



**Comprehensive Study of the County's Point System
for Public Benefits in Incentive Zones
Incentive Benefit Costing Memorandum**

Submitted to Montgomery Planning
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Table of Contents

1. Introduction	2
Project Overview	2
Objective	2
2. Methodology	3
3. Public Benefit Costing	3
Major Public Facilities	4
Connectivity and Mobility	5
Diversity of Uses and Activities	10
Quality Building and Site Design	13
Protection and Enhancement of the Natural Environment	16
4. Conclusion	22
Analysis Summary	22
Key Findings	23
Bibliography	25

1. Introduction

Project Overview

Montgomery Planning engaged the Hayat Brown team to complete a study assessing the County's Point System for Public Benefits in Incentive Zones. Montgomery County (County) offers two methods of development: the standard method and optional method. The standard method of development refers to by-right development that does not require the provision of public benefits. The optional method of development allows applicants to achieve greater density for projects in exchange for public benefits as detailed in the County's Point System. The Point System outlines a menu of public benefits with associated point values from which applicants can choose. Each project must accumulate a minimum number of points by providing public benefits from that menu to be granted incentive density.

The overall goal of this study is to evaluate the effectiveness of the existing Point System, quantify the value of the incentive density granted by the Point System in comparison with the public benefits received, benchmark the County's Point System against other programs around the country and develop a set of recommendations to modernize the Point System.

This study will be utilized by Montgomery Planning as it embarks on a comprehensive update of the County's Point System. In this report, we estimate the cost to applicants to provide each of the public benefits outlined in the County's Incentive Density Implementation Guidelines [1] (Implementation Guidelines).

Objective

This report will focus on estimating the cost of providing the 36 public benefits described in the Implementation Guidelines. The objectives of this costing exercise are to:

- Gain a current understanding of the costs, in 2023 dollars, associated with providing each public benefit identified in the Implementation Guidelines.
- Assist with understanding the overall magnitude of the costs that applicants incur when providing various combinations of public benefits to receive incentive density under the optional method of development.
- Allow for the comparison of the costs of providing individual benefits against the points awarded for each benefit, arriving at a general understanding of the "points value" vs cost for each public benefit.
- Create a baseline understanding of costs for providing public benefits so that cost can be compared with the value generated by incentive density.
- Generate a defensible set of costing assumptions to inform financial analysis focused on understanding how public benefits impact project feasibility.

2. Methodology

In coordination with Montgomery Planning, the Hayat Brown team determined the appropriate costing method for each public benefit based on each benefit's specific characteristics. Subsequently, the team estimated a cost or range of costs for each benefit. Cost estimates were determined by reviewing data from Hayat Brown's proprietary internal databases, Marshall & Swift¹, RS Means², CoStar,³ and a review of developer pro formas, then validated through discussions with members of the local development community including applicants and general contractors active in Montgomery County. The majority of the public benefit costs estimated are construction hard costs or land costs in a pro forma analysis, although some public benefits may also impact operating expense assumptions. Where applicable, estimates of impacts to a project's operating costs are included in this analysis. Notably, some public benefits reduce project construction costs. All cost estimates are assumed to be in 2023 dollars.

3. Public Benefit Costing

In this section, we outline costing details for each of the 36 public benefits, across seven categories, offered by the County in exchange for incentive density. For each public benefit, the following information is provided:

Description – In addition to defining the public benefit, this section will describe how the public benefit is evaluated for points.

Costing Methodology – This section will explain and justify the approach to estimating costs for the public benefit, including a summary of the sources for estimating the costs. Generally, this section will point out whether the costs of the benefit are better understood as lump sum costs or as per square foot costs that scale with project size. For some public benefits, we estimate a range of costs. This section will describe how we determined that range.

Cost Estimate – This section presents the cost estimate or range of estimates, if applicable. Where helpful, this section will provide examples of estimating the total cost of public benefits where the estimate is not a lump sum.

Additional Considerations – This section will explain any other elements relevant to estimating the costs of the public benefit, and why those elements are relevant.

¹ Marshall & Swift is a provider of building and improvement cost data for commercial and residential real estate.

² RS Means is a provider of construction cost estimation data.

³ CoStar is a commercial real estate information database.

Major Public Facilities

Major Public Facilities

Description: Applicants may receive points for constructing major public facilities as part of their projects. Applicants may also receive points for conveying land and/or floor area towards a major public facility or making a payment towards the construction of the facility off-site. The implementation guidelines provide examples of various facilities that would qualify under this category, but the definition is not limited to any one facility. For projects that have received points for this benefit, most have either provided a park, a payment towards a park, or a bikeshare facility. Projects have not provided major public facilities in the form of public infrastructure projects like schools and libraries.

Costing Methodology: Despite the wide range of eligible public benefits under this category, estimates are provided for two specific public benefits: a developed park and a bikeshare facility as these are the primary public benefits delivered under this category. The cost for a developed park is shown as a range to account for how costs can increase depending on the features included in a park, such as courts, fields, playgrounds, restrooms, and other amenities. Cost estimates were obtained from Marshall & Swift and discussions with applicants. The costs are provided on a per square foot basis so that the cost estimate can be scaled to account for the size of a developed park included in a development application. No operating cost impacts were assumed.

The size of a bikeshare facility can vary, but the average bikeshare station with 15 docks and ten bikes is representative of the costs of most bikeshare stations, according to discussions with Capital BikeShare and applicants we interviewed for this study. Bikeshare stations generate estimated operating costs of \$100 per dock per year.

Cost Estimates:

Developed Park:

- Low Complexity – \$25 per square foot
- Medium Complexity – \$100 per square foot
- High Complexity – \$200 per square foot

Bike Share:

- Mid-size station (15 docks, 10 bikes): \$55,000 installed
 - Operations Estimate: \$1,500 annually

Additional Considerations: This analysis does not include providing major infrastructure projects because although allowable under the implementation guidelines, they have never been provided. This is likely because the costs would vastly exceed what is supportable for an optional method project.

Connectivity and Mobility

Advance Dedication

Description: Points may be awarded to applicants for dedicating a portion of their site for rights-of-way that support greater connectivity and accessibility to pedestrians, bikes, autos, and transit while increasing the overall walkability within the development.

Costing Methodology: The cost to the applicant to provide this public benefit is based on the value of the land area that is dedicated. No operating cost impacts were assumed.

Cost Estimate: The cost to provide land area for Advanced Dedication depends on the site's land value. The cost to provide this public benefit is estimated to be the proportional land value of the advance dedication.

Additional Considerations: Rights-of-way dedicated in advance of submitting a development application may also be considered part of the tract area for FAR calculations. Therefore, the applicant does not lose out on maximum allowable density by dedicating a portion of the site.

Minimum Parking

Description: Applicants can earn points for constructing fewer parking spaces than the maximum allowed, where applicable. Points are awarded on a sliding scale.

Costing Methodology: In the real estate development community, parking spaces are typically priced on a per space basis. The cost for this benefit is estimated based on the average cost to construct a surface, structured, or below-grade parking space. Structured and below-grade parking spaces require more labor and material to construct than surface parking which is reflected in the estimates below. Cost estimates were based on data from Marshall and Swift, a review of developer pro formas, and discussions with applicants. No operating cost impacts were assumed.

Cost Estimate⁴:

- Structured – \$35,000/space
- Surface – \$2,800/space
- Below Grade – \$55,000/space

⁴ Cost estimates assume an average of 350 square feet per parking space.

The Metro Tower project applicant received points for providing 163 fewer spaces than the 463 maximum spaces required by code. The spaces were required to be provided within a below-grade parking structure. Providing the maximum allowable parking would have increased project costs by \$16.7 million in 2023 dollars.

Additional Considerations: Applicants' total development costs are reduced by the difference in cost between the number of parking spaces constructed and the maximum number of parking spaces allowed. Parking fees are encouraged by the County and at some projects, parking spaces generate revenue.

Neighborhood Services

Description: In neighborhoods with fewer than 10 different basic services within ¼ mile, applicants may be awarded points for providing retail bays appropriate for those basic services. Basic services include banks, cafes, care centers, community/civic centers, convenience stores, dry cleaners, hair care services, hardware stores, health clubs, laundromats, libraries, medical and dental offices, parks, pharmacies, police and fire stations, post offices, religious institutions, restaurants, schools, supermarkets, and theaters. A minimum of four of the bays provided must have a maximum floor area of 5,000 square feet. Additionally, frontage should not be disproportionately devoted to a single use.

Costing Methodology: In instances where applicants have opted to provide neighborhood services, retail bays are typically already included in the development plan, therefore no additional construction costs were assumed. However, restricting the applicant to specific tenant categories is likely to increase vacancy and decrease rents due to the smaller pool of potential tenants.

Cost Estimate: In modeling the impact of this public benefit on overall project performance, we would account for these costs by assuming a five percent increase in the retail vacancy rate and a five percent decrease in market retail rents.

Public parking

Description: Applicants may receive points for providing public parking for civic and retail uses. Points are awarded on a sliding scale for providing public spaces above the minimum requirement, up to the maximum allowed in the zone.

Costing Methodology: In the real estate development community, parking spaces are typically priced on a per space basis. The cost for this benefit is estimated based on the average cost to construct a surface, structured, or below-grade parking space. Structured and below-grade parking spaces require more labor and material to construct than surface parking which is reflected in the estimates below. Cost estimates were based on data from Marshall and Swift and discussions with applicants.

*Cost Estimate*⁵:

- Structured \$45,000/space,
- Surface \$2,800/space,
- Below Grade \$70,000/space

Saul Centers White Flint project received points for providing 40 below-grade spaces of public parking. The provision of this public benefit is estimated to have increased project costs by \$2.0M in 2023 dollars.

Additional Considerations: Parking fees are encouraged by the County and in some projects, parking spaces generate revenue.

Through-Block Connections

Description: Applicants may receive points for safe and attractive pedestrian connections between streets. Generally, the connection should be open-air (unless a property owner grants a public access easement for a walkway through the first floor of a building), at least 15 feet wide and open to the public between 8 a.m. and 9 p.m. or for the hours of operation of any connected, publicly accessible parking or transit facility within ½ mile.

Construction Costing Methodology: The per square foot model was chosen as the most appropriate costing method because through-block connections are typically paved walkways with varying levels of improvements. The range of estimates allows for low complexity paved walkways, medium complexity walkways with increased sitework or higher quality materials, and high complexity walkways with increased sitework, higher quality materials, and/or other additional amenities. We obtained these construction cost estimates from Marshall & Swift and discussions with applicants. The costs are provided on a per square foot basis to allow cost estimates to be scaled to the size of the proposed connection. Constructing a privately owned, publicly accessible connection requires regular maintenance and therefore will increase project operating costs. We provide an operating cost assumption as a percentage of project operating costs to account for this increase. This cost estimate was based on discussions with local project owners.

Cost Estimate:

- Low Complexity – \$40 per square foot
- Medium Complexity – \$60 per square foot

⁵ Cost estimates assume an average of 350 square feet per parking space.

- High Complexity – \$85 per square foot

Operations Estimate:

- 0.5% increase in project operating expenses

Metro Tower was required to provide the enhanced pedestrian connection between Hampden Lane and Elm Street within the open space plaza containing a water feature, raised planter(s) with seat wall, lighting, and artwork(s). This open space plaza includes 9,183 square feet and would be classified as medium complexity; therefore, the estimated increase in project costs for this benefit is \$367,320 in 2023 dollars.

Transit Access Improvements

Description: Applicants receive points for constructing new or improving existing transit access to maximize connectivity and transit use throughout the County. Improvements should upgrade pedestrian connections to transit stations or stops to meet County standards for accessibility, be located within ½ mile of the project site, or provide regular access for passengers within ½ mile and should not be required on-site or along the frontage.

Construction Costing Methodology: Typical transit access improvements consist of constructing or improving pedestrian access to transit-proximate development projects; therefore, costs are based on the per square foot costs for sidewalks. Estimates for varying levels of complexity were determined to account for the range of factors including site conditions, additional included elements, accessibility requirements and finish quality that may impact total cost. We obtained these construction cost estimates from Marshall & Swift and discussions with applicants. Maintenance of additional common areas, where upgrades are not located within the public right-of-way, is estimated to marginally increase operating expenses. This cost estimate was based on discussions with local project owners.

Cost Estimate:

- Low Complexity – \$40 per square foot
- Medium Complexity – \$60 per square foot
- High Complexity – \$85 per square foot

Operations Estimate:

- 0.5% increase in project operating expenses

The Brightview Bethesda project will improve crosswalks, sidewalks, and accessibility ramps at the intersections of Rugby Avenue at Glenbrook Road and Auburn Avenue. These improvements are located within ½-mile of the project site and are not otherwise required improvements along the subject property's frontage. Assuming the approximate square footage of these improvements is

3,000 sf and the project is of medium complexity, the estimated increase to project costs for this improvement is \$180,000 in 2023 dollars.

Additional Considerations: Transit access improvements may also include upgrades such as seating (estimated cost varies based on specific requirements) or real-time information signs (estimated cost of \$25,000 including installation). These may be included in the cost estimate on a one-off basis.

Streetscape Improvements

Description: Applicants receive points for constructing off-site streetscape improvements not otherwise required as part of the project. Streetscape improvements may include upgraded landscaping, lighting, or furnishings among other improvements, additionally the improvements must comply with applicable master plan recommendations, including undergrounding or moving utilities behind buildings.

Construction Costing Methodology: Typical streetscape improvements consist of sidewalks with additional amenities; therefore, costs are based on the per square foot cost for sidewalks with an amenity premium. Estimates for varying levels of complexity were determined to account for a range of factors including site conditions, additional included elements and finish quality that may impact total cost. We obtained these construction cost estimates from Marshall & Swift and discussions with applicants. A separate estimate for underground utilities was calculated as this is a required component of some streetscape improvements that can add significant cost. Estimates for varying levels of complexity were determined to account for a range of factors including utility pole removal, utility provider coordination, or site complexity. We obtained this cost estimate through a review of costs for local utility undergrounding projects. Streetscape improvements are typically off-site in the public right of way; therefore, no operations costs were calculated.

Cost Estimate:

Streetscape:

- Low Complexity – \$60 per square foot
- High Complexity – \$85 per square foot

Underground Utilities:

- Low Complexity – \$1,200 per linear foot
 - High Complexity – \$1,800 per linear foot
-

Trip Mitigation

Description: Applicants receive points for entering into binding traffic mitigation agreements that meet County zoning ordinance requirements. The agreements are designed to reduce the number of trips attributable to the project. Trip mitigation agreements can include strategies such as the appointment

of a transportation benefits coordinator to assist tenants with exercising commuting options, installing displays with commuter information, providing emergency transportation, providing car/van pool parking, and/or providing bike storage facilities.

Construction Costing Methodology: The strategies typically included in trip mitigation agreements vary significantly, may be passed on to tenants and, in most cases, do not represent a significant cost to the applicant. Therefore, no estimate was calculated.

Way Finding

Description: Applicants receive points for developing and implementing way-finding systems. The systems should provide maps, signs, and information to orient users to nearby features such as parks, trails, cultural facilities, transit, landmarks, and other areas of interest.

Construction Costing Methodology: Applicants are typically asked to provide a comprehensive system that orients pedestrians. Therefore, cost estimates are based on average cost given the level of complexity. Factors increasing complexity include the size of the project, the number of signs, and the quality of the wayfinding system. Construction cost estimates were obtained from Marshall & Swift and discussions with applicants. Wayfinding systems generally have minimal effect on operating costs, therefore no operations estimate was calculated.

Cost Estimate:

- Low Complexity – \$10,000,
 - Medium Complexity – \$20,000,
 - High Complexity – \$40,000
-

Diversity of Uses and Activities

Adaptive Buildings

Description: Applicants can earn points for the construction of commercial or mixed-use buildings that can be adapted to another use. Applicants receive points for buildings that have a minimum floor to floor height of at least 15 feet on any floor meeting grade and 12 feet on any other floor; and must be able to accommodate various types of use with only minor modifications.

Construction Costing Methodology: Based on discussions with applicants and a review of Marshall and Swift, it was determined there is a premium to hard construction costs for buildings to become adaptive according to the standards in the implementation guidelines. This premium was estimated on a per square foot basis as a percentage increase above baseline hard construction costs. The premium range provided below accounts for ranges in cost premiums related variances in the base

construction type. For example, the cost to convert a residential building will differ from the cost to convert an office building. No operating cost impacts were assumed.

Cost Estimate: Adaptive buildings will have a 2-5% increase over baseline hard construction costs. For example, a 100,000 square foot building has hard construction costs of \$250 per sf, the cost of building the same project as an adaptive building would cost between \$255 to \$262.50 per square foot. Therefore:

Cost to construct a non-adaptive building: \$25,000,000.

Cost to construct adaptive building: \$25,500,000 to \$26,250,000.

Net cost of building project as adaptive: \$500,000 to \$1,250,000

Care Centers

Description: Applicants can earn points for the construction of a child, teen, or adult daycare facility. Per the Implementation Guidelines, the facility must accommodate a minimum of 15 users, must satisfy state standards and must ensure that a minimum of 25% of the spaces are open to the public.

Construction Costing Methodology: Construction cost estimates are based on per square foot cost for daycare centers. The operating estimates assume increased vacancies and decreased rents related to finding an appropriate care center operator. We obtained these construction cost estimates from Marshall & Swift and discussions with applicants.

Cost Estimate:

- Indoor cost – \$280 per square foot
- Outdoor cost – \$75-100 per square foot

Operations Estimate:

- 5% increase in project vacancy estimate
- 10% decrease in project rental rate estimate

Additional Considerations: The State of Maryland mandates that care centers construct 110 square feet per child (35 indoor + 75 outdoor).

Dwelling Unit Mix

Description: Applicants can earn points for providing residential multifamily projects with a unit mix that includes a minimum of 7.5 percent efficiency units, 8 percent one-bedroom units, 8 percent two-bedroom units, and 5 percent three-or more bedroom units.

Construction Costing Methodology: The dwelling unit mix requirements includes more large units than included in the typical unit mix. This benefit is not expected to have a significant effect on

construction costs; therefore, no estimate was calculated. On a per square foot basis, larger units generate lower rents, reducing project rental income. The operating cost estimate was calculated by analyzing the difference between the average number of units per bedroom size in new construction buildings and the public benefit minimum requirement to determine the effect of this difference on average rental rates. The data used for these calculations was obtained through CoStar.

Operating Estimate:

3.6% decrease in average rental rates

Enhanced Accessibility for Seniors or the Disabled

Description: Applicants can earn points on a sliding scale for the construction of single-family or owner-occupied housing designed for individuals with mobility impairments. Interiors must meet the American National Standards Institute A117.1 Residential Type A standards or an equivalent County standard.

Construction Costing Methodology: Constructing units that meet the increased standards results in increased per square foot construction costs. Costs were estimated as a per square foot construction cost premium. Estimates were obtained from Marshall & Swift and discussions with applicants. No operating cost impacts were assumed.

Cost Estimate:

- 10% premium on accessible unit square footage

Square footage devoted to accessible units will have a 10% increase over baseline hard construction costs. For example, a project with base building hard cost of \$250 per square foot. A cost of \$275 per foot should be applied to any accessible unit square footage.

Live/Work

Description: Applicants can earn points for providing a percentage of live/work units in a project. Points are awarded for providing a minimum of 2 units in zones with an FAR of 2.0 or lower or a minimum of 6.6% of total units in zones with an FAR greater than 2.0.

Construction Costing Methodology: This benefit has not been frequently used by applicants, therefore, no costing methodology or cost estimate was calculated.

Moderately Priced Dwelling Units

Moderately priced dwelling units were analyzed by Montgomery Planning staff as a standalone exercise. Please refer to MPDU costing analysis.

Small Business Opportunities

Description: Applicants can receive points for providing retail bays of no more than 5,000 square feet for a minimum of three small businesses on sites of more than one acre or all of the commercial space on smaller sites. Additionally, the gross floor space approved for small businesses must be restricted by covenant for a minimum of six years from initial occupancy.

Construction Costing Methodology: In instances where applicants have opted to provide small business opportunities, retail bays are typically already included in the development plan, therefore no construction cost estimates were calculated. However, restricting the applicant to specific tenant categories is likely to increase vacancy and decrease rents due to a smaller pool of potential tenants.

Cost Estimate: In modeling the impact of this public benefit on overall project performance we would account for these costs by assuming a five percent increase in the retail vacancy rate and a five percent decrease in market retail rents.

Quality Building and Site Design

Architectural Elevations

Description: Applicants can earn points for developing projects that are bound by architectural elevations submitted as part of a site plan. These elevations must include features such as a minimum amount of transparency on the first floor and a minimum amount of spacing between doors. Elevation should also prioritize applicable master plan and/or design guidelines.

Construction Costing Methodology: Constructing units that meet the increased architectural standards required results in increased per square foot construction costs. A range of estimates was calculated to allow for a variety of potential elevation upgrades including higher quality materials, additional signage, lighting, or other elements. Costs were estimated as a per square foot construction cost premium. Estimates were obtained from Marshall & Swift and discussions with applicants. No operating cost impacts were assumed.

Cost Estimate:

- Low Complexity – \$20 per square foot
- Medium Complexity – \$40 per square foot

- High Complexity – \$73 per square foot
-

Exceptional Design

Description: Applicants can earn points for a building or a site design that exceptionally enhances the visual and functional character of a setting by providing innovative responses to the immediate context, using higher quality materials, employing sustainable design strategies, and serving as a landmark or creating a sense of place.

Construction Costing Methodology: Constructing units that meet the increased design standards results in increased per square foot construction costs. A range of estimates was calculated to allow for a variety of potential elevation upgrades including higher quality materials, unique design, or other elements. Costs were estimated as a per square foot construction cost premium. Estimates were obtained from Marshall & Swift and discussions with applicants. No operating cost impacts were assumed.

Cost Estimate:

- Low Complexity – \$20 per square foot
 - Medium Complexity – \$40 per square foot
 - High Complexity – \$73 per square foot
-

Historic Resource Protection

Description: Applicants may earn points for protecting an on- or off-site historic resource or contributing element within a historic district designated in the Montgomery County Master Plan for Historic Preservation through preservation or enhancement efforts such as capital improvements, landscaping upgrades, or view shed protection. Alternatively, points may also be earned for making a payment-in-lieu.

Construction Costing Methodology: This benefit has not been frequently used by applicants; therefore, no costing methodology or cost estimate was calculated.

Public Open Space

Description: Applicants can earn points for providing, or making a payment for, open space above the minimum open space requirement for a given zone. The public open space provided must meet certain requirements including being accessible from the street; being open to the public between sunrise and sunset; being completed with amenities and being at least 35 feet wide.

Construction Costing Methodology: If an applicant opts to provide open space on-site, the estimated cost is equal to the cost of improvements. A range of per square foot estimates was calculated to

account for project complexities such as additional site work, high quality finishes, and accommodating additional requirements related to meeting minimum guidelines, where applicable. Construction cost estimates were obtained from Marshall & Swift and discussions with applicants. If an applicant opts to pay a fee-in-lieu, the actual fee should be used. Maintenance of public open space is estimated to marginally increase operating expenses. This cost estimate was based on discussions with local project owners.

Cost Estimate:

- Low Complexity – \$25 per square foot
- Medium Complexity – \$100 per square foot
- High Complexity – \$200 per square foot

Operating Estimate:

- 0.5% increase in operating expenses
-

Public Art

Description: Applicants can earn incentive density for the provision of public art. Public art must be reviewed and approved by the Art Review Panel under the Public Art Guidelines. The review determines whether the art meets specific minimum guidelines. Alternatively, an applicant may pay a fee to the Public Art Trust Steering Committee.

Construction Costing Methodology: The cost of public art and the associated operating expenses vary based on the unique attributes of each installation. No estimate was calculated for this benefit.

Structured Parking

Description: Applicants may receive points on a sliding scale for providing above or below grade structured parking.

Construction Costing Methodology: Construction cost assumptions are based on estimates of the average cost per parking space by space type. Construction cost estimates were obtained from Marshall & Swift and discussions with applicants. No operating cost impacts were assumed.

Cost Estimate⁶:

- Structured – \$35,000/space
- Below Grade – \$55,000/space

Additional Considerations: Parking fees are encouraged by the County and at some projects, parking spaces generate revenue.

Tower Step-Back

Description: Applicants may earn points for setting back a building's upper floors. Buildings must be stepped back a minimum of 6 feet beyond the first-floor facade. The setback must begin at a height no greater than 72 feet.

Construction Costing Methodology: Construction cost estimates are based on the per square foot premium to hard costs. A range of estimates were calculated to allow for project specific conditions related to the site, building height, design, and structural complexity required to incorporate the step back. Construction cost estimates were obtained from Marshall & Swift and discussions with applicants. No operating cost impacts were assumed.

Cost Estimate:

- Low Complexity – \$20 per square foot
 - Medium Complexity – \$40 per square foot
 - High Complexity – \$73 per square foot
-

Protection and Enhancement of the Natural Environment

Building Lot Termination

Description: Applicants earn points by purchasing Building Lot Termination easements (BLTs) or paying into the Agricultural Land Preservation Fund. The purchase of BLTs is required in the CR and LSC zones. A BLT easement restricts residential, commercial, industrial, and other non-agricultural uses on a given property. The primary purpose of a BLT easement is to preserve agricultural land by reducing the fragmentation of farmland resulting from residential development.

⁶ Cost estimates assume an average of 350 square feet per parking space.

Construction Costing Methodology: The cost estimate is based on the County's current rate for the purchase of a BLT as of March 16, 2023. No operating cost impacts were assumed.

Cost Estimate:

- \$250,000 per BLT
-

Cool Roof

Description: Applicants can receive points for the construction of a cool roof or a roof that is designed to reflect more sunlight than a traditional roof.

Construction Costing Methodology: Roof construction is commonly estimated on a per square foot basis. A range of estimates was calculated to accommodate variations in materials and project specific characteristics. Construction cost estimates were obtained from Marshall & Swift and discussions with applicants. No operating cost impacts were assumed.

Cost Estimate:

- Single Ply Membrane (Cool Roof) \$5-\$10 per square foot
-

Energy Conservation and Generation

Description: Applicants can earn points for the construction of projects that exceed the energy efficiency standards for building type by 17.5% for new buildings and 10% for existing buildings. Applicants can also earn points for providing a renewable energy generation facility on-site or within ½ mile of the site that is capable of generating a minimum of 1.25 percent of the projected energy requirement for the development.

Construction Costing Methodology: The cost of providing this benefit comes from the production of the infrastructure required to create/conserv energy. Conserving energy is priced using a premium to base construction costs, with a range to account for a variety of conservation measures. The cost of an energy generation facility is typically priced as a dollar price per watt and may vary significantly depending on the type of system constructed. The estimate below represents an estimate of actual costs actually incurred in the County. The operating cost of the energy generation/conservation systems is affected by the type of conservation measures; the size and complexity of the generation system; the location of the project; weather patterns; and local regulations that can affect maintenance requirements, insurance premiums, and permitting costs. Estimates for energy conservation/generation construction and operation were obtained through conversations with applicants.

Cost Estimate:

- Energy Conservation: 2% – 10% of the total hard costs
- Energy Generation: \$3.50 – \$5.25 per watt

Operations Estimate:

- \$5,000 - \$75,000 increase to annual operating expenses per year

Additional Considerations: The execution of this public benefit can take many forms. Renewable energy facilities can be wind, solar, or hydroelectric. In addition to the base cost of energy generation facilities, other cost considerations may include: increased structural costs related to supporting the facility or costs associated with commissioning the facility including entering into a public purchase agreement.

Habitat Preservation and Restoration

Description: Applicants may receive points on a sliding scale for the preservation and/or restoration of natural habitats on-site or within the same local watershed. The area preserved or restored must meet the following criteria:

- The area must be shown on an exhibit as part of a site plan application.
- Preservation and restoration techniques must at least meet the standards of the M-NCPPC Environmental Guidelines.
- The area must be at least 2,500 square feet.
- The area must be protected by a restrictive easement or covenant recorded in the land records or put in a land trust.

Construction Costing Methodology: This benefit has not been frequently used by applicants; therefore, no costing methodology or cost estimate was calculated.

Recycling Facility Plan

Description: Applicants can earn points for providing a recycling facility plan to be approved as part of a site plan for buildings that satisfy Montgomery County Executive Regulation 15-04AM or Montgomery County Executive Regulation 18-04 which outline recycling plan requirements in the County.

Construction Costing Methodology: The guidelines for receiving incentive density points are based on projects that exceed zoning regulations. Costs to provide a plan that meets this standard vary significantly depending on the specific elements of the plan and method of implementing County requirements; therefore, no estimate was calculated.

Transferable Development Right (TDR)

Description: Applicants can earn points for properties in a TDR Overlay zone by purchasing TDRs. TDRs allow the county to shift development from the agricultural reserve to another location to preserve rural areas and farmland.

Construction Costing Methodology: Actual Cost was used to value TDRs. The estimate, based on the County's rates for the purchase of a TDR, was obtained from Montgomery Planning staff on March 16, 2023. No operating cost impacts were assumed.

Cost Estimate:

- \$20,000 per TDR
-

Tree Canopy

Description: Applicants can earn points for protecting tree canopy coverage, calculated as 75 percent of 20-year canopy coverage of at least 25% of the on-site open space.

Construction Costing Methodology: The cost of this benefit is estimated based on the cost per tree to protect the appropriate percent of the canopy coverage. Estimates for the purchase, installation, and initial maintenance of American Elm (or similar) were obtained through discussions with local nurseries and applicants. No operating cost impacts were assumed.

- Cost Estimate: \$800 per tree

Operating Estimate: None

Vegetated Area

Description: Applicants can receive points for plantings with a minimum size of 5,000 square feet and a minimum soil depth of 12 inches, not including vegetated roofs or storm water management facilities.

Construction Costing Methodology: The cost estimate reflects the per square foot cost of constructing a vegetated area including the cost of design, plants, landscaping, storm water management, and other costs that go into the development of green spaces. Maintenance of vegetated areas will increase project operating costs; therefore, an operations cost estimate was calculated. A range of estimates for construction and operations were provided to reflect variations in site requirements, storm water management, and quality of materials. Estimates were obtained from Marshall and Swift, as well as discussions with applicants, nurseries, and landscape architects.

Cost Estimate:

- Low Complexity – \$10 per square foot
- High Complexity – \$20 per square foot

Operating Estimate:

- Low complexity – \$5,000 per year
 - High complexity – \$90,000 per year
-

Vegetated Roof

Description: Applicants can earn points for the installation of a vegetated roof. The vegetated roof must cover at least 33 percent of a building's roof, excluding mechanical equipment, and must have a minimum soil depth of 4 inches.

Construction Costing Methodology: Construction cost for a vegetated roof was estimated on a per square foot basis. The cost includes the cost of the roof, materials, additional required structural support, as applicable, and any required irrigation or water management system. The cost range is affected by the complexity of the irrigation and water management systems as well as the plants and other materials used. Maintenance of vegetated areas will increase project operating costs; therefore, an operations cost estimate was calculated. A range of estimates for construction and operations were provided to reflect variations in site requirements, water management, and quality of materials. Estimates were obtained from Marshall and Swift and discussions with applicants.

Cost Estimate:

- Low Complexity – \$35 per square foot
- High Complexity – \$45 per square foot

Operating Estimate:

- Low Complexity – \$0.75 per square foot, annually
 - High Complexity – \$1.50 per square foot, annually
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Vegetated Wall

Description: Applicants may earn points for installing a vegetated wall covering a minimum of 30% of a blank wall or parking garage façade that has a minimum area of 300 square feet. The wall must be visible from a public street or public open space.

Construction Costing Methodology: Construction cost for a vegetated wall was estimated on a per square foot basis. The cost includes the cost of the materials and installation. The cost range is affected by the complexity of installation and the quality of the materials used. Maintenance of vegetated walls will increase project operating costs; therefore, an operations cost estimate was

calculated. A range of estimates for construction was provided to reflect variations in site requirements, system complexity, water management and quality of materials. Estimates were obtained from Marshall and Swift and discussions with applicants.

Cost Estimate:

- Low Complexity – \$80 per square foot
- High Complexity – \$150 per square foot

Operating Estimate:

- \$5 per square foot, annually
-

4. Conclusion

Analysis Summary

This report provided a summary of the analysis conducted by the Hayat Brown team to estimate the costs for each of the 36 public benefits described in the County's Implementation Guidelines. This analysis sought to provide an understanding of the costs, in 2023 dollars, associated with providing each public benefit identified in the Implementation Guidelines and to produce a set of defensible inputs to be used in financial analysis focused on understanding how the public benefits impact project feasibility. Additionally, this analysis will inform additional analysis on:

- How the provision of benefits impact project feasibility;
- Determining the overall magnitude of the costs that applicants incur when providing various combinations of public benefits to receive incentive density under the optional method of development; and
- Comparing the costs of providing individual benefits against the points awarded for each benefit, arriving at a general understanding of the "points value" vs cost for each public benefit.

The Hayat Brown Team researched each of the 36 benefits described in the Implementation Guidelines. Of these, estimates were not calculated for the following **nine** benefits:

- Transit Proximity – Points are awarded based on proximity to existing or planned transit stops. This is an inherent site feature and does not present additional cost to applicants beyond initial land cost.
- Trip Mitigation – The strategies typically included in trip mitigation agreements vary significantly, may be passed on to tenants and, in most cases, do not represent a significant cost to the applicant. Therefore, no estimate was calculated.
- Live/Work Units – This benefit has not been frequently used by applicants; therefore, no costing methodology or cost estimate was calculated.
- Moderately Priced Dwelling Units – Due to the complexity of this benefit, costs were analyzed by Montgomery Planning staff as a standalone exercise.
- Historic Resource Protection – This benefit has not been frequently used by applicants; therefore, no costing methodology or cost estimate was calculated.
- Public Art – The cost of public art and the associated operating expenses vary based on the unique attributes of each installation. No estimate was calculated for this benefit.
- Habitat Preservation and Restoration – This benefit has not been frequently used by applicants; therefore, no costing methodology or cost estimate was calculated.

- Recycling Facility Plan – Costs to provide a plan that meets this standard vary significantly depending on the specific elements of the plan and method of implementing County requirements; therefore, no estimate was calculated.
- Retaining Building – The cost to provide this benefit is specific to each project, therefore a standard cost estimate was not calculated.

Key Findings

The incentive benefit costing exercise identified key differences in the incentive benefit categories. Costing methodologies generally fall into one of four buckets: unit or per square foot cost, lump sum cost, no up-front cost, or actual cost with some benefits offering payment-in-lieu options. This exercise also involved estimating the cost of providing benefits on operating revenues and expenses to adequately quantify impacts on project feasibility.

Cost Methods

There is a range of methods needed to reasonably assess the cost of providing various public benefits. These include unit cost, lump sum cost, no up-front cost or actual cost. Additionally, some benefits allow payment-in-lieu options. While each approach is suitable for specific benefits, it makes direct cost comparison across benefits difficult.

Limitations

It must be understood that the costs estimated as part of this analysis represent standard estimates to provide specific benefits, actual costs may vary significantly based on project characteristics. In many cases, a range of estimates was calculated to mitigate this concern, however, these ranges are representative and should not be considered exhaustive.

Additionally, as discussed above, some benefits may be specific to a project, such as historic resource protection or retained buildings, preventing the calculation of a standard cost estimate. Cost variations may also be specific to a project, for example, the cost of storm water mitigation associated with providing a green roof may vary significantly from site to site due to site specific complexities.

Opportunity Costs

It should be noted that this analysis does not consider the opportunity costs of electing to provide a specific benefit. An objective evaluation of costs to provide public benefits should avoid considerations of "opportunity costs" since these abstract scenarios can be numerous and complicated, thereby undermining the applicability of cost estimation efforts. For example, the cost to provide a through-block connection is based on the cost of constructing the actual connection and does not include the costs a developer may incur related to building design that allows for the

connection or any opportunity cost associated with lost square footage or other related considerations.

Cost / Point Disparities

Our analysis showed that the financial cost of providing benefits did not necessarily align with the points awarded in some categories. For instance, providing a comprehensive, high complexity, wayfinding system is estimated to cost \$40,000 and a project may receive 10 points for this benefit. In comparison with the cost to provide public open space where a 6,000 square foot, medium complexity, public plaza at \$100 per square foot costs approximately \$600,000, not including operating expenses. This same plaza, assuming a net lot area would be awarded 13 points. These cost differentials will be further discussed in the *Financial Analysis Report*.

Bibliography

- [1] “Commercial/Residential and Employment Zones Incentive Density Implementation Guidelines Proposed Revision,” 2017.