Board on June 11, 2015. The document, and the underlying projection in particular, predate any announcement of an idea to increase the residential units in Downtown Columbia. The pages of the 2015 Feasibility Study which are relevant to this matter are attached and are pages 19, 25, 31 and 40. (Attachment 1) The decision on this development change will not be known for several months so changes to these pages will be contained in the 2016 Feasibility Study.

Projection Methods

Future enrollment may be projected in different ways. The HCPSS projection method is based upon cohort survival or grade succession model with other factors, including birth data, new construction and existing residential housing. The Department of Planning and Zoning (DPZ) housing projection is included in the student enrollment projection model by school attendance area. Housing is divided into single-family attached, single-family detached and multi-family residential units for calculation of yield rates for each new unit type. The number future residential of units, estimated in an absorption schedule, is multiplied by historical pupil yield rates for each future year. The historical yield rates are calculated from the existing attending area or countywide averages if there is very little or no history in the past five years.

In the memo to the DPZ (Attachment 3), staff used the average standing yield rate (2007-2011) for the existing 741 apartments in Downtown Columbia to calculate the effect of new housing. This rate was then multiplied by the estimated absorption schedule for each future year. This was done because there is evidence documented in the Columbia Schools Study that different types of multi-family have different pupil yields. The HCPSS projection method typically combines all multi-family units including all rental apartments and condominiums of all heights. Changes in height, number of bedrooms, age and location are all actually factors which can alter the standing yield for any type of housing, including multi-family. Future Downtown Columbia development is expected to have a lower pupil yield because it is anticipated to have taller and more expensive multi-family units with fewer bedrooms than the typical multi-family units already existing in Howard County.

No projection method is perfect and longer planning horizons are more difficult to project. The HCPSS method serves school system needs with accurate annual projections and accurate estimates for the ten year Long-Range Master Plan in the capital budget. There is evidence that the second decade of the projection is less reliable. One theory is that since there is no adjustment in the projection for changes in grade succession ratios over time, any positive ratio will continuously increase beyond a likely outcome. Additional assumptions could be built into the model to control for this effect, but since the school system makes an annual projection, changes in trends are taken into account, facilitating adjustments to long range plans.

MuniCap, Inc. is a finance consulting firm that specializes in the public finance aspects of redevelopment. MuniCap is under contract with the DPZ and is preparing a relevant fiscal study for the County Council. A study by MuniCap will model enrollment with a standing yield projection, which will not include the cohort survival projection methodology. Selected standing yield rates are multiplied by the total future units to create low, medium and high scenarios. Their study will use actual measured rates from Howard County and Montgomery County to model future enrollment.

The standing yield method used by the consultant will not include any increasing factors like grade succession ratios. Standing yields may actually change depending upon many factors like an aging building becoming more affordable over time, but evidence in the region does not indicate the yields would produce twenty year outcomes as high as those estimated by the HCPSS method. A more detailed study of multi-family yields is possible but, given the short timing, the consultant includes multiple ranges of scenarios. This helps capture any unforeseen changes in yields for this project. This seems to be the best approach in evaluating the long range impact of a specific project. Ongoing school system planning will continue to use the present cohort model, but the Office of School Planning also has standing yield models at its disposal for long range planning.

Recent Evaluations

The Columbia School Study was initiated as a result of the original Downtown Columbia Plan approval and was an attachment to the June 2014 Feasibility Study. (Attachment 2) In light of the pending application for additional residential units and a recent County Council work session discussing the same, the HCPSS Office of School Planning collaborated with the Department of Planning and Zoning to update the Columbia School Study in a memorandum dated October 8, 2015. (Attachment 3) The memorandum gave a preliminary determination of the school accommodations that would be required based on the projected additional growth.

A draft of Municap's fiscal study indicates the fiscal impact of the proposal will be found to be a net positive and, even under a high student yield scenario, the study finds there will be adequate additional tax revenue to offset the capital and operating expenses needed to accommodate downtown development. The MuniCap study finds that future school capacity is needed at a lower rate than the HCPSS analysis indicates. The variation results from different but valid enrollment projection methods. Under either scenario, school sites and capital funding will be needed. A final report is expected from MuniCap sometime in November.

Update to 2015 Feasibility Study

Analysis - Elementary

One additional 600-seat elementary school is included in the approved FY 2016-2025 Long-Range Master Plan. We believe this will accommodate the 5,500 new units already approved for Downtown Columbia development. The FY 2017 proposed capital budget has New ES #44 planned to open in 2027.

The preliminary enrollment analysis of the impact based on the new proposal (attachment 3) shows this school may be needed as early as 2024. An opening this early seems unlikely since the capital funding horizon is constrained by other projects and systemic needs.

The 2015 Feasibility Study notes that the completed addition at Running Brook ES, a planned addition at Swansfield ES, and redistricting including these schools, as well as Bryant Woods ES, Longfellow ES, and Clemens Crossing ES, are an interim capacity solution prior to the opening of a new elementary school. The Swansfield ES renovation completion is scheduled for August 2018, the same time as completion of New ES #42, which will require redistricting. As a result, it may be possible to implement this interim capacity solution in 2018 and provide relief for a number of years.

The HCPSS model indicates we may need a second 600-seat elementary school beyond New ES #44, but the model shows these conditions in the second decade of the projection. The standing yield model will show a more gradual growing enrollment and will not call for a second future elementary school. Conditions should be monitored to watch for stronger trends but our present capital plan and feasible redistricting serve the likely impact of the new proposal. Experience has shown that having a variety of viable sites in the land bank is extremely important since land will only grow more scarce and expensive. The HCPSS model's indication for a second school can be supported by the addition of a property sized for an elementary school to the land bank. The Columbia School Study recommends the site in Clary's Forest.

Analysis – Middle

Replacement of Wilde Lake MS, a project that is scheduled to open in 2017, is identified by the feasibility study as a key feature of the capital improvement plan. The new school is planned to be 293 seats larger than the existing one, and will stay within target utilization until 2024, based on the current projection. The Feasibility Study identified intermittent crowding at Harper's Choice MS but only in the latter years and suggested monitoring for future relocatable classroom consideration.

The preliminary enrollment analysis of the impact based on the new proposal (attachment 3) shows crowding of the Wilde Lake MS replacement after 2024. The FY 2017 proposed capital budget shows systemic renovation of Harper's Choice MS starting in FY 2022 which suggests the project would complete in August of 2023. It is not uncommon to include swing space in renovations. Since program area will be needed and construction will be phased, some additional classrooms can facilitate the project and provide additional capacity. If Harper's Choice MS were expanded in a renovation and if Wilde Lake MS replacement school were overcrowded, the capacity could facilitate redistricting. Other capacity may still remain at Clarksville MS at that time.

Analysis – High

The Columbia West Region high school is Wilde Lake HS. The projection for this school remains (with the approved 5,500 units) remains between 90–110 percent utilization until 2027. This projection models the effect of the Columbia Town Center development. The preliminary enrollment analysis of the impact based on the new proposal (attachment 3) shows Wilde Lake HS will exceed 110% utilization after 2020. The school was replaced in 1996 and does not yet qualify for systemic renovation where additional capacity could be included in the project. The interim measure would be installation of temporary capacity.

Conclusion

Projected school capacity levels would be insufficient to accommodate the additional student enrollment that would result from the total 6,750 new housing units. At the elementary level, the HCPSS model indicates we may need a second new 600-seat elementary school. Funding for this school is not presently budgeted. At the middle school level, capacity is needed above and beyond the larger capacity of the replacement Wilde Lake MS. Funding additional capacity along with the with the renovation of Harper's Choice MS, a likely way to provide this capacity, is not presently budgeted. At the high school level, capacity is needed above and beyond the present capacity of Wilde Lake HS. Funding an addition is not presently budgeted. The HCPSS model shows most of these conditions in the second decade of the projection.

With another model showing more modest growth, conditions should be monitored and viable sites should be added to the land bank. The development agreements of Downtown Columbia only offer land as an option and the available sites are smaller than a middle or high school site. The original study evaluated alternatives like the provision of office or programmatic space within Downtown Columbia. The Board may continue to pursue alternatives in light of the proposed development.

Key Terms

Some terms in the discussion of this proposal may not be familiar so they are defined below:

Absorption schedule – An estimate of the number of residential units that will be constructed per year. This is based upon an estimate of how the local housing market can absorb the proposed development from a separate market study. The schedule has been used to model enrollment scenarios.

CEPPA - Timed or triggered commitments made with Downtown Columbia approval called Community Enhancements, Programs, and Public Amenities (CEPPAs). The CEPPA relevant to the school system is #17 which states, "GGP shall, if deemed necessary by the Board of Education, reserve an adequate school site or provide an equivalent location within Downtown Columbia." This CEPPA must be satisfied by the Downtown Columbia developer prior to the approval of the site development plan for the 1,375th new residential unit (25 percent of the total 5,500 units).

Cohort Survival Projection – An enrollment projection that factors the succession of cohorts through the grades. Measured historical ratios for the succession each grade to the next model increase or decrease the cohort. The HCPSS model uses this method with other components.

Housing Projection – The HCPSS enrollment projection depends upon an annual projection of housing by the Department of Planning and Zoning. Regulatory factors like the Adequate Public Facility Ordinance are also a factor.

Pupil Yield Rate – A rate calculated from the actual number of students coming from a type of housing. Yield rates can be K-12 or broken out by level.

Residential Units – Dwelling units. Commonly referred to homes, apartments or condominiums.

a. High rise residential – Multi-family residential structures more than four stories in height.
b. Low rise residential – Multi-family residential structures up to four stories in height.
c. Multi-family residential – A residential building with multiple units which are either rented or owned as condominiums. The HCPSS enrollment projection groups all apartments and condominiums together for yield calculations.
d. Single-family residential – One family residential units, either detached or townhouse. Pupil yield rates are often higher from groups of this type of home than multi-family residential units. None of these types of units are proposed in Downtown Columbia.

Standing Yield Projection – An enrollment projection made by multiplying an anticipated standing yield by the number of anticipated units. This method has been used by a consultant to the DPZ.

Standing Yield Rate – A pupil yield rate for a specific type of housing (for example, high rise multi-family). The Office of School Planning measures standing yield rates for existing housing by school attendance area and countywide. Average rates are used as a component of the enrollment projection.

Attachment 1

Relevant pages from the 2015 Feasibility Study

Elementary Schools Columbia West Region

Need:
The region will have existing capacity through 2020 despite growth at Running Brook ES

Strategy:
Provide interim capacity within the region using the addition at Swansfield ES. Maintain Faulkner Ridge site for a future elementary school.

Figure 4.2 Elementary schools of the Columbia West Region

Investment in a 100-seat addition at Running Brook ES, which opened last August, has been a key capital project for managing growth in this area. Even with this addition, Running Brook ES is expected to continue to grow. A 100-seat addition is also planned at Swansfield ES and will open in 2018. A study of Columbia schools attached to the 2014 Feasibility Study recommended the Faulkner Ridge site for a new school. The combination of the additional capacity at these two schools will help to delay the need for a new school with feasible redistricting.

Table 4.2 Five year elementary school utilization in the Columbia West Region

Columbia - West	Projected Pop.	Capacity	2015 Projected Utilization	Projected Pop.	Capacity	2020 Projected Utilization
Bryant Woods ES	322	361	89.2	342	361	94.7
Clemens Crossing ES	500	521	96.0	530	521	101.7
Longfellow ES	428	512	83.6	436	512	85.2
Running Brook ES	517	405	127.7	735	505	145.5
Swansfield ES	555	521	106.5	519	621	83.6
Region Totals	**2322**	**2320**	**100.1**	**2562**	**2520**	**101.7**

Middle Schools Columbia West Region

Need:
Enrollment exceeds 110 percent of regional capacity.

Strategy:
Utilize temporary capacity until the replacement school is built at Wilde Lake MS in 2017.

Figure 4.8 Middle schools of the Columbia West Region

The Columbia West Region capacity utilization is now above 110 percent. This supports the decision to replace Wilde Lake MS, a project that is scheduled to open in 2017. The new school is planned to be 293 seats larger than the existing one, and will stay within target utilization until 2024, based on the current projection. The pre- and post- measure charts show intermittent crowding at Harper's Choice MS, which does not happen to occur in the selected years below. This will be monitored for relocatable classroom consideration.

Table 4.8 Five year middle school utilization in the Columbia West Region

Columbia - West	Projected Pop.	Capacity	2015 Projected Utilization	Projected Pop.	Capacity	2020 Projected Utilization
Harpers Choice MS	546	506	107.9	542	506	107.1
Wilde Lake MS	573	467	122.7	692	760	91.1
(Region MS Totals)	1119	973	115.0	1234	1266	97.5

High Schools Columbia West Region

Need:
Capacity utilization is below 110 percent for Wilde Lake HS until 2027.

Strategy:
Monitor projections.

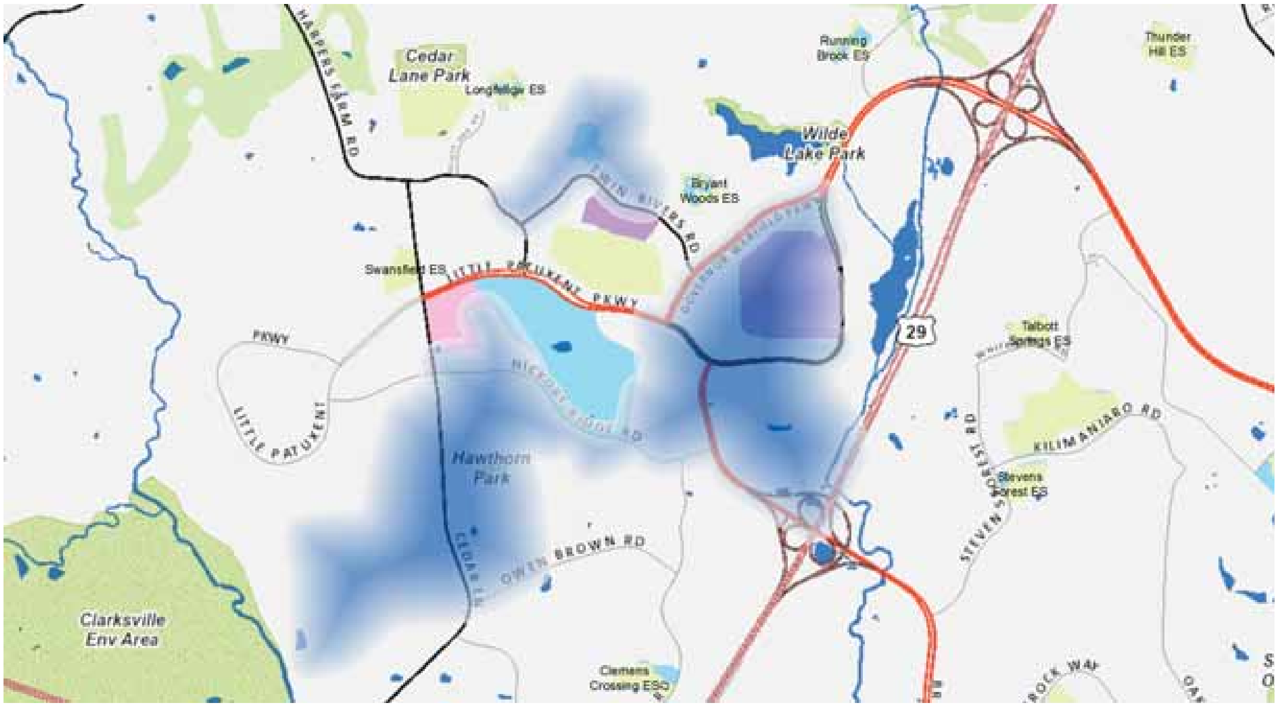
Figure 4.14 High schools of the Columbia West Region

The Columbia West Region high school is Wilde Lake HS. The projection for this school remains between 90–110 percent utilization until 2027. With only a few classrooms of remaining capacity, plans to redistrict students into Wilde Lake HS should be avoided unless absolutely necessary. This projection models the effect of the Columbia Town Center development without the adjustment presented in the addendum. Adequate capacity exists to accommodate growth at Wilde Lake HS until 2027.

Table 4.14 Five year high school utilization in the Columbia West Region

Columbia - West	Projected Pop.	Capacity	2015 Projected Utilization	Projected Pop.	Capacity	2020 Projected Utilization
Wilde Lake HS	1279	1424	89.8	1526	1424	107.2

Elementary School Redistricting - Columbia West



The FY 2016 Long-Range Master Plan indicated a new elementary school may serve this area in 2025 as ES #44. The Howard County Planning Board has suggested this area be served by ES #43, which is slated for opening in 2023 in the Long Range Plan. Either way, funding constraints are likely to dictate a later opening. The Columbia schools study attached to the 2014 Feasibility Study identified the best location for this school to be where the Faulkner Ridge Center building is presently located.

Since capacity is needed prior to any likely funding of this new school, an interim plan is needed. Interim Columbia West elementary school redistricting will take advantage of capacity in the region and is anticipated to occur in 2018, depending upon when the Swansfield addition opens. A recent addition at Running Brook ES is not sufficient to contain expected growth. Existing capacity at the other schools, including the addition at Swansfield ES, will facilitate redistricting within the region. Some small feeds are anticipated with interim redistricting, but they can be resolved when ES #44 opens.

Table 5.2. Interim Columbia West Elementary Redistricting

Sending	Receiving	Appx. # Students
Bryant Woods	Clemens Crossing	94
Bryant Woods	Longfellow	71
Clemens Crossing	Swansfield	110
Running Brook	Bryant Woods	148
Running Brook	Clemens Crossing	20
Total		**443**

Attachment 2

Columbia Town Center Report as attached to the 2014 Feasibility Study

Columbia Town Center School Analysis

Attachment to the June 2014 Feasibility Study

Written and Prepared by
HCPSS Office of School Planning

Reviewed by and Developed in Consultation with
Howard County Department of Planning and Zoning Division of Research

For information contact:

Joel A. Gallihue, Manager of School Planning
10910 Clarksville Pike
Ellicott City, MD 21042
410-313-7184

Jeff Bronow, Chief of Research
Howard County Department of Planning and Zoning
3430 Court House Drive, Ellicott City, MD 21043
410-313-4370

Table of Contents

I. Introduction 2
II. Current Development Status in Downtown Columbia 5
III. Existing Facilities 7
A. Running Brook Elementary School 7
B. Wilde Lake Middle School 10
C. Wilde Lake High School 13
D. Other Facilities 14
IV. Vacant Sites 15
A. Faulkner Ridge 15
B. Hickory Ridge Village Sites 16
V. Projections 18
A. Elementary School Level Enrollment Projections 18
B. Middle School Level Enrollment Projections 22
C. High School Level Enrollment Projections 24
VI. Alternative Pupil Generation 26
A. Elementary School Chart 27
B. Middle School Chart 28
C. High School Chart 29
D. Elementary Modification 35
E. Middle Modification 35
F. Impact to High School Projection 36
VII. Options for School System Needs 37
A. Temporary Capacity 37
B. Construction of Additions 38
C. New Schools 38
D. Redistricting 38
VIII. Recommendations 38

I. Introduction

In February 2010, the Howard County Council adopted a General Plan Amendment for Downtown Columbia, also known as the Downtown Columbia Plan. In the two years preceding adoption, the review of this plan included discussion about the need for schools. Student yield analysis studies based on existing apartment and condominium (condo) buildings in Howard County showed that there would be some need, but also raised questions about whether students generated from future housing in Downtown Columbia would occur to the same extent given that the type of planned housing there (new high rise apartments and condos in a mixed use environment) is unique and doesn't currently exist in Howard County.

The adoption of this plan came when the HCPSS had only just begun the process of realigning the long-term capital facilities plan and redistricting to respond to growing needs in the eastern part of the county. The HCPSS had just opened facilities in the west (Bushy Park ES) and northeast (Veterans ES). The only new planned capacity in the east at that time that was not associated with the full-day kindergarten mandate was the expansion of Elkridge ES. Planning for expansion of Bellows Spring ES was in discussion. Incorporating Downtown Columbia growth into future capital plans would require consensus about the anticipated impact of that growth.

The planned revitalization of Downtown Columbia intends to bring mixed-use development to Downtown in the form of six neighborhoods. The residential element of these mixed-use neighborhoods will consist of 5,500 new multi-family residential units, including both condo and rental.

Figure 1

The image in Figure 2 is an aerial illustration representing a conceptual rendering of the future redevelopment of Downtown Columbia The existing mall remains central but it will be surrounded with new mixed-use neighborhoods to be built around it over the next 20 to 30 years

Figure 2

The new neighborhoods identified in the Downtown Columbia Plan are shown to the left (Exhibit E of the General Plan Amendment). The first residential projects are currently under construction in Warfield located north and west of the mall and shown in purple. Initial plans for The Crescent were recently submitted to the Department of Planning and Zoning.

In the discussions that led to the approval of the Downtown Columbia Plan the question of school needs arose. The minutes of the Board of Education meeting on December 17, 2009 indicate that the Board members agreed that it would be prudent to expect a minimum of one school site for the Downtown Columbia development. On the other side of that concern was a belief that the downtown units would be of a higher value and incorporated into a mixed-use community and therefore tend to attract occupants with fewer children. Some have cited comparable developments in Montgomery County and Northern Virginia, where pupil yields are fairly low. Pupil yields in the existing apartments in Downtown Columbia are also very low, but at the time it wasn't possible to be certain what the pupil generation rates would be for the new development, so decision making checkpoints were put into the Plan stipulating further analysis when measurable yield data became available during the initial construction phases. A further component of this perspective is that the Rouse Company had provided nearby school sites in the early stages of development in Columbia several decades ago which are still available to serve enrollment growth with new schools.

The approval of the Downtown Columbia Plan included adoption of timed or triggered commitments called Community Enhancements, Programs, and Public Amenities (CEPPAs). The CEPPA relevant to the school system is #17 which states, "GGP[1] shall, if deemed necessary by the Board of Education, reserve an adequate school site or provide an equivalent location within Downtown Columbia." This CEPPA must be satisfied by the Downtown Columbia developer prior to the approval of the site development plan for the 1,375th new residential unit. (25 percent of the total 5,500 units)

In anticipation of CEEPA #17, the Educational Facilities section of the Downtown Columbia Plan first calls for the HCPSS and Department of Planning and Zoning (DPZ) to study all available options for school system needs and characterize the best options for a range of possible pupil yields in a Columbia Town Center School Analysis. This analysis, which is provided here, must be approved by the Board of Education. Later, when 10 percent of the new residential units planned for Downtown Columbia (550 units of the total 5,500) are built and occupied, the Plan stipulates that HCPSS will consider updated enrollments and, subject to Board of Education approval, select the most appropriate yield ratio and associated option outlined in the Columbia Town Center School Analysis for implementation. This is followed by the application of CEPPA #17 stated above at the 25 percent unit threshold.

Since the Feasibility Study is a long-range planning document, it is well suited to host this Columbia Town Center School Analysis as an addendum. The goal of this analysis is to lay out the options for dealing with a range of enrollment growth estimates associated with Downtown Columbia development.

II. Current Development Status in Downtown Columbia

Construction has begun in Downtown Columbia in the Warfield neighborhood adjacent to the Columbia Mall. A 380 rental apartment complex known as The Metropolitan (Figure 3) is currently being built and is expected to be completed and ready for occupancy at the end of 2014 or early 2015. This mixed-use building also includes retail space on the ground floor. There are two other mixed use buildings still under plan review in the Warfield neighborhood that will be located adjacent to this first building. One of these buildings will include 267 residential units and the other 170 residential units. Both will also include retail space on their ground floors. It is anticipated that these two buildings will be ready for occupancy in 2017. The total for all three buildings includes 817 residential units.

---

[1] General Growth Properties was the successor to the Rouse Company. The land development unit was later divested and now called Howard Hughes Company.

Figure 3

Construction of "The Metropolitan" seen from this vehicular entrance to the mall helps to illustrate the changes coming to Downtown Columbia

A second Downtown Columbia neighborhood, called The Crescent, is also at the beginning of the planning stages. The Neighborhood Design Guidelines for this project just recently went to the Department of Planning and Zoning's Design Advisory Panel for initial review in May 2014. The Final Development Plan (FDP) for this neighborhood was recently submitted to DPZ in the first week of June. This FDP includes 2,300 residential units with construction phased over the next 10 years. Site development plan approvals, the last plan approval stage required prior to the issuance of building permits, for the various portions of The Crescent neighborhood will then be submitted for review.

In addition to development in these two neighborhoods, there is a 160 unit residential condo building planned in The Lakefront neighborhood. This building was known as the WCI Tower, and was approved back in 2006, but faced a lengthy appeals process and the company has since undergone bankruptcy. There is now a new owner of that site, which is now referred to as Little Patuxent Square. In addition to the residential units, Little Patuxent Square also includes office and retail space. Exact timing of construction of this building is currently uncertain. This plan is not included in the 5,500 units given it had been grandfathered prior to the adoption of the Downtown Columbia Plan.

Other recent development activity in Downtown Columbia, including recently completed, under construction, or in the planning stages include the redevelopment of Merriweather-Symphony Woods, a retail expansion in The Mall, the Merrill Lynch Building renovation, the Howard Hughes headquarters building renovation which will include Whole Foods and a fitness center, the renovation of Clyde's Restaurant, and the addition of the new Petit Louis Bistro restaurant. All of these projects do not contain a residential component, but clearly show that the redevelopment of Downtown Columbia is well under way.

III. Existing Facilities

A. Running Brook Elementary School

Running Brook ES is located at 5215 West Running Brook. This school was constructed in 1970 and has been renovated three times since then to maintain the facility, increase capacity, and respond to changes in program delivery. The current capacity of the facility is 405 seats (K–5), with separate space dedicated to Prekindergarten and early childhood programming.

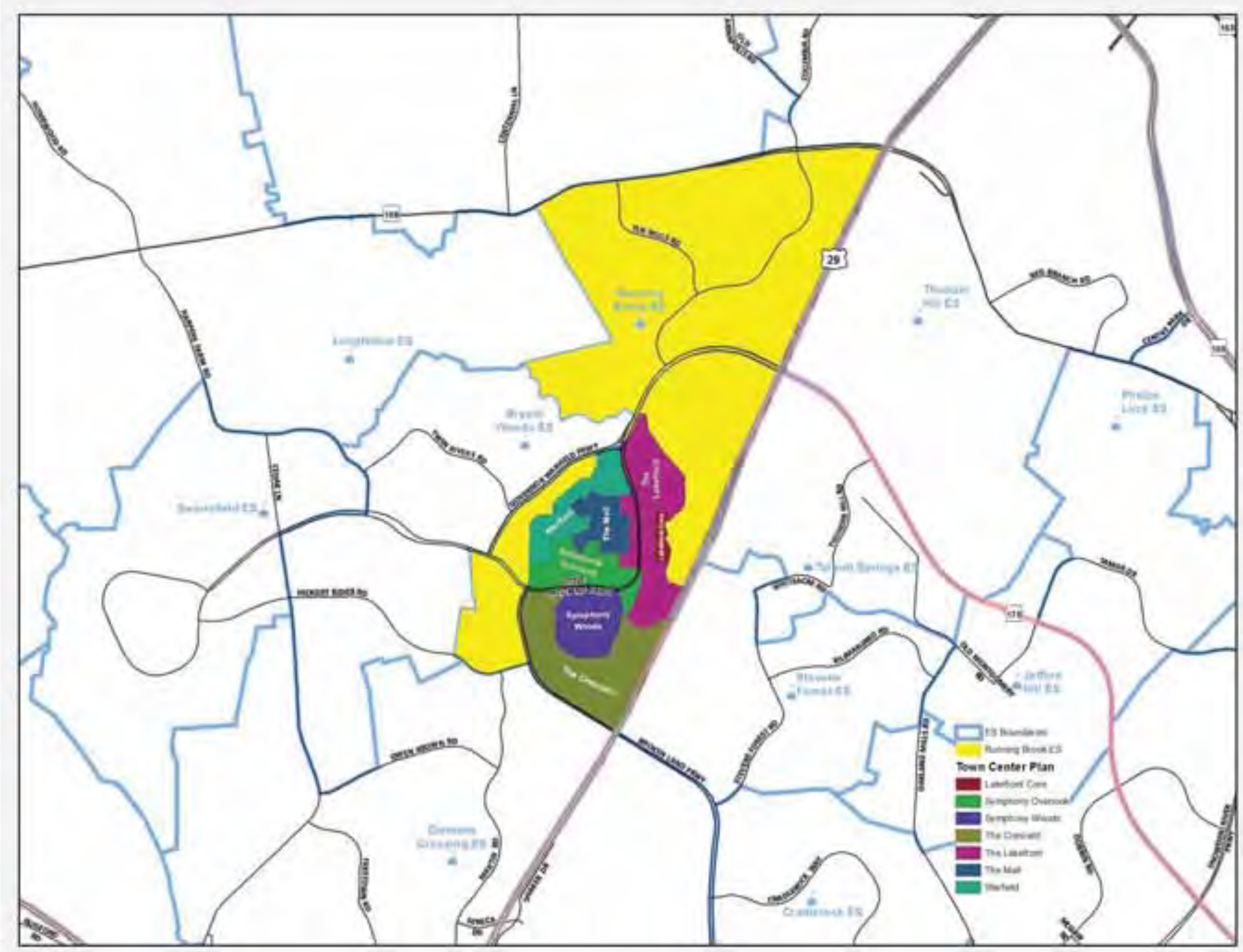
Figure 4

An aerial view of Running Brook ES as presently configured is shown above. The project includes a cafetorium expansion in the front and a two-story classroom addition in the rear as shown in the pictures to the right (photo from pictometry, illustrative drawings from SMG Architects).

On September 30, 2013, the annual official enrollment report submitted to the state reported 462 students in Grades K–5 and 30 students in Prekindergarten which represents significant overcrowding based upon the current capacity of 405 students. A systemwide analysis of school facilities[2] conducted in 2009 determined that this facility possessed about 66 percent of the net square footage required by the 1994 elementary educational facility specifications. The required educational program is being delivered at this facility with the aid of six relocatable classroom facilities, but additional permanent capacity was necessary.

A $6.2 million dollar addition to Running Brook ES is underway to address the existing deficiencies and continued population growth in the Columbia West school region. The project will provide an estimated 100 seats of additional classroom space by adding a two-story classroom addition, a cafetorium expansion, and additional core infrastructure space necessary to operate effectively as a larger school. This expansion will also improve the utility and effectiveness of the existing academic support spaces. As reported in the monthly construction report presented to the Board of Education this past April, the project was approximately 34 percent complete and will be ready for occupancy in August 2014.

Figure 5



Downtown Columbia is assigned to Running Brook ES. The Downtown Columbia neighborhoods are shown in different colors for reference and the balance of the Running Brook ES attendance area is shown in yellow. Other adjacent school attending areas are shown with a blue outline.

Figure 6

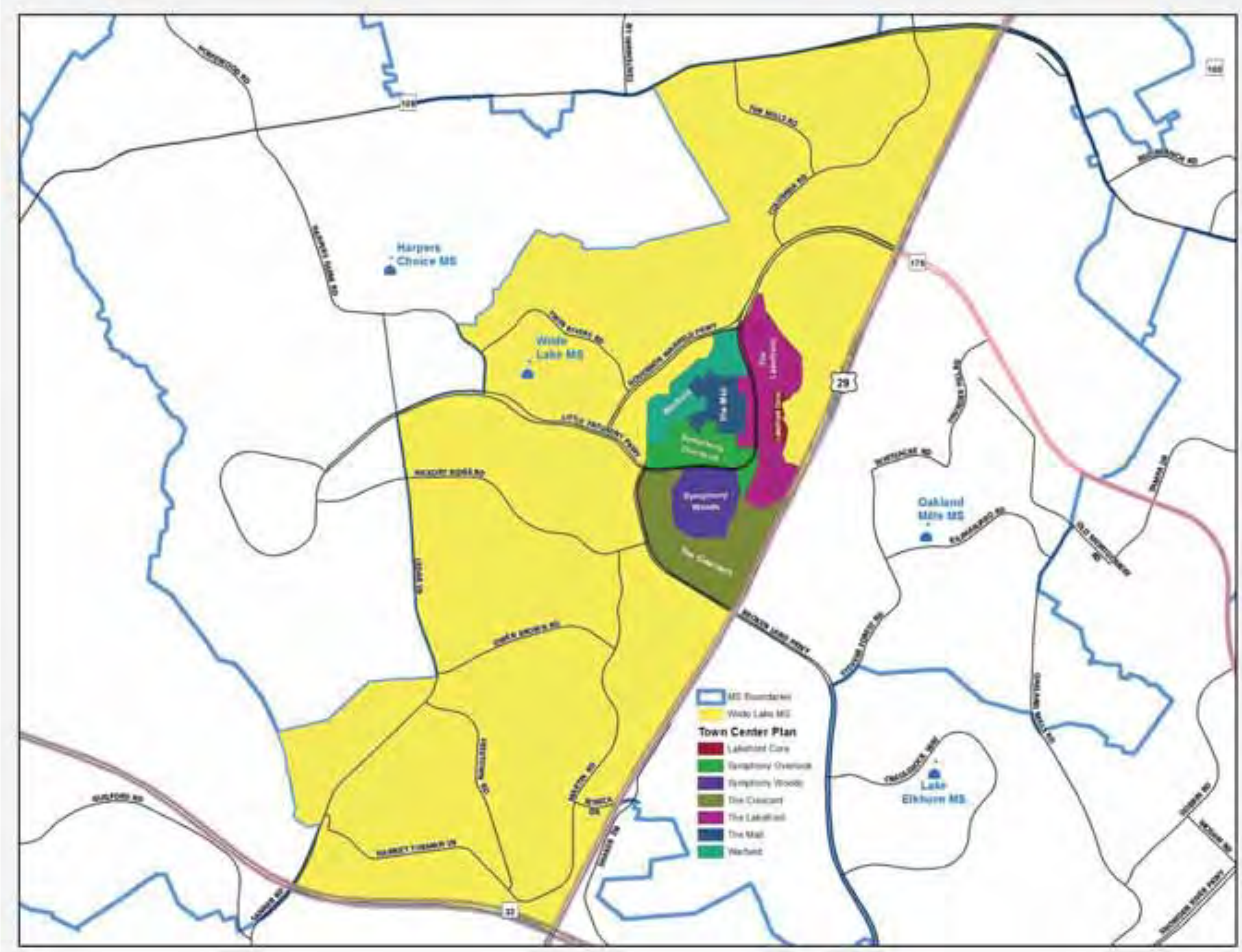
Running Brook ES is presently surrounded by a mix of housing types.

The Running Brook ES attending area is presently made up of 70 percent multi-family housing of either condos or rental apartments. The balance of existing housing stock is 20 percent town home and 10 percent single-family detached. The only new units in the Running Brook ES attendance area will be those in the Downtown Columbia Plan.

B. Wilde Lake MS

Wilde Lake MS is located at 10481 Cross Fox Lane. The school is set in a campus with Wilde Lake HS adjacent to the Wilde Lake Village Center. This single-story school building with masonry exterior wall construction was constructed in 1969 with an open classroom design. The school has been renovated two times since then to maintain the facility and respond to changes in program delivery. The current capacity of the facility is 467 seats (Grades 6–8).

Figure 7



Downtown Columbia is assigned to Wilde Lake MS. The Downtown Columbia neighborhoods are shown in different colors for reference and the balance of the Wilde Lake MS attendance area is shown in yellow. Other adjacent school attending areas are shown with a blue outline.

Figure 8

An aerial view of Wilde Lake MS today is shown above left. HCPSS considered expanding the school during a renovation but the Board of Education adopted a plan to replace this school with a new building on the same site and then raze the existing building. The picture to the right illustrates the adopted school replacement strategy with the new building set in the rear of the site. Parking, circulation and playfields for the new building would be built where the existing building is now sited (photo from pictometry, illustrative drawing from TCA Architects).

On September 30, 2013, the annual official enrollment report submitted to the state reported 546 students in Grades 6–8. A system wide analysis of school facilities[3] determined that this facility possessed about 77 percent of the net square footage required by the 1994 middle school educational facility specifications. The required educational program is being delivered at this facility with the aid of four relocatable classroom facilities. The June 2014 Feasibility Study indicates that when the significantly larger Wilde Lake MS replacement school is completed in 2017, it will open at near capacity.

The Wilde Lake MS attending area is presently made up of 51 percent multi-family housing of either condos or rental apartments. The balance of existing housing stock is 21 percent town home and 28 percent single family detached. Very few new single family or town home units are anticipated and all of the new residential communities of Downtown Columbia like Warfield will feed into Wilde Lake MS. The new multi-family development at Wilde Lake Village Center is also included in the projection. At the “build-out condition” when all anticipated development is built, the attending area is projected to consist of 70 percent multi-family units.

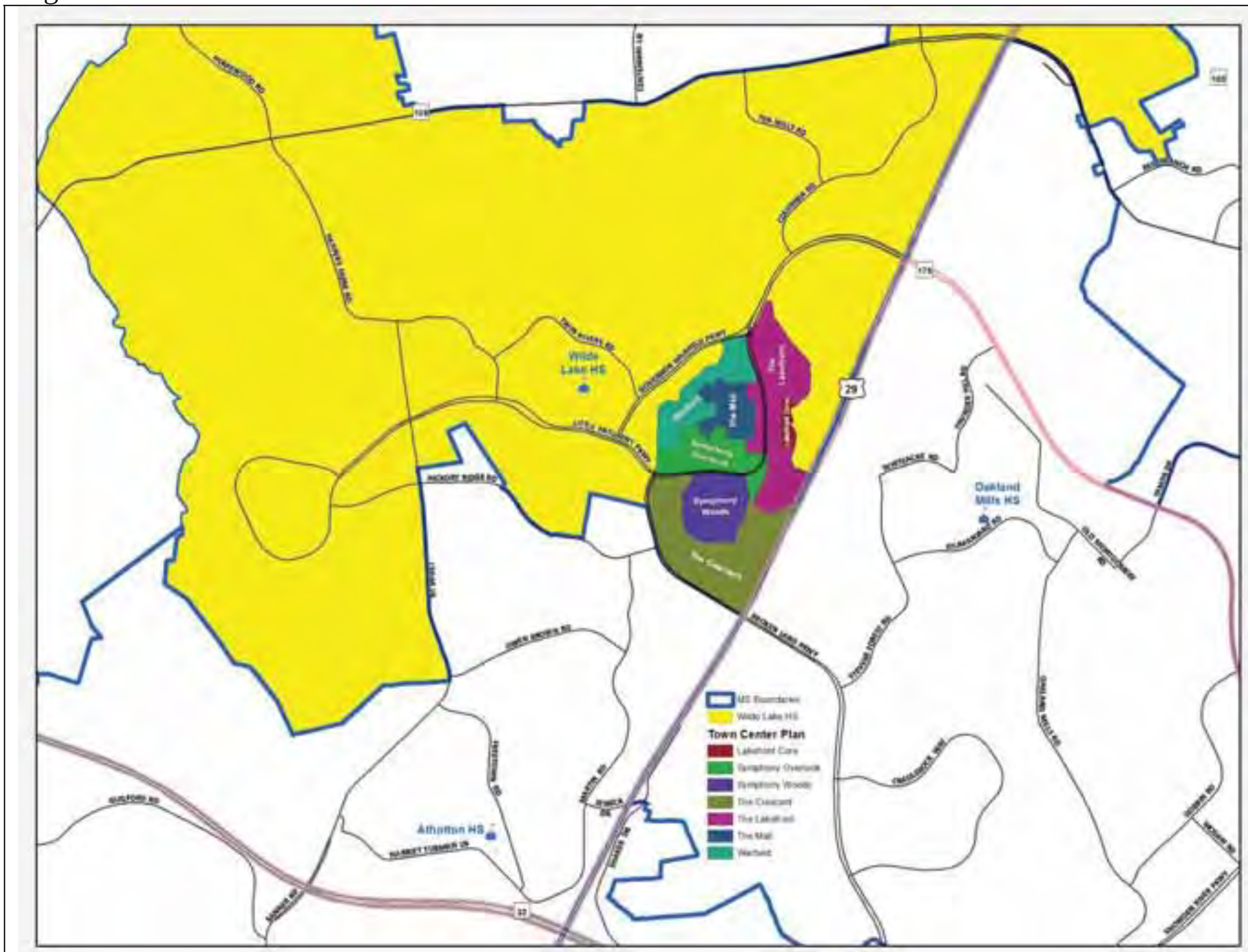
---

[3]Gilbert Architects Inc. August 2008 and May 2013

C. Wilde Lake High School

Wilde Lake HS is located at 5460 Trumpeter Road. This school was originally constructed in 1971 and was replaced in 1996. The current capacity of the facility is 1,424 seats (Grades 9–12). On September 30, 2014 the annual official enrollment report submitted to the state reported 1,259 students in Grades 9–12. The facility is not overcrowded per rated capacity at this time, and was built to the same prototype design standards as many of the HCPSS's newer high schools. Wilde Lake HS is projected to remain under 110 percent capacity utilization until 2018 based on the current feasibility study.

Figure 9



Downtown Columbia is assigned to Wilde Lake HS. The Downtown Columbia neighborhoods are shown in different colors for reference and the balance of the Wilde Lake HS attendance area is shown in yellow. Other adjacent school attending areas are shown with a blue outline.

Figure 10

An aerial view of Wilde Lake HS today. Fields are shown in the foreground with the school in the center of the picture. Wilde Lake MS is not in view but located to the left. The Wilde Lake Interfaith Center is the building with the darker roof in the background. To the left of that is the Wilde Lake Village Center and the indoor aquatics facility (photo from pictometry).

The Wilde Lake HS attending area is presently made up of 44 percent multi-family housing of either condos or rental apartments. The balance of existing housing stock is 28 percent town home and 28 percent single-family detached. No new single-family or town home units are anticipated and all of the new residential communities of Town Center like Warfield will feed into Wilde Lake HS. The new multi-family development at Wilde Lake Village Center is also included in the projection. At the "build-out condition" when all anticipated development is built, the attending area is projected to consist of 59 percent multi-family units.

D. Other Facilities

Other elementary facilities in the Columbia West area include Bryant Woods ES, Clemens Crossing ES, Longfellow ES, and Swansfield ES. With Running Brook ES, these schools serve the Columbia West region. The combined capacity of the Columbia West elementary schools will keep this region below 110 percent utilization until 2019 based on the current feasibility study. Like Running Brook ES the other facilities are significantly smaller than the newer 600 student prototype school design. They have limited room for expansion and are using relocatable classrooms. A comprehensive renovation of Longfellow ES renovation is under way (scheduled to be completed in August 2015) and a renovation and 100-seat addition for Swansfield ES is in the planning stages.

The elementary schools in Oakland Mills Village are nearby but on the east side of MD 29. They include Talbott Springs ES, Thunder Hill ES, and Stevens Forest ES. These schools are all near or within target utilization and cannot be used to balance schools in West Columbia.

Harpers Choice MS is the only other middle school in the Columbia West region and it is projected to exceed 110 percent capacity utilization in 2015 based on the current feasibility study. The combined capacity of the Columbia West middle schools will be above 110 percent utilization next school year. The HCPSS owns a school site which is located at Marriottsville Road and Rt. 40 that could someday provide relief to the Columbia West region if a new middle school were opened at that site in the future, but there is no funding placeholder in the capital improvement program at this time.

As noted before in this report, both facilities are smaller than is expected in the 1994 educational specification. After installations planned this summer, the region will host 38 relocatable classrooms, providing approximately 525 additional seats of temporary capacity. While about half of this capacity is intended to provide swing space during the renovation of Running Brook ES and replacement of Wilde Lake MS, the rest helps off-set buildings built to older designs before current programming needs were anticipated.

Wilde Lake HS is the only high school serving Columbia West. The nearest available high school capacity exists at River Hill HS and Oakland Mills HS. There are no present plans for redistricting between these schools.

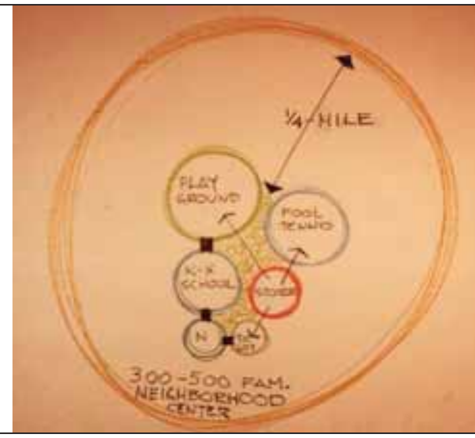
IV. Vacant Sites

A. Faulkner Ridge

Faulkner Ridge is located at 10598 Marble Faun Lane. Faulkner Ridge was one of the early Columbia school sites and opened in 1969. The school was closed in 1983 due to low enrollment. After the school was closed, administrative functions were moved into the building and it was used in this way until 2010. The building is currently being used for storage. If the site were used for a school again, the existing building would need to be replaced with a school that meets current educational specifications.

Figure 11

The Faulkner Ridge school site is a part of the neighborhood center.



Rouse Company planning diagram of neighborhood center.

The site remains an excellent location for a future school. The Rouse Company planned schools as part of its vision for neighborhood centers and the other two Wilde Lake neighborhood centers host operating schools (Running Brook ES and Bryant Woods ES). The diagram above on the right shows the land use components of the neighborhood center which all remain except the store which was converted to a day care center. This site is within a mile of the center of Downtown and is closer to Warfield, The Mall, and the northern part of The Lakefront than sites in Hawthorn and Clary's Forest (described further below). The 2011 Feasibility Study demonstrated that opening a school at the Faulkner Ridge site in 2019 or later could be done with redistricting to include nearby schools, Bryant Woods ES and Swansfield ES. With some local redistricting, a school with the HCPSS's current educational specification would serve to keep utilization within target through the middle of the next decade.

B. Hickory Ridge Village Sites

Like Wilde Lake Village, Hickory Ridge Village was designed with three neighborhood centers, Clary's Forest, Hawthorn, and Clemens Crossing. Unlike Wilde Lake's three neighborhoods, only one of the Hickory Ridge Village neighborhood centers have been used to build a school, the Clemens Crossing ES location. Two others exist and they are in reasonable proximity to the Columbia Downtown.

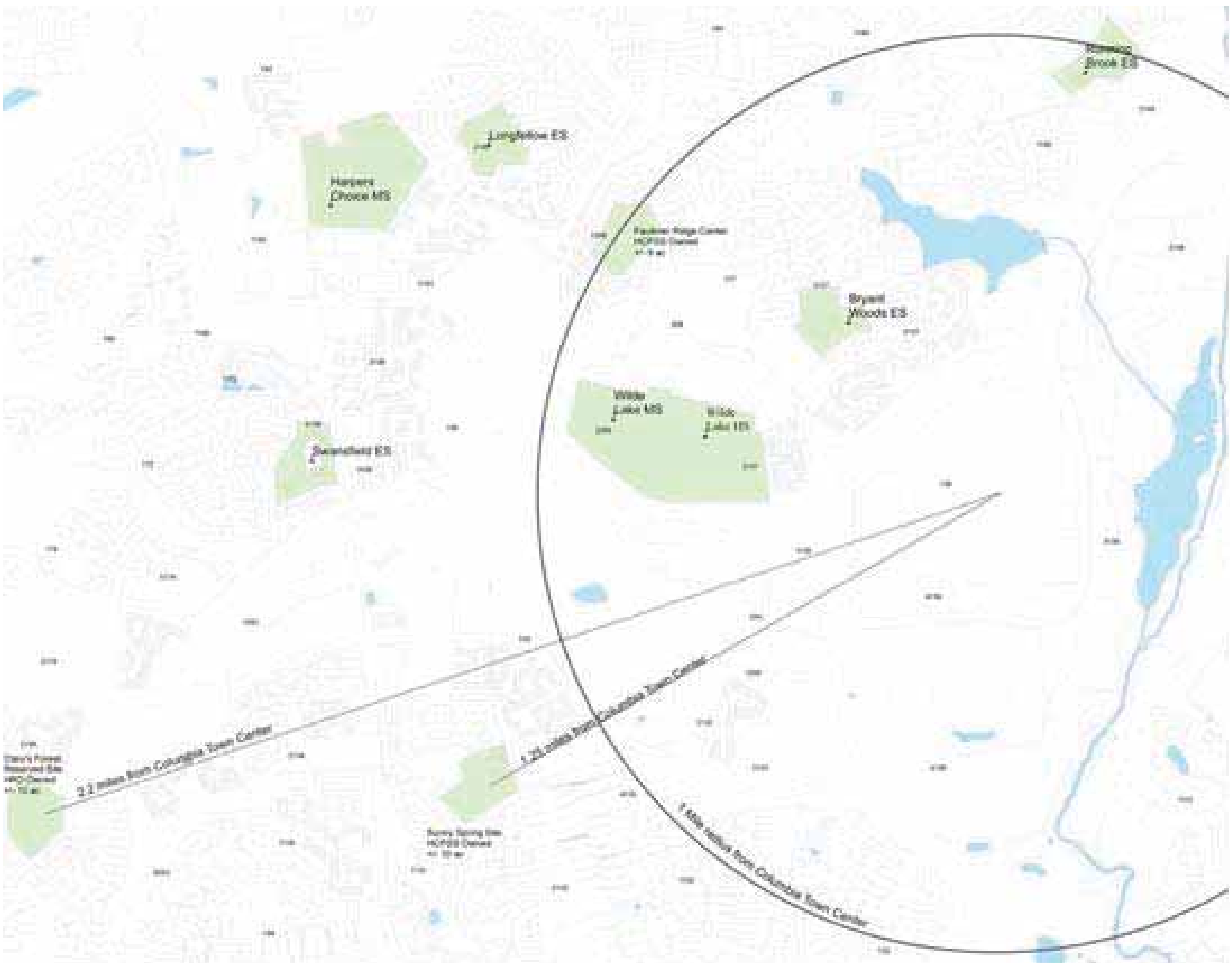
Figure 12

Hawthorn Neighborhood Center (Sunny Spring Site)	
	A school was never built in the Hawthorn Neighborhood Center. HCPSS owns the field and forested area behind the community center which is at 6175 Sunny Spring The site is approximately ten acres in size and about 1.5 miles from the center of Downtown Columbia. The land is made available for community use, as are all operating schools.

Figure 13

Clary’s Forest Neighborhood Center	
	A school was never built in the Clary’s Forest Neighborhood Center. The vacant land is adjacent to the community center which is at 11615 Little Patuxent Parkway. The site has not been transferred to the HCPSS and is currently owned by Howard Research and Development, a subsidiary of Howard Hughes. The site is 9.75 acres in size and about 2.5 miles from the center of Downtown Columbia. The site is unused.

Figure 14



Proximity of sites to Columbia Town Center

V. Projections

A. Elementary School Level Enrollment Projections

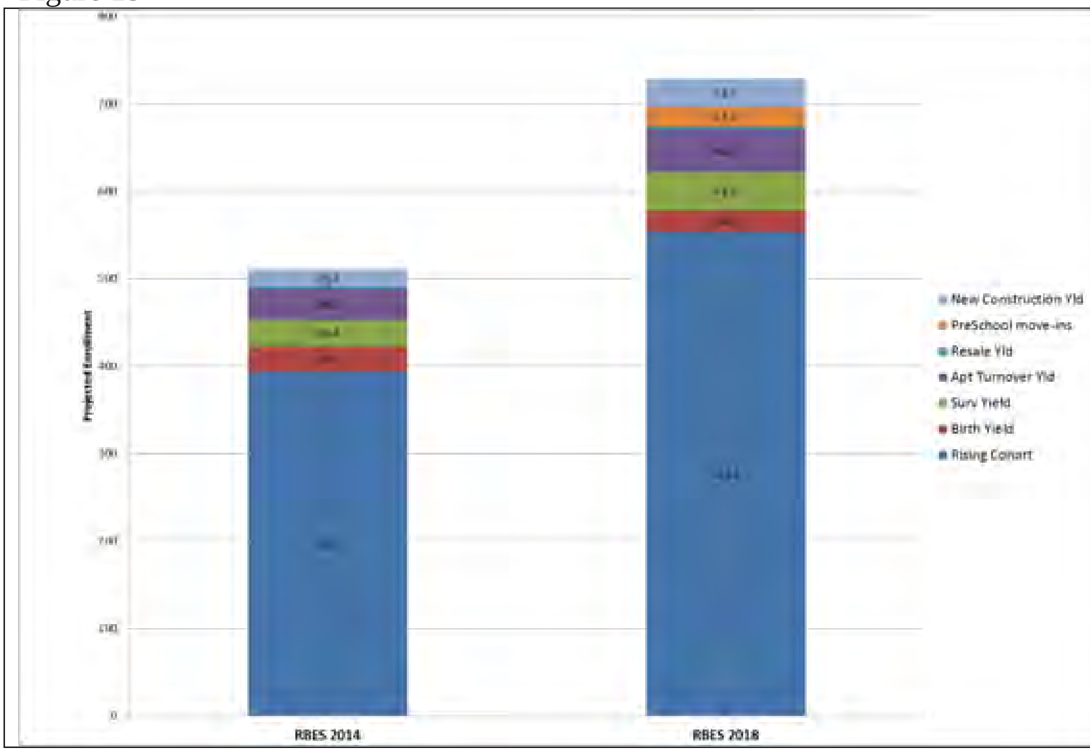
The June 2014 Feasibility Study report provides individual projections for each school in the system. The projection model and methodology used in the report is based on historic cohort survival ratios, and projects the number of students that “survive” from one grade level (cohort) to the next. Then the effects of new housing yields and the net effects of resale of existing housing stock and apartment turnover are added to the projection.

The projection indicates that Running Brook ES will remain below 110 percent capacity utilization until 2016. Enrollment will grow from the present enrollment of 492 to a peak of 1,263 in 2035.   The methodology is based on cohort survival but housing factors like the effects of new housing yields or the net effect of the resale of existing housing stock are also included.

The model starts with a cohort of students being born and then increases or decreases the cohort based upon grade succession and housing factors at each grade based upon school history. The effects are reapplied to the rising cohort each year.

Some parameters are specifically relevant to multi-family. Existing housing is used to calculate net student yield from turnover of apartments from one lease to the next. DPZ provides a projection of total future housing spread over future years for each school attending area. The projected number of units is multiplied by the yield for new housing of that in each year of the projection to get yield from new housing. Net yield increases as units accumulate in accord with the DPZ projection. The figure below helps to show all factors in a stacked format contrasting two years.

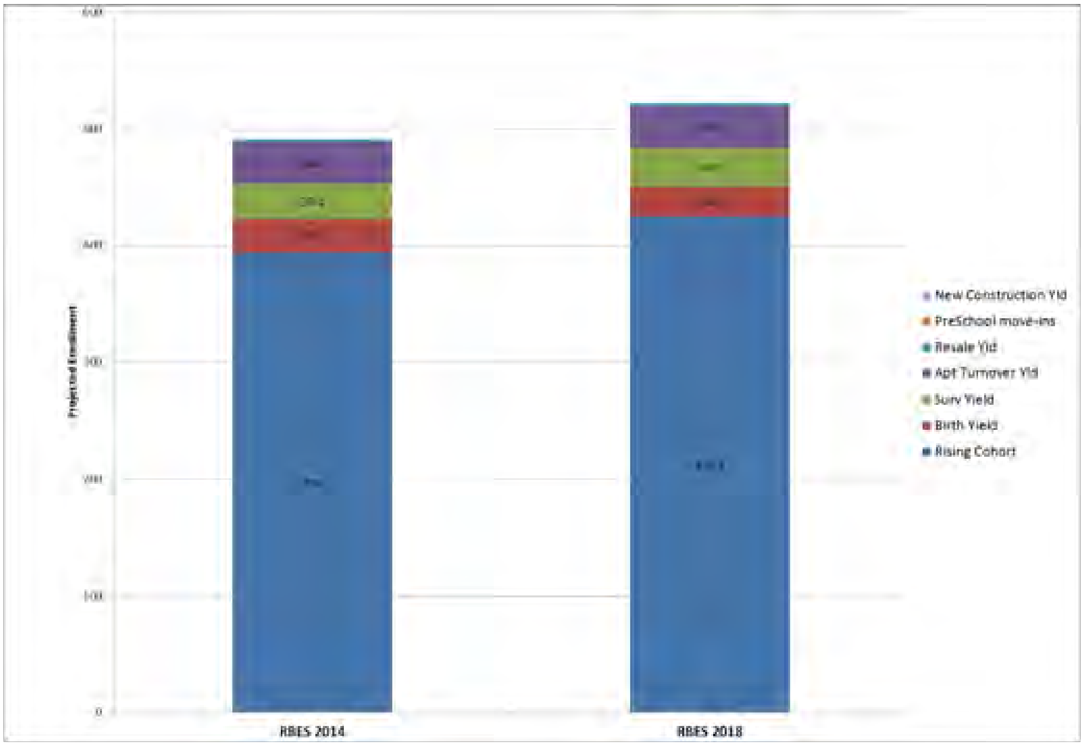
Figure 15



Running Brook ES as projected in the Feasibility Study with the effects stratified. The housing effects feed into the subsequent cohorts.

Having considered the factors in the projection, this study seeks to adjust the factors for multi-family housing based upon observed differences found in the standing yield study. In the figure below the factors are entirely removed. It can be seen that growth coming from other factors is much less intense.

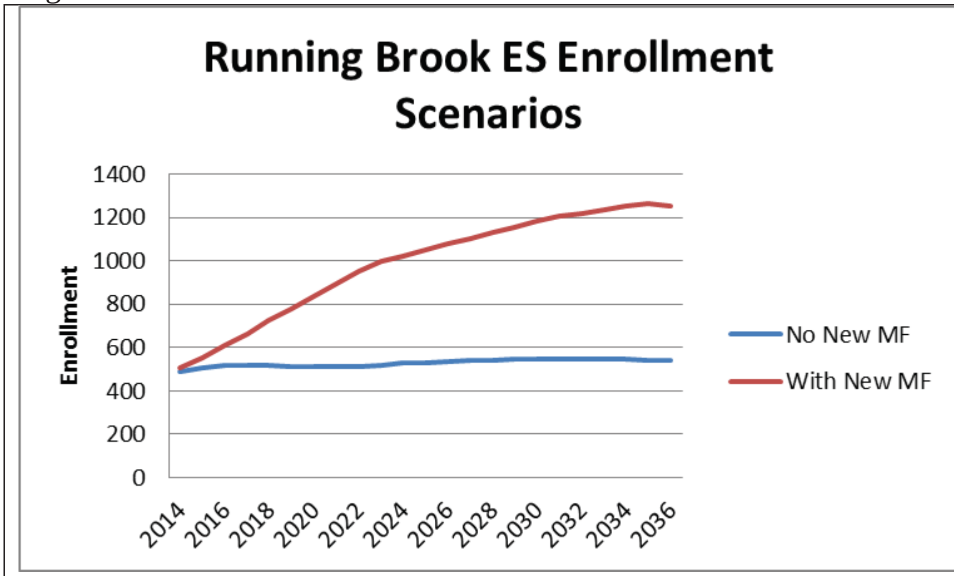
Figure 16



Running Brook ES as projected in the feasibility study but with Town Center removed. Without new housing, only existing housing effects apply. The housing effects feed into the subsequent cohorts.

The future housing number comes from a housing projection developed by the Department of Planning and Zoning. This projection takes into account all development allowed by the General Plan including recently approved projects, development plans that are currently being reviewed, and future development based on zoning capacity. The accumulation of future units is guided by known phasing and what would be permitted further in the future annually under current growth management law. As it happens, the Running Brook ES attending area housing projection is only made up of the Downtown Columbia development. It is important to also remember that other effects are modeled in the projection like births and survival rates but the specific effects which are relevant to the projected development. That can be illustrated by removing them from the projection and graphing the difference.

Figure 17



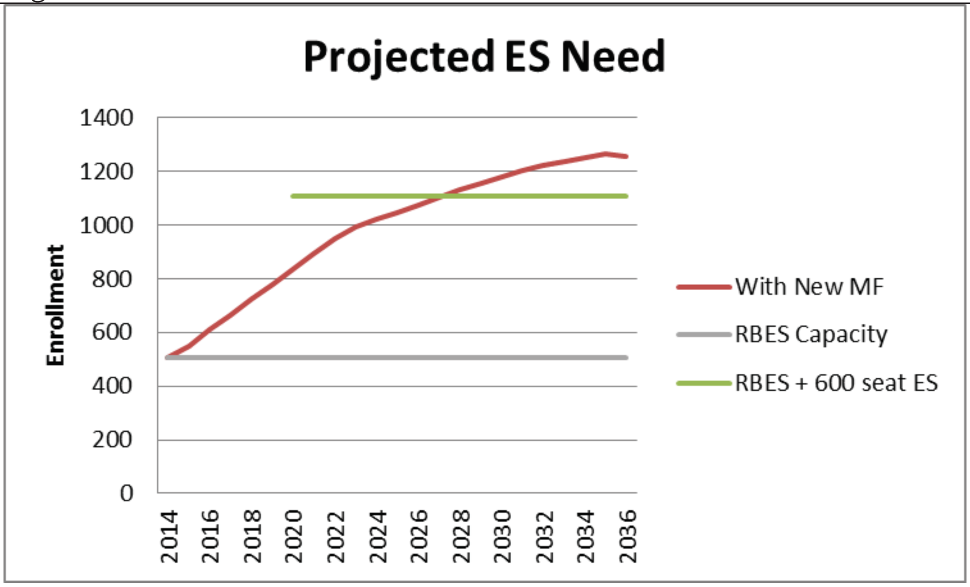
The line “With New MF models the enrollment projection with the additional proposed multi-family units of Downtown Columbia as it is in the feasibility study. This is contrasted with a no build scenario. The additional 5660 units will more than double the number of housing units in the attending area.

The scenario with new multi-family units shows enrollment is expected to double in the next decade and triple in the following decade. Removing the future multi-family development from the model produces modest enrollment growth of 7 percent in the next decade and 11 percent in the following decade.

The above chart shows enrollment but when the projection is presented in the feasibility study it is expressed as capacity utilization. This measure shows the effect of the enrollment growth on existing capacity. The feasibility study includes a planned 100 seat addition to Running Brook ES scheduled to open in August 2014 which would raise the capacity to at least 505 seats. The feasibility study indicates capacity utilization will be almost 200 percent in a decade and peak at 250 percent utilization. Removing the Columbia Town Center future development results in projected capacity utilization no higher than 108 percent. This scenario could be easily accommodated by the existing building with the new addition.

The additional capacity needed based on the above analysis is 600 seats to serve the Running Brook attending area alone. This capacity happens to match the current educational specification of a school like Ducketts Lane ES. No such school is presently in the capital improvement program (CIP). If such a school were added, the combined capacity would keep capacity utilization under 115 percent throughout the projection. This is illustrated in Figure 18.

Figure 18



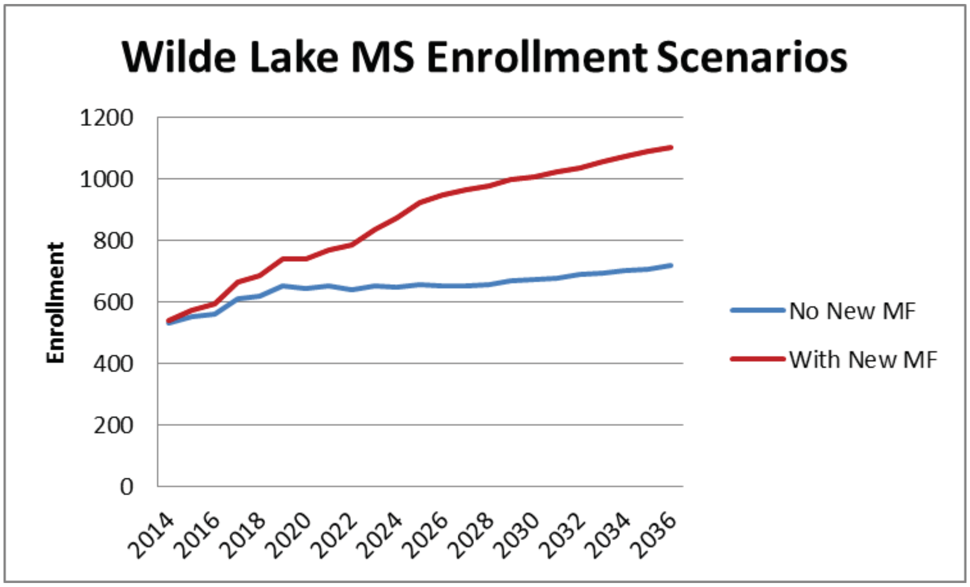
The grey line represents the anticipated capacity of Running Brook ES with the addition. The green line represents Running Brook ES plus a new school with 600-seat capacity. Most of the enrollment growth projected with the model in the feasibility study can be accommodated with these two capital investments.

B. Middle School Level Enrollment Projections

The projection indicates that the Wilde Lake MS replacement school will remain below 110 percent capacity utilization until 2019. Enrollment will grow from the present enrollment of 546 to a peak of 1,104 in 2035.

The relevant new housing yields and the net effect of the resale of existing housing stock are incorporated as well as the accumulation of future units projected by DPZ for this attendance area. These include Downtown Columbia and Wilde Lake Village Center. While this report is focused upon Downtown Columbia, the Wilde Lake Village Center phasing is only a minor contribution. The effect of Downtown Columbia can be illustrated by also removing that from the projection and graphing the difference.

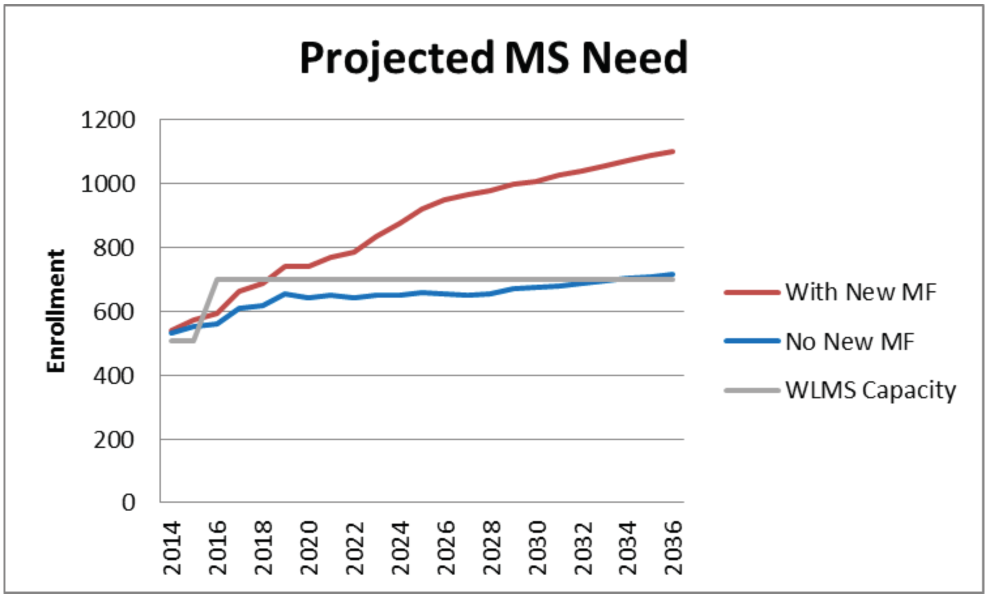
Figure 19



The line "No New MF" models the enrollment projection with the additional proposed multi-family units of Downtown Columbia as it is in the feasibility study. This is contrasted with a no build scenario. Wilde Lake Village Center units are not removed but with only 250 units the distinction is minor anyway. The additional 5910 units will be added to 8493 units presently in the attending area.

The scenario with new multi-family units shows enrollment is expected to increase by 38 percent in the next decade and will have nearly doubled by the following decade. Removing the future multi-family development from the model produces modest enrollment growth of 6.5 percent in the next decade and 11 percent in the following decade. The feasibility study indicates capacity utilization will be almost 134 percent in a decade and peak at 177 percent utilization. Without the Columbia Town Center development capacity utilization would be no higher than 116 percent. Figure 20 illustrates capacity needs with and without Columbia Town Center Development.

Figure 20



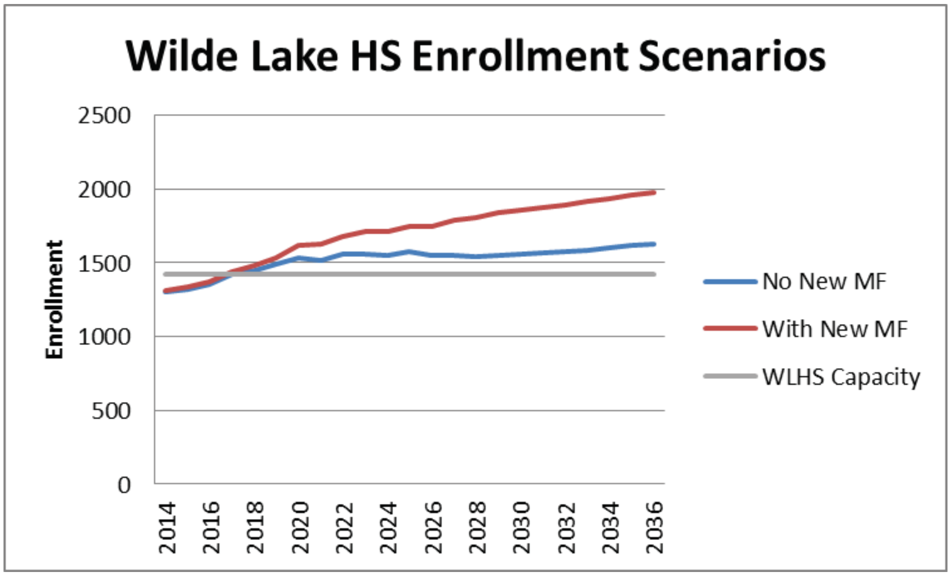
The grey line represents the capacity of Wilde Lake MS with the step up when the replacement school opens. The blue line represents Wilde Lake MS enrollment without future multi-family, which is nearly all Downtown Columbia. The red line models Wilde Lake MS growth with this development. The planned capacity serves projected enrollment well through the end of the decade.

For the next few years growth can be accommodated by the replacement school with some temporary capacity. The ultimate additional capacity which is needed is 440 seats. It is reasonable to believe about 150 seats could eventually be added to Harpers Choice MS but this falls significantly short of the ultimate needs for capacity. HCPSS owns a school site which is located at Marriottsville Road and Rt. 40 (between the Harpers Choice MS and Mount View MS attending area) that could someday provide relief to the Columbia West region if a new middle school were opened at that site in the future, but there is no funding placeholder in the CIP at this time.

C. High School Level Enrollment Projections

The projection indicates that Wilde Lake HS will remain below 110 percent capacity utilization until 2020. Enrollment will grow from the present enrollment of 1,255 to a peak of 2036 in 2040. New housing yields and the net effect of the resale of existing housing stock are incorporated in the projection. As noted above, the accumulation of future units projected by DPZ for this attendance area includes Columbia Town Center and Wilde Lake Village Center.

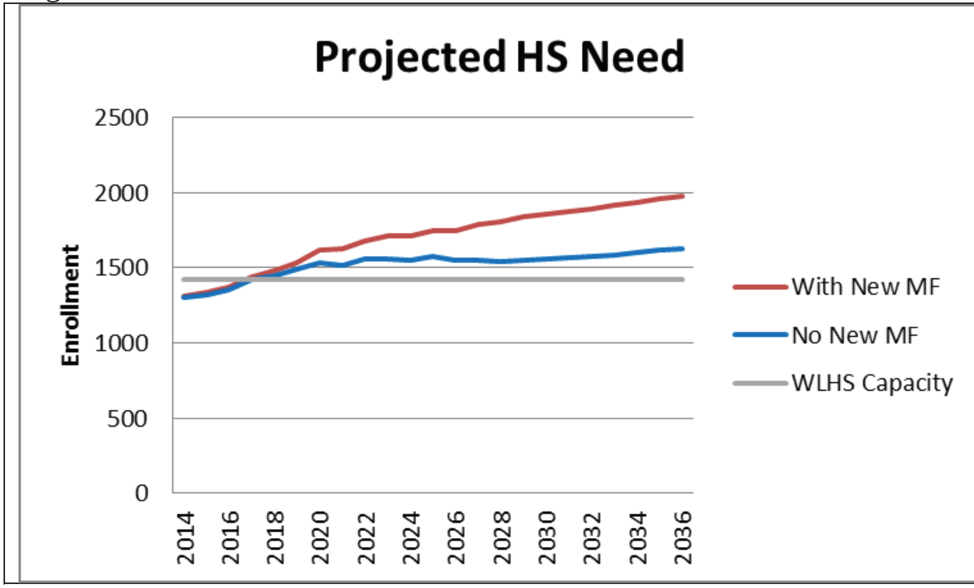
Figure 21

	The line "With New MF" models the enrollment projection with the additional proposed multi-family units of Downtown Columbia as it is in the feasibility study. Wilde Lake Village center units were not removed but with only 250 units the distinction is minor anyway. The line "No New MF" models a scenario where no multi-family units are built.

The scenario with new multi-family units shows enrollment is expected to increase by 30 percent in the next decade and 47 percent after the following decade. Removing the future multi-family development from the model produces modest enrollment growth of 19 percent in the next decade and 22 percent in the following decade.

The feasibility study indicates capacity utilization will be almost 122 percent in a decade and peak at 146 percent utilization. Without Columbia Town Center, development results in capacity utilization no higher than 114 percent. Figure 22 illustrates capacity needs with and without Columbia Town Center Development.

Figure 22



The grey line represents the capacity of Wilde Lake HS. The blue line represents Wilde Lake MS enrollment without Columbia Town Center. The red line models Wilde Lake MS growth with Columbia Town Center.

For the next few years growth can be accommodated by the existing school, but the ultimate additional capacity needed is 666 seats. The high school educational specification would not readily support this size addition. The best way to address this need would be in the context of opening HS #13 which is shown later in the CIP.

VI. Alternative Pupil Generation

The projected needs based upon the model in the feasibility study seem urgent. A continuing theme since the plan amendment was adopted has been a belief that the downtown units would be of a higher value and built within a mixed-use environment and, therefore, tend to attract occupants with fewer children. DPZ staff has cited comparable developments in Montgomery County and Northern Virginia, where pupil yields are fairly low. For this reason the feasibility study projections have been questioned because it relies upon countywide data which may not include comparable units.

The current enrollment projection method was developed in 2003 in-house on the heels of a 2002 consultant produced projection developed by the DeJong Richter firm. Staff observed that the consultant was using a standard cohort survival methodology. The best advantage to cohort survival is that the method is rooted in student data, the data staff knows well and can control. The cohort projection methodology also includes birth data to help determine new kindergartener’s entering the system. Demographers also modify cohort survival with other components like housing effects. The HCPSS methodology modifies the cohort projection with additional considerations including net new students generated from future residential development and resale and rental turnover of existing homes.

Residential development can yield students differently. Different age families are attracted to different types of units. The HCPSS method treats all multi-family units the same. This means that a variety of units including condos, tall elevator buildings, and walk-up garden rental apartments are all averaged into one yield. Combining the types was a reasonable design for the model because the majority of housing in Howard County is single family (detached or town home) and multi-family pupil generation rates are so much lower than that of other units that the distinctions didn't really matter. Furthermore, the HCPSS did not have detailed information of the type of multi-family housing.

In order to develop a pupil generation rate, enrollment history is required. The HCPSS collects five-year histories for yields from new apartments and net yield from turnover of existing apartments. Sometimes at the school district level, however, there is not any new apartment construction yield history in the past five years. In some cases it is a school where there are no multi-family units. In other cases it is a school where multi-family units exist but are older than five years. In these circumstances countywide rates for new multi-family construction are used. For this reason for the Downtown Columbia area in the feasibility report the projection is using countywide averages of new multi-family yields. The net apartment turnover and condo resale measures do use local school district data because it is available. The use of countywide new construction yield data has been questioned in modeling Downtown Columbia on the theory that multi-family in other areas may generate at different rates.

As an alternative to utilizing countywide averages, staff concluded it was necessary to analyze the potential of new development in Downtown Columbia by looking at more detailed yield data from existing multifamily units in Howard County. Staff knows from yield studies conducted by nearby jurisdictions[4] that pupil generation rates tend to vary by the number of stories and condo vs. rental. They are generally lower for condos and high rise buildings and higher for rental units and lower rise garden style structures. So staff analyzed all the multi-family units in Howard County and classified them by four types: 1) 1 to 4 story rentals, 2) 5 stories and higher rentals, 3) 1 to 4 story condos, and 4) 5 story and higher condos. Department of Planning and Zoning (DPZ) staff developed this information in the form of a GIS layer.[5] The sample was countywide and it included a total of 25,538 multifamily units. Three quarters of the units were apartments and one quarter were condos, with most units being in buildings of four stories or less. Only two percent of the sample was apartments of five stories or more. Less than one percent of the sample was condos of five stories or more. These smaller samples are probably less significant but the goal of this analysis was to examine local data. Staff took this data and geocoded ten years of student enrollment history to the polygons and summarized the results to acquire rates by multi-family type.

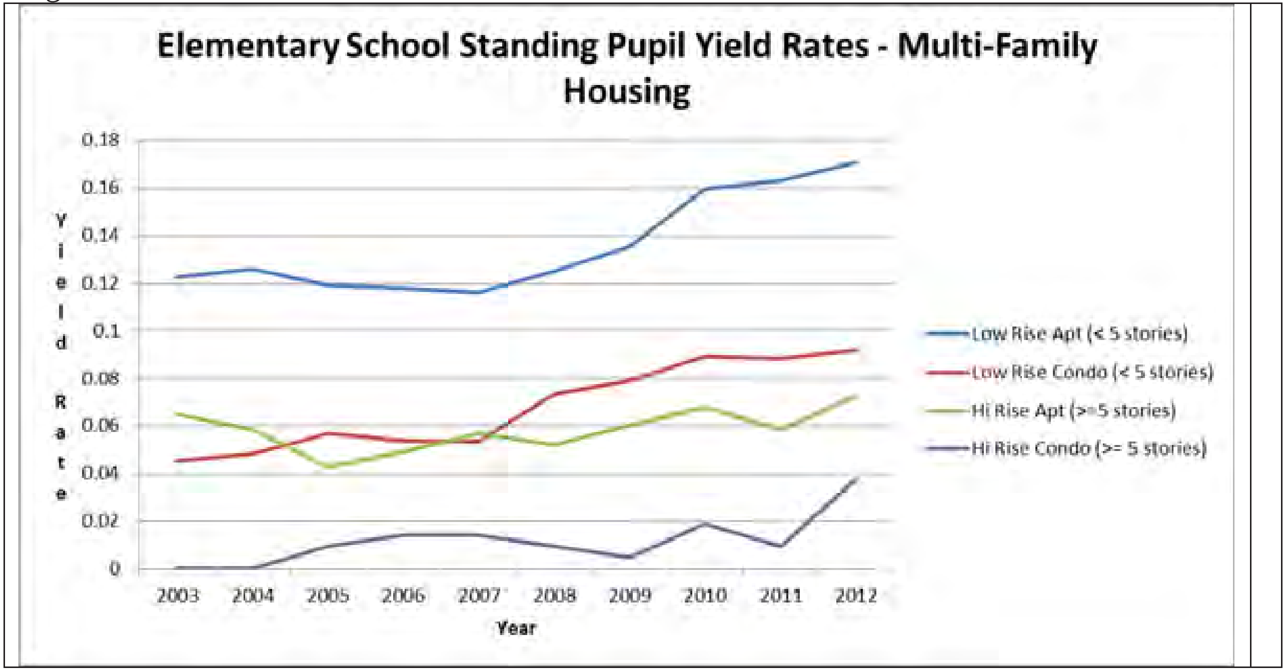
A. Elementary School Chart

The following graph shows standing pupil generation rates by multi-family housing type over time for the elementary level. Low-rise rental units produce the most students and high-rise condo units produce the least. This study shows the same trend staff has seen in the feasibility study projection that multi-family pupil generation rates have been increasing.

---

[4] Alexandria, VA, Baltimore County, MD, Fairfax County, VA and Montgomery County, MD.
[5] They have not yet been able to do the same for single family housing.

Figure 23



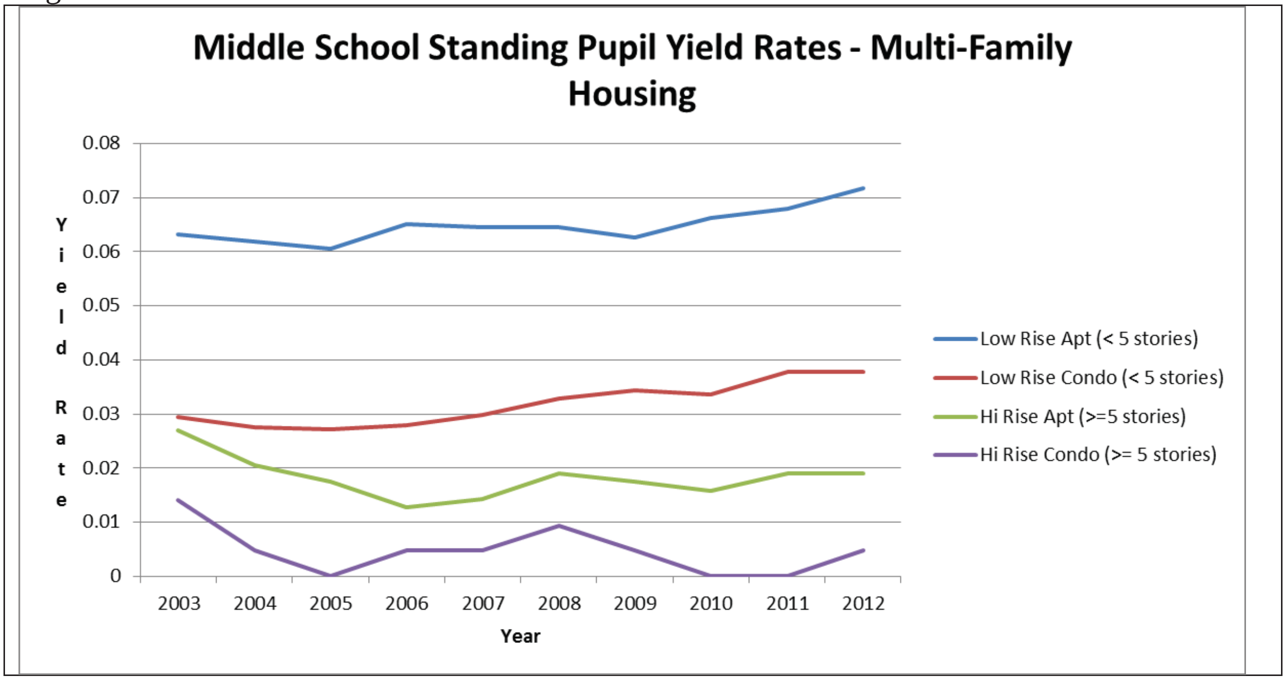
Since the Feasibility Study projection for Running Brook ES projection did not have new multi-family units in the last five years, staff chose the countywide average, which per the HCPSS's methodology, is done for all school districts that do not have any recent history from new development. This countywide rate was 0.101 (elementary students per unit). The standing yield study suggests in recent years that low-rise apartments exceed this average and low-rise condos approach this average. High-rise apartments are lower at about 0.07. High-rise condos are close to 0.04, but it should be noted that there is only a small sample of these types of units. The next report is required when 10 percent of the Downtown Columbia units have been constructed and occupied. All are planned to be high-rise rental and condo so this will provide a larger sample to determine pupil yields.

B. Middle School Chart

The following graph shows pupil generation rates by multi-family housing type over time for middle schools. The middle school pupil generation rates are lower as would be expected since it consists of only half as many cohorts. Staff also expects that as families' children age they tend to seek larger housing units which are often townhomes or single-family detached units. Similar to elementary school students, low-rise rental units produce the most middle students and high-rise condominium units produce the least.

This study supports increasing utilization rates. In the feasibility study staff has chosen the countywide average for Wilde Lake MS because there were no new units in the last five years. This rate of 0.045 is only half the low-rise apartment standing yield rate and closer to existing rates for high-rise apartments and condos.

Figure 24

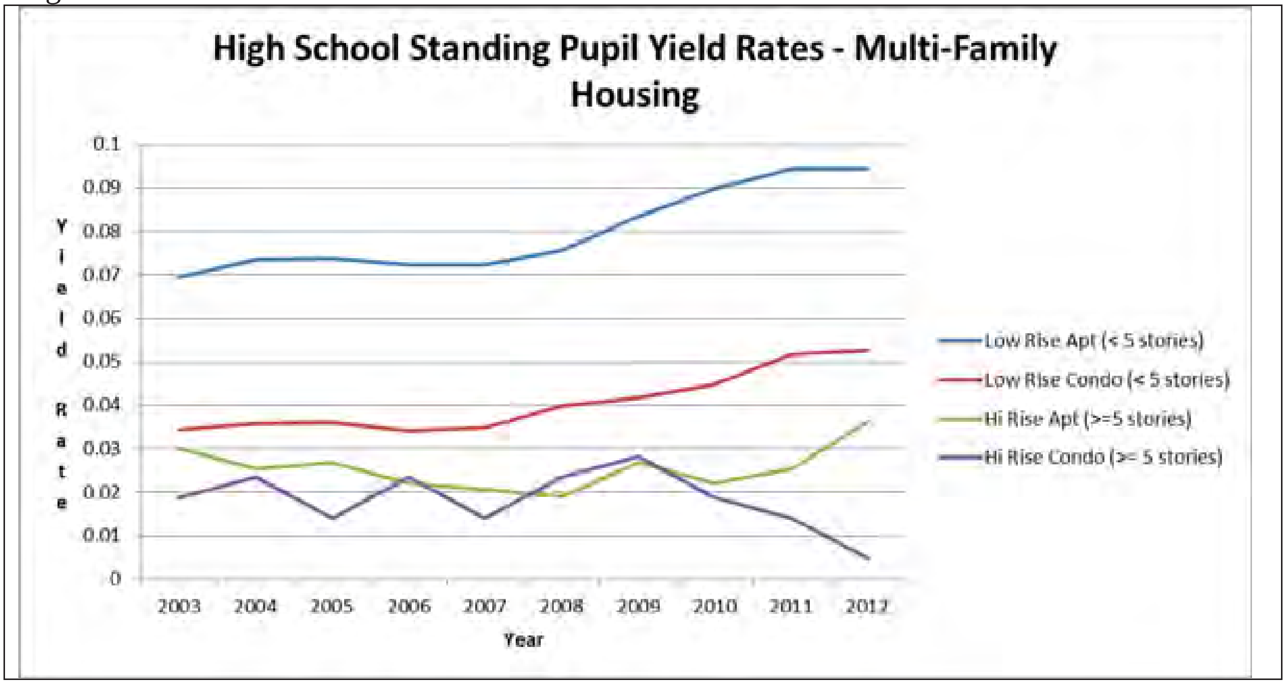


C. High School Chart

The following graph shows pupil generation rates by multi-family housing type over time for high school. Most high school pupil generation rates are lower than elementary as would be expected since it consists of only two thirds the number of cohorts. Low-rise rental units again produce the most students and high-rise condo units produce the least.

This study supports increasing utilization rates. In the feasibility study staff has chosen the countywide average for Wilde Lake HS because there were no new units in the last five years. This rate of 0.036 would not be out of place on this graph where the rates are ranging between 0.005 and 0.09.

Figure 25



A number of conclusions can be drawn from this standing yield study. The first is that the ten-year standing yields by unit type are not dramatically different from the combined multi-family yields presently used in the HCPSS's methodology. Combining the unit type does not appear to have been detracting from the results. It is also clear from the data above that high-rise rental and condo units have lower yields than low-rise units.

The concern that future yields are higher than the yields from the new units that will be built in Downtown Columbia has validity. Most existing multi-family units in Howard County are low-rise walk up apartments and very few are high-rise five stories or higher. Prices were not studied but it is reasonable to assume many of these existing units are modest in price, making them affordable to young families. In contrast, the first multi-family project in Downtown Columbia, The Metropolitan, will be a five and six story complex including a parking garage, interior clubhouse, and courtyard with pool, and have retail on the first floor. Potential units and rents were reported in the Baltimore Sun to be, "lofts, one-, two- and three-bedroom apartments ranging from $1,500 to $2,800 in monthly rents[6]."

There are some problems with adopting the hypothesis that all 5,660 Downtown Columbia units over the next twenty years will all be high end units. This is not what has occurred in the last fifty years. In the early years of Columbia, early advertisements appealed to business people in the New York City market who might relocate their companies to Columbia and chose to live in the new community as well, but luxury apartments were not specifically referenced. Furthermore, following this initial marketing effort, the economy stagnated under the burden of inflation. Ads in Columbia for apartments and condos then emphasized good price and

[6] Luke Lavoie, "Developers break ground on $100 million apartments in downtown Columbia." *Baltimore Sun*, February 11, 2013

convenience, not luxury. The result in Columbia has many appealing features but it is not equivalent to places like Bethesda Row in Montgomery County or the features cited for The Metropolitan. More like The Metropolitan are likely, but it is hard to say over a long span of time what the market will bear.
Another factor to consider is the rising trend for families to live in multi-family units. While higher income families typically choose single family options, demographers are finding the next generation to rear children, millennials (18-33) are less inclined to marry[7] and more inclined to rent[8]. Should they retain these preferences as they begin to raise children, a supply of new high quality apartments in a county with a well-regarded school system may be an attractive draw.

Successful communities have unique features that attract new residents. The school system is a primary attraction in Howard County for new residents. New housing in Downtown will initially be marketed to singles and empty nesters. Ideally their presence will sustain new investments in Downtown businesses and other activities. The result could be a community which is more desirable to a wider range of new residents, including families. This will probably influence later phases of Downtown. There is no requirement that Howard Hughes Company build only luxury apartments and no prohibition on families.

There are a variety of avenues for future analysis. Given the available data and the task at hand it seems best to try to apply these findings to the current projection model and see if that changes staff's perception of future needs. The sample for high-rise apartments and condos that currently exist in Howard County is too small to draw statistical conclusions. This leaves the contrast between low-rise apartments and low-rise condos. The existing stock of low-rise condos is definitely more luxury in nature than the existing stock of low rise apartments. So it would seem that low-rise condo rates are a reasonable proxy for future luxury units which may be rental or condo. The average pupil generation rate over the 10 year standing yield analysis in this study for low-rise apartments is 0.136 elementary students per unit. The average pupil generation rate is half of that for low-rise condos at 0.068 students per unit for all instructional levels. In comparison the average low-rise condo rate is lower at the elementary and middle level but it is higher for high school. All values are summarized in the following table:

Table 1

Comparison of Multi-family Yield Rates			
	Countywide Multi-family rate (Feasibility Study)	Average low rise apartment rate	Average low rise condo rate
Elementary	0.101	0.136	0.068
Middle	0.045	0.065	0.032
High	0.036	0.080	0.041

In examining the generation rates recorded in other communities, staff took notice of a Baltimore County report which included a survey of pupil generation rates conducted in 2009[9] by the

[7] Pew Research Center, *Millennials in Adulthood*, (Washington, DC: March 7, 2014)
[8] Pew Research Center, *Young Adults After The Recession Fewer Homes Fewer Cars Less Debt*, (Washington DC: February 21, 2013)
[9] Baltimore County Public School System, *Pupil Yield Study*, (Towson, MD: 2009)

Baltimore Metropolitan Council and a residential forecast study in 2012 by the Sage Policy Group / Cropper GIS. In the 2009 study multi-family units were broken out into owned and rented. Geography is listed by election district. The 2012 study focuses on Districts 2, 3, & 4 because this is an area of significant residential growth. District 2 and 4 incorporate the multifamily development near the Owings Mills Mall which is relevant to a discussion of Downtown Columbia future growth. These areas have some similar existing development and plans for town center redevelopment. The following table presents the multifamily rates for these two districts:

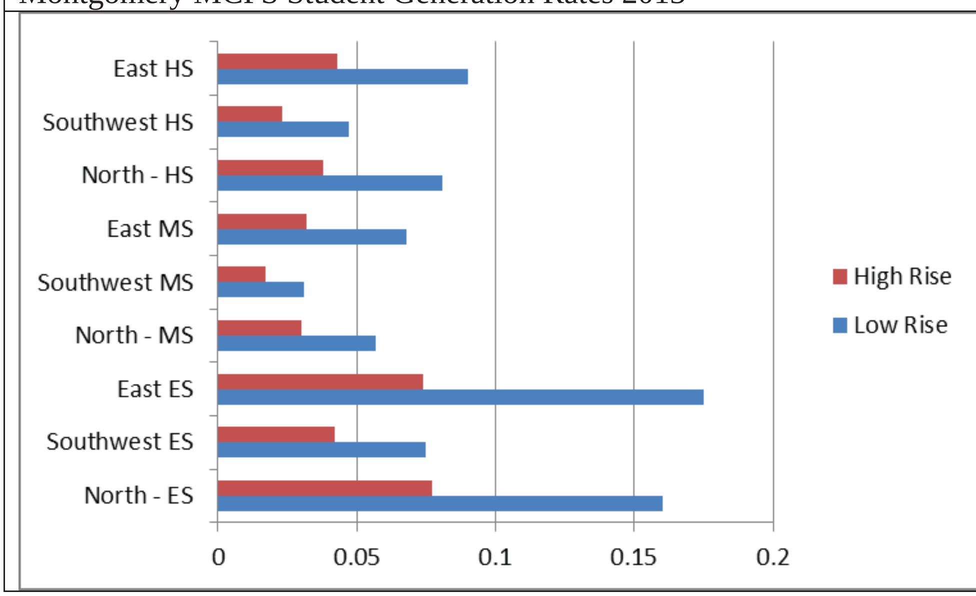
Table 2

Selected Baltimore County Multi-family Yield Rates 2005-2007						
	Elementary		Middle		High	
	Rent	Own	Rent	Own	Rent	Own
District 2	0.091	0.068	.035	.030	0.049	0.040
District 4	0.16	0.049	.071	0.025	.079	0.031

Montgomery County, Maryland is an adjacent jurisdiction with a variety of multi-family housing types of different ages. They track generation rates by school level, height of building, and region.

Figure 26

Montgomery MCPS Student Generation Rates 2013

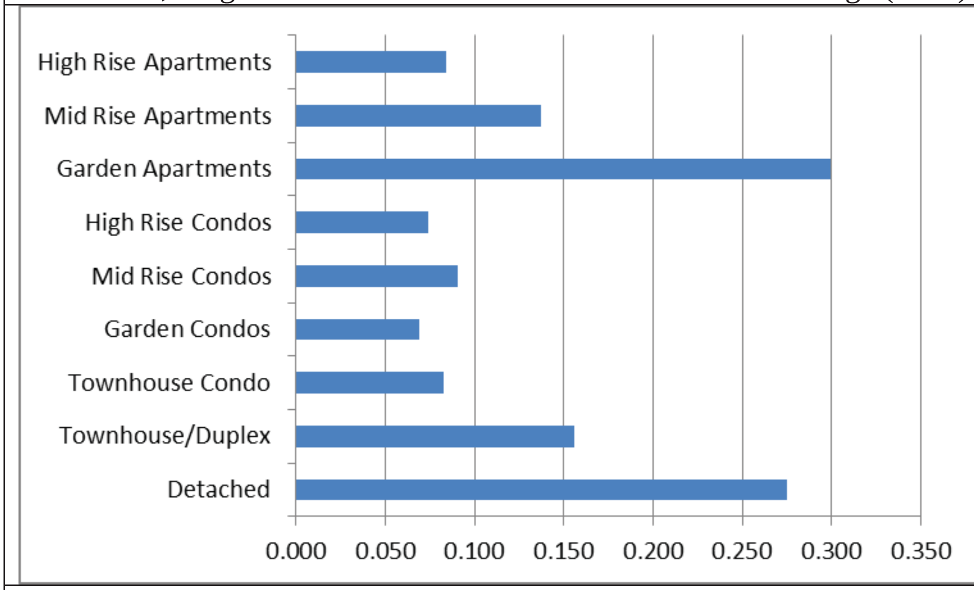


North includes general "upcountry" like Clarksburg. The East includes "down county" like Silver Spring. The Southwest includes Bethesda – Chevy Chase. Note that Southwest values are generally lower.

While the existing pupil generation rates tend to compare to Montgomery County's North and East regions, the types of housing proposed in Downtown Columbia may have comparable examples in the Southwest region. These lower rates are in the same range as the observed standing yield in Howard County. One of the more urbanized areas in the region which possesses a mixture of multi-family housing types is Alexandria, Virginia. Most units predate 2000 and their studies show that pupil generation rates increase with the age of the facility.

Figure 27

Alexandria, Virginia PS Student Generation Rates 3-Year Average (2012)



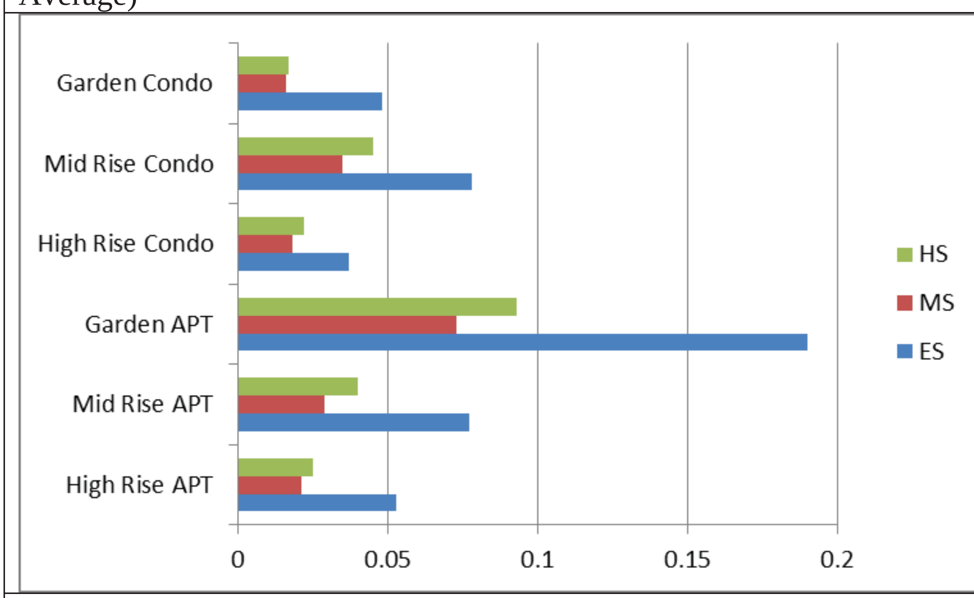
Over 85 percent of the multifamily units in Alexandria were built before 2000 but there is a wider mix of types than in Columbia which helps to characterize likely future Downtown Columbia units.

Note: Housing Authority and Cooperative Garden apartment yields are removed. These types happened to have much higher pupil generation rates but they are unlikely in Howard County.

In developments which were built in 2000 and later, there are some specific circumstances worth noting.

Figure 28

Alexandria, Virginia PS Student Generation Rates Post 2000 Housing (2011-2012 2-year Average)

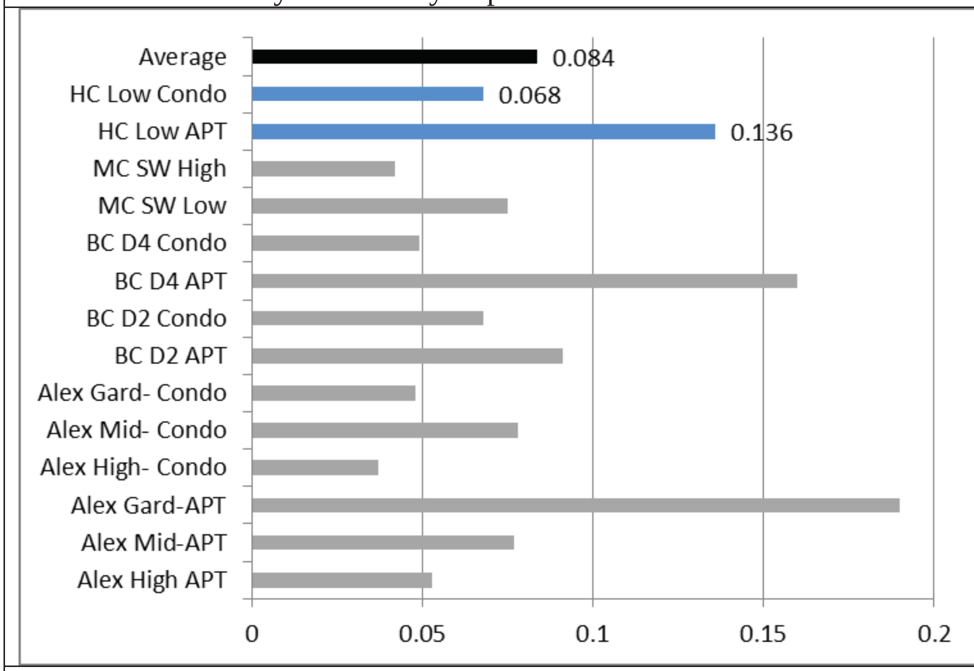


Future Downtown Columbia units will probably fit the mid-rise apartment category. Existing units mostly fit the garden apartment with a few garden and mid-rise condos.

To put this selected data in context the following chart places the observed Howard County standing yield rates in the context of selected rates from Baltimore County, Montgomery County, and Alexandria, Virginia. Since elementary rates are the highest, they are presented to simplify the number of values on the chart.

Figure 29

Selected Multifamily Elementary Pupil Generation Rates



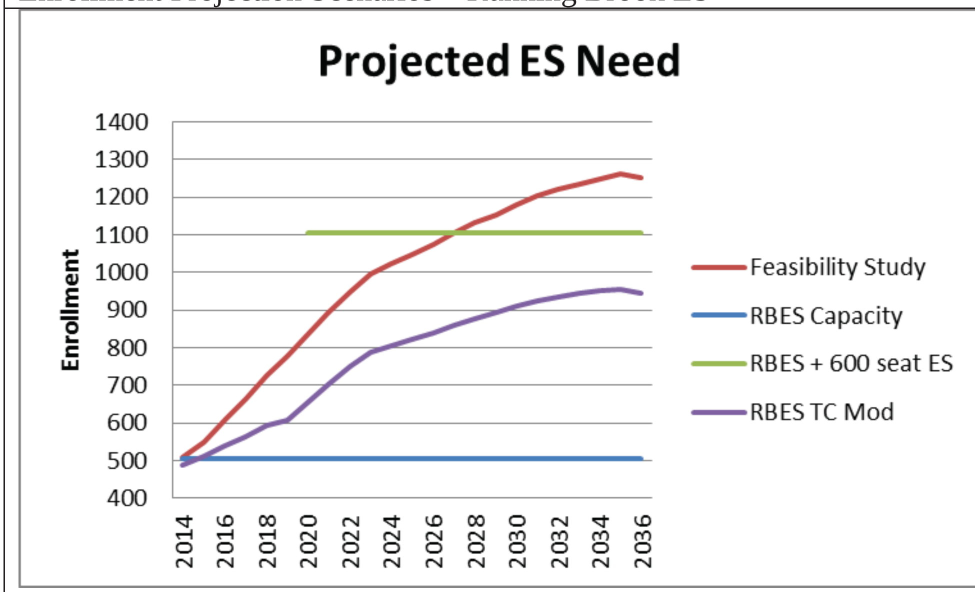
The low-rise condo rate for Howard County is below all apartment rates except high-rise apartments in Alexandria. Notably, the rate is close to the mid-rise apartment rate in Alexandra. It is fairly similar to the condo rates in the other areas.

While there is no perfect way to model future development in Downtown Columbia, these values provide some context. Choosing the standing yield rate measured for Howard County condominiums as a proxy for future multifamily units in Howard County seems to be a reasonable choice given the pupil yield performance in other jurisdictions shown in Figure 29. One of the better comparisons in this chart for luxury units above four stories seems to be the Montgomery County Southwest region (Bethesda Chevy Chase area). Howard County's condo rate is higher than their high rise rate of 0.042 (5 stories or higher) but it is lower than their low rise rate of 0.075. When the next report addresses conditions following 10 percent build out of Downtown Columbia a slightly more conservative choice like 0.042 could be warranted, if staff were to use Bethesda Chevy Chase area as a guide. In the charts that follow the projection is adjusted with the low rise condo rate replacing the countywide multi-family yield rate at the elementary and middle school level. This rate is also proportionally applied to future year net yield from apartment turnover. Since the low rise condo rate is actually lower than the countywide multifamily average at the high school level no change is made. However the high school chart is adjusted for the elementary and middle school rising student effects.

D. Elementary Modification

The following graph shows enrollment projections at Running Brook ES under two scenarios. The red line shows the projected enrollment from the feasibility study projection, which uses the countywide average rate of 0.101 at the elementary school level. The purple line indicates the modification which substitutes the low rise condo rate (0.064) rather than the countywide multi-family yield rate. This rate is also proportionally applied to future year net yield from apartment turnover, reducing yield rates by a third. For reference current capacity is shown in blue and capacity for a new school meeting current education specifications is shown in a green line.

Figure 30

Enrollment Projection Scenarios – Running Brook ES	
	Modifying the enrollment projection to the lower yield rate of 0.064 and proportionally reducing the future net yield from apartment turnover results in a lower projection.

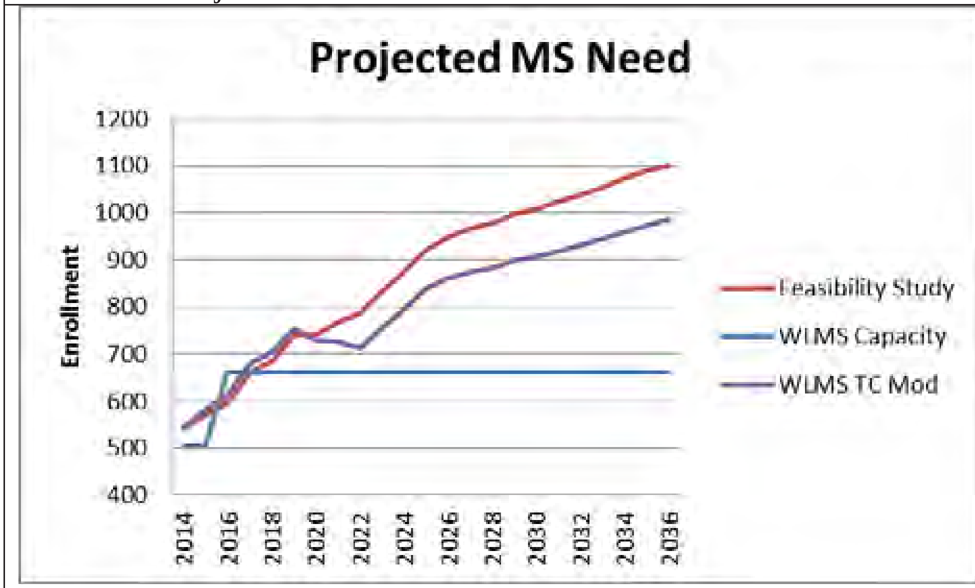
The projections shown above provide a range of possible outcomes useful in planning for what choice may be considered after 10% of the units are constructed and occupied, and yields can be evaluated. The first insight seems to be that one school site is definitely necessary for elementary needs.

E. Middle Modification

Figure 31 shows enrollment projections at Wilde Lake MS under two scenarios. The red line shows the projected enrollment from the feasibility study projection. The purple line indicates the modification which substitutes the low rise middle school condo rate (0.032) for the reasons discussed after figure 29, for the countywide multi-family yield rate (0.045). This rate is also proportionally applied to future year net yield from apartment turnover, reducing yield rates by about 30 percent. For reference, Wilde Lake MS capacity is shown in blue with a change reflecting the Wilde Lake MS replacement.

Figure 31

Enrollment Projection Scenarios – Wilde Lake MS



Modifying the enrollment projection to the lower yield rate of 0.033 and proportionally reducing the future net yield from apartment turnover results in a projection that is less dramatic (note chart originates at 400 for readability).

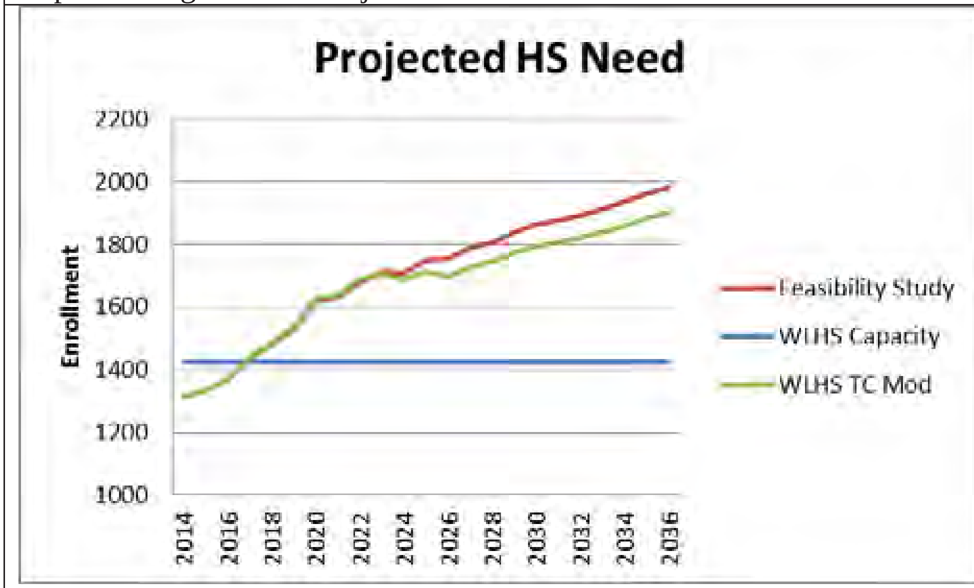
At the middle school level the modification to the trend suggests that a combination of redistricting and expansion of a nearby school like Harpers Choice MS will accommodate growth over the next ten years. The longer term need can be rationalized into a fraction of land using HCPSS Policy 6000 Site Selection and Acquisition as a guide. This policy suggests a desirable size in usable acres for a middle school beginning at 20 acres. The long-term need for approximately 300 seats is 0.45 the prototype middle school capacity of 662, or 20 acres multiplied by 0.45 is 9.1 acres. Alternatively the fraction in average middle school floor area is approximately 25,128 square feet.

F. Impact to High School Projection

The following graph shows enrollment projections at Wilde Lake HS with the Wilde Lake MS and Running Brook ES feeds reduced to reflect modified pupil generation rates. Interestingly the standing yield rate for low rise condos exceeds the current average pupil yield rates for multi-family countywide. It is too early to tell if this is an indication of a trend. For this reason the new apartment yield rate was not adjusted nor was there a change to the future year net yield from apartment turnover. A change still occurs because of the effect from the feeds that were subjected to modification. Also note that the larger attending area and capacity makes any high school less sensitive to one specific development.

Figure 32

Impact to High School Projection– Wilde Lake HS



Modified elementary and middle projections cause the high school enrollment projection to be that is less dramatic with a plateau from 2022 –2026 (note chart originates at 1000 for readability).

At the high school level the modification of the feeders lowers the long term enrollment trend. Temporary capacity could be considered at Wilde Lake HS in the short term, and as plans for a new high school relieving the Northeast and Southeast Regions evolve, a plan could consider redistricting options.

This need can be rationalized into a fraction of land using HCPSS Policy 6000 as a guide. This policy suggests a desirable size in usable acres for a high school beginning at 30 acres. The long-term need for approximately 450 seats is 0.31 the average high school capacity of 1,429, or 30 acres multiplied by 0.31 is 9.4 acres. Alternatively the fraction in average high school floor area is approximately 70,000 square feet.

VII. Options for School System Needs

The conventional options for HCPSS to resolve K– 12 capacity needs are temporary capacity, expansion of existing buildings, new buildings, and redistricting.

A. Temporary Capacity

Temporary capacity is already being used at the elementary and middle facilities in this area to support current academic programming needs. There are some disadvantages to temporary capacity, including negative impacts to parking and recess space, increased maintenance requirements, and security vulnerabilities. The advantage to temporary capacity is that it allows the system to react to short-term needs at a relatively low cost. System wide temporary capacity needs are evaluated annually and may be adjusted to accommodate the needs of the Columbia West region. Policy 6010 School Attendance Areas dictates that temporary capacity may not count toward capacity in any HCPSS capital planning or redistricting feasibility studies.

B. Construction of Additions

Construction of new wings to existing schools has historically been done to address enrollment growth, but only to the limits of the largest educational specification at that instructional level (788 students in elementary, 700 students in middle, and 1,400 at the high school level). Regardless of these practices, the smaller Columbia elementary buildings and sites are only capable of a limited amount of expansion. Specifically the Running Brook ES site will have reached the limits of its core capacity following the completion of the current addition. Some of the other schools in this region may be able to host small additions, but these improvements will not significantly address the long term needs.

C. New Schools

This report underscores the need for a new elementary school and fractions of both a middle and high school. This need is calculated after the model was modified to suppress pupil generation rates to better capture proposed development. Past history has proven the Faulkner Ridge site can serve the elementary need with a new school, and if capital funding for construction is made available. Obtaining land bank sites that are consistent with the secondary needs is an option. Another option would be for the developer to provide Class A office space which could be used for either administrative offices or regional Pre-K centers.

D. Redistricting

Redistricting can access available capacity within the system by shrinking the attending area of crowded schools and enlarging the attending area of schools with available capacity. Future feasibility studies can examine redistricting as needed. The weakness of redistricting plans affecting Columbia is that the available capacity may be too distant to take advantage of.

VIII. Recommendations

1. **Prepare to monitor enrollment in Columbia Downtown –** A follow up report is due when 10% of units are permitted and occupied. This report may require an additional standing yield analysis or other studies. In the interim continue to evaluate comparable growth in surrounding jurisdictions.
2. **Retain Faulkner Ridge Site –** The Faulkner Ridge site is closest to Town Center and should be considered a primary option for construction of a future elementary school.
3. **Retain Hawthorn Site –** This site is still relatively close to Town Center and a valuable location for future prekindergarten, elementary, or middle school needs.
4. **Obtain Clary's Forest Site –** The Faulkner Ridge and Hawthorn sites alone do not resolve future needs. When middle and high school needs as fractions of typical schools were rationalized to the land requirement, they each called for a site of that size. While the Clary's Forest site is most distant of the three sites, owning it gives HCPSS future flexibility in responding to future prekindergarten, elementary, or middle school needs.
5. **Since other tracts of land are not available, Seek opportunities for office space within a downtown building** - Approximately 35,000 square feet of space would be

equivalent to the HCPSS leased space in the Ascend One building plus Central Office staff space at the ARL building. That size space could also serve the need for regional early childhood education. Either of such uses would actually be very complimentary to the mixed use development, either bringing services to residents or patronization of retail.

Attachment 3

Memorandum to the
Department of Planning and Zoning
Columbia School Study – Preliminary Update

HOWARD COUNTY
PUBLIC SCHOOL SYSTEM

October 9, 2015

MEMORANDUM

To: Jeffrey Bronow, Chief of Research, Department of Planning and Zoning (DPZ)

From: Joel Gallihue, Manager of School Planning

Subject: Columbia School Study – Preliminary Update

In light of a pending application by Howard Hughes Company for adjustments to increase the units in Downtown Columbia and a recent council work session discussing the same, the HCPSS Office of School Planning is collaborating with the Department of Planning and Zoning in updating the Columbia School Study (an attachment to the June 2014 Feasibility Study) to determine the school accommodations that would be required based on the projected additional growth.

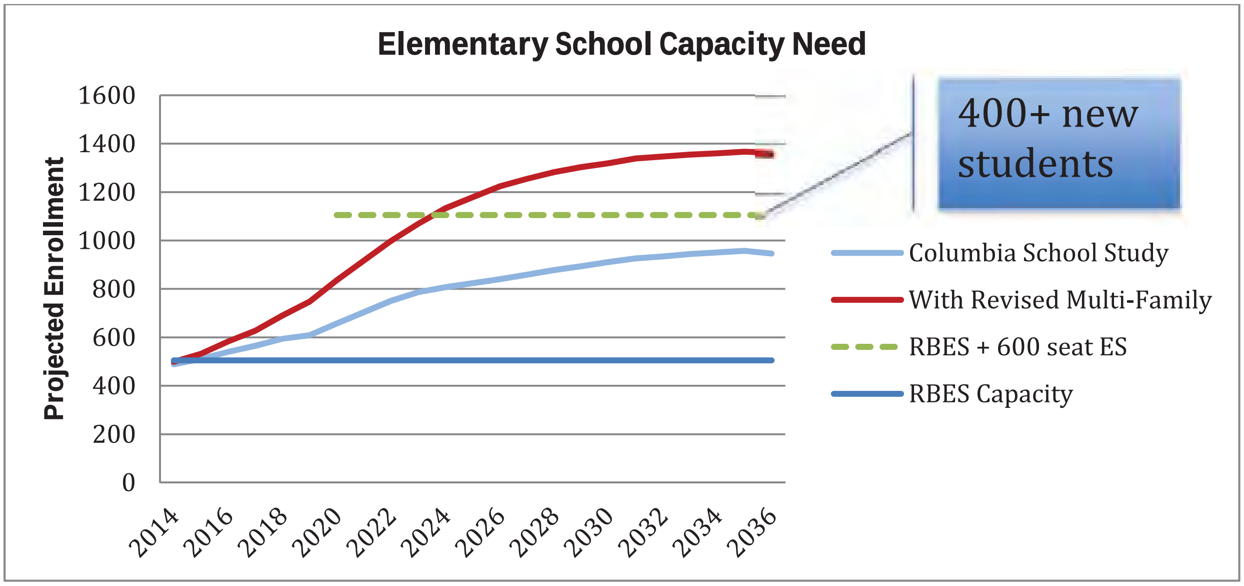
The Town Center attendance area is presently assigned to Running Brook Elementary, Wilde Lake Middle, and Wilde Lake High schools. The proposed addition consists of a range of affordable and market rate housing and represents an increase of approximately 23 percent over the originally approved 5,500 new units in this area. Our currently projected school capacity levels would be insufficient to accommodate the additional student enrollment that would result from the total 6,750 new housing units, prompting a revaluation of recommendations from the Columbia School Study.

Analysis

The increases to anticipated enrollment are based on the average enrollment yield of current rental apartment units in Downtown Columbia from 2007-2011. The Town Center attendance area is presently assigned to Running Brook Elementary School and Wilde Lake Middle and High schools. One additional 600-seat elementary school is included in the approved FY 2016-2025 Long Range Master Plan, and will accommodate the 5,500 new units already approved for Downtown Columbia development. Staff will continue to study relevant pupil yields as additional information becomes available.

Elementary School Impact

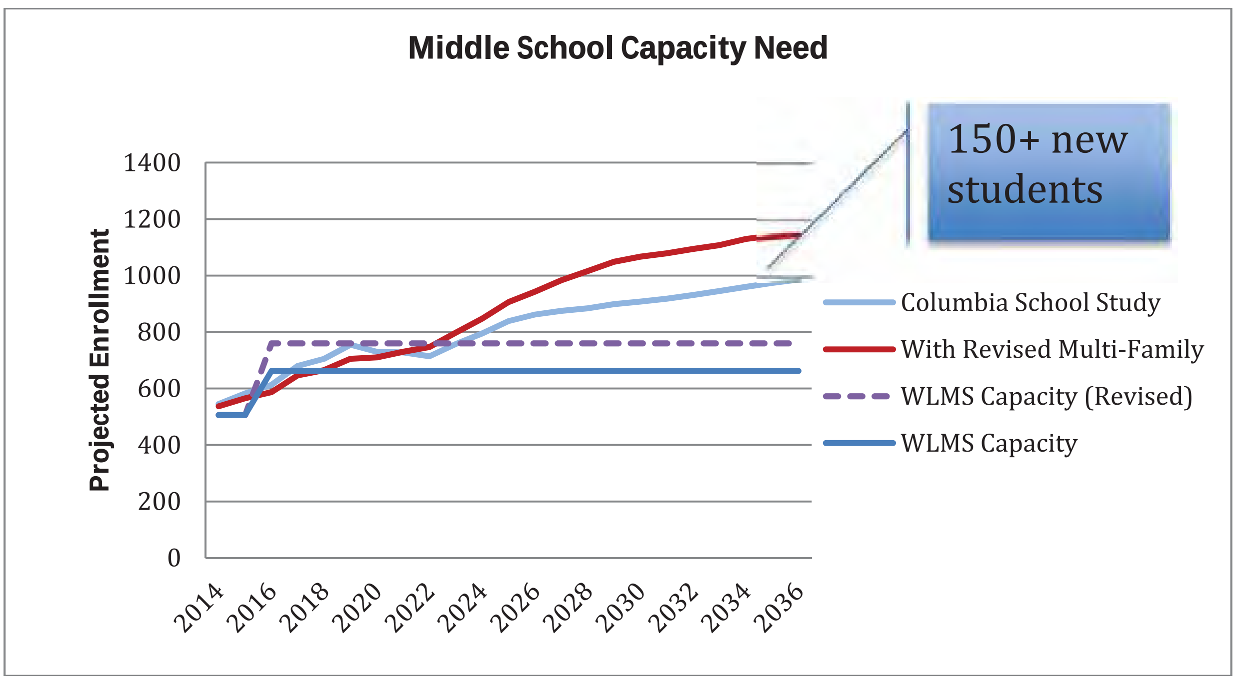
The following graph is an update to Figure 30 in the Columbia School Study. The light blue line shows growth as anticipated in the original study. The dashed lines represent the additional enrollment provided by the one new 600-seat school currently planned. The red line represents expected total enrollment levels including the 6,750 new residential units. The increased enrollment exceeds the capacity of the one school included the long range plan. The navy blue line represents current school capacity as a reference.



The analysis indicates an increase of more than 400 elementary students resulting from the proposed expansion of the Downtown Columbia development, as displayed in the graph above.

Middle School Impact

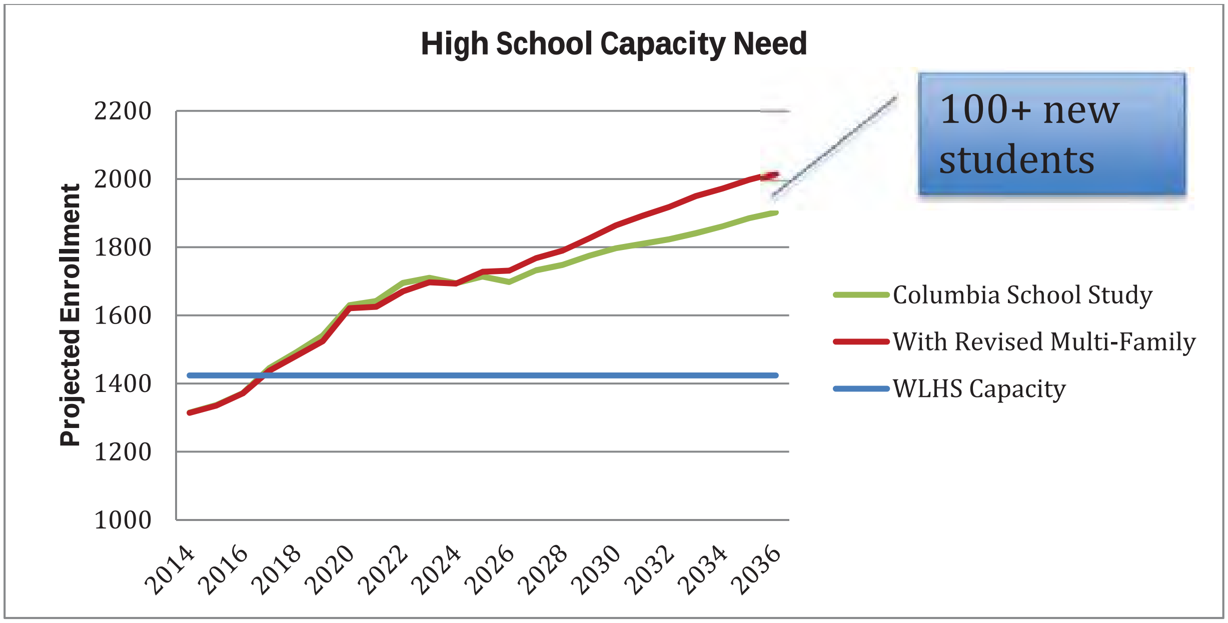
The following graph is an update to Figure 31 in the Columbia School Study. The light blue line shows growth as anticipated in the original study. The red line shows the enrollment projections at Wilde Lake MS given the proposed increase in housing units. For reference, both existing capacity (navy blue line) and replacement capacity (dashed line) of Wilde Lake MS are shown.



The analysis indicates an increase of more than 150 middle school students resulting from the proposed expansion of the Downtown Columbia development, as displayed in the graph above.

High School Impact

The following graph, an update to Figure 32 from the Columbia Schools Study, shows the enrollment projections at Wilde Lake HS, with the increased expected enrollment represented by the red line. For reference, the blue line shows the existing capacity of Wilde Lake HS.



The analysis indicates an increase of more than 100 high school students resulting from the proposed expansion of the Downtown Columbia development, as displayed in the graph above.

Summary

Our preliminary analysis indicates that the proposal would result in more than 650 additional students in the downtown Columbia area over the development period. Our current capital improvement program and long-range master plan do not include capacity for these students. This growth could not feasibly be contained by further expansion of existing elementary schools. An additional elementary school would be required at a total cost of up to $50 million. Expansion of an existing middle school would be required as well, at a cost of more than $10 million, and a proportional impact would affect existing high schools. In addition, the operational costs associated with the necessary capacity expansion would be significant. We look forward to collaborating further on this matter.

Copy to: Superintendent

Exhibit A4 - Traffic Study

Sabra, Wang & Associates, Inc.

Engineers • Planners • Analysts

March 2, 2016

Mr. Kris Jagarapu, P.E.
Chief, Traffic Engineering Division
Department of Public Works
9250 Bendix Road
Columbia, Maryland 21045

Reference: Proposal for an Updated Traffic Assessment of Downtown Columbia
Contract No.: 4400002503 Traffic and Transportation Engineering Services
SWA Project No. 14-69.10

Dear Mr. Jagarapu:

Sabra, Wang & Associates (SWA) is pleased to provide this scope and fee to perform an update of the Downtown Columbia Traffic Study. The main objective of this task is to:

1) re-baseline existing traffic volumes and traffic operations
2) Update land use changes and projections, development staging, and traffic forecasts
3) Evaluate future year 2017, 2020 and 2024 traffic operations
4) Test programmed roadway improvements identified by the developers, State and County and identify any additional required transportation improvements to meet the County required mobility standards

This study will collaborate with other on-going and recent transportation studies including the Downtown Cordon Line Study and the Downtown Transportation Demand Management Plan

A description of each work task is described below: SWA's scope of work will be as follows:

EXISTING CONDITIONS:

1) Existing Traffic Volumes - We will collect and compile recent peak period (6:30 to 9:30 AM and 4:00 PM to 7:00 PM) traffic counts for the following intersections:
    1) Little Patuxent Parkway at Columbia Road
    2) Little Patuxent Parkway at Vantage Point Road
    3) Little Patuxent Parkway at Governor Warfield Parkway (North)
    4) Little Patuxent Parkway at South Entrance Road
    5) Little Patuxent Parkway at Broken Land Parkway
    6) Little Patuxent Parkway at Governor Warfield Pkwy South/Banneker Rd
    7) Broken Land Parkway at Hickory Ridge Road
    8) Broken Land Parkway at US 29 Southbound Ramp
    9) Hickory Ridge/Symphony Road at Entrance Road

2) Traffic Model Development – We will obtain and update the existing conditions Synchro model for the entire Columbia Downtown Center and all intersections above, including all lane geometry, balanced traffic volumes and signal timing and phasing as field-verified.

3) Perform field observations to document any existing traffic congestion at the study intersections including residual queuing, phase failures, turn lane blockage or turn lane spillover. Queuing data will be used to re-calibrate the baseline Synchro model

4) Perform baseline (year 2016) traffic operations analysis using both the Critical Lane and Highway Capacity Manual methodology. Performance measures will include CLV, delay, volume-to-capacity ratio, level of service for the overall intersection and each approach, as well as 95^{th} percentile static (Synchro) and dynamic (SimTraffic queuing) for each movement

YEAR 2017 CONDITIONS:

5) Review updated land use forecasts for each neighborhood (Crescent, Warfield, Waterfront, etc.) and identify development densities, staging plans, and roadway improvements
6) Estimate trip generation rates, trip discounts/ mode split, trip distribution and trip assignment for each neighborhood/ development site
7) Evaluate expected growth in regional through traffic volumes
8) Calculate total year 2017 traffic volumes (existing + growth in existing + site development)
9) Perform year 2017 traffic operations analysis for each study intersection
10) Identify additional required intersection or roadway improvements to meet the Downtown Columbia APFO requirements

YEAR 2020 CONDITIONS:

11) Review updated land use forecasts for each neighborhood (Crescent, Warfield, Waterfront, etc.) and identify development densities, staging plans, and roadway improvements
12) Estimate trip generation rates, trip discounts/ mode split, trip distribution and trip assignment for each neighborhood/ development site
13) Evaluate expected growth in regional through traffic volumes
14) Calculate total year 2020 traffic volumes (existing + growth in existing + site development)
15) Perform year 2020 traffic operations analysis for each study intersection
16) Identify additional required intersection or roadway improvements to meet the Downtown Columbia APFO requirements

YEAR 2024 CONDITIONS:

17) Review updated land use forecasts for each neighborhood (Crescent, Warfield, Waterfront, etc.) and identify development densities, staging plans, and roadway improvements
18) Estimate trip generation rates, trip discounts/ mode split, trip distribution and trip assignment for each neighborhood/ development site
19) Evaluate expected growth in regional through traffic volumes
20) Calculate total year 2024 traffic volumes (existing + growth in existing + site development)
21) Perform year 2024 traffic operations analysis for each study intersection
22) Identify additional required intersection or roadway improvements to meet the Downtown Columbia APFO requirements

FINAL TECHNICAL REPORT:

23) Prepare a technical report and summarize study findings
24) Develop concepts and costs for any major roadway improvements
25) Prepare and deliver a PowerPoint presentation

Exhibit A5 - Values Analysis

Joint Affordable Housing Recommendations - Value to Howard Hughes

Land Contributions	# units	Value/unit	Value*
Transit Center air rights site conveyance[1]	60	53,500	(3,210,000)
Toby's site conveyance (0.44 acres)	N/A	N/A	(1,153,846)
Flier Building site purchase and conveyance	N/A	N/A	(2,800,000)
Banneker Fire Station	N/A	N/A	0
Temporary fire station site conveyance[1]	90	53,500	(4,815,000)
Existing library site conveyance[1]	300	53,500	(16,050,000)
Additional Units in HH Projects	**# units**	**Value/unit**	**Value***
Market rate units	1,030	24,400	25,132,000
80% AMI units[3]	180	(69,180)	(12,452,400)
Section 8 units[3]	180	(69,180)	(12,452,400)
Parking	**# units**	**Value/unit**	**Value***
Ratio reduction	N/A	N/A	8,076,000
Housing Trust Fund Fees	**# units**	**Value/unit**	**Value***
For-sale units[2]	549	7,000/9,000	(4,393,000)
Metropolitan	817	2,000	(1,634,000)
CEPPA 10	N/A	N/A	(1,500,000)
CEPPA 11	N/A	N/A	(1,500,000)
CEPPA 26	5,500	2,000/7,000/9,000	35,000,000
Total Value			**6,247,354**

Notes:

*2015 dollars

1. $53,500 per unit residential land value at Metropolitan
2. fiscal impact study
3. value/unit constitutes margin between value of market rate and afforable unit

Toby's

Lot size (sq. ft.)		19,166	
Coverage		0.25	
Building area		4,792	
Annual Ground lease payment	$	75,000	
Ground Rent PSF building area	$	15.65	
Cap Rate		6.5%	NOI/value of land
Land Value	$	1,153,846	

New units

	Market Rate	MIHU/Sect. 8	Variance
Value per Gross Square Foot (1)	207.42	138.24	
Square Feet per Unit (1)	1,000	1,000	
Value per Unit (1)	207,420	138,240	
Construction Cost per SF (2)	157.02	157.02	
Parking cost per SF (3)	26.00	26.00	
Total cost per SF	183.02	183.02	
Square Feet per Unit (1)	1,000	1,000	
Cost per Unit	183,020	183,020	
Profit per Unit	24,400.00	(44,780.00)	69,180.00

(1) Source: Schedule I Municap Fiscal Impact Study
(2) RS Means Construction Cost Estimates for Apartment, 8-24 Story in Baltimore, Maryland, http://www.rsmeans.com/models/
(3) Assumes $20,000 per parking space times 1.3 spaces per unit and 1,000 SF per unit

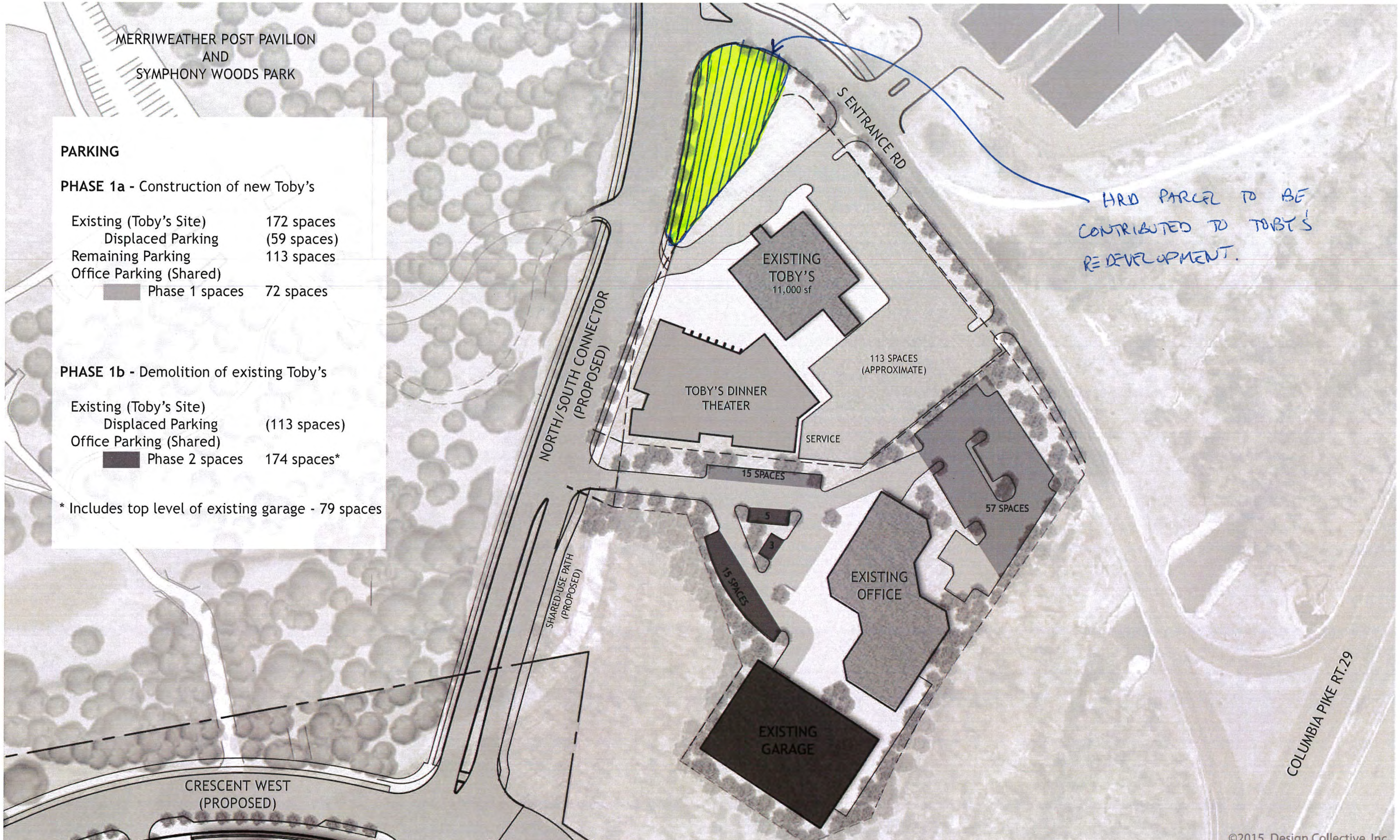
New MR units	1,030
Profit from new MR Units	25,132,000
Subidized units	360
Loss from new Subsidized Units	(16,120,800)
Loss from new Subsidized Units Foregone because are being built in place of MR Units	(24,904,800)

Parking

Structured Parking Cost Comparison

	50%	50%	
Market Rate	2,207	2,207	4,414
Affordable	485	485	970

	Spaces/Unit	Avg. Cost/Space	# Units	Total Cost	
Current Ratios					
Market Rate	1.55	20,000	4,414	136,834,000	
Affordable	1.55	20,000	970	30,070,000	
				166,904,000	
JR Ratios					
Market Rate					
Studio/1 Bdrm.	1.3	20,000	2,207	57,382,000	1.475
2 or 3 Bdrm.	1.65	20,000	2,207	72,831,000	
				130,213,000	
Affordable					
Studio/1 Bdrm.	1.3	20,000	485	12,610,000	
2 or 3 Bdrm.	1.65	20,000	485	16,005,000	
				28,615,000	
				8,076,000	



Phase 1 - Site/Parking Plan

50 0 50 100 200 feet N

Attachment B: *PlanHoward 2030* Amendments (GPA 2016-03)

Introduced ______________
Public Hearing ______________
Council Action ______________
Executive Action ______________
Effective Date ______________

County Council Of Howard County, Maryland

2016 Legislative Session   Legislative Day No. ____

Bill No. _____ -2016

Introduced by the Chairperson at the request of the County Executive

AN ACT amending *PlanHoward 2030*, the general plan for Howard County, in order to amend the number of housing unit allocations available to developers of new residential units in Downtown Columbia for the period 2015 - 2030; and generally relating to planning, zoning and land use in Howard County.

Introduced and read first time _____________________, 2016. Ordered posted and hearing scheduled.

By order____
Jessica Feldmark, Administrator

Having been posted and notice of time & place of hearing & title of Bill having been published according to Charter, the Bill was read for a second time at a public hearing on _______________________, 2016.

By order ____
Jessica Feldmark, Administrator

This Bill was read the third time on ____________, 2016 and Passed ___, Passed with amendments _______, Failed _______.

By order ____
Jessica Feldmark, Administrator

Sealed with the County Seal and presented to the County Executive for approval this ____day of ____________, 2016 at ___ a.m./p.m.

By order ____
Jessica Feldmark, Administrator

Approved/Vetoed by the County Executive ___________________, 2016

____
Allan H. Kittleman, County Executive

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; ~~Strike-out~~ indicates material deleted by amendment; Underlining indicates material added by amendment

WHEREAS, this Act amends certain provisions of *PlanHoward 2030* in order to accomplish the goals of providing a broad spectrum of affordable housing in Downtown Columbia.

NOW, THEREFORE,

Section 1. Be It Enacted *by the County Council of Howard County, Maryland, that PlanHoward2030 is hereby amended as follows and as more specifically shown in the attached pages:*

1. Text on page 74 is amended as follows:

Downtown Columbia. These allocations are based on the Downtown Columbia Plan adopted in 2010, AND SUBSEQUENTLY AMENDED IN 2016. The annualized pace of growth shown in Figure 6-10 is based on the housing unit allocation chart adopted by the County Council. Over the 16-year allocation period from 2015 through 2030, [[3,750]]4,519 Downtown Columbia allocations are available. [[Including the 950 allocations that were made available in the 2013 and 2014 allocation years in previous allocation charts, a total of 4,700 of the 5,500 ultimate approved Downtown units will be allocated, reflecting the maximum units allowed in the first two of the three total growth phases in the Downtown Plan.]]

2. Remove figure 6-10, Howard County APFO Allocations Chart, from PlanHoward2030 and substitute a revised Figure 6-10 as attached to this Act.

Section 2. And Be It Further Enacted *by the County Council of Howard County, Maryland that the Director of the Department of Planning and Zoning may correct obvious errors, capitalization, spelling, grammar, headings and similar matters and may publish this amendment to PlanHoward 2030 by adding or amending covers, title pages, a table of contents, and graphics to improve readability.*

Section 3. And Be It Further Enacted *by the County Council of Howard County, Maryland, that this amendment be attached to and made part of PlanHoward2030.*

Section 4. And Be It Further Enacted *by the County Council of Howard County, Maryland, that this Act shall become effective 61 days after its enactment.*

Figure 6-10
Howard County APFO Allocations Chart

Year	Downtown Columbia	Growth and Revitalization	Established Communities	Green Neighborhood	Rural West	Total County
2015	400	1,200	400	150	100	**2,250**
2016	350	1,200	400	150	100	**2,200**
2017	300	1,200	400	150	100	**2,150**
2018	225	1,200	400	150	100	**2,075**
2019	225	1,200	400	150	100	**2,075**
2020	222	1,200	400	150	100	**2,072**
2021	440	1,200	400	150	100	**2,290**
2022	390	1,200	400	150	100	**2,240**
2023	340	1,200	400	150	100	**2,190**
2024	265	1,200	400	150	100	**2,115**
2025	240	1,200	400	150	100	**2,090**
2026	240	1,200	400	150	100	**2,090**
2027	240	1,200	400	150	100	**2,090**
2028	220	1,200	400	150	100	**2,070**
2029	210	1,200	400	150	100	**2,060**
2030	212	1,200	400	150	100	**2,062**
20 Year Totals	**4,519**	**19,200**	**6,400**	**2,400**	**1,600**	**34,119**

Source: Howard County DPZ

Attachment C: Zoning Regulation Amendment 170 (ZRA 170)

PETITION TO AMEND THE ZONING REGULATIONS OF HOWARD COUNTY

DPZ Office Use Only:

Case No. ZRA-170

Date Filed: ______

1. **Zoning Regulation Amendment Request**

I (we), the undersigned, hereby petition the County Council of Howard County to amend the Zoning Regulations of Howard County as follows: To amend Section 125.0 of the Howard County Zoning Regulations to:

1. Delete Section 125.0.A.9.f.(2)(e)(i) to ensure that Moderate Income Housing Units comply with section 125.0.A.9.f. in Downtown Revitalization development projects;

2. Add new Section 125.0.A.9.f.(3) to exempt any affordable dwelling unit located in Downtown Columbia from the maximum number of downtown net new dwelling units established by Section 125.0.A.9.c.(1);

3. Add new Section 125.0.A.9.f.(4) to require that at least 10% of the dwelling units in each Downtown Revitalization development be Moderate Income Housing Units with certain alternatives.

To amend Section 125.0.H.3.g to require that a Site Development Plan that proposes Downtown Revitalization satisfies Section 125.0.A.9.f.(4).

To amend Section 133.0 to update the base parking ratios for residential land uses in Section 133.0.F.3.a. (Table 1) by breaking them down into two separate categories consisting of studio and one-bedroom units, and units with two or more bedrooms.

2. **Petitioner's Name** Valdis Lazdins, Director, Department of Planning and Zoning

Address 3430 Courthouse Drive, Ellicott City, MD 21043

Phone No. (W) 410-313-2350 (H) N/A

Email Address vlazdins@howardcountymd.gov

3. **Counsel for Petitioner** Paul Johnson, Deputy County Solicitor

Counsel's Address 3430 Courthouse Drive, Ellicott City, MD 21043

Counsel's Phone No. 410-313-2101

Email Address pjohnson@howardcountymd.gov

2016 MAR 14 PM 3:44

HOWARD COUNTY COUNCIL RECEIVED

4. Please provide a brief statement concerning the reason(s) the requested amendment(s) to the Zoning Regulations is (are) being proposed

1. Requiring Moderate Income Housing Units to comply with section 125.0.A.9.f. ensures that appropriate building heights are maintained and arts and culture amenities are realized.
2. Exempting affordable dwelling units in Downtown Columbia from the maximum number of net new dwelling units allocated to Downtown encourages development projects that would exceed current Howard County Code requirements for affordable housing.
3. Requiring at least 10% Moderate Income Housing Units for each Downtown Revitalization development ensures the units will be constructed, while maintaining consistency with other zoning districts.
4. Basing parking ratios on residential unit size and type will more accurately reflect true parking demand.

5. Please provide a detailed justification statement demonstrating how the proposed amendment(s) will be in harmony with current General Plan for Howard County This ZRA is consistent with *PlanHoward 2030*, which discusses the importance of locating more affordable housing with convenient access to employment, schools, services and public transit. The General Plan also discusses the need for diverse housing types, including multifamily units affordable to the workforce. Specifically, Policy 9.2 calls for the County to "Expand full-spectrum housing for residents at diverse income levels and life stages, and for individuals with disabilities, by encouraging high quality, mixed income, multigenerational, well designed, and sustainable communities." Further, Implementing Action b. advocates "Diverse rental opportunities through working with developers to provide increased full spectrum rental choice for all incomes, ages, and abilities throughout Howard County, especially in areas designated for increased density and revitalization." Additionally, the Zoning Regulation Amendment associated with Section 125.0.A.9.f. is in harmony with policy 8.11 to " Ensure County residents and visitors have access to a wide variety of arts and cultural programs; cultivate artists; and develop a creative workforce."

Finally, adjusted parking ratios for residential land uses are in harmony with policy 10.4 to "Review and update all County development regulations to respond to County General Plan development goals and changing market conditions, and to improve the efficiency of the County's review process.

6. The Legislative Intent of the Zoning Regulations in Section 100.A. expresses that the Zoning Regulations have the purpose of "...preserving and promoting the health, safety and welfare of the community." Please provide a detailed justification statement demonstrating how the proposed amendment(s) will be in harmony with this purpose and the other issues in Section 100.A. All proposed amendments are in harmony with the legislative intent of the Howard County Zoning Regulations. Specifically, Section 100.0.A.5. of the Howard County Zoning Regulations indicates that it is the intent of these Regulations "To provide for adequate housing choices in a suitable living environment within the economic reach of all citizens."

7. Unless your response to Section 6 above already addresses this issue, please provide an explanation of the public benefits to be gained by the adoption of the proposed amendment(s) . Social and economic well-being for seniors, individuals, and families is gained by increasing affordable housing choices located close to jobs, schools and other amenities.

8. Does the amendment, or do the amendments, have the potential of affecting the development of more than one property, yes or no? Yes

If yes, and the number of properties is less than or equal to 12, explain the impact on all properties affected by providing a detailed analysis of all the properties based upon the nature of the changes proposed in the amendment(s). If the number of properties is greater than 12, explain the impact in general terms.

The number of properties is potentially greater than 12. The land use impacts related to Section 125.0.A.9.f.(4) are marginal since this section only requires 10% Moderate Income Housing Units for each Downtown Revitalization development and does not impact overall density. However, the proposed amendment to Section 125.0.A.9.f.(3) exempts affordable units from the maximum number of net new dwelling units. This provision will likely increase density within Downtown Columbia. Depending on the overall increase, impacts related to traffic/circulation, infrastructure, parking, schools, and other public services could occur.

9. If there are any other factors you desire the Council to consider in its evaluation of this amendment request, please provide them at this time. Please understand that the Council may request a new or updated Technical Staff Report and/or a new Planning Board Recommendation if there is any new evidence submitted at the time of the public hearing that is not provided with this original petition. This ZRA is a companion to the proposed revisions to Title 13 (Housing), Title 16 (Adequate Public Facilities Ordinance), and Title 28 (Downtown Columbia) of the Howard County Code, as well as amendments to *PlanHoward 2030* and the Downtown Columbia Plan, and an anticipated proposed Development Rights and Responsibilities Agreement.

10. You must provide the full proposed text of the amendment(s) as a separate document entitled "Petitioner's Proposed Text" that is to be attached to this form. This document must use this standard format for Zoning Regulation Amendment proposals; any new proposed text must be in CAPITAL LETTERS, and any existing text to be deleted must be in **[[** Double Bold Brackets **]]**. In addition, you must provide an example of how the text would appear normally if adopted as you propose.

After this petition is accepted for scheduling by the Department of Planning and Zoning, you must provide an electronic file of the "Petitioner's Proposed Text" to the Division of Public Service and Zoning Administration. This file must be in Microsoft Word or a Microsoft Word compatible file format, and may be submitted by email or some other media if prior arrangements are made with the Division of Public Service and Zoning Administration.

11. The Petitioner agrees to furnish additional information as may be required by the Department of Planning and Zoning prior to the petition being accepted for scheduling, by the Planning Board prior to its adoption of a Recommendation, and/or by the County Council prior to its ruling on the case.

12. The undersigned hereby affirms that all of the statements and information contained in, or filed with this petition, are true and correct. The undersigned has read the instructions on this form, filing herewith all of the required accompanying information. If the Petitioner is an entity that is not an individual, information must be provided explaining the relationship of the person(s) signing to the entity.

Valdis Lazdins, Director	3-15-16
Petitioner's name (Printed or typed)	Petitioner's Signature Date
Valdis Lazdins	
Petitioner's name (Printed or typed)	Petitioner's Signature Date

Paul T. Johnson

Counsel for Petitioner's Signature

[If additional signatures are necessary, please provide them on a separate document to be attached to this petition form.]

FEE

The Petitioner agrees to pay all fees as follows:

Filing fee ....$695.00. If the request is granted, the Petitioner shall pay $40.00 per 200 words of text or fraction thereof for each separate textually continuous amendment ($40.00 minimum, $85.00 maximum)

Each additional hearing night........................... $510.00*

The County Council may refund or waive all or part of the filing fee where the petitioner demonstrates to the satisfaction of the County Council that the payment of the fee would work an extraordinary hardship on the petitioner. The County Council may refund part of the filing fee for withdrawn petitions. The County Council shall waive all fees for petitions filed in the performance of governmental duties by an official, board or agency of the Howard County Government.

****

For DPZ office use only:

Hearing Fee $ ____________________________

Receipt No. ______________________________

PLEASE CALL 410-313-2350 FOR AN APPOINTMENT TO SUBMIT YOUR APPLICATION

County Website: www.howardcountymd.gov

Revised:5/08
T:\Shared\Public Service and Zoning\Applications\County Council\ZRA Application Draft

INSTRUCTIONS TO THE APPLICANT/PARTY OF RECORD

- As required by State Law, applicants are required to complete the AFFIDAVIT AS TO CONTRIBUTION that is attached, and if you have made a contribution as described in the Affidavit, please complete the DISCLOSURE OF CONTRIBUTION that is attached.

- If you are an applicant, Party of Record (i.e., supporter/protestant) or a family member and have made a contribution as described in the Affidavit, you must complete the DISCLOSURE OF CONTRIBUTION that is attached.

- Filed affidavits and disclosures will be available for review by the public in the office of the Administrative assistant to the Zoning Board during normal business hours.

- Additional forms may be obtained from the Administrative Assistant to the Zoning Board at (410-313-2395) or from the Department of Planning and Zoning.

- Completed form may be mailed to the Administrative Assistant to the Zoning Board at 3430 Courthouse Drive, Ellicott City, MD 21043.

- Pursuant to State Law, violations shall be reported to the Howard County Ethics Commission.

ZONING MATTER: ______________________

____

AFFIDAVIT AS TO CONTRIBUTION

As required by the Annotated Code of Maryland
State Government Article, Sections 15-848-15-850

I, Valdis Lazdins, the applicant in the above zoning matter

________, HAVE X HAVE NOT

made any contribution or contributions having a cumulative value of $500 or more to the treasurer of a candidate or the treasurer of a political committee during the 48-month period before application in or during the pendency of the above referenced zoning matter.

I understand that any contribution made after the filing of this Affidavit and before final disposition of the application by the County Council shall be disclosed within five (5) business days of the contribution.

I solemnly affirm under the penalties of perjury and upon personal knowledge that the contents of the foregoing paper are true.

Name: Valdis Lazdins

Date: 3-15-16

ZONING MATTER: ____________________________________
____

DISCLOSURE OF CONTRIBUTION

As required by the Annotated Code of Maryland
State Government Article, Sections 15-848-15-850

This Disclosure shall be filed by an Applicant upon application or by a Party of Record within 2 weeks after entering a proceeding, if the Applicant or Party of Record or a family member, as defined in Section 15-849 of the State Government Article, has made any contribution or contributions having a cumulative value of $500 or more to the treasurer of a candidate of the treasurer of a political committee during the 48-month period before the application was file or during the pendency of the application.

Any person who knowingly and willfully violates Sections 15-848-15-850 of the State Government Article is subject to a fine of not more than $5,000. If the person is not an individual, each officer and partner who knowingly authorized or participated in the violation is subject to the same penalty.

APPLICANT OR
PARTY OF RECORD: ____

RECIPIENTS OF CONTRIBUTIONS:

Name	Date of Contribution	Amount
______________________	__________________	__________
______________________	__________________	__________
______________________	__________________	__________

I understand that any contribution made after the filing of this Disclosure and before final disposition of the application by the County Council shall be disclosed with five (5) business days of the contribution.

Name: ____________________________________

Date: ____________________________________

ZONING MATTER: ______________________________
____

AFFIDAVIT AS TO ENGAGING IN BUSINESS WITH AN ELECTED OFFICIAL

As required by the Annotated Code of Maryland
State Government Article, Sections 15-848-15-850

I, Valdis Lazdins, the applicant in the above zoning matter

______________, AM   X   AM NOT

Currently engaging in business with an elected official as those terms are defined by Section 15-848 of the State Government Article of the Annotated Code of Maryland.

I understand that if I begin engaging in business with an elected official between the filing of the application and the disposition of the application, I am required to file an affidavit in this zoning matter at the time of engaging in business with elected official.

I solemnly affirm under the penalties of perjury and upon personal knowledge that the contents of the foregoing paper are true.

Name: Valdis Lazdins

Date: 3-15-16

ZRA 160 - Exhibit A

Petitioner's Proposed Text

Howard County Zoning Regulations.

Section 125.0: - NT (New Town) District

A. Definitions, Requirements and Restrictions Applicable to NT Districts

9. Downtown Revitalization:

f. Additional Requirements.

(1) The maximum building height permitted for Downtown Revitalization shall conform to the building height shown on the Downtown Maximum Building Height Plan and shall not exceed twenty stories.

(2) Any Downtown Revitalization Development shall provide for art in the community that is equivalent in value to 1% of the building construction cost.

(a) Art must be provided:

(i) On site;

(ii) On other property located within Downtown Revitalization development provided with the written consent of the owner of the fee simple property; or

(iii)The petitioner may pay a fee in-lieu of providing art on-site that is equivalent in value to 1% of the building construction cost.

(b) Art may be provided in combination with other Downtown Revitalization Developments.

(c) Each in-lieu fee must be paid prior to issuance of a use and occupancy permit for the first building in the project that generates the requirement, and the collected funds must be used to provide art on property within Downtown Revitalization Developments.

(d) If the value of the art provided on site or in combination with other projects exceeds 1% of the building construction cost, then the excess value beyond 1% can be credited towards the requirements of this subsection for a subsequent-Final

Development Plan subject to the procedures and requirements set forth in this subsection.

(e) The following construction projects are not subject to the requirements of this section:

[[(i) Construction of Moderate Income Housing Units.]]

[[(ii)]](I) Construction of places of worship and their accessory uses.

[[(iii)]](II) Renovations to existing or construction of new cultural facilities which include facilities located within a Downtown Arts and Entertainment Park, Downtown Arts, Cultural and Community Uses, and Downtown Community Commons.

[[(iv)]](III) Parking Structures.

[[(v)]](IV) Renovations to existing buildings or structures required by government mandated code compliance construction projects, such as projects exclusively designed for compliance with the Americans with Disabilities Act ("ADA"), the Maryland Accessibility Code, the National Fire Protection Association (NFPA) Life Safety Code, and/or fire sprinkler retrofits.

(3) ANY AFFORDABLE DWELLING UNIT LOCATED IN DOWNTOWN COLUMBIA IS EXEMPT FROM THE MAXIMUM NUMBER OF DOWNTOWN NET NEW DWELLING UNITS ESTABLISHED BY SECTION 125.O.A.9.C(1). FOR PURPOSES OF THIS SECTION, AN "AFFORDABLE DWELLING UNIT" IS ANY DWELLING UNIT THAT IS RESTRICTED BY HOWARD COUNTY'S MODERATE INCOME HOUSING UNIT PROGRAM SET FORTH IN TITLE 13, SUBTITLE 4 OF THE HOWARD COUNTY CODE, A DEVELOPMENT RIGHTS AND RESPONSIBILITY AGREEMENT, OR RESTRICTIVE COVENANT THAT IS ENFORCEABLE BY THE COUNTY FOR A TERM OF NOT LESS THAN 40 YEARS, SUCH THAT THE UNIT MUST BE MADE AVAILABLE FOR OCCUPANCY BY A HOUSEHOLD WITH AN INCOME OF NOT MORE THAN 80% OF THE HOWARD COUNTY MEDIAN INCOME.

(4) A DEVELOPER SHALL PROVIDE A MINIMUM OF 10% OF ALL RESIDENTIAL DWELLING UNITS AS AFFORDABLE DWELLING UNITS ONLY IN ACCORDANCE WITH THE MODERATE INCOME HOUSING UNIT PROGRAM UNLESS:

(I) A DEVELOPER OF FOR-SALE UNITS, AT ITS OPTION, PAYS A PER UNIT PAYMENT TO THE DOWNTOWN COLUMBIA COMMUNITY HOUSING FOUNDATION ("DCCHF") IN THE AMOUNTS SET FORTH IN TITLE 28, SUBTITLE 1 OF THE HOWARD COUNTY CODE AND THIS PAYMENT SHALL BE:

A. IMPOSED UPON THE ISSUANCE OF ANY BUILDING PERMIT FOR A BUILDING CONTAINING FOR-SALE DWELLING UNITS; AND

B. ADDITIONAL TO ANY OTHER FEES REQUIRED TO BE PAID BY THE DEVELOPER; OR

(II) THE COUNTY DETERMINES THAT THE PURPOSES OF THE AFFORDABLE HOUSING REQUIREMENTS OF THE ZONING REGULATIONS AND TITLE 13, SUBTITLE 4 OF THE HOWARD COUNTY CODE WILL BE SERVED TO A GREATER EXTENT BY ENTERING INTO A DEVELOPMENT RIGHTS AND RESPONSIBILITIES AGREEMENT WITH THE DEVELOPER IN ACCORDANCE WITH TITLE 16, SUBTITLE 17 OF THE HOWARD COUNTY CODE.

H. Site Development Plan—Downtown Revitalization

3. Planning Board Review and Approval Criteria.

The Planning Board shall approve, approve with conditions, or deny a Site Development Plan that proposes Downtown Revitalization based on whether the petition satisfies the following criteria:

g. The Site Development Plan satisfies the affordable housing requirements in accordance with the approved Final Development Plan AND SUBSECTION A.9.F(4) OF THIS SECTION.

Howard County Zoning Regulations.

Section 133.0: - Off-Street Parking and Loading Facilities.

F. Permitted Reductions in Off-street Parking Requirements

3. Downtown Revitalization

Off-street parking and loading facilities for Downtown Revitalization shall be provided in accordance with the following shared parking methodology and parking ratios:

a. The methodology for determining the shared parking demand consists of the following steps and is described in the following paragraphs:

(1) Determine individual weekday and weekend peak parking ratios for each land use.

(2) Determine the number of reserved parking spaces for each use.

(3) Select time-of-day and monthly parking variation factors.

(4) Adjust parking ratios for modal split, auto occupancy, and captive market effects.

(5) Calculate the hourly parking demand for weekdays and weekends for each month.

Step 1: Determine individual weekday and weekend peak parking rations for each land use.

Table 1 presents the base parking ratios for weekdays and weekends. These ratios must be used unless the petitioner provides reasonable justification for use of alternative ratio(s) that will not be detrimental to the public welfare. For land uses not listed in Table 1, data from the current edition of "Parking Generation" (ITE), "Shared Parking" (ULI), the Howard County Zoning Regulations, or other applicable sources may be used.

Step 2: Determine the number of reserved parking spaces for each use.

A significant proportion of residential parking spaces are typically reserved, due to market and security requirements. Some portion of office, retail, hotel, or other uses may require reserved spaces for some portion of the day. These reserved spaces should be outlined and specified by land use on an hourly basis.

Step 3: Select time-of-day and monthly parking variation factors.

The time-of-day adjustment factors for weekdays and weekends are shown in Tables 2 and 3, respectively. Table 4 shows the monthly adjustment factors for customer and visitor parking, while Table 5 includes the monthly adjustment factors for employees. These typical factors are taken from the ULI Shared Parking Manual and may be modified based on other published data or independent studies to ensure accuracy for specific land uses or circumstances.

Step 4: Adjust parking ratios for modal split, auto occupancy, and captive market effects.

Modal split, auto occupancy, and captive market effects will be different for each Downtown Revitalization development. Modal splits and auto occupancy can be determined through U.S. Census journey-to-work data, patron surveys, or other local data, and can be adjusted to reflect future conditions.

Non-captive adjustments reflect the proportion of users that are not already parked nearby for a primary purpose. These adjustments for captive market effects should only be applied to simultaneous trips, not sequential trips. For example, an office worker who walks across the street for a snack during the day is part of the captive market, while a couple who has dinner before a movie is not. Table 6 includes sample non-captive adjustment factors for weekdays and can be modified based on the characteristics of the land use and surroundings.

Step 5: Calculate the hourly parking demand for weekdays and weekends for each month.

The individual parking demands for each land use during each time period are then computed by multiplying the parking ratios (adjusted for modal split, auto occupancy, and captive market effects) by the time-of-day and monthly variation factors. No adjustment factors or variation factors are applied to reserved parking spaces.

The sum of the adjusted parking demands for each land use are then compared for each scenario (each hour of each day of each month), and the maximum total parking demand represents the shared parking requirement for the project.

Table 1
Howard County Shared Parking Methodology
Base Parking Ratios

Land Use	Weekday		Weekend		Unit
	Visitor	Employee	Visitor	Employee	
General Retail/Personal Service	2.90	0.70	3.20	0.80	/ksf GLA
Shopping Center	3.20	0.80	3.60	0.90	/ksf GLA
Restaurants, standard, and beverage establishments	15.25	2.75	17.00	3.00	
Fast Food Restaurant	12.75	2.25	12.00	2.00	/ksf GLA
Cinema	0.19	0.01	0.26	0.01	/seat
Performing Arts Theater	0.30	0.07	0.33	0.07	/seat
Health Club	6.60	0.40	5.50	0.25	/ksf GLA
Hotel	0.90	0.25	1.00	0.18	/room
Restaurant/Lounge	10.00		10.00		/ksf GLA
Conference Ctr./Banquet (20 to 50 sq ft/guest room)	30.00		30.00		/ksf GLA
Convention Space (>50 sq ft/guest room)	20.00		10.00		/ksf GLA
Residential UNIT (1) – STUDIO AND ONE-BEDROOM UNITS	0.15	[[1.50]] 1.15	0.15	[[1.50]] 1.15	/unit

RESIDENTIAL UNIT (1) – TWO OR MORE BEDROOMS	0.15	1.50	0.15	1.50	/UNIT
General Office up to 100 ksf	0.275	3.30	0.028	0.33	/ksf GLA
General Office over 100 ksf	0.20	2.60	0.02	0.26	/ksf GLA
Medical/Dental Office	3.00	1.50	3.00	1.50	/ksf GLA

Note(s):	(1) 1.0 space reserved for residents' sole use; remainder may be shared.
	(2) For all other land uses, data from the current edition of "Parking Generation" (ITE), "Shared Parking" (ULI), the Howard County Zoning Regulations or other applicable sources may be used.

Attachment D: Development Rights and Responsibilities Agreement (DRRA)

The Howard Research And
Development Corporation
10480Little Patuxent Parkway
Suite 300
Columbia, MD 21044

John E. DeWolf III
T 410.964.4989
John.DeWolf@HowardHughes.com

March 15, 2016

Hon. Allan H. Kittleman
Howard County Executive
3430 Court House Drive
Ellicott City, Maryland 21043

Re: Petition for Development Rights and Responsibilities Agreement (Downtown Columbia)

Dear Mr. Kittleman:

Pursuant to Section 16.700, *et seq*., of the Howard County Code, The Howard Research And Development Corporation ("HRD") submits this Petition to negotiate and execute a Development Rights and Responsibilities Agreement ("DRRA") for Downtown Columbia. The purpose of the DRRA is to ensure the development of Downtown Columbia fulfills the vision expressed in the Downtown Columbia Plan, including the development of a full spectrum of affordable housing.

I. <u>Background</u>

Existing County law mandates a full-spectrum housing program for Downtown Columbia based on the model described in the Downtown Columbia Plan. This model has been funded by HRD with two lump-sum $1.5 Million payments, a one-time payment of between $2,000 - $9,000 for each new dwelling unit, and annual contributions from commercial development. To date, HRD has paid more than $4.8 Million into the Fund. These and subsequently collected funds are to be used by the Columbia Downtown Housing Corporation ("CDHC") to create affordable housing opportunities Downtown.

On October 29, 2014, in response to concerns expressed by CDHC about the lack of a viable mechanism to fulfill its obligations, the County Council adopted Resolution 120-2014 asking whether legislative changes were needed to achieve a full spectrum of housing. In response, CDHC presented a set of initial recommendations. HRD objected to these recommendations explaining how they would discourage investment by HRD and others and would stifle Downtown revitalization. The Council then asked CDHC and HRD to work together toward a set of joint recommendations.

The Howard Research And
Development Corporation
10480Little Patuxent Parkway
Suite 300
Columbia, MD 21044

John E. DeWolf III
T 410.964.4989
John.DeWolf@HowardHughes.com

II. Joint Recommendations on Affordable Housing

Over the next 10 months, HRD and CDHC worked, along with representatives from both the Howard County Housing Commission ("Commission") and your office, to develop a comprehensive set of recommendations to achieve a full spectrum of housing ("Joint Recommendations") (Attachment 1). During that same period, the County Council held nine public worksessions to help it and the public understand the issues, challenges, economic implications and potential opportunities surrounding this issue and its relationship to successful revitalization Downtown.

The Commission subsequently approved the Joint Recommendations and offered the following additional recommendations (Attachment 2):

1. HRD should grant the Housing Commission a right of first refusal to purchase Low Income Housing Tax Credit ("LIHTC") projects that HRD develops (discussed below).
2. HRD should provide gap financing to the Housing Commission for the LIHTC projects as lender of last resort.
3. CDHC should agree to provide funding from the Downtown Columbia Community Housing Fund as necessary to assist in developing any LIHTC projects.
4. HRD should agree in a Master Lease to the Commission for the very low income units to provide the same level of maintenance, repair and capital improvements as are provided for the market rate units.

The attached DRRA is an agreement between HRD and the County. The DRRA implements the Joint Recommendations and each of the Commission's additional recommendations. An exception is HRD's proposed financing of the Commission's acquisition of the Columbia Flier site for its development by the Commission as a mixed income project. This transaction, part of the Joint Recommendations, is instead addressed in a separate agreement with the Commission.

Accordingly, the enclosed packet of materials is the result of the combined efforts of HRD, CDHC and the Commission working with the County staff and administration to address affordable housing needs in the Downtown Columbia area. Please see the attached materials for specific provisions and details.

III. Development Rights and Responsibilities Agreement ("DRRA")

The DRRA (Attachment 3) will create up to 900 affordable units, including very low income units, low income units and middle income units. This figure represents 16.4% of the 5,500 market rate units to be developed Downtown, including The Metropolitan and Parcel C

The Howard Research And
Development Corporation
10480Little Patuxent Parkway
Suite 300
Columbia, MD 21044

John E. DeWolf III
T 410.964.4989
John.DeWolf@HowardHughes.com

development for which HRD has already made the required payments to the Housing Fund. The figure is 19.2% of the 4,683 market rate units remaining to be developed Downtown.

When development of the Flier site is included, up to an additional 110 affordable units and 110 market rate units will be developed, increasing the total number of affordable units to 1,010. This figure represents 15.3% of the new total number of units (both market rate and affordable – 1,010/6,620).

The DRRA requires all new market rate rental housing developments to include both very low income and middle income units with an inclusionary zoning requirement. This will create approximately 400 additional affordable units. The DRRA also provides for a long term master lease with the Commission to assure newly created housing opportunities will be available for very low income residents.

The DRRA also describes five LIHTC projects that will create up to 500 additional low income units. To facilitate the LIHTC projects, the DRRA includes land exchanges, land contributions and long term leases. In addition, the DRRA establishes timeframes for each project and can include mandatory conveyance of land by HRD to the Commission at no cost to the Commission if timeframes are not met. The LIHTC sites also include opportunities for senior housing and provisions to facilitate the redevelopment and creation of new public facilities for the existing Banneker Fire Station, the existing Central Library, a new Downtown Transit Center, and Toby's Dinner Theatre.

The DRRA also includes funding by HRD of an additional $3.2 Million in loans and gap financing for the Commission to develop additional affordable housing opportunities, and provides the Commission with a right of first offer to purchase for either of the two LIHTC projects which HRD may develop.

IV. <u>Amendment to the Downtown Columbia Plan ("DCP Amendment")</u>

The enclosed DCP Amendment (Attachment 4) filed with the Planning Board by the Department of Planning and Zoning ("DPZ") revises the affordable housing provisions of the Downtown Columbia Plan to impose an inclusionary MIHU requirement on rental development and the option to enter into a development rights and responsibilities agreement to provide more affordable units, serve lower income households, and/or provide affordable units at earlier stages of development. The DCP Amendment also modifies the existing for–sale housing payment provisions to be based on the square footage of each unit.

Lastly, the DCP Amendment modifies the Downtown Revitalization Phasing Progression and CEPPA Implementation Chart to be consistent with the above changes.

The Howard Research And
Development Corporation
10480Little Patuxent Parkway
Suite 300
Columbia, MD 21044

John E. DeWolf III
T 410.964.4989
John.DeWolf@HowardHughes.com

V. Amendment to PlanHoward2030 ("PH Amendment")

The PH Amendment also filed with the Planning Board by DPZ modifies provisions regarding Downtown Columbia and the housing allocations chart in the existing plan. (Attachment 5)

VI. Amendments to Title 13, Housing and Community Development, Title 16, Subdivision and Land Development Regulations, and Title 28, Downtown Columbia ("Code Amendment")

A proposed amendment to the County Code is forthcoming and will be appended to the DRRA once submitted for introduction by the Administration. The Code Amendment will revise the affordable housing provisions of the County Code to implement the new MIHU requirement discussed above. The Code Amendment will also amend provisions of the adequate public facilities ordinance to take CEPPA 17 into account.

CEPPA 17 requires that HRD, if deemed necessary by the Board of Education, reserve an adequate school site or provide an equivalent location within Downtown Columbia. CEPPA 17, like the other CEPPAs, is required to assure that the community enhancements, programs and public amenities supporting Downtown Revitalization are provided as development proceeds. Because development cannot proceed unless particular milestones are met and the CEPPA requirements are satisfied, CEPPA 17 guarantees there will be school capacity to serve Downtown Columbia.

The Code Amendment will also modify Code provisions that require the affordable housing payments under the current model. The amendment limits future payments to for-sale units and bases the payment schedule on the square footage of each unit as discussed above.

VII. Zoning Regulation Amendment ("ZRA")

A proposed amendment to the Howard County Zoning Regulations is also forthcoming from the Administration and will be appended to the DRRA ("ZRA"). The ZRA will exclude affordable units from the maximum number of new dwellings Downtown. Importantly, to be excluded, the affordable unit must be restricted either by a development rights and responsibilities agreement or a restrictive covenant that is enforceable by the County for at least forty (40) years.

The ZRA will also establish the inclusionary MIHU requirement on all rental development unless the County determines the purposes of the affordable housing provisions of the

The Howard Research And
Development Corporation
10480Little Patuxent Parkway
Suite 300
Columbia, MD 21044

John E. DeWolf III
T 410.964.4989
John.DeWolf@HowardHughes.com

County Code will be served to a greater extent by a development rights and responsibilities agreement.

Lastly, the ZRA will propose a modest reduction in the parking requirements for studio and one bedroom apartments based on Department of Planning and Zoning research of local case studies, nearby jurisdictional standards, current industry practice, and professional design methodologies.

Conclusion

The DRRA is the culmination of nearly two years' effort to understand and responsibly address the issue of affordable housing. The DRRA employs a variety of tools, inclusionary requirements, land contributions and transfers, and tax credits to achieve this result, and it does so in a way that will encourage, rather than stifle, additional investment Downtown.

The DRRA implements the Joint Recommendations and each of the additional recommendations of the Howard County Housing Commission by establishing the rules and regulations governing HRD's development Downtown. As a consequence, the DRRA provides greater certainty in the County's comprehensive planning process, the implementation of its General Plan, and the provision of a full spectrum of affordable housing.

We look forward to working with the Administration and to the execution of the DRRA so that the progress we have made in Downtown Columbia can continue to benefit all of the County's citizens.

Sincerely,

John E. DeWolf III
Vice President
THE HOWARD RESEARCH AND
DEVELOPMENT CORPORATION

Enclosures

cc: Tom Carbo, Esq.
Paul Casey, Esq.
Kevin Kelehan, Esq.
Mr. Carl DeLorenzo

DRAFT 9.4.15

JOINT RECOMMENDATIONS FOR AFFORDABLE HOUSING IN DOWNTOWN COLUMBIA

The parties to these **Joint Recommendations for Affordable Housing in Downtown Columbia** dated September ___, 2015 (the "Recommendations") are **The Howard Research And Development Corporation** ("HRD"), the **Columbia Downtown Housing Corporation** ("CDHC"), the **Howard County Housing Commission** ("Commission") and **Howard County, Maryland** ("County").

Background

On February 1, 2010, the Howard County Council ("County Council") approved Bill No. 58-2009 approving the Downtown Columbia Plan, A General Plan Amendment ("Downtown Columbia Plan"). The Downtown Columbia Plan envisioned a full spectrum housing program for Downtown Columbia to be achieved through the creation of a Downtown Columbia Community Housing Foundation which would administer a housing fund to be created from contributions from the Downtown Columbia Community Developer, developer and property owner contributions, and other sources.

On July 2, 2012 the County Council approved Bill No. 24-2012 establishing the Downtown Columbia Community Housing Fund ("Fund") for the purpose of providing affordable housing assistance as an amenity as described in the Downtown Columbia Plan and further providing for the recognition of a nonprofit entity as the Downtown Columbia Housing Foundation for purposes of administering the Fund.

On November 5, 2012, the County Council adopted Resolution 154-2012 recognizing CDHC as the Downtown Columbia Housing Foundation under the Downtown Columbia Plan.

On or about October 8, 2013, HRD, as the designated Community Developer, contributed $1.5 Million to the Fund in accordance with the Downtown Columbia Plan and Bill 24-2012. To date, approximately $2.3 Million in contributions have been provided to the Fund.

On March 31, 2014, CDHC presented its Second Annual Report to the County Council and County Executive in which CDHC advised that without changes in legislation it would be difficult to realize its goals regarding the development of affordable housing in Downtown.

On October 29, 2014, the County Council adopted Resolution 120-2014 requesting CDHC to consider whether legislative changes are necessary and appropriate to ensure the Downtown Columbia Plan's vision for a full spectrum of affordable housing can be achieved and to recommend any changes believed necessary and appropriate to the County Council and County Executive.

On February 27, 2015, CDHC presented its recommendations to the County Council and County Executive.

On June 8, 2015, representatives of the Community Developer presented an alternative means of achieving a full spectrum of housing in Downtown Columbia.

Representatives of CDHC, HRD, the Housing Commission and the County Executive met to discuss elements of HRD's alternative, to understand the various perspectives and objectives of the parties, to identify any modification(s) to HRD's alternative plan, and to determine what, if any, recommendations should be made to the County Council and pursued.

The purpose of these Recommendations is to set forth the parties' agreement on a plan for providing a full spectrum of housing in Downtown Columbia.

1. Definitions.

Unless otherwise defined in these Recommendations, the following words, when used in these Recommendations, shall have the following meanings:

A. "Affordable Unit" means a rental dwelling unit that is either a Middle Income Unit, a Low Income Unit, or a Very Low Income Unit.

B. "Downtown Revitalization" means a form of development required in Downtown Columbia after the effective date of the Downtown Columbia Plan in compliance with the applicable provisions of the Howard County Code and Zoning Regulations that must conform with the recommendations of the Downtown Columbia Plan.

C. "CEPPAs" means the Community Enhancements, Programs and Public Amenities identified in the Downtown Columbia Plan.

D. "Full Build Out" means that point in time when a building permit has been issued for the 5,500th Net New Market Rate Dwelling Unit within the Downtown Columbia Plan area.

E. "Downtown Columbia Community Housing Fund" means the housing trust fund established by Bill No. 24-2012 effective September 3, 2012.

F. "Middle Income Unit" means an Affordable Unit to be leased to tenants who earn a maximum of eighty percent (80%) of the Howard County median income ("AMI") (i.e., rental payment of 30% of gross income less a utility allowance) during the Restriction Period. For purposes of these Recommendations, Middle Income Units specifically do count as both Market Rate Dwelling Units and Affordable Units.

G. "Low Income Unit" means a unit as described in Internal Revenue Code section 42(g)(2).

G.1. "LIHTC Project" means a residential or mixed-use development containing Low Income Units.

H. "Market Rate Dwelling Unit" means a rental or for-sale dwelling unit developed in the Downtown Columbia Plan area which is not a Very Low Income Unit nor a unit in a LIHTC Project.

I. "Net New" means the number of dwelling units that are permitted under the Downtown Revitalization approval process after the effective date of the Downtown Columbia Plan in excess of the number of dwelling units that are shown on a site development plan for property located within Downtown Columbia that was approved prior to the effective date of the Downtown Columbia Plan.

J. "Property" means all real property in Downtown Columbia currently owned by HRD or its affiliates consisting of approximately 230 acres as shown on <u>Exhibit A</u>.

K. "Very Low Income Unit" means a dwelling unit intended for tenants who either have a Section 8 voucher or whose annual household income would qualify them for a Section 8 voucher, as determined by the Commission.

L. "Zoning Regulations" means the Howard County Zoning Regulations, including, without limitation, the Downtown Revitalization provisions of the New Town (NT) District.

2. <u>Affordable Housing</u>.

HRD is committed to creating affordable housing in Downtown Columbia, Maryland. Toward that end, HRD agrees to facilitate the construction of up to 970 Affordable Units at Full Build Out subject to the following initiatives:

A. In conformity with Section 2.1, HRD will designate at least three percent (3%) but not more than five percent (5%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) that is constructed or otherwise provided on the Property as Very Low Income Units;

B. In conformity with Section 2.2, HRD will ensure the inclusion of at least three percent (3%) and not more than five percent (5%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) that is constructed or otherwise provided on the Property as Middle Income Units;

C. In conformity with Section 2.3, HRD will facilitate the development of six LIHTC Projects that are specifically designated to provide affordable rental housing to tenants whose annual income does not exceed approximately 50% of the Howard County AMI (approximately 60% of the Baltimore, Maryland MSA's AMI); and

D. In conformity with Section 2.4, modify the Fund structure.

2.1. <u>Very Low Income Units</u>.

A. HRD shall designate a minimum of three percent (3%) but not more than five percent (5%) of all Net New rental units within each building containing rental units that is constructed or otherwise provided on the Property (excluding the Metropolitan and Parcel C) to be Very Low Income Units in order to achieve a maximum of 180 Very Low Income Units at

Full Build-Out. The Commission shall master lease such units in each such building from HRD for a period of 40 years, and the Commission shall then in turn lease them to individual households holding Section 8 vouchers or at an income level of up to approximately 50% of the Howard County AMI. The Commission shall lease the units from HRD at a rate of 95% of the Section 8 Voucher Payment Standard ("VPS") for Columbia, MD (100% minus a 5% allowance for vacancy), which VPS rates are currently $1,151 for an efficiency, $1,409 for a one bedroom, $1,634 for a two bedroom, and $2,193 for a three bedroom. The 95% of VPS payment to HRD will be guaranteed regardless of vacancy (unless caused by HRD) and will not be discounted by a utility allowance. A portion of the $0.05 per square foot annual commercial payment to the Fund shall be made available by CDHC to the Commission to subsidize the Commission's payment of utilities under the master lease to HRD at a level to be agreed upon by CDHC and the Commission. Units may include smaller square footages and other design elements to reduce development cost and increase affordability, in accordance with the standards shown on Exhibit B.

B. Within the first phase of development within Area 3 of the Crescent development area, HRD will designate 3% of the Net New rental units within each building containing rental units as Very Low Income Units. In future Downtown Columbia development phases, affordable designations will be made by HRD in accordance with the following schedule:

> For development up to and including the 3,542nd Market Rate Dwelling Unit, three percent (3%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) that is constructed or otherwise provided on the Property will be Very Low Income Units.
>
> For development from the 3,543rd Market Rate Dwelling Unit up to and including the 5,500th Market Rate Dwelling Unit, five percent (5%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) that is constructed or otherwise provided on the Property will be Very Low Income Units.

2.2. Middle Income Units.

A. HRD shall ensure that a minimum of 3% but not more than 5% of all Net New rental units in each building containing rental units that is constructed or otherwise provided on the Property (excluding the Metropolitan and Parcel C) will be Middle Income Units in order to achieve a maximum of 180 Middle Income Units at Full Build-Out. Units may include smaller square footages and other design elements to reduce development costs and increase affordability, in accordance with the standards shown on Exhibit B. Such units shall be leased to households earning up to 80% of Howard County AMI. Income qualification shall be performed by HRD or its designated building manager, and annual compliance checks may be performed by the County. Households leasing a Middle Income Unit may remain in the unit so long as their income does not exceed 100% of Howard County AMI for more than one year, in which case the building manager may either raise the rent to a market level and lease an alternative unit to a qualifying household at the restricted rent level, or relocate the original household to another unit and re-lease the Middle Income Unit to a qualifying household. HRD will execute and record a binding covenant on each building, enforceable by CDHC and the County, to require that the income qualification program and restricted rent levels shall be maintained for a minimum of 40 years following first occupancy of a Middle Income Unit within the building (the "Restriction Period").

B. Within the first phase of development within Area 3 of the Crescent, HRD will designate 3% of the Net New rental units within each building containing rental units as Middle Income Units. In future Downtown Columbia development phases, affordable designations will be made by HRD in accordance with the following schedule:

> For development up to and including the 3,542nd Market Rate Dwelling Unit, three percent (3%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) that is constructed or otherwise provided on the Property will be Middle Income Units.
>
> For development from the 3,543rd Market Rate Dwelling Unit up to and including the 5,500th Market Rate Dwelling Unit, five percent (5%) of all Net New rental units (excluding the Metropolitan and Parcel C) in each building containing rental units that is constructed or otherwise provide on the Property will be Middle Income Units.

2.3 <u>Projects to be Developed Using Low Income Housing Tax Credits ("LIHTC").</u> HRD will develop or facilitate the development of six LIHTC Projects that are specifically designed to include Low Income Units, as follows:

A. Downtown Fire Station – Temporary and Existing Site.

(i) Consistent with CEPPA #9, HRD will provide Howard County with a suitable site for a temporary relocation of the Banneker fire station consisting of approximately one (1) acre located within Area 4 of the Crescent approximately as shown on Exhibit C ("Temporary Fire Station Site") at no cost to the County while the Banneker Fire Station site is being redeveloped. Howard County will convey the existing Banneker Fire Station site in fee simple to the Commission. HRD and Howard County will record covenants, enforceable by CDHC, on the Temporary Fire Station Site and the Banneker Fire Station site, respectively, prior to their conveyance, limiting the sites' development to the uses as contemplated herein. Each party shall be responsible for providing its site free from any environmental conditions which would prevent use of the site for residential development. The Commission shall construct a new fire station and residential development on the Banneker Fire Station Site. The new fire station development shall include approximately one hundred (100) Low Income Units as part of a mixed income development of approximately 200 units. Upon providing the Temporary Fire Station Site to the County for the temporary fire station use, HRD will have irrevocably satisfied its obligations regarding CEPPA 9 in full.

(ii) Following completion of the Banneker Fire Station redevelopment, the Temporary Fire Station site may be developed by HRD or a venture between HRD and the Commission or other developer(s) into a LIHTC Project with approximately 90 Low Income Units. Alternatively, at any time HRD may convey the Temporary Fire Station site to the Commission. Additionally, HRD must convey the Temporary Fire Station Site to the Housing Commission in fee simple for zero dollars consideration if HRD fails to meet any of the following milestones after construction of a new fire station on the Banneker Fire Station Site has been completed: (a) commence design within 1 year, (b) apply for LIHTC financing within 2 years, or (c) commence construction of a LIHTC Project on the Temporary Fire Station Site within 3 years.

(iii) If HRD is involved in the redevelopment of the Temporary Fire Station Site, HRD may seek 70% (9% Allocation) LIHTC allocations for the affordable housing portions of these projects, and if so then the County shall use commercially reasonable efforts to assist HRD in obtaining the 70%/9% LIHTC. HRD may also seek 30% (4% Allocation) LIHTC, in which case the County agrees to use commercially reasonable efforts to assist the parties in obtaining tax-exempt bond financing in conjunction with the 4% LIHTCs.

B. Toby's Dinner Theatre Redevelopment.

(i) Subject to reaching agreement with the owners of Toby's Dinner Theatre ("Toby's"), the County, and the Commission, HRD will contribute approximately 0.44 acres of land at no cost to the redevelopment of Toby's with future contemplated improvements consisting in concept of a new building for Toby's, a performing and visual arts facility, a parking structure and approximately 200 dwelling units. HRD will also record a suitable modification ("Modification") of any covenants restricting the development of the site so it may be developed as contemplated herein, and further will not make any other modification to such covenants except to facilitate the development contemplated herein, inclusive of an affordable housing component, which Modification will be enforceable by CDHC. Any residential units constructed on the site would be developed as part of a mixed income project including approximately 50% Low Income Units.

(ii) If HRD is involved in the redevelopment of Toby's, HRD may seek 70% (9% Allocation) LIHTC allocations for the affordable housing portion of this project, and if so then the County shall use commercially reasonable efforts to assist HRD in obtaining the 70%/9% LIHTC. HRD may also seek 30% (4% Allocation) LIHTC, in which case the County agrees to use commercially reasonable efforts to assist the parties in obtaining tax-exempt bond financing in conjunction with the 4% LIHTCs.

C. Columbia Flier Building.

(i) Subject to favorable disposition of the site by the County and agreement with the Housing Commission, HRD will purchase the Columbia Flier Building site ("Columbia Flier Site") for $2.8 Million for its anticipated development jointly with the Commission. Howard County will record a covenant on the site prior to its conveyance to HRD, limiting its development to the uses as contemplated herein. The project would be developed with approximately 220 Units as a LIHTC Project with approximately 50% Low Income Units , and may also include a commercial component, such as an incubator use, if so desired by the County. Alternatively, at any time HRD may convey the Columbia Flier Site to the Commission. Additionally, HRD must convey the Columbia Flier Site to the Commission in fee simple for zero dollars consideration if HRD fails to meet any of the following milestones after the Columbia Flier Site has been conveyed to HRD: (a) commence design within 1 year, (b) apply for LIHTC financing within 2 years, or (c) commence construction of a LIHTC Project on the Columbia Flier Site within 3 years.

(ii) If HRD is involved in the redevelopment of the Columbia Flier Site, HRD may seek 70% (9% Allocation) LIHTC allocations for the entire project, and if so then the County shall use commercially reasonable efforts to assist HRD in obtaining the 70%/9% LIHTC. HRD may also seek 30% (4% Allocation) LIHTC, in which case the County agrees to use commercially reasonable efforts to assist the parties in obtaining tax-exempt bond financing in conjunction with the 4% LIHTCs.

D. Existing Library.

(i) If Howard County (i) decides to relocate the Central Library to a location on the Property approximately as shown on Exhibit D or to a comparable site on the Property as mutually agreed by the County and HRD, and (ii) appropriates 100% of the funds required for the construction of a New Central Library structurally compatible with HRD's utilization of the air and subsurface rights, then HRD and the County shall (a) enter into a land swap wherein the County would receive an appropriate site on the Property for a New Central Library, with air and subsurface rights retained by HRD, and HRD would receive the existing Central Library Site ("Existing Central Library Site"); and (b) HRD will construct the New Central Library using the appropriated County funds, and the Existing Central Library Site may be redeveloped by HRD or a venture between HRD and the Commission or other developer(s) as a mixed-income project containing approximately 300 total units, including approximately 50% Low Income Units. Howard County will record a covenant on the site prior to its conveyance, enforceable by CDHC and the County, limiting its development to the uses as contemplated herein. Each party shall be responsible for providing its site free from any environmental conditions which would prevent use of the site for residential development. Alternatively, at any time HRD may convey the Existing Central Library Site to the Commission. Additionally, HRD must convey the Existing Central Library Site to the Commission in fee simple for zero dollars consideration if HRD fails to meet any of the following milestones after the New Central Library has been completed: (a) commence design within 1 year, (b) apply for LIHTC financing within 2 years, or (c) commence construction of a LIHTC Project on the Existing Central Library Site within 3 years.

(ii) If by the time that the 3,542nd Net New Market Rate Unit has been developed, the New Central Library has not yet been developed and there is not County funding and a set schedule in place for the development of the New Central Library, then the parties hereto shall develop an alternative for the 150 Affordable Units anticipated from the Existing Central Library Site. Possible means to achieve the additional Affordable Units could include, but are not limited to, increasing the percentage of Very Low Income Units and/or Middle Income Units in market rate projects, increasing the number of Low Income Units on any of the undeveloped LIHTC Project sites, new LIHTC Project sites, payment of fees consistent with the original Downtown Columbia Plan or any other payment, or any other means mutually agreed upon by the parties. HRD shall agree that it will not draw building permits or commence construction on any additional Net New Market Rate Units until an alternative plan is agreed upon.

(iii) In the event that, prior to the events described in (ii) above, HRD elects to develop the Property shown on Exhibit D contemplated for the New Central Library for a use which does not include the New Central Library, then HRD may propose an alternative, comparable site for the New Central Library, to be mutually agreed upon by the County and HRD. If a comparable replacement site is not identified and mutually agreed upon by the County and HRD, then the parties shall work together in good faith to identify a means to develop an alternative for the 150 Affordable Units anticipated from the Existing Central Library Site as discussed in (ii) above. HRD shall agree that it will not draw building permits or commence construction on any additional Net New Market Rate Units until an alternative plan is agreed upon.

(iv) In the event that, prior to the events described in (ii) above, the County decides to develop the New Central Library on the Existing Central Library Site, the parties shall work together in good faith to develop an alternative plan for the 150 Affordable Units anticipated from the Existing Central Library Site as discussed in (ii) above, which may include developing the 150 Affordable Units on the Existing Central Library Site. If an alternative plan is not developed by the time that the 3,542nd Net New Market Rate Unit has been developed, then HRD shall agree that it will not draw building permits or commence construction on any additional Net New Market Rate Units until an alternative plan is agreed upon.

(v) If HRD is involved in the redevelopment of the Existing Central Library Site, HRD may seek 70% (9% Allocation) LIHTC allocations for the affordable housing portion of this project, and if so then the County shall use reasonable commercial efforts to assist HRD in obtaining the 70%/9% LIHTC. HRD may also seek 30% (4% Allocation) LIHTC, in which case the County agrees to use reasonable commercial efforts to assist the parties in obtaining tax-exempt bond financing in conjunction with the 4% LIHTCs.

E. Future Downtown Transit Center Site.

(i) The Downtown Columbia Plan envisions a new transit center as part of the redevelopment of Downtown Columbia. The December 2011 NelsonNygaard transit study ("Study") provided to the County by HRD in satisfaction of CEPPA 5 recommended locating the new transit center in the Symphony Overlook Neighborhood, generally between the Mall and the Corporate Center buildings. HRD will provide a site for the County's construction of a new transit center including approximately 60 Low Income Units to be located on the same site on top of the transit center. HRD will record a covenant on the site prior to its conveyance, enforceable by CDHC and the County, limiting its development to the uses as contemplated herein. The site will be within the Symphony Overlook Neighborhood generally consistent with the location identified in the Study. HRD will provide the site by fee simple transfer at no cost or by long term lease of at least 99 years for a nominal sum. HRD will retain all air and subsurface development rights which are not needed for the construction of the transit center and the 60 Low Income Units, and the County's construction of the transit center and Low Income Units must be structurally compatible with HRD's utilization of the air and subsurface rights. HRD's provision of a site for a new transit center as described herein will be deemed to have irrevocably satisfied CEPPA 14.

Unit counts for the LIHTC Projects are based on approximate site areas and an assumed density similar to the Metropolitan project recently completed downtown of approximately 100 units per acre. All LIHTC Project sites will require planning approvals from the County. To the extent that HRD acts as the developer of any of the LIHTC Project sites, it shall seek to design to and obtain approval for the unit counts contained herein and the densities feasible for the sites. In the event that any of the sites are not conveyed directly to the Commission, then the number of Low Income Units to be provided and/or facilitated by HRD and the percentage of Low Income Units in each LIHTC Project developed under these Recommendations shall be the number ultimately approved by the County on the LIHTC Project sites identified herein.

2.4 Modification of Housing Trust Fund Fee Structure

The parties agree that the fee structure contained Bill No. 24-2012 should be amended as follows:

A. HRD, as Community Developer, has contributed the sum of $1.5 million to the Downtown Columbia Partnership for contribution to the Fund and it is anticipated that HRD will contribute an additional $1.5 million plus the payments into the Fund as prescribed by the current Downtown Plan for the project known as Parcel C, immediately north of the Metropolitan. HRD shall not be required to contribute additional funds except to the extent it develops or owns properties that are subject to fees required of other developers and/or property owners as set forth herein.

B. Each developer that develops for-sale residential properties pursuant to the Downtown Revitalization Zoning Regulations shall be required to provide a one-time payment to the Downtown Columbia Partnership, for contribution to the CDHC, upon the issuance of any building permit for a residential for-sale Market Rate Dwelling Unit based on the following charges:

i. for each unit up to and including the 1,500th Net New unit: $2.00 per square foot;

ii. for the 1,501st Net New unit up to and including the 3,500th Net New unit: $7.00 per square foot;

iii. for each unit between 3,500 up to and including the 5,500th Net New unit: $9.00 per square foot.

Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed, upon the issuance of a final decision of the courts upholding the issuance of the permit.

C. The amounts to be paid under subsections (B)(i), (B)(ii) and (B)(iii) above will be subject to annual adjustment as provided in Bill 24-2012.

D. The above fees will not apply to any rental residential dwelling unit in Downtown Columbia; however any rental Net New Market Rate Dwelling Unit shall be counted towards the thresholds set forth in Section 2.4.B(i) – (iii) above for purposes of calculating the fees payable by for-sale dwelling units.

E. In addition, each owner of property developed with commercial uses pursuant to the Downtown Revitalization Zoning Regulations shall provide an annual payment to the Downtown Columbia Partnership, for contribution to the CDHC, in the amount of 5 cents ($0.05) per square foot of Gross Leasable Area for office and retail uses and 5 cents ($0.05) per square foot of net floor area for hotels. The payment will be made annually by the property owner, with the initial payment being made prior to the issuance of an occupancy permit for net new commercial development on the property. The amount of the charge will be subject to annual adjustment as provided in Bill 24-2012.

2.5. Properties Not Owned by HRD.

The Downtown Columbia Plan and/or Zoning Regulations should be amended to require that any property that is not a "Property" as defined herein, but which is subject to the Downtown Columbia Plan and is proposed for residential development, must provide a least 10% of the units as Moderate Income Housing Units serving households at not more than 60% of the Howard County median income. Because it does not currently own these properties, HRD takes no position on this recommendation.

3. Modification of Existing Parking Ratios.

Based upon an analysis by the County, the parties agree existing parking ratios for Downtown Columbia should be modified to a more urban standard and to reduce parking requirements and associated costs as follows:

3.1. Market Rate.

The parking ratios set forth in Section 133.0.F.3 of the Zoning Regulations should be modified to the following ratios for each Net New Market Rate Dwelling Unit located within Downtown Columbia, subject to confirmation that the below ratios are supported for Downtown Columbia by an updated shared parking analysis:

A. Studio or 1-bedroom: 1.1 spaces per unit

B. 2- or 3-bedroom: 1.65 spaces per unit.

The parking ratios set forth above may be further reduced for New Affordable Units, similar to reductions provided for affordable units in jurisdictions such as Montgomery County, Los Angeles, Seattle and Denver, where parking ratios are reduced between 25% and 50%, subject to confirmation that the reduced ratios are supported for Downtown Columbia by an updated shared parking analysis.

4. Exclusion of LIHTC and Very Low Income Units from Residential Development Limits.

4.1. Based upon an analysis by the County, the parties agree the Zoning Regulations should be amended to exclude all Very Low Income Units developed and all Units within LIHTC Projects developed from the 5,500 unit maximum number of Net New residential units permitted Downtown. Furthermore, the Adequate Public Facilities Ordinance should be amended if necessary such that the housing unit allocation chart adopted each year by the County Council includes additional housing unit allocations advanced from future years in the same manner as provided for residential units in Downtown Columbia under existing law equal to the combined total number of Very Low Income Units and all units within LIHTC Projects as provided in Sections 2.1 and 2.3 above.

The County agrees to submit legislation contemplated by these Recommendations to the Howard County Council for introduction within thirty (30) days after the date of these Recommendations and to affirmatively support the passage of such legislation.

The parties understand and acknowledge that all sections of these Recommendations are integral to the whole and are not severable. To become enforceable, each provision of these Recommendations must be incorporated into a binding Development Rights and Responsibilities Agreement ("DRRA") and no obligation shall be created on any party hereto until (i) the execution of such DRRA and (ii) the passage of all required legislation and zoning modifications required to implement all sections of these Recommendations, unless the waiver or one or more elements is mutually agreed to in writing by all parties.

These Recommendations are non-binding on the parties but are intended to confirm the parties' agreement on the concepts for achieving the goal of a full spectrum of housing in Downtown Columbia as set forth herein and the parties' commitment to work together in good faith to enter into a formal Development Rights and Responsibilities Agreement to formalize the agreements reached herein.

References to the parties in these Recommendations include their successors and assigns.

WITNESS/ATTEST

THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION

____

By: ______________________________
John DeWolf
Vice President

COLUMBIA DOWNTOWN HOUSING CORPORATION

____

By: ______________________________
Paul K. Casey
President

HOWARD COUNTY HOUSING COMMISSION

_______________________________ By: _______________________________
Thomas P. Carbo
Executive Director

HOWARD COUNTY, MARYLAND

_______________________________ By: _______________________________
Allan Kittleman
County Executive

EXHIBIT A

Town Center Ownership by HHC					
FDP PHASE	SECTION/AREA	PLAT	PARCEL	ACREAGE	OWNER
140-A-1	7/8	4355	D	3.414	HRD
			E	0.815	HRD
		14938	4	0.99	HRD
111-A-1	7/6	4369	D-1	3.937	Town Center East Parking Lot Business Trust
			H	0.573	Town Center East Parking Lot Business Trust
		21/56	B	1.211	Town Center East Business Trust
	7/1	15694	F-2	1.135	HRD Parking Deck Business Trust
	7/6	16142	C-2	0.234	Town Center East Parking Lot Business Trust
62-A-1	7/1	26/23	A-1	1.681	Town Center East Parking Lot Business Trust
		26/23	D-1	2.574	Town Center East Parking Lot Business Trust
4-A-V	1	12/62	2	0.262	Town Center East Business Trust
			3	0.743	Town Center East Business Trust
			5	1.077	Town Center East Business Trust
		4293	1-A	1.578	Town Center East Business Trust
		13186	21	0.459	HRD Parking Deck Business Trust
			22	0.323	Wincopin Restaurant Business Trust
		13536	13	10.198	Merriweather Post Business Trust
		30/45	11C	0.413	HRD
		30/45	11D	0.077	HRD
		30/45	11E	0.05	HRD
		30/45	11F	0.046	HRD
		30/45	11G	0.391	HRD
4-A-V and 139-A-III		30/45 27/64	Symphony Woods Road	2.578	HRD
225	unsubdivided			64.4	HRD
95		23/86	17	2.315	ACB Parking Business Trust
		23/86	18	7.504	Clover Acquisitions, LLC
139-A-III	1/3	27/64	2	9.196	HRD
234	5/4	14054	1	5.487	HRD
			2	4.396	HRD
			3	1.428	HRD
225	unsubdivided			64.4	HRD
217-A-1	2/8	14022	C	5.448	Parcel C Property, LLC (JV with Kettler, et al.)
			D	4.781	Parcel D Property, LLC (JV with Kettler, et al.)
		14021	1	3.105	HRD
224-A	2/9	12669	1	0.37	HRD
122-A	2/4	4542	A-2	2.405	10 CCC, LLC
			A-4	1.412	20 CCC, LLC
			A-6	2.009	10/20/30 CCC Parking Deck, LLC
			A-7	2.432	30 CCC, LLC
192-A	2/5	6321	A	1.841	40 CCC Parking Deck, LLC
			B	2.178	40 CCC, LLC
		8577	C-4	0.981	60 CCC, LLC
			C-1	1.176	50 CCC, LLC
192-A, 211-A	2/8	14022	E	6.176	50/60/70 CCC Parking Deck, LLC
211-A		9512	B	2.006	70 CC, LLC
TOTAL				**230.205**	**Acres**

Exhibit B

Downtown Columbia Affordable Housing Guidelines

The guidelines below apply to the Middle Income (80% AMI) and Very Low Income (30% AMI) units (jointly termed "Affordable Units") in all HHC market rate buildings to be developed in Downtown Columbia, unless otherwise stated.

1. Location
   The location of affordable units in each building shall not be congregated into one area of the building, and shall be dispersed to the extent possible taking into consideration design constraints. Affordable Units may be stacked vertically.

2. Unit Mix
   The unit mix of the Affordable Units in each building shall be similar to the overall unit mix of the building within 30% of the unit mix percentage for each unit type. The table below provides two examples of permissible unit quantities in a 300-unit building which provides 6% Affordable Units (3% Middle Income and 3% Very Low Income Units):

	Total Building		**Scenario One**			**Scenario Two**		
Unit Type	Total Quantity	Unit Mix	Quantity AUs	%(max)	Relative Ratio	Quantity AUs	% (min)	Relative Ratio
Studio	45	15%	3	16.7%	+11%	2	11.1%	(-26%)
1bd	135	45%	9	50%	+11%	7	38.9%	(-14%)
2bd	90	30%	4	22.2%	(-26%)	7	38.9%	+30%
3bd	30	10%	2	11.1%	+11%	2	11.1%	+11%
Total	300	100%	18	100%		18	100%	

3. Unit Size
   The minimum gross floor area for Affordable Units shall be:

   Studio/Efficiency: 350 square feet
   1 Bedroom Unit: 500 square feet
   2 Bedroom Unit: 650 square feet
   3 Bedroom Unit: 850 square feet

   If market rate units for a particular unit type in a project are smaller than the minimums listed above (i.e. a market rate micro-unit of 300 square feet), then the affordable units of that type may be the same square footage as the market rate.

   In addition to the minimum square footages listed above, the minimum gross floor area for Affordable Units shall be no less than 80% of the minimum gross floor area for each market rate unit type in each particular project. The table below provides two examples of minimum permissible unit sizes within individual sample projects:

	Scenario One (Smaller Units)			Scenario Two (Larger Units)		
Unit Type	Market Rate Unit Size (min)	AU Unit Size (min)	% of Market Rate	Market Rate Unit Size (min)	AU Unit Size (min)	% of Market Rate
Studio	400	350	87.5%	500	400	80%
1bd	550	500	90.9%	650	520	80%
2bd	850	680	80%	900	720	80%
3bd	1,000	850	85%	1,200	960	80%

4. Occupancy

The minimum and maximum occupancy levels for each unit type shall be:

Unit Type	Min	Max
Studio/Efficiency:	1	2
1 Bedroom Unit:	1	2
2 Bedroom Unit:	2	4
3 Bedroom Unit:	3	6

5. Rental Rates

The rental rates for the Very Low Income units shall be 95% of the Section 8 Voucher Payment Standard, to be master leased by the Housing Commission. There shall be no discount from these rent levels for utility allowances. A portion of the annual commercial payments to the CDHC housing fund of $0.05/sf from new downtown commercial development shall be made available to the Housing Commission (as master lessee) to subsidize the utility costs of the tenants, at a level to be mutually agreed upon between CDHC and the Commission.

The rental rates for the Middle Income units shall be based on the Howard County median income (family of four), adjusted for household size, then adjusted at 80% of the median income, with the annual rent calculated at 30% of the income, less a utility allowance.

For example, in 2015, the following rent schedule would apply:

Median Income (family of 4): $109,476

Unit Type	Occupancy Base	Household Adjustment	Adjusted Income	Income at 80% AMI	Annual Max Rent	Monthly Max Rent*
Studio/Eff	1.0	70%	$76,633	$61,306	$18,392	$1,533
1 Bedroom	1.5	75%	$82,107	$65,686	$19,706	$1,642
2 Bedroom	3.0	90%	$98,528	$78,822	$23,647	$1,970
3 Bedroom	4.5	104%	$113,855	$91,084	$27,325	$2,277

*The Monthly Maximum Rent for each unit type shall be charged regardless of the actual number of occupants. Does not include utility charges and service fees that are paid by the owner.

6. Eligibility Income Limits

   Middle Income Unit applicants shall be subject to maximum income limits by household size assuming the following household size adjustments to the median area income (at 80%):

   1 person: 70%

   2 persons: 80%

   3 persons: 90%

   4 persons: 100%

   5 persons: 108%

   6 persons: 116%

7. Quantity of Bathrooms

   The minimum number of bathrooms (including toilet, sink, shower or tub) for any affordable unit shall be:

Studio/Efficiency:	1
1 Bedroom Unit:	1
2 Bedroom Unit:	1
3 Bedroom Unit:	2

8. Bedrooms

   The minimum bedroom size shall be 100 square feet, subject to applicable code requirements.

9. Unit Finishes

   In order to keep the construction costs of affordable units down, affordable units may have different unit interior finishes from the market rate units as follows:

   Carpet in bedrooms, living and dining areas
   VCT flooring in bathrooms and kitchens
   Formica countertops in kitchens and bathrooms
   Black or white appliances
   No decorative backsplashes in the kitchen
   Standard builder grade cabinetry
   Standard builder grade electrical and plumbing fixtures

   Unit entries of affordable and market rate units shall be identical, such that an affordable unit is not discernible from a market rate unit in the building corridors.

10. Additional Fees

    Additional fees charged for market rate unit and affordable unit applicants and tenants shall be the same. Fees may include, but are not limited to: application fees, parking space fees, pet fees, storage space rental fees, guest passes (for pool use), lost key fees and amenity rental fees. Security deposit requirements are subject to applicant credit standing and income qualification.

EXHIBIT C

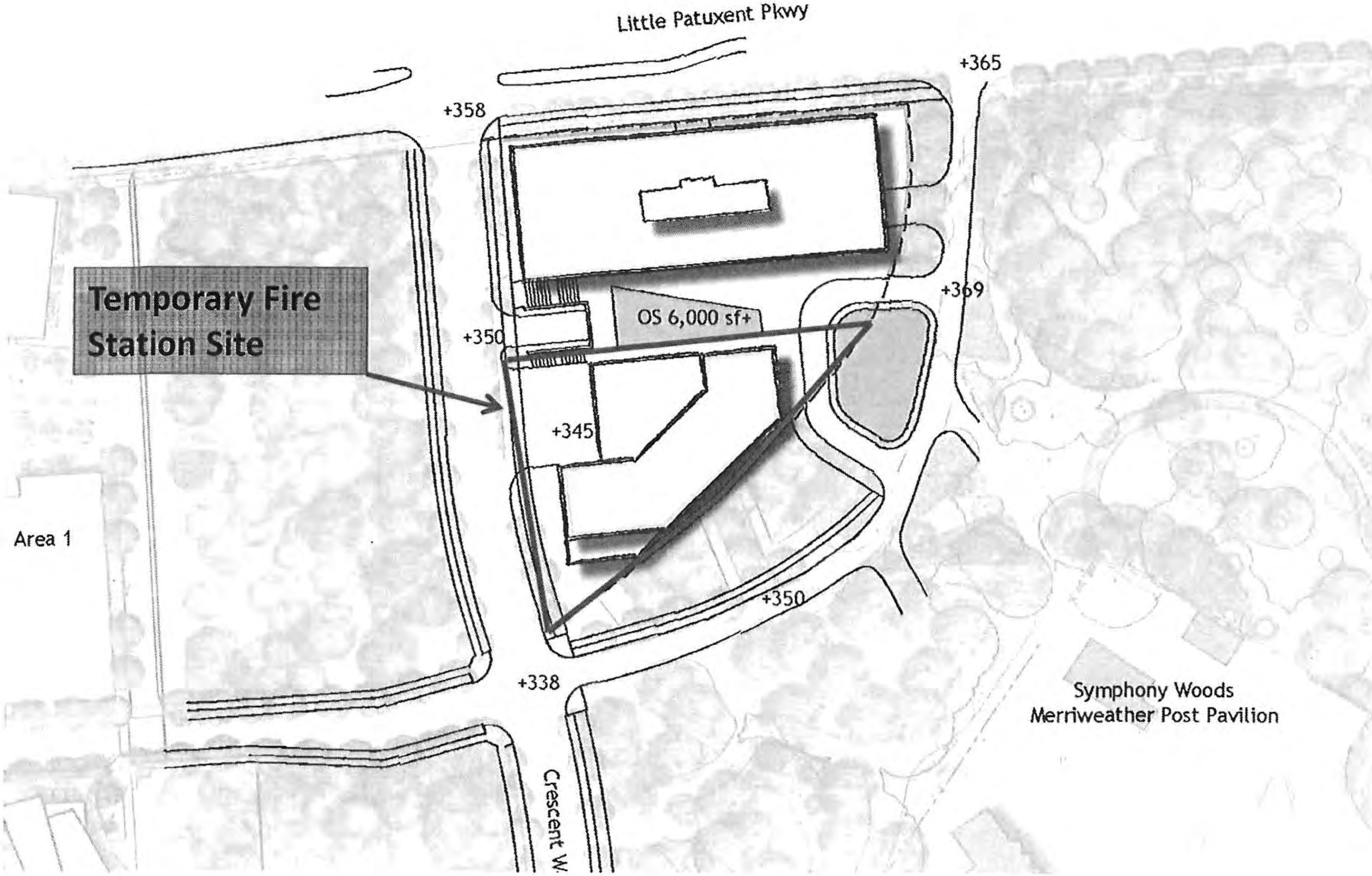
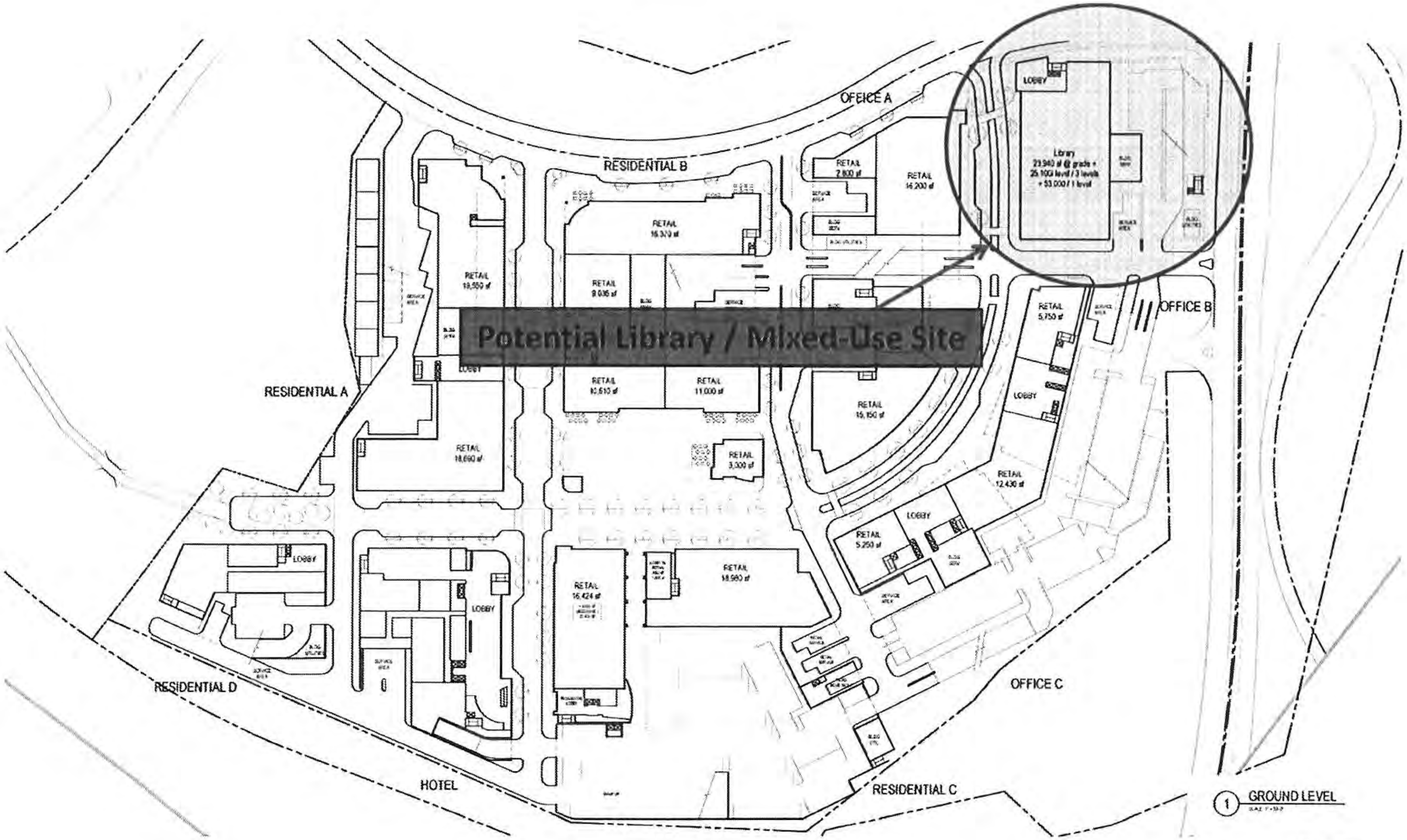

Little Patuxent Pkwy
+365
+358
+369
Temporary Fire
Station Site
OS 6,000 sf+
+350
+345
+350
Area 1
+338
Crescent W
Symphony Woods
Merriweather Post Pavilion

EXHIBIT D



JP2 ARCHITECTS
2835 O'Donnell Street,
Suite 300
Baltimore, MD 21224
t 410 276 7470
f 410 276.7471
www.JP2architects.com

MERRIWEATHER DISTRICT

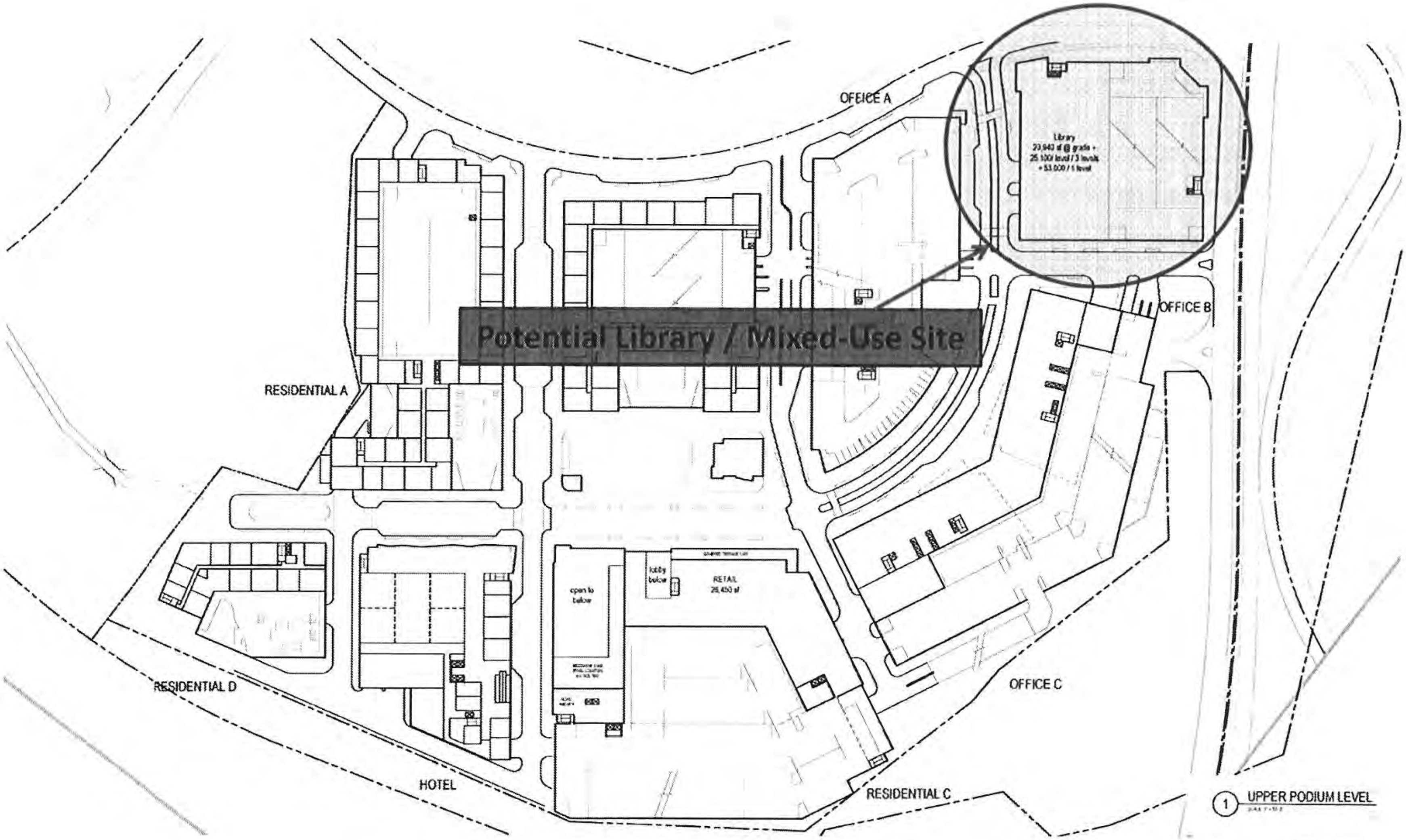
COLUMBIA, MARYLAND

26 JUNE, 2015

Street Level Plan

Conceptual Plan – Subject to Change

Client:
Howard Hughes Corp.
10221 Wincopin Circle
Columbia, MD 21044
t 410.964.4800



JP2 ARCHITECTS
2835 O'Donnell Street,
Suite 300
Baltimore, MD 21224
t 410 276.7470
f 410 276.7471
www.JP2architects.com

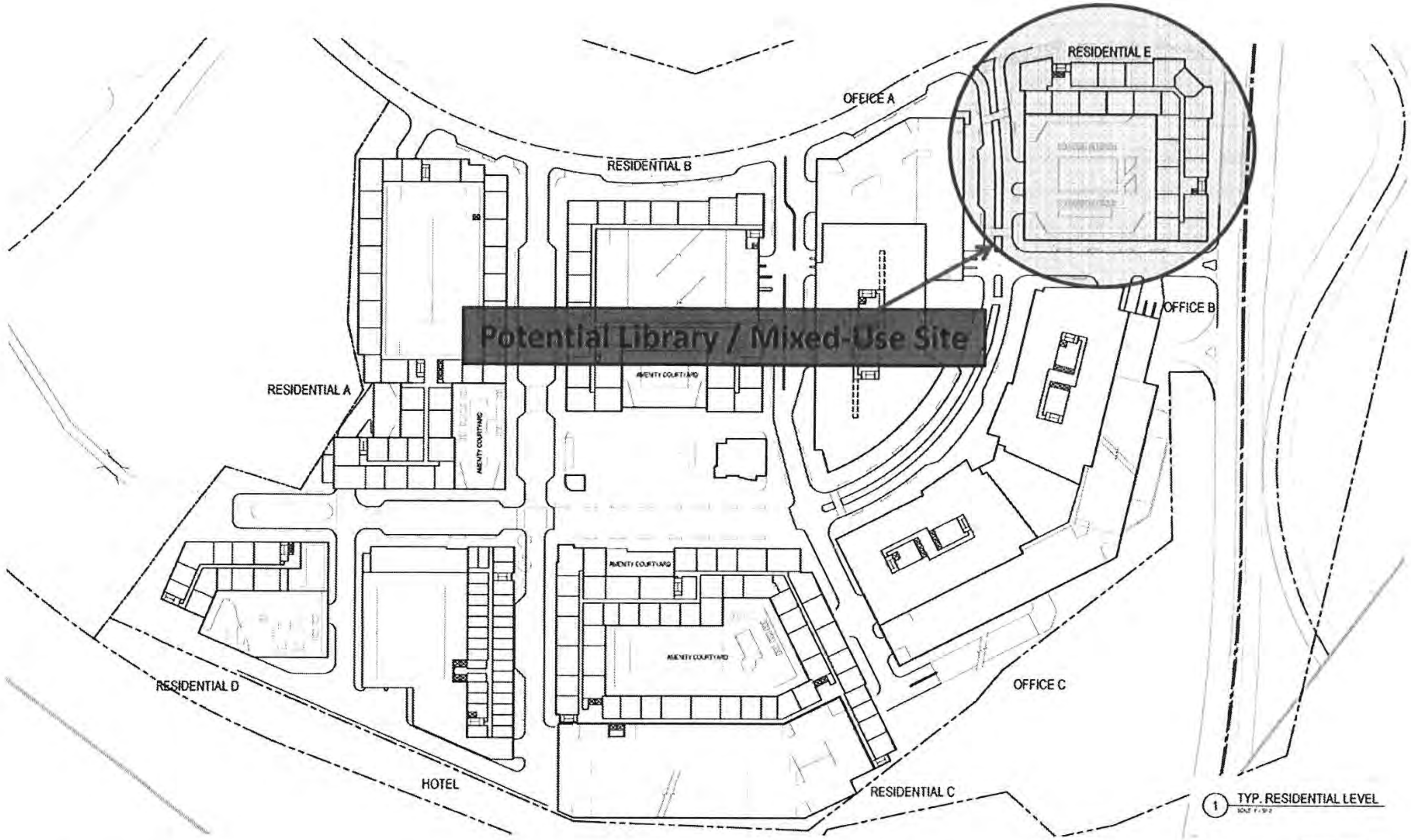
MERRIWEATHER DISTRICT

COLUMBIA, MARYLAND

26 JUNE, 2015

Level Two Plan
Conceptual Plan – Subject to Change

Client:
Howard Hughes Corp.
10221 Wincopin Circle
Columbia, MD 21044
t 410.964.4800



JP2

JP2 ARCHITECTS
2835 O'Donnell Street,
Suite 300
Baltimore, MD 21224
t 410 276 7470
f 410 276 7471
www.JP2architects.com

MERRIWEATHER DISTRICT

COLUMBIA, MARYLAND

26 JUNE, 2015

Client:
Howard Hughes Corp.
10221 Wincopin Circle
Columbia, MD 21044
t 410 964 4800

Upper Levels Plan
Conceptual Plan – Subject to Change

Howard County
HOUSING

September 4, 2015

The Honorable Allan Kittleman
The Honorable Mary Kay Sigaty
3430 Courthouse Drive
Ellicott City, Maryland 21043

Re: Joint Recommendations for Affordable Housing in Downtown Columbia

Dear Mr. Kittleman and Mrs. Sigaty:

At a special meeting held on Tuesday, September 1, 2015, the Howard County Housing Commission (the "Commission") considered and voted to approve the proposed Joint Recommendations for Affordable Housing in Downton Columbia, a copy of which is enclosed (the "Joint Recommendations"). The Commission also discussed and voted to offer the following additional recommendations:

1) For any Low Income Housing Tax Credit project developed by HRD, the Commission should be granted a right of first refusal to purchase the project after the 15-year tax credit compliance period for the minimum purchase price in accordance with Section 42 of the Internal Revenue Code.

2) For any Low Income Housing Tax Credit project developed by the Commission, HRD should agree to provide, as a lender of last resort, modest gap financing to cover any shortfalls in the project's development budget.

3) The Columbia Downtown Housing Corporation ("CDHC") should agree to provide funding from the Downtown Columbia Community Housing Fund as necessary to assist in the development of any of the Low Income Housing Tax Credit projects.

4) HRD should agree, as part of the master lease for Very Low Income Units, to provide the same level of maintenance, repair, and capital improvements over the 40-year term of the lease as are provided for market rate units.

The Commission welcomes the opportunity to assist in the efforts to realize the Downtown Columbia Plan's vision of a full spectrum of housing. If you have any questions, please do not hesitate to contact us.

Sincerely,

Thomas P. Carbo
Executive Director

Enclosure
cc: County Council Members
Commissioners
Columbia Downtown Housing Corporation
Greg Fitchitt
B. Diane Wilson
Lonnie Robbins
Carl DeLorenzo
Shirelle Bennett

DEVELOPMENT RIGHTS AND RESPONSIBILITIES AGREEMENT
(Affordable Housing)

THIS DEVELOPMENT RIGHTS AND RESPONSIBILITIES AGREEMENT (this "Agreement"), made as of the ______ day of __________, 2016, by and between HOWARD RESEARCH AND DEVELOPMENT CORPORATION, its successors and assigns ("HRD") and HOWARD COUNTY, MARYLAND, a body corporate and politic of the State of Maryland ("Howard County" or "County"); HRD and Howard County are hereinafter each referred to as a "Party" and collectively as the "Parties".

RECITALS

1. On February 1, 2010, the Howard County Council approved the Downtown Columbia Plan, a General Plan Amendment (the "Downtown Columbia Plan"). The Downtown Columbia Plan envisions the evolution of Downtown Columbia as Howard County's urban center with new development of 5,500 dwellings, 640 hotel rooms, 4.3 Million square feet of office and 1.25 Million square feet of retail uses. The Downtown Columbia Plan further envisions a full spectrum housing program for Downtown Columbia to be achieved through the creation of a Downtown Columbia Community Housing Foundation which would administer a housing fund to be created from contributions from the Downtown Columbia Community Developer (i.e., HRD), developer and property owner contributions, and other sources.

2. As part of the Downtown Columbia Plan, HRD and other property owners and developers in Downtown Columbia are required to provide various Community Enhancements, Programs and Public Amenities ("CEPPAs"), including CEPPAs aimed at achieving affordable housing. CEPPAs 10 and 11 require contributions from HRD to the Fund (as defined below) of $1,500,000 each and CEPPAs 26 and 27 require additional contributions to the Fund, including one-time payments of between $2,000.00 - $9,000.00 for each new dwelling unit.

3. The Howard County Council adopted Bill 24-2012 effective September 3, 2012, which established the Downtown Columbia Community Housing Fund ("Fund") for the purpose of providing affordable housing assistance as an amenity as described in the Downtown Columbia Plan and further providing for the recognition of a nonprofit entity as the Downtown Columbia Housing Foundation for purposes of administering the Fund. Bill 24-2012 also established mandatory contributions into the Fund by the Downtown Columbia Community Developer and property owners

4. On November 5, 2012, the County Council adopted Resolution 154-2012 recognizing the Columbia Downtown Housing Corporation ("CDHC") as the Downtown Columbia Housing Foundation under the Downtown Columbia Plan.

5. Net New (as defined in Section 1.1.CC below) approved residential development includes (i) The Metropolitan comprised of 380 dwelling units and ground floor retail space; and (ii) Parcel C comprised of 437 total dwelling units and ground floor retail space, both of which were approved by final development plan FDP-DC-Warfield-1. Site development plan approval of The Metropolitan (SDP 13-007) reduced the number of Net New dwelling units remaining to be constructed in Downtown Columbia to 5,120 units, and site development plan approval of

Parcel C (SDP 14-024) further reduced the number of Net New dwelling units remaining to be constructed to 4,683 units.

6. On or about October 8, 2013, HRD, as the designated Community Developer, in order to permit construction and occupancy of The Metropolitan, contributed \$2,329,422.20 to the Fund in accordance with the Downtown Columbia Plan, CEPPAs 10, 26 and 27, and Bill 24-2012. On or about February 1, 2016, HRD contributed an additional \$2,498,103.63 to the Fund in accordance with the Downtown Columbia Plan, CEPPAs 11, 26 and 27 and Bill 24-2012 in order to permit construction and occupancy of Parcel C. To date, approximately \$4,827,525.83 in contributions have been provided to the Fund by HRD.

7. On March 31, 2014, CDHC presented its Second Annual Report to the County Council and County Executive in which CDHC advised that changes in legislation will be necessary to realize the goals of the Downtown Columbia Plan for the development of a full spectrum housing program in Downtown Columbia.

8. On October 29, 2014, the County Council adopted Resolution 120-2014 requesting CDHC to consider whether legislative changes are necessary and appropriate to ensure the Downtown Columbia Plan's vision for a full spectrum of affordable housing can be achieved and to recommend any changes believed necessary and appropriate to the County Council and County Executive.

9. On February 27, 2015, CDHC presented its recommendations to the County Council and County Executive, which recommendations would have required 15% of future residential development in Downtown Columbia to be affordable, providing up to 702 units of affordable housing in Downtown Columbia at full residential build-out and serving households with an average AMI of 60% of the Howard County AMI.

10. As Community Developer under the Downtown Columbia Plan, HRD objected to CDHC's recommendations to the County Council and County Executive on the basis that the adoption of such recommendations would only stifle future development in Downtown Columbia. HRD suggested instead that a more nuanced approach be developed as a collaboration among HRD, the County, CDHC and the Howard County Housing Commission ("Commission"), which would actually "jump start" and maximize the potential to create affordable housing in Downtown Columbia.

11. On June 8, 2015, at a public worksession of the County Council representatives of HRD presented the County Council and representatives of CDHC and the Commission with an alternative means of achieving a full spectrum of housing in Downtown Columbia, and after discussion at this worksession, it was understood that HRD, CDHC and the Commission would attempt to work towards a joint recommendation regarding affordable housing and to determine what, if any, recommendations should be jointly made to the County Council and pursued.

12. Representatives of CDHC, HRD, the Commission and the Howard County Executive met over a period of months during summer and fall 2015 to understand the various perspectives and objectives of the parties, including, without limitation, achieving a full spectrum of housing, the economic constraints affecting the ability of the private sector alone to meet this

**L&B 5540601v11/07450.0069

objective, the existing requirements and recommendations of the Downtown Columbia Plan, CEPPAs and Bill 24-2012, and the potential use of mechanisms such as low income housing tax credits, PILOT, and land dedication and land exchanges to facilitate the creation of affordable housing.

13. On September 8, 2015, representatives of CDHC, HRD, the Commission and the Howard County Executive presented the County Council with a set of joint recommendations on affordable housing in Downtown Columbia (the "Joint Recommendations"). The Joint Recommendations describe a multi-faceted approach to achieve a full spectrum of housing by encouraging rather than stifling private investment including, without limitation, recommendations for (i) Very Low Income Units, Low Income Units, and Middle Income Units; (ii) an inclusionary program whereby Affordable Units are included in each residential rental building going forward; (iii) land exchanges, leases or contributions to facilitate development or redevelopment of a new Central Library, the existing Central Library, a new transit center, Toby's Dinner Theatre, the Banneker Fire Station and the Temporary Fire Station Site, all of which (except for the new Central Library) are anticipated to include additional Affordable Units relatively early in the development of the full residential buildout program, and in significant quantity, (iv) modification of the Fund contribution mechanism; and (v) accompanying legislation to facilitate this approach. Together the Joint Recommendations provide for the development of approximately 900 Affordable Units in Downtown Columbia at a full spectrum of household income levels at Full Residential Build Out (defined in Section 1.1.R below).

14. HRD is, either itself or through its affiliates, engaged in the development, construction, redevelopment and management of real estate and owns or controls the residential development on parcels of real property in Downtown Columbia, including those parcels more particularly described on Exhibit "A", attached hereto and by this reference incorporated herein.

15. Maryland law, Land Use Article, § 7-301 *et seq.* of the Maryland Annotated Code ("Land Use Article"), grants Howard County the authority to establish procedures and requirements for the consideration and execution of Development Rights and Responsibilities Agreements.

16. The Howard County Council adopted Council Bill No. 4-2010 on March 1, 2010, effective May 4, 2010, creating Sections 16.1700 *et seq.* of the Howard County Code authorizing Howard County to enter into Development Rights and Responsibilities Agreements ("County Ordinance").

17. This Agreement is intended to constitute a Development Rights and Responsibilities Agreement as provided for in the Land Use Article and the County Ordinance and includes provisions intended to implement the Joint Recommendations adopted by HRD and CDHC and endorsed by the Commission and the County.

18. On or about _______________, HRD petitioned Howard County to enter into this Agreement.

19. On or about _____________, 2016, Howard County reviewed this petition and determined to accept this petition and initiate the process of considering a Development Rights and Responsibilities Agreement.

20. The parties acknowledge and agree that HRD's affordable housing obligations set forth in this Agreement will (a) provide for more affordable dwelling units, (b) serve lower income households, and (c) provide the units at earlier stages of development, than if the Property were subject to a 10% MIHU requirement; and, consequently, the affordable housing goals in the Downtown Columbia Plan will be served to a greater extent by this Agreement.

21. It is the intention of the parties that, subject to Section 8.1.C below, upon performance of its obligations under this Agreement, HRD and its affiliates shall be deemed to have satisfied all affordable housing obligations under the County Law with respect to the development by HRD and its affiliates of up to 5,500 Net New Market Rate Dwelling Units.

NOW, THEREFORE, in consideration of the foregoing recitals, which are not merely prefatory but are hereby incorporated into and made a part of this Agreement, and the mutual covenants and agreements as set forth below, and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge HRD and Howard County hereby agree as follows:

ARTICLE I
DEFINITIONS

1.1. Definitions. Unless otherwise defined in this Agreement, the following words, when used in this Agreement, shall have the following meanings:

A. "APFO Approval" means approval by Howard County Department of Planning and Zoning of applicable Adequate Public Facilities Ordinance tests for the Project or any portion thereof in accordance with the provisions of Section 16.1100 *et seq.* of the Howard County Code, and the applicable provisions of the Howard County Design Manual.

B. "Affordable Unit" means a rental dwelling unit that is any of a Middle Income Unit, a Low Income Unit, or a Very Low Income Unit.

C. "AMI" means area median income.

D. "Banneker Fire Station Site" means (i) the property and improvements located at 5815 Banneker Road and more particularly identified as Lot No. 12 Columbia Town Center Subdivision Section 1 as shown on Plat No. _______ recorded among the Land Records comprised of approximately 1.551 acres, and (ii) 0.4 acres of land located at _________________ and known as Parcel ___, Tax Map ___, which is currently owned by the Columbia Association but which is anticipated to be conveyed to the County on or about _______, 20__.

E. "CEPPAs" means the Community Enhancements, Programs and Public Amenities identified in the Downtown Columbia Plan.

F. "County Law" or "Howard County Law" means the Code of Howard County, Maryland and any other laws of Howard County including, without limitation, its zoning regulations, Land Development and Subdivision Regulations, resolutions, written policies, other regulations, the Howard County Design Manual, including, without limitation, the Downtown Revitalization provisions of the NT District, the APFO standards applicable to Downtown Revitalization, the 2030 General Plan, the Downtown Columbia Plan, the Downtown Advisory Panel Act, the Howard County Green Buildings Law, design criteria or any other provision having the force and effect of law which are in effect on the Effective Date of this Agreement.

G. "Crescent" means that portion of the Property which is the subject of Final Development Plan FDP-DC-Crescent-1, as the same may be amended from time to time.

H. "Crescent Area 3" means that portion of the Property within the Crescent that is identified as Parcel D in FDP-DC-Crescent-1 as the same may be amended from time to time.

I. "Development" means Development as defined in the Zoning Regulations.

J. "Downtown" or "Downtown Columbia" means Downtown Columbia as defined in the Zoning Regulations.

K. "Downtown Columbia Community Housing Fund", "Housing Trust Fund" or "Fund" means the Downtown Columbia Community Housing Fund established by Bill No. 24-2012 effective September 3, 2012.

L. "Downtown Columbia Partnership" means the Downtown Columbia Partnership established by Howard County Council Bill 24-2012.

M. "Downtown Columbia Plan" means the Downtown Columbia Plan approved by the Howard County Council as Bill 58-2009.

N. "Downtown Revitalization" means a form of development required in Downtown Columbia after the effective date of the Downtown Columbia Plan in compliance with the applicable provisions of the Howard County Code and Zoning Regulations that must conform with the recommendations of the Downtown Columbia Plan.

O. "DPZ" means the Howard County Department of Planning and Zoning.

P. "Effective Date of this Agreement" means the last to occur of (i) the date the last Party executes this Agreement; or (ii) the date the last piece of legislation contemplated by Article V of this Agreement becomes effective.

Q. "Existing Central Library Site" means the property and improvements located at 10375 Little Patuxent Parkway and more particularly identified as Lot 5 Town Center Section 1, Area 3 as shown on Plat No. 7989 recorded among the Land Records comprised of approximately 3.2166 acres.

R. "Full Residential Build Out" means that point in time when a building permit has been issued for the 5,500th Net New Market Rate Dwelling Unit within the Downtown Columbia Plan area.

S. "Future Downtown Transit Center Site" means a suitable site for the construction of a new transit center for Downtown Columbia identified by HRD pursuant to the Downtown Columbia Plan, CEPPA 5.

T. "Land Development and Subdivision Regulations" means Title 16 of the Howard County Code in effect on the Effective Date of this Agreement, including without limitation the Adequate Public Facilities Act and the Howard County Design Manual.

U. "Land Records" means the land records of Howard County, Maryland.

V. "LIHTC" means federal low income housing tax credits administered through Internal Revenue Code Section 42.

W. "LIHTC Project" means a residential or mixed-use development containing Low Income Units.

X. "Low Income Unit" means a unit as described in Internal Revenue Code section 42(g)(2).

Y. "Market Rate Dwelling Unit" means a rental or for-sale dwelling unit developed in the Downtown Columbia Plan area which is not an Affordable Unit.

Z. "Metropolitan" means the Metropolitan Downtown Columbia development located within the Warfield Neighborhood in Downtown Columbia.

AA. "Middle Income Unit" means an Affordable Unit to be leased to tenants who earn a maximum of eighty percent (80%) of the Howard County median income ("AMI") (i.e. rental payment of 30% of gross income less a utility allowance) during the Restriction Period.

BB. "New Central Library Site" means a site located within the Crescent in the approximate location shown on Exhibit "C" attached hereto and incorporated herein or a comparable site suitable for a New Central Library building as mutually agreed by the County and HRD.

CC. "Net New" means the number of dwelling units that are permitted under the Downtown Revitalization approval process after the effective date of the Downtown Columbia Plan (including the dwelling units in The Metropolitan and Parcel C as described in Recital 5 above) in excess of the number of dwelling units that are shown on a site development plan for property located within Downtown Columbia that was approved prior to the effective date of the Downtown Columbia Plan.

DD. "Parcel C" means the development approved by SDP 14-024 within the Warfield Neighborhood in Downtown Columbia, as the same may be amended from time to time.

EE. "Planning Board" means the Planning Board for Howard County Maryland.

FF. "Property" means the real property in Downtown Columbia currently owned by HRD or its affiliates shown on Exhibit "A", and such additional property as provided in Section 9.12 of this Agreement.

GG. "Restriction Period" means the period of time that a unit located in Downtown Columbia must remain as an Affordable Unit, which shall be, in the case of Middle Income Units, a minimum of forty (40) years following the first occupancy of a Middle Income Unit within a building that contains one or more Middle Income Units; in the case of Low Income Units, a minimum of forty (40) years following the first occupancy of a Low Income Unit within a building that contains one or more Low Income Units, and in the case of Very Low Income Units, a minimum of forty (40) years following the rent commencement date under the master lease for each building that contains one or more Very Low Income Units as more particularly described in Section 4.2A below.

HH. "Subdivision Plat" means a final plat(s) of subdivision for the property or any phase or portion thereof, prepared in accordance with the County Code and approved by DPZ and/or the Planning Board.

II. "Section 8 Voucher" means a Housing Choice Voucher made available to persons meeting the qualifications of the program administered by the US Department of Housing and Urban Development.

JJ. "Temporary Fire Station Site" means a suitable site for the temporary relocation of the Banneker Fire Station consisting of approximately one (1) acre as shown on Exhibit "D" attached hereto and incorporated herein.

KK. "Toby's" means the Toby's Dinner Theatre site and improvements located at 5900 Symphony Woods Road and more particularly identified as Lot 1 Columbia Town Center Section 5 Area 1 as shown on Plat No. ____ recorded among the Land Records comprised of approximately 2.58 acres.

LL. "Very Low Income Unit" means a dwelling unit intended to be leased to tenants who either have a Section 8 Voucher or whose annual household income would qualify them for a Section 8 Voucher, as determined by the Commission.

MM. "Zoning Regulations" or "HCZR" means the Howard County Zoning Regulations, including, without limitation, the Downtown Revitalization provisions of the NT District, in effect on the Effective Date of this Agreement.

ARTICLE II
ZONING, LIMITATIONS, PLAN APPROVALS AND PLAN CONSISTENCY

2.1. Zoning and Plan Designations. The Property is zoned NT on the Howard County Zoning Map and is subject to the Downtown Revitalization provisions of the Zoning Regulations. Howard County agrees that it is in the best interests of Howard County and its citizens for the Property, during the term of this Agreement, to be developed in accordance with Howard County Law (as defined in Section 1.1.F above)

2.2. Developable Area. The physical area of the Property that is available for development consists of the entirety of the Property except for the areas which are precluded from development by the Land Development and Subdivision Regulations and Zoning Regulations. The Parties acknowledge that the exact size, shape and configuration of one or more of these areas may be adjusted based on final surveying, engineering, and design of each project. Except as provided in Section 8.1.C of this Agreement, this developable area may not be expanded, reduced, limited or otherwise altered by any legislative, executive or quasi-judicial action of Howard County including, but not limited to, a comprehensive rezoning, a piecemeal rezoning, or the enactment of ordinances, resolutions, rules or regulations, or the interpretation thereof (such as forest conservation or stream buffer ordinances), which would result in a reduction of the developable areas of the Property.

2.3. APFO Approval. HRD shall be required to obtain APFO Approval in accordance with the Howard County Law for each project or relevant portion thereof that HRD develops. If required as a condition of APFO Approval, HRD shall make or contribute funds towards certain road improvements to serve the project, and to convey any rights-of-way needed for the construction of the road improvements as required by APFO.

2.4. Other Development Approvals and Permits. All sections of the Property shall be required to obtain all applicable development approvals and all other applicable requirements of the County Law for land development, including but not limited to site improvement plans (for water, sanitary sewer, storm water management and storm drainage and sediment and erosion control improvements), Subdivision Plat(s) including any required dedications of land consistent with the County Law, building permits, and occupancy permits. Development of the Property shall also be required to obtain all applicable Maryland or federal approval(s) and permits.

2.5. Master Plan Consistency. Howard County and the Planning Board have determined that this Agreement is consistent with the Howard County General Plan and the Downtown Columbia Plan.

2.6. Affordable Housing. The Parties agree that, in consideration of the County's obligations contained in Section 8.1B, HRD agrees to provide affordable housing for HRD's development in Downtown Columbia in accordance with this Agreement. HRD's compliance with the terms of this Agreement shall fully satisfy and discharge any and all obligations of HRD, its affiliates, successors and assigns, to provide, construct, fund, facilitate or otherwise create affordable housing Downtown as a requirement in connection with the development by HRD, its affiliates, successors and assigns, of up to 5,500 Net New Market Rate Dwelling Units

Downtown during the term of this Agreement. Provided HRD is in compliance with the DRRA, the County will not unreasonably delay, condition, or withhold development approvals that are otherwise in accordance with applicable laws, rules and regulations based on the status of affordable housing construction Downtown.

2.7. Public Health, Safety and Welfare. Howard County has determined that development of the Property in accordance with the Zoning Regulations and County Code and the terms and provisions of this Agreement will ensure that the public health, safety and welfare of the citizens of Howard County are protected.

ARTICLE III
DEVELOPMENT REVIEW

3.1. Timely Development Review. Howard County agrees to use all commercially reasonable efforts in accordance with County Code to ensure that the processing and review of development applications, including but not limited to, APFO Approvals, final development plans, subdivision plans, site development plans, issuance of building permits and occupancy permits, are performed in an efficient, timely manner, without undue delay, consistent with the County's current development review process, and that such processing and review will not be subjected to any delay or any moratorium except in accordance with the terms of this Agreement.

3.2. Timely Submission of Documents. HRD agrees to use all commercially reasonable efforts to submit and process plans and legal documents for the items set forth in Section 3.1 above in a timely manner.

ARTICLE IV
IMPLEMENTATION OF THE DOWNTOWN COLUMBIA PLAN – AFFORDABLE HOUSING IN DOWNTOWN COLUMBIA

4.1. Affordable Housing.

HRD agrees to facilitate the construction of up to 900 Affordable Units at Full Residential Build Out in Downtown Columbia, in accordance with the following initiatives:

A. In conformity with Section 4.2 of this Agreement, HRD will designate at least three percent (3%), but not more than five percent (5%), of all Net New rental units in each building containing rental units (excluding the Metropolitan and the units to be constructed on Parcels C in the Warfield Neighborhood) (collectively, "the Metropolitan and Parcel C") that is constructed or otherwise provided on the Property as Very Low Income Units;

B. In conformity with Section 4.3 of this Agreement, HRD will ensure the inclusion of at least an additional three percent (3%), and not more than five percent (5%), of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) that is constructed or otherwise provided on the Property as Middle Income Units;

C. In conformity with Section 4.4 of this Agreement, HRD will facilitate the development of five LIHTC Projects in Downtown Columbia that are specifically designated to provide affordable rental housing to tenants whose annual income does not exceed approximately 50% of the Howard County AMI (approximately 60% of the Baltimore, Maryland MSA's AMI) as more particularly set forth in Section 4.4 below; and

4.2. Very Low Income Units.

A. In accordance with Sections 4.2B and 4.2C, HRD shall designate a minimum of three percent (3%), but not more than five percent (5%), of all Net New rental units within each building containing rental units constructed or otherwise provided on the Property (excluding the Metropolitan and Parcel C) to be Very Low Income Units in order to achieve approximately 200 Very Low Income Units on the Property at Full Residential Build Out. HRD shall lease such units in each building to the Commission for a period of at least forty (40) years in accordance with the terms of a master lease for each building to be entered into by and between HRD and the Commission and containing the terms set forth below, and the Commission may then in turn lease the units to individual households holding Section 8 Vouchers or at an income level of up to approximately 50% of the Howard County AMI. HRD shall lease the units to the Commission at a rate equal to 95% of the Section 8 Voucher Payment Standard ("VPS") for Columbia, MD (100% minus a 5% allowance for vacancy), which VPS rates for 2016 are $1,123 for an efficiency, $1,363 for a one bedroom, $1,713 for a two bedroom, and $2,195 for a three bedroom. The 95% of VPS payment to HRD will be guaranteed regardless of vacancy (unless caused by HRD) and will not be discounted by a utility allowance. The lease rate shall be adjusted annually in accordance with adjustments in the VPS for Columbia, MD, but in no event shall the lease rate be decreased by more than 3% annually or by more than 10% cumulatively from the initial lease rate for each building. Units developed as Very Low Income Units may include smaller square footages than Market Rate Dwelling Units and other design elements to reduce development cost and increase affordability, in accordance with the standards shown on Exhibit "B". The rent commencement date under each master lease with respect to a building under this Section 4.2A shall be the date that a use and occupancy permit is issued for that building. At the end of the Restriction Period applicable to any given building, the Very Low Income Units in that building may, in HRD's sole and absolute discretion, be released as Market Rate Dwelling Units, unless HRD and the Commission agree, in each of their sole and absolute discretion, to renew or extend the master lease for that building.

B. Within the first phase of development within the Crescent Area 3 development area, HRD will designate 3% of the Net New rental units within each building containing rental units as Very Low Income Units.

C. In future Downtown Columbia development phases, affordable designations will be made by HRD in accordance with the following schedule:

(i) For development up to and including the issuance of an occupancy permit for the 1,877th Market Rate Dwelling Unit, at least three percent (3%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) constructed or otherwise provided on the Property will be Very Low Income Units.

(ii) For development from the issuance of an occupancy permit for the 1,878th Market Rate Dwelling Unit up to and including the issuance of an occupancy permit for the 5,500th Market Rate Dwelling Unit, approximately five percent (5%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) constructed or otherwise provided on the Property will be Very Low Income Units, subject to Section 4.2.D below.

D. In HRD's sole discretion, projects developed under 4.2.C(i) above may include more than 3% Very Low Income Units, and projects developed under 4.2.C(ii) above may include more than 5% Very Low Income Units, in which case the number of surplus Very Low Income Units may be deducted from the future 5% requirement in projects developed under 4.2.C(ii), so long as the number of Very Low Income Units in each project is always equal to or greater than 3%. For example, if a 300 unit project developed under 4.2.C(i) contained 10 Very Low Income Units (one unit more than required), then a corresponding 300 unit project developed under 4.2.C(ii) could contain only 14 Very Low Income Units (one fewer than the 5% requirement).

4.3. Middle Income Units.

A. In addition to the units provided in Section 4.2 and in accordance with Sections 4.3B and 4.3C, HRD shall record in the Land Records a Declaration in the form attached hereto as Exhibit "F" in order to designate a minimum of 3%, but not more than 5%, of all Net New rental units in each building containing rental units constructed or otherwise provided on the Property (excluding the Metropolitan and Parcel C) to be Middle Income Units in order to achieve approximately 200 Middle Income Units on the Property at Full Residential Build Out. Units developed as Middle Income Units may include smaller square footages than Market Rate Dwelling Units and other design elements to reduce development costs and increase affordability, in accordance with the standards shown on Exhibit "B". Such units shall be leased to households earning up to 80% of Howard County AMI, adjusted for family size. Income qualification shall be performed by HRD or its designated building manager, and an annual compliance certification for the purpose of verifying household income for each leased Middle Income Unit may be requested in writing by the County or the Commission as its designee and must be provided in writing by HRD within thirty (30) days after the request is received.. Households leasing a Middle Income Unit may remain in the unit so long as their income does not exceed 100% of Howard County AMI for more than one year, in which case the building manager may either raise the rent to a market level and lease an alternative unit to a qualifying household at the restricted rent level, or relocate the original household to another unit and re-lease the Middle Income Unit to a qualifying household. HRD will execute and record a binding covenant on each parcel of property on which a building containing rental units is to be constructed, enforceable by CDHC, the Commission and the County, to require that the income qualification program and restricted rent levels shall be maintained for the Restriction Period. At the end of the Restriction Period, the units may, in HRD's sole and absolute discretion, be released as Market Rate Units.

B. Within the first phase of development within Crescent Area 3, HRD will designate 3% of the Net New rental units within each building containing rental units as Middle Income Units.

C. In future Downtown Columbia development phases, affordable designations will be made by HRD in accordance with the following schedule:

(i) For development up to and including the issuance of an occupancy permit for the 1,877th Market Rate Dwelling Unit, at least three percent (3%) of all Net New rental units in each building containing rental units (excluding the Metropolitan and Parcel C) that is constructed or otherwise provided on the Property will be Middle Income Units.

(ii) For development from the issuance of an occupancy permit for the 1,878th Market Rate Dwelling Unit up to and including the issuance of an occupancy permit for the 5,500th Market Rate Dwelling Unit, approximately five percent (5%) of all Net New rental units (excluding the Metropolitan and Parcel C) in each building containing rental units that is constructed or otherwise provide on the Property will be Middle Income Units, subject to Section 4.3.D below.

D. In HRD's sole discretion, projects developed under 4.3.C(i) above may include more than 3% Middle Income Units, and projects developed under 4.3.C(ii) above may include more than 5% Middle Income Units, in which case the number of surplus Middle Income Units may be deducted from the future 5% requirement in projects developed under 4.3.C(ii), so long as the number of Middle Income Units in each project is always equal to or greater than 3%. For example, if a 300 unit project developed under 4.3.C(i) contained 10 Middle Income Units (one unit more than required), then a corresponding 300 unit project developed under 4.3.C(ii) could contain only 14 Middle Income Units (one fewer than the 5% requirement).

4.4. Projects to be Developed Using Low Income Housing Tax Credits ("LIHTC"). HRD will develop, or facilitate the development of as provided herein, up to five LIHTC Projects in Downtown Columbia that are specifically designed to include Low Income Units, as follows:

A. *Downtown Fire Station – Temporary and Existing Site.*

(i) The County has determined to redevelop the Banneker Fire Station at its existing location at 5815 Banneker Road.

(ii) In accordance with CEPPA 9, HRD will lease the Temporary Fire Station site on a short term basis not longer than thirty (30) months to Howard County for a temporary relocation of the Banneker fire station (the "Temporary Fire Station") consisting of approximately one (1) acre located within Area 4 of the Crescent approximately as shown on Exhibit "D" at no cost to the County while the Banneker Fire Station site is being redeveloped (the "Lease"). HRD will Lease the site to Howard County upon the County's completion of construction documents and financing for the Temporary Fire Station. Subject to the relocation provision in Section 4.4E, HRD will record covenants, enforceable by CDHC and the Commission, on the Temporary Fire Station Site, limiting the site's development to the uses as contemplated below. Upon providing the Temporary Fire Station Site to the County for the temporary fire station use, HRD will have irrevocably satisfied its obligations regarding CEPPA 9 in full. HRD shall bear none of the costs of relocating the fire station to the Temporary Fire Station Site, inclusive of the costs of any property or other taxes levied against the Temporary Fire Station Site during the lease term during which it is used for the Temporary Fire Station.

(iii) The parties acknowledge that Howard County intends to convey the existing Banneker Fire Station site in fee simple to the Commission upon the Commission's completion of construction documents and financing for the Banneker Redevelopment (defined below). The parties acknowledge that the Commission intends to construct a new fire station and residential development on the Banneker Fire Station Site at no cost to HRD (the "Banneker Redevelopment"). The Banneker Redevelopment is intended to include approximately one hundred (100) Low Income Units as part of a mixed income development of approximately 200 units. The parties acknowledge that the conveyance of the Banneker Fire Station site to the Commission is subject to County laws and procedures for disposition of County property.

(iv) Following the issuance of a certificate of occupancy for the Banneker Redevelopment but in no event later than the expiration of the Lease, the County shall remove the Temporary Fire Station and restore the Temporary Fire Station Site to its original condition at no cost to HRD. Except as set forth below, the Temporary Fire Station Site shall then be developed by HRD or a venture between HRD and the Commission or other developer(s) with one of the following two (2) types of projects in HRD's sole discretion: (1) a Senior Affordable Project (defined below), or (2) provided that the Temporary Fire Station Site can be combined with the necessary adjacent land to enlarge the development parcel, a mixed-income LIHTC Project with approximately 90 Low Income Units. Alternatively, at any time HRD may convey the Temporary Fire Station site to the Commission in fee simple for zero dollars additional consideration. Additionally, HRD must convey the Temporary Fire Station Site to the Commission in fee simple for zero dollars additional consideration if HRD fails to meet any of the following milestones after completion of construction and issuance of a certificate of occupancy for the Banneker Redevelopment: (a) commence design within 1 year, (b) apply for financing within 2 years, or (c) close on its financing and commence construction of the housing project on the Temporary Fire Station Site within 3 years. Upon the conveyance of the Temporary Fire Station Site to the Commission under either scenario described in the preceding two sentences, the requirements of this Section 4.4A shall be deemed satisfied and HRD shall be relieved of any and all further obligations under this Section 4.4 A. "Senior Affordable Project" means a residential project containing Affordable Units designed for and restricted to occupancy by households having at least one member who is 55 years of age or older.

(v) If HRD is involved in the redevelopment of the Temporary Fire Station Site, or any alternative site pursuant to Section 4.4E below, HRD may seek 70% (9% Allocation) LIHTC allocations for the affordable housing portions of these projects, and if so then the County shall use commercially reasonable efforts to assist HRD in obtaining the 70%/9% LIHTC. HRD and/or the Commission may also seek 30% (4% Allocation) LIHTC, in which case the County shall use commercially reasonable efforts to assist HRD and/or the Commission in obtaining tax-exempt bond financing in conjunction with the 4% LIHTCs.

(vi) At any time after the County's issuance of a certificate of occupancy for one of the projects described in this Section 4.4A on the Temporary Fire Station Site or any alternative site pursuant to Section 4.4E below, within ten (10) days after HRD's request, the County shall execute and deliver to HRD a Certificate of Compliance confirming that the requirements of this Section 4.4A have been satisfied. Furthermore, upon conveyance of the Temporary Fire Station Site to the Commission under Section 4.4A(iv) above, the County and the Commission shall execute a Certificate of Compliance confirming that the requirements of this Section 4.4A have been satisfied.

B. Toby's Dinner Theatre Redevelopment.

Within sixty (60) days after receiving written notice from the Commission that it has reached a binding agreement with the owners of Toby's for the redevelopment of that facility, HRD will transfer to the Commission in fee simple approximately 0.44 acres of land (the "Toby's Adjacent Parcel"), at no cost, for the redevelopment of Toby's with future contemplated improvements consisting in concept of a new building for Toby's, a performing and visual arts facility, a parking structure and approximately 200 dwelling units. If for any reason the contemplated redevelopment is not completed within ten (10) years following the transfer, HRD shall have the option, in its sole discretion, to have the Toby's Adjacent Parcel revert to HRD's ownership, at no cost to HRD, by giving written notice to the owner of the Toby's Adjacent Parcel. This reverter right shall be included in the deed to the Commission. HRD will also record a suitable modification ("Modification") of any covenants restricting the development of the site so it may be developed as contemplated herein, and further will not make any other modification to such covenants except to facilitate the development contemplated herein, inclusive of an affordable housing component, which Modification will be enforceable by CDHC, the Commission and the County. The Parties acknowledge that any residential units constructed on the site are intended to be developed by the Commission as part of a mixed income project including approximately 50% Low Income Units. If the Commission fails to reach a binding agreement with the owners of Toby's for the redevelopment described above within three (3) years after the Effective Date of this Agreement, then HRD's obligations under this Section 4.4B shall terminate and HRD shall be free to develop the Toby's Adjacent Parcel without limitation (including, without limitation, any obligation to construct or designate Affordable Units thereon), subject to applicable law.

C. *Existing Library.*

(i) Not later than the date that is eighteen (18) months after the Effective Date of this Agreement (the "Library Election Deadline"), the County shall notify HRD in writing whether the County elects to pursue a land swap agreement with HRD (the "Library Land Swap Election"), whereby the County would (1) relocate the Central Library to the New Central Library Site and (2) convey the Existing Central Library Site to HRD for its redevelopment as a LIHTC Project in accordance with the following general terms or such other terms as agreed upon in writing by the Parties:

a. For zero dollars additional consideration, HRD would convey to the County the New Central Library Site (but with HRD retaining all air, subsurface, and ground rights in and to the New Central Library Site to the extent not required for the construction of the New Central Library).

b. HRD or the County would then construct a New Central Library on the New Central Library Site using County funds. The New Central Library may incorporate a Pre-K instructional use (not to exceed 3,000 square feet) with associated outdoor space. Parking for the New Central Library shall also be constructed using County funds or alternatively may be provided in a shared public parking garage financed by the County through, for example, tax increment financing. The New Central Library shall be structurally and operationally compatible with HRD's utilization of the air, subsurface and ground rights retained by HRD on the New Central Library Site, and HRD shall have the right to approve the County's plans for the New Central Library to ensure such compatibility. To the extent that structural upgrades are required in order for HRD to utilize the air or subsurface property rights, HRD shall pay for such upgrades on a prorated basis. Prior to construction of the New Central Library, HRD and the County shall execute and record a reciprocal easement agreement or mixed-use condominium regime in commercially reasonable form, providing for shared access, support and such other terms as are customary in mixed-use projects where there is a similar vertical and/or horizontal division of property;

c. Within thirty (30) days following the issuance of a use and occupancy certificate for the New Central Library, and except as set forth below, the Existing Central Library Site would be conveyed to HRD and redeveloped by HRD or a venture between HRD and the Commission or other developer(s) as a mixed-income residential or mixed-use project containing approximately 300 total units, including approximately 50% Low Income Units, and which may also include mixed-uses such as a Pre-K instructional use (not to exceed 3,000 square feet) with associated outdoor space if so desired by the County.

Notwithstanding anything to the contrary above, the County shall not exercise the Library Land Swap Election unless the Howard County Council has adopted a resolution approving the land swap and the terms of this Section 4.4C.

(ii) If the County has timely exercised the Library Land Swap Election, then the Parties shall negotiate and execute the land swap agreement within ninety (90) days after such election and HRD shall convey the New Central Library Site to the County within thirty (30) days after both of the following conditions have been satisfied (collectively, the "Library Land Swap Conditions"): (1) the County shall have placed the New Central Library in the County's CIP Budget, which CIP Budget shall provide for the appropriation of 100% of the construction costs for the New Central Library and commencement of construction no later than ____ (___) fiscal years thereafter, and (2) the County shall have established a schedule for the development of the New Central Library providing for commencement of construction no later than December 31, 2021.

(iii) If the County fails to timely exercise the Library Land Swap Election, or if the County does timely exercise the Library Land Swap Election but the

Library Land Swap Conditions have not been satisfied within twelve (12) months after the Library Land Swap Election is exercised, then HRD shall have the right, at its sole option, to (1) continue to keep the New Central Library Site available for a land swap for the New Central Library once County funding is in place and a development schedule has been established, (2) propose an alternative, comparable site for the New Central Library, subject to approval by the County, which approval shall not be unreasonably withheld, conditioned or delayed, or (3) meet with the County to develop an alternative for the 150 Affordable Units anticipated to be constructed on the Existing Central Library Site. By mutual agreement of the Parties, a possible alternative for the additional Affordable Units could include, but is not limited to, increasing the percentage of Very Low Income Units and/or Middle Income Units in future market rate projects, increasing the number of Low Income Units on any of the undeveloped LIHTC Project sites, establishing new LIHTC Project site(s), payment of fees consistent with the original Downtown Columbia Plan or other agreed upon payment, or other means mutually agreed upon by the Parties. If HRD elects alternative (3) above, the County shall meet with HRD and diligently work to develop an alternative plan. The County shall not unreasonably withhold its approval of any alternative plan proposed by HRD which provides 150 Affordable Units. If an alternative plan is not developed by the time that a certificate of use and occupancy is issued for the 3,500th Market Rate Dwelling Unit approved after the date of this Agreement, then HRD agrees that it will not draw building permits or commence construction on any additional Market Rate Dwelling Units above the 3,500th Market Rate Dwelling Unit until an alternative plan is agreed upon, so long as the County has not unreasonably withheld, conditioned or delayed its approval of any alternative plan proposed by HRD.

At such time as the County shall have agreed to an alternative site for the New Central Library or an alternative plan for the 150 Affordable Units anticipated to be constructed on the Existing Central Library Site, HRD shall thereafter have the right to develop the New Central Library Site free of all limitations (including, without limitation, any obligation to construct or designate Affordable Units thereon), but subject to applicable law.

(iv) Alternatively, at any time after the Existing Central Library Site has been conveyed to HRD, HRD may convey the Existing Central Library Site to the Commission for zero dollars additional consideration. Additionally, HRD must convey the Existing Central Library Site to the Commission in fee simple for zero dollars additional consideration if HRD fails to meet any of the following milestones after the New Central Library has been completed and a use and occupancy certificate has been issued: (a) commence design within 1 year, (b) apply for LIHTC financing within 2 years, or (c) commence construction of a LIHTC Project on the Existing Central Library Site within 3 years. Upon the conveyance of the Existing Central Library Site to the Commission under either scenario described in the preceding two sentences, HRD shall be relieved of all further obligations to provide the Affordable Units contemplated under this Section 4.4C.

(v) If HRD is involved in the redevelopment of the Existing Central Library Site, HRD may seek 70% (9% Allocation) LIHTC allocations for the affordable housing portion of this project, and if so then the County shall use reasonable commercial efforts to assist HRD in obtaining the 70%/9% LIHTC. HRD or any of the other Parties may also seek 30% (4% Allocation) LIHTC, in which case the County agrees to use reasonable commercial efforts to assist the Parties in obtaining tax-exempt bond financing in conjunction with the 4% LIHTCs.

D. *Future Downtown Transit Center Site.*

(i) The Downtown Columbia Plan envisions a new transit center as part of the redevelopment of Downtown Columbia. The December 2011 Nelson Nygaard transit study ("Study") provided to the County by HRD in satisfaction of CEPPA 5 recommended locating the new transit center in the Symphony Overlook Neighborhood, generally between the Mall and the Corporate Center buildings. In accordance with CEPPA 14, HRD will identify the site (the "Transit Center Site") prior to approval of the first SDP in the Symphony Overlook Neighborhood and will provide the Transit Center Site to the County by fee simple transfer at no cost or by long term lease of at least 99 years for a nominal sum for the County's construction of a new transit center, together with approximately 60 Low Income Units to be located on the same site immediately above the transit center, provided, however, HRD shall retain all subsurface and air rights in and to the Transit Center Site. HRD will transfer or lease the Transit Center Site to Howard County upon the County's completion of construction documents and financing for the transit center. All costs associated with the conveyance, excluding attorney's fees, but including recording fees, title insurance, transfer and recordation taxes, if any, any other settlement costs shall be paid by the County. HRD will record a covenant on the site prior to its conveyance, enforceable by CDHC, the Commission and the County, limiting its development to the uses as contemplated herein. The Transit Center Site will be within the Symphony Overlook Neighborhood generally consistent with the location identified in the Study unless otherwise identified by mutual agreement of the Parties. HRD will retain all air and subsurface development rights which are not needed for the County's construction of the transit center and the 60 Low Income Units, and the County's construction of the transit center and Low Income Units shall be at no cost to HRD, except that HRD shall bear any additional cost of making the transit center structurally compatible with HRD's utilization of the air and subsurface rights. The transit center must be structurally and operationally compatible with HRD's utilization of the air and subsurface rights retained by HRD on the Transit Center Site, and HRD shall have the right to approve the County's plans for the transit center to ensure such compatibility. Prior to the County's commencement of construction on the Transit Center Site, HRD and the County shall execute a reciprocal easement agreement or mixed-use condominium regime in commercially reasonable form, providing for shared access, support and such other terms as are customary in mixed-use projects where there is a similar horizontal or vertical division of property. HRD and the County shall cooperate with one another in their development activities on the Transit Center Site so that neither party unreasonably interferes with the other party's development thereof. HRD's provision of a site for a new transit center as described herein will be deemed to have irrevocably satisfied CEPPA 14. Upon such conveyance, HRD shall be relieved of any further obligations under this Section 4.4D.

E. *Relocation of LIHTC Sites.*

(i) Notwithstanding anything to the contrary in this Agreement, if a LIHTC Relocation Trigger Event (defined below) shall occur, then HRD, in its sole discretion, may propose a comparable substitute location for the applicable LIHTC Project, subject to County approval which shall not be unreasonably withheld, conditioned or delayed. Upon County approval, the relocated project shall be developed on the approved alternative site and HRD shall be free to develop the site previously identified for such project free of all limitations (including, without limitation, any obligation to construct or designate Affordable Units thereon), but subject to applicable law.

(ii) "LIHTC Relocation Trigger Event" shall mean the occurrence of any of the following:

a. With respect to the Temporary Fire Station, if construction has not commenced on the Temporary Fire Station Site within eighteen (18) months after the date of this Agreement,

b. With respect to the new transit center, if the site plan approvals and financing for the transit center have not been completed within twenty-four (24) months after the County's approval of the first site development plan in the Symphony Overlook Neighborhood or, if after the transfer or lease of the Transit Center Site to the County, the County has not commenced construction of the new transit center within twenty-four (24) months after such transfer or lease.

c. With respect to the New Central Library Site, if prior to the County's exercise of the Library Land Swap Election, HRD in its sole discretion elects to develop the New Central Library Site with a use which does not include the New Central Library.

(iii) If the County unreasonably withholds its consent to any alternative site, then HRD's obligations under Sections 4.4A, 4.4C or 4.4D, as applicable, shall be deemed fully satisfied; provided, however, if a replacement site for the Existing Central Library is not mutually agreed upon by the County and HRD, then the Parties shall work together in good faith to identify a means to develop an alternative for the 150 Affordable Units anticipated from the Existing Central Library Site as discussed in Section 4.4C(ii) above. HRD agrees that it will not draw building permits or commence construction on any additional Market Rate Dwelling Units above the 3,500th Market Rate Dwelling Unit approved after the date of this Agreement until an alternative plan for the 150 Affordable Units anticipated from the Existing Central Library Site is agreed upon, so long as the County has not unreasonably withheld its approval of any alternative plan proposed by HRD.

(iv) The parties further agree that (a) the parcel described in Exhibit E attached hereto (the "Alternative Temporary Fire Station Site") is an acceptable alternative site for the Temporary Fire Station Site, and (b) if within (18) months after designating the Alternative Temporary Fire Station Site as the site for the Temporary Fire Station, construction has not commenced on the Alternative Temporary Fire Station Site, HRD, in its sole discretion, may propose a comparable second alternative site for the Temporary Fire Station (the "Second Alternative Temporary Fire Station Site"), subject to approval by the County, which approval shall not be unreasonably withheld, conditioned or delayed.

(v) The deed of the Transit Center Site to the County shall contain an automatic reverter to HRD in the event that the LIHTC Relocation Trigger Event applicable to the Transit Center Site shall occur.

(vi) Prior to formally proposing to the County any alternative site under this Section 4.4E, HRD shall meet with CDHC and the Commission to discuss such proposed alternative site; provided, however, (i) CDHC and the Commission shall not have any approval rights with respect to any alternative site, and (ii) in all events the Alternative Temporary Fire Station Site shown on Exhibit E attached hereto shall be deemed acceptable and no consultation with CDHC or the Commission shall be required for a relocation to that site.

F. *LIHTC Unit Counts, Declaration of Covenants*. The parties acknowledge that unit counts for the LIHTC Projects listed in this Agreement are based on approximate site areas and an assumed density similar to the Metropolitan project recently completed Downtown of approximately 100 units per acre. All LIHTC Project sites will require development approvals from the County. To the extent that any of HRD or its Affiliates acts as the developer of any of the LIHTC Project sites, it shall use commercially reasonable efforts to design to and obtain approval for the unit counts contained herein and the densities feasible for the sites. In the event that either of the Temporary Fire Station or Existing Library sites are not conveyed directly to the Commission, then the number of Low Income Units to be provided and/or facilitated by HRD and the percentage of Low Income Units on each LIHTC Project site developed shall be the number and percentage ultimately approved by the Planning Board on the LIHTC Project sites identified herein but not to exceed the number and percentage specified herein. The limits on income and identity of the units subject to restriction shall be specified in recorded declarations filed by the County or HRD which restrictions shall continue for the duration of the Restriction Period. At the end of the Restriction Period, the units may be released as Market Rate Units. Units developed as Affordable Units may include smaller square footages than Market Rate Dwelling Units and other design elements to reduce development cost and increase affordability, in accordance with the standards shown on Exhibit "B".

G. *Gap Financing*. HRD shall establish a fund in an amount not to exceed $3,200,000 (the "HRD Fund") for the following purposes:

(i) to loan up to $2,800,000 to the Commission to develop affordable housing in or near Downtown Columbia, and

(ii) to provide "gap financing" for the LIHTC projects described in this Section 4.4, subject to the terms and conditions set forth in this Section 4.4G below. To the extent that, following commercially reasonable efforts by the Commission to secure all traditional sources of financing for LIHTC projects, the funding available for the development of any of the LIHTC projects remains less than the amount needed to make the project financially feasible, then HRD shall provide a loan or grant to the project so as to finance the "gap," subject to the following:

a. To the extent it has funds available from the Fund, the CDHC shall commit to provide a loan or grant of up to $10,000 for each Affordable Unit in the project; and

b. HRD's financing shall not exceed $6,400 for each Affordable Unit in the project; and

c. HRD's financing may be in the form of a loan, the repayment of principal and/or interest of which shall be deferred as necessary in order to make the project financially feasible and to pay any deferred developer fee, and which shall provide for the return of capital plus a modest return at the time of sale or refinance of the project; and

d. HRD's financing under this Section 4.4G(ii) shall be made available only to the extent that the HRD Fund is not utilized for the affordable housing provided under Section 4.4G(i) above.

(iii) HRD's aggregate financial responsibility under this paragraph H shall not exceed $3,200,000.

(iv) HRD may, at its sole option and at any time during the term of this Agreement, deliver the remaining balance of the HRD Fund to CDHC for its use in supporting the goals of the Downtown Columbia Plan of providing affordable housing opportunities for households of eligible income. Furthermore, in the event that HRD makes the loan to the Commission described in Section 4.4G(i) above, within 30 days after the closing on such loan, HRD shall deliver the remaining balance of the HRD Fund to CDHC for its use in supporting the Downtown Columbia Plan affordable housing goals.

I. As an alternative to developing one or more of the LIHTC Projects or to conveying the property on which an LIHTC Project was to be constructed as described above, HRD, in its sole discretion, may include a corresponding number of Low Income Units as a stand-alone project or as part of a project containing Market Rate Dwelling Units.

ARTICLE V
AGREEMENT CONTINGENT ON LEGISLATION

5.1. Agreement Contingent on Approval of Legislation. No obligation shall be created on any Party hereto unless and until the approval of all legislation addressed substantially in the form attached to this Agreement as Exhibit "G".

ARTICLE VI
SURVIVAL AND TRANSFER OF OBLIGATION

6.1. Nature, Survival, and Transfer of Obligations. HRD agrees that this Agreement shall run with the land and be binding upon and inure to the benefit of HRD and its affiliates, and their respective successors and assigns, and upon any and all successor owners of record of all or any portion of the Property (except owners of an individual condominium dwelling unit improved as part of the Project and pursuant to a validly issued building permit). To assure that all such successors, assigns, and successor owners have notice of this Agreement and the obligations created by it, HRD agrees that it shall:

A. Have this Agreement recorded among the Land Records within twenty (20) days after the Effective Date of this Agreement;

B. Incorporate, by reference, this Agreement into any and all real estate sales contracts entered into after the Effective Date of this Agreement for the sale of all or any portion of the Property; and

C. Prior to the transfer of all or any portion of the Property (except the transfer of an individual condominium dwelling unit solely for use as a private residence), or any equitable interest therein, require the transferee to execute an enforceable written agreement, in a form reasonably satisfactory to Howard County, binding transferee to this Agreement.

6.2. Binding Upon Successors and Assigns. The Parties agree that all obligations assumed by it under this Agreement shall be binding on it, its agencies, employees, and governmental units, the Planning Board and its and their respective successors and assigns.

ARTICLE VII
BREACH AND REMEDIES

7.1. Disputes. This Agreement shall be governed by the law of the state of Maryland, not including its choice of law rules, and the parties hereby agree to venue in and the exclusive jurisdiction of the Circuit Court of Maryland for Howard County.

EACH PARTY KNOWINGLY, VOLUNTARILY AND INTENTIONALLY WAIVES ITS RIGHT TO A TRIAL BY JURY TO THE FULLEST EXTENT PERMITTED BY LAW IN ALL ACTIONS AND OTHER LEGAL PROCEEDINGS ARISING OUT OF OR RELATING TO THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED HEREBY. THIS WAIVER APPLIES TO ALL ACTIONS AND OTHER LEGAL PROCEEDINGS, WHETHER SOUNDING IN CONTRACT, TORT OR OTHERWISE

7.2. Breaches by HRD. If HRD shall fail or refuse to perform its obligations as required, then after sixty (60) days from receipt of written notice provided to HRD by Howard County indicating the nature of the default and if HRD has not commenced action to cure the default and diligently pursued the same, the County may seek equitable relief to enforce the terms and conditions of this Agreement either through a decree for specific performance or an injunction. Should the remedies of specific performance or injunction not be available to Howard County because of actions of HRD, then Howard County shall be entitled to bring a legal action for damages. In all events, this Agreement shall not be terminated except as provided in Section 9.5 below.

7.3. Breaches by Howard County. If Howard County shall fail or refuse to perform its obligations as required, then after sixty (60) days from receipt of written notice provided to Howard County by HRD indicating the nature of the default and if Howard County has not commenced action to cure the default and diligently pursued the same, HRD may seek equitable relief to enforce the terms and conditions of this Agreement either through a decree for specific performance or an injunction. Should the remedies of specific performance or injunction not be available to HRD because of actions of Howard County, then HRD shall be entitled to bring a legal action for damages.

ARTICLE VIII
EFFECT OF DEVELOPMENT REGULATIONS

8.1. Effect

A. HRD must comply with all federal, Maryland and local laws existing on the Effective Date of this Agreement.

B. (i) Except as provided in Section 8.1.C herein, the laws, rules, regulations and policies which govern the Development, use, density and intensity of the Property described on Exhibit A hereto shall be the laws, rules, regulations and policies in force on the Effective Date of this Agreement, excluding any State or Federally mandated requirements and the Howard County Life Safety Code. So as to provide clarity in this respect, the parties agree that such governing laws, rules, regulations and policies include the Downtown Columbia Plan, Zoning Regulations, and requirements for affordable housing, adequate public facilities, Development phasing, CEPPAs and parking.

(ii) With respect to any other property against which this Agreement is recorded pursuant to Section 9.12 below, the laws, rules, regulations and policies which govern the use, development, density or intensity of such property shall be the laws, rules, regulations and policies in force on the date that this Agreement is recorded in the Land Records against such property, except that the affordable housing obligations, if any, for the development of such property shall be established by this Agreement.

C. If Howard County determines that compliance with a law(s) enacted or adopted after the Effective Date of this Agreement is essential to ensure the health, safety or welfare of residents of all or part of Howard County, this Agreement may not prevent Howard County from requiring HRD to comply with those laws, rules, regulations and policies.

D. In the event Howard County takes any action to subject the Property to any new or modified law(s) after the Effective Date of this Agreement under Section 8.1.C above or modifies the Zoning or Comprehensive Plan land use designations of the Property or any portion thereof, as set forth in this Agreement, HRD shall be relieved of any remaining obligation under this Agreement. Additionally, HRD shall be relieved of any obligation subsequent to the date of the Howard County action.

8.2. Approvals Required. HRD shall obtain all approvals necessary under any provision of Maryland or federal law before proceeding with development of the Property. This Agreement does not address any approvals required by Maryland or federal law, and HRD shall be responsible for obtaining any approvals required by local, Maryland, or federal law.

8.3. Fees. HRD shall pay all fees (specifically including but not limited to excise taxes, surcharges and water and sewer connection fees) required by the County at the time of the

Effective Date of this Agreement at the rate in effect at the time the fee is due. Nothing in this Agreement shall be construed as a waiver or reduction of any such fee except as provided herein.

8.4. Growth Control Delay. In the event that a "Growth Control Delay" (as hereinafter defined) is imposed, then any deadline concerning (i) HRD's obligation to construct, install, fund or post financial guarantees for the infrastructure improvements required pursuant to any development approval for the development of all or a portion of the Property in accordance with the phasing requirements set forth therein shall be extended for one (1) additional day for each day during which such Growth Control Delay exists, and the development shall not be subjected to any additional regulation, legislation, limitation, phasing, contributions, penalties or delay in construction, or issuance of zoning certificates/building permits solely as a result of the Growth Control Delay. The term "Growth Control Delay" shall mean any and all delays caused during APFO Approval and/or the implementation or declaration by the United States Government, State of Maryland, Howard County, and/or any agency, department, division and/or branch thereof for purposes of a limitation, prohibition, restriction and/or phasing upon the review, recording, development and construction as intended by HRD, which is deemed to be essential to ensure the public health, safety, and welfare of County residents as determined in accordance with Section 8.1.C above.

ARTICLE IX
MISCELLANEOUS

9.1. Time of Essence. Time is of the essence in the performance of all terms and provisions of this Agreement.

9.2. Term.

A. This Agreement shall constitute covenants running with the land and shall run with and bind the Property. This Agreement shall terminate and be of no further force or effect forty years (40) after the Effective Date, unless extended by an amendment to this Agreement complying with all procedures required in this Agreement, the County Ordinance and Maryland Law, unless extended pursuant to Section 9.5 below, unless terminated pursuant to Section 8.1 above or unless terminated by agreement of the Parties or as permitted by law.

B. Nothing in this Agreement shall be construed to supersede the term(s) as set forth in any other agreement(s) between any of the Parties, except with respect to the obligation of HRD to provide or provide assistance for the provision of affordable housing units within Downtown Columbia.

9.3. Notices. All notices and other communications in connection with this Agreement shall be in writing and shall be deemed delivered to the addressee thereof (I) when delivered in person on a business day at the address set forth below; (2) on the third business day after being deposited in any main or branch United States post office for delivery by properly addressed, postage prepaid, certified or registered mail, return receipt requested, at the address set forth below; or (3) upon delivery by any commercial express or next day delivery service, properly addressed and all charges prepaid, at the address set forth below.

Notices and communications to HRD shall be addressed and delivered to the following address:

Galleria Tower One, 22nd Floor
13355 Noel Road
Dallas, Texas 75240
Attention: General Counsel
Telephone: (214) 741-7744
peter.riley@howardhughes.com

with a copy to:

John E. DeWolf, III
Senior Vice President
Howard Hughes Corporation
10480 Little Patuxent Parkway, Suite 400
Columbia, Maryland 21044

Notices and communications to Howard County shall be addressed and delivered to the following address:

Howard County Executive
3430 Courthouse Drive
Ellicott City, MD 21043

With a copy to:

Howard County Solicitor
3430 Courthouse Drive
Ellicott City, MD 21043

Chair, Howard County Council
3430 Courthouse Drive
Ellicott City, MD 21043

Director, Department of Planning and Zoning
3430 Courthouse Drive
Ellicott City, MD 21043

By notice complying with the requirements of this Section, any Party shall have the right to change the address or addressee or both for all future notices and communications to such Party, but no notice of a change of address shall be effective until actually received.

9.4. Amendments. The Parties to this Agreement may amend the Agreement by mutual consent after Howard County holds a public hearing and complies with all applicable laws of the County Ordinance concerning amendment of a Development Rights and Responsibilities Agreement. All amendments to this Agreement shall be in writing and shall be executed by each of the Parties hereto. Unless the Planning Board determines that the proposed amendment is consistent with the General Plan and the Downtown Columbia Plan, the Parties may not amend this Agreement.

9.5. Termination or Suspension. The Parties to this Agreement may terminate or suspend the Agreement by mutual consent after Howard County holds a public hearing and complies with all applicable laws concerning termination or suspension of a Development Rights and Responsibilities Agreement as set forth in the Howard County Code. If Howard County determines that a suspension or termination is essential to ensure the public health, safety or welfare, as determined in accordance with Section 8.1.C above, Howard County may suspend or terminate this Agreement following a public hearing. Any such unilateral termination of this Agreement by Howard County shall not in any way affect the validity of any development approvals which have been obtained for the Property, including, but not limited to, APFO Approvals, final development plan approvals and site development plan approvals. Furthermore, if this Agreement is suspended under this Section 9.5, then the term of this Agreement as set forth in Section 9.2 above shall be extended by the same number of days that this Agreement is suspended.

9.6. Authority to Execute.

A. The Parties hereby acknowledge and agree that all required notices, meetings, and hearings have been properly given and held by Howard County with respect to the approval of this Agreement and agree not to challenge this Agreement or any of the obligations created by it on the grounds of any procedural infirmity or any denial of any procedural right. Each of the Parties hereby warrants and represents to the other Parties that the persons executing this Agreement on its behalf have been properly authorized to do so. Each of the Parties agrees not to challenge this Agreement of any of the obligations created by it on grounds that any of the other Parties lacked authority to enter into all or a portion of this Agreement.

B. HRD hereby warrants and represents to the other Parties that (i) it or its affiliates is the fee simple, record owners of the Property; (ii) that it has the right, power and authority to enter into this Agreement and to agree to the terms, provisions, and conditions set forth herein and to bind the Property as set forth herein, (iii) that all legal actions needed to authorize the execution, delivery and performance of this Agreement have been taken, and (iv) that it has been duly represented by attorneys.

9.7. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Maryland.

9.8. Consent to Jurisdiction. The Parties irrevocably consent to the jurisdiction of the Circuit Court for Howard County, Maryland.

9.9. Remedies Cumulative. Each right, power and remedy of a Party provided for in this Agreement, or any other agreement between the Parties, now or hereafter existing, shall be cumulative and concurrent and in addition to every other right, power or remedy provided for in this Agreement or any other agreement between the Parties, now or hereafter existing.

9.10. Severability. In case any one or more of the provisions contained in this Agreement shall for any reason be held invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of the Agreement, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained in this Agreement.

9.11. Interpretation. All headings are inserted in this Agreement only for convenience and ease of reference and are not to be considered in the construction or interpretation of this Agreement. Unless the context clearly requires otherwise: (a) words such as "include", "including", or "such as" shall be interpreted as if followed by the words "without limitation"; and (b) any reference to an Article, Section, or other subdivision, or Exhibit, is intended to refer to an Article, Section, or other subdivision, or Exhibit, of this Agreement. In the event of any inconsistency between the text of this Agreement and any Exhibit attached hereto, the text shall govern.

9.12. Recordation. HRD shall record this Agreement in the Land Records against the Property identified on Exhibit A attached hereto within 20 days after the day on which the parties execute this Agreement. In addition, at any time during the term of this Agreement, HRD shall have the right to record this Agreement against other property in Downtown Columbia that is not identified on Exhibit A hereto but which HRD or its affiliates own or have an equitable interest in, and upon such recordation, development of such property shall be subject to the terms of this Agreement. HRD shall provide the County with a copy of the recorded Agreement promptly after such recordation. Upon recordation of this Agreement against such additional property, the additional property shall be deemed a part of the Property and shall be subject to the terms of this Agreement. Notwithstanding anything to the contrary in this Section, if HRD records this Agreement against any real property in which HRD or its affiliates hold merely an equitable interest at the time of such recordation but fail to acquire fee ownership thereof within three (3) years after such recordation, then such property shall be deemed automatically released from this Agreement on the expiration of such three (3)-year period.

9.13. Appeals. Both Maryland law and the Howard County Law may allow any person aggrieved by this Agreement to file an appeal. If the effect of the decision in such Appeal revises this Agreement in any way, any Party to this Agreement may terminate the Agreement by providing notice to all Parties within thirty (30) days of the date that the decision in the appeal becomes final and all appeals thereof have been finally determined.

9.14. No Obligation to Approve. This Agreement shall not be interpreted or construed to impose any legal obligation on Howard County or any of its boards, agencies, commissions or employees to approve any development, use, density or intensity other than as provided specifically in this Agreement.

9.15. No Third Party Beneficiary Status. The Parties specifically agree that this Agreement is not intended to create in the public or any member thereof, nor in the Commission, CDHC or any other person or entity, third party beneficiary status in connection with the performance of the obligations under this Agreement.

9.16. Lien holders. All persons with a lien interest in the Property have executed this Agreement, and those lien holders with a power of sale have subordinated such liens to the position of Howard County under this Agreement.

9.17. Each party acknowledges that such party and its counsel, after negotiation and consultation, have reviewed and revised this Agreement. As such, the terms of this Agreement shall be fairly construed and the usual rule of construction, to wit, that ambiguities in this Agreement should be resolved against the drafting party, shall not be employed in the interpretation of this Agreement or any amendments, modifications or exhibits hereto or thereto.

9.18. Further Assurances. Within 15 days after a party's request, the other party shall execute such further assurances of this Agreement as may be necessary or desirable to effectuate the intent and purposes of this Agreement. Without limiting the generality of the preceding sentence, in each instance under Section 4.4 in which HRD has proposed, and the County has approved, a substitute site for a LIHTC Project, the County shall execute and deliver to HRD, within ten (10) days after HRD's request, a recordable release of the previously designated site from the obligations of this Agreement, the form of which shall be reasonably acceptable to HRD.

EXHIBITS:

A – The Property
B – Downtown Columbia Affordable Housing Guidelines
C – New Central Library Site
D – Temporary Fire Station Site
E – Alternative Temporary Fire Station Site
F – Middle Income Declaration of Covenants
G – Downtown Columbia Plan

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, the Parties have hereunto set their hands on the date first above written.

WITNESS/ATTEST	HOWARD RESEARCH AND DEVELOPMENT CORPORATION
______________________	______________________ (SEAL)
______________________	______________________ (SEAL)
ATTEST:	HOWARD COUNTY, MARYLAND
______________________ ______________________ Chief Administrative Officer	BY: ______________________ (SEAL) Allan H. Kittleman Howard County Executive

APPROVED AS TO FORM AND LEGAL SUFFICIENCY

this ___ day of _______ 2016.

____
Gary Kuc
County Solicitor

[Notaries on Following Pages]

STATE OF MARYLAND,

____________ COUNTY, TO WIT:

I HEREBY CERTIFY that on this day of 2016, before me, the subscriber, a Notary Public of the State of Maryland, in and for the County aforesaid, personally appeared ____________________________, representative for HOWARD RESEARCH AND DEVELOPMENT CORPORATION, personally known to me or proven to be the individual named herein and executed this Agreement for the purposes stated therein.

AS WITNESS my Hand and Notarial Seal.

____
Notary Public

My Commission Expires: ________

STATE OF MARYLAND,

____________ COUNTY, TO WIT:

I HEREBY CERTIFY that on this day of 2016, before me, the subscriber, a Notary Public of the State of Maryland, in and for the County aforesaid, personally appeared ALLAN H. KITTLEMAN, the County Executive for HOWARD COUNTY, MARYLAND, who acknowledged the same to be the act of the County and that he executed the foregoing Agreement for the purposes therein contained by signing in my presence the name of Howard County, Maryland as County Executive.

AS WITNESS my Hand and Notarial Seal.

____
Notary Public

My Commission Expires: ________

ATTORNEYS' CERTIFICATION

THIS IS TO CERTIFY that the undersigned are members, in good standing, of the Bar of the Court of Appeals of Maryland, and that the within instrument was prepared by the undersigned or under their supervision.

____

Upon Recordation Please Return To:

Todd D. Brown, Esq.
Linowes and Blocher LLP
7200 Wisconsin Avenue
Suite 800
Bethesda, MD 20814

LIENHOLDER CONSENTS AND SUBORDINATION OF INTERESTS

The undersigned lienholder does hereby consent to the aforesaid Agreement, and by the signature of its Trustee, does hereby agree that such instrument shall be subordinate to and shall survive any sale under its Deed of Trust dated ___________ and recorded among the Land Records of Howard County, Maryland in Liber ___ folio __.

WITNESS:

____

<u>**Exhibit "A"**</u>

The Property

Exhibit A

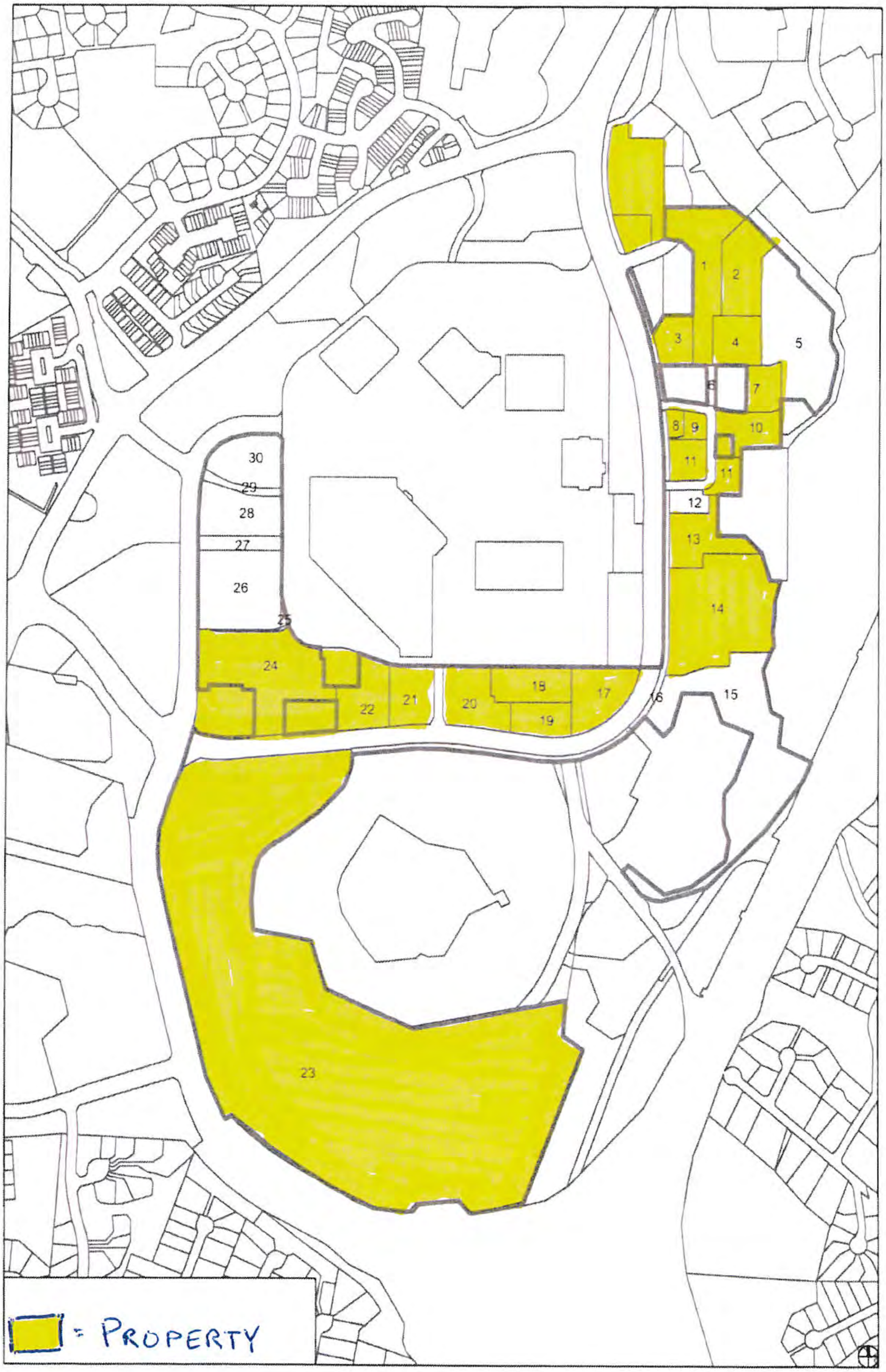

1
2
3
4
5
6
7
8
9
10
11
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
= PROPERTY

Exhibit "B"

Downtown Columbia Affordable Housing Guidelines

The guidelines below apply to the Middle Income (80% AMI) and Very Low Income (30% AMI) units (jointly termed "Affordable Units") in all HHC market rate buildings to be developed in Downtown Columbia, unless otherwise stated.

1. Location
   The location of affordable units in each building shall not be congregated into one area of the building, and shall be dispersed to the extent possible taking into consideration design constraints. Affordable Units may be stacked vertically.
2. Unit Mix

   The unit mix of the Affordable Units in each building shall be similar to the overall unit mix of the building within 30% of the unit mix percentage for each unit type. The table below provides two examples of permissible unit quantities in a 300-unit building which provides 6% Affordable Units (3% Middle Income and 3% Very Low Income Units):

	Total Building		**Scenario One**			**Scenario Two**		
Unit Type	Total Quantity	Unit Mix	Quantity AUs	%(max)	Relative Ratio	Quantity AUs	% (min)	Relative Ratio
Studio	45	15%	3	16.7%	+11%	2	11.1%	(-26%)
1bd	135	45%	9	50%	+11%	7	38.9%	(-14%)
2bd	90	30%	4	22.2%	(-26%)	7	38.9%	+30%
3bd	30	10%	2	11.1%	+11%	2	11.1%	+11%
Total	300	100%	18	100%		18	100%	

3. Unit Size

   The minimum gross floor area for Affordable Units shall be:

   Studio/Efficiency: 350 square feet
   1 Bedroom Unit: 500 square feet
   2 Bedroom Unit: 650 square feet
   3 Bedroom Unit: 850 square feet

   If market rate units for a particular unit type in a project are smaller than the minimums listed above (i.e. a market rate micro-unit of 300 square feet), then the affordable units of that type may be the same square footage as the market rate.

   In addition to the minimum square footages listed above, the minimum gross floor area for Affordable Units shall be no less than 80% of the minimum gross floor area for each market rate unit type in each particular project. The table below provides two examples of minimum permissible unit sizes within individual sample projects:

	Scenario One (Smaller Units)			Scenario Two (Larger Units)		
Unit Type	Market Rate Unit Size (min)	AU Unit Size (min)	% of Market Rate	Market Rate Unit Size (min)	AU Unit Size (min)	% of Market Rate
Studio	400	350	87.5%	500	400	80%
1bd	550	500	90.9%	650	520	80%
2bd	850	680	80%	900	720	80%
3bd	1,000	850	85%	1,200	960	80%

4. Occupancy

The minimum and maximum occupancy levels for each unit type shall be:

Unit Type	Min	Max
Studio/Efficiency:	1	2
1 Bedroom Unit:	1	2
2 Bedroom Unit:	2	4
3 Bedroom Unit:	3	6

5. Rental Rates

The rental rates for the Very Low Income units shall be 95% of the Section 8 Voucher Payment Standard, to be master leased by the Housing Commission. There shall be no discount from these rent levels for utility allowances. A portion of the annual commercial payments to the CDHC housing fund of $0.05/sf from new downtown commercial development shall be made available to the Housing Commission (as master lessee) to subsidize the utility costs of the tenants, at a level to be mutually agreed upon between CDHC and the Commission.

The rental rates for the Middle Income units shall be based on the Howard County median income (family of four), adjusted for household size, then adjusted at 80% of the median income, with the annual rent calculated at 30% of the income, less a utility allowance.

For example, in 2015, the following rent schedule would apply:

Median Income (family of 4): $109,476

Unit Type	Occupancy Base	Household Adjustment	Adjusted Income	Income at 80% AMI	Annual Max Rent	Monthly Max Rent*
Studio/Eff	1.0	70%	$76,633	$61,306	$18,392	$1,533
1 Bedroom	1.5	75%	$82,107	$65,686	$19,706	$1,642
2 Bedroom	3.0	90%	$98,528	$78,822	$23,647	$1,970
3 Bedroom	4.5	104%	$113,855	$91,084	$27,325	$2,277

*The Monthly Maximum Rent for each unit type shall be charged regardless of the actual number of occupants. Does not include utility charges and service fees that are paid by the owner.

6. Eligibility Income Limits

   Middle Income Unit applicants shall be subject to maximum income limits by household size assuming the following household size adjustments to the median area income (at 80%):
   1 person: 70%
   2 persons: 80%
   3 persons: 90%
   4 persons: 100%
   5 persons: 108%
   6 persons: 116%

7. Quantity of Bathrooms

   The minimum number of bathrooms (including toilet, sink, shower or tub) for any affordable unit shall be:

Studio/Efficiency:	1
1 Bedroom Unit:	1
2 Bedroom Unit:	1
3 Bedroom Unit:	2

8. Bedrooms

   The minimum bedroom size shall be 100 square feet, subject to applicable code requirements.

9. Unit Finishes

   The unit finish packages (i.e. countertops, flooring, cabinetry, appliances, fixtures, etc.) shall be the same as one or more of the finish packages for the market rate units in the building.

   Unit entries of affordable and market rate units shall be identical, such that an affordable unit is not discernible from a market rate unit in the building corridors.

10. Additional Fees

    Additional fees charged for market rate unit and affordable unit applicants and tenants shall be the same. Fees may include, but are not limited to: application fees, parking space fees, pet fees, storage space rental fees, amenity fees, guest passes (for pool use), lost key fees and amenity rental fees. Security deposit requirements are subject to applicant credit standing and income qualification.

<u>**Exhibit "C"**</u>

New Central Library Site

Parcel C-1: New Central Library Site

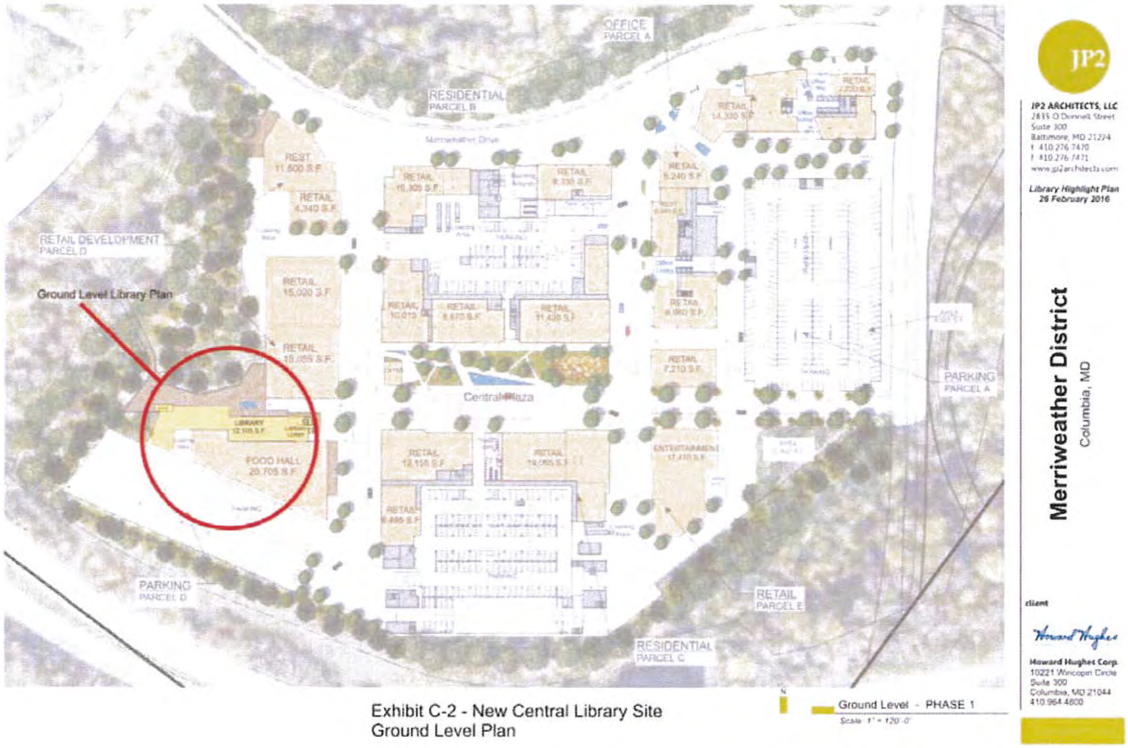


Exhibit C-2 - New Central Library Site
Ground Level Plan

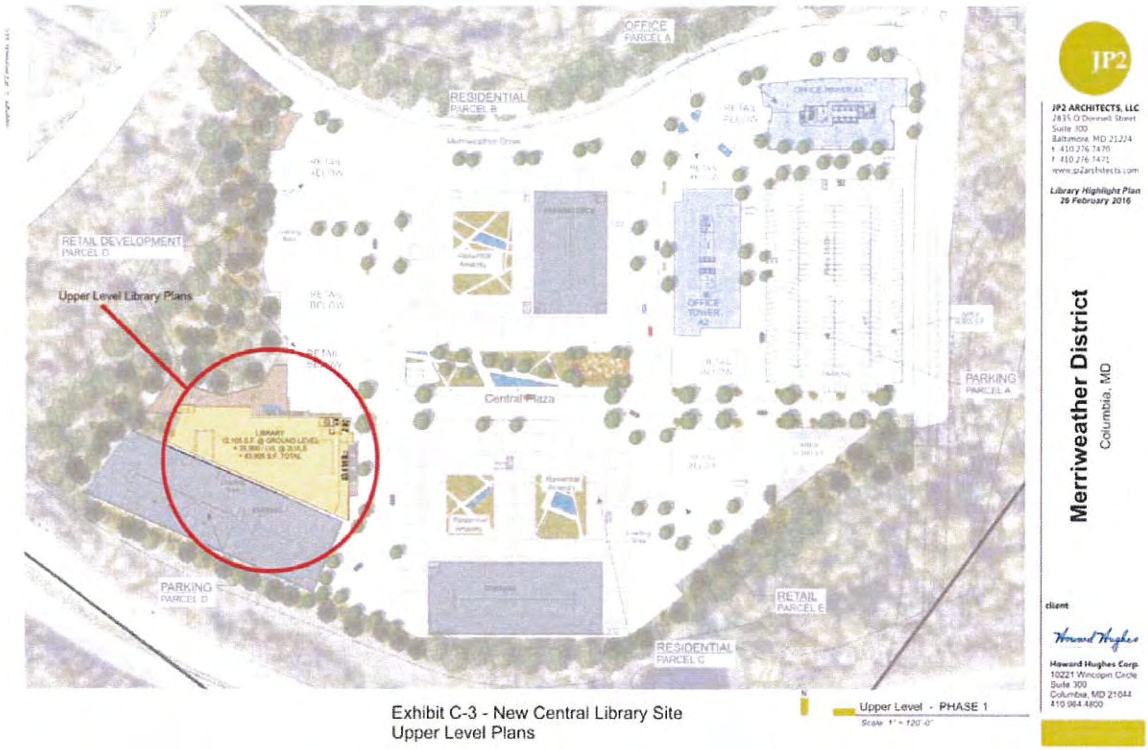


Exhibit C-3 - New Central Library Site
Upper Level Plans

Exhibit "D"

Temporary Fire Station Site

Parcel D-1: Temporary Fire Station Site

**L&B 5540601v11/07450.0069

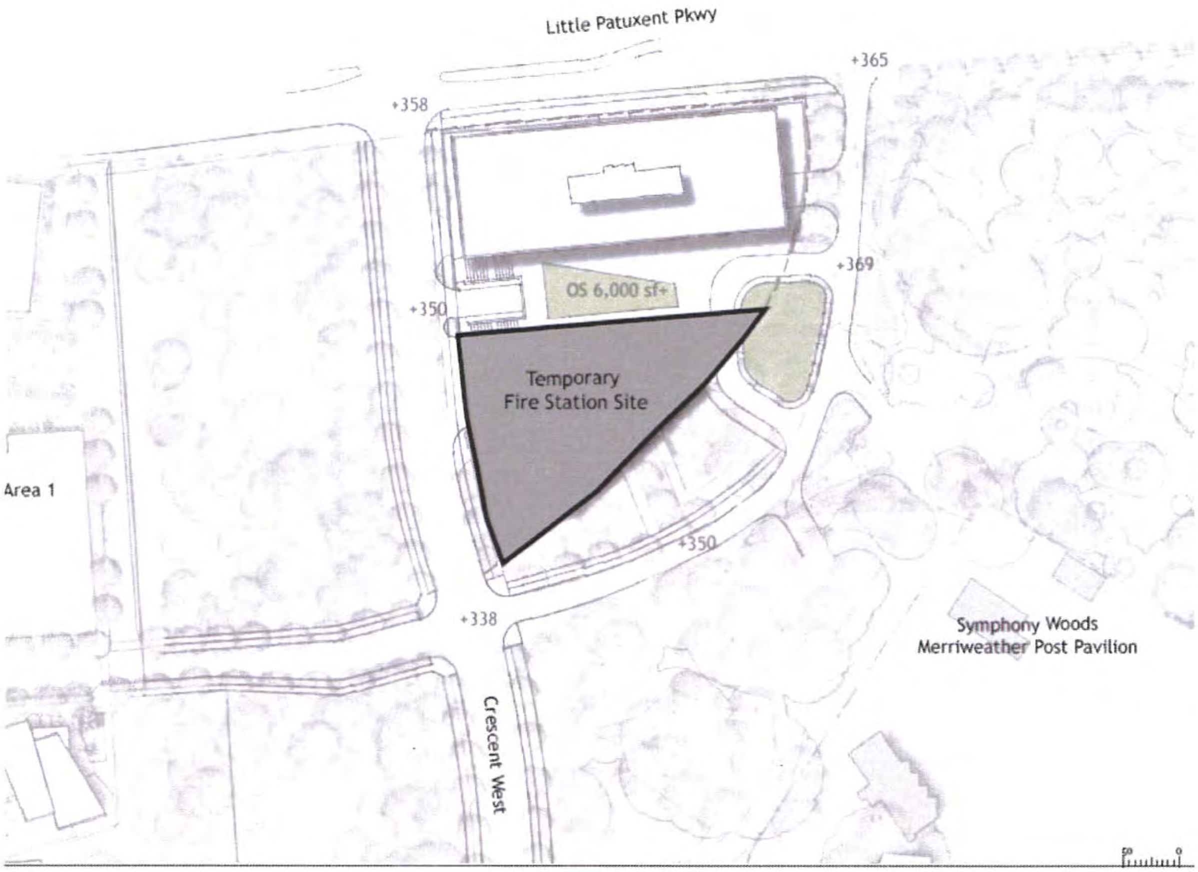


Exhibit D-2

Temporary Fire Station Site
Enlarged Site Plan

Exhibit "E"

Alternative Temporary Fire Station Site

Parcel E: Alternative Temporary Fire Station Site

**L&B 5540601v11/07450.0069

Exhibit "F"

Middle Income Declaration of Covenants

DOWNTOWN COLUMBIA
DECLARATION OF COVENANTS
MIDDLE INCOME UNITS

THIS DECLARATION OF COVENANTS ("Declaration"), made this ___ day of ____________ 201_, hereinafter set forth by Howard Research and Development Corporation, owner (hereinafter referred to a "Declarant").

NOW, THEREFORE, Declarant hereby declares that the Property described hereinafter shall be held, sold and conveyed subject to the following covenants, conditions and restrictions:

ARTICLE I

Declarant, Howard County, Maryland, Columbia Downtown Housing Corporation, and the Howard County Housing Commission are parties to a Development Rights and Responsibilities Agreement (Affordable Housing) which provides for the reservation of certain Affordable Units for rent within the residential properties being developed in the Downtown Columbia redevelopment in Howard County. One category of Affordable Units contemplated by such Agreement are those designated as "Middle Income Units."
Declarant is the owner of the Property set forth and described in Exhibit "1" attached hereto. The units in the Property that are the subject of this Declaration of Covenants, and are hereinafter referred to as the Middle Income Units ("MIU"s) are the following units offered for lease and located in the property located at ________________________________, Columbia, Maryland _____ (the "Property"): [INSERT NUMBERS FOR UNITS TO BE SUBJECT TO RENTAL RESTRICTIONS].

ARTICLE II

For a period of forty (40) years beginning on the date of recordation of this Declaration, or such other period as established by law (the "Restriction Period"), the MIUs and the improvements thereon and those that may subsequently be made to the MIUs must be leased to households comprised of individuals or families earning no more than eighty percent (80%) of the average median income of persons living in Howard County, Maryland, as published by ____________________________ ("Medial Income Limit") The County shall monitor and notify Declarant and any subsequent owners of the Property which is subject to these Declarations of any revisions to the dollar amount of the Median Income Limit in order to assure compliance.

ARTICLE III

Declarant and any other lessor of the MIUs shall lease the MIUs to lessees who must agree to occupy the MIU as their primary residence during the Restriction Period. The Declarant and any other lessors of an MIU, except for the Howard County Housing Commission and other housing development agencies or non-profit corporations approved by the County Executive, are not permitted to lease or rent the MIUs to other parties during the Restriction Period. This restriction may be waived by the County to allow a temporary rental of the MIU for good and sufficient cause. Further, if the income of the lessee of an MIU exceeds the Median Income Limit in any year after a lease for such MIU is signed, the Declarant or any subsequent lessor of the MIU may continue to lease to such lessee a unit on the Property provided (i) the income of that lessee does not exceed one hundred percent (100%) of the average median income of persons living in Howard County, Maryland, for more than one year, or (ii) the Declarant or any subsequent lessor of the MIU either relocates such lessee to another non-restricted unit on the Property or subjects another unit on the Property to these Declarations.

ARTICLE IV

Declarant, its heirs, assigns, and successors, hereby irrevocably assigns, transfers, and conveys unto Howard County, Maryland the Howard County Commission, and to Columbia Downtown Housing Corporation all of its right, title, interest, or obligation to enforce and maintain in full force and effect, the terms, conditions, and requirements of this Declaration of Covenants.

ARTICLE V

Any of the Declarant, Columbia Downtown Housing Corporation, the Howard County Commission, or Howard County, Maryland, may enforce these Covenants by a proceeding, at law or in equity, against any person or persons violating or attempting to violate intentionally or otherwise, any covenant or restriction herein contained, either to restrain any violation hereof or to recover damages or monies, or to proceed against the land or the MIUs to enforce any lien or obligation created by or resulting from these Covenants.

ARTICLE VI

These Covenants are binding upon the MIUs, upon the Declarant, the lessees and purchasers of the MIUs, upon the Declarant's and the MIU lessees' and purchasers' heirs, successors, and assigns, and upon all transferees and transferors of the title to the MIUs during the Restriction Period and until the fulfillment of all other provisions contained herein.

ARTICLE VII

The original deed of conveyance from the Declarant, its heirs, assigns or successors, and all subsequent transfers, assignments, and deeds of conveyance out by subsequent Purchasers of the MIU, must, during the term of these Covenants, be a two-party deed that contains conspicuous language specifically reciting that the MIU is subject to these Covenants, referencing the date of recordation of these Covenants among the land records of Howard County, Maryland, including the Liber and Folio reference. Notice must also be included in any contract of sale for an MIU that fully and completely discloses the rental restrictions and controls established herein. All subsequent purchasers of an MIU must likewise provide such notice in contracts of sale.

ARTICLE VIII

These Covenants cannot be terminated without the written consent of the County, except by the expiration of the Restriction Period defined in Article II. A termination statement, executed by the County Executive of Howard County will be recorded among the land records of Howard County, Maryland.

ARTICLE IX

If any default occurs and is continuing, the County, the Howard County Commission, or Columbia Downtown Housing Corporation may apply to any state or federal court having jurisdiction for specific performance of the Declaration of Covenants, for an injunction against any violation of this Declaration of Covenants, or for such other relief at law or in equity as may be appropriate and consistent with applicable requirements of the Declaration of Covenants. No remedy conferred upon or reserved to the County, the Howard County Commission, or Columbia Downtown Housing Corporation by this Declaration of Covenants is intended to be exclusive of any other available remedy or remedies, but each and every such remedy is cumulative and is in addition to every other remedy given under this Declaration of Covenants, existing at law or in equity. No delay or omission to exercise any right or power accruing upon any failure to perform under this Article will impair any such right or power or will be construed to be a waiver thereof. If, upon or after the occurrence of any default hereunder, the County, the Howard County Commission, or Columbia Downtown Housing Corporation incurs expenses for the enforcement or performance or observance of any obligation or agreement on the part of others contained herein, the County, the Howard County Commission, or Columbia Downtown Housing Corporation must be reimbursed upon demand by the party or parties for reasonable expenses paid to third parties.

JURATS APPEAR ON FOLLOWING PAGE

IN WITNESS WHEREOF, Declarant Howard Research and Development Corporation has caused these presents to be executed by ______________________________ its ______________________________, and its corporate seal to be affixed hereto, and does appoint ______________________________ its true and lawful attorney-in-fact to acknowledge and deliver these presents.

DECLARANT:
HOWARD RESEARCH AND
DEVELOPMENT CORPORATION

BY:______________________________
Name:______________________________
Title:______________________________

STATE OF MARYLAND
COUNTY OF HOWARD:

I HEREBY CERTIFY that on this ______ day of ______________________, 20__, personally appeared ______________________________ (name), ____________________ (title) of Howard Research and Development Corporation, who is personally well known to me, or proven to be, the person named as attorney-in-fact as aforesaid, and by virtue vested in him as aforesaid, acknowledged the same to be the act and deed of Howard Research and Development Corporation, the Declarant herein, for the purposes herein contained.

WITNESS my hand and seal this __________ day of __________________, 20__.

My Commission Expires: _______________

____
NOTARY PUBLIC

EXHIBIT 1
PROPERTY DESCRIPTION

THE PROPERTY: ____
(Subdivision Name)

This property was acquired by ______________________________ on ____________ (date).
The Deed is recorded at Liber ______________________ Folio __________________.

Exhibit "G"

Downtown Columbia Plan

Introduced ___________
Public Hearing ___________
Council Action ___________
Executive Action ___________
Effective Date ___________

County Council Of Howard County, Maryland

2016 Legislative Session — Legislative Day No. ____

Bill No. ____ -2016

Introduced by the Chairperson at the request of the County Executive

AN ACT amending the *Downtown Columbia Plan* to revise the Downtown Columbia affordable housing program; setting forth methods for the development of affordable housing; revising the Downtown Revitalization Phasing Progression to reflect the timing of affordable housing development; amending certain Community Enhancements, Programs and Public Amenities to reflect the methods for the development of affordable housing; and generally relating to planning, zoning and land use in Howard County.

Introduced and read first time ____________________, 2016. Ordered posted and hearing scheduled.

By order ______________________________
Jessica Feldmark, Administrator

Having been posted and notice of time & place of hearing & title of Bill having been published according to Charter, the Bill was read for a second time at a public hearing on ____________________, 2016.

By order ______________________________
Jessica Feldmark, Administrator

This Bill was read the third time on ___________, 2016 and Passed ___, Passed with amendments ______, Failed ______.

By order ______________________________
Jessica Feldmark, Administrator

Sealed with the County Seal and presented to the County Executive for approval this ____day of ___________, 2016 at ___ a.m./p.m.

By order ______________________________
Jessica Feldmark, Administrator

Approved/Vetoed by the County Executive _________________, 2016

____
Allan H. Kittleman, County Executive

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; ~~Strike-out~~ indicates material deleted by amendment; Underlining indicates material added by amendment

WHEREAS, the Downtown Columbia Plan, adopted as an amendment to General Plan 2000 and included in *PlanHoward 2030* by reference, envisioned a full spectrum housing program for Downtown Columbia; and

WHEREAS, this Act amends certain provisions of the Downtown Columbia Plan in order to accomplish the goals of providing a broad spectrum of affordable housing in Downtown Columbia.

NOW, THEREFORE,

Section 1. Be It Enacted *by the County Council of Howard County, Maryland, that the Downtown Columbia Plan is hereby amended as follows and as more specifically shown in the attached pages:*

1. *Section 1.5, Diverse Housing, is amended as shown in the attached Exhibit A;*
2. *Section 4.1, General Plan, is amended as shown in the attached Exhibit B; and*
3. *Remove the existing Downtown Revitalization Phasing Progression, as shown in Section 4.2, Phasing on page 73 of the adopted Downtown Columbia Plan, and substitute the attached revised Downtown Revitalization Phasing Progression as shown in the attached Exhibit C;*
4. *The Downtown Columbia Community Enhancements, Programs and Public Amenities (CEPPAs) Implementation Chart are amended as shown in the attached Exhibit D.*

Section 2. And Be It Further Enacted *by the County Council of Howard County, Maryland that the Director of the Department of Planning and Zoning may correct obvious errors, capitalization, spelling, grammar, headings and similar matters and may publish this amendment to PlanHoward 2030 by adding or amending covers, title pages, a table of contents, and graphics to improve readability.*

Section 3. And Be It Further Enacted *by the County Council of Howard County, Maryland, that this amendment be attached to and made part of PlanHoward 2030.*

Section 4. And Be It Further Enacted *by the County Council of Howard County, Maryland, that this Act shall become effective 61 days after its enactment.*

EXHIBIT A

1.5 DIVERSE HOUSING

This Plan recognizes and celebrates the original vision of Jim Rouse to create a socially responsible city for people of all ages, incomes and backgrounds. The establishment of an ongoing mechanism to provide a full spectrum of housing into the future is an important social responsibility shared by us all. Of related but equal importance is encouraging within downtown Columbia itself the diversity of people that exists elsewhere in Columbia today. Realizing this diversity will be important to the social and economic success of the downtown, where the mixing of individuals with different backgrounds and incomes will result in an ongoing exchange of ideas in an environment where residents, workers and visitors will have an opportunity to learn from one another and grow together as a community.

Downtown Columbia: A Community Vision recaptures the spirit of the Rouse vision for a complete city in which different types of people live together to create a fully realized community. In such respect, this Plan also recognizes the enrichment a community can experience through the diversity of its people. This Plan strives to achieve this objective through the provision of expanded residential opportunities for in-town living in both housing form and affordability, and through the establishment of a [[community housing fund]] BASELINE MODERATE INCOME HOUSING UNIT REQUIREMENT, A COMMUNITY HOUSING FUND, AND THE FLEXIBILITY FOR DEVELOPERS TO PROPOSE A MIX OF AFFORDABLE HOUSING POLICIES THAT EXCEED THE MINIMUM REQUIREMENTS, which will be used to help meet the affordable housing needs of the community.

Background

The need for affordable housing exists today and will likely continue to grow into the future. Significantly, however, what at times can be overlooked is the important relationship between reasonable opportunities for affordable housing and the economic health of the County. *General Plan 2000* recognized this significance and identified the important relationship between the need for affordable housing and the County's employment growth, and its demand for [[low]]LOW- and moderate-income workers. In this regard, *General Plan 2000* recognized that to the degree [[low]]LOW- and moderate-income workers can be housed in the County, the County's economic development prospects are improved. In addition, General Plan 2000 further recognized that by providing more affordable housing it becomes possible for residents' children and parents, as well as teachers, firemen and policemen to live in the County. The accommodation of work force housing is a goal shared by all.

General Plan 2000 (Policy 4.2) recommends providing affordable housing for existing low- and moderate-income residents and for the diverse labor force needed for continuing economic growth. Policy 4.2 also recommends that new funding sources be identified to enable the Office of Housing and Community Development to expand the supply of affordable housing to serve low- or moderate-income households, including seniors and persons with disabilities. In a similar context, *Downtown Columbia: A Community Vision* expands upon these objectives and suggests that new models for developing affordable housing in combination with mixed-use development should generate new and innovative techniques for achieving these objectives. *PLANHOWARD 2030* EXPANDS ON *GENERAL PLAN 2000* AFFORDABLE HOUSING POLICY EMPHASIZING THE MOST DOMINANT IMPEDIMENT TO ACHIEVING AFFORDABLE HOUSING CHOICE IS AN INADEQUATE SUPPLY OF HOUSING AVAILABLE TO HOUSEHOLDS BELOW THE MEDIAN AREA INCOME LEVEL. POLICY 9.2 CALLS FOR EXPANDING FULL SPECTRUM HOUSING FOR RESIDENTS AT DIVERSE INCOME LEVELS AND LIFE STAGES, AND FOR INDIVIDUALS WITH DISABILITIES, BY ENCOURAGING HIGH QUALITY, MIXED INCOME, MULTIGENERATIONAL, WELL-DESIGNED, AND SUSTAINABLE COMMUNITIES. It is with these policy statements in mind that this Plan proposes a means of providing a full spectrum of housing for Downtown Columbia.

[[Downtown Columbia Community Housing Foundation]] DOWNTOWN COLUMBIA AFFORDABLE HOUSING PROGRAM

THE DOWNTOWN COLUMBIA PLAN RECOMMENDATIONS FOR THE CREATION OF FULL SPECTRUM HOUSING SERVING DOWNTOWN COLUMBIA ARE DESIGNED TO ENCOURAGE A COMPREHENSIVE SET OF OPTIONS TO MEET AFFORDABLE HOUSING NEEDS. THE PLAN ENVISIONS USE OF THE FOLLOWING METHODS FOR THE DEVELOPMENT OF AFFORDABLE HOUSING:

1. A MINIMUM OF 10% OF ALL RESIDENTIAL DWELLING UNITS SHOULD BE DESIGNATED AS AFFORDABLE AS DEFINED BY HOWARD COUNTY'S MODERATE INCOME HOUSING UNIT ("MIHU")PROGRAM;
2. A DEDICATED TRUST FUND BE ESTABLISHED AND MANAGED BY THE DOWNTOWN COLUMBIA COMMUNITY HOUSING FOUNDATION ("DCCHF"); AND
3. THE OPTION FOR DEVELOPERS TO PROPOSE INNOVATIVE APPROACHES TO EXCEEDING THE MINIMUM AFFORDABILITY REQUIREMENT THROUGH A DEVELOPMENT RIGHTS AND RESPONSIBILITIES AGREEMENT ("DRRA").

THIS PLAN RECOMMENDS AMENDING THE DOWNTOWN REVITALIZATION PROVISIONS OF THE ZONING REGULATIONS (WHICH GOVERN REDEVELOPMENT IN DOWNTOWN COLUMBIA) TO REQUIRE THAT AFFORDABLE HOUSING BE PROVIDED IN DOWNTOWN COLUMBIA IN CONNECTION WITH THESE THREE METHODS, AND ARE DESCRIBED IN MORE DETAIL BELOW.

METHODS FOR THE DEVELOPMENT OF AFFORDABLE HOUSING

<u>METHOD 1: A MINIMUM OF 10% OF ALL RESIDENTIAL DWELLING UNITS SHOULD BE DESIGNATED AS AFFORDABLE AS DEFINED BY HOWARD COUNTY'S MODERATE INCOME HOUSING UNIT PROGRAM</u>

TO ENSURE AFFORDABLE HOUSING IS CREATED WITHIN EACH DOWNTOWN RESIDENTIAL DEVELOPMENT, THIS PLAN

RECOMMENDS THAT THE ZONING REGULATIONS REQUIRE AT LEAST 10% OF ALL UNITS OFFERED IN EACH DEVELOPMENT EXCLUDING THE METROPOLITAN AND PARCEL C MUST BE PROVIDED AS MIHUS PURSUANT TO THE MIHU LAW OF THE HOWARD COUNTY CODE.

TO ENSURE AFFORDABLE HOUSING IS CREATED CONCURRENT WITH MARKET RATE HOUSING IN EACH PHASE OF DEVELOPMENT, THIS PLAN ALSO RECOMMENDS A MINIMUM NUMBER OF RESIDENTIAL DWELLING UNITS IN EACH DEVELOPMENT PHASE MUST BE AFFORDABLE BEFORE MOVING ON TO A SUBSEQUENT PHASE. THESE MINIMUMS PROVIDE A BASELINE FOR ESTABLISHING AFFORDABLE HOUSING IN PROPORTION TO MARKET RATE HOUSING AND WILL APPLY TO ALL PROPERTY OWNERS.

METHOD 2: A DEDICATED TRUST FUND BE ESTABLISHED AND MANAGED BY THE DOWNTOWN COLUMBIA COMMUNITY HOUSING FOUNDATION

A full spectrum housing program for Downtown Columbia should establish a flexible model that aspires to make new housing in downtown affordable to individuals earning across all income levels. In order to create an effective, flexible means of providing a full spectrum of housing for Downtown Columbia, GGP will establish the DCCHF[[Downtown Columbia Community Housing Foundation ("DCCHF")]], as detailed below. [[The intent of this full spectrum housing program for Downtown Columbia is to satisfy all affordable housing requirements for downtown.]]

- **Initial Source Fund**

GGP will establish the DCCHF at its expense and will contribute $1.5 million to the DCCHF upon issuance of the first building permit for new housing in Downtown Columbia. GGP will contribute an additional $1.5 million upon issuance of a building permit for the 400th new residential unit in Downtown Columbia. Each payment will be contingent on expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit.

- **Ongoing Developer Contributions - DWELLING UNITS OFFERED FOR SALE**

INSTEAD OF PROVIDING MODERATE INCOME HOUSING UNITS AS REQUIRED BY THE ZONING REGULATIONS, EACH [[Each]] developer OF FOR-SALE DWELLING UNITS MAY [[will]] provide a one-time, per unit payment to the DCCHF in the following amounts, to be imposed upon the issuance of any building permit for a building containing FOR-SALE dwelling units. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit:

1. $2.00 PER SQUARE FOOT [[$2,000/unit]] for each NET NEW DWELLING unit up to and including the 1,500th NET NEW DWELLING unit.
2. $7.00 PER SQUARE FOOT [[$7,000/unit]] for each NET NEW DWELLING unit between the 1,501th unit up to and including the 3,500th NET NEW DWELLING unit.
3. $9.00 PER SQUARE FOOT [[$9,000/unit]] for each NET NEW DWELLING unit [[between]] ABOVE AND INCLUDING the 3,501st NET NEW DWELLING unit [[up to and including the 5,500th unit]].

The amounts to be paid under 1, 2 and 3 above will be subject to annual adjustment based on a builder's index, land value or other index provided in the implementing legislation. AFFORDABLE UNITS SHALL BE EXCLUDED FROM THE COMPUTATION SET FORTH UNDER 1, 2, AND 3 ABOVE.

Each owner of property developed with commercial uses pursuant to the Downtown Revitalization Zoning Regulations shall provide an annual payment to the DCCHF in the amount of five cents ($0.05) per square foot of Gross Leasable Area for office and retail uses, and five cents ($0.05) per square foot of net floor area for hotels. The payment will be made annually by the property owner, with the initial payment being made prior to the issuance of an occupancy permit for net new commercial development on the property. The amount of the charge will be subject to annual adjustment based on a builder's index, land value, or other index provided in the implementing legislation.

- **DCCHF Notice of Sale**

The [[DHCCF]]DCCHF should be notified by the developer or joint venture, via first class mail, of land for or all residential units offered for initial sale in each new residential or mixed use building in Downtown Columbia. No later than 10 days after the sale of rental housing, the owner must provide written notice of the sale. The DCCHF also should be notified by the developer, via first-class mail, of all apartment units offered for rental in each new residential or mixed-use building containing rental units. In support of these objectives, GGP should involve DCCHF in meaningful discussion with land purchasers in Downtown Columbia in order to encourage full spectrum housing in each and every neighborhood.

- **DCCHF Organizational Structure**

It is anticipated that Howard County, in consultation with GGP, will determine, by legislation, the organizational entity, organizational structure, membership, functions, and implementation of the DCCHF. The legislation should provide that, in order to be eligible to receive the funds provided for in this Plan, the DCCHF must be a non-profit entity organized for the purpose of providing full spectrum, below market housing in Downtown Columbia. Use of DCCHF funds is limited to providing full spectrum, below market housing in Downtown Columbia, which may include, but is not limited to, funding new construction; acquiring housing units; preserving existing homes; financing rehabilitation of rental housing; developing senior, family or special needs housing; providing predevelopment, bridge, acquisition and permanent financing; offering eviction prevention and foreclosure assistance.

METHOD 3: THE OPTION FOR DEVELOPERS TO PROPOSE INNOVATIVE APPROACHES TO EXCEEDING THE MINIMUM AFFORDABILITY REQUIREMENT THROUGH A DEVELOPMENT RIGHTS AND RESPONSIBILITIES AGREEMENT, WHICH IS A COUNTY VEHICLE USED FOR PROMOTING ABOVE MINIMUM COMPLIANCE WITH EXISTING ZONING LAW.

DRRAS ARE A COUNTY VEHICLE USED FOR PROMOTING ABOVE MINIMUM COMPLIANCE WITH EXISTING ZONING LAW. IN ORDER TO FURTHER INCREASE THE TOTAL PERCENTAGE OF AFFORDABLE UNITS IN DOWNTOWN COLUMBIA BEYOND 10%, THE COUNTY CAN DETERMINE THAT THE PURPOSES OF THE MIHU LAW WILL BE SERVED TO A GREATER EXTENT BY ENTERING INTO A DRRA WITH THE DEVELOPERS OF RESIDENTIAL PROPERTY IN DOWNTOWN COLUMBIA.

EXAMPLES OF MECHANISMS DEVELOPERS ARE ENCOURAGED TO CONSIDER WHEN PURSUING A DRRA PETITION TO THE COUNTY INCLUDE: DESIGNATION OF UNITS TO A BROADER INCOME SPECTRUM; THE FORMATION OF PUBLIC, PRIVATE AND NONPROFIT PARTNERSHIPS; THE USE OF LOW INCOME HOUSING TAX CREDITS; LAND DEDICATION AND LAND EXCHANGES; AND OTHER CONDITIONS, RESTRICTIONS AND ENHANCEMENTS.

EXHIBIT B

4.1 GENERAL PLAN

General Plan 2000 addresses Downtown Columbia under Policy 5.5: Encourage Downtown Columbia's continuing evolution and growth as the County's urban center. This Plan builds on and reinforces this policy as discussed in detail in the following sections. The successful evolution and growth of Downtown Columbia as recommended in *Downtown Columbia: A Community Vision* and *General Plan 2000* will depend on not only the addition of jobs and housing, but on the provision of a variety of high quality amenities and services that will attract new businesses, employees and homeowners to live, work and invest in downtown. Although most of the enhancements, amenities and services recommended by this Plan will be provided through private investment, a small portion of the public infrastructure (such as public parking garages) may be financed through alternative public or private mechanisms, such as, without limitation, tax increment financing (TIF) or Revenue Authority bonds. *PLANHOWARD 2030* BUILDS UPON THE VISION FOR DOWNTOWN COLUMBIA AS A TARGETED GROWTH AND REVITALIZATION AREA AND ESTABLISHES POLICY 10.2 FOR CONTINUED FOCUS ON ITS GROWTH AS AN EMERGING URBAN DOWNTOWN COMMUNITY.

More Downtown Columbia Residential Units

This Plan recognizes the need for additional housing in Downtown Columbia and recommends development of 5,500 additional units, EXCLUDING AFFORDABLE UNITS. This additional housing will be fundamental to the economic future of Columbia. The additional people living downtown will also be needed to provide an active pedestrian environment after normal office hours as well as customers for shops, restaurants and other entertainment uses. Additional housing will also help populate the streets downtown, enhancing the safety of residents, workers and visitors.

Development of additional housing units in downtown must provide increased housing opportunities for residents at different income levels and should provide a range of housing choices. Housing types could include among other possibilities, high and mid-rise multifamily; mixed-use high rise multifamily located above retail or office uses; loft-style housing located above retail or office space; single family attached housing; livework housing with office or retail uses within a single housing unit; student housing; and mixed-income housing.

This Plan also recommends development of 640 additional hotel rooms in Downtown Columbia. With the recommended increases in commercial and residential uses, additional hotel resources will be necessary to serve the present and future needs of the community. The addition of a convention/conference center and exhibit space also will add to the demand for quality hospitality accommodations and services. Depending on market conditions, a variety of hotel product types could be desirable and should be permitted. Hotel uses should be available to serve all of the needs of Downtown Columbia's residents, businesses and visitors.

The remainder of Section 4.1 is omitted

EXHIBIT C

PROPOSED CHART UNDER AFFORDABLE HOUSING JOINT RECOMMENTATION PROPOSAL

DOWNTOWN REVITALIZATION PHASING PROGRESSION													
PHASE I					PHASE II CUMMULATIVE					PHASE III COMPLETION			TOTAL
Use Type	Min		Max		Use Type	Min		Max		Use Type	Up To		
	Units	SF	Units	SF		Units	SF	Units	SF		Units	SF	
Retail		300,000		676,446	Retail		429,270		1,100,000	Retail		820,730	1,250,000
Office/Conf*		1,000,000		1,531,991	Office/Conf*		1,868,956		2,756,375	Office/Conf*		2,431,044	4,300,000
Hotel Rms**	100		640		Hotel Rms**	200***		540***		Hotel Rms**	440		640
Residential - Market Rate**	656		2,296		Residential - Market**	1,442		4,700		Residential - Market**	4,058		5,500

*Office/conference includes hotel conference/banquet space greater than 20 sq ft per hotel room.

** For zoning and phasing purposes, hotel rooms and residential development are tracked by unit. Actual square footage of hotel and residential development will be calculated for CEPPA compliance.
At least 5% of the sum of cumulative market and affordable units in Phase I and 10% of the sum of cumulative market and affordable units in Phase II must be affordable units before moving onto the subsequent phase.

*** The minimum number of hotel rooms required in Phase II is 100 unless more than 540 rooms were constructed in Phase I; the maximum number of hotel rooms for Phase II will be the difference between 640 and the number of rooms constructed in Phase I.

EXHIBIT D

DOWNTOWN COMMUNITY ENHANCEMENTS, PROGRAMS AND PUBLIC AMENITIES (CEPPAs) IMPLEMENTATION CHART

The Downtown CEPPA Implementation Chart identifies the timing and implementation of the various specific CEPPAs to be provided. The Downtown Columbia Plan anticipates that GGP, as the principal property owner, will undertake many of the CEPPAs. However, the responsibility lies with all property owners undertaking development or redevelopment in Downtown Columbia. Moreover, in the event of any future fragmentation of ownership of GGP's holdings, the CEPPAs must still be provided in accordance with the benchmarks established in this chart. Under such circumstances, the required CEPPAs could be funded by the developer(s) of individual parcels, a cooperative of developers or otherwise. In no case shall the obligation to provide a CEPPA be triggered: (i) by the development or construction of downtown arts, cultural and community uses, downtown community commons, or downtown parkland; or (ii) when the development of an individual parcel of land shown on a plat or deed recorded among the County Land Records as of April 6, 2010 consists only of up to a total of 10,000 square feet of commercial floor area and no other development.* The timing and implementation of other amenities discussed in this Plan or shown in concept on the exhibits to this Plan will be governed by the zoning regulation recommended by this Plan.

If a specific CEPPA identified in the Downtown CEPPA Implementation chart cannot be provided because: (i) the consent of the owner of the land on which the CEPPA is to be located or from whom access is required cannot reasonably be obtained; (ii) all necessary permits or approvals cannot reasonably be obtained from applicable governmental authorities; or (iii) factors exist that are beyond the reasonable control of the petitioner, then the Planning Board shall: (i) require the petitioner to post security with the County in an amount sufficient to cover the cost of the original CEPPA; or (ii) approve an alternate CEPPA comparable to the original and appropriate timing for such alternate CEPPA or alternative timing for the original CEPPA. In approving an alternate comparable CEPPA or timing, the Planning Board must conclude the alternate comparable CEPPA and/or timing: (i) does not result in piecemeal development inconsistent with the Plan; (ii) advances the public interest; and (iii) conforms to the goals of the Downtown Plan.

Additionally, because development phasing is inextricably linked to market forces and third party approvals, it will be important for the zoning to provide sufficient flexibility to consider a Final Development Plan which takes advantage of major or unique employment, economic development or evolving land use concepts or opportunities, and to consider a Final Development Plan amendment that adjusts the location, timing or schedule of CEPPAs and/or the residential and commercial phasing balance to take advantage of these opportunities.

PRIOR TO SUBMISSION OF THE FIRST FINAL DEVELOPMENT PLAN

1. GGP completed at its expense an environmental assessment of the three sub-watersheds of Symphony Stream, Wilde Lake and Lake Kittamaqundi located upstream of the Merriweather & Crescent Environmental Enhancements Study area. GGP participated with Howard County and The Columbia Association in a joint application to the Maryland Department of Natural Resources for Local implementation grant funding from the Chesapeake and Atlantic Coastal Bays 2010 Trust Fund.

2. GGP will commission at GGP's expense (i) the preparation of the Land Framework component of the Downtown Columbia Sustainability Program and (ii) a detailed outline for the Community Framework component of the Sustainability Program (Community Framework Outline). The Sustainability Program must be developed around the Sustainability Framework document referenced with this Plan. The Howard County Environmental Sustainability Board must be provided with a copy of the Sustainability Program, and will be invited to provide comments to the Design Advisory Panel concurrent with the Design Advisory Panel's review of the Downtown-wide Design Guidelines (Guidelines).

3. GGP will commission at GGP's expense in consultation with Howard County a study evaluating a new Downtown Columbia Route 29 interchange between Route 175 and Broken Land Parkway and options for a connection over Route 29 connecting Downtown Columbia to Oakland Mills, including potential bicycle, transit and multimodal improvements. The study will evaluate alternative alignments and geometry, capacity analysis, preliminary environmental assessments, right of way impacts, multimodal opportunities, interaction and options with regard to the Oakland Mills bridge connection, preliminary costs, design and implementation schedule. Once the study is completed, GGP will suggest funding mechanism(s) for the potential implementation of its recommendation(s).

   If the study concludes that enhancing the existing pedestrian bridge is not recommended, then the funding for the renovation of the existing bridge should be used for the alternative connection recommended by the study. In addition, the pathways described in CEPPA No. 12 should be realigned to match the recommended connection.

4. GGP will prepare at its expense Downtown-wide Design Guidelines inclusive of sustainability provisions from the Sustainability Program and a Comprehensive Signage Plan for Downtown for approval by the County Council.

PRIOR TO APPROVAL OF THE FIRST FINAL DEVELOPMENT PLAN

5. GGP will commission at GGP's expense and in consultation with Howard County one or more feasibility studies for the following: (i) a new Broken Land Parkway/Route 29 north/south collector road connection to Little Patuxent Parkway and (ii) a new Downtown transit center and Downtown Circulator Shuttle.

   With regard to the collector road, the feasibility study will evaluate alternative alignments and geometry, capacity analysis, preliminary environmental assessments, right of way impacts, preliminary costs, design and phasing of construction for this connection.

   With regard to the transit center, the study will evaluate both long and short term transit expectations and needs both locally and regionally so that an appropriate location and facility program can be determined. Consideration shall be given to how the facility will operate initially as a free standing building, and in the future as a mixed use component of the Downtown Plan. Recommendations will be provided with regard to goals, management and operations.

   With regard to the Shuttle, the study will evaluate and determine appropriate levels of service and phasing in of service at various levels of development. As part of this, the study should examine the relationship between the shuttle and both long and short term, local and regional transit expectations and needs. The shuttle feasibility study will also analyze equipment recommendations, routes and stops, proposed vehicle types, and operational and capital costs. The feasibility study shall include an evaluation and recommendations regarding ownership, capital and operational funding opportunities, responsibilities and accountability to provide guidance to the Downtown Columbia Partnership and the County.

6. GGP and Howard County will jointly determine the functions, organizational structure, implementation phasing schedule consistent with the redevelopment phasing schedule, potential funding sources and projected funding needs of the Downtown Columbia Partnership, prior to GGP's establishment of this Partnership. The Downtown Columbia Partnership's role in promoting Downtown Columbia is outlined in Section 5.2 of the Plan.

One of the primary responsibilities of the Downtown Columbia Partnership shall be the transportation initiatives outlined in the shuttle feasibility study and the promotion and implementation of the TDMP. As such, at least fifty percent (50%) of the revenue collected pursuant to CEPPA No. 25 shall be utilized for the implementation of transportation initiatives in the shuttle feasibility study or other direct transit services downtown.

GGP will provide the Partnership's initial operating funding as necessary to fund the initial efforts of the Partnership until other sources of funding and/or sufficient developer contributions are available to operate the Partnership. Funding provided by GGP to support initial start-up costs shall be in addition to funding provided for by CEPPA No. 23 and 25. However, after issuance of a building permit for the 500,000 square-foot of new commercial uses, GGP's obligation as described in the previous two sentences shall end and thereafter the property owners developing pursuant to Section 125.A.9 of the Howard County Zoning Regulations, including but not limited to GGP, will contribute toward funding the permanent ongoing operations of the Downtown Columbia Partnership as set forth in CEPPA No. 25.

PRIOR TO APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN

7. GGP will submit a phasing schedule for implementation of the restoration work on GGP's property and a Site Development Plan for the first phase of the environmental restoration work as described in CEPPA No. 15.

8. GGP, in collaboration with the County, will establish the Downtown Arts and Culture Commission, an independent nonprofit organization, to promote and support Merriweather Post Pavilion's revitalization in accordance with this Plan and the development of Downtown Columbia as an artistic and cultural center.

PRIOR TO ISSUANCE OF THE FIRST BUILDING PERMIT

9. To facilitate the renovation of the Banneker Fire Station, GGP and the County shall cooperate to identify a site for the development of a temporary fire station while the Banneker Fire station is being renovated. GGP shall make the site available at no cost to the County on an interim basis but not longer than 30 months. GGP shall not be responsible for the development or construction costs associated with the temporary fire station. [[In the alternative, if prior to the issuance of the first building permit the County determines a new

location for a fire station in Downtown Columbia is necessary and desirable, then GGP shall provide, subject to all applicable laws and a mutual agreement between the parties, a new location for a fire station within the Crescent Neighborhood as shown on Exhibit C by fee transfer at no cost to the County or by a long-term lease for a nominal sum.]]

UPON ISSUANCE OF THE FIRST BUILDING PERMIT

10. GGP shall contribute $1.5 million in initial funding for the Downtown Columbia Community Housing Fund. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit.

UPON ISSUANCE OF THE BUILDING PERMIT FOR THE 400TH RESIDENTIAL UNIT

11. GGP shall contribute $1.5 million in additional funding for the Downtown Columbia Community Housing Fund. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit.

PRIOR TO ISSUANCES OF A BUILDING PERMIT FOR THE 500,000TH SF OF DEVELOPMENT

12. GGP will complete at its expense (i) the pedestrian and bicycle pathway from the existing Route 29 pedestrian bridge to Oakland Mills Village Center and to Blandair Park; (ii) the pedestrian and bicycle pathway from the existing Route 29 pedestrian bridge to the Crescent and Merriweather-Symphony Woods neighborhoods, inclusive of the pathway located between the Town Center Apartments and Route 29; and (iii) the pedestrian and bicycle pathway from the Crescent and Merriweather-Symphony Woods neighborhoods to Howard Community College and Howard County General Hospital.* The scope and design of new pedestrian and bicycle pathways in the Plan will be guided by the new Downtown-wide Design Guidelines, Adequate Public Facilities Ordinance, and as delineated in this Plan and its Exhibit I.

    GGP will develop at its expense recommended maintenance standards and responsibilities for a heightened level of design and security for the new pathway improvements. When GGP submits the first Site Development Plan under this Plan, GGP will also submit a Site Development Plan to facilitate implementation of these pathway improvements.

In addition, GGP along with the County and community will develop a scope of work for renovation of the existing Route 29 pedestrian bridge and will solicit a minimum of two proposals from separate architectural design consulting firms for alternative design improvements to the bridge structure to enhance its appearance and pedestrian safety. The consultant responses will be provided to the County for its selection, in consultation with GGP, of appropriate near-term improvements to retrofit the existing bridge. GGP will contribute up to $500,000 towards the implementation of the selected improvements. If enhancement of the bridge is not recommended by the study in CEPPA No. 3, GGP shall either post security or cash with the County in the amount of $500,000 to be used in accordance with CEPPA No. 3.

13. GGP will enter into and record in the land records of Howard County, Maryland, a declaration of restrictive covenants that shall (1) prohibit the demolition of the former Rouse Company Headquarters building, and (2) prohibit the exterior alteration of the former Rouse Company Headquarters building, except as provided for in the Downtown-wide Design Guidelines. GGP shall provide a copy of the recorded declaration to the County. The declaration of restrictive covenants will not prohibit interior alterations or future adaptive reuse that would better integrate the building into its surroundings and activate the adjacent pedestrian spaces as described in the Downtown-wide Design Guidelines and this Plan or prohibit reconstruction of the building in the event of casualty.

PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE 1,300,00TH SF OF DEVELOPMENT

14. GGP in cooperation with Howard Transit shall identify a location in Downtown Columbia for a new Howard County Transit Center consistent with the recommendation(s) of the feasibility study (See CEPPA No. 5). GGP shall provide a location either by fee transfer at no cost or a long-term lease for a nominal sum subject to all applicable laws and regulations. Any contract of sale or lease may provide for the retention of air and subsurface development rights by GGP and allow for the co-location of public facilities or private development on the same parcel provided that any other use of any portion of the property does not interfere with the County's ability to use, construct, or finance the facility in the manner most advantageous to the County.

15. GGP will complete, at GGP's expense, environmental restoration projects, including stormwater management retrofit, stream corridor restoration, wetland enhancement, reforestation and forest restoration, on its property and on property included within GGP's construction plans for the Merriweather-Symphony Woods and Crescent areas, as identified in the Land Framework of the Sustainability Program as referenced in Section 3.1 of this Plan.

16. GGP will complete Phase I of the Merriweather Post Pavilion redevelopment program based on the redevelopment program scope and phasing outlined below.

The redevelopment program will generally follow the evaluation and conclusions outlined in the October 2004 Ziger/Sneed LLP Merriweather Post Pavilion Study, Section III "Evaluation of the Site and Structures" and Section IV "Conclusions" included in the 2004 Merriweather Citizens Advisory Panel report to Howard County. Final design and scope will be determined by GGP's consultants, program and industry needs, operator recommendations, site and facility conditions and code requirements. Major components of the redevelopment program will include new handicapped parking accommodation; entrance and access modifications; restroom, concession and box office renovations and or replacement; utility systems replacement and additions; new roofs over the loge seating areas; reconfigured and replacement seating; renovated and new administration, back of house dressing and catering areas; code upgrades including fire suppression systems and handicapped ramps and pathway access.

After development of preliminary renovation drawings, contractor input and schedule development, the program will be divided into three distinct phases to allow uninterrupted seasonal performances, staging and construction phasing.

PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN FOR THE 1,375TH NEW RESIDENTIAL UNIT

17. GGP shall, if deemed necessary by the Board of Education, reserve an adequate school site or provide an equivalent location within Downtown Columbia.

PRIOR TO ISSURANCE OF A BUILDING PERMIT FOR THE 2,600,000TH SF OF DEVELOPMENT

18. GGP will construct at its expense, the Wilde Lake to Downtown Columbia pedestrian and bicycle pathway. The scope and design of new pedestrian and bicycle pathways in the Plan will be guided by the new Downtown-wide Design Guidelines, Adequate Public Facilities Ordinance, and as delineated in this Plan and its Exhibit.

19. GGP will construct at its expense the Lakefront Terrace (steps to the Lake) amenity space and pedestrian promenade (see Item 9, on Plan Exhibit G) connecting the Symphony Overlook Neighborhood to the Lakefront and Lakefront pathway. The final design of the Lakefront Terrace will be determined at the time of Site Development Plan review.

20. GGP will complete Phase II redevelopment of Merriweather Post Pavilion based on the redevelopment program scope and phasing as outlined in CEPPA No. 16.

PRIOR TO ISSURANCE OF A BUILDING PERMIT FOR THE 3,900,000TH SF OF DEVELOPMENT

21. GGP will complete Phase III redevelopment of Merriweather Post Pavilion based on the redevelopment program scope and phasing as outlined in CEPPA No. 16.

22. At least one Downtown Neighborhood Square as defined in the Zoning Regulations shall be completed and deeded to Howard County for public land.

PRIOR TO ISSUANCE OF A BUILDING PERMIT FOR THE 5,000,000TH SF OF DEVELOPMENT

23. GGP will provide $1,000,000 towards the initial funding of a Downtown Circulator Shuttle.

24. Transfer of ownership of Merriweather Post Pavilion to the Downtown Arts and Culture Commission for zero dollar consideration.

PRIOR TO THE APPROVAL OF EACH FINAL DEVELOPMENT PLAN

25. Each owner of property developed with commercial uses pursuant to the Downtown Revitalization Zoning Regulations shall participate as a member in the Downtown Columbia Partnership established pursuant to CEPPA No.6 and provide an annual per-square-foot charge in an amount of twenty-five cents ($0.25) per square foot of Gross Leasable Area for office and retail uses and twenty-five cents ($0.25) per square foot of net floor area for hotels to the Downtown Columbia Partnership. Each Final Development Plan shall show a consistent means of calculating and providing this charge, and require that the first annual charge be paid prior to issuance of occupancy permits for those buildings constructed pursuant to that Final Development Plan and subsequent Site Development Plans under Downtown Revitalization. This per-square-foot charge shall be calculated at the time of Site Development Plan approval and shall include an annual CPI escalator to be specified in each Site Development Plan.

UPON ISSUANCE OF ANY BUILDING PERMIT FOR A BULDING CONTAINING DWELLING UNITS OFFERED FOR SALE

26. INSTEAD OF PROVIDING MODERATE INCOME HOUSING UNITS AS REQUIRED BY THE ZONING REGULATIONS, EACH DEVELOPER OF FOR-SALE DWELLING UNITS MAY PROVIDE [[To fulfill an affordable housing obligation, each developer will provide]] a one-time, per unit payment to the DCCHF in the following amounts, to be imposed upon the issuance of any building permit for a building containing FOR-SALE dwelling units. Payment will be contingent upon the expiration of all applicable appeal periods associated with each building permit without an appeal being filed, or if an

appeal is filed upon the issuance of a final decision of the courts upholding the issuance of the permit:

1). $2.00 PER SQUARE FOOT [[$2,000/unit]] for each NET NEW DWELLING unit up to and including the 1,500th NET NEW DWELLING unit.
2). $7.00 PER SQUARE FOOT [[$7,000/unit]] for each NET NEW DWELLING unit between the 1,501th unit up to and including the 3,500th NET NEW DWELLING unit.
3). $9.00 PER SQUARE FOOT [[$9,000/unit]] for each NET NEW DWELLING unit ABOVE AND INCLUDING [[between]] the 3,501st NET NEW DWELLING unit [[up to and including the 5,500th unit]].

The amounts to be paid under 1), 2) and 3) above will be subject to annual adjustment based on a builder's index, land value or other index provided in the implementing legislation. *AFFORDABLE UNITS SHALL BE EXCLUDED FROM THE COMPUTATION SET FORTH UNDER **1, 2,** AND **3** ABOVE.*

ADDITIONAL CEPPA CONTRIBUTION

27. Each owner of property developed with commercial uses pursuant to the Downtown Revitalization Zoning Regulations shall provide an annual payment to the DCCHF in the amount of five cents ($0.05) per square foot of Gross Leasable Area for office and retail uses, and five cents ($0.05) per square foot of net floor area for hotels. The payment will be made annually by the property owner, with the initial payment being made prior to the issuance of an occupancy permit for net new commercial development on the property. The amount of the charge will be subject to annual adjustment based on a builder's index, land value, or other index provided in the implementing legislation.

Introduced ____________
Public Hearing ____________
Council Action ____________
Executive Action ____________
Effective Date ____________

County Council Of Howard County, Maryland

2016 Legislative Session

Legislative Day No. ____

Bill No. ____ -2016

Introduced by the Chairperson at the request of the County Executive

AN ACT amending *PlanHoward 2030*, the general plan for Howard County, in order to amend the number of housing unit allocations available to developers of new residential units in Downtown Columbia for the period 2015 - 2030; and generally relating to planning, zoning and land use in Howard County.

Introduced and read first time ____________________, 2016. Ordered posted and hearing scheduled.

By order ____________________________
Jessica Feldmark, Administrator

Having been posted and notice of time & place of hearing & title of Bill having been published according to Charter, the Bill was read for a second time at a public hearing on ____________________, 2016.

By order ____________________________
Jessica Feldmark, Administrator

This Bill was read the third time on __________, 2016 and Passed ___, Passed with amendments ______, Failed ______.

By order ____________________________
Jessica Feldmark, Administrator

Sealed with the County Seal and presented to the County Executive for approval this ____day of __________, 2016 at ___ a.m./p.m.

By order ____________________________
Jessica Feldmark, Administrator

Approved/Vetoed by the County Executive ________________, 2016

____
Allan H. Kittleman, County Executive

NOTE: [[text in brackets]] indicates deletions from existing law; TEXT IN SMALL CAPITALS indicates additions to existing law; ~~Strike-out~~ indicates material deleted by amendment; Underlining indicates material added by amendment

WHEREAS, this Act amends certain provisions of *PlanHoward 2030* in order to accomplish the goals of providing a broad spectrum of affordable housing in Downtown Columbia.

NOW, THEREFORE,

Section 1. Be It Enacted *by the County Council of Howard County, Maryland, that PlanHoward2030 is hereby amended as follows and as more specifically shown in the attached pages:*

1. *Text on page 74 is amended as follows:*

> **Downtown Columbia.** These allocations are based on the Downtown Columbia Plan adopted in 2010, AND SUBSEQUENTLY AMENDED IN 2016. The annualized pace of growth shown in Figure 6-10 is based on the housing unit allocation chart adopted by the County Council. Over the 16-year allocation period from 2015 through 2030, [[3,750]]4,519 Downtown Columbia allocations are available. [[Including the 950 allocations that were made available in the 2013 and 2014 allocation years in previous allocation charts, a total of 4,700 of the 5,500 ultimate approved Downtown units will be allocated, reflecting the maximum units allowed in the first two of the three total growth phases in the Downtown Plan.]]

2. *Remove figure 6-10, Howard County APFO Allocations Chart, from PlanHoward2030 and substitute a revised Figure 6-10 as attached to this Act.*

Section 2. And Be It Further Enacted *by the County Council of Howard County, Maryland that the Director of the Department of Planning and Zoning may correct obvious errors, capitalization, spelling, grammar, headings and similar matters and may publish this amendment to PlanHoward 2030 by adding or amending covers, title pages, a table of contents, and graphics to improve readability.*

***Section 3. And Be It Further Enacted** by the County Council of Howard County, Maryland, that this amendment be attached to and made part of PlanHoward2030.*

***Section 4. And Be It Further Enacted** by the County Council of Howard County, Maryland, that this Act shall become effective 61 days after its enactment.*

Figure 6-10
Howard County APFO Allocations Chart

Year	Downtown Columbia	Growth and Revitalization	Established Communities	Green Neighborhood	Rural West	Total County
2015	400	1,200	400	150	100	**2,250**
2016	350	1,200	400	150	100	**2,200**
2017	300	1,200	400	150	100	**2,150**
2018	225	1,200	400	150	100	**2,075**
2019	225	1,200	400	150	100	**2,075**
2020	222	1,200	400	150	100	**2,072**
2021	440	1,200	400	150	100	**2,290**
2022	390	1,200	400	150	100	**2,240**
2023	340	1,200	400	150	100	**2,190**
2024	265	1,200	400	150	100	**2,115**
2025	240	1,200	400	150	100	**2,090**
2026	240	1,200	400	150	100	**2,090**
2027	240	1,200	400	150	100	**2,090**
2028	220	1,200	400	150	100	**2,070**
2029	210	1,200	400	150	100	**2,060**
2030	212	1,200	400	150	100	**2,062**
20 Year Totals	**4,519**	**19,200**	**6,400**	**2,400**	**1,600**	**34,119**

Source: Howard County DPZ