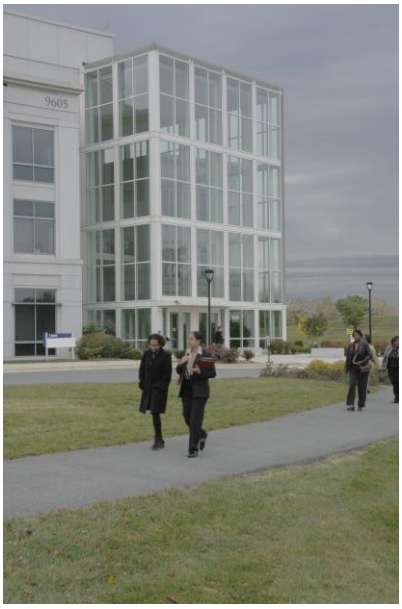
July 2009

Planning Board Draft

gaithersburg west master plan

The Life Sciences Center



Montgomery County Planning Department
The Maryland-National Capital Park and Planning Commission

MontgomeryPlanning.org

gaithersburg west master plan

The Life Sciences Center

Abstract

This plan for areas of western Gaithersburg within the County's planning jurisdiction contains the text and supporting maps for a comprehensive amendment to the approved and adopted 1982 *Oakmont Special Study Plan,* the 1985 *Gaithersburg Vicinity Master Plan*, and the 1990 *Shady Grove Study Area Master Plan*. It also amends *The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties,* as amended, the *Master Plan of Highways within Montgomery County,* as amended, and the *Countywide Bikeways Functional Master Plan,* as amended. This Plan makes recommendations for land use, zoning, urban design, transportation, environment, and community facilities.

Source of Copies

The Maryland-National Capital Park and Planning Commission
8787 Georgia Avenue
Silver Spring, MD 20910-3760

and online at:
www.montgomeryplanning.org/community/gaithersburg

The Maryland-National Capital Park and Planning Commission

The Maryland-National Capital Park and Planning Commission is a bi-county agency created by the General Assembly of Maryland in 1927. The Commission's geographic authority extends to the great majority of Montgomery and Prince George's Counties; the Maryland-Washington Regional District (M-NCPPC planning jurisdiction) comprises 1,001 square miles, while the Metropolitan District (parks) comprises 919 square miles, in the two counties.

The Commission is charged with preparing, adopting, and amending or extending *The General Plan (On Wedges and Corridors) for the Physical Development of the Maryland-Washington Regional District in Montgomery and Prince George's Counties*.

The Commission operates in each county through Planning Boards appointed by the county government. The Boards are responsible for all local plans, zoning amendments, subdivision regulations, and administration of parks.

The Maryland-National Capital Park and Planning Commission encourages the involvement and participation of individuals with disabilities, and its facilities are accessible. For assistance with special needs (e.g., large print materials, listening devices, sign language interpretation, etc.), please contact the Community Outreach office, 301-495-4600 or TDD 301-495-1331.

Planning Board Draft Plan

gaithersburg west master plan

The Life Sciences Center

Prepared by the Montgomery County Planning Department
July 2009

the plan process

A master plan or sector plan provides comprehensive recommendations for the use of public and private land. Each plan reflects a vision of the future that responds to the unique character of the local community within the context of a countywide perspective.

Together with relevant policies, plans guide public officials and private individuals when making land use decisions.

The PUBLIC HEARING DRAFT PLAN is the first formal proposal to amend an adopted master plan or sector plan. Its recommendations are not necessarily those of the Planning Board; the draft is prepared for the purpose of receiving public testimony. The Planning Board holds a public hearing and receives testimony, after which it holds public worksessions to review the testimony and revise the Public Hearing Draft Plan as appropriate. When the Planning Board's changes are made, the document becomes the Planning Board Draft Plan.

The PLANNING BOARD DRAFT PLAN is the Board's recommended Plan and reflects its revisions to the Public Hearing Draft Plan. The Regional District Act requires the Planning Board to transmit a master plan or sector plan to the County Council with copies to the County Executive who must, within 60 days, prepare and transmit a fiscal impact analysis of the Planning Board Draft Plan to the County Council. The County Executive may also forward to the County Council other comments and recommendations.

After receiving the Executive's fiscal impact analysis and comments, the County Council holds a public hearing to receive public testimony. After the hearing record is closed, the Council's Planning, Housing, and Economic Development (PHED) Committee holds public worksessions to review the testimony and makes recommendations to the County Council. The Council holds its own worksessions, and then adopts a resolution approving the Planning Board Draft Plan, as revised.

After Council approval, the plan is forwarded to the Maryland-National Capital Park and Planning Commission for adoption. Once adopted by the Commission, the plan officially amends the master plans, functional plans, and sector plans cited in the Commission's adoption resolution.

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plan summary

The *Gaithersburg West Master Plan* envisions a vibrant Life Sciences Center (LSC) where the foundation of health care, biotechnology, and academia combine to create a dynamic and sustainable science and medical hub. Knowledge will drive its agenda, attracting international scientists, business leaders, physicians, and professors who will contribute ideas and insights for the future. Labs, classrooms, research centers, and universities will encourage and foster cutting-edge discoveries. The LSC should evolve into a place where the physical form—buildings, open spaces, and amenities—is as inspiring as the discoveries occurring inside.

This Plan's vision will develop over 25 to 35 years. During that time, the local and national economy will experience three or four business cycles. These economic cycles make it imperative to periodically check the Plan's progress and recommendations. Regardless of the pace of growth, it is essential to establish a vision and provide a blueprint for the future that will enable the LSC to evolve over time.

While this Plan is about providing opportunities for future world-leading scientific research, it is also concerned with protecting residential neighborhoods and investments made by businesses and institutions in the area. Growth and change in the LSC must occur in a way that does not overburden the surrounding communities. This Plan's explicit staging recommendations are essential to preserving the quality of life that residents enjoy. Infrastructure—particularly transit—must be provided before significant amounts of development can be built. Staging development ensures that growth will be managed and timed with the delivery of the infrastructure necessary to support it.

Key Recommendations

- Transform the LSC into a dynamic live/work community while ensuring growth opportunities for research, medical, and bioscience interests.

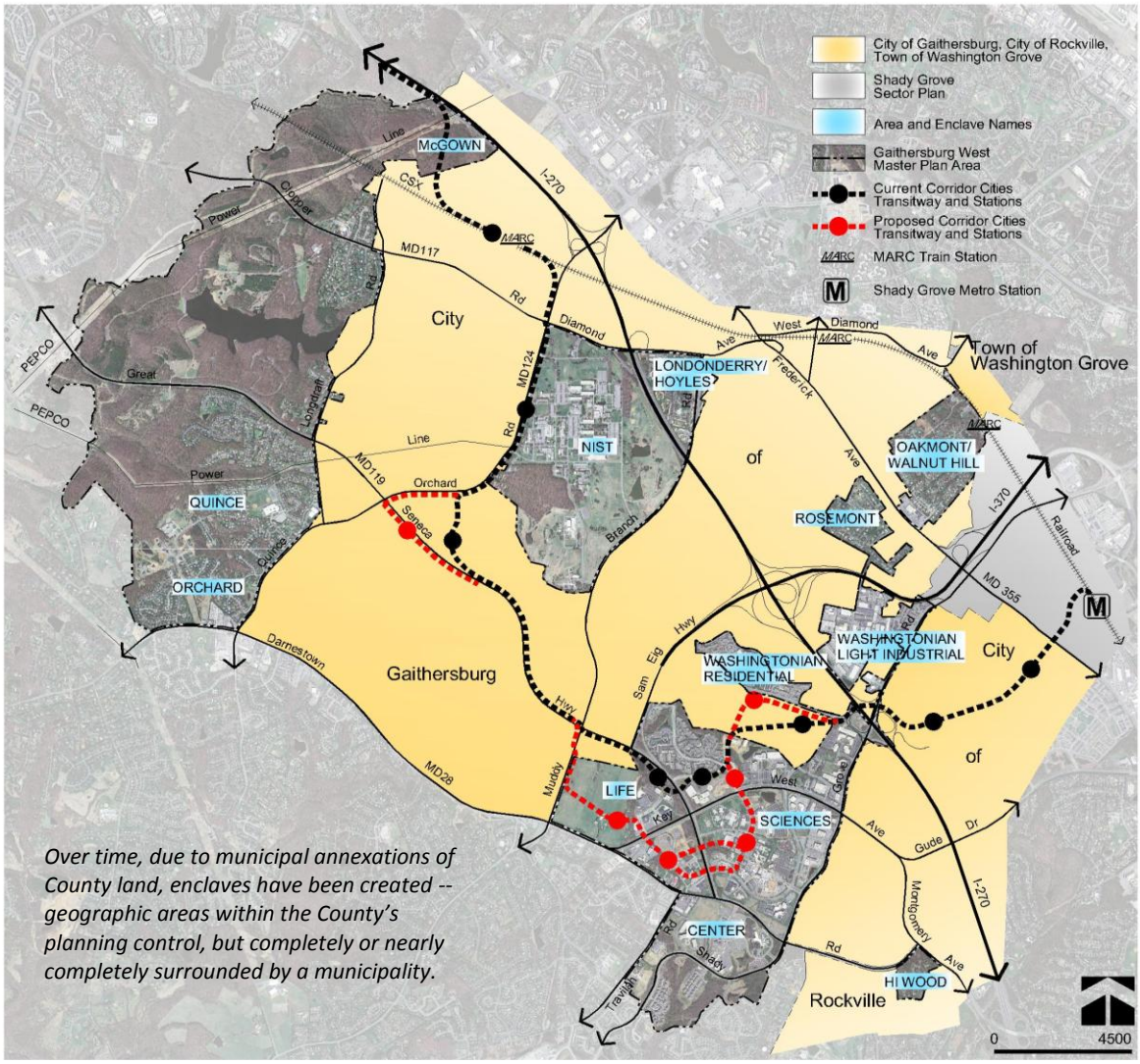
- Realign the Corridor Cities Transitway (CCT) through the LSC to provide three transit stations that will be the focal point of new development in the LSC Central, West, and Belward districts.

- Concentrate density, building height, and civic green spaces at the CCT stations. Provide appropriate transitions to adjacent neighborhoods and to the historic Belward Farm.

- Create a grid pattern of new streets that improve local circulation and connectivity among the LSC districts, promote alternatives to car use, and enhance access to the future transit stations.

- Create the LSC Loop as the organizing element of the open space plan to connect districts and destinations, incorporate natural features, and provide opportunities for recreation and non-motorized transportation.

Gaithersburg West Master Plan



- Replace the Public Safety Training Academy (PSTA) in the LSC West District with a new residential community that includes supporting retail, open spaces, and community facilities.
- Maintain the established residential neighborhoods throughout Gaithersburg West.
- Create a sustainable community that will attract nationwide interest with design and materials that minimize carbon emissions, maximize energy conservation, and preserve water and air quality.
- Ensure that development in the Piney Branch Special Protection Area uses the best available stormwater management treatment techniques to protect the watershed's headwaters.
- Meet the recreation needs of the Gaithersburg West area by identifying and acquiring a site for a new local public park.
- Support the County's Agricultural Reserve with zoning that requires acquisition of Building Lot Termination (BLT) easements to achieve maximum densities.

overview and context

Forty-five years ago, the County identified the I-270 Corridor as a place for higher densities in a series of Corridor Cities supported by a comprehensive transportation network. Since then, jobs and business opportunities have attracted skilled workers and business investment that have in turn enabled local government to provide quality schools, amenities, and services.

The Gaithersburg West Plan area covers 4,360 acres in the heart of the I-270 Corridor. It includes the Life Sciences Center, the western Quince Orchard neighborhoods and enclave areas such as the National Institute of Standards and Technology (NIST) and Rosemont, which are completely or nearly completely surrounded by a municipality. The City of Gaithersburg occupies 10 square miles in the center of the Plan area. The City of Rockville borders the Plan area on the east and the Town of Washington Grove is located to the northeast. The incorporated municipalities have their own planning and zoning authority and are not part of the County's master plans.

The Life Sciences Center has played a significant role in establishing the Corridor as a globally known center for science and technology-driven industry, home to biotechnology companies, higher education facilities, and a quality medical center. This Plan provides a blueprint for the future that will transform the LSC into a vibrant place served by transit and enhanced by activating uses, open spaces, and amenities.

Planning Framework

The Plan's recommendations are consistent with State and County planning policies.

- The 1964 General Plan identifies the I-270 Corridor (which includes the LSC) for concentrated, high-density development supported by a comprehensive transportation system including a major highway network, rail lines, and centers called Corridor Cities.

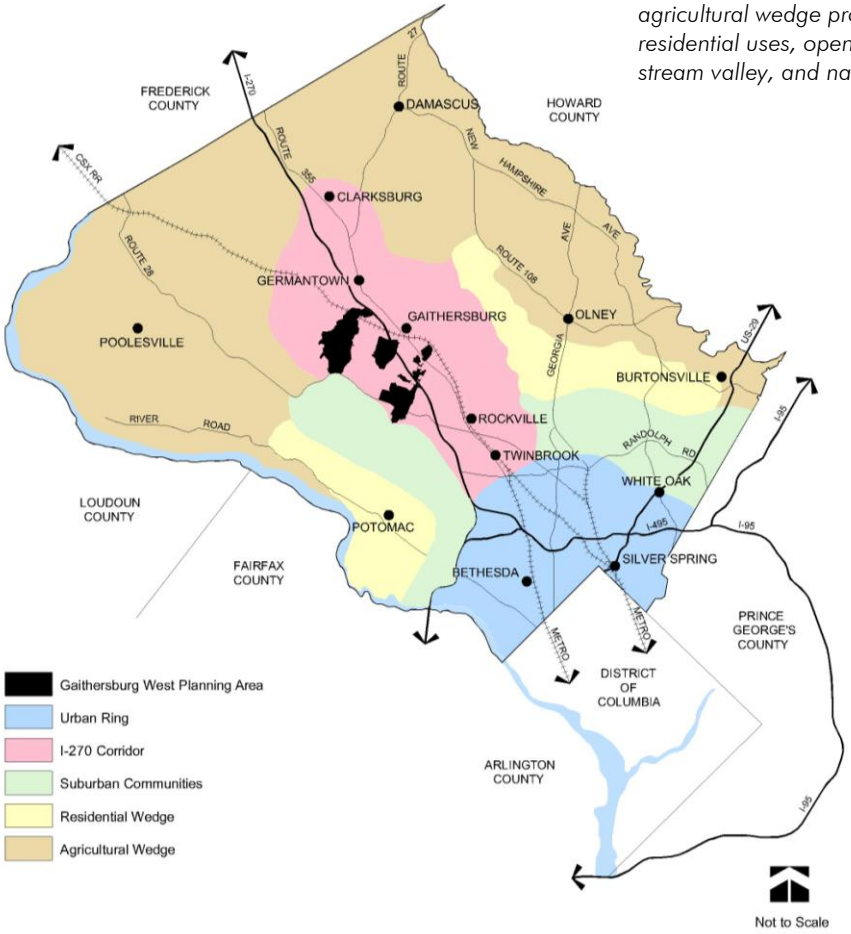
- The 1992 Economic Growth, Resources Protection and Planning Act requires local plans to protect sensitive environmental resources.

- The 1993 *General Plan Refinement* supported the Corridor Cities concept but acknowledged that it had not yet fully evolved.

- The 1997 Priority Funding Areas Act directs State spending to support smart growth, typically to existing communities and places where local governments want investment to support future growth. The entire Master Plan area is within a Priority Funding area and is eligible for State funding.

Wedges and Corridors

The suburban communities, residential wedge, and agricultural wedge provide areas for lower density residential uses, open space, as well as farmland, stream valley, and natural resources protection.



The Future of the I-270 Corridor

The I-270 Corridor is the County's economic engine and the biotechnology industry is a critical driver. Area businesses benefit from proximity to the federal government—the world's largest technology buyer. Locally based federal research centers support a major biotechnology industry cluster and offer promising future opportunities such as nanotechnology.

Economic expansion, population growth, and diversification will stimulate new development. New residents—many from highly skilled backgrounds—will augment an extraordinary talent pool. This larger, more varied skill base could open new creative and entrepreneurial business directions—from digital media to international market development to technology commercialization. New and expanding opportunities combined with a "quality of place" that fosters innovation could encourage younger residents and recruits to stay in the area.
By channeling development into existing centers served by transit, highways and infrastructure, the County will protect its natural environment and agricultural land that contribute to our quality of life while making better use of existing transportation and service infrastructure.

This Plan's recommendations work within the comprehensive overview of the 2008 *MD 355/I-270 Corridor Study,* which provides a policy framework for the Corridor master and sector plans. The County's approach to managing growth could bolster the Corridor's competitive strengths—a high quality of life, exceptional talent base, strong employment resources and the potential for enhanced economic opportunity. Creating higher density, mixed-use communities at transit stations epitomizes smart growth and sound planning principles by:

- balancing land use and transportation
- providing opportunities to live near work
- maximizing public investments in infrastructure
- reducing sprawl and protecting the environment
- reducing the carbon footprint and reliance on fossil fuels
- producing more sustainable forms of development.

The 2006 *Shady Grove Sector Plan* recommends that the area around the Shady Grove Metro Station be transformed from a light industrial service park to a high-density mixed-use community with a residential focus that makes the best use of Metro proximity.

The 2009 *Twinbrook Sector Plan* builds on the area's proximity to the Metro station and allows growth for technology-oriented businesses as well as a complementary mix of housing and service uses.

The proposed 2009 *Germantown Master Plan* builds on the Corridor City concept and envisions an up-County center for community life with mixed uses and density focused at transit stations.

The proposed 2009 *White Flint Sector Plan* envisions the Metro station area and Rockville Pike as a vibrant and sustainable urban center that can adapt to future challenges.

This Plan focuses development around future transit stations in the LSC with bicycle and pedestrian systems that enhance access. The Corridor Cities Transitway (CCT) will enable people who work at the LSC to live in nearby communities connected by transit. The Plan also recommends new housing in the LSC to create more opportunities to live near work. In addition to promoting a compact form of development, the Plan seeks to promote healthy, active living by fostering walking, creating new opportunities for recreation, and providing growth potential for important medical services. The result will be a sustainable form of development and a community where people want to live and work.

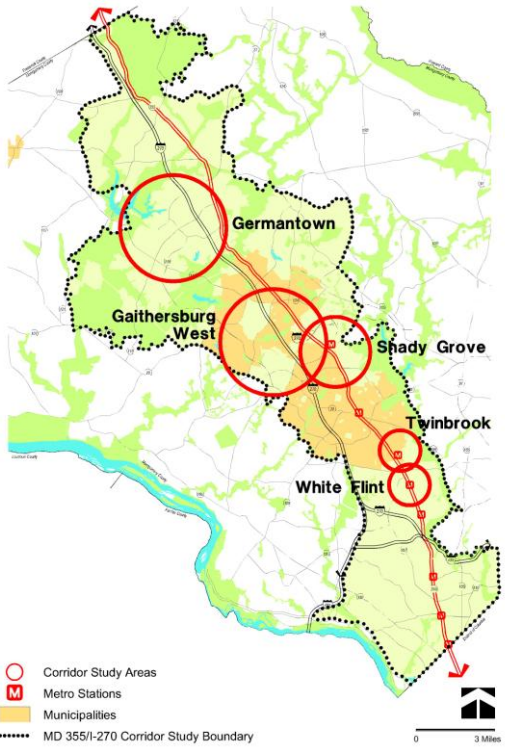
Annexation

Municipalities establish Maximum Expansion Limits (MEL) to set boundaries for future potential annexations of unincorporated land. The Maryland State Code (Article 23A, Section 19) requires that municipalities produce a Municipal Growth Plan delineating the MEL. Only land within the MEL and adjoining the municipal boundaries can be considered for annexation.

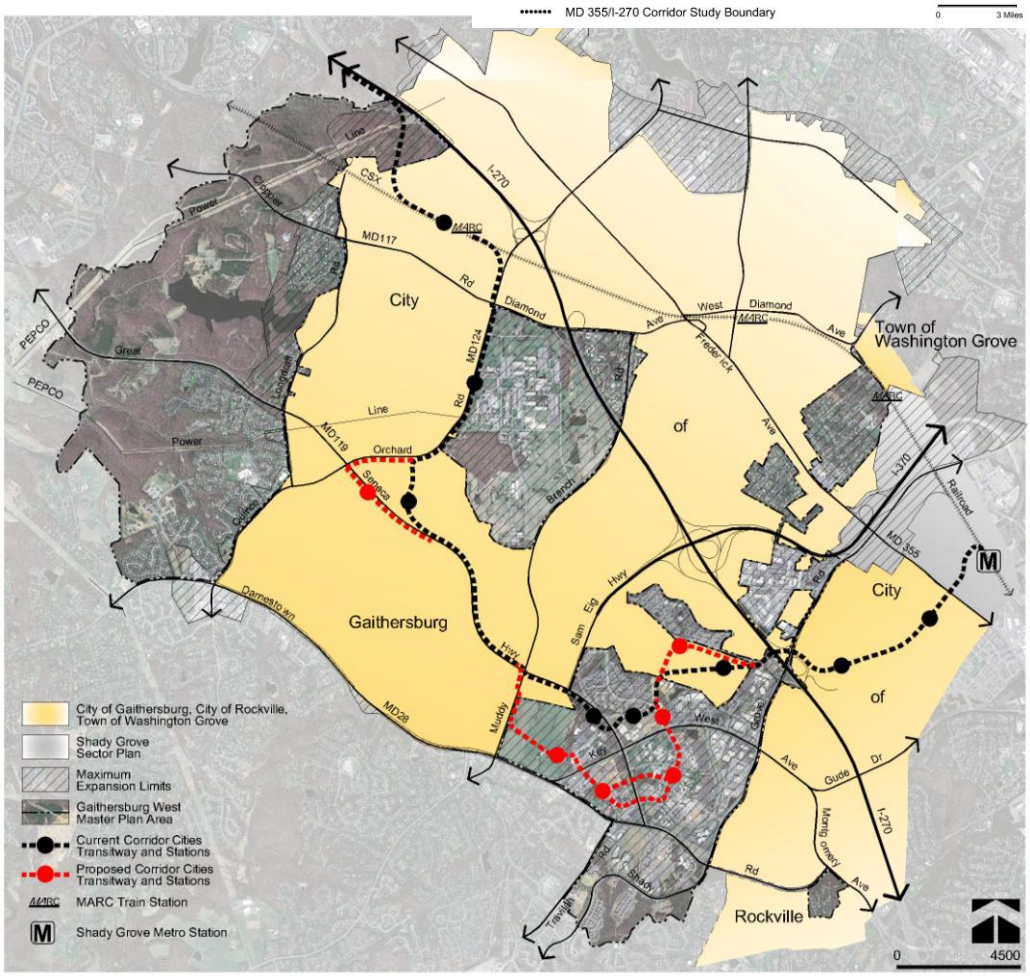
In 2009, the City of Gaithersburg established a new MEL as part of its adopted *Municipal Growth Element*. The City's new MEL includes nearly all of the Gaithersburg West Master Plan area, including the Life Sciences Center. This Master Plan recognizes that future annexations may occur and that annexing properties surrounded by municipalities would help create coherent boundaries.

MD 355/I-270 Corridor

Ideally, the boundaries between the County and the municipalities would be logical and well-defined, following roads or natural features such as streams. This Plan strongly opposes annexation of any portion of the Life Sciences Center, which is not an enclave. Over the past 30 years, the County has invested substantial resources to create and develop the LSC. Annexing any of the LSC would leave the County without control of a significant element of its economic development strategy and create irretrievable revenue losses.



City of Gaithersburg Maximum Expansion Limits



the life sciences center

Planning for Science, Health Care, and Transit

The Plan's vision for the LSC builds on the strong foundation of existing institutions and businesses, and the County's land use plan that brought together health services, academia, and research and development companies. Today, the LSC has the largest concentration of, and is the premier location for, research and biotechnology companies in the County.

The future viability of the LSC requires the following components:

- opportunities for growth and expansion of existing enterprises
- a dynamic environment that will attract skilled workers and investment
- infrastructure and services to support future development
- staging development to balance growth and minimize adverse impacts
- sustainable practices that provide a quality of place.

Transit is an essential element of this Plan and is the basis for the land use and zoning recommendations. A strong public and private commitment to the Plan's transit proposals will help ensure that the LSC is connected internally as well as to the rest of the Corridor.

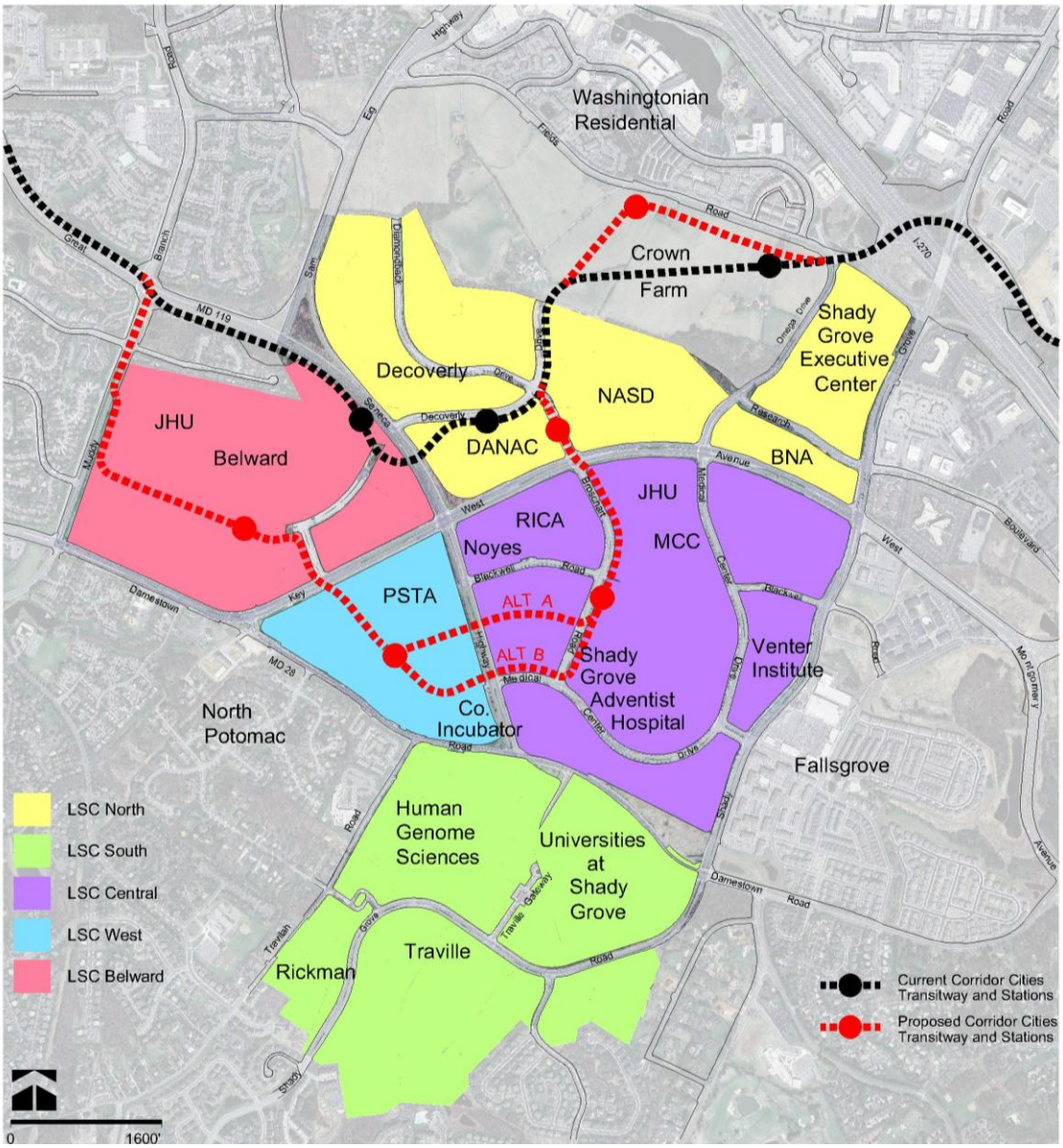
Vision

"It's heading right at us, but we never see it coming…The most important things happening in the world today won't make tomorrow's front page…They'll be happening in laboratories—out of sight, inscrutable and unhyped until the very moment when they change life as we know it."
— "The Future is Now," The Washington Post, April 13, 2008

This Plan establishes a blueprint for the LSC that includes an expanded, first-class medical center, research facilities, academic institutions, and an array of services and amenities for residents, workers, and visitors. It will have an open space system that incorporates the area's natural environmental features into a larger network, connecting destinations by paths and trails, and providing opportunities for a range of outdoor experiences.

The LSC of the future will be served by a fully integrated transit system that links mid-County activity centers via the Corridor Cities Transitway (CCT). Access to high quality transit is increasingly important to businesses trying to attract knowledge-based, creative class workers. The LSC will continue to be a specialized employment center but it will be connected by transit with nearby residential communities at the Shady Grove Metro Station, the King Farm, the Crown Farm, Kentlands, and the Watkins Mill Town Center.

Life Sciences Center Districts



In previous plans, the Life Sciences Center was identified as the block that includes Shady Grove Adventist Hospital and the larger area was called the R&D Village. This Plan applies the term LSC more broadly to five districts, incorporating the Belward property to the west and the Universities at Shady Grove to the south.

Today's LSC

The LSC's two academic institutions—the Universities at Shady Grove (USG) and the Johns Hopkins University-Montgomery County Campus (JHU-MCC)—have increased its prominence and expanded opportunities for collaboration. Shady Grove Adventist Hospital provides the broader community with a full range of health care services. A number of biotechnology companies, including Human Genome Sciences, BioReliance, and the J. Craig Venter Institute, are located here. Many of the goals for the LSC have been realized. As originally envisioned, the LSC had a specific land use purpose with a unique employment niche. Residential and retail development was planned for large tracts surrounding the LSC, rather than integrated

within the Center. The LSC and R&D Zones ensured that land would be reserved for life sciences to concentrate these uses and accomplish the original vision for the LSC. Housing and retail were specifically excluded from the LSC and R&D zones to enable the primary land uses of medical, life science, and academia to become established and have room to grow.

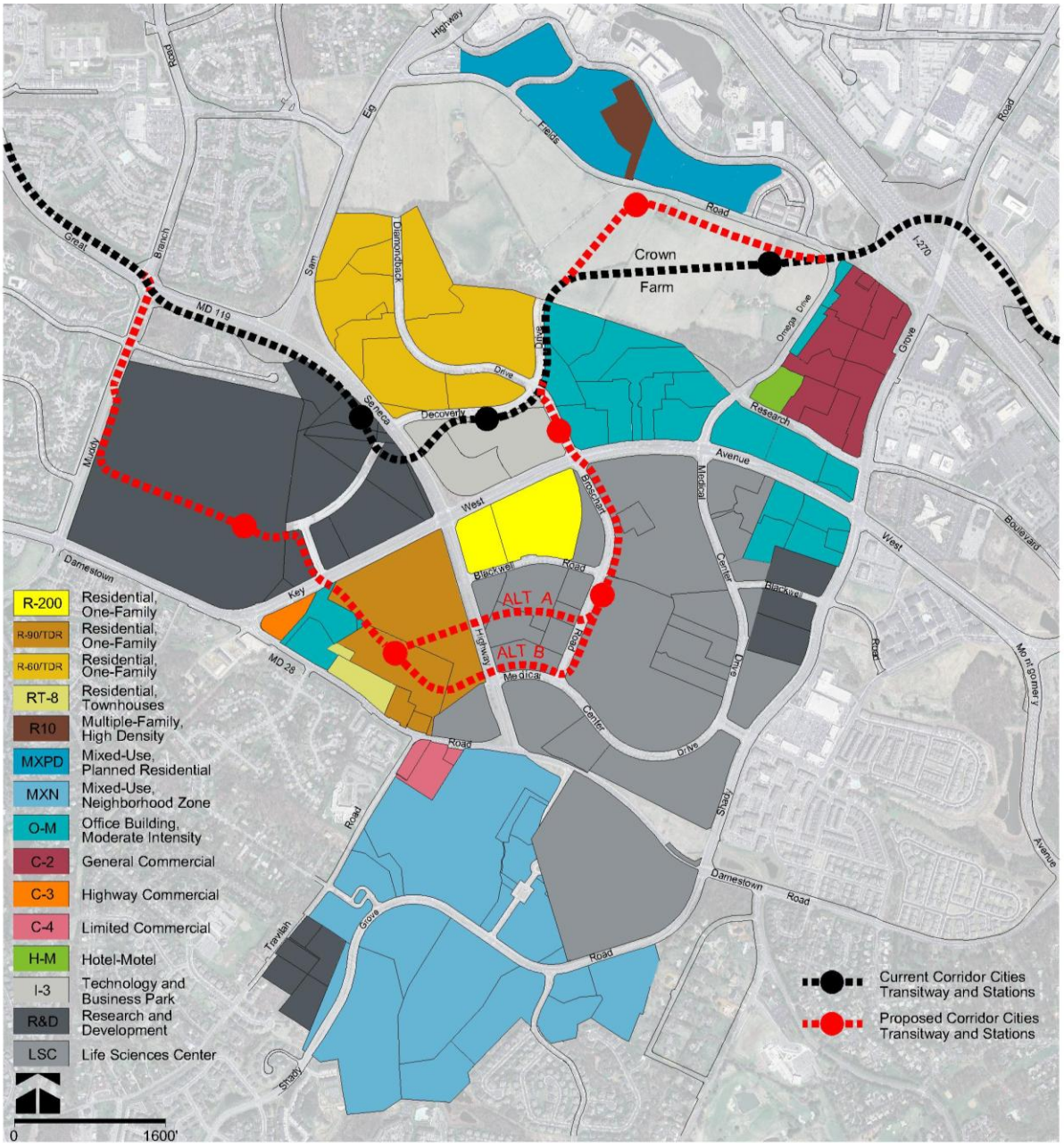
Today, the LSC contains nearly seven million square feet of commercial development and has 3.7 million square feet of approved development in the pipeline. Many LSC sites have maximized their development potential under the existing zoning.

The LSC's physical framework is modeled on a 20-year-old development program for suburban research parks. The LSC looks and functions like a conventional office park, with single-purpose clusters separated by wide highways and surrounded by parking lots. This model ensures auto-dependence and discourages walking. There is so little variety of uses in the LSC today that employees often drive to lunch spots because there are no services within easy walking distance.

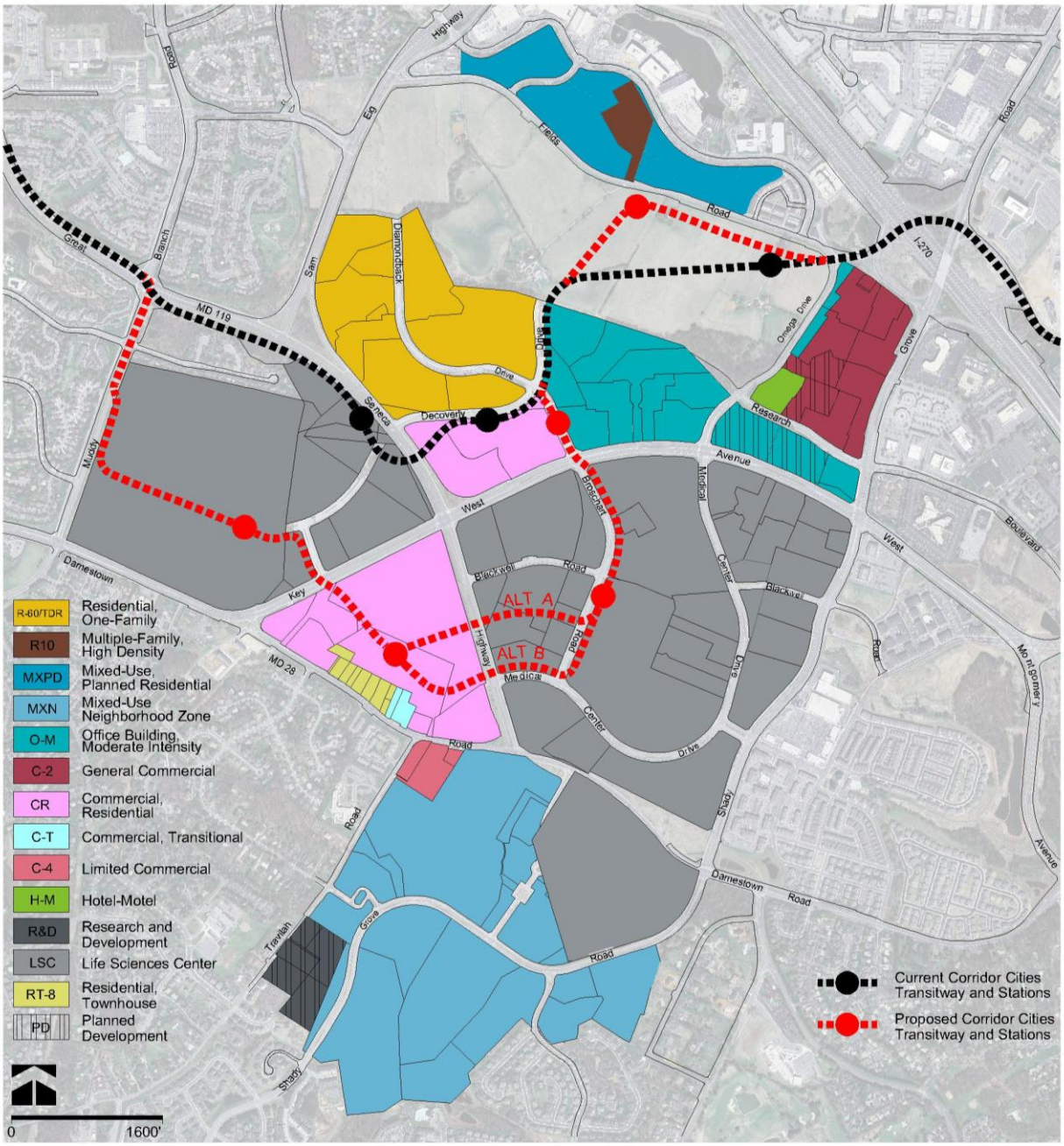
existing and proposed life sciences center zoning

Zone	Description	Existing Acreage	Proposed Acreage
LSC	Life Sciences Center	226	419
CR	Commercial-Residential	0	93
R&D	Research and Development	167	13
O-M	Office Building, Moderate Intensity	85	62
I-3	Technology and Business Park	24	0
H-M	Hotel-Motel	3	3
C-2	General Commercial	42	42
C-3	Highway Commercial	3	0
C-4	Limited Commercial	4	4
C-T	Commercial, Transitional	0	2
MXN	Mixed-Use Neighborhood	192	192
MXPD	Mixed-Use, Planned Development	42	42
R-10	Multiple Family, High-Density Residential	7	7
R-60/TDR	Residential, One-Family/TDR	60	60
R-90/TDR	Residential, One-Family/TDR	62	0
R-200	Residential, One-Family	22	0

Existing Zoning



Proposed Zoning



Tomorrow's LSC: Linking Land Uses/Connecting Communities

This Plan envisions the LSC with an enhanced role as the County's premier life sciences location. Transforming today's suburban, auto-oriented LSC into tomorrow's walkable, vibrant science center requires changing the built environment and the mix of uses over time. The CCT is the centerpiece of the Plan's vision for the LSC.

The CCT in the I-270 Corridor will:

- provide a transit option among the Corridor Cities
- improve mobility within the Corridor
- alleviate congestion on I-270
- extend transit service west and north of the Shady Grove Metro Station (the terminus of the Red Line).

The 14-mile CCT transit line will run from the Shady Grove Metro Station to the Comsat site in Clarksburg. Fourteen stations are planned, with park-and-ride facilities at seven. The alignment is planned as an exclusive, dedicated facility for either light rail transit (LRT) or bus rapid transit (BRT) with limited interaction with vehicular traffic at local street crossings. It is planned to include a multi-use path.

Both the 1964 General Plan and the 1970s Gaithersburg and Germantown plans included the concept of a transitway. It has been recommended in all subsequent I-270 Corridor master plans, including the 1994 *Clarksburg Master Plan and Hyattstown Special Study Area* and the 1993 *Frederick County Comprehensive Plan*.

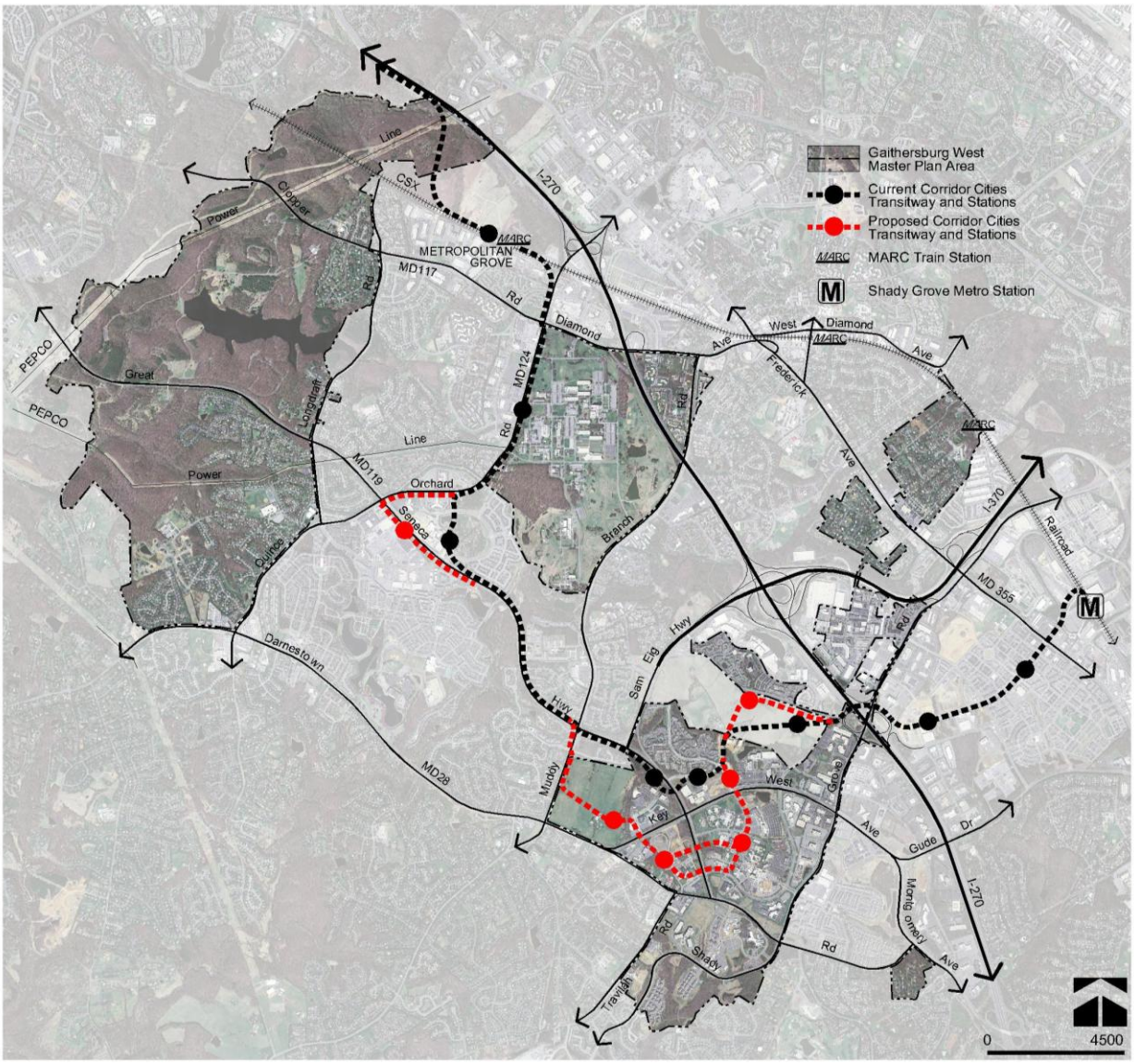
This Plan recommends realigning the CCT to bring transit into the heart of the LSC where it can serve more businesses, institutions, and other users than the current route.

The Plan builds a pattern of density focused on the three LSC districts where CCT transit stations are proposed: Central, West, and Belward. Increased density is recommended at proposed transit stations and development can only proceed in stages that are linked to the provision of infrastructure, most importantly, the CCT.

The LSC South District is not recommended for increased densities largely because it is within the Piney Branch Special Protection Area. Realigning the CCT route into the center of the LSC will bring transit closer to LSC South, where it can serve the Universities at Shady Grove, Human Genome Sciences, and the Traville community. The proposed alignment offers two alternatives between the LSC Central and LSC West stations.

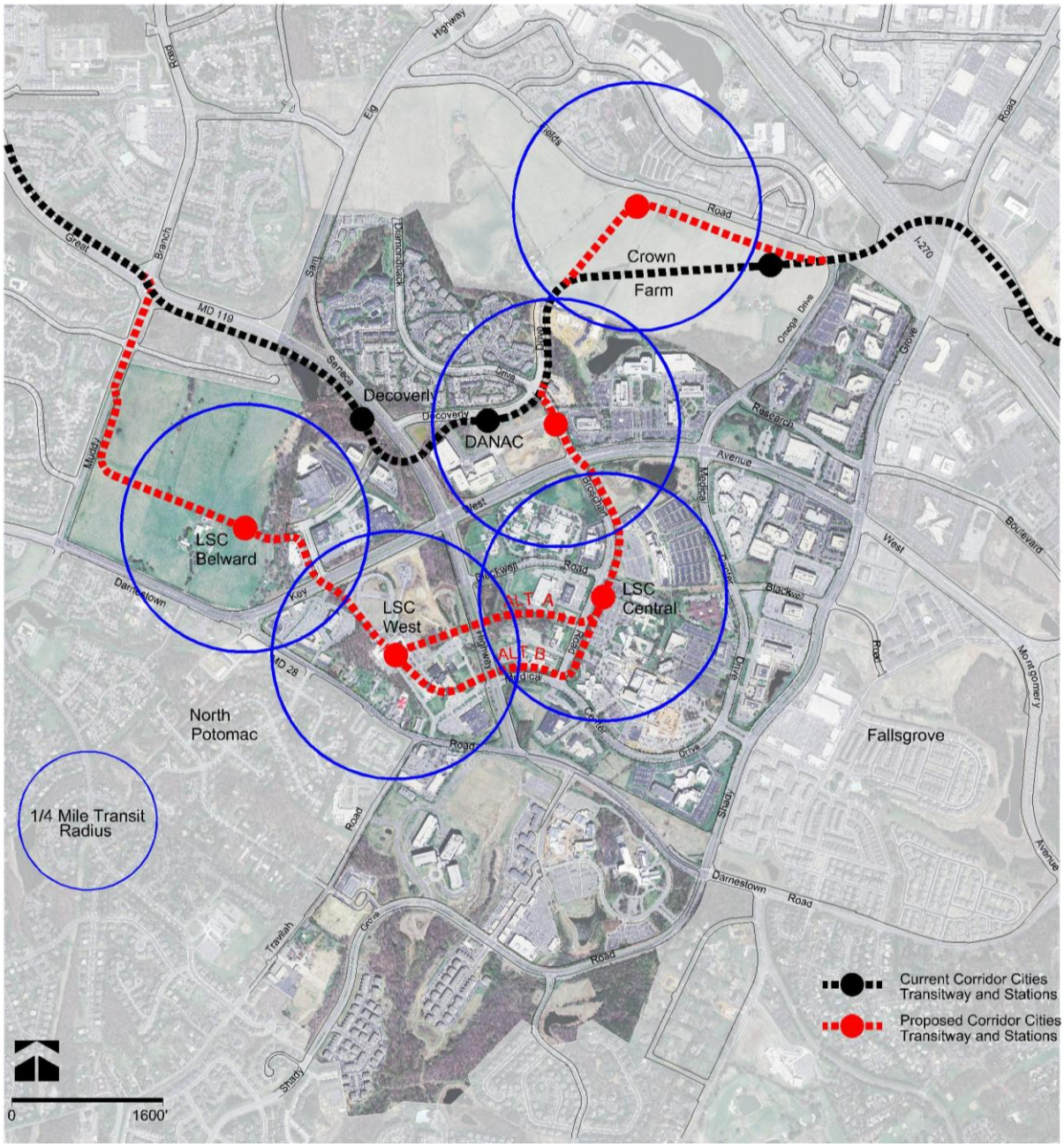
The two current station locations—DANAC (on the south side of Decoverly Drive) and Decoverly (along Great Seneca Highway near Sam Eig Highway) are not located to serve the LSC districts with the most growth potential and the greatest number of future transit riders. The Decoverly station would serve primarily as a park-and-ride facility since it is located along a highway rather than in the center of development. Also, the alignment near the Decoverly station would impact an environmentally sensitive wetland and stream buffer area, which could be avoided if the route is relocated.

Corridor Cities Transitway (Phase 1)



The CCT's first phase will be from the Shady Grove Metro Station to the Metropolitan Grove MARC Station. The second phase would extend the line from Metropolitan Grove north to Germantown and Clarksburg. The CCT route and design will not only connect people and places, but its stations will be the focal point of new development in the Corridor.

Corridor Cities Transitway Alignments and Stations



The Plan's three new proposed stations are located where new development and redevelopment is expected, increasing the number of potential CCT riders within a quarter mile radius, or a five-minute walk. The proposed realignment would lengthen the route by one mile. This Plan shows both the current alignment and the proposed alignment because the Maryland Transit Administration (MTA) is studying the route and selecting an alternative. If the CCT is ultimately provided as BRT, it may be possible to incorporate both the current and proposed routes, but the land use and zoning recommendations in this Plan require the realignment through the LSC to serve the proposed densities at the three new stations.

Housing

This Plan's primary goal is to create a world class life sciences center. A range of housing options and amenities is needed to support this development and help achieve County housing goals, including Moderately Priced Dwelling Units and workforce housing. The transportation infrastructure proposed in this Plan will link the LSC districts in a sustainable development pattern where people can walk, bike, or use transit to reach their destinations.

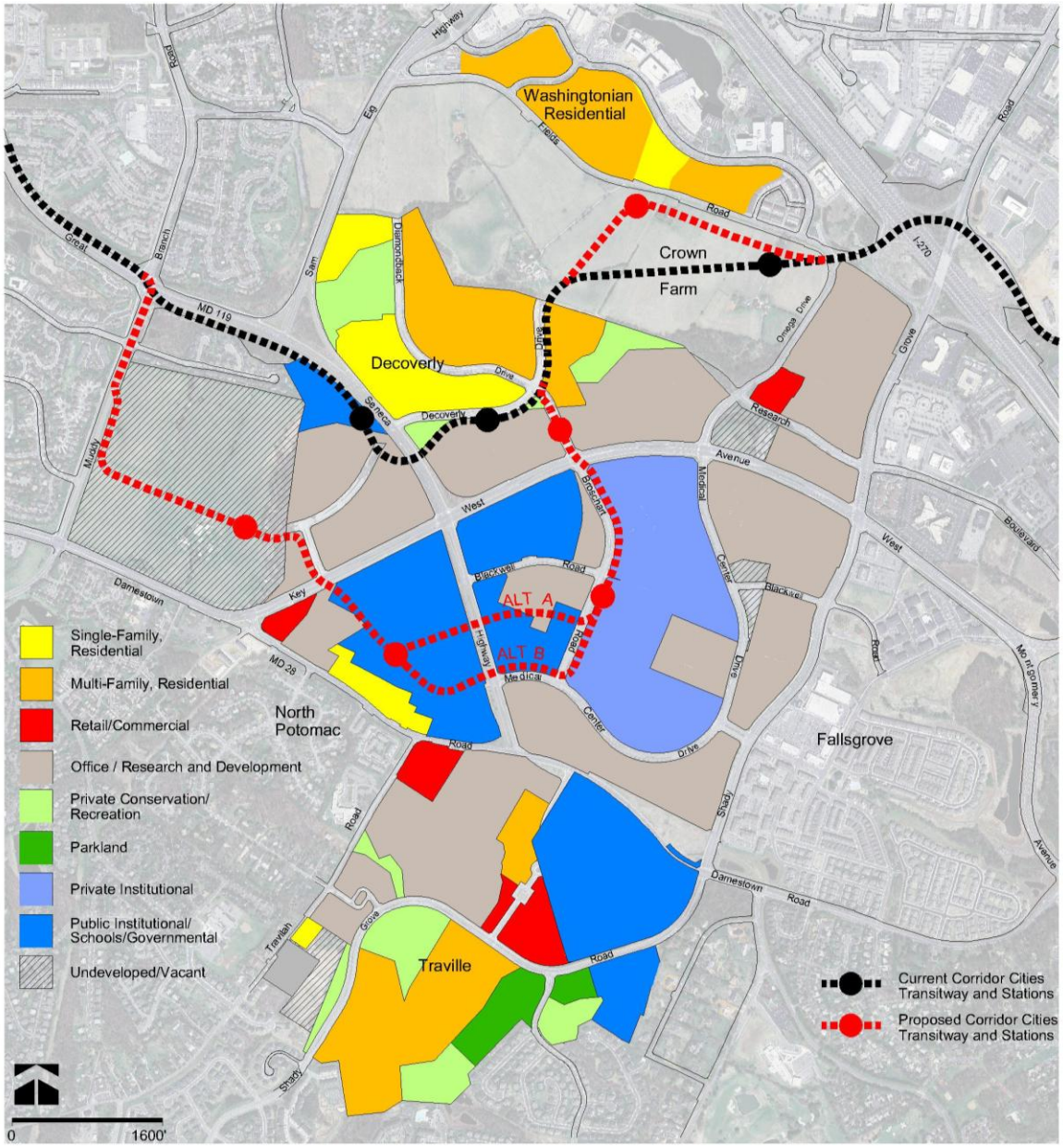
One of the County's fundamental planning tools is the jobs-housing balance—the ratio of jobs to housing units in an area. Creating a balance provides the opportunity for people to live near work, which can reduce traffic congestion. While a balanced jobs-housing ratio does not guarantee that the housing will be occupied by those who work nearby, opportunities to live near work should be provided.

To date, the LSC has developed as a single-purpose, single-use employment center. Housing has not been a permitted use so the jobs-housing ratio within this area is not balanced. Because the LSC's focus has been on economic development and jobs, not housing, achieving the optimal jobs-housing balance within this small geographic area is unrealistic. However, over a broader area, the appropriate ratio can be achieved.

The 1990 Plan proposed new residential neighborhoods on large tracts of land near the LSC, including new neighborhoods at the King Farm, the Crown Farm, and the Thomas Farm (Fallsgrove). King Farm and Fallsgrove were annexed into the City of Rockville and are nearly built-out. The Crown Farm was annexed into the City of Gaithersburg, which approved a mixed-use community with 2,250 dwelling units that is not yet under construction. Existing housing that is near the LSC and within the Plan boundaries totals 3,262 dwelling units (of which 230 are senior units) at the Decoverly and Traville communities and the Washingtonian cluster north of Crown Farm.

This Plan recommends a new residential community on the current site of the County's Public Safety Training Academy (PSTA), LSC West. Housing development on this site could yield 2,000 new dwelling units. In addition, the Plan recommends that housing be allowed as a secondary use in the LSC Central District, which, along with several other sites in the greater LSC, could yield 3,750 new dwelling units. In LSC Central, the Plan allows 30 percent of the density to be used for housing. If all LSC Central property owners utilized this option, the total dwelling units in the district could be 2,225. This maximum theoretical amount will not be achieved in LSC Central due to the existing built environment and the business objectives of the property owners.

Existing Land Use



There are 3,262 dwelling units in the LSC area—

- *1,368 units in the Washingtonian residential cluster*
- *1,144 at Decoverly*
- *750 (including 230 senior units) at Traville*

Overall, the potential residential land use for the greater LSC could yield a maximum of 5,750 additional dwelling units to complement a projected total of 60,000 jobs (based on existing, approved, and proposed development). The resulting ratio of 6.6 jobs per dwelling unit is based on the existing housing in the greater LSC area (3,262 dwelling units) combined with the potential new housing (5,750 dwelling units) for a total of 9,012. This jobs-housing ratio reflects the Plan's emphasis on the life sciences and health care services but does not include the substantial amount of existing housing nearby in Rockville, Gaithersburg, and Potomac. Within an approximate two mile radius of the LSC, there are over 25,000 existing households and the jobs-housing ratio is 2.8.

The LSC will be part of a continuum of communities linked by the CCT, enabling people to live and work within the corridor and get where they need to go by transit. At CCT stations to the east and west of the LSC, over 10,000 dwelling units are planned in pedestrian-oriented, mixed-use communities, including the Shady Grove Metro Station, the Crown Farm, and Watkins Mill Town Center. Creating such places fosters sustainable development and helps reduce sprawl as well as our dependence on autos.

Urban Form and Open Spaces

The LSC districts will be connected through a refined street network, transit, and trails. The highest density and building height will be concentrated at the proposed CCT stations. People may live and work in the same district, but interact with colleagues in another district. Overall, mobility will be enhanced through options other than cars, and shorter trips.

The streets, buildings, and open spaces will create a physical environment that supports the research community and enhances opportunities for people to interact. Design guidelines for the LSC, in a separate document, provide detail to guide new development and implement the urban form recommendations in this Plan.

The Plan's urban design recommendations set the scale and character for the LSC.

- Circulation on a pedestrian-oriented street grid that creates pedestrian and bicycle connections to transit and between uses and districts.
- Buildings that define the public spaces, streets, plazas, parks, and views.
- A system of public open spaces that provides a setting for community activity and also preserves natural resources.
- A standard for sustainability that reflects the LSC's cutting edge science.

Circulation

The LSC will have a walkable street system with a grid network. Streets and transit will tie the districts together. The LSC Loop, described below, will unify the pedestrian and bicycle circulation system of sidewalks, bikeways, trails, and paths that provide mobility and recreation options. The CCT will include a multi-use path that will enhance connectivity among the LSC districts.

- Grid network of streets
- Sidewalks connecting districts, providing access to transit and public spaces
- CCT transit stations and multi-use path

Buildings

Buildings oriented to the streets and public spaces will be built based on development standards that accommodate a variety of uses, including laboratories, prototype manufacturing, offices, academic buildings, residences, and retail spaces. Allowing mixed uses is critical to achieving the Plan's vision. Building standards will also ensure that new development provides compatible transitions to adjacent neighborhoods along Darnestown and Muddy Branch Roads.

- Buildings and residential entrances oriented to streets
- Parking garages located on block interiors
- Visible retail focused at CCT stations

Public Open Spaces

A comprehensive system of public open spaces for collaboration, recreation, and other community activities will preserve important resources including streams, forests, and historic properties. This open space system will also provide the setbacks and green spaces that contribute to compatibility with the adjacent neighborhoods.

- Public open spaces at each CCT station
- Stream valley parks
- Transitional green areas

Sustainability

New development must feature building, site, and street designs that respect natural systems, respond to sun, shade and topography, and make maximum use of renewable resources, reducing disruption of the natural environment to the highest extent feasible. Development should be compact and feature a diversity of land uses, making more efficient use of land, energy and building materials, and enabling people to live, work and shop in one area. The CCT, trails, and attractively designed sidewalks will connect the districts and adjacent neighborhoods, encouraging walking instead of driving. Trail systems within developed areas will connect with trails surrounding parks.

This Plan recommends reinforcing and expanding the use of green buildings to emphasize green site design and energy conservation practices. Development should incorporate approaches and technology to maximize energy conservation and increase renewable energy use such as solar, wind and geothermal. Environmental site design and stormwater management techniques should be used to improve water conservation and reduce energy required for water treatment and distribution. Building re-use, deconstruction techniques that recover reusable building materials, and recycling should be employed to further reduce energy associated with development.

Minimizing imperviousness will be necessary to reduce construction energy costs, but also reduce urban heat island effect and improve water conservation. Improving connectivity through the provision of trails, transit, and sidewalks will reduce automobile use. Forestation approaches are recommended, including preserving existing forest, adding urban tree canopy and landscaping to reduce local carbon concentrations. All these building and site design approaches will benefit air quality, water quality, and human health.

- Air Quality Protection
  The Washington Metropolitan region, including the Gaithersburg West Master Plan area, has been identified as a non-attainment area for ground-level ozone and fine particulate matter. The same recommendations this Plan makes for creating a sustainable community and improving climate protection, including forestation, green buildings, reducing imperviousness, and improving connectivity, will provide overall air quality benefits.

- Water Quality Protection
  County, State and Federal regulations establish water quality protection goals. In addition, this Plan recommends protecting existing streams and wetlands and their buffers through site design. Stormwater management should include best management practices that capture stormwater on-site for re-use in non-potable water applications.

- Active Living
  All of the environmental recommendations can contribute to maintenance of the physical and mental well-being of the residents and employees in Gaithersburg West. Besides the direct health benefits of protecting the climate, air quality and water quality, compact,

pedestrian-friendly design will encourage walking and bicycle riding, increasing physical fitness.

Community Facilities and Amenities

Community facilities, services, and amenities contribute to making great places to live, work, and play. The LSC's proposed redevelopment offers an opportunity to enhance public facilities, amenities, and recreational options. An interconnected pedestrian and bike system will link neighborhoods—both existing and future—to each other, parks, transit, and other destinations. This Plan recommends using urban design, parks, and trails to create an open space network for the LSC that will provide a range of experiences and a sense of place, integrating the built and natural environments and passive and active spaces.

This Plan provides a site for a future elementary school in the LSC West District, should it be needed to accommodate students that could be generated from build-out of the potential residential densities. In addition, a future high school site has been reserved on the Crown Farm in the City of Gaithersburg.

A fire station is needed in this area and the northwest corner of Shady Grove Road and Darnestown Road is under consideration.

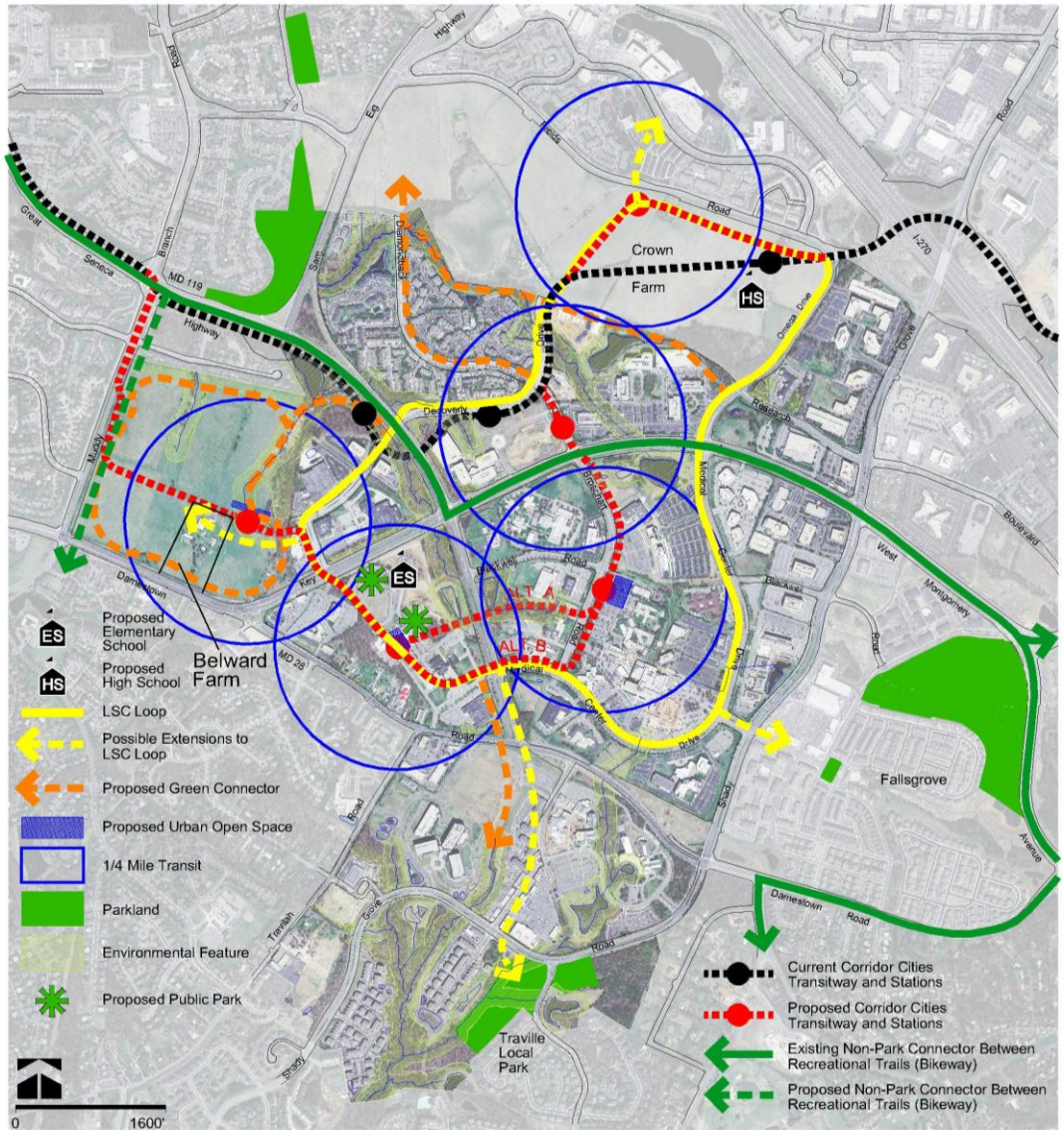
A new community center, the North Potomac Recreation Center, is planned on Travilah Road adjacent to Big Pines Local Park, as recommended in the 2002 *Potomac Subregion Master Plan*.

As the LSC grows into a major hub for life sciences research and development, a library specializing in science and medical research may be desirable. A high technology library could provide an inspiring environment for innovation and entrepreneurship, a place where students of all ages can rub shoulders with the industry's best minds. A publically accessible library could be funded through private sector development contributions to an amenity fund.

The organizing element of the LSC open space plan is a 3.5-mile multi-use path loop connecting the districts and destinations. The LSC Loop will run alongside existing streets, such as Medical Center Drive and Omega Drive, and be completed on new streets in LSC West. It will incorporate the proposed multi-use path next to the CCT through LSC West and onto the Belward property.

The LSC Loop will link activity centers and community facilities, including the planned high school on the Crown Farm (in the City of Gaithersburg), the historic Belward Farm, and the civic green and retail center on LSC West. CCT stations along the Loop include the Crown Farm, Belward, and LSC West. From the Loop, paths will connect with other destinations and activities in the area, including Fallsgrove and Traville. Traville Local Park, in LSC South,

Community Facilities and Open Space Network



is proposed to have a small rectangular field, half-court basketball, older children's playground, and a tot lot, and should be accessible from the LSC Loop.

The LSC's existing stream buffer areas should be integrated with the Loop, offering passive outdoor experiences. The on-road hard surface portion of the Muddy Branch Trail Corridor intersects the Plan area at the southwest corner of the Belward property, and should connect to the rest of the Countywide trail system.

Not all open space can or should be publicly owned and managed. Public amenity spaces in new developments will provide recreation and open space. Public parks and publicly accessible facilities and open spaces should complement each other and be seamlessly integrated to create a cohesive pattern of open space.

The LSC Loop will:

- create a primary recreational feature that connects the districts, destinations, and open spaces throughout the area
- provide connections to area amenities, including the historic Belward Farm, retail destinations, the proposed high school and elementary school, and the natural path system through the stream buffer areas
- connect destinations by paths, including stream valley park trails such as Muddy Branch
- integrate regulated green spaces such as wetlands, streams, and forest conservation easements to provide passive recreational experiences
- provide connections to Traville Local Park in LSC South.

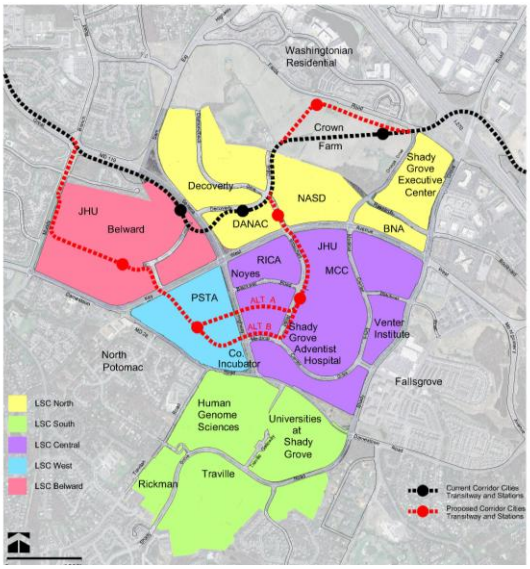
The LSC Districts

The Plan's land use, zoning, circulation, and design recommendations for the LSC districts focus density at the proposed CCT stations to fulfill the Plan's vision of connected centers.

life sciences center: existing and proposed development

	Existing	Existing & Approved	1990 Master Plan	Proposed 2009 Plan
Commercial (sf)	6,940,000	10,700,000	13,000,000	20,000,000
Dwelling units	3,300	3,300	3,800	9,000
Jobs	21,200	30,550	38,000	60,000
Jobs-Housing Ratio	6.4	9.2	10.0	6.6

The largest property owners (20 acres or more) at the proposed CCT stations—JHU's Belward and MCC sites, Shady Grove Adventist HealthCare, DANAC, and the future developers of LSC West (the PSTA site)—will be required to submit concept plans that demonstrate how their site will achieve the Plan's vision—highest densities and heights at the stations, mixed uses, a local street network, neighborhood buffers, the LSC Loop, historic properties, and open spaces.



LSC Central: A Medical and Biotech Center

This 230-acre district includes Shady Grove Adventist Hospital, several medical office buildings, the Johns Hopkins University-Montgomery County Campus (JHU-MCC), the Regional Institute for Children and Adolescents (RICA) and Noyes Institute facilities, and some County social service uses. This area also includes the Key West Corporate Center and biotech companies such as the J. Craig Venter Institute, BioReliance, and Otsuka.

Today, LSC Central is a single-purpose destination for workers, students, and hospital visitors. While it should continue to focus on medical and biotech uses, other uses should be introduced, including retail and a limited amount of housing (approximately 30 percent of permitted floor area ratio). The Plan recommends a CCT station on Broschart Road near Blackwell Road, and those streets should be enlivened with activating uses. Future development, in its design and use, should be carefully planned to take advantage of transit and contribute to creating a vibrant LSC hub.

Adventist HealthCare (AHC) and JHU, as the district's largest property owners, will play a significant role in achieving the land use vision. Population growth, combined with demographic shifts and aging baby boomers, is fueling demand for additional capacity at the Shady Grove Adventist Hospital. To meet these needs, the 48-acre facility will continue to evolve, including centers of cardiac and vascular services, oncology, and women's and children's services.

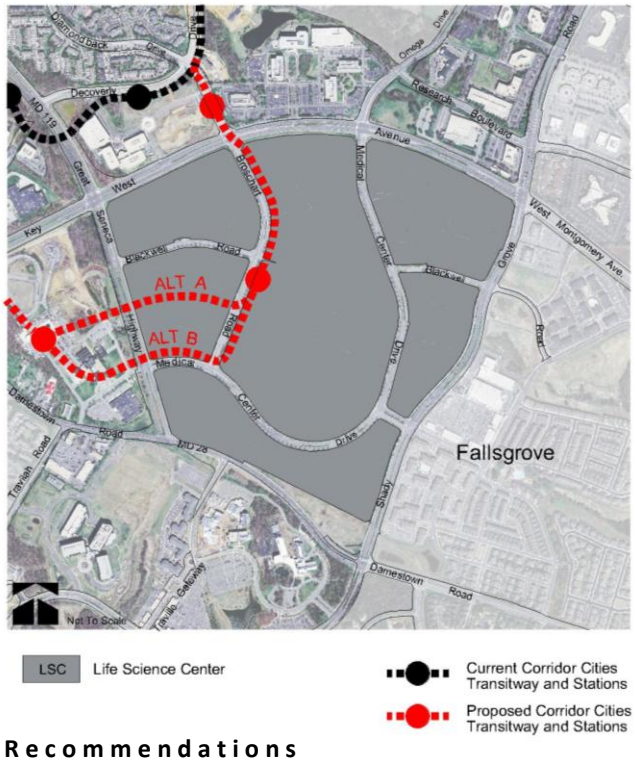
AHC intends to develop medical offices, diagnostic and outpatient treatment facilities, and convenience retail. Accompanying these physical improvements will be structured parking, landscaped open spaces, and other public amenities. Under the current zoning, AHC would not be able to expand its facilities substantially. This Plan supports an expanded, first-class medical center and recommends zoning changes to accommodate future growth.

Most of the land in LSC Central is zoned LSC. To implement the vision of a mixed-use, transit oriented center, this Plan recommends modifying the LSC Zone to permit more uses, density, and height. The revised zone would allow housing and the Plan recommends that up to 30 percent of the floor area ratio (FAR) in LSC Central could be residential. LSC Central properties zoned R-200, O-M, and R&D are recommended for rezoning to the revised LSC Zone. One zone for all LSC Central properties will enhance development or redevelopment possibilities, provide consistent land use options and development standards, and improve design cohesiveness.

The Plan envisions redeveloping portions of the block surrounded by Broschart Road, Medical Center Drive, Great Seneca Highway, and Blackwell Road. Currently, this area is developed with low-density, low-scale uses. With a transit station along Broschart Road, portions of this block could redevelop to higher densities with a mix of housing, retail, and employment uses. The Plan recommends rezoning the RICA and Noyes facilities (from R-200 to LSC) to accommodate redevelopment consistent with the vision for LSC Central if these uses are relocated.

A fire station is needed in this area and a possible location is the northwest corner of Shady Grove Road and Darnestown Road. The 1990 *Shady Grove Study Area Master Plan* identified this intersection for a possible grade-separated interchange, which is being removed by this Plan.

Proposed Zoning



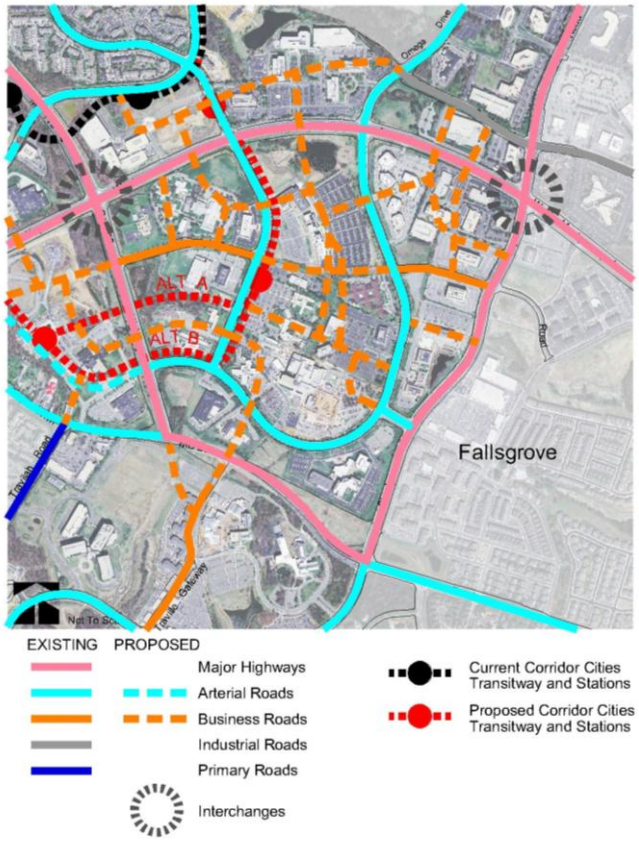
Recommendations

Land Use and Zoning

- Amend the LSC Zone to allow mixed uses and increased density and height
- Amend the LSC zoning standards to reflect current technology and allow future flexibility
- Allow a maximum of 1.0 FAR for properties in LSC Central
- Allow a maximum of 1.5 FAR for properties in the center of the district (bounded by Key West Avenue, Medical Center Drive, and Broschart Road): AHC, JHU, and 9707, 9711, and 9715 Medical Center Drive
- Allow a maximum of 30 percent of permitted FAR to be used for housing
- Rezone the RICA and Noyes properties from the R-200 Zone to the LSC Zone
- Rezone the R&D and O-M parcels to the LSC Zone
- Require submission of a Concept Plan prior to approval of any future individual development projects for AHC and JHU to address the Plan's guidelines, including the location of the CCT, the highest densities and height at transit, the mix of uses, creation of a local street network, and provision of open spaces
- Accommodate a fire station on the northwest corner of Shady Grove Road and Darnestown Road

Urban Form and Open Spaces

- Locate the highest density and tallest buildings (150 feet) adjacent to the transit station to form an identifiable center. Future developments should be well-integrated with each other
- Create an identifiable LSC Loop along Medical Center Drive that connects pedestrians to other transit centers, the network of natural pathways along the stream buffers, and the open spaces
- Design Broschart Road as an urban street, lined with buildings and activating street-level uses. The east side of Broschart Road is shared by AHC and JHU, and both property owners have opportunities to create a lively street edge that takes full advantage of transit station proximity
- Design Blackwell Road between the AHC and JHU properties with a building edge and improved connections
- Provide at least 15 percent of the net tract area as public use space
- Include the following public open spaces:
  - LSC Loop
  - Stream buffers
  - Urban square at the CCT station
  - Urban promenade to connect between buildings and public spaces



Mobility

- Locate a CCT Station along Broschart Road near Blackwell Drive in the vicinity of AHC and JHU
- Extend Blackwell Road between Medical Center Drive and Broschart Road
- Create additional streets to encourage an urban building form and to improve access and circulation for pedestrians and vehicles

LSC West: A New Residential Community

Most of this 75-acre district is the County's Public Safety Training Academy (PSTA), on 52 acres. The PSTA has been at this site, bordered by Key West Avenue, Great Seneca Highway, and Darnestown Road, since 1973 when the area was mostly farmland. Since the 1980s, when the County decided to create the LSC, the uses around the PSTA have changed dramatically.

This training facility for firefighters, police officers, and operators of large vehicles is next to the County's Innovation Center (Incubator), which provides space for biotech start-up businesses. On the north side of Darnestown Road are a small retail center, medical office buildings, and several single-family homes that have been assembled and are proposed for townhouse development (RT-8 Zone).

While the PSTA is an important public facility, it has no relationship to the LSC. The County recognizes that all of the PSTA's needs cannot be satisfied at this location with its limited expansion capability and has identified a site where the PSTA could be relocated.

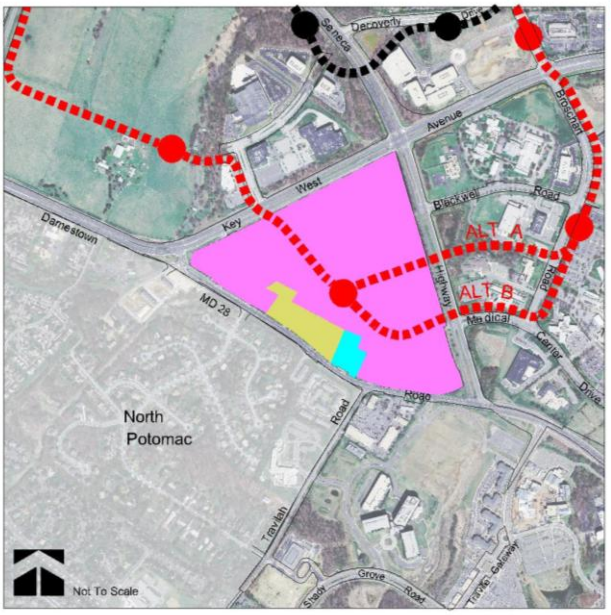
The Plan supports relocating the PSTA and redeveloping the site with a residential community that includes amenities and services, bringing housing opportunities within walking distance of jobs in the LSC. The corner of Great Seneca Highway and Darnestown Road has the potential to become a signature site. The Innovation Center could remain at this location or, ideally, be incorporated into redevelopment of the PSTA or elsewhere in the LSC.

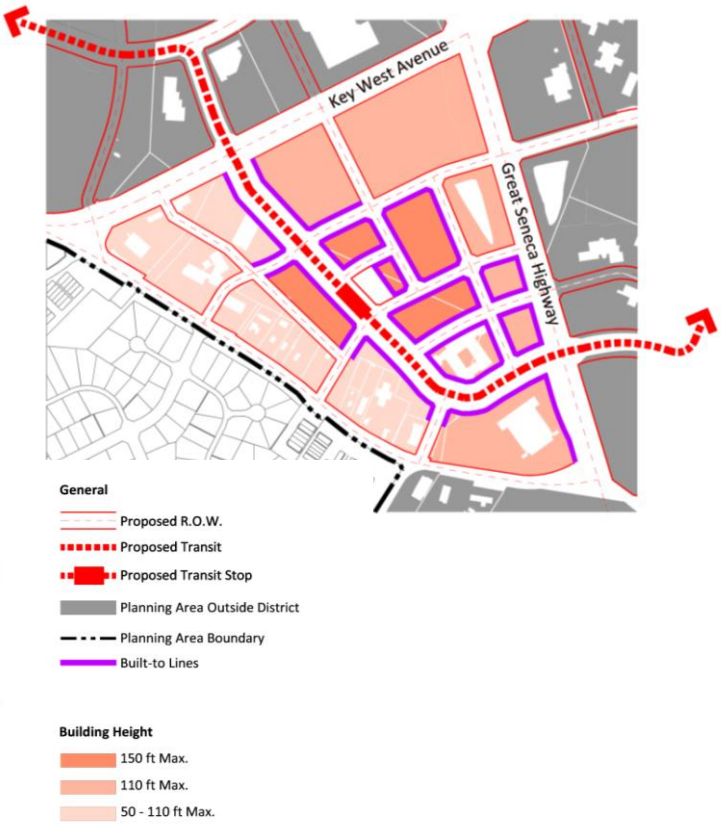
The Plan recommends the Commercial Residential (CR) Zone with a 1.0 FAR that could yield 2,000 dwelling units with supporting retail, services, and community uses. The CR Zone is recommended for the PSTA and PEPCO parcels (currently zoned R-90/TDR), the Innovation Center (LSC Zone), and the small retail center (C-3) and medical office buildings (O-M) at the intersection of Darnestown Road and Key West Avenue. The following CR components will promote development of the new residential community that the Plan envisions for LSC West: CR 1.0, C 0.5, R 1.0, H 150. The Plan recommends that the two special exception uses (at 10109 and 10111 Darnestown Road) be rezoned from R-90/TDR to C-T (Commercial, Transition) and confirms the RT-8 Zone for the remainder of parcels along Darnestown Road.

Residential buildings with the most density and height should be adjacent to the CCT station and the new LSC West community should include retail, civic spaces, and, if needed, a new public elementary school. If a new elementary school is needed, it could be combined with a local park on the northern portion of LSC West. If the school is needed and if the northern area is chosen, the proposed local street (B-5 on the LSC Circulation Map) should be eliminated to create adequate space for a park/school site. If the school is not needed, a local public park for active recreation should be provided. In addition to the park/school site, development should be accompanied by a new public urban park to serve as the central open space for the residential community. This public green space should be near the CCT station and one-half to one acre in size to create a gathering place and focal point for the community.

The Plan recommends that impacts to the forested area at the corner of Great Seneca Highway and Key West Avenue be minimized. Since rare, threatened, or endangered species information has never been gathered for this site, a Natural Resources Inventory should be prepared when the site is redeveloped.

Proposed Zoning





CR	Commercial, Residential		Current Corridor Cities Transitway and Stations
C-T	Commercial, Transitional		Proposed Corridor Cities Transitway and Stations
RT-8	Residential, Townhouse		

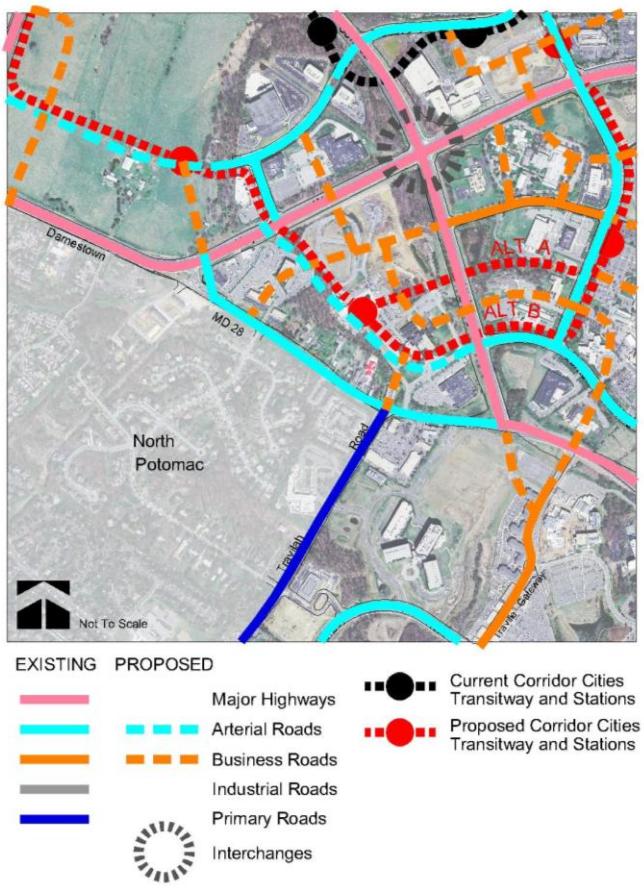
Recommendations

Land Use and Zoning

- Relocate the PSTA and create a new residential community on the site with supporting retail, open space, transit, and community facilities
- Rezone the PSTA and PEPCO parcels from R-90/TDR to the CR Zone
- Rezone the County's Innovation Center site from the LSC Zone to the CR Zone
- Rezone the C-3 and O-M parcels to the CR Zone
- Properties rezoned to CR have the following components: C 0.5, R 1.0, H 150
- Rezone 10109 and 10111 Darnestown Road (special exception uses) from R-90/TDR to C-T (Commercial, transitional) to reflect the existing uses
- Require a Concept Plan for LSC West with the first Preliminary Plan application to address the CCT location, the placement of highest densities and building height at transit, creation of a local street network, public open spaces, and the LSC Loop
- Locate highest density housing and retail uses and the tallest buildings (150 feet) closest to the CCT station to provide convenience and activity
- Minimize impacts to the forest at the corner of Key West Avenue and Great Seneca Highway
- Accommodate a new public elementary school combined with a local park, and a central public open space near the proposed CCT station

Urban Form and Open Spaces

- Extend the LSC Loop along Medical Center Drive to connect pedestrians to other transit centers, the network of natural pathways along the stream buffers, and the open spaces
- Locate a multi-story elementary school, if needed
- Provide facilities for active recreation on the park/school site
- Provide at least 15 percent of the net tract area as public use space
- Integrate the following public open spaces:
  - LSC Loop
  - Stream buffers
  - Forest area along Great Seneca Highway and Key West Avenue
  - Civic green at the CCT Station
  - Urban promenade to connect between buildings and public spaces
- Use the visible corner at Darnestown Road and Great Seneca as a signature site for a significant building



Mobility

- Locate a CCT station along Medical Center Drive extended near the center of the LSC West site
- Create a grid of streets on LSC West as part of the new residential community

LSC Belward: A New Science and Research Community

The Belward property, owned by JHU, is surrounded by major roads and residential neighborhoods on three sides. The 1990 *Shady Grove Study Area Master Plan* designated Belward as part of the greater Life Sciences Center and recommended it be developed as a research campus with a limited amount of employee housing. JHU received Preliminary Plan approval in 1996 for 1.8 million square feet on 138 acres, a density of 0.3 FAR in the R&D Zone. The eastern portion of the property, with access from Key West Avenue, was sold and developed. The remaining 107 acres is undeveloped.

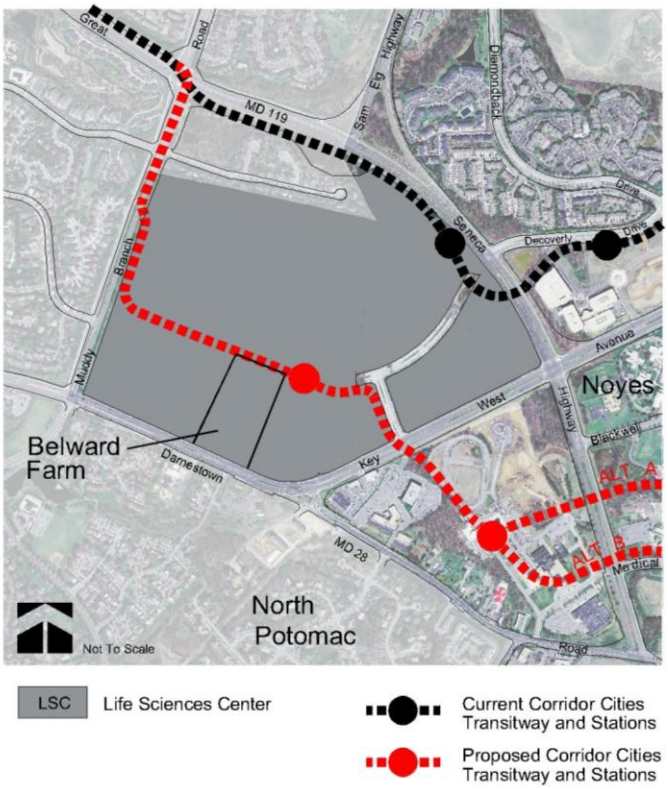
This Plan recommends increased density on the Belward property (1.0 FAR), served and supported by a CCT transit station. The Plan recommends that both the 107-acre undeveloped Belward property as well as the developed, eastern portion, be rezoned from the R&D Zone to the revised LSC Zone to allow a mix of uses and higher densities focused on the CCT station. Development on the Belward property may include housing for the employees and/or visiting researchers. Compatible transitions and buffers for the adjacent single-family neighborhoods are critical.

The property's historic Belward Farm includes the 1891 farmhouse, barns, and outbuildings. A 6.98-acre environmental setting was established for the historic properties by the 1996 Preliminary Plan approval, and includes the driveway from Darnestown Road to preserve views of the site.

Due to the proposed increase in development recommended for Belward, this Plan recommends expanding the historic farmstead's environmental setting to between 10 and 12 acres. New development adjacent to and near the farmstead must be compatible in scale and graduated in height to be sensitive to the historic resource. Views of the farmstead from Darnestown Road, as well as other vantage points within Belward should be incorporated into future site planning and design. Reuse of the Belward Farm offers opportunities for community-serving uses such as a cultural, recreational, or educational center that could become a destination on the CCT and the LSC Loop.

To meet the recreation needs of this area, as well as provide facilities for those working on-site at Belward, areas should be reserved for both active and passive recreation. Two rectangular fields for active recreation should be provided within the designated buffer areas along Muddy Branch and Darnestown Roads.

Proposed Zoning



Recommendations

Land Use and Zoning

- Rezone the Belward property from R&D to the LSC Zone and allow up to 1.0 FAR
- Require a Belward Concept Plan with the first Preliminary Plan application to address the Plan's guidelines, including the CCT location, the highest densities and height at transit, preservation of the historic property, creation of a local street network and the LSC Loop, and neighborhood buffers
- Maintain Belward as an open campus development
- Provide a network of active and passive open spaces

Historic Belward Farm

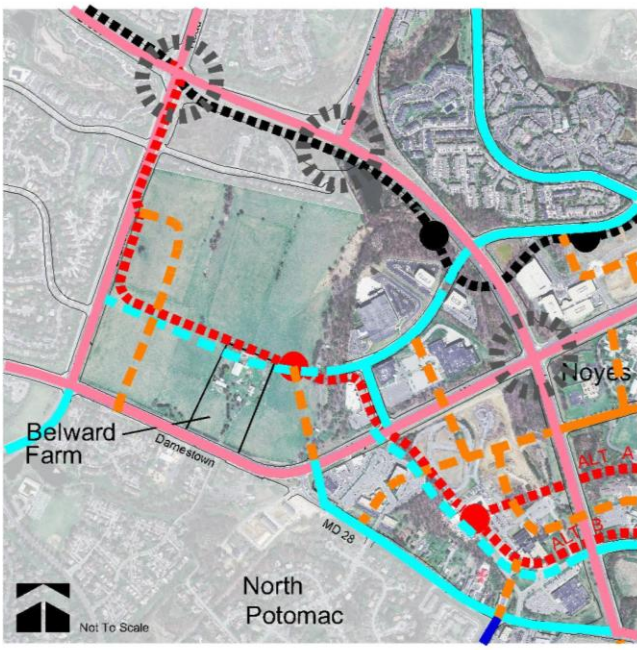
- Preserve views of the farmstead from Darnestown Road, looking north, east, and west as well as other vantage points within the larger Belward site
- Step new buildings down to 60 feet (four stories) adjacent to the Belward Farm
- Use the site, including the house and barns, for recreational, educational, social, or cultural uses that complement the community and new development
- Preserve open space and mature trees surrounding the farmstead. Retain an environmental setting large enough to convey the agricultural character of the historic resource, between 10 and 12 acres

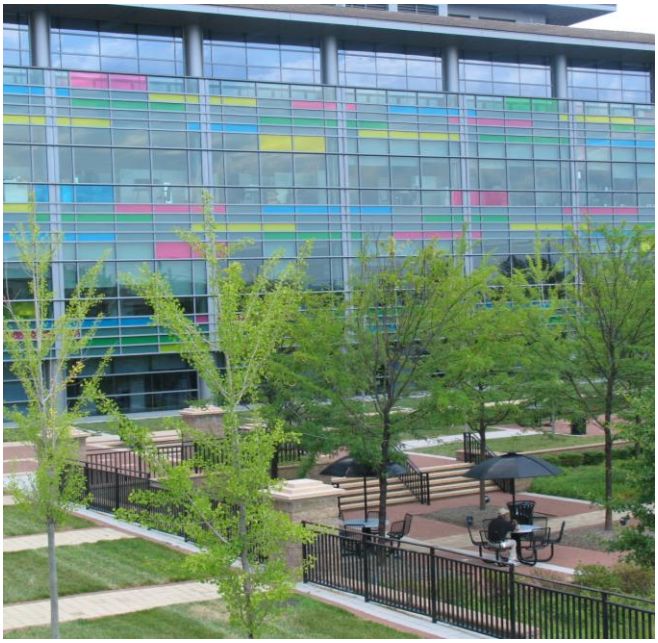
LSC Belward District

To the north and immediately adjacent to Belward is the Mission Hills neighborhood, a subdivision of 52 single-family homes in the City of Gaithersburg. Across Muddy Branch Road to the west are the Washingtonian Woods and Westleigh neighborhoods, also in the City of Gaithersburg. South of Darnestown Road are the North Potomac neighborhoods, in the County's 2002 Potomac Subregion Master Plan.

Urban Form and Open Spaces

- Concentrate the highest density and building heights (150 feet) near the CCT station
- Organize the significant roads to provide views of the historic Belward Farm
- Complete the Muddy Branch Trail Corridor from Dufief Mill Road and Darnestown Road to Great Seneca Highway along the Belward property on the east side of Muddy Branch Road
- Create the LSC Loop along Medical Center Drive and Decoverly Drive to connect pedestrians with other transit centers, the network of natural pathways along the stream buffers, and the open spaces
- Preserve the landmark tree on the Muddy Branch Road side of the property
- Include the following public open spaces:
  - LSC Loop
  - Stream buffers that may include natural surface trails
  - Belward Farm environmental setting
  - Urban square at the CCT station
  - Urban promenade connecting buildings and public spaces.
- Provide at least 15 percent of the net tract areas as public use space
- Create a 300-foot buffer along Muddy Branch Road and a 60-foot buffer along Darnestown Road
- Provide two rectangular fields for active recreation in these buffer areas, with permitting by the Parks Department
- Preserve and augment the trees along the northern boundary as a transition to the existing single-family houses in Mission Hills
- Provide a 200-foot buffer along the property's northern edge, adjacent to Mission Hills, between the property line of the single-family homes and any buildings on Belward
- Provide a 100-foot wide stream buffer around the two tributaries of the Muddy Branch





EXISTING PROPOSED

Major Highways
Arterial Roads
Business Roads
Primary Roads
Interchanges

Current Corridor Cities Transitway and Stations
Proposed Corridor Cities Transitway and Stations

Mobility

- Realign the CCT through the LSC with a station on the Belward property along Decoverly Drive extended near the intersection with Medical Center Drive extended
- Extend Decoverly Drive across Great Seneca Highway into and through the Belward site to Muddy Branch Road
- Create a network of new streets with short blocks
- Provide a comprehensive pedestrian network throughout Belward with an emphasis on easy and convenient access to the proposed CCT station
- Implement the LSC Loop, including natural surface trails through the stream valleys and connected paths and sidewalks throughout the site and in the perimeter buffer areas
- Build the proposed trail connection (a non-park connector between recreational trails/bikeway) on the east side of Muddy Branch Road from Darnestown Road to Great Seneca Highway
- Improve connections and access from surrounding neighborhoods to enable residents to easily access the CCT station, the LSC Loop, the historic site, as well as other amenities in the Belward District

LSC North: Residential and Office

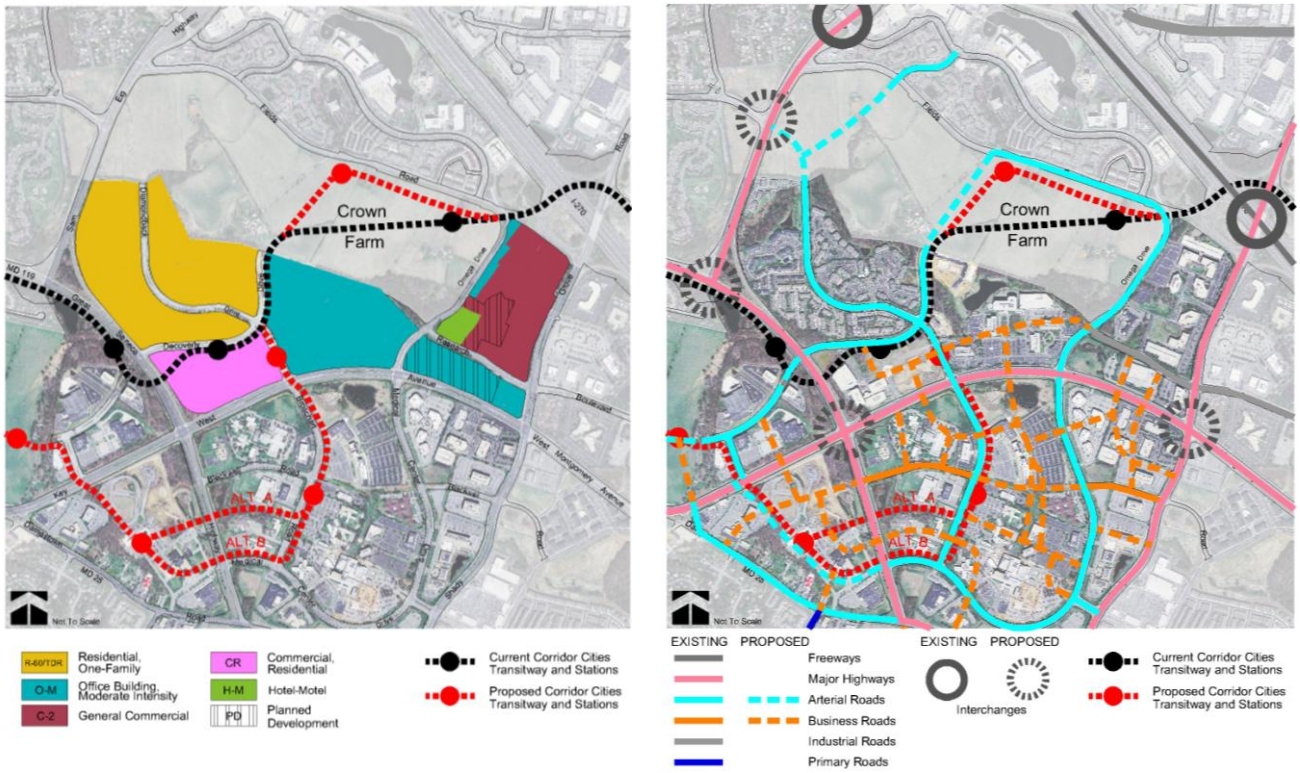
The 195-acre LSC North District is developed with several office parks, including DANAC, the National Association of Securities Dealers, Shady Grove Executive Center, and the Bureau of National Affairs. These properties are zoned I-3, O-M, and C-2. LSC North also includes the residential communities of Decoverly, with 1,144 townhouse and multifamily units along Diamondback Drive west of Decoverly Drive.

The current CCT alignment includes a station on the north side of the DANAC property. The DANAC station should be relocated to the east side of the property as part of the CCT alignment through the LSC. The Plan recommends that the DANAC property be rezoned from the I-3 Zone to a CR Zone. Rezoning DANAC to a mixed use zone with higher density will take better advantage of this transit station location. The parcel on the southeast corner of Key West Avenue and Diamondback Drive (Lot 7) is largely undeveloped and is adjacent to the proposed CCT station on the east side of the property. The recommended Zone for this parcel (Lot 7) is: CR 2, C 1.5, R 1.5, H 150. The remainder of the DANAC property should be zoned CR 1.0, C 0.5, R 0.5, H 80. Building height along Decoverly Drive adjacent to the residential community to the north is limited to 50 feet within 100 feet of the right-of-way.

Each of the other office parks in LSC North has some remaining development capacity. Current zones for several of the office parks allow relatively high density for the area (1.5 FAR) and the Plan does not recommend increases because the objective is to concentrate additional density at the proposed CCT stations and achieve an overall balance between land use and transportation infrastructure.

The possibility of residential as an infill use on remaining developable sites in LSC North would increase the amount of housing near the jobs in the greater LSC. To create a sense of community, the Plan encourages clustering any housing to create a residential neighborhood rather than isolated housing sites in scattered office parks. The Plan recommends the Planned Development (PD) Zone option for the 6.9-acre site in the Shady Grove Executive Center and for the 11.34-acre Bureau of National Affairs (BNA) site. These sites would be appropriate for urban, high density housing and the zoning can be requested through a Local Map Amendment. Pedestrian-oriented local retail facilities that are compatible with and provide convenience for residents are encouraged. Community-serving amenities should be provided, including the LSC Loop along Omega Drive as well as pedestrian connections to CCT stations at DANAC and Crown Farm.

Proposed Zoning



Recommendations

- Extend Decoverly Drive north from its current terminus, into and through the Crown Farm to Fields Road
- Extend Diamondback Road north from its current terminus into and through the Crown Farm to Fields Road
- Rezone DANAC from the I-3 Zone to the CR Zone
- Allow a Planned Development option for high density residential use at the Shady Grove Executive Center and the Bureau of National Affairs sites
- Provide for the LSC Loop, to be accompanied with the CCT from Fields Road to Diamondback Drive, and then along Decoverly Drive and across Great Seneca to the Belward site

LSC South: Mixed-Use Center

This 245-acre district south of Darnestown Road includes the Traville community's retail and residential uses, Human Genome Sciences (HGS), and the Universities at Shady Grove, an innovative academic center that is part of the University System of Maryland.

LSC South is in the Watts Branch Watershed and is part of the Piney Branch sub-watershed, which was designated a Special Protection Area (SPA) due to its fragile ecosystem, unusually good water quality, and susceptibility to development pressures. SPAs require approval of a water quality plan demonstrating a high level of stormwater control and treatment. Accordingly, this Plan recommends minimal additional development.

The retail and residential developments at Traville are built-out, with approximately 100,000 square feet of retail and 750 dwelling units, 230 of which are senior housing. The HGS site is approximately half built-out. The Universities at Shady Grove have produced a master land use plan for their site, which is approximately half built-out.

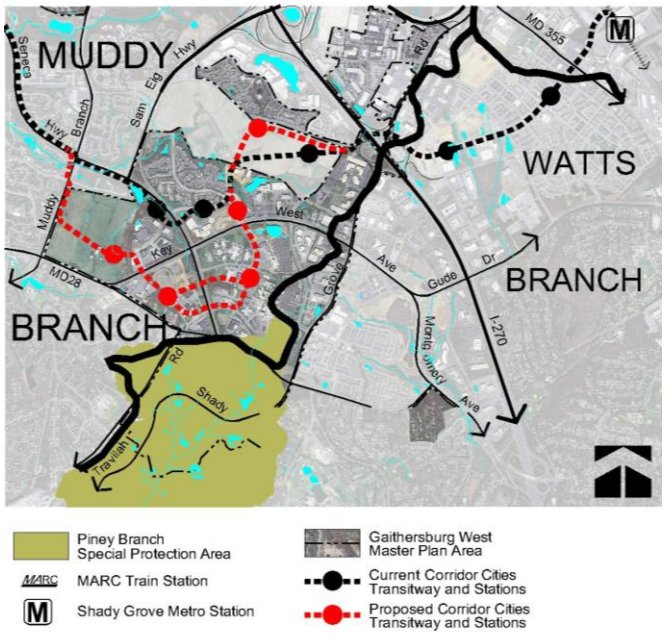
Only the 13-acre Rickman property on Travilah Road (zoned R&D) is undeveloped. The Plan supports R&D uses on this site, but housing would also be compatible with surrounding properties. The Plan recommends the Planned Development option (PD-22) for the Rickman property and supports a waiver of the percentage requirements for dwelling unit types to encourage a compact design that respects this environmentally sensitive area. The property owner can initiate the rezoning by filing a Local Map Amendment. A Development Plan and Site Plan are required in the PD Zone.

This Plan encourages the physical and visual integration of LSC South with the areas north of Darnestown Road, through building design and massing, street character and improved connections across Darnestown Road, and access to the CCT stations at LSC Central and West. These stations are between one-half to three-quarters of a mile (a 10-15 minute walk) from LSC South destinations. With higher density development around the CCT stations, the transit locations will become more visible and recognizable as landmark features.

HGS and USG, along the south side of Darnestown Road, have developed as campus-style, inward-focused designs with parking lots adjacent to Darnestown Road. Future development at these sites should create a building edge along Darnestown Road near Great Seneca Highway. On the north side of Darnestown Road, redevelopment of the PSTA site will also create opportunities for new buildings to address the street edge, especially the corner of Darnestown Road and Great Seneca Highway.

Extending Great Seneca Highway as a local business district street south of Darnestown Road provides an additional, signalized access point for LSC South. This proposed improvement should be coordinated with HGS's and USG's future plans, including their internal street network. A major benefit of improving the intersection of Great Seneca Highway and Darnestown Road would be to provide direct access, particularly for pedestrians and bicyclists, between LSC South and the proposed CCT station at LSC West.

Watts Branch Watersheds



Recommendations

- Maintain the R&D Zone on the Rickman site, but recommend rezoning to PD-22 by a Local Map Amendment to encourage residential development.
- Protect the Piney Branch sub-watershed and support the SPA by limiting development in LSC South beyond existing and approved projects to only the undeveloped Rickman parcels on Travilah Road.
- Extend Great Seneca Highway as a business district street south of Darnestown Road.
- Improve pedestrian connections between LSC South and areas to the north—LSC West and LSC Central—emphasizing pedestrian access to the future transit stations.
- Construct Traville Local Park and provide connections to the LSC Loop.

LSC Circulation

The Plan provides a comprehensive transportation network for all modes of travel, including bicycle and pedestrian routes and constructing the the CCT on the proposed realignment through the LSC. The local street network will supplement existing arterials by extending and connecting existing roads, and by creating new streets. In addition to the specific mobility recommendations for each district, this section provides overall transportation goals and guidelines for the LSC.

An enhanced and expanded transportation network will:

- better integrate and connect the five LSC districts
- improve local circulation and take trips off the major roads
- improve the pedestrian environment
- provide access to transit by creating short, walkable blocks directly connected to CCT stations.

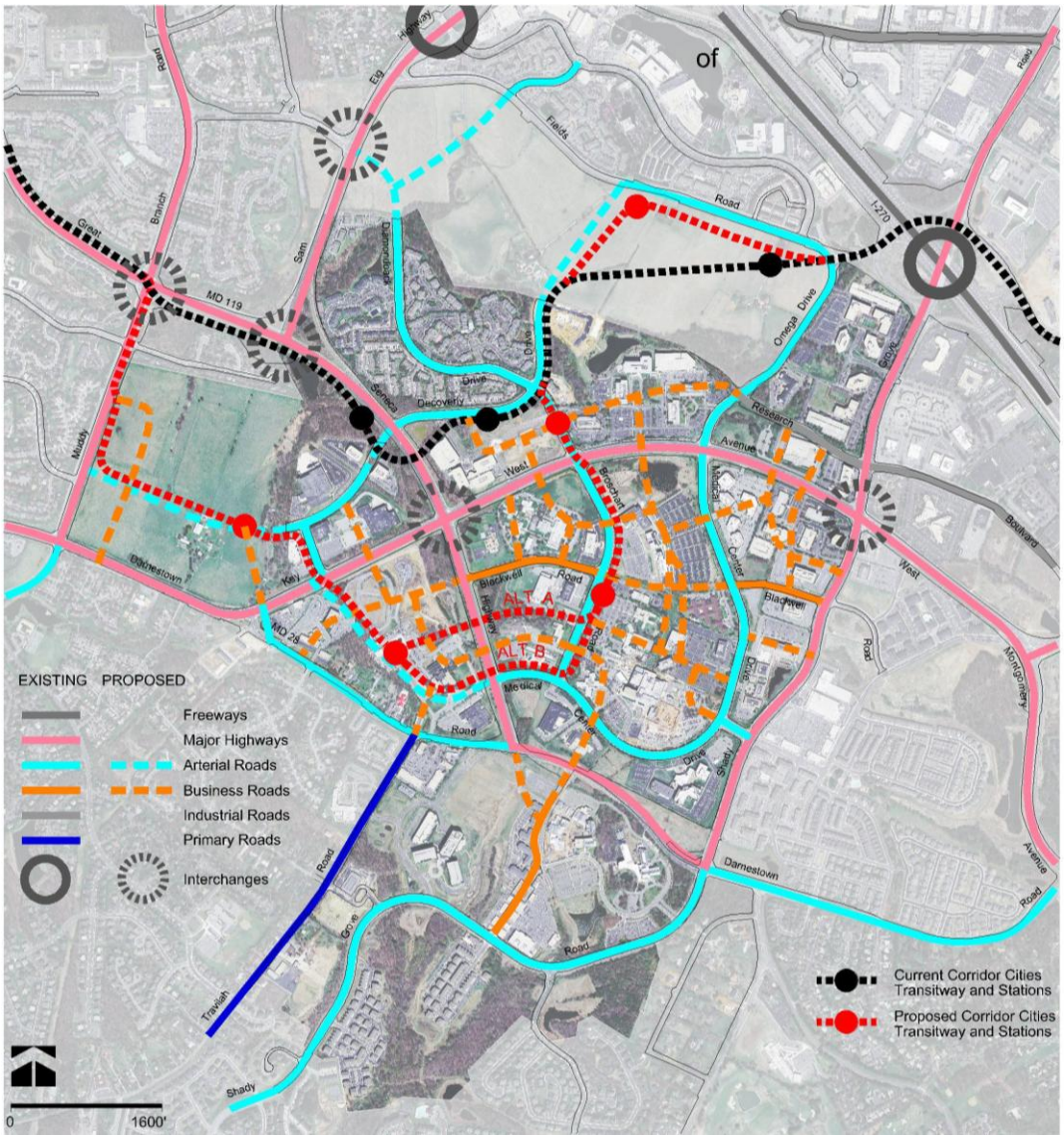
Street System

This Plan recommends a network of major highways, arterial roads, and local streets that provide safe access and help shape the community's character. The Plan includes recommendations for major infrastructure projects to support future growth and development based on buildout of the LSC to the proposed maximum zoning capacity. Maximum zoning capacity is not always achieved and some of the street network recommendations may not be necessary. Staging of development and infrastructure provision, particularly the CCT, is addressed in the Implementation section. Revisiting the Plan in six years will assess the pace of buildout and the need for infrastructure delivery.

The proposed local street network will create a finer grid and improve vehicular and pedestrian connections between the districts. Streets and transit tie the districts together. The LSC Loop unifies the pedestrian and bicycle circulation system with sidewalks, bikeways, trails, and paths that provide mobility and recreation options.

The local street network should be built to business district street standards with sidewalks on both sides. Business district streets are two lanes with parking on one side (60-foot right-of-way) or both sides (70- or 100-foot right-of-way) and should include curb extensions at crosswalks to further reduce pedestrian exposure to vehicular traffic. The proposed streets on the LSC Circulation map are intended to show the general locations of new streets, not the actual alignments. Specific alignments of proposed streets will be determined through the regulatory development review process.

LSC Circulation



Recommendations

- Augment the master planned street network to include a grid of business district streets with 60-, 70-, and 100-foot right-of-ways. Master planned streets should be consistent with the design standards in the County Code. Exceptions to this treatment include portions of Key West Avenue and Sam Eig Highway, which will require separate design treatments.
- Design local streets and intersections with pedestrian-friendly characteristics such as minimal corner radii, special crosswalk pavement, wide sidewalks, and street trees.
- Reconstruct Sam Eig Highway as a grade-separated highway within a 250-foot right-of-way with three through lanes in each direction; shoulders suitable for peak-period, peak-direction bus rapid transit (BRT); two-lane, one-way frontage roads connecting to Fields Road and Diamondback Drive; and a flyover ramp from eastbound Great Seneca Highway to northbound Sam Eig Highway.
- Reconstruct Key West Avenue within a 200-foot right-of-way between Great Seneca Highway and Shady Grove Road to provide a consistent design treatment including a wide landscaped median, eight through travel lanes (four in each direction), and a separate

curb lane that can serve as a through lane for transit vehicles and a right turn lane for other vehicles during peak periods.

- Construct urban diamond, grade-separated interchanges at three LSC locations: Great Seneca Highway over Muddy Branch Road, Great Seneca Highway over Key West Avenue, and Key West Avenue over Shady Grove Road.
- Remove the grade-separated interchange from the intersection of Shady Grove and Darnestown Roads and from the intersection of Darnestown Road and Wootton Parkway (previously recommended in the 1990 *Shady Grove Study Area Master Plan*).
- Develop an LSC bicycle network that facilitates bicycle travel in mixed traffic along local streets. This network should include an interconnected system of shared use paths (Class I bikeways), signed shared roadways/on-road paths (Class III bikeways along local streets), and shared roadways with wide curb lanes or paved shoulders.
- Implement the LSC Local Bikeway network described in the Implementation section.

Transit System

Project planning for the CCT takes into account the potential need to reconfigure existing bus service to avoid duplication and ensure the most efficient allocation of vehicles and personnel. There are currently six Ride On routes from the Shady Grove Metro Station, three of which provide service to the LSC area, including Shady Grove Adventist Hospital and the Traville Transit Center. When the CCT is in place, these routes may need to be adjusted to ensure the most efficient service.

Recommendations

- Realign the CCT with line-haul service between the proposed LSC CCT stations. To reduce delays for transit and vehicles, this realignment may require CCT grade separations at Key West Avenue and Great Seneca Highway.
- Develop express bus service using value-priced lanes from I-270 and the Intercounty Connector (ICC) to serve the LSC.
- Develop shuttle bus routes serving the LSC area

Travel Demand Management

With development focused in the LSC, the Plan recommends an aggressive non-auto driver mode share goal. The current mode share in the LSC area is roughly 16 percent. The proposed goal of 30 percent relies on a combination of land use (density, diversity, and design) and zoning requirements, transit improvements (including the CCT), Travel Demand Management (TDM) programs, and staging.

Recommendations

- Actively manage parking supply and demand and promote shared parking efficiencies, particularly relieving the requirement for smaller properties to self-park. Public/private parking agreements should be encouraged as private properties redevelop and potentially act as a funding source for the CCT.
- Define public garage sites at Preliminary Plan for publicly-owned properties in LSC Central (near Shady Grove Adventist Hospital) and LSC West.
- Establish long-term parking space capacity limits in LSC Central, LSC West, and LSC Belward.
- Establish a 30 percent non-auto driver mode share goal for LSC employees.

areas and enclaves

The areas and enclaves are the portions of this Plan outside of the Life Sciences Center.

The *areas* include the western communities of Quince Orchard and the McGown property that are contiguous to County land. Over time, due to municipal annexations, *enclaves* have been created—geographic areas that are within the County's jurisdiction, but are completely or nearly completely surrounded by a municipality.

Five of the enclaves areas are within the City of Gaithersburg and one (Hi Wood) is within the City of Rockville:

- The National Institute of Standards and Technology (NIST) and Londonderry and Hoyle's Addition
- Rosemont
- Oakmont and Walnut Hill
- Washingtonian Residential
- Washingtonian Light Industrial Park
- Hi Wood.

For the most part, these areas are built-out with stable, mature residential neighborhoods, long-term institutional uses, or light industrial uses. While significant change is not anticipated or recommended for most of these areas, this section highlights several issues, including the need for a new local park in the Quince Orchard area. Existing land use and zoning maps for the Plan area are included in this section.

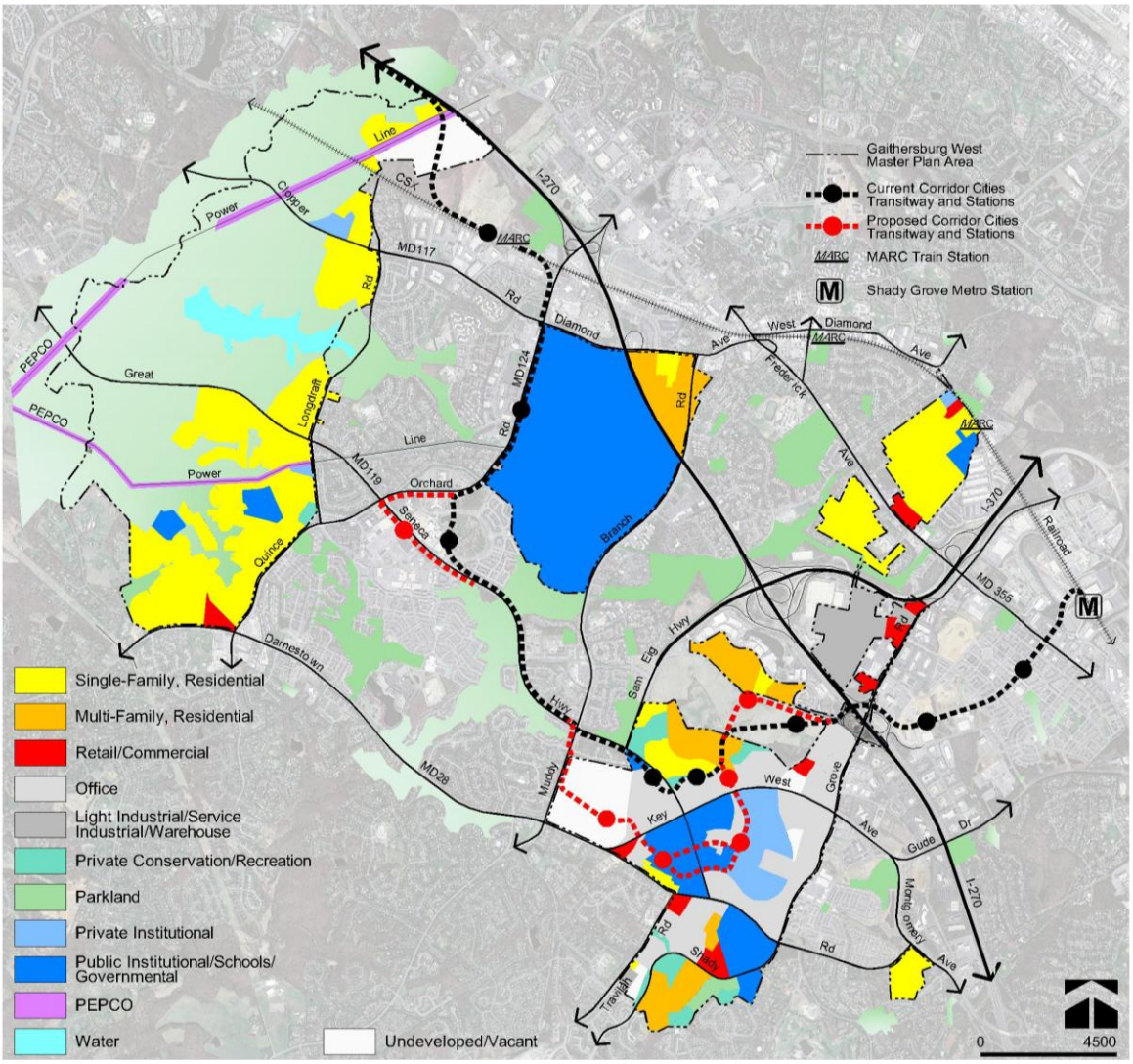
Areas

Quince Orchard

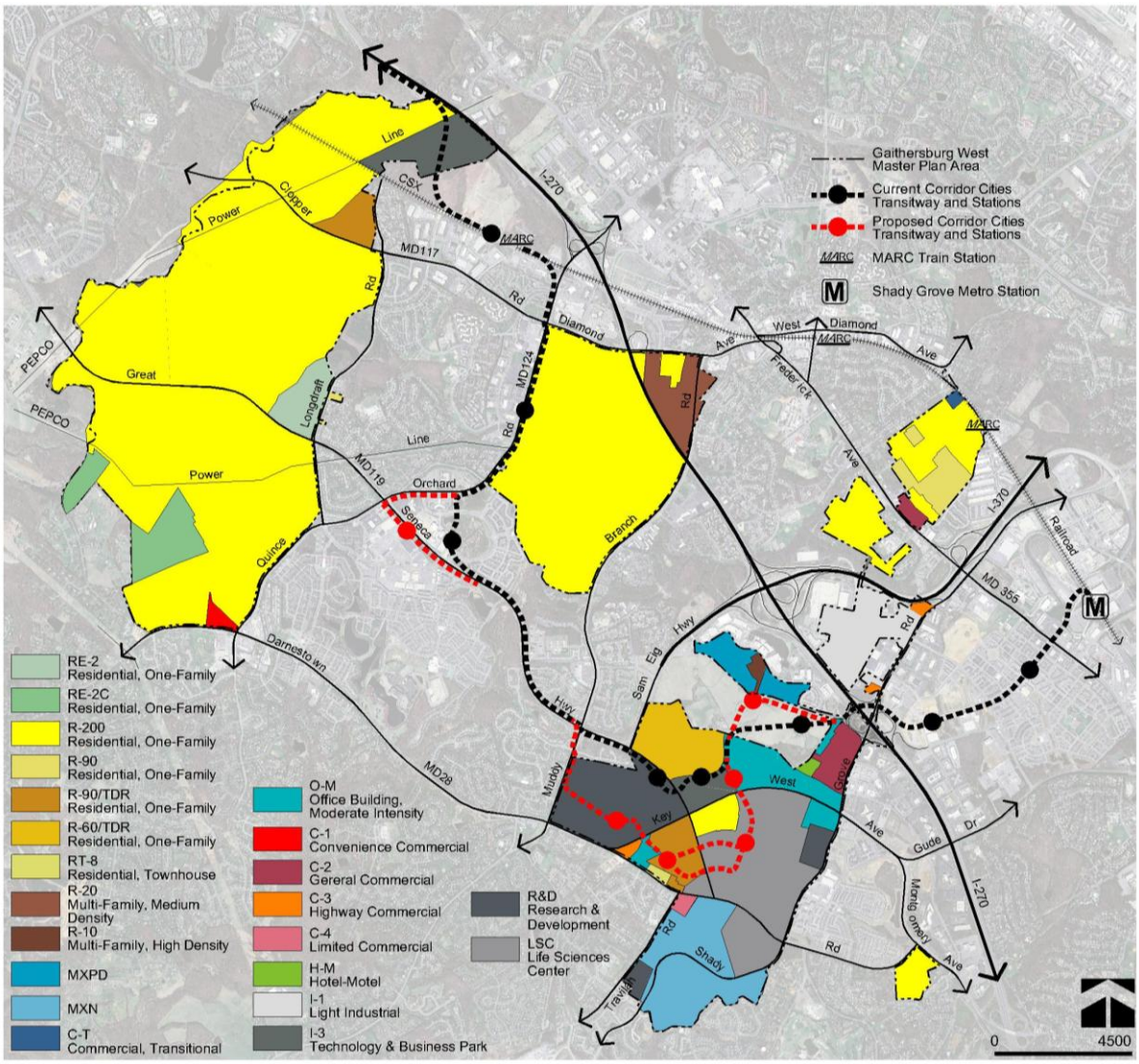
The communities in the westernmost part of the Plan area are Quince Orchard, Orchard Hills, Willow Ridge, and Parkridge. The Plan recommends that these residential neighborhoods be maintained and preserved.

Quince Orchard and Longdraft Roads divide the County from the City of Gaithersburg. The City's 2009 Maximum Expansion Limits (MEL) include extensive areas in the vicinity of Quince Orchard. This Plan does not support annexation, which would alter the logical boundaries that currently divide the County and the City and could result in the loss of potential sites for County parks, as occurred when the Crown Farm was annexed into the City of Gaithersburg.

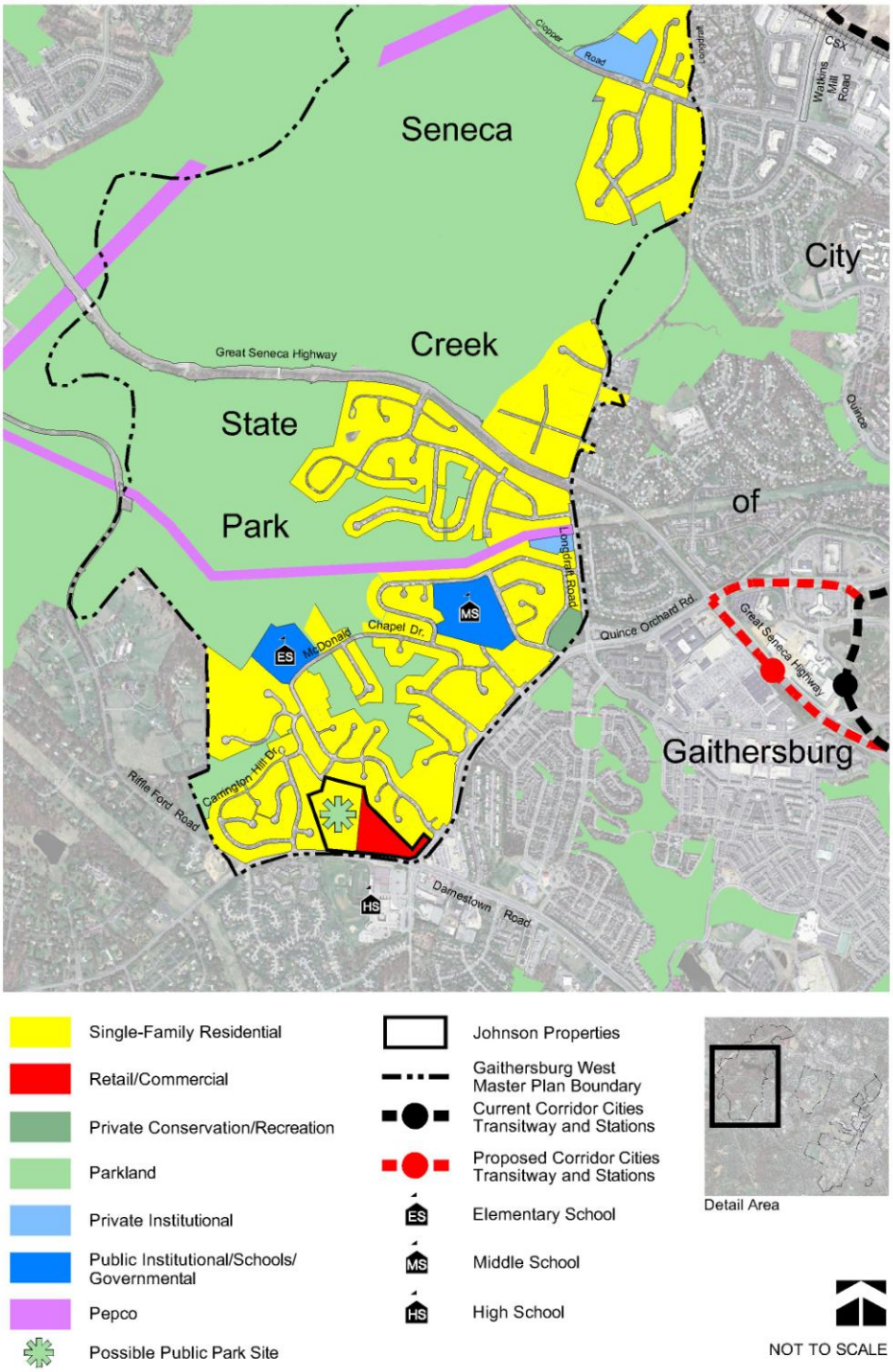
Gaithersburg West Existing Land Use



Gaithersburg West Existing Zoning



Existing Land Use: Quince Orchard



Areas east of Quince Orchard and Longdraft Roads are generally within the City of Gaithersburg. Areas west of these roads and east of Seneca Creek State Park are in the Gaithersburg West Master Plan. Areas south of Darnestown Road are covered by the County's 2002 Potomac Subregion Master Plan.

Parks are essential components of community life that protect the environment, establish neighborhood identity, and provide valuable recreational opportunities. They should be designed as part of a comprehensive open space system that supports recreation, a sense of place, and a sustainable community.

The Quince Orchard Area includes:

- Seneca Creek State Park (1,842 acres)
- Orchard Neighborhood Park (12.3 acres) – Carrington Hill Drive
- Quince Orchard Valley Neighborhood Park (89.2 acres) – Suffolk Terrace

The *Countywide Park Trails Plan* proposes a 250-mile interconnected system of hard surface and natural surface trails in eight greenway corridors. The Seneca Greenway Corridor forms the Plan area's western boundary and provides a continuous 25-mile natural surface trail along Seneca Creek between the Potomac and Patuxent Rivers. Connections to Seneca Greenway Corridor from Quince Orchard Valley Neighborhood Park should be provided.

The *Land Preservation, Parks, and Recreation Plan* (LPPRP) provides recommendations and policy guidelines for future park development. The LPPRP noted the need for additional recreation facilities in the I-270 Corridor including four rectangular fields.

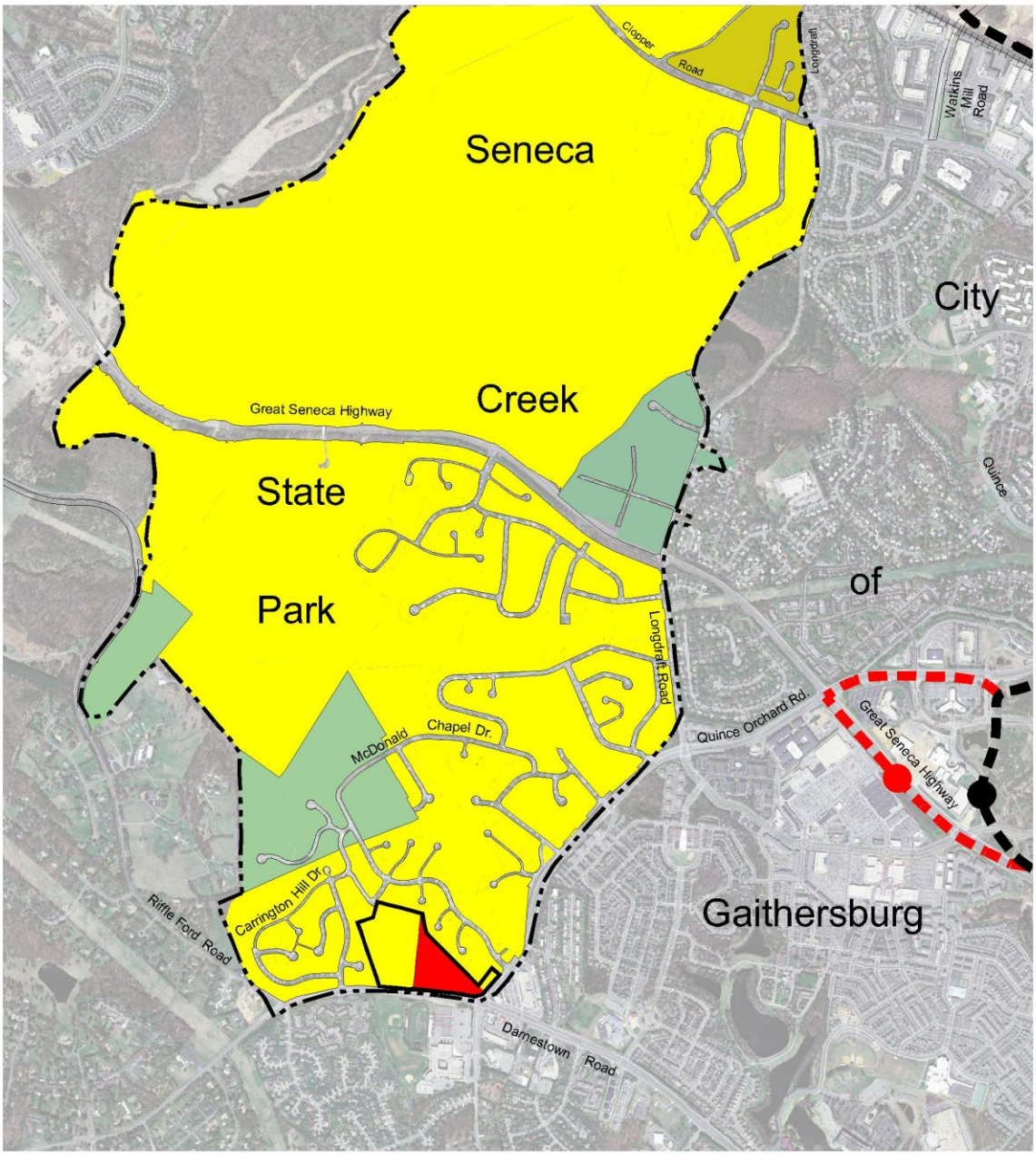
The 1985 *Gaithersburg Vicinity Master Plan* and the 1990 *Shady Grove Study Area Master Plan* both recommended a 10-acre local park on the Crown Farm, which has since been annexed into the City of Gaithersburg and is no longer available for a County park site. Consideration should be given, but not limited to the Johnson property at 12311 Darnestown Road. The Johnson family owns the largely vacant R-200 14-acre parcel on Darnestown Road along with the adjacent C-1 commercial property. Ideally, a new local park would provide two rectangular fields for active recreation. If the R-200 parcel is not acquired as an active recreation park site, the parcel may be appropriate for residential use including single family detached and townhouse units. Townhouse development could be requested through a Local Map Amendment.

Longdraft Road

In 2008, the Montgomery County Department of Transportation (MCDOT) completed a Facility Planning Study of Longdraft Road between Clopper and Quince Orchard Roads and made recommendations for upgrades. The County Council chose not to proceed with Phase II of the Longdraft Road facility plan.

Longdraft Road is currently two lanes, and for most of its length it has no curbs, gutters, shoulders, or sidewalks. Along the 1.5-mile stretch that was studied, 30 residential driveways and 13 intersections result in a large number of turning movements. Due to travel demand forecasts and the extension of other area roads, improvements to Longdraft Road may be needed to reduce existing and future congestion and improve vehicular and pedestrian safety. This Plan recommends that Longdraft Road be retained in the *Master Plan of Highways* as a four-lane arterial road.

Existing Zoning: Quince Orchard



RE-2C Residential, One-Family

R-200 Residential, One-Family

R-90/TDR Residential, One-Family

C-1 Convenience Commercial

Johnson Properties

Gaithersburg West Master Plan Boundary

Current Corridor Cities Transitway and Stations

Proposed Corridor Cities Transitway and Stations

Detail Area

NOT TO SCALE

Recommendations

- Retain the existing residential and commercial zones and maintain the established character of these neighborhoods.
- Address the demands for active recreation in this area by acquiring land for a local public park.
- Provide a natural surface trail connecting Quince Orchard Valley Neighborhood Park to the Seneca Greenway Corridor.
- Retain Longdraft Road as a potential four-lane arterial road
- Promote planting street trees and neighborhood trees.

McGown Property

The McGown property is a largely undeveloped tract south of I-270 adjacent to the City of Gaithersburg. It includes a 65-acre parcel zoned I-3 and a 10-acre parcel zoned R-200. Access is currently via Game Preserve Road, a narrow, two-lane road adjacent to Seneca Creek State Park that includes a one-lane tunnel under the CSX tracks.

The property contains mature forest, some of high quality. Tributary streams flow to Seneca Creek across the property and are priorities for restoration or retrofit. The 10-acre parcel features steep slopes, a mature oak-hickory forest with birds common to an interior woodland, as well as mature mountain laurel in the understory with a minimal presence of invasive species. The Plan recommends that this high quality forest be preserved through a forest conservation easement or other method to be determined through the development review process.

The proposed CCT is planned to run diagonally across the McGown property, with a stop co-located with the MARC Metropolitan Grove Station. A CCT maintenance facility is also being considered adjacent to the CSX rail line.

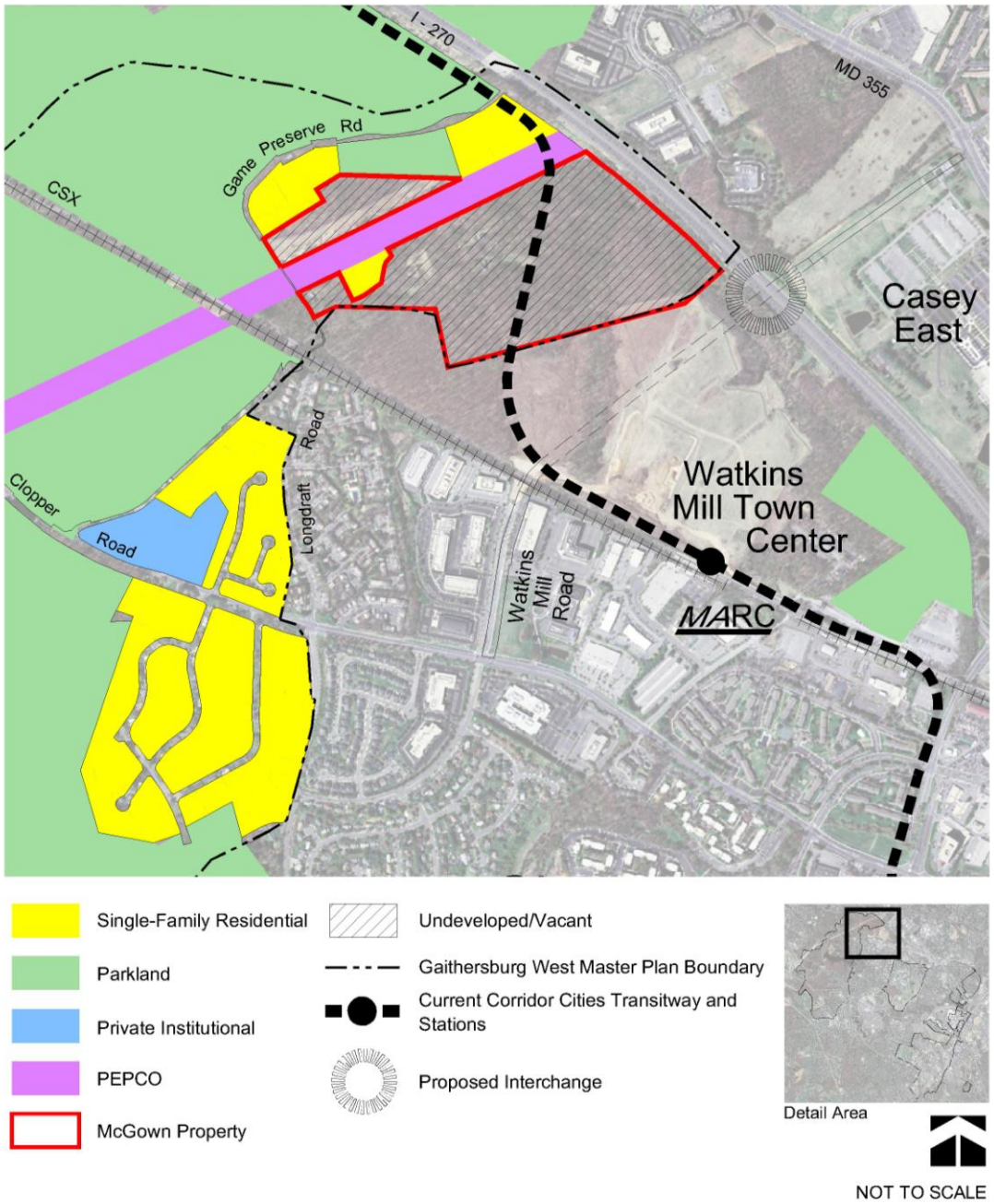
The City of Gaithersburg has approved two mixed-use developments adjacent to the McGown property: Watkins Mill Town Center to the south and Casey East between I-270 and MD 355. The Town Center project includes a 27-acre city park and the Casey East project includes a site for the 6th District Police Station. To provide access to the City's mixed-use developments, several new roadway improvements would be required, including access ramps to I-270 that extend onto the McGown property.

The McGown property is within the City of Gaithersburg's Maximum Expansion Limits (MEL). Since this property is somewhat isolated and disconnected from any centers of growth planned in the County, annexation into the City of Gaithersburg may be appropriate. Annexation would allow for a comprehensive and coordinated development that would be compatible with the adjacent mixed-use projects approved by the City of Gaithersburg. This Plan supports a moderate density, mixed-use development on the McGown property.

Recommendations

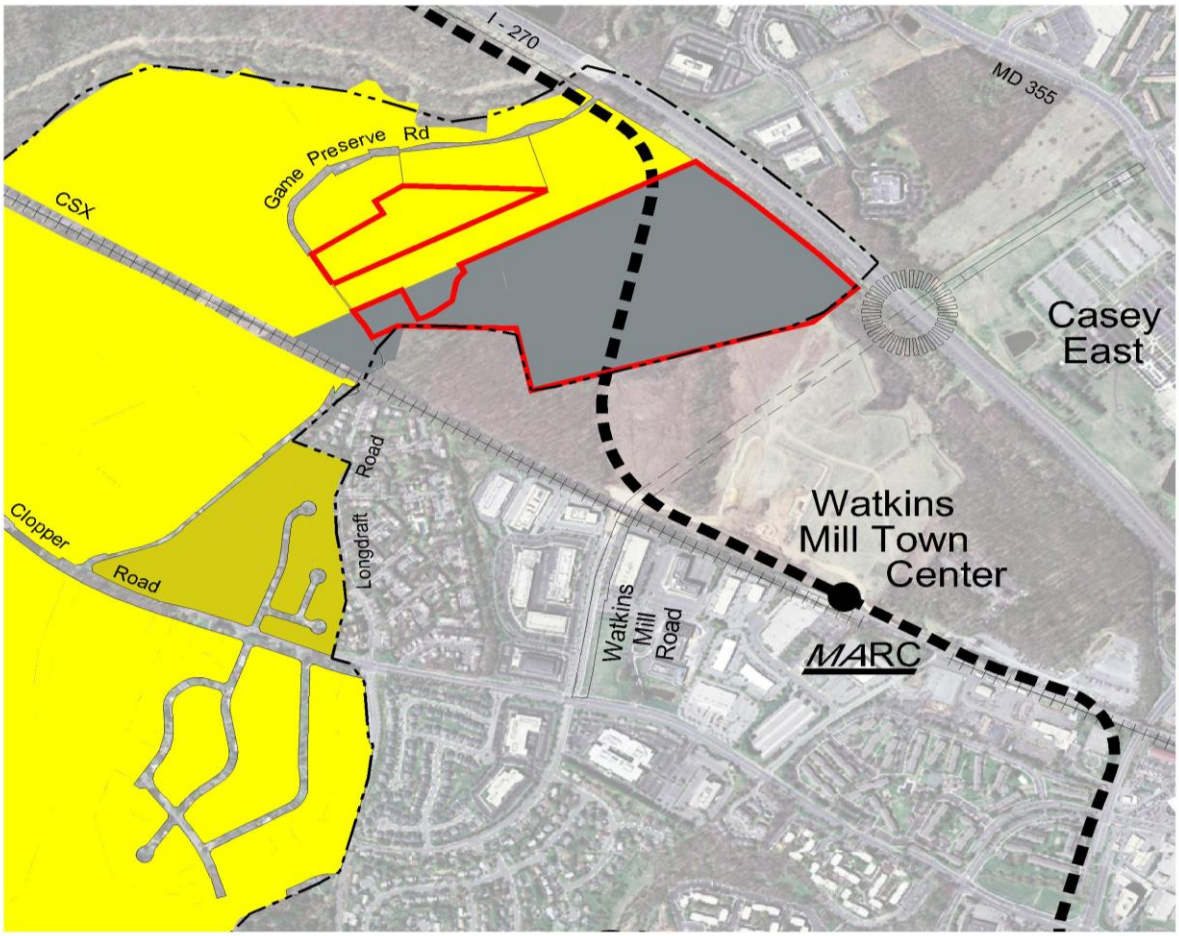
- Coordinate planning with the City of Gaithersburg.
- Consider the Planned Development Zone at a moderate density (10-15 units per acre).
- Preserve the property's natural resources, particularly the high quality, mature forest on the 10-acre parcel.
- Preserve and create connections to Seneca Creek State Park.
- Provide right-of-way for Watkins Mill Road extended.

Existing Land Use: McGown Property



The McGown property is two parcels divided by the PEPCO right-of-way: a 65-acre site zoned I-3 and a 10-acre site zoned R-200. It borders Seneca Creek State Park to the northwest and the City of Gaithersburg to the south and east.

Existing Zoning: McGown Property



R-200 Residential, One-Family

R-90/TDR Residential, One-Family

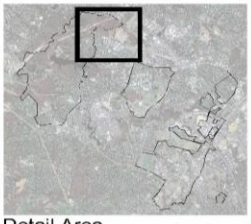
I-3 Technology and Business Park

McGown Property

Gaithersburg West Master Plan Boundary

Current Corridor Cities Transitway and Stations

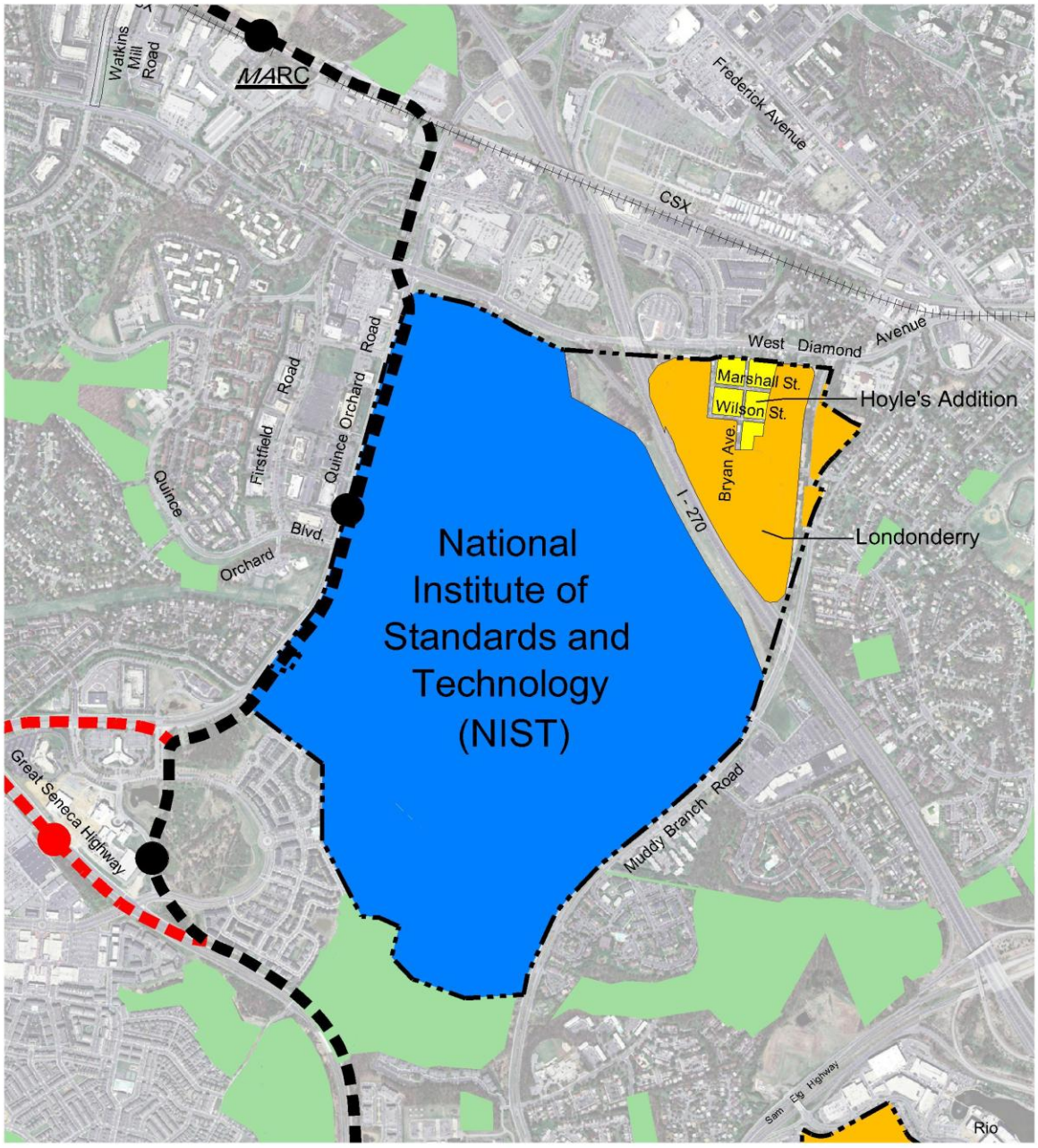
Proposed Interchange



Detail Area

NOT TO SCALE

Existing Land Use: NIST/Londonderry-Hoyle's Addition



Single-Family Residential

Multi-Family Residential

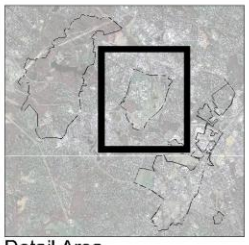
Parkland

Public Institutional/Schools/ Governmental

Gaithersburg West Master Plan Boundary

Current Corridor Cities Transitway and Stations

Proposed Corridor Cities Transitway and Stations



Detail Area

NOT TO SCALE

- Establish access points to the McGown property from Watkins Mill Road extended.
- Provide off-ramp right-of-way for the proposed new interchange at I-270 and Watkins Mill Road.
- Establish and provide CCT right-of-way and provide for a transit station co-located with the MARC station in the City of Gaithersburg

Enclaves

The five enclaves that are completely or nearly completely surrounded by the City of Gaithersburg are all within the City's Maximum Expansion Limits (MEL) and could be considered for annexation. This Plan does not recommend significant changes for these areas.

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National Institute of Standards and Technology (NIST)

NIST is a federal agency that promotes innovation and industrial competitiveness by advancing measurement sciences, standards, and technology. NIST researchers work with industry, academic institutions, and other government agencies. The 580-acre Gaithersburg facility has 3.4 million square feet in a campus style research, development, and office complex. There are no plans to significantly expand the facility, which is zoned R-200.

A CCT station is planned on the western side of the NIST facility. With 5,000 employees (2,700 permanent and 2,300 contract), this station offers an opportunity to change commuting patterns and is an important link in the future public transit network.

Recommendations

- Coordinate with NIST to plan for the proposed CCT station along Quince Orchard Road
- Refer all plans for development at NIST, including campus master plans, to the Montgomery County Planning Board as part of the mandatory referral process
- Preserve mature trees and forest
- Target stream buffer areas for forest planting and removal of invasive plants

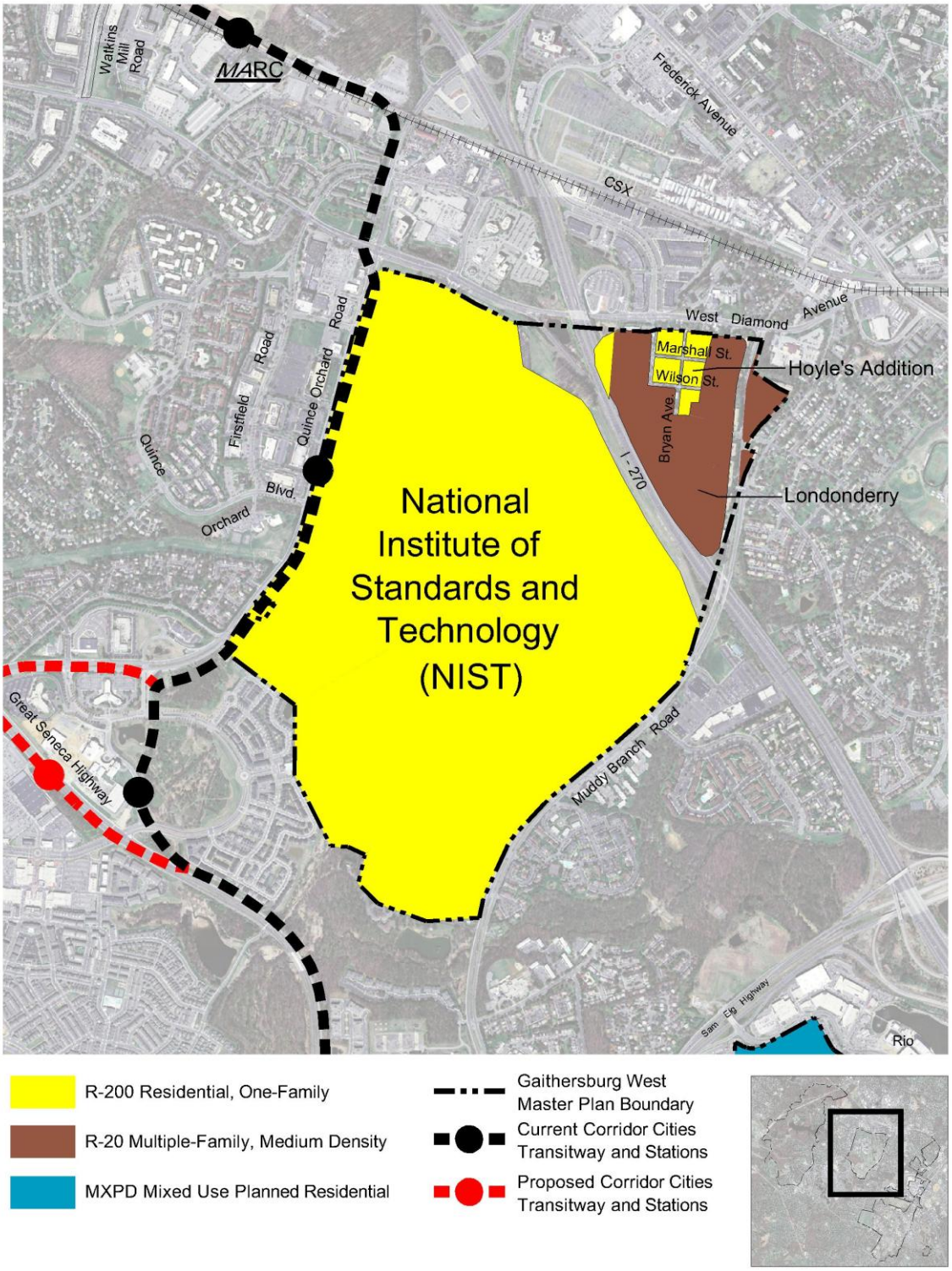
Londonderry and Hoyle's Addition

Both the Londonderry and Hoyle's Addition areas are appropriate for annexation into the City of Gaithersburg. Hoyle's Addition may be appropriate for townhouse zoning in the future. Any future development should provide appropriate transitions to the surrounding residential areas and protect the natural features.

Recommendations

- Annexation of these areas into the City of Gaithersburg is logical and consistent with the City's MEL
- Maintain the existing zoning
- Target stream buffer areas for forest planting and removal of invasive plants
- Use low-impact development techniques to minimize runoff to stream systems

Existing Zoning: NIST/Londonderry and Hoyle's Addition



Rosemont, Oakmont, and Walnut Hill

These primarily residential communities have little development potential and the stable residential areas should be preserved. Several recommendations for this area reflect consistency with the 2006 *Shady Grove Sector Plan*, particularly removing the CSX Transitway easement along Oakmont Avenue and maintaining Oakmont Avenue as a two-lane arterial.

The 1982 *Oakmont Special Study Plan* recommended the C-T Zone for several single-family houses along Oakmont Street at its intersection with Oakmont Avenue near the CSX tracks. The C-T option was intended to buffer the single-family houses from the proposed transit easement north of the CSX tracks and from the possible widening of Oakmont Avenue to four lanes. Given the recommendations to remove the transit easement and maintain Oakmont as two lanes, this Plan recommends removing the proposed C-T option.

Deer Park Bridge

Deer Park Bridge, known as the Humpback Bridge, was built in 1945 and added to the *Locational Atlas and Index of Historic Sites* in 2005. The bridge spans the CSX railroad tracks, providing a connection between Gaithersburg and the historic Town of Washington Grove. The bridge is near the Washington Grove MARC station and reflects the origin and development of Washington Grove, Oakmont, and Gaithersburg. As a local landmark, the Humpback Bridge is a familiar visual feature. A timber bridge has been at this location since the 1880s. The bridge was rehabilitated in 1988 and 2000.

The bridge is maintained by the Montgomery County Department of Transportation (MCDOT), which evaluated its structural condition in 2008. Replacement of beams is scheduled for 2009. MCDOT initiated a facility planning study several years ago, which has been delayed due to concerns raised by the City of Gaithersburg and the Town of Washington Grove. This Plan supports the ongoing efforts of MCDOT to assess the bridge's condition and explore appropriate alternatives, including rehabilitation or replacement that address safety, mobility, preservation, and fiscal considerations.

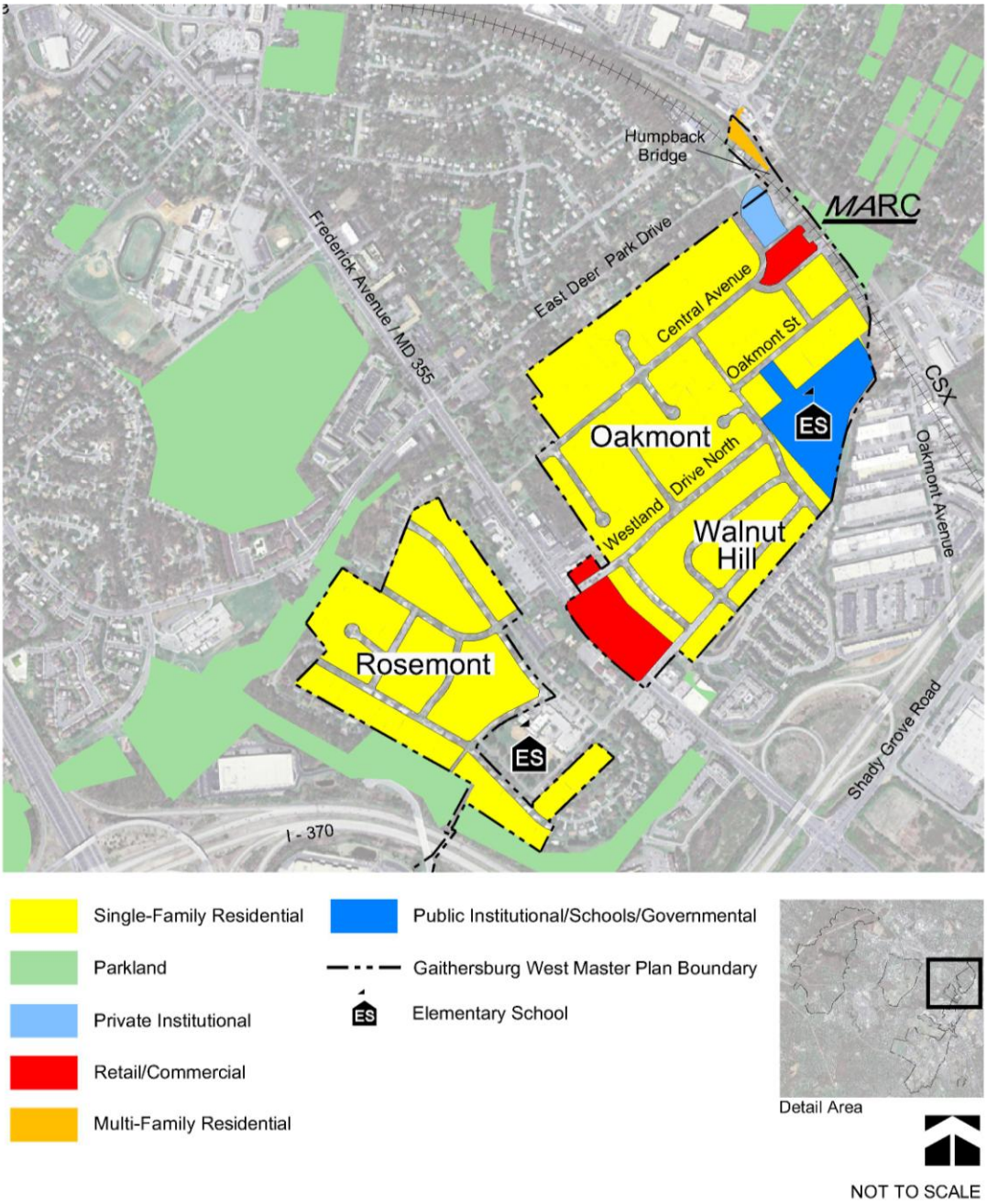
A life cycle cost analysis is also being conducted by MCDOT to compare bridge rehabilitation with bridge replacement. MCDOT will share the result of the life cycle cost analysis with the City of Gaithersburg and Town of Washington Grove, and then conclude the Deer Park Drive Bridge Facility Planning Study.

Future restoration or rehabilitation work should preserve the bridge's form, scale, and location. The traditional use of wood is important, but materials should be considered with some leniency. If deemed unsuitable for further rehabilitation for vehicular traffic, new uses may be identified that would be compatible with its preservation, including exclusive use by bicyclists and pedestrians. Heritage tourism goals include a railroad theme that could connect with this resource.

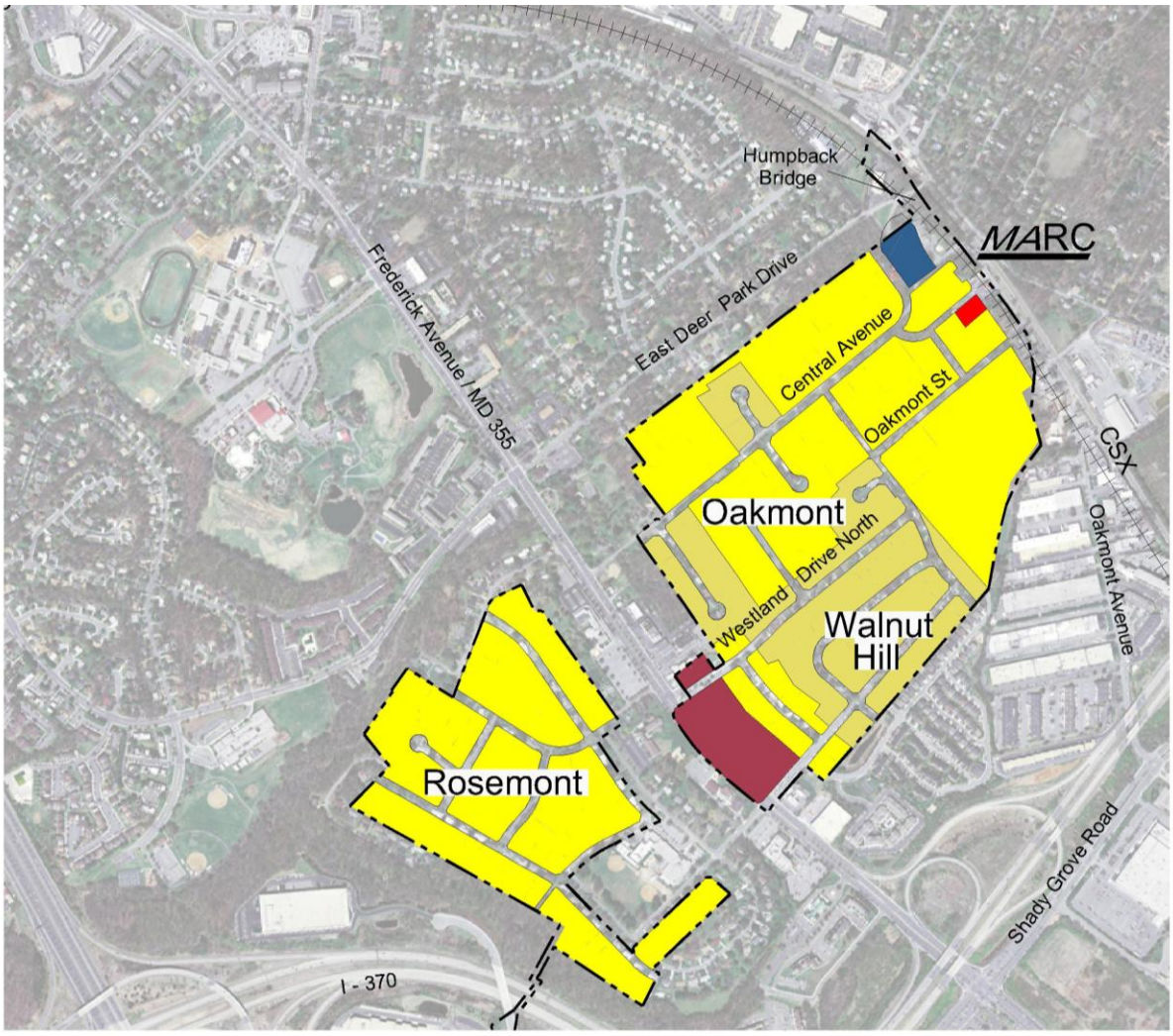
Recommendations

- Remove the proposed C-T zoning option on the R-200 properties in the vicinity of Oakmont Street.
- Designate Oakmont Avenue from the southern Plan boundary to Central Avenue with an 80-foot minimum right-of-way and two travel lanes, consistent with the 2006 *Shady Grove Sector Plan*.
- Remove the CSX Transitway easement along Oakmont Avenue, consistent with the 2006 *Shady Grove Sector Plan*.

Existing Land Use: Rosemont, Oakmont, Walnut Hill



Existing Zoning: Rosemont, Oakmont, Walnut Hill



R-200 Residential, One-Family

R-90 Residential, One-Family

C-T Commercial, Transitional

C-1 Convenience Commercial

C-2 General Commercial

Gaithersburg West Master Plan Boundary

Detail Area

- Improve stormwater management, reduce impervious surface, increase street tree planting, and incorporate other low impact development and green building techniques if the Walnut Hill Shopping Center redevelops.
- Preserve and create connections following Muddy Branch parallel to Central Avenue.

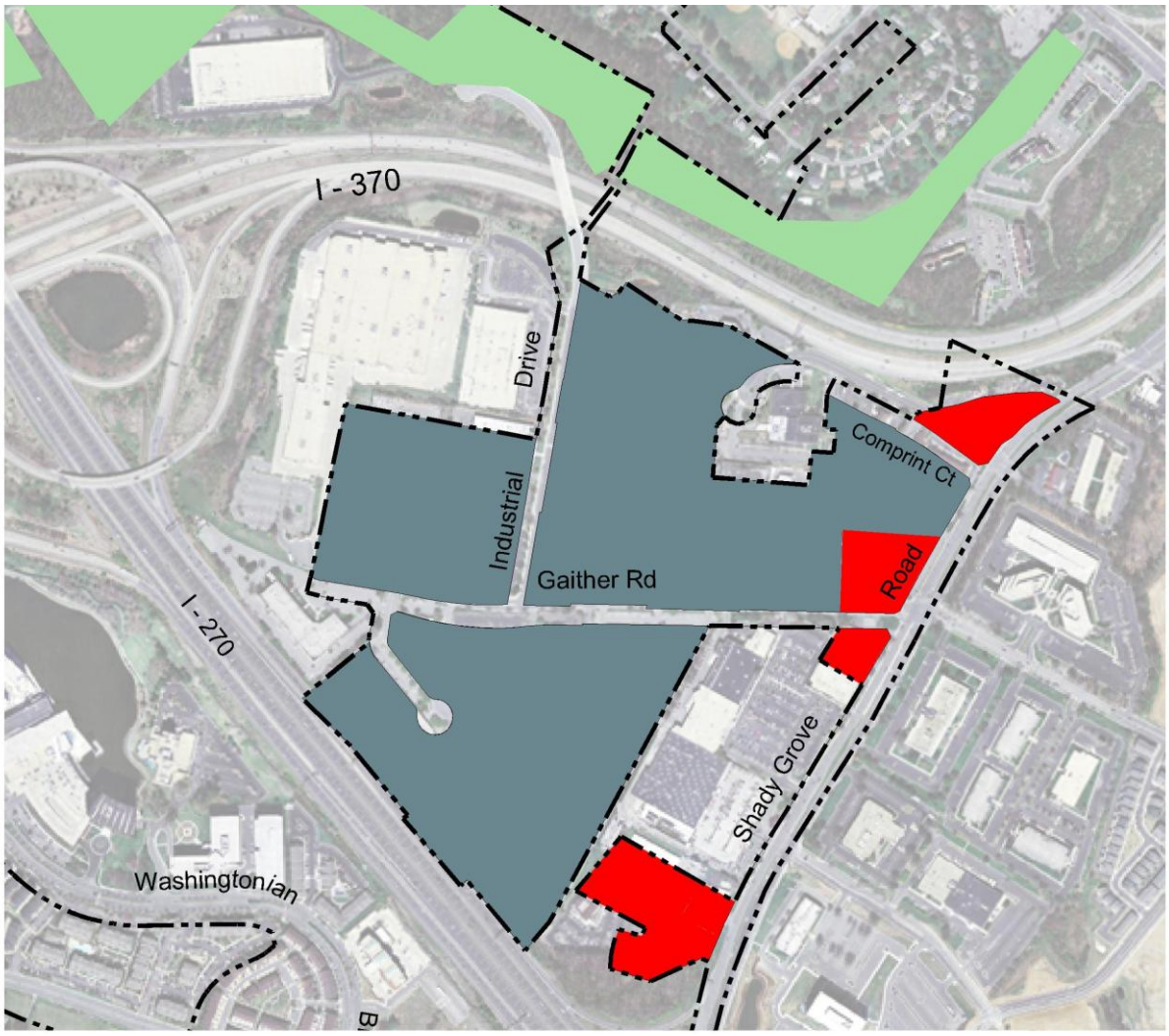
Washingtonian Light Industrial Park

This 103-acre enclave is a light industrial area primarily zoned I-1 with a few C-3 parcels. The Shady Grove Center north of Gaither Road was built in 1971 and has 108,000 square feet of retail space on a six-acre site.

Recommendations

- Consider future commercial mixed-use redevelopment of the Shady Grove Center.
- Retain the I-1 Zone and the C-3 Zone for all other properties in the Washingtonian Light Industrial Park.
- Reduce imperviousness, improve stormwater management, and implement other green building techniques if there is redevelopment.

Existing Land Use: Washingtonian Light Industrial Park

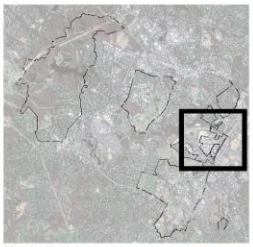


Parkland

Retail/Commercial

Light Industrial /
Service Industrial / Warehouses

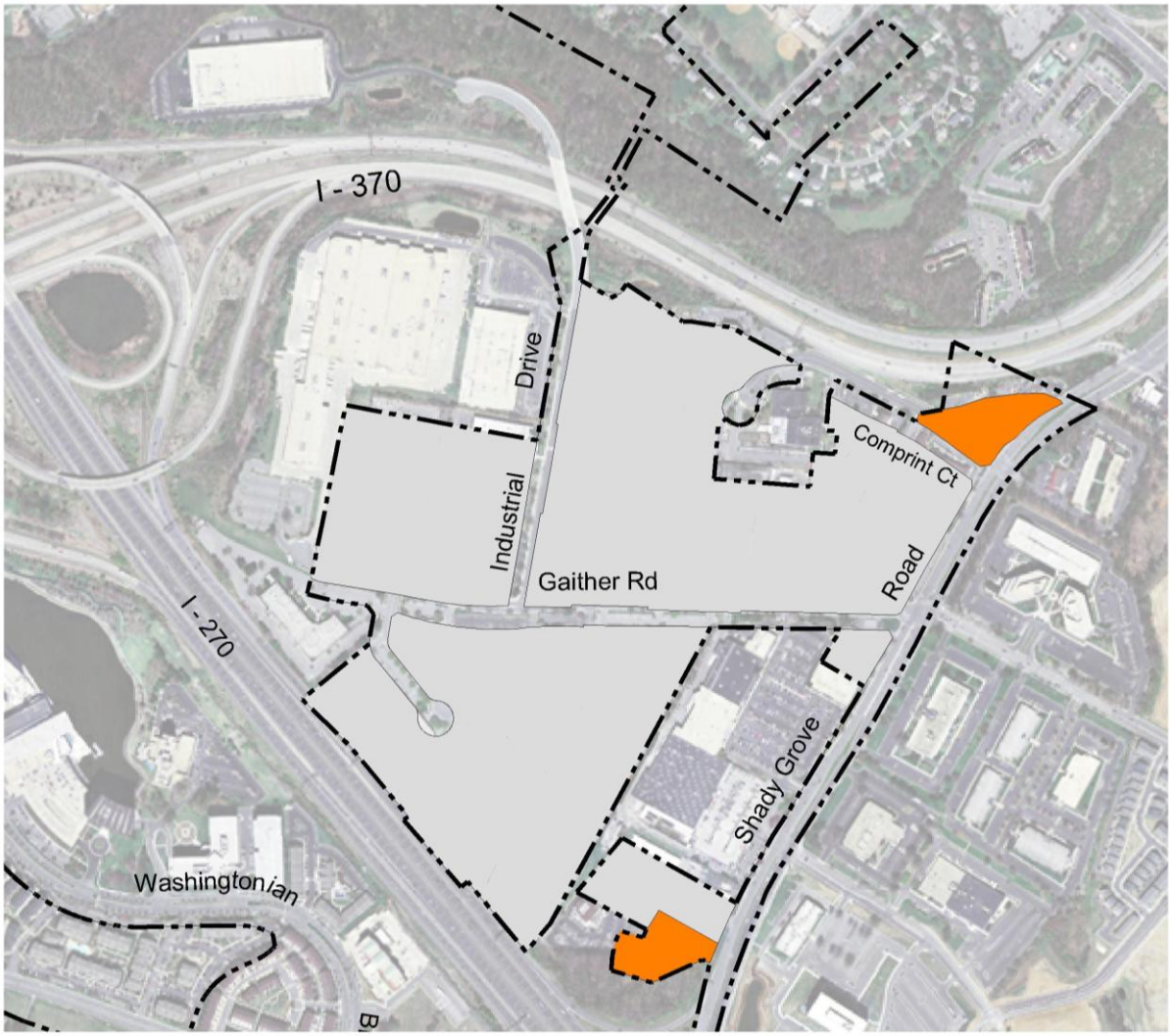
Gaithersburg West Master Plan Boundary



Detail Area

NOT TO SCALE

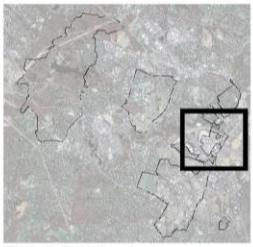
Existing Zoning: Washingtonian Light Industrial Park



C-3 Highway Commercial

I-1 Light Industrial

Gaithersburg West Master Plan Boundary



Detail Area

NOT TO SCALE

implementation

This Plan recommends implementation strategies for zoning and staging public facilities and infrastructure, and provides guidance for regulatory review.

Zoning

The Life Sciences Center (LSC) Zone

For the LSC to achieve its potential, this Plan recommends retaining the LSC Zone but modifying it to reflect contemporary standards, contribute to preserving the Agricultural Reserve through Building Lot Termination (BLT) easements, and allow more density and uses without diminishing the area's primary mission as a medical and biotechnology hub. The original LSC Zone and the R&D Zone are similar and both zones were applied to properties in the LSC through the 1996 Sectional Map Amendment. This Plan recommends using a single zone for properties where life science uses are encouraged. The revised LSC Zone would preserve the zone's primary purpose while introducing additional uses to help transform the LSC from a single-use research park into a more vibrant center. After the Plan is approved and adopted, along with a text amendment revising the LSC Zone, the zoning changes will be implemented through a Sectional Map Amendment.

Commercial Residential (CR) Zones

The proposed CR Zones allow a wide range of uses and require the designation of four elements: total allowed floor area ratio (FAR), maximum commercial/non-residential (C) floor area ratio, maximum residential (R) floor area ratio, and maximum building height (H). The CR Zone is applied through a Sectional Map Amendment consistent with the recommendations of a sector or master plan.

The CR Zone has two methods: standard and optional. The standard method allows up to 0.5 FAR and requires compliance with a specific set of development standards. The optional method allows for greater density and height when supported by additional public benefits, facilities, and amenities. The additional density may be achieved through a series of incentive increases that can be combined to achieve the maximum allowable density.

The CR Zone allows contributions to a fund for off-site amenities that benefit the public, subject to Planning Board approval. These projects must be identified in a master or sector plan and appear in the CIP for contributions to be made. The following list of projects would be eligible for private sector contributions.

- Design and construct the public local park (the park/school site) on LSC West (PSTA).
- Design and construct the public civic green space on LSC West (PSTA).
- Design and construct two rectangular fields recommended in the buffer area on the Belward site.
- Fund a study of adaptive reuse options for the historic Belward Farm buildings
- Provide and construct a publicly accessible research library focused on science and biotechnology.
- Construct portions of the LSC Loop, including trails in stream valleys that connect to the main path as well as to other destinations, open spaces, and activities in the LSC area.

Concept Plans

This Plan recommends that the largest property owners (20 acres or more) surrounding the proposed CCT stations submit concept plans that demonstrate how their sites will achieve the Plan's vision, including placing the highest densities and building heights at the stations, providing a mix of uses, creating a local street network, providing appropriate neighborhood buffers, creating the LSC Loop, preserving historic properties, and providing open spaces.

Concept plans should be submitted by JHU for Belward and the JHU-MCC site, by Shady Grove Adventist HealthCare, by DANAC, and by the future developers of LSC West (the PSTA site) with the Preliminary Plan application (for unapproved projects) or with Site Plan amendments (for approved projects).

Staging

Master plan staging addresses the timing of development and the provision of key public facilities. Staging assures sufficient capacity for the next phase of growth, provides essential place-making facilities as well as necessary connections for efficient mobility within and around an area. Experience shows that all density allowed by zoning is rarely built and certainly not all at once. Market absorption rates are one limiting factor. Realizing the vision in this Plan will take time and its implementation should be reviewed six years after adoption to evaluate how development is achieving the vision and to make any necessary adjustments.

The Annual Growth Policy (AGP) is used to establish the policies and procedures for administration of the Adequate Public Facilities Ordinance (APFO). The LSC is in the R&D Village policy area, where the AGP indicates that, by suburban standards, area roads are congested and certain school clusters are overcrowded. Any new development will need to mitigate a percentage of its impact before it can move forward.

The goal of the APFO is to ensure that transportation and school facilities have sufficient capacity for the Planning Board to approve specific development projects. Although the AGP and APFO serve vital functions, they are insufficient to accomplish the purposes of master plan staging, which has a different and complementary set of functions, including:

- Provide early notice of what must be done to realize the long term growth envisioned in a master plan, including programming large capital projects like the CCT. Such projects are often needed to serve the aggregate level of development in an area but are too large to have a regulatory nexus to a specific development project. This type of staging is particularly important where a major infusion of capital is needed for substantial growth to occur.
- Achieve a desired form of development—community building—or accomplish other policy goals, such as a desired level of "environmental adequacy."
- Provide long-term continuity for growth management. Master plans are updated less often than the growth policy, which is revised every two years, so there is less unpredictability. This Plan recommends that the buildout of Gaithersburg West be reevaluated six years after adoption of the Plan to verify that the vision of the Plan is being achieved and to address the need for mid-course corrections.
- Provide assurance that development will be timed with the provision of necessary public facilities to support it. A growth policy that is revised every two years provides less certainty.

In addition to the APFO standards, this Plan recommends staging to ensure that infrastructure is in place before development is allowed to proceed. Staging is applied to the LSC North, Central, and Belward districts where the greatest changes are proposed. Each development stage will be initiated when all of the triggers for that stage are met. After a stage has been triggered, individual properties can proceed with Preliminary Plan approval. Residential development is not subject to the staging amount or sequence since increasing housing in the LSC is encouraged to improve the jobs-housing balance and provide mixed uses.

The CCT is the centerpiece of the Plan's vision for the LSC. The Plan promotes transit-oriented development by concentrating higher density uses near future CCT stations. Staging principles seek to prevent the construction of low intensity uses at transit stations that could preclude or delay the recommended higher intensity uses. To achieve the vision, a mix of uses, particularly at transit stations, should be part of new development and redevelopment to enliven these

areas, increase and encourage transit use, and help create a more dynamic Life Sciences Center.

The Plan provides stages and amounts of development that are tied to the CCT's funding, construction, and operation to ensure that transit is available as development proceeds. Relocation of the PSTA from the LSC West District is a part of staging to ensure that the proposed alignment through the LSC can be achieved and to provide new housing with increases in jobs. Staging also requires that the non-driver mode share be documented and that increases be achieved over time, a goal that results in reduced traffic congestion and increased transit use.

Staging Principles

Staging will help implement the Plan's vision as follows:

- Life science uses should be given priority.
- Density and height should be concentrated at transit stations amid transit-oriented mixed-use development at LSC Central, Belward, and DANAC.
- Historic and environmental resources should be protected.
- Buildings within one-eighth mile of the future CCT stations should be at least 60 feet high. In all other areas, the desired minimum building height is 36 feet (three stories of occupied space) in order to retain land for future higher densities.
- Mixed-use development is emphasized; single purpose or free standing retail buildings are inconsistent with the Plan's vision in any phase of development
- Public institutions are not subject to staging because these projects are reviewed as mandatory referrals.
- Structured parking should be hidden from the street; although surface parking is inconsistent with the Plan's vision, it is anticipated and acceptable on an interim basis.

Staging Requirements

In 2009, the LSC contains nearly 7 million square feet of commercial development. Approximately 3.7 million square feet of commercial (non-residential) development has been approved but is not yet built in the five LSC districts. The total existing and approved development in all five LSC districts is 10.7 million square feet.

This Plan recommends that the staging plan and its requirements be applied to the LSC North, LSC Central, and LSC Belward districts. In these three districts in 2009, existing commercial development totaled nearly 5.5 million square feet, with 2.7 million square feet in the pipeline, for a total of 8.2 million square feet. The 2.7 million square feet of development in the pipeline is not subject to the Plan's staging requirements unless a project's Preliminary Plan expires. If a Preliminary Plan expires, the development capacity associated with it becomes available to all eligible applicants. This released capacity would essentially shift from the category of approved, pipeline development to the category of additional new development, while the total in the stage would remain unchanged.

In the three districts that are subject to staging, the Plan provides for the current 8.2 million commercial square feet (existing development and the approved pipeline), plus an additional increment of 400,000 square feet in Stage 1. Health care services are exempt from the requirements of Stage 1. Development above 8.6 million commercial square feet cannot proceed until all the prerequisites for Stage 2 have been met, including funding of the CCT from the Shady Grove Metro Station to Metropolitan Grove.

Stage 1
Stage 1 allows an additional 400,000 square feet of commercial (nonresidential) development in LSC North, Central, and Belward. Existing and approved development totals 8.2 million square feet and Stage 1 allows 400,000 additional square feet for a total of up to 8.6 million square feet. Health care services (as defined in the Life Sciences Center Zone) are exempt from the requirements of Stage 1.

5,500,000 existing development
2,700,000 approved development
400,000 additional new development
8,600,000 Total Stage 1 development

Stage 2
Stage 2 allows a total of 11.4 million square feet of commercial development, of which 8.6 million will have been built in Stage 1. After all the prerequisites required before Stage 2 have been met, development above 8.6 million can proceed, including an additional 2.8 million square feet of new commercial development, up to a total of 11.4 million square feet.

8,600,000 Stage 1 development
2,800,000 Stage 2 additional new development
11,400,000 Total Stage 2 development at full buildout

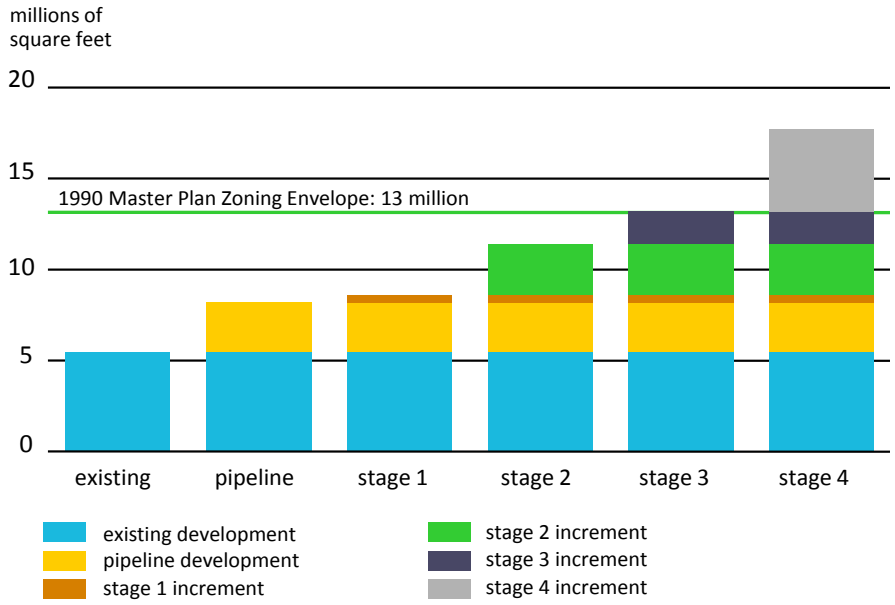
Stage 3
Stage 3 allows a total of 13.2 million square feet of commercial development, of which 11.4 million square feet will have been built in Stages 1 and 2. After all the prerequisites required before Stage 3 have been met, development above 11.4 million square feet can proceed, including an additional 1.8 million square feet of new development, up to a total of 13.2 million square feet.

11,400,000 Stage 2 development
1,800,000 Stage 3 additional new development
13,200,000 Total Stage 3 development at full buildout

Stage 4
Stage 4 allows a total of 17.7 million square feet of commercial development, of which 13.2 million square feet will have been built in the previous stages. After all the prerequisites required before Stage 4 have been met, development above 13.2 million can proceed, including an additional 4.5 million square feet of new development, up to a total of 17.7 million square feet.

13,200,000 Stage 3 development
4,500,000 Stage 4 additional new development
17,700,000 Total Stage 4 development at full buildout

staging of commercial development



stages of development and requirements at each stage

Before Stage 1 begins, all of the following must occur:

- Approve and adopt the Sectional Map Amendment.
- Fund and begin operating the Greater Shady Grove Transportation Management District (TMD).
- Create a new LSC Policy Area with urban standards and characteristics.
- Include the entirety of the Rickman property on Travilah Road in the R&D Policy Area.
- Document the baseline of non-driver mode share through monitoring and traffic counts.

Stage 1 New Commercial Development Allowed: 400,000 square feet
Total Commercial Development Allowed: 8.6 million square feet

Before Stage 2 begins, all of the following must occur:

- Fully fund construction of the CCT, including the proposed realignment through the LSC, from the Shady Grove Metro Station to Metropolitan Grove in the County's six-year CIP or the State CTP.
- Fully fund relocation of the Public Safety Training Academy from LSC West to a new site.
- Fund the LSC Loop trail in the County's six-year CIP and/or through developer contributions as part of plan approvals.
- Achieve a five percent increase over the baseline for the non-driver mode share.

Stage 2 New Commercial Development Allowed: 2.8 million square feet
Total Commercial Development Allowed: 11.4 million square feet

Before Stage 3 begins, all of the following must occur:

- CCT is under construction from Shady Grove Metro Station to Metropolitan Grove.
- Construct and open at least one public street (such as Medical Center Drive extended) across LSC West and Belward to provide a direct connection across major highways and between the districts, contributing to place-making and connectivity.
- Fully fund construction of the following two interchanges, or other transportation project(s) providing equivalent mobility and capacity, in the County's six-year CIP or the State CTP:
    - Sam Eig Highway at Great Seneca Highway
    - Great Seneca Highway at Key West Avenue.
- Achieve a 10 percent increase over the baseline for the non-driver mode share.

Stage 3 New Commercial Development Allowed: 1.8 million square feet
Total Commercial Development Allowed: 13.2 million square feet

Before Stage 4 begins, all of the following must occur:

- Begin operating the CCT from the Shady Grove Metro Station to Clarksburg.
- Fully fund the widening of Key West Avenue, or other transportation projects providing equivalent mobility and capacity, in the County's six-year CIP or the State CTP.
- Complete construction of the two highest priority interchanges identified as prerequisites to Stage 3.
- Fully fund construction of the following three interchanges, or other transportation project(s) providing equivalent mobility and capacity, in the County's six-year CIP or the State CTP:
    - Shady Grove Road at Key West Avenue
    - Sam Eig Highway at Diamondback Drive
    - Great Seneca Highway at Muddy Branch Road.
- Achieve a 15 percent increase over the baseline for the non-driver mode share.

Stage 4 New Commercial Development Allowed: 4.5 million square feet
Total Commercial Development Allowed: 17.7 million square feet

Plan Evaluation

This Plan should be reviewed approximately six years after adoption. Revisiting this Plan in regular intervals—focusing on the LSC—is particularly important to assess how the area is developing, the need for infrastructure delivery, and if the vision is being achieved.

The review of the Plan should examine:

- the CCT's delivery schedule
- traffic generation and roadway performance
- the jobs to housing balance—are local workers occupying the housing
- the built form's evolution
- absorption rates to determine the rate of needed infrastructure delivery
- costs to the County
- the area institutions' investment in the Plan's vision.

Policy Areas

Growing strategically means higher densities where transit is or will be, creating greener buildings, providing more services locally, using existing infrastructure, and providing mobility choices. The County's growth policy addresses traffic and school capacity issues. Creating nodes of activity at transit locations with mixed uses can promote a better balance between

jobs and housing, reducing the number of vehicle miles traveled. This Plan helps achieve these goals, promoting the opportunity for transit service in the mid-County area.

- Establish a new LSC policy area for the LSC Central, LSC West, and LSC Belward transit station areas.
- Revise the R&D Village policy area to include the entirety of the Rickman property, located on Travilah Road, within its boundary. Presently, the subject property is physically located in two policy areas—R&D Village and North Potomac. This revision would rectify this situation and is consistent with the Plan's land use and transportation objectives.

Transportation Network

This Plan provides a comprehensive transportation network for all modes of travel, including transit, roads, bicycles, and pedestrians, to guide implementation of the Plan's street and highway system and bikeway and trails networks.

Street and Highway Classifications

This Plan proposes the following changes to the *Master Plan of Highways*.

- Remove roadways that have been annexed by the City of Gaithersburg:
  - Louis Sullivan Drive
  - portions of Fields Road
  - portions of Diamondback Drive (although connection to Sam Eig Highway within City of Gaithersburg is needed for network connectivity).

- Remove the Shady Grove Road/Darnestown Road and Shady Grove Road/Wootton Parkway interchanges recommended in the 1990 *Shady Grove Study Area Master Plan*.

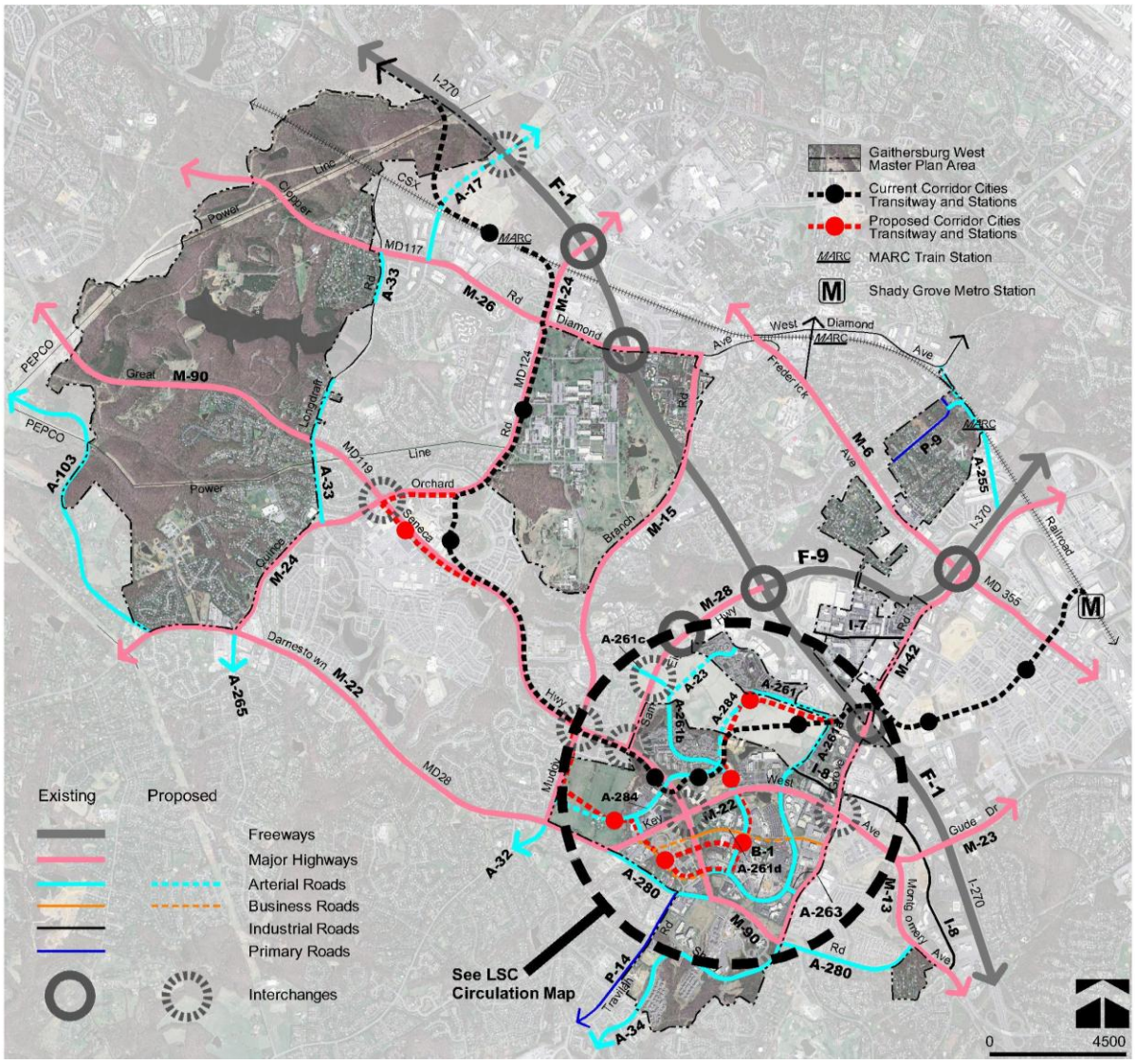
- Retain the 1990 *Shady Grove Study Area Master Plan* recommendations for grade-separated interchanges at:
  - Sam Eig Highway at Diamondback Drive
  - Sam Eig Highway and Great Seneca Highway (MD 119)
  - Great Seneca Highway and Key West Avenue (MD 28)
  - I-270 at Watkins Mill Road extended (in the City of Gaithersburg).

- Add new grade-separated interchanges at:
  - Key West Avenue (MD 28) at Shady Grove Road
  - Great Seneca Highway at Muddy Branch Road (in coordination with City of Gaithersburg)
  - Quince Orchard Road at Great Seneca Highway (in coordination with City of Gaithersburg).

- Change the number of lanes for Oakmont Avenue from four to two, as recommended in the 2006 *Shady Grove Sector Plan*.

- Remove the CSX Transitway easement along Oakmont Avenue, as recommended in the 2006 *Shady Grove Sector Plan*.

Transportation Network



Road Number	Name	Limits	Minimum r.o.w.	Lanes[1]	Speed (m.p.h)	Design Standard
Freeways						
F-1	I-270	Great Seneca Creek to Shady Grove Road	300'	12	-	-
Controlled Major Highways						
CM-22	Key West Avenue (MD 28)	Darnestown Road (MD 28) to Shady Grove Road	200'	8	40	Custom
CM-28	Sam Eig Highway	Great Seneca Highway (MD 119) to I-270	250'	6+BRT		
CM-90	Great Seneca Highway (MD 119)	Great Seneca Creek to Gaithersburg City Limit	150'	6	50	Custom
		Sam Eig Highway to Key West Avenue (MD 28)	150'-200'[2]	6	45	2008.10
		Key West Avenue to Darnestown Rd.	150'	6	45	2008.10
Major Highways						
M-6	Frederick Avenue (MD 355)	Gaithersburg City Limit to Gaithersburg City Limit	120'	6	-	-
M-13	West Montgomery Avenue (MD 28)	Darnestown Road to 800' east of Darnestown Road	150'	6	-	2008.04 or .10
M-15	Muddy Branch Road	Darnestown Road (MD 28) to Gaithersburg City Limit	150'	6	45	2008.04 or .08
	Muddy Branch Road	Gaithersburg City Limit to West Diamond Avenue (MD 117)	150'	6	45	2008.04 or .08
	Muddy Branch Road	Decoverly Drive (extended) to Gaithersburg City Limit	170' [2]	6	45	2008.04
M-22	Darnestown Road (MD 28)	Riffle Ford Road to Muddy Branch Road	120'	4	40	2008.04
	Darnestown Road (MD 28)	Muddy Branch Road to Key West Avenue (MD 28)	150'	6	40	2008.04
	Key West Avenue (MD 28)	Darnestown Road (MD 28) to Shady Grove Road	200'	8	40	Custom
M-24	Quince Orchard Road (MD 124)	Darnestown Road (MD 28) to Longdraft Road	150'	6	40	-
	Quince Orchard Road (MD 124)	Gaithersburg City Limit to Gaithersburg City Limit	170' [2]	6	-	-
M-26	Clopper Road (MD 117)	Great Seneca Creek to Muddy Branch Road	150'	4 to 6	45	2008.04
	Diamond Avenue (MD 117)	Quince Orchard Road (MD 124) to Muddy Branch Road	120'	4 to 6	45	-
M-28	Sam Eig Highway	Great Seneca Highway (MD 119) to I-270	250'	6+BRT	50	Custom
M-42	Shady Grove Road	Darnestown Road to 1,200' west of Frederick Road (MD 355)	150'	6	40	2008.04
M-90	Darnestown Road	Great Seneca Highway to Shady Grove Road	150'	6	45	2008.10

[1] The number of planned through travel lanes for each segment, not including lanes for turning, parking, acceleration, deceleration, or other auxiliary purposes.

[2] Fifty feet of right-of-way is intended for provision of an exclusive transitway; where dual width is specified, the lower figure refers to non-transitway sections.

Road Number	Name	Limits	Minimum r.o.w.		Speed (m.p.h)	Design Standard
Arterial Roads						
A-17	Watkins Mill Road	Clopper Road (MD 117) to MD 355 (City of Gaithersburg)	NA[3]	4	-	-
A-23	Rio Boulevard	Washingtonian Boulevard (City of Gaithersburg) to Fields Road	80'	4	30	As built
A-33	Longdraft Road	Quince Orchard Road (MD 124) to 180' north of Longdraft Court (City of Gaithersburg)	80'	4	30	2004.01
	Longdraft Road	Golden Post Lane (City of Gaithersburg) to Clopper Road (MD 117)	80'	4	30	2004.01
A-34	Shady Grove Road	Darnestown Road to Cavanaugh Drive	100'	4	35	2004.09
A-103	Riffle Ford Road	Great Seneca Creek to 700' north of Woodsboro Drive	80'	4		-
	Riffle Ford Road	220' east of Hallman Court to Darnestown Road (MD 28)	80'	4	40	2004.08
A-255	Oakmont Avenue	From Plan boundary to Plan boundary	80'	2	30	
A-261	Fields Road	From 1500' east of Rio Boulevard (City of Gaithersburg) to 675' west of Washingtonian Boulevard (City of Gaithersburg)	150'[4]	4	-	-
	Fields Road	From 150' west of Omega Drive (City of Gaithersburg) to Omega Drive	150'[4]	4	-	-
A-261a	Omega Drive	Fields Road to Key West Avenue (MD 28)	100'	4	30	2004.10
A-261b	Diamondback Drive	Sam Eig Highway to Key West Avenue	100'-150'[4]	4	30	2004.09
	Broschart Road	Key West Avenue to Medical Center Drive	100'	4	30	2004.09
A-261d	Medical Center Drive	Key West Avenue (MD 28) to Key West Avenue (MD 28)	100'-150'[4]	4	30	2004.10 (needs SUP)
A-263	Medical Center Way	Shady Grove Road to Medical Center Drive	100'	4	30	As built
A-280	Darnestown Road	Key West Avenue (MD 28) to Great Seneca Highway	100'	4	40	2004.10
A-280	Darnestown Road	Shady Grove Road to West Montgomery Avenue (MD 28)	100'	4	40	2004.10
A-284	Decoverly Drive	Muddy Branch Road to Fields Road	100'-150'[4]	4	30	2004.09

[3] Watkins Mill Road is an arterial within City Limits. As a significant connection to I-270, it is included in this table; right-of-way requirements are deferred to the City of Gaithersburg.

[4] Fifty feet of right-of-way is intended for provision of an exclusive transitway; where dual width is specified, the lower figure refers to non-transitway sections.

street and highway classifications—continued

Road Number	Name	Limits	Minimum r.o.w	Lanes	Speed (m.p.h.)	Design Standard
Business District Streets						
B-1	Blackwell Road	Great Seneca Highway to Broschart Road	100'	4	30	2005.03
	Blackwell Road	Broschart Road to Shady Grove Road	100'	4	30	2005.03
	Blackwell Road	Key West to Great Seneca Highway	70'	2	30	2005.02
B-2	*Road A*	proposed new road	60'	2	30	2005.01
B-3	*Road B*	proposed new road	70'	2	30	2005.02
B-4	*Road C*	proposed new road	70'	2	30	2005.02
B-5	*Road D*	proposed new road	70'	2	30	2005.02
B-6	*Road E*	proposed new road	70'	2	30	2005.02
B-7	*Road F*	proposed new road	60'	2	30	2005.01
B-8	*Road G*	proposed new road	70'	2	30	2005.02
B-9	*Road H*	proposed new road	60'	2	30	2005.01
B-10	*Road I*	proposed new road	70'	2	30	2005.02
B-11	*Road J*	proposed new road	60'	2	30	2005.01
B-12	*Road K*	proposed new road	70'	2	30	2005.02
B-13	*Road L*	proposed new road	60'	2	30	2005.01
B-14	*Road M*	proposed new road	60'	2	30	2005.01
B-15	*Road N*	proposed new road	70'	2	30	2005.02
B-16	*Traville Gateway Drive*	Shady Grove Road to Medical Center Drive	70'	2	30	2005.02
B-17	*Travilah Road*	Darnestown to Medical Center Drive Extended	70'	2	30	2005.02
B-18	*Road Q*	proposed new road	70'	2	30	2005.02
B-19	*Road R*	proposed new road	60'	2	30	2005.01
I-8	Research Boulevard	Omega Drive to Shady Grove Road	80'	4	30	2006.03

street and highway classifications—continued

Road Number	Name	Limits	Minimum r.o.w	Lanes	Speed (m.p.h)	Design Standard
Primary Residential Streets						
P-9	Central Avenue	500' east of Frederick Avenue (MD 355, City of Gaithersburg) to 350' north of Oakmont Avenue (City of Gaithersburg)	70'	2	25	2003.12
P-14	Travilah Road	Darnestown Road to Unicorn Way	70'	2	30	2003.10

Pedestrian Network

Every trip starts or ends with a pedestrian trip. The pedestrian element of the transportation network should emphasize the need for safe, contiguous, and accessible walking routes to local destinations, especially transit. Providing a safe and pleasant pedestrian experience is a challenge in areas designed for cars. Signal timing at intersections impacts pedestrian safety and comfort. The County should continue to improve operations and infrastructure to meet national guidelines, including the *Manual for Uniform Traffic Control Devices* and Americans with Disabilities Act best practices.

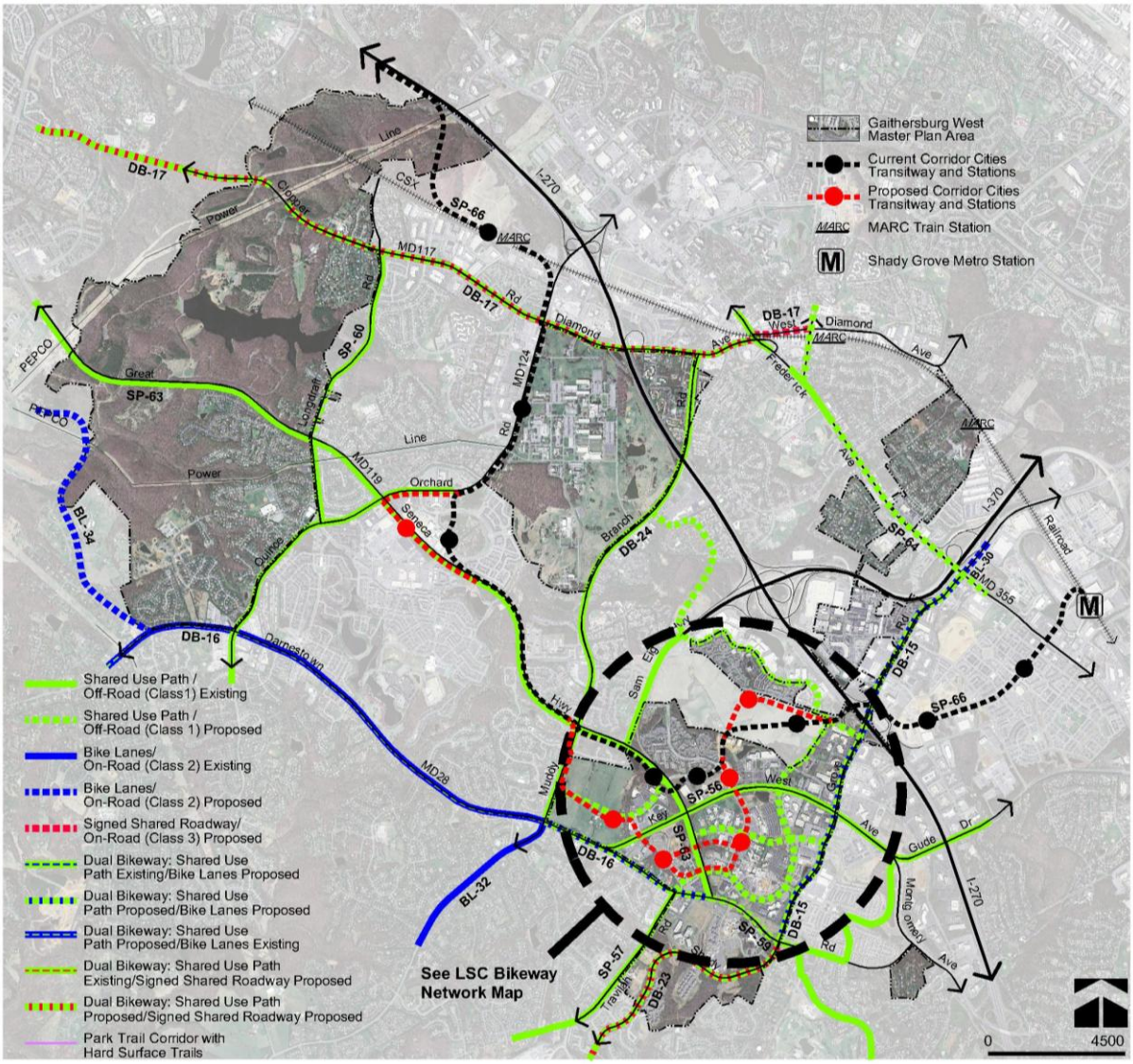
Recommendations

- Design local streets and intersections with pedestrian-friendly characteristics such as minimal corner radii, special crosswalk pavement, wide sidewalks, and street trees.
- Place sidewalks sufficiently away from curbs and travel lanes to separate pedestrians from moving traffic.
- Provide four-way crosswalks at intersections.
- Provide sidewalks on both sides of public streets.
- Create a grid of intersecting streets and short blocks in new developments or redevelopment areas to support and encourage walking.
- Design streets that are defined with buildings, animated with active uses, and include streetscape and landscape features to encourage pedestrian activity.

Bikeway and Trail Systems

This Plan encourages walking and biking as an alternative to automobiles as well as for recreation. This Plan supports efforts to implement safe and convenient pedestrian and bicycle facilities through an inter-connected system of bikeways, trails, and sidewalks. The Plan area is served by a network of existing bikeways and trails.

Gaithersburg West Bikeway Network



The recommended County wide and local LSC bikeway networks must be coordinated with the cities of Gaithersburg and Rockville to ensure a linked system. Together, the County wide and local bikeways and the trails network will provide a framework for an interconnected system.

gaithersburg west bikeways recommended by the *countywide bikeways functional master plan*

Route Number	Name	Type	GWMP Limits	Status/Condition	Description
BL-30	Shady Grove Road east	Bike lanes	Frederick Road (MD 355) to Muncaster Mill Road (MD 115)	Implemented between MD 115 and Crabbs Branch Way. Proposed between MD 355 and Crabbs Branch Way.	Part of a direct route to Shady Grove Metrorail station.
BL-32	Dufief Mill Road	Bike lanes	Darnestown Road (MD 28) to Travilah Road	Existing	Roadway shoulder functions as bike lanes.
BL-34	Riffle Ford Road	Bike lanes	Darnestown Road to Germantown Road (MD 118)	New proposal in 2005 CBFMP	Important connection to South Germantown Park.
DB-15	Shady Grove Road west	Dual bikeway: shared use path and bike lanes	Darnestown Road to Frederick Road	Proposed	Forms part of connection to Shady Grove Metrorail station; shared use path to be implemented by Rockville, bike lanes to be implemented by County.
DB-16	Darnestown Road north	Dual bikeway: shared use path and bike lanes	Seneca Road to Great Seneca Highway (MD 119)	Shared use path and bike lanes exist in segments. Bike lanes installed by SHA from Seneca Road to Muddy Branch Road.	Provides direct connection to Rockville and forms part of connection to Gaithersburg from Poolesville; SHA-provided 16' wide curb lanes should be striped as bike lanes.
DB-17	Clopper Road/Diamond Avenue	Dual bikeway: shared use path and signed shared roadway	Summit Avenue to Clarksburg Road (MD 121)	Mostly proposed. Shared use path exists in segments.	Provides direct connection to City of Gaithersburg as well as several MARC stations; Improvements by SHA underway within Gaithersburg city limits.
DB-23	Shady Grove Road extended	Dual bikeway: shared use path and signed shared roadway	Darnestown Road to River Road (MD190)	Modified proposal in 2005 CBFMP	Suitable for both on-road and off-road facilities. An important east-west connector between Potomac communities and cities of Rockville and Gaithersburg.
DB-24	Muddy Branch Road	Dual bikeway: shared use path and bike lanes	Darnestown Road to Diamond Avenue	Mostly proposed. Existing 8' concrete path in segments, but narrows in places.	Direct connection to City of Gaithersburg; indirect connection to Gaithersburg MARC station. Need consistent-width path for entire roadway; adequate ROW exists for bike lanes if road is improved in the future.

Route Number	Name	Type	GWMP Limits	Status/Condition	Description
SP-56	Key West Avenue	Shared use path	Darnestown Road to Gude Drive	Existing	Connection between countywide bikeway network and City of Rockville bikeway system.
SP-57	Travilah Road	Shared use path	Darnestown Road to River Road	Proposed, exists in segments	Connects to two major bikeways and several local destinations; forms part of alternate route to C&O canal.
SP-58	Quince Orchard Road	Shared use path	Dufief Mill Road to Darnestown Road	Exists in segments; mostly proposed	Provides direct connection to Gaithersburg.
SP-59	Darnestown Road south	Shared use path	Key West Avenue to Wootton Parkway	Proposed	Forms part of important connection to City of Rockville and Rockville Metrorail station.
SP-60	Longdraft Road	Shared use path	Quince Orchard Road to Clopper Road (MD 117)	Proposed	Connects to two major bikeways and to City of Gaithersburg.
SP-63	Great Seneca Highway (MD 119)	Shared use path	Darnestown Road to Middlebrook Road	Existing	Provides excellent off-road connections between Germantown and Gaithersburg.
SP-64	Frederick Road (MD 355)	Shared use path	Gude Drive to Watkins Mill Road	Exists in segments; mostly proposed	Provides excellent connection to downtown Rockville and Gaithersburg.
SP-66	Corridor Cities Transitway	Shared use path	Shady Grove Metro Station to Frederick Road (MD 355)	Mostly proposed; segments exist as part of other bikeways	Connects major employment centers in the I-270 Corridor north of Rockville; intended to parallel the CCT and be implemented as part of CCT project, regardless of mode or alignment.

SP=Shared Use Path BL=Bike Lanes DB=Dual Bikeway

LSC Bikeways

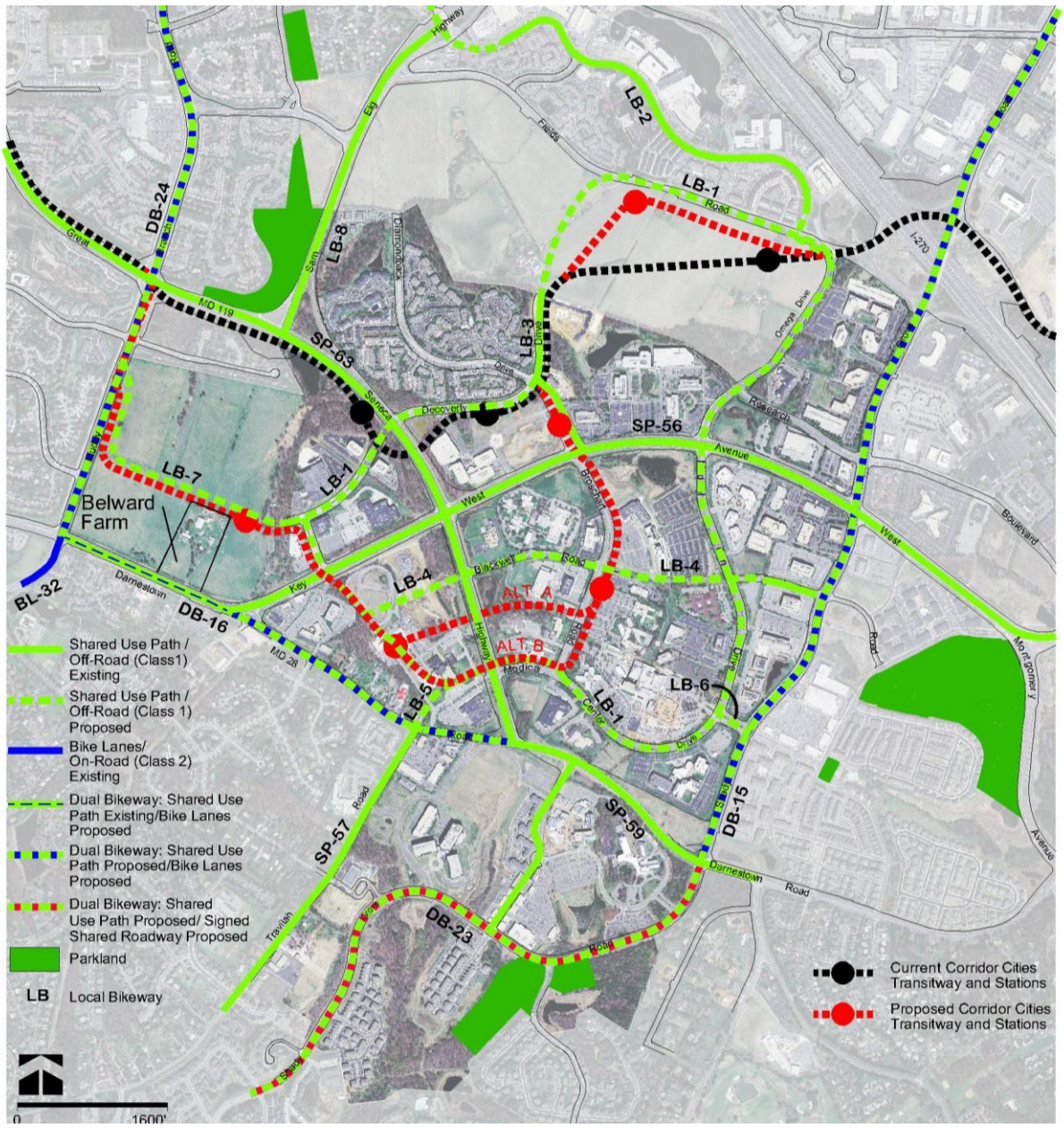
This Plan's recommended local bikeway network supplements the regional framework provided by the *Countywide Bikeways Functional Master Plan* and the *Countywide Park Trails Plan*. The local LSC bikeway network will connect to area schools, parks, open spaces, and commercial centers as well as to the County wide system.

LSC bikeways

Name	Type	Limits	Status/Condition	Discussion
LB-1 LSC Loop	Shared use path	Circular loop through the LSC	Proposed	3.5- mile recreational path connecting major destinations in the LSC districts.
LB-2 Washingtonian Boulevard	Shared use path	Sam Eig Highway to 850' northwest of Fields Road (City)	Existing and proposed, short segments exist	Connects mixed-use area to the local and City of Gaithersburg bikeway networks.
LB-3 Decoverly-Diamondback	Shared use path	Key West Ave. to Crown Farm property line	Existing segment, proposed through Crown Farm.	Connects mixed-use areas to the countywide bikeway network on Key West; should extend through Crown Farm to Fields Road.
LB-4 Blackwell Road	Shared use path	Shady Grove Road to Darnestown Road	Proposed	Connect countywide bikeway on Shady Grove Road to LSC and City of Rockville.
LB-5 PSTA	Shared use Path	Medical Center Drive extended through PSTA to Darnestown Road	Proposed	Connect LSC Loop on Medical Center Drive to the PSTA site and across Darnestown Road to countywide SP-57 and DB-16.
LB-6 Medical Center Way	Signed, shared roadway	Medical Center Drive to Shady Grove Road	Proposed	Connect LSC Central to the countywide network and City of Rockville paths and destinations.
LB-7 Belward Property	Shared use path along the CCT alignment	Key West Avenue to Muddy Branch Road	Proposed	Connect to LSC Loop, CCT station, historic farm, and countywide DB-24 on Muddy Branch Road.
LB-8 Sam Eig Highway	Shared use path	Washingtonian Blvd. to Great Seneca Highway	Existing	Connects Rio and future Crown Farm development to the Countywide bikeways.

LB=Local Bikeway

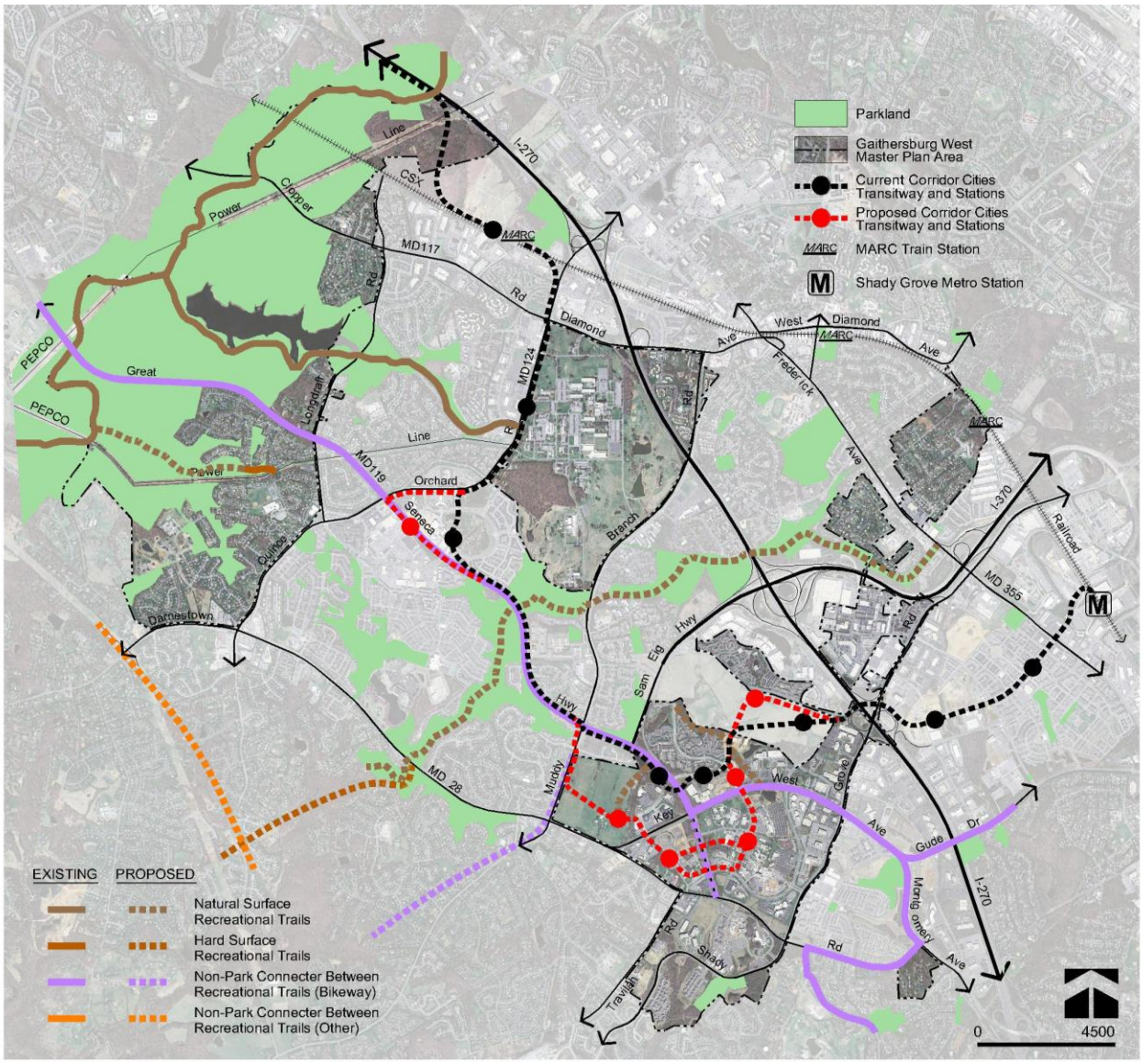
LSC Bikeway Network



Recommendations

- Provide County wide and local bikeways as recommended on the bikeway tables and maps.
- Provide a continuous bikeway as part of the CCT.
- Include bikeway and pedestrian paths as part of all grade-separated interchanges.
- Complete the trails network, including:
  - The Muddy Branch Trail Corridor from Dufief Mill Road and Darnestown Road to Great Seneca Highway on the east side of Muddy Branch Road adjacent to the Belward property
  - A natural surface trail connection between Quince Orchard Valley Park and the Seneca Greenway Corridor.

Trail Network



Proposed Capital Improvement Projects

The Capital Improvements Program (CIP) funded by the County Council and implemented by County agencies, establishes how and when construction projects are completed. The CIP cycle starts every two years when regional advisory committees and the M-NCPPC hold forums to discuss proposed items for the six-year CIP. The land use and staging recommendations contained in this Master Plan will require the following capital improvement projects. Some projects may include private sector participation.

proposed capital improvements projects

Stage	Project Name	Location/Limits	Road Number	Category	Coordinating Agency
1	Greater Shady Grove TMD			Transp.	MC-DOT
1	Travilah Fire Station	Shady Grove Road and Darnestown Road		Safety	MC-DGS
2	PSTA Relocation				MC-DGS
2	CCT Funded	Shady Grove Metro-Metropolitan Grove		Transit	MSHA/MTA Private Sector
2	LSC Recreation Loop			Recreation	Private Sector
3	CCT under construction	Shady Grove Metro-Metropolitan Grove		Transit	MSHA/MTA
3	Elementary School	LSC West/PSTA		Schools	MCPS
3/4	Park (with school)	LSC West/PSTA		Recreation	M-NCPPC
3/4	Civic Green (PSTA)	LSC West/PSTA		Open Space	M-NCPPC/ Private Sector
3	Medical Center Drive extended	Great Seneca Hwy. to Key West	A-261d	Transp.	MC-DOT/ Private Sector
3/4	LSC Central	Central Green		Open Space	Private Sector
3	Decoverly Drive extended	Johns Hopkins Drive to Muddy Branch Rd.	A-284	Transp.	MC-DOT/ Private Sector
3	Sam Eig/Great Seneca Hwy	Intersection Interchange		Transp.	MC-DOT/ MSHA
3	Key West/Great Seneca Hwy	Intersection Interchange		Transp.	MC-DOT/ MSHA
3/4	JHU Belward	Active Recreation/ Fields and Trails		Recreation	Private Sector
3/4	JHU Belward	Muddy Branch Trail Connector		Recreation	M-NCPPC Private Sector
4	Key West Avenue Widening	Darnestown Road to Shady Grove Road	M-22	Transp.	MC-DOT/ MSHA
4	Shady Grove Road/ Key West Avenue	Intersection: Interchange		Transp.	MC-DOT/ MSHA
4	Sam Eig Highway/ Diamondback Drive	Intersection Interchange		Transp.	MC-DOT/ MSHA
4	Great Seneca Hwy/ Muddy Branch Road	Intersection Interchange		Transp.	MC-DOT/ MSHA

Agencies *MC-DOT: Montgomery County Department of Transportation MCPS: Montgomery County Public Schools*
M-NCPPC: Maryland-National Capital Park and Planning Commission
MC-DGS: Montgomery County Department of General Services
MSHA/MTA: Maryland State Highway Administration/Maryland Transit Administration

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Nancy Floreen
Michael Knapp
George L. Leventhal
Nancy Navarro
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County Executive
Isiah Leggett

The Maryland-National Capital Park and Planning Commission
Samuel J. Parker, Jr., Chairman
Royce Hanson, Vice Chairman

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The Life Sciences Center

Montgomery County Planning Department
The Maryland-National Capital Park and Planning Commission

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