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*A Character Counts! City*

**City of Gaithersburg**

# **MUNICIPAL GROWTH**

**A Master Plan Element**

**Adopted April 6, 2009**

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**2003**  
MASTER PLAN

# **CITY OF GAITHERSBURG 2003 MASTER PLAN**

## **MUNICIPAL GROWTH ELEMENT**

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# CITY OF GAITHERSBURG 2003 MASTER PLAN

## CHAPTER 6 MUNICIPAL GROWTH

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## 1. Purpose and Intent

On May 2, 2006 Governor Martin O'Malley signed House Bill (HB) 1141 into law, amending Article 66B, Land Use of the Annotated Code of Maryland. This Article establishes the requirements of a municipal comprehensive master plan and its required elements, and the procedures for approving said master plan. HB 1141 requires the addition of a Municipal Growth Element to a jurisdiction's Comprehensive Plan. The following document presents a detailed quantitative analysis of potential growth, including Maximum Expansion Limits (MELs) and impacts, for the City of Gaithersburg by 2030. The chart in Appendix B defines the various roles and purposes of the Municipal Growth, Land Use, and Community Facilities Elements, as defined by the Maryland Department of Planning "Models and Guidelines".

Please note that the figures, such as the proposed housing ratios, densities, and jobs to housing ratio are used in this document for analysis purposes only and are not to be construed as entitlements, suggestions, or recommendations for future development. Any specific recommended densities, land uses, and zoning for future projects will be addressed either in the Land Use Element of the Master Plan or during customary Site Plan review in accordance with Chapter 24 (Zoning) of the City Code.

The following document presents an analysis of potential infrastructure impacts on a City-wide scale. Any specific future development project within the City of Gaithersburg must comply with the City's adopted Adequate Public Facilities Ordinance (APFO) in addressing and mitigating any related infrastructure impacts including traffic, school capacity, water and sewer capacity, and fire and rescue services.

The Maximum Expansion Limits presented in the following document were delineated through a combination of geographic considerations and sound planning principles to comply with the requirements of HB 1141. The MEL areas shown are not to be interpreted as areas the City of Gaithersburg is actively pursuing for annexation. The City of Gaithersburg cannot unilaterally annex property. The process for annexation is defined in Article 23A of the Annotated Code of Maryland. Further, as defined in Article 23A, annexations must be initiated by the property owner.

## 2. Introduction

The Maryland Economic Growth, Resource Protection, and Planning Act of 1992 (Planning Act), and subsequent recodification of Article 66B in 2000 and 2006, altered the way citizens of the State of Maryland address land use by focusing planning efforts toward growth management and resource protection. Codified in Article 66B, Section 3.05(a)(4)(x) of the Annotated Code of Maryland, the Municipal Growth Element requires a detailed and quantitative analysis of the City of Gaithersburg's anticipated growth. This analysis concerns the Citywide perspective of growth. This element will characterize the form of future growth and potential impacts, rather than make site specific recommendations.

The Land Use Element will continue to be the tool whereby site specific zoning, use and density recommendations are made on individual tracts of land and the Community Facilities Element will be the tool to define specific infrastructure needs, based upon current and near term conditions. The Land Use Element and Community Facilities Element recommendations are to be viewed as concrete implementation strategies within the policy framework established by the Municipal Growth Element.

This Element, planning for potential future development and growth, must be based on current conditions, projections and assumptions about what future populations and conditions will be, and reflect the goals and objectives of the City. In 1995, the City's housing goals included a goal to "encourage a broad range of housing types and costs to meet the needs of different household sizes, income ranges, life styles and age groups." In 1999, the City adopted the 'City of Gaithersburg Smart Growth Policy.' One of the principles of the policy is to encourage planning and development that must "strengthen community diversity."

The City set out to encourage "diversity of housing types to enable all citizens from a wide range of economic levels and age groups to live within its boundaries." The City's 'Housing Policy', adopted in 1999, reinforced the City's desire to encourage a "diversity of housing types throughout the City." The policy strove to attain a mix of housing types, comprised of a minimum 50 percent single family detached units, unless the public interest or Master Plan dictated otherwise. The result was an increase in single family units from the policies adopted during the 1980s and 1990s.

The Housing Policy objective was feasible only because development within the City involved large tracts of open land. Future development in the City will take on a decidedly different character as the City is generally "built out", leaving redevelopment as the primary mechanism for future growth. The Metropolitan Washington Council of Governments (MWCOG) has forecasted that Montgomery County, in 2030, will have a population of 1,141,000 and maintain 670,000 jobs<sup>1</sup>. Going forward, the City of Gaithersburg will be typified by redevelopment projects that must address this burgeoning growth in both population and jobs that are to be found in the region as a whole, while still achieving the City goals and objectives.

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<sup>1</sup> MWCOG results are from the Round 7.2 Forecasting Model, which established Montgomery County's year 2005 population at 929,078 and year 2005 jobs at 500,000.

The City of Gaithersburg, as planned by the year 2030, will be home to two MARC stations, four Corridor Cities Transitway (CCT) stations, the western terminus of the Intercounty Connector (ICC), and a new I-270 full interchange sited at Watkins Mill Road. These transportation hubs will further enhance the City of Gaithersburg as an accessible employment destination for the surrounding metropolitan area, building upon the existing sizable employment base exemplified by the Medimmune, IBM, Monument, and Lockheed Martin campuses. The City has been proactive in planning for these hubs through the development and approval of various Transit Oriented Developments (TODs), all with sizable commercial/office components.

The overall vision for future City growth will retain the goal of providing for diversity in demographics, economics, and housing types, while addressing the need to increase employment opportunities in this ever-growing region. The long-term developments within the City will be high density, mixed use projects with large multiple-family housing components that comply with the City's Adequate Public Facilities Ordinance, Environmental Standards, Green Building Design Criteria, and Storm Water Management regulations. A great amount of future developments will be sited in the Central Business District, the Master Planned Kentlands Boulevard Commercial District, or along Frederick Avenue (MD 355).

Additionally, the City has delineated areas outside of the current incorporated limits. These areas, defined as the maximum expansion limits (MEL), are sites that could realistically be annexed into the City of Gaithersburg by the year 2030. The MEL includes current Montgomery County enclaves such as the Rosemont neighborhood and larger under-developed tracts of land such as the Belward Farm and the McGown properties<sup>2</sup>. The 2030 growth projections defined in this document apply the same methodologies and visions to the areas in the MEL.

The Municipal Growth Element of the City's Master Plan will serve as an informational and policy document to the Mayor and City Council, the Planning Commission, other boards and committees of the City, and the citizens of Gaithersburg. The Element will describe the vision and needs for the City's potential growth over the coming decades and outlines the types and scale of infrastructure and other impacts that can be expected. Ultimately, this Element will support the policies and principles of the City, as well as the other Master Plan Elements.

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<sup>2</sup> Please refer to Map 2 and Appendix A.

## **6. Demand for Future Growth**

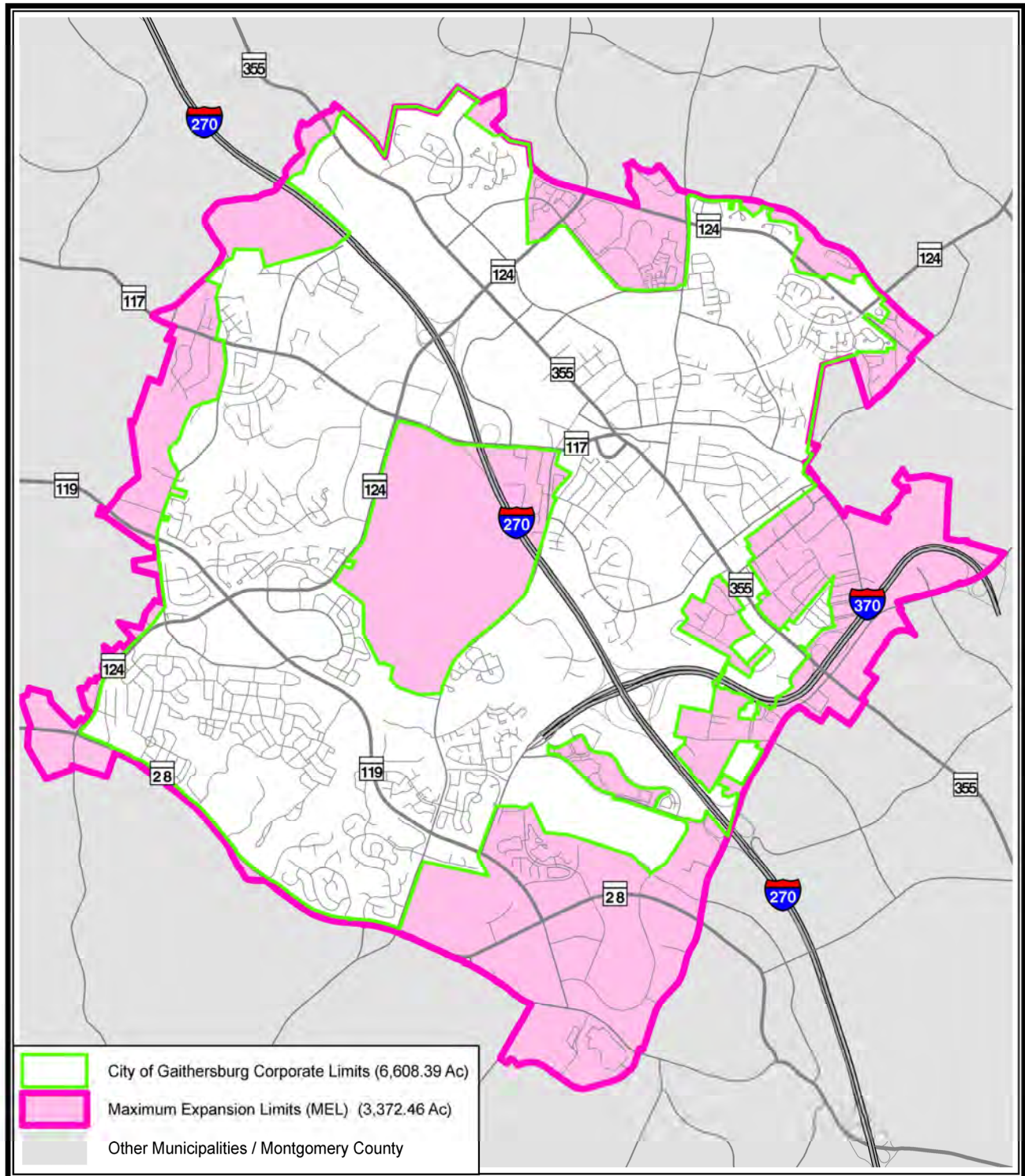
### **6.1 City of Gaithersburg Adequate Public Facilities Ordinance**

In 2007, the City of Gaithersburg adopted an Adequate Public Facilities Ordinance (APFO) that requires most proposed development meet certain standards for traffic impacts, school capacity, water and sewer capacity, and the provision of fire and emergency services. The APFO applies to all future development proposed within the City boundary, unless exempted by an annexation agreement.

### **6.2 Growth Areas Overview**

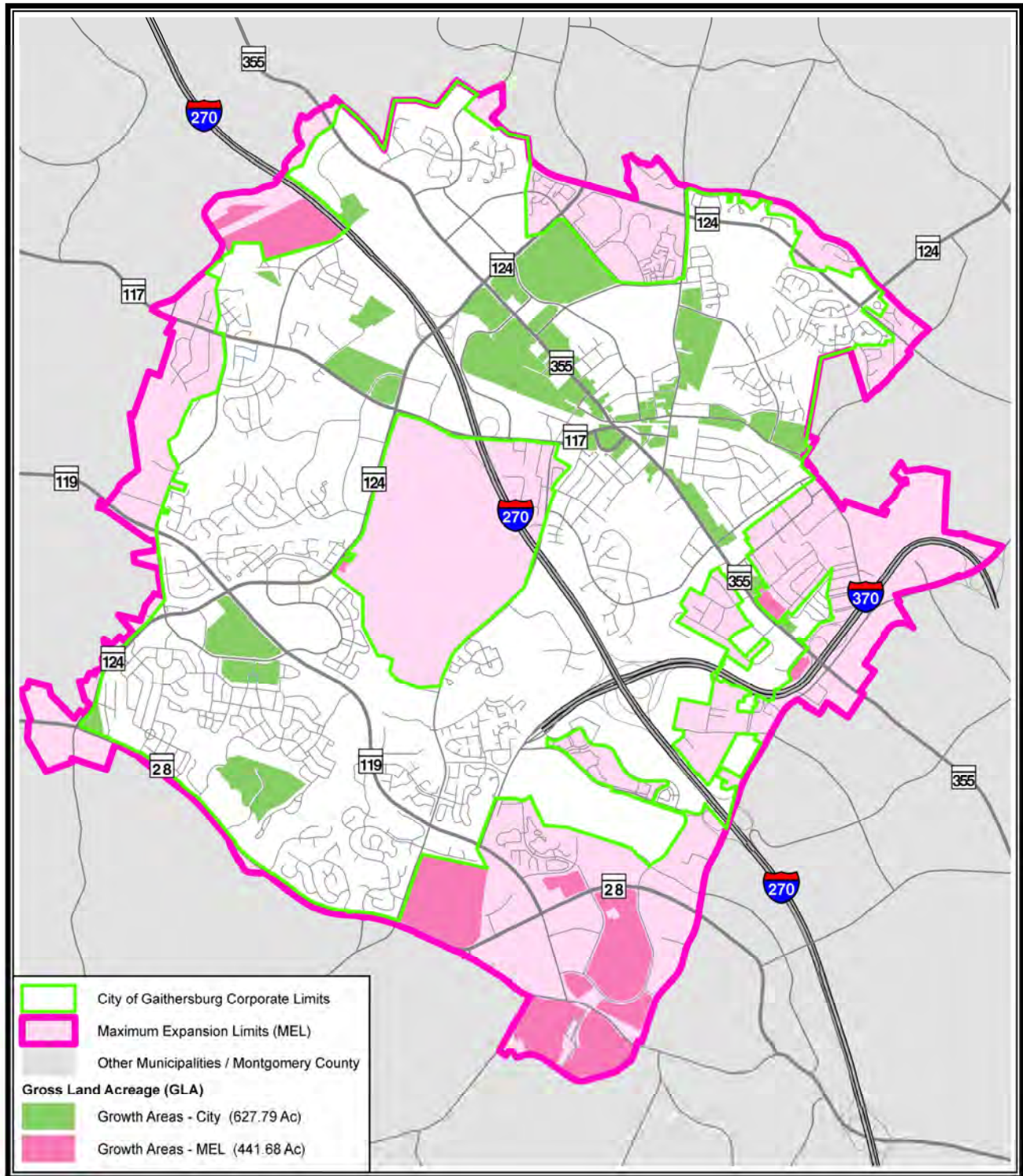
Growth Areas are those areas within the City and Maximum Expansion Limits (MEL) that have the potential for growth in housing, population, and jobs by 2030. This growth may be the result of new development, infill development, or redevelopment of these areas. Growth Areas are limited to those properties that are included in an approved Master Plan or are likely to be designated as Study Areas in the 2009 Master Plan update, are identified in the City's adopted 2008 Strategic Plan, or are properties that currently have redevelopment projects proposed. Growth Areas within the City limits include 600.6 acres and within the MEL include 381.1 acres, for a total of 981.7 acres of gross land buildable (GLB). The final Growth Areas are shown on the maps that follow and in Appendix A.

**Map 2: Maximum Expansion Limits (MEL) for Gaithersburg**



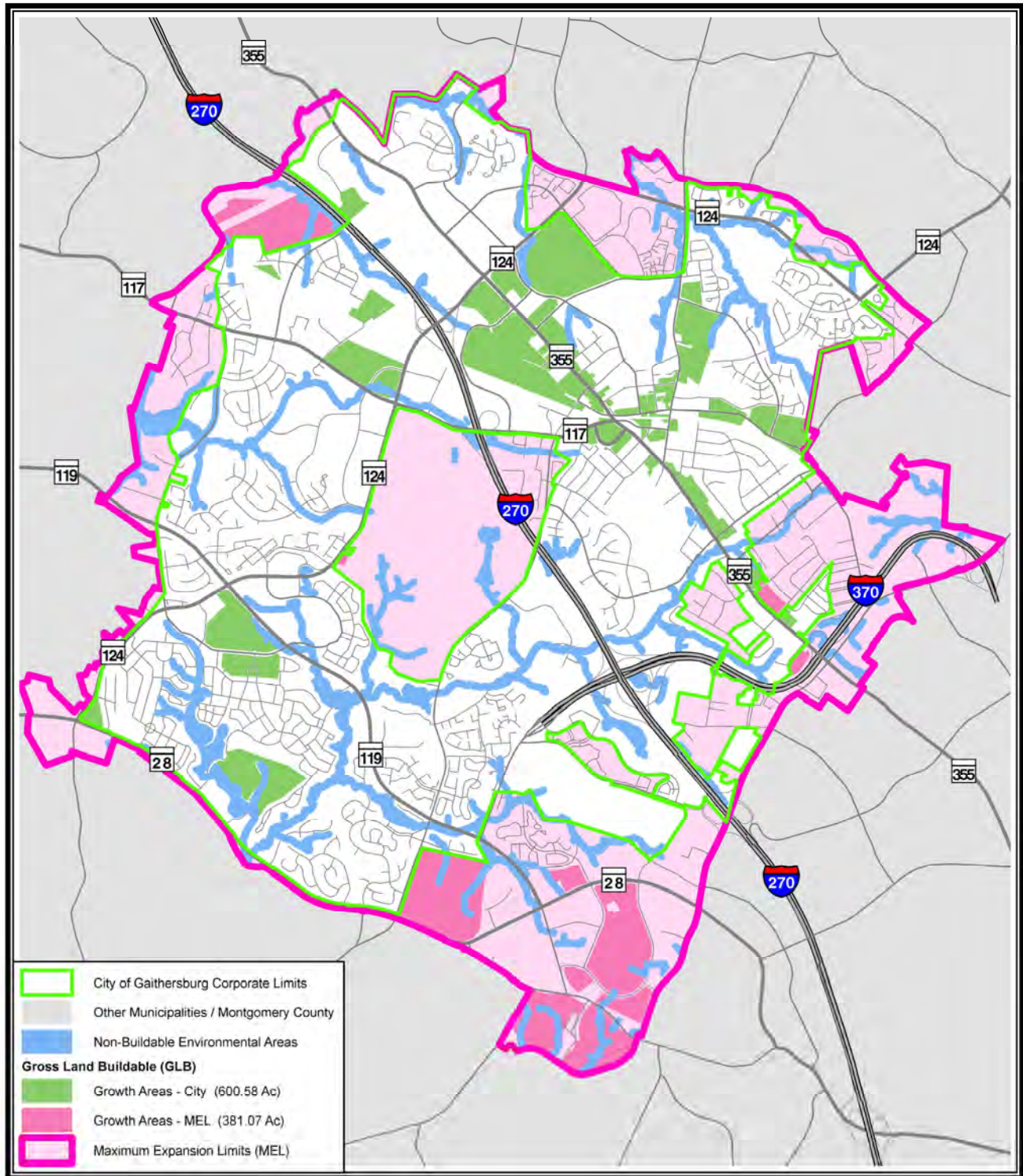
*Please refer to Appendix A for more detailed maps of properties within the MEL.*

**Map 3: Growth Areas and MEL for Gaithersburg – Gross Land Acreage (GLA)**



*Please refer to Appendix A for more detailed maps of the Growth Areas properties.*

**Map 4: Growth Areas and MEL for Gaithersburg – Gross Land Buildable (GLB)**



*Please refer to Appendix A for more detailed maps of the Growth Areas properties.*

### 6.3 Summary of Population, Housing, Jobs Forecasts for 2030

The City of Gaithersburg is forecast to grow to between 85,420 and 98,256 persons and 34,429 to 39,834 housing units by 2030. This represents an increase of 32,807 to 45,643 persons and 13,755 to 19,160 housing units over the Census 2000 figures. The number of jobs in the City is forecast to grow to between 103,011 and 130,037 by 2030, compared to the estimated 55,968 jobs that exist in 2008. The number of jobs per housing unit is forecast to increase from 2.4 in 2008 to between 3.0 and 3.3 by 2030, reflecting Gaithersburg's continued transition from bedroom community to a more balanced mix of employment and residential uses.

Within the City and maximum expansion limits (MEL), the population is forecast to grow from 77,518 persons in 2008 to between 117,365 and 138,345 persons by 2030. Housing is forecast to grow from 30,304 in 2008 to between 47,246 and 56,081 in 2030. Jobs within the City and MEL are forecast to reach between 161,727 and 205,901 by 2030, up from the estimated 92,873 jobs in 2008. The number of jobs per housing unit will increase from 3.0 in 2008 to between 3.4 and 3.7 by 2030.

**Table 9: City and MEL 2030 Forecast Housing, Population, and Jobs**

	Density of 20 units/acre			Density of 32 units/acre		
	City	MEL	Total City and MEL	City	MEL	Total City and MEL
Baseline 2008 Housing	23,091	7,213	30,304	23,091	7,213	30,304
Pipeline Housing	4,891	N/A	4,891	4,891	N/A	4,891
Growth Areas Housing	6,447	5,604	12,051	11,852	9,034	20,886
<b>Total Housing 2030</b>	<b>34,429</b>	<b>12,817</b>	<b>47,246</b>	<b>39,834</b>	<b>16,247</b>	<b>56,081</b>
Baseline 2008 Population	59,912	17,606	77,518	59,912	17,606	77,518
Pipeline Population	10,430	N/A	10,430	10,430	N/A	10,430
Growth Areas Population	15,078	14,339	29,417	27,914	22,483	50,397
<b>Total Population 2030</b>	<b>85,420</b>	<b>31,945</b>	<b>117,365</b>	<b>98,256</b>	<b>40,089</b>	<b>138,345</b>
Baseline 2008 Jobs	55,968	36,905	92,873	55,968	36,905	92,873
Pipeline Jobs	15,552	N/A	15,552	15,552	N/A	15,552
Growth Areas Jobs	31,491	21,811	53,302	58,517	38,959	97,476
<b>Total Jobs 2030</b>	<b>103,011</b>	<b>58,716</b>	<b>161,727</b>	<b>130,037</b>	<b>75,864</b>	<b>205,901</b>

**Note:** The proposed densities shown in Table 9 are for analysis purposes only and are not to be construed as entitlements for future development. Specific recommended densities, land uses, and zoning for future projects will be addressed either in the Land Use Element of the Master Plan or during Site Plan review in accordance with Chapter 24 (Zoning) of the City Code.

## 6.4 Summary of Growth Areas Forecasts

The 2030 forecasts represent the “net growth” of population, housing, and jobs from 2005 through 2030 and represent a summation of the individual Baseline, Pipeline, and Growth Areas estimates. In order to prevent double-counting, the gross calculations from Section 4 of population, housing, and jobs within the Growth Areas are reduced by the number of existing housing units, persons, and jobs within the Growth Areas. Thus, the Growth Areas forecasts included in Table 9 and Table 10 include only the net additional growth above the 2008 Baseline and Pipeline estimates. These forecasts form the basis for analysis of the impacts of growth on infrastructure and community facilities in the remaining sections.

**Table 10: Growth Areas 2030 Forecast Housing Units, Population, and Jobs**

	Density of 20 Units/acre			Density of 32 Units/acre		
	City of Gaithersburg	Maximum Expansion Limits	Total City & MEL	City of Gaithersburg	Maximum Expansion Limits	Total City & MEL
Housing Units	6,447	5,604	12,051	11,852	9,034	20,886
Population	15,078	14,339	29,417	27,914	22,483	50,397
Jobs	31,491	21,811	53,302	58,517	38,959	97,476

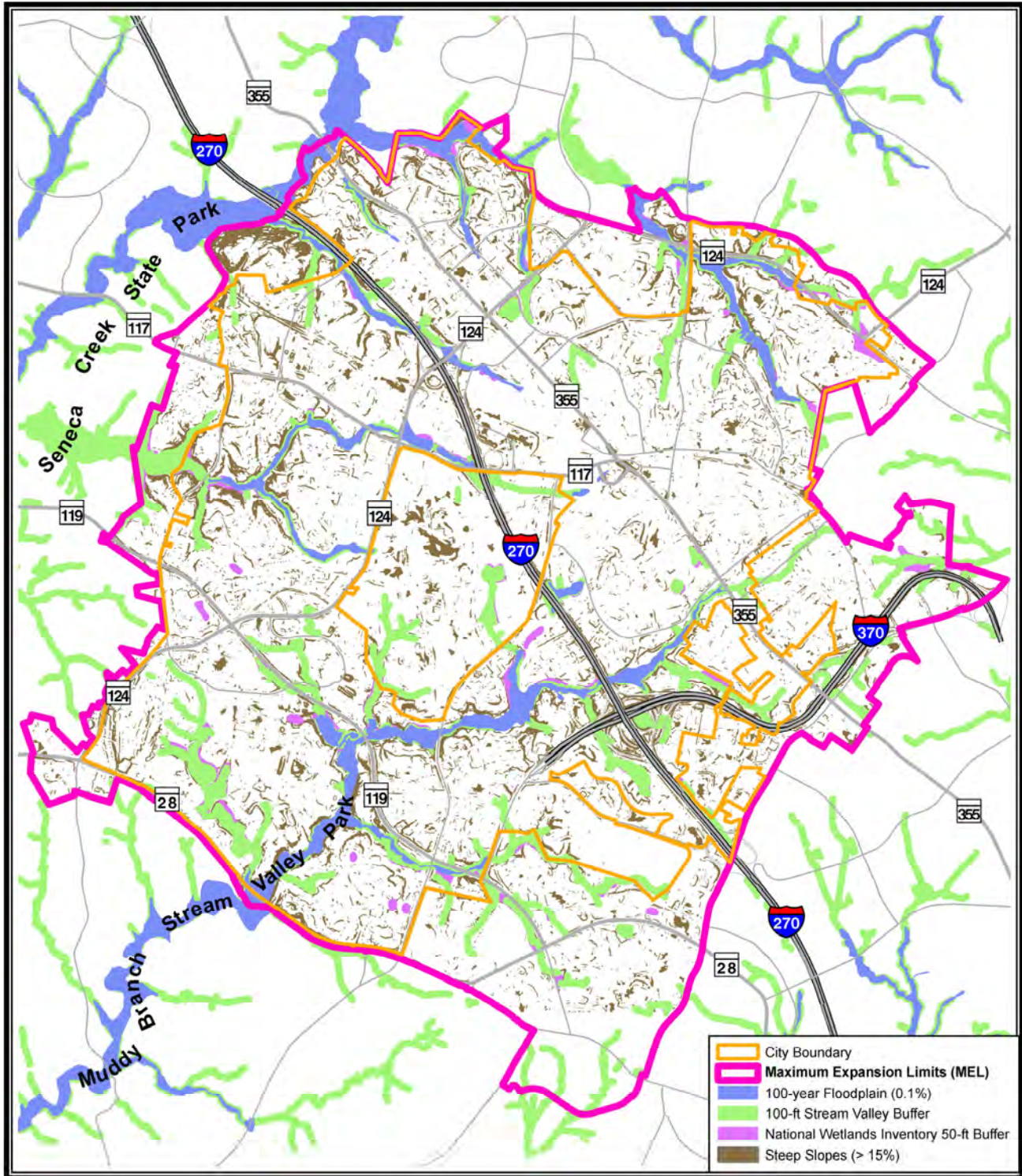
## 7. Environmental Setting

The incorporated City of Gaithersburg is an urban, State designated Priority Funding area, surrounded by suburban style growth. There are no agricultural lands bordering either the City or the MEL areas. Gaithersburg contains over 24 miles of predominately first and second order perennial streams located in the Muddy Branch Watershed (2,985 acres) and the Great Seneca Watershed (3,418 acres). The major tributaries and water resources include: 1) Muddy Branch, 2) Long Draught Branch, 3) Whetstone Run, and 4) Seneca Creek. Approximately 191 acres of non-tidal wetlands are found interspersed along these stream valleys. Additionally, there are approximately 20 man-made lakes and ponds scattered throughout Gaithersburg, many serving as SWM facilities.

The City has enacted many environmental regulations to protect natural resources. In addition to complying with applicable State regulations, the City requires such measures as a one hundred foot buffer around streams, a fifty foot buffer around non-tidal wetlands, and a twenty-five foot building restriction line adjacent to the one hundred year floodplain. As the following map shows, Gaithersburg and the MEL are virtually “built-out” and have already protected the resources found within these boundaries. The focus of development and growth going forward will involve enhancement and restoration of the current environmental setting.

Redevelopment opportunities will involve expanding the urban forest and protection through restoration of water resources where applicable. New development will be sensitive to existing conditions by applying smart growth and “green” based planning methods to retain as much natural environment as possible, while minimizing impacts. The most sensitive adjoining areas that would typically require development type buffering are the Seneca Creek State Park and the Muddy Branch Stream Valley Park. These areas are currently bordered by medium density residential neighborhoods that are not expected to undergo redevelopment by 2030. The current site and situation of the City and MEL will not result in the delineating and addressing of transitional buffer areas to accomplish 2030 growth.

Map 5: Environmentally Sensitive Areas



## 8. Schools

The City of Gaithersburg is served by six Montgomery County Public School clusters, incorporating elementary, middle, and high schools upon which the clusters are named. The following are the said clusters:

- Watkins Mill Cluster
- Col. Zadok Magruder Cluster
- Gaithersburg Cluster
- Quince Orchard Cluster
- Northwest Cluster
- Thomas S. Wootton Cluster

The City, when considering development, incorporated a public school capacity test into the adopted Adequate Public Facilities Ordinance (APFO) that states:

***“Sec. 24-246. Adequacy of School Capacity***

*With the exception of age restricted development, schematic development plan or preliminary site plan for residential development shall not be approved if the subject property is within the attendance area of a Montgomery County Public School that is forecasted to have a student population that exceeds 110% of Montgomery County Public Schools Program Capacity two (2) years in the future subject to the following:*

- (a) The program capacity for each school attended by Gaithersburg residents is determined annually by the Superintendent of Montgomery County Public Schools and reported to the Board of Education in the Communities Facilities Master Plan and Capital Improvements Program.*
- (b) Capacity shall be reviewed individually for each elementary school, middle school, and high school. Sharing of capacity between schools shall not be permitted.*
- (c) Upon review of the current Communities Facilities Master Plan and Capital Improvements Program, the City Manager shall determine on the first business day of each fiscal year whether or not each public school attended by Gaithersburg residents is forecasted to exceed 110% of programming capacity two (2) years in the future.”*

In calculating students generated by year 2030 growth, staff used the Density and Housing Unit Type Breakdown methodologies established previously in this document. The students estimated cannot be accurately allocated to any specific cluster and are based upon full build-out City wide. Future student population and distribution, based upon growth, will be specifically defined by APFO requirements, assumed to remain in effect, and Montgomery County Public Schools determination of cluster boundaries.

When calculating 2030 student populations, staff used Montgomery County Public Schools (MCPS) student generation rates for new housing by type, based upon the 2005 Census Update Survey<sup>19</sup>. The following table defines the factors used:

**Table 11: Student Generation Factors**

Housing Type	Elementary School Students	Middle School Students	High School Students
SFD	0.320	0.144	0.131
SFA	0.211	0.122	0.107
Multi-family garden apartment	0.153	0.056	0.073
High/Low Rise w/parking	0.042	0.039	0.033

It should be noted that when calculating 2030 student numbers, multi-family dwellings used the High/Low Rise w/parking factors as garden apartments are not foreseen to be the predominate future multi-family development type. Additionally, the student generation numbers are for new future housing only and do not include students based upon existing housing stock that remains in 2030. The students generated by those existing units are assumed to be accounted for and not considered an additional growth impact.

## 8.1 Future Growth School Impact Based Upon 20 units/acre

The first set of calculations is based upon a future growth density of 20 units/acre. Using this ratio, the City of Gaithersburg will have 6,447 additional housing units within the current incorporated City limits. The maximum expansion limits (MEL) will have 5,604 additional housing units for a combined total of 12,051 new units above existing. These housing totals are then divided by the Housing Unit Type Breakdown ratio of fifty percent (50%) multi-family, twenty-five (25%) percent single-family detached, and twenty-five percent (25%) single-family attached (50/25/25), previously defined in Section 4 of this Element. These subtotals are then multiplied by the MCPS generation factors in Table 11. Calculations are rounded to the nearest whole number. The following table illustrates the student generation based upon 20 units/acre:

<sup>19</sup> Taken from a memo to the Montgomery County Planning Board from the Montgomery County Planning Department re: "Financial Infrastructure Recommendations for Planning Board May 15 Worksession on Growth Policy" May 14, 2007

**Table 12: Public School Impact of Forecast Growth, 20 units/acre density**

2030 Forecast	Unit Count	School Type		
		Elementary	Middle	High
Single-Family Detached	1,612	516±	232±	211±
Single-Family Attached	1,612	340±	197±	172±
Multi-Family	3,224	135±	126±	106±
<b>City of Gaithersburg Sub-Totals:</b>	<b>6,448</b>	<b>991±</b>	<b>555±</b>	<b>489±</b>
Single-Family Detached	1,401	448±	202±	184±
Single-Family Attached	1,401	296±	171±	150±
Multi-Family	2,802	118±	109±	92±
<b>MEL Sub-Totals:</b>	<b>5,604</b>	<b>862±</b>	<b>482±</b>	<b>426±</b>
<b>Total City &amp; MEL</b>	<b>12,052</b>	<b>1,853±</b>	<b>1,037±</b>	<b>915±</b>

*Note: Unit counts may be slightly higher than those shown in Table 10 due to rounding*

## 8.2 Future Growth School Impact Based Upon 32 units/acre

The second set of calculations is based upon a future growth density of 32 units/acre. Using this ratio, the City of Gaithersburg will have 11,852 additional housing units within the current incorporated City limits. The MEL will have 9,034 additional housing units for a combined total of 20,886 new units above existing. The methodology then used for the calculations is the same as described above. The following table illustrates the student generation based upon 32 units/acre:

**Table 13: Public School Impact of Forecast Growth, 32 units/acre density**

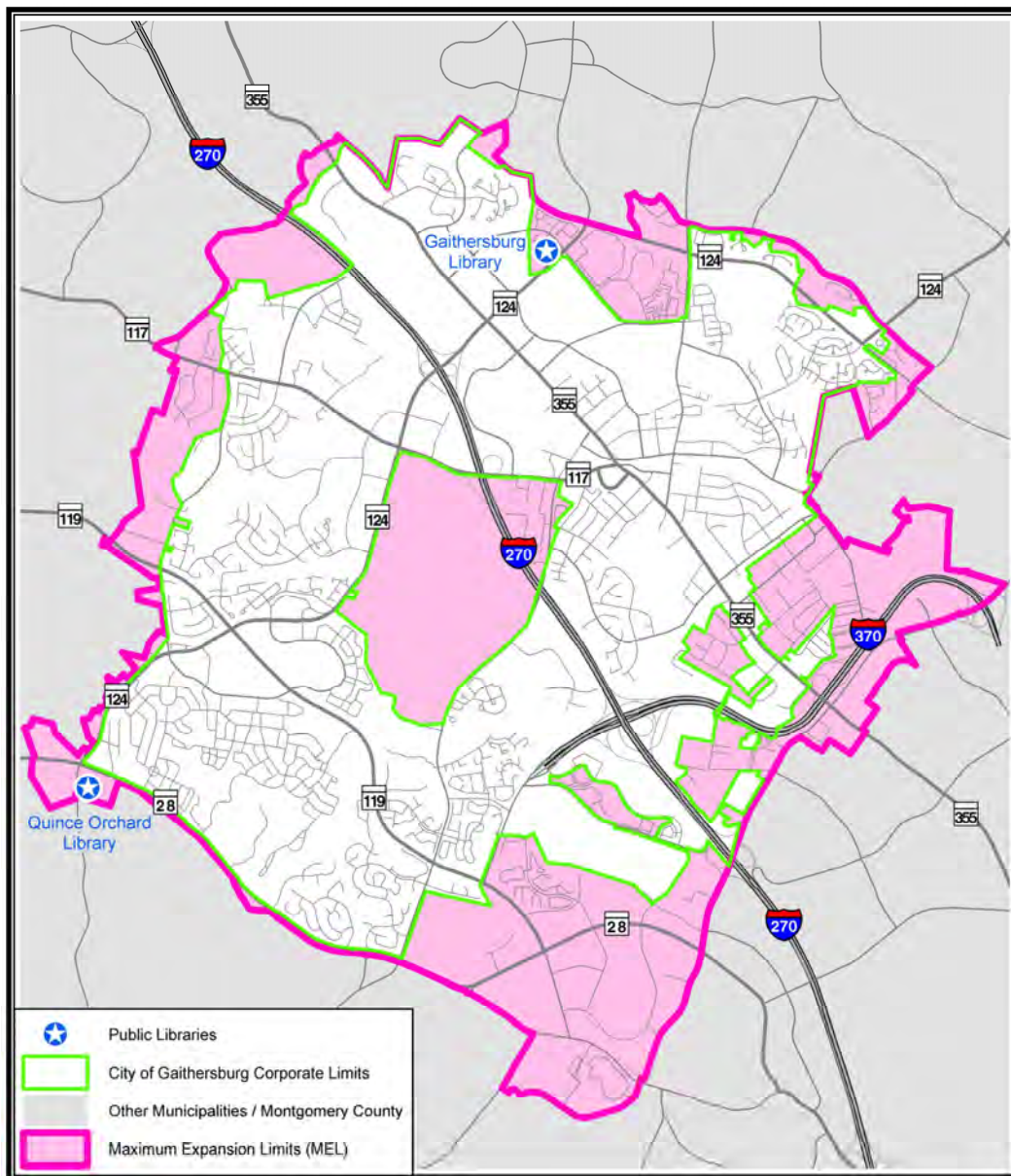
2030 Forecast	Unit Count	School Type		
		Elementary	Middle	High
Single-Family Detached	2,963	948±	427±	388±
Single-Family Attached	2,963	625±	361±	317±
Multi-Family	5,926	249±	231±	196±
<b>City of Gaithersburg Sub-Totals:</b>	<b>11,852</b>	<b>1,822±</b>	<b>1,019±</b>	<b>901±</b>
Single-Family Detached	2,259	723±	325±	296±
Single-Family Attached	2,259	477±	276±	242±
Multi-Family	4,518	190±	176±	149±
<b>MEL Sub-Totals:</b>	<b>9,036</b>	<b>1,390±</b>	<b>777±</b>	<b>687±</b>
<b>Total City &amp; MEL</b>	<b>20,888</b>	<b>3,212±</b>	<b>1,796±</b>	<b>1,588±</b>

*Note: Unit counts may be slightly higher than those shown in Table 10 due to rounding*

## 9. Libraries

Montgomery County makes public libraries available for all areas of the County, including the City of Gaithersburg. Currently, no public library is located within the City limits, although two libraries are adjacent to the City and within the maximum expansion limits (MEL). Montgomery County Public Libraries (MCPL) does not have a defined standard for provision of library facilities and services, but uses information such as circulation of holdings to determine if additional services or facilities are needed. The City of Gaithersburg works closely with MCPL to ensure that City residents are adequately served by the public libraries. This partnership is reflected in the City’s adopted Community Facilities Element, which includes several recommendations in Section 5, Objectives 14 and 15.

**Map 6: Libraries in Gaithersburg and the MEL**



## 10. Public Safety

### 10.1 Police

The City of Gaithersburg is currently served by the Gaithersburg City Police Department in conjunction with the Montgomery County Police Department (MCPD) District 6 pursuant to a memorandum of understanding<sup>20</sup>. The delineated MEL areas are served solely by the MCPD. The City force, according to the FY 09 budget, is staffed by 54 sworn officers and District 6, as of 2007, has 123 sworn officers.

It is understood that either of the projected 2030 growth populations will most likely necessitate increased numbers of police. However, the future geography and demographics of crime cannot be accurately predicted therefore specific staffing levels are not defined. The appropriate levels of staffing for the two police departments will depend upon local tailored solutions to meet local conditions at that time.

### 10.2 Fire and Emergency Medical Services

The Montgomery County Fire and Rescue Service (MCFRS) provides fire protection and emergency medical services to the City of Gaithersburg<sup>21</sup>. Three existing fire stations provide the majority of the fire and rescue service to Gaithersburg: Stations 8, 28, and 31. These stations are supplemented by surrounding fire stations during major or concurrent incidents. The National Institute of Standards and Technology (NIST) operates Station 53, which also provides off-site services under a mutual aid agreement with MCFRS. Five additional stations are planned or proposed in or near the Gaithersburg area. Three of these stations, Travilah, Germantown-Milestone, and Germantown-Kingsview, were included in the County's FY09-14 CIP budget. Two additional stations, the "Shady Grove" station and "Montgomery Village North" station, are in the early stages of planning and, if approved, could be operational within the 2016-2020 time frame.

Future development must address emergency services as defined in the City's APFO, which states:

***"Sec. 24-248. Fire and Emergency Services.***

- (a) Fire and emergency response. 10 minute full response availability shall be provided for all proposed development. A full response time is defined as the time required for receiving, processing, and traveling to the site of an emergency call from at least 2 stations. Fire and rescue stations included and receiving funding in the Montgomery County Capital Improvements Program (CIP) shall be countable."***

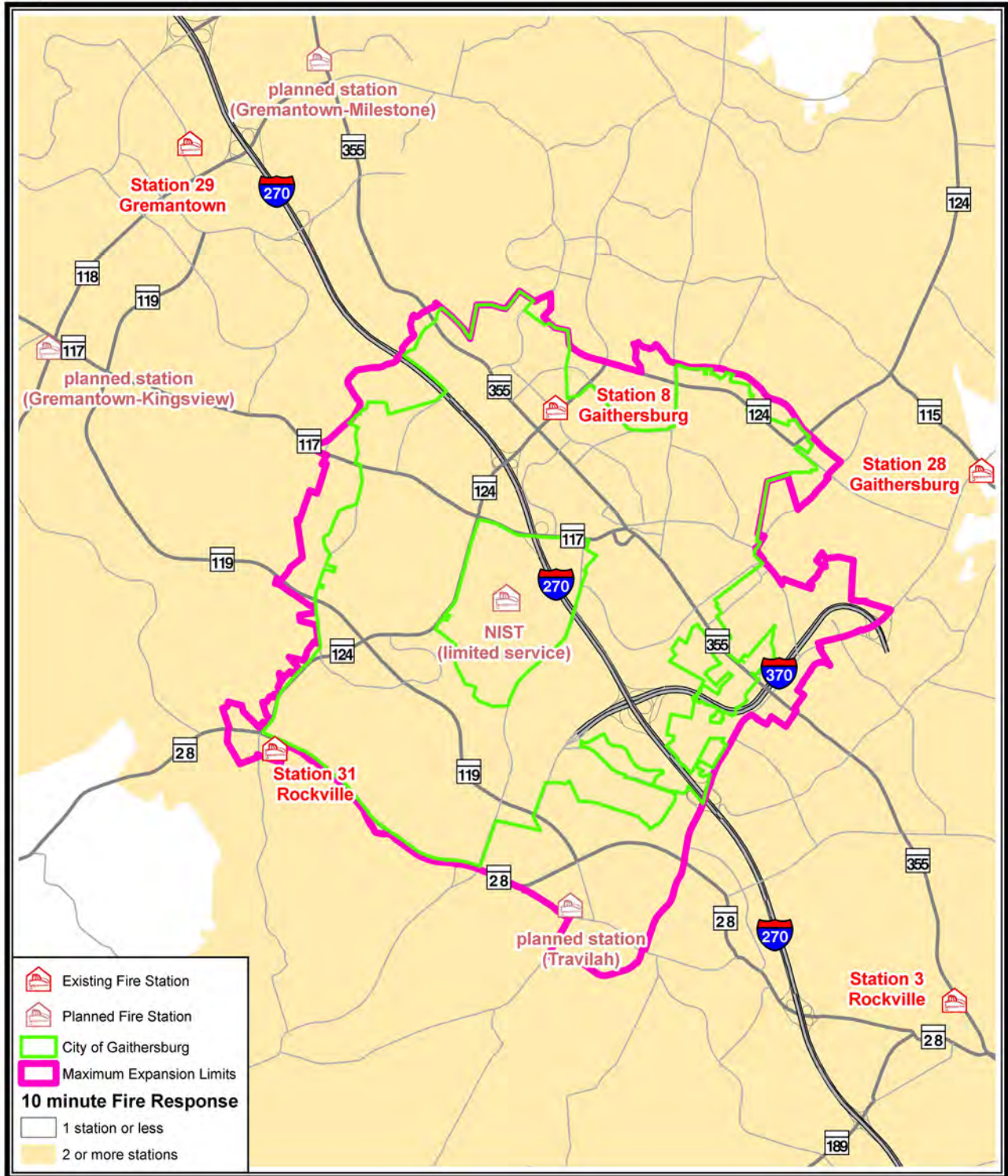
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<sup>20</sup> A more complete discussion of Police services can be found in the City of Gaithersburg Community Facilities Element

<sup>21</sup> A more complete discussion of Fire and Rescue services can be found in the City of Gaithersburg Community Facilities Element

As is evidenced by the following exhibit all 2030 areas within the incorporated limits of the City and the defined areas of the MEL will fulfill the requirements of the APFO.

**Map 7: Fire and Emergency Response**



## 11. Water and Sewer

### 11.1 Future Capacity Responsibilities

Under State law, Montgomery County has planning authority for the availability and adequacy of water and sewer service in the County, including the City of Gaithersburg. Montgomery County coordinates the planning and development of water supply and sewerage facilities to develop a Comprehensive Water Supply and Sewerage Systems Plan (CWSP). State law requires that the County incorporate the water and sewer plans of municipalities into the CWSP. The County's Plan also incorporates all or part of subsidiary plans of the sanitary districts, privately-owned facilities, and local, state, and federal agencies that have existing, planned, or programmed development within the County. The County reviews and adopts the CWSP on a triennial basis, and also reviews and acts on proposed plan amendments at intervals between mandated, triennial updates.

Community water and sewer service for the City of Gaithersburg is provided by the Washington Suburban Sanitary Commission (WSSC). WSSC provides data and makes recommendations to the County regarding water supply and sewer system capacity, engineering, and fiscal aspects of system expansion. Additionally, WSSC responsibilities include reviewing and commenting on the CWSP and water and sewer service area category changes. WSSC prepares and submits a Six-Year Capital Improvements Program (CIP) for major community water and sewer projects to the County as part of its responsibility to plan the water supply and sewer system. The County incorporates the adopted WSSC annual CIP and subsequent amendments as updates to the CWSP.

The City of Gaithersburg, on January 2, 2007, approved and adopted an Adequate Public Facilities Ordinance (APFO), by ordinance O-1-07. This APFO contains four facets, one of which is Water & Sewer Service. The APFO states:

***“Sec. 24-247. Water and Sewer Service.***

- (a) Water supply.*** *Development that would create a total water demand that would exceed available supply less an adequate reserve for fire-flow shall not be approved. A minimum of 1,000 gallons per minute shall be deemed adequate fire-flow for the purposes of this subsection. Final water supply adequacy shall be confirmed by the Washington Suburban Sanitary Commission (WSSC) prior to the issuance of development approvals.*
- (b) Sewer Service.*** *Development that would cause the City to exceed transmission capacity available at Blue Plains Wastewater Treatment Plant, Seneca Wastewater Treatment Plant or other facilities as determined by WSSC shall not be approved. Final sewer transmission capacity shall be confirmed by WSSC prior to the issuance of development approvals.”*

This ordinance codifies the responsibilities of the City of Gaithersburg and reaffirms the oversight roles of both Montgomery County and WSSC as to future development within the City and water and sewer capacity.

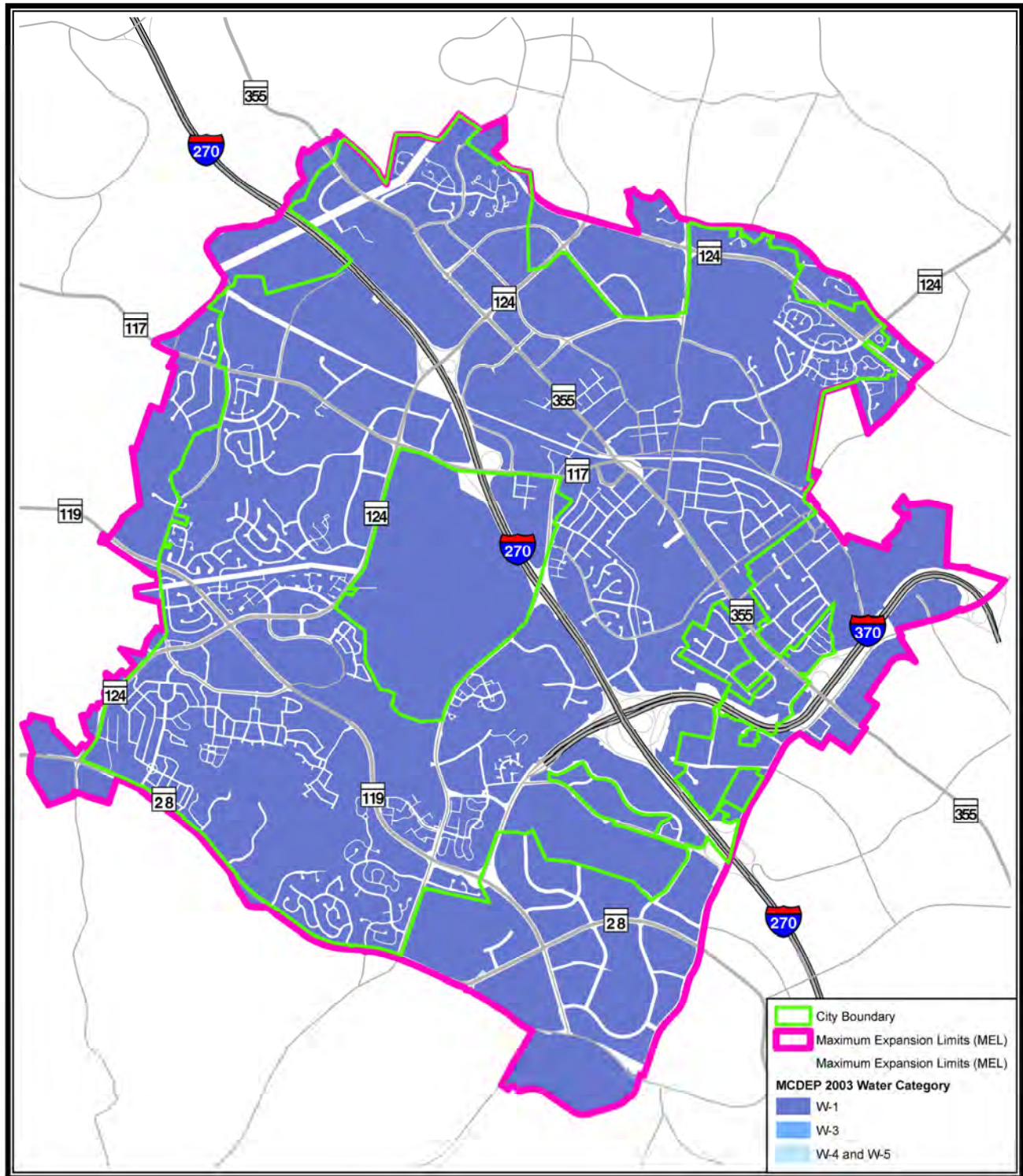
## 11.2 Water and Sewer Service Categories:

State regulations (COMAR 26.03.01.04) have established category designations for water and sewer service areas to provide for the orderly extension of community water and sewer service. These categories identify those areas approved or proposed for community service and those areas where development will depend on individual systems, including any special service conditions or restrictions. The following are the various categories, taken from the adopted 2003-2012 Comprehensive Water Supply and Sewerage Systems Plan (CWSP):

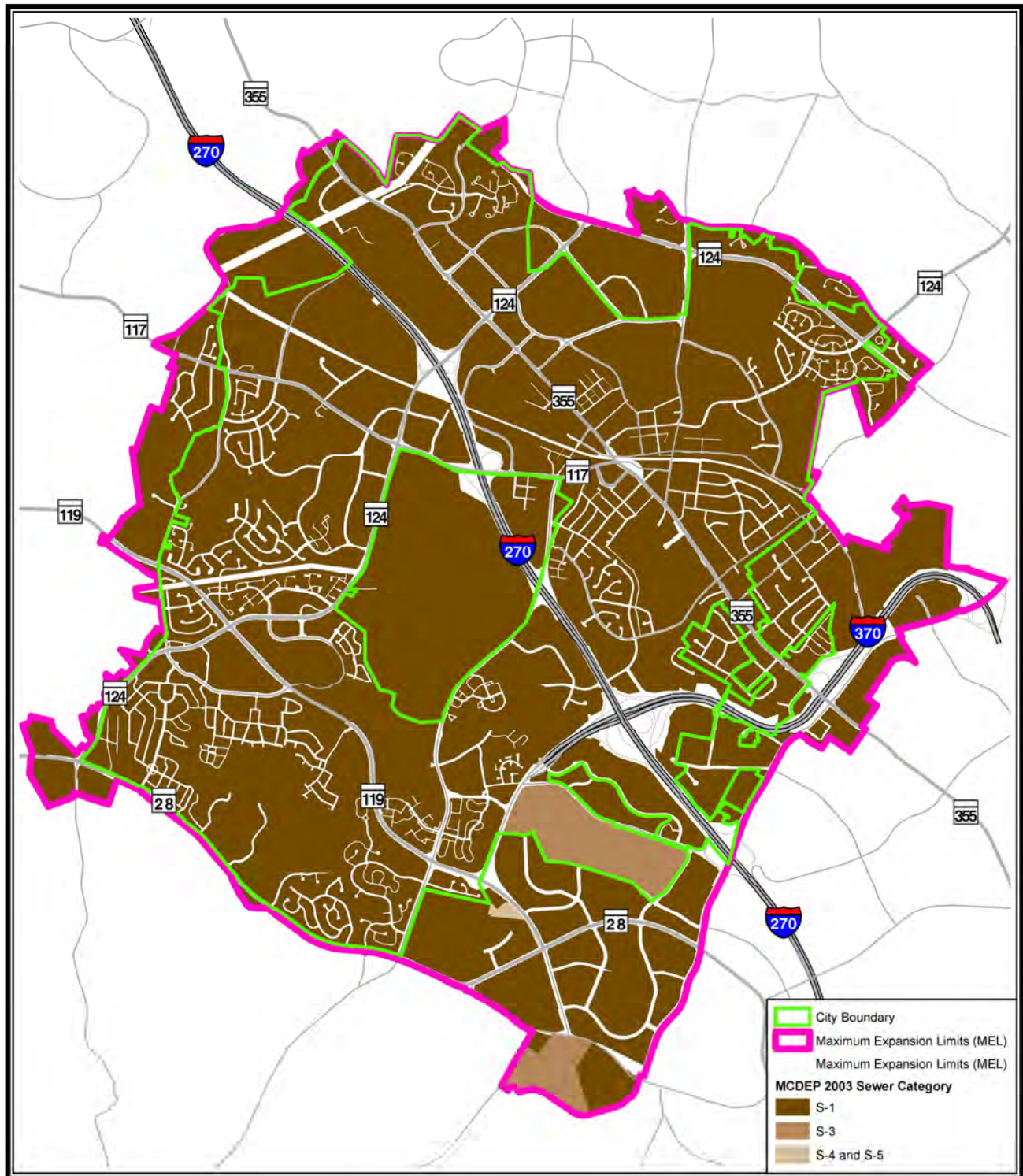
**Table 14: Water and Sewer Service Categories**

Service Area Categories	Category Definition and General Description
<b>W-1 and S-1</b>	Areas served by community systems which are either existing or under construction. – This may include properties or areas for which community system mains are not immediately available or which have not yet connected to existing community service.
<b>W-2 and S-2</b>	<b>Categories W-2 and S-2 are not used in Montgomery County.</b> (State definition: Areas served by extensions of existing community and multi-use systems which are in the final planning stages.)
<b>W-3 and S-3</b>	Areas where improvements to or construction of new community systems will be given immediate priority and service will generally be provided within two years or as development and requests for community service are planned and scheduled.
<b>W-4 and S-4</b>	Areas where improvements to or construction of new community systems will be programmed for the three- through six-year period. – This includes areas generally requiring the approval of CIP projects before service can be provided.
<b>W-5 and S-5</b>	Areas where improvements to or construction of new community systems are planned for the seven- through ten-year period. – This category is frequently used to identify areas where land use plans recommend future service staged beyond the scope of the six-year CIP planning period.
<b>W-6 and S-6</b>	Areas where there is no planned community service either within the ten-year scope of this plan or beyond that time period. This includes all areas not designated as categories 1 through 5. – Category 6 includes areas that are planned or staged for community service beyond the scope of the plan’s ten-year planning period, and areas that are not ever expected for community service on the basis of adopted plans.

Map 8: Water Service Area Categories, 2003-2012 CWSP



**Map 9: Sewer Service Area Categories, 2003-2012 CWSP**



Currently, both the City of Gaithersburg and MEL areas have a water category of W-1, meaning they are currently served by community systems and will not require new infrastructure construction. The subject areas also have sewer categories of S-1<sup>22</sup>, again meaning they are currently served by community systems and will not require new infrastructure construction.

### 11.3 Future Usage Capacity Needs

WSSC developed water production use for growth projections for planning water system improvements, used in the adopted 2003-2012 CWSP. The following usage methodology is based upon housing unit type<sup>23</sup> and estimates usage per employee/ job:

**Table 15: Average Daily Water Use by Land Use Type**

Land Use Type	Average Daily Water Use in gallons per day (gpd)
Single-Family Dwelling Unit (SFDU)	231 gpd
Multi-Family Dwelling Unit (MFDU)	209 gpd
Employees (Jobs)	51 gpd

The City of Gaithersburg, based upon this system, currently uses or is allocated to use approximately ten million gallons of water per day.

**Table 16: City of Gaithersburg Existing and Pipeline Development Water Demand**

Land Use Type	Unit Total	Water Demand (Gallons/Day)
Single Family	12,626	2,916,606
Multi- Family	15,356	3,209,404
Jobs	71,520	3,647,520
<b>City Subtotal</b>		<b>9,773,530</b>

The areas within the targeted MEL use over three million gallons daily. Combined with the existing City usage, the total gallons per day is approximately thirteen million (13,305,267) for this region.

**Table 17: Maximum Expansion Limits Existing Water Demand**

Land Use Type	Unit Total	Water Demand (Gallons/Day)
Single Family	1,674	386,694
Multi- Family	5,539	1,157,651
Jobs	36,905	1,882,155
<b>MEL Subtotal</b>		<b>3,426,500</b>

<sup>22</sup> With the exception of two sites (one being the Crown Farm), which have categories of S-3, meaning new community services will be provided with the commencement of construction of approved projects.

<sup>23</sup> Single-family dwelling units include detached and attached (townhouse) units. Multi-family units include garden-style and high-rise apartments and condominiums, piggyback (2 over 2) condo townhouses, and group quarters.

Using either the growth densities of 20 DU/Acre or 32 DU/Acre, 2030 development within the current incorporated limits of the City will add approximately three to six million gallons of daily water usage respectively.

**Table 18: City of Gaithersburg Additional Water Demand, 2030**

Growth Areas Density: 20 units/ac			Growth Areas Density: 32 units/ac		
Land Use Type	Unit Total	Water Demand Gallons/Day	Land Use Type	Unit Total	Water Demand Gallons/Day
Single Family	3,224	744,744	Single Family	5,926	1,368,906
Multi- Family	3,224	673,816	Multi- Family	5,926	1,238,534
Jobs	31,491	1,606,041	Jobs	58,517	2,984,367
<b>City Subtotal</b>		<b>3,024,601</b>	<b>City Subtotal</b>		<b>5,591,807</b>

Once again using the two growth densities, the MEL at full 2030 build out would also add approximately six to ten million gallons of daily water usage respectively.

**Table 19: Maximum Expansion Limits Additional Water Demand, 2030**

Growth Areas Density: 20 units/ac			Growth Areas Density: 32 units/ac		
Land Use Type	Unit Total	Water Demand Gallons/Day	Land Use Type	Unit Total	Water Demand Gallons/Day
Single Family	2,802	647,262	Single Family	4,517	1,043,427
Multi- Family	2,802	585,618	Multi- Family	4,517	944,053
Jobs	21,811	1,112,361	Jobs	38,959	1,986,909
<b>MEL Subtotal</b>		<b>2,345,241</b>	<b>MEL Subtotal</b>		<b>3,974,389</b>

In summation, the 2030 full build-out<sup>24</sup> at a density of 20 DU/Acre will generate a combined City and MEL usage of approximately eighteen and a half million gallons per day (18,675,109). The 2030 full build-out<sup>24</sup> at a density of 32 DU/Acre will generate a combined City and MEL usage of approximately twenty-three million gallons per day (22,871,463). The following table, taken from the adopted 2003-2012 CWSP, has determined that the maximum planned capacity in 2020 will be 357 million gallons per day for the entire service area. It is assumed that either build-out scenario could be facilitated within this planned capacity.

<sup>24</sup> Full build out is defined as the sum of the existing usage shown in Tables 16 and 17 and the additional usage due to growth shown in Tables 18 and 19

**Table 20: Projected Water Demand and Planned System Capacity, WSSC Region**

Calendar Year	Projected Demand (MGD)		Planned Capacity (MGD)* Maximum Daily
	Average Daily	Maximum Daily	
2005	178.7	266.2	341
2010	188.3	280.5	357
2015	196.6	292.9	357
2020	205.2	305.7	357

Source: WSSC Planning Group

\* This is planned treatment capacity at both Potomac and Patuxent treatment facilities

The adopted 2003-2012 CWSP also states:

*“The WSSC’s 7 treatment plants have a combined treatment capacity of 89 million gallons per day (mgd). the WSSC has purchased 169 mgd of treatment capacity at the Blue Plains Regional Wastewater Treatment Plant located in the District of Columbia, 3 mgd of capacity at the Mattawoman Wastewater Treatment plant located in northern Charles County, and 20,000 gallons per day of capacity in the Town of Poolesville’s wastewater treatment plant. For most facilities, the WSSC plans enough capacity to last 20 years or more.”*

To reiterate, the City’s APFO was established to, in part, ensure there is sufficient current and future capacity for both water and sewer. As development proposals are submitted, WSSC review and comment will be required for any approval. The previous calculations are based upon hypothetical suppositions and may not come to fruition due to unforeseen regional changes over the next twenty years.

## 12. Stormwater Management

The purpose of stormwater management (SWM) in development projects is to fulfill the goals required by the Federal Clean Water Act (33 U.S.C. § 1251 et seq.) Any development that disturbs greater than five thousand (5,000) square feet of land area in the City of Gaithersburg is required to address stormwater runoff. The City of Gaithersburg follows the requirements laid forth in the 2000 Maryland Stormwater Design Manual, Volumes I and II (Maryland Department of the Environment, April 2000) and the USDA Natural Resources Conservation Service Maryland Conservation Practice Standard Pond Code 378 (January 2000).

On April 24, 2007, Governor Martin O'Malley signed the "Stormwater Management Act of 2007" (Act), which became effective on October 1, 2007. Practices such as environmental site design (ESD), once encouraged, are now required to be implemented to the maximum extent practicable through the use of nonstructural best management practices and other better site design techniques. This new act coupled with the City's "Green" building requirements and existing code will result in all future residential and non-residential development mitigating SWM runoff by managing both quantity and quality in new ways.

Specifically, the City of Gaithersburg requires that for new developments, all stormwater quality treatment devices must safely convey the 100-year storm and must provide extended detention of the 1-year, 24-hour storm event. For redevelopment projects, the current codified requirements apply:

- Land-disturbing redevelopment activity involving less than one-third (1/3) of the site, stormwater management shall be provided for a minimum of twenty percent (20%) of the site's existing impervious area and the impervious area resulting from the land disturbing activity.
- If the land-disturbing redevelopment activity involves two-thirds (2/3) or more of the site, stormwater management shall be provided for the entire impervious area on the site, including impervious area previously existing and left untouched by the development or redevelopment. For purposes of this requirement, construction of new structures over existing structures or existing impervious areas shall be included in the computation of the percentage of site involvement. This computation shall not include resurfacing of existing impervious area unless such resurfacing involves the removing or replacing of an existing impervious area.
- If the land-disturbing redevelopment activity involves more than one-third (1/3) and less than two-thirds (2/3) of the site area, stormwater management may be required for the total imperviousness of the site as determined by the city's department of public works.

In addressing 2030 growth, the City of Gaithersburg will adhere to all Federal, State, and local SWM requirements at that time while continuing to improve the existing SWM systems found in the subject areas. The City's Land Use, Environment, and Water Resources Elements address specific policies and recommendations pertaining to water quality and stormwater management.

### 13. Recreation

The City of Gaithersburg is a community committed to providing a mix of both active and passive recreational opportunities. Found in an urban setting that is currently “built-out”, it is unreasonable to expect the City to achieve the State standard recommendation of 30 acres of parkland per 1,000 persons. The following table lists the acreages currently found within the City and Maximum Expansion Limits (MEL):

**Table 21: Public and Private Parks Within the City of Gaithersburg**

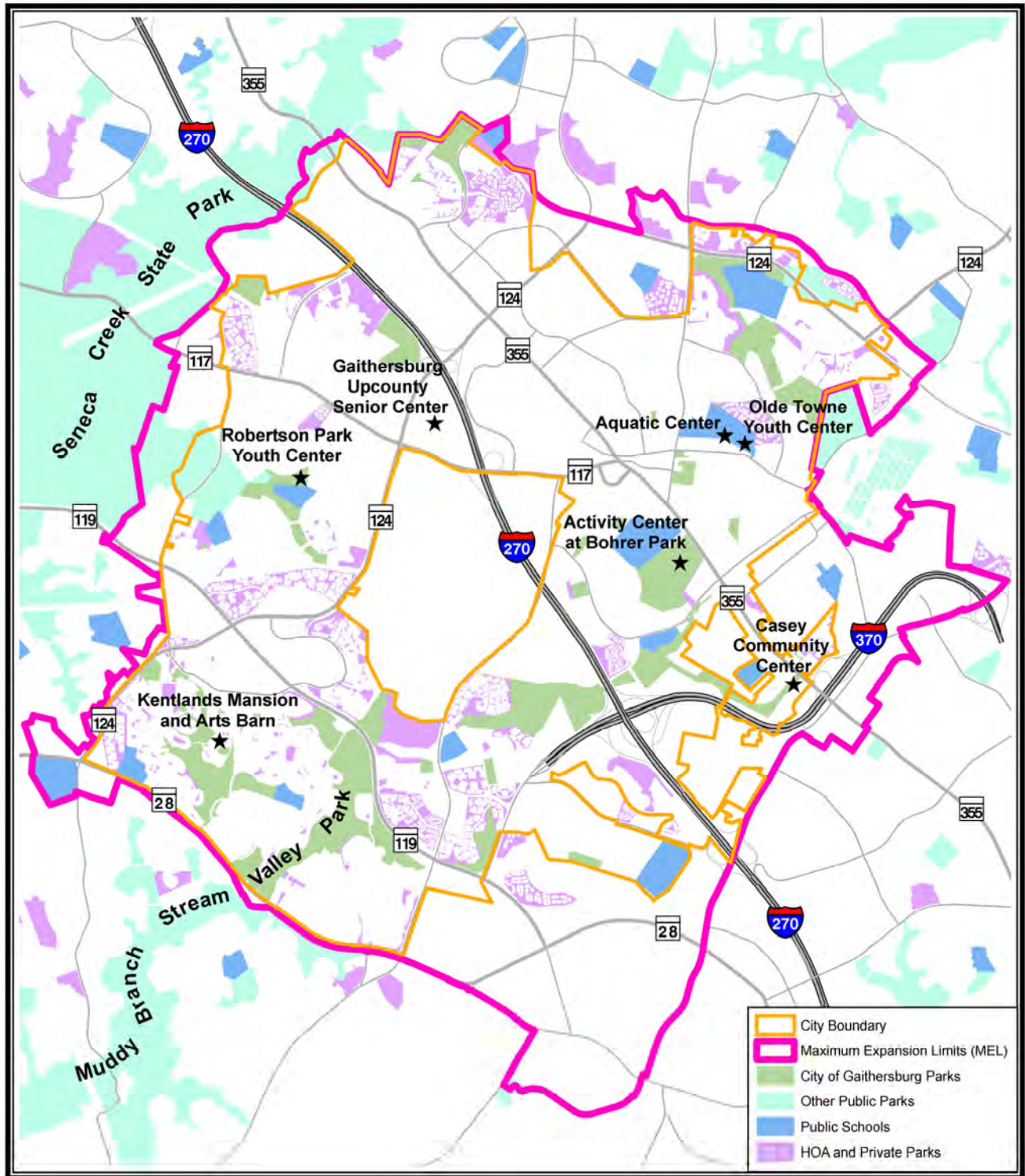
<b>Park/Recreation Ownership</b>	<b>City Acreage</b>	<b>MEL Acreage</b>
HOA and Private Parks	517.21	57.73
Public Parks	750.16	113.69
Public Schools <sup>25</sup>	219.19	108.79
<b>Total</b>	<b>1486.56</b>	<b>280.21</b>

It is to be emphasized that in addition to these traditional open park areas, the City also provides and maintains facilities such as Youth and Senior Centers, Aquatic Center, and Activity and Community Centers. While these facilities are not included in parkland calculations, they serve as valuable amenities not only to the citizens of Gaithersburg, but to many Montgomery County residents as well. Additionally, many neighborhoods operate, through their home owner associations, facilities such as swimming pools, ball courts, and clubhouses, providing further recreational amenities. Also of note, the City and MEL areas border Seneca Creek State Park and the Muddy Branch Stream Valley Park, two substantial regional public open spaces.

As future growth occurs, the City will continue to incorporate public amenities into each project through the addition of open and/or programmable spaces. Specific recommendations for public amenities can be found in the City’s adopted Land Use, Community Facilities, and Parks and Recreation Elements of the Master Plan.

<sup>25</sup> Public Schools were added in that the associated playgrounds and fields are often used for both programmed and “pick-up style” non-school hour recreation by the surrounding communities.

Map 10: Parks and Recreational Facilities



## 14. Financing

The City of Gaithersburg is a State-designated Priority Funding Area. As such, the City is recognized as having existing infrastructure that would support future development and redevelopment. As noted in the Introduction, the City's future development patterns will primarily focus on redevelopment rather than new or "greenfield" development. As a result, the need for additional infrastructure will be limited compared to other municipalities.

As a municipality within Montgomery County, the City of Gaithersburg does not have the responsibility of funding school construction or fire and rescue facilities. These services are funded by Montgomery County. Further, water and sewer and roadways improvements are also typically funded by other agencies.

The City has a long history of collaborating with the development community in providing new infrastructure. Many of the City's streets, storm water management facilities, as well as parks and other amenities, have been funded and constructed entirely by private development. As the City of Gaithersburg focuses on future redevelopment opportunities, it is anticipated that the development community will incur the costs of upgrading or replacing inadequate or antiquated infrastructure as part of their redevelopment plans.

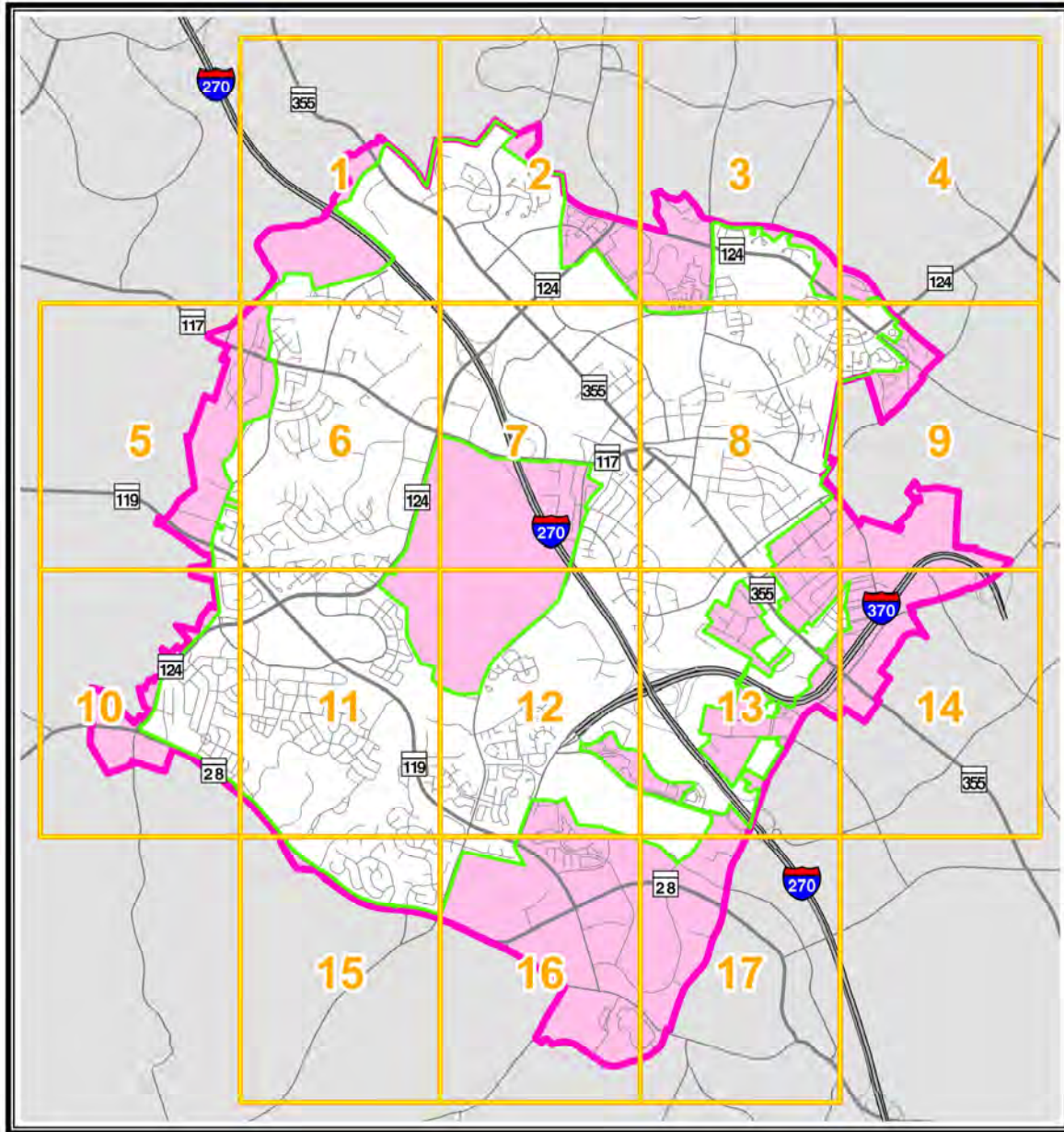
Any of the limited opportunities for greenfield development in the future will require annexation into the City. The City has demonstrated its ability to negotiate public improvements and infrastructure, such as land for school sites and other public facilities, as terms of any annexation agreements.

Montgomery County currently imposes impact taxes for both schools and traffic. While the Montgomery County Public School system receives the funding generated by the school impact tax, the County recognizes that traffic impact taxes generated within the incorporated City limits should be used to mitigate traffic within the City. In 2002, Montgomery County and the City of Gaithersburg executed a memorandum of understanding which allows the City to receive these development impact taxes for a number of designated traffic improvements within the City of Gaithersburg.

In summation, future infrastructure needs within the City's designated Growth Areas will be financed through a combination of public and private funds without undue burdens on City residents. The City of Gaithersburg will remain financially stable during future growth periods by coordinating with private developers, Montgomery County, and other agencies that fund public infrastructure.

# 15. Appendix A: Detailed Maps of MEL, Growth Areas, Zoning

## Index of Detailed Appendix Map Sheets

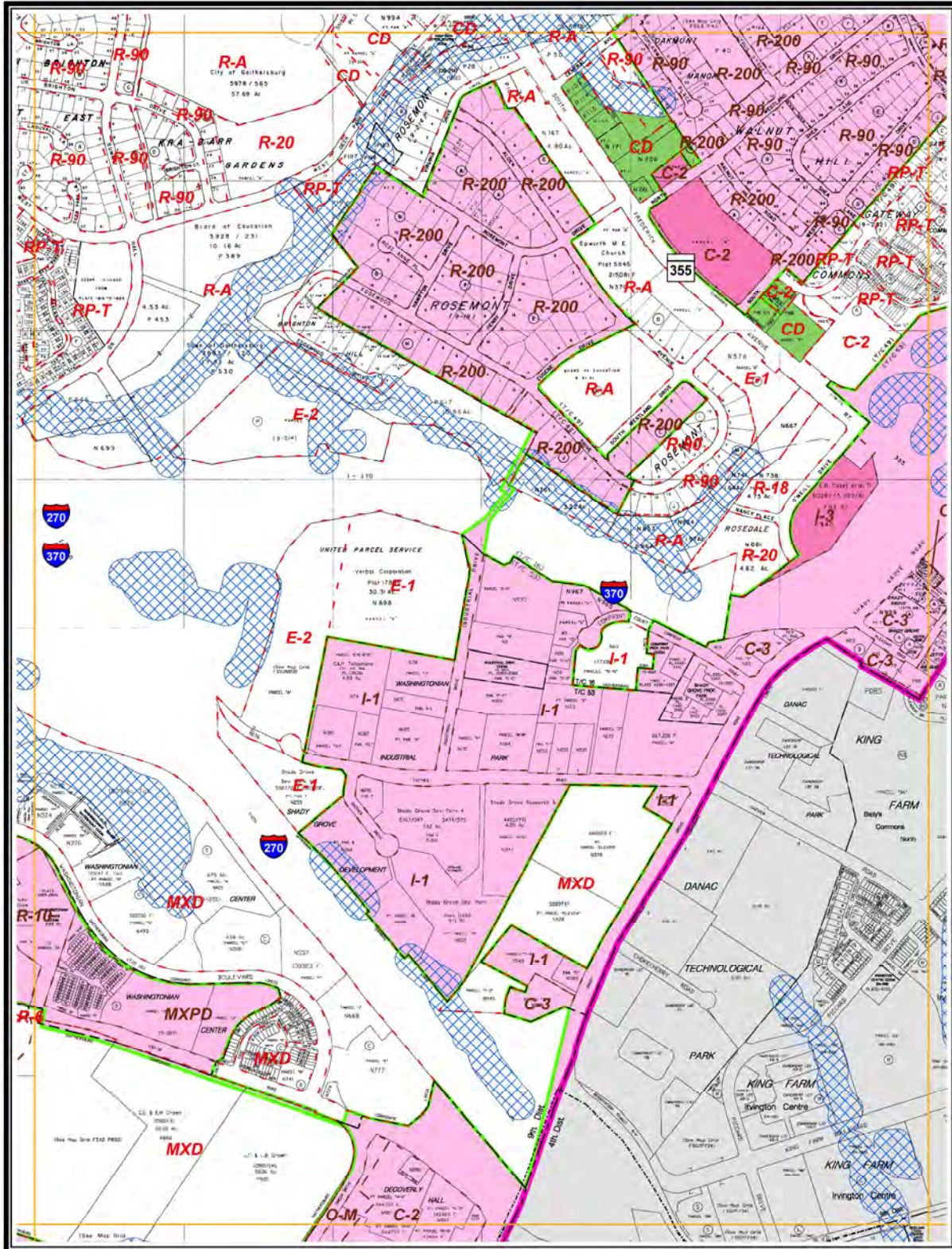


### Legend Key for Appendix Map Sheets

- |  |   |
|--|---|
|  City of Gaithersburg Corporate Limits    |  Growth Areas - City               |
|  Maximum Expansion Limits (MEL)           |  Growth Areas - MEL                |
|  Other Municipalities / Montgomery County |  Map Sheet Border                  |
|  R-90' City Zoning                        |  Non-Buildable Environmental Areas |
|  R200' County Zoning                      |   |

Map Sheet A-13

Map Sheet A-08



Map Sheet A-12

Map Sheet A-14

Map Sheet A-17