

Montgomery County Planning Department Research & Technology Center

The MD-355 / I-270 Technology Corridor Montgomery County, Maryland



SUMMARY OF RESEARCH 2006 - 2007

Montgomery County Planning Department Research & Technology Center

RECENT RESEARCH REPORTS on the MD-355 / I-270 Technology Corridor Montgomery County, Maryland 2006 – 2007

Biotech Industry Space Demands Krishna Akundi

Census Update Survey Profile Pamela Zorich

Demographics

Pamela Zorich

Housing Profile Sharon Suarez

Industrial Land Market Krishna Akundi

Industries & Jobs Profile Lisa Madigan Tate

Jobs and Housing Balance Wayne Koempel

Leased Office Space Market Trends Krishna Akundi

Retail Overview Krishna Akundi

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Introduction

A high quality of life and access to exceptional talent and economic opportunity are the MD-355/I-270 Corridor's signature strengths.

These strengths are intertwined and self-reinforcing. Good jobs and ample business opportunities attract skilled workers and business investment that in turn enable local government to provide quality schools, amenities and services—making the Corridor an even more appealing place to live, work and do business.

The MD-355/I-270 Corridor has absorbed significant growth over the past several decades while retaining an enviable quality of life. But the costs of that growth—traffic congestion, escalating land and housing prices, heavier loads on public services and infrastructure, and greater pressure on the environment—are beginning to undermine the Corridor's fundamental livability and economic competitiveness. It is equally important to recognize that the Corridor's population and economy are not just growing, they are changing—becoming far more diverse than in the past.

How will a more complex, densely developed demographic and economic environment affect the Corridor's future? And how can Montgomery County manage continuing growth and change—mitigating their costs and challenges without compromising the Corridor's quality of life or missing out on the Corridor's potential?

Research Overview

The Montgomery County Planning Department's MD-355/I-270 Corridor Project aims to provide a cohesive perspective on design and development issues that span individual communities and master plan boundaries within the Corridor.

To that end, Research Center staff compiled and analyzed demographic, housing, retail, commercial real estate and economic information for the Corridor as a whole, delivering their findings in a series of data sets and reports to Community-Based Planning earlier this year.¹

This summary report draws from the wealth of information in these studies in order to:

- provide a comprehensive, data-rich profile of the Corridor;
- describe the main forces reshaping its economic, demographic and built environments; and
- suggest implications for Corridor-wide policies and strategies that might help mitigate emerging challenges and bolster key competitive strengths.

Research Team findings are summarized below. Key trends and their possible implications for planning and policy are analyzed in the next section. The last section provides statistics and other details supporting these findings and recommendations.

MD-355/I-270 Corridor Research

Biotech Industry Space Demands Census Update Survey Profile Demographics Housing Profile Industrial Land Market Industries & Jobs Profile Jobs and Housing Balance Leased Office Space Market Trends Retail Overview



Future growth will concentrate in the Corridor

The Corridor has 65% of residential, 72% of household and 83% of job growth

¹ Additional community-level data and analyses will be prepared as needed for individual master plan updates.

Summary of Findings

Demographics

- The Corridor has a large, well-educated, affluent and diverse population.
- Corridor residents are not equally advantaged in education, income, English proficiency and other assets.
- The Corridor is home to almost half of Montgomery County's workforce, but more than one-third of the Corridor's employed residents commute to jobs outside the County.
- The Corridor will become more densely populated over the next 25 years.
- The expected demographic profile of future residents will in some ways be similar to the current population, but also more diverse.

Housing

- The Corridor supplies a major share of Montgomery County's housing stock.
- Demand is high for all unit types in the Corridor.
- Corridor rents are higher than the County average, and vacancy rates are low.
- Homeownership opportunities exist in all categories of Corridor housing.
- Housing costs are very high relative to incomes, putting homeownership increasingly out of reach of new homebuyers.

Economic Activity

- The MD-355/I-270 Corridor is Montgomery County's economic engine.
- The biotechnology industry is a critical economic driver.
- The Corridor economy is predominantly service-driven.
- The service sector is highly diversified, with advanced professional, research and technology services at the core.
- Advanced services and construction have led job growth in the Corridor.
- Most Corridor businesses are small, but employers of all sizes support the job base.
- Small and mid-sized establishments have supplied most recent job growth in the Corridor.
- The Corridor has added business establishments of all sizes in recent years.

Commercial Real Estate

- The Corridor is Montgomery County's primary office market.
- The Corridor also contains the wealth of the County's industrial and flex space.
- Market forces may undermine the future availability of industrial space for biotech and other uses.

Retail

- The Corridor contains more than half of Montgomery County's retail base.
- The Corridor is not meeting local retail demand.

Analysis

The MD-355/I-270 Corridor is changing visibly. With communities adding jobs, houses, businesses and people, it is becoming more densely developed. It also is diversifying, with a population that is increasingly varied in age, income, ethnicity, culture, language and housing. Integrating and providing services to this larger, more complex population–without compromising the high quality of life that residents continue to demand–will be a challenge.

The economic base also is growing and diversifying. No longer just a suburb of the nation's capital, the Corridor has emerged as a globally-known center for science and technology-driven industry.

Area businesses prosper from proximity to the U.S. federal government–the world's largest technology buyer. Top 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 are fueling new rounds of development. The Corridor's large, affluent consumer base has attracted a lively retail, restaurant and residential service mix. Robust commercial and residential building and renovation activity sustain the local construction sector.





Corridor Housing Growth Forecast

New Corridor residents-many from highly qualified backgrounds-augment an already 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 also could induce well-educated younger residents and recruits to stay in the area despite its rising cost of living.

Policy can help overcome the challenges and leverage the opportunities presented by dynamic growth and change. The need to manage growth at the County level strongly influences the Corridor's development trajectory. By channeling residential and economic development into already-developed centers served by transit and highways, Montgomery County hopes to protect its open, green and agricultural space–vital elements of local quality of life and environmental health–while making better use of existing transport and service infrastructure.

The County's approach to managing growth could bolster the Corridor's key competitive strengths—a high quality of life, exceptional base of talent and economic opportunity—over the long run. Smart Growth can help foster and sustain diverse urban centers where critical thinking, creativity, adaptability and innovation—and the businesses and residents these qualities attract—are able to thrive.

Key to generating these competitive benefits is to ensure that Smart Growth-based plans produce mixed-use urban environments that are livable for residents, and workable for employers. From a demographic point of view, three elements are valuable: mobility; affordable, attractive housing; and Corridor share of County employment

Source: Round 7.0 COG Forecast (2005)



diverse, tolerant communities. By facilitating the movement of people, goods and services around the region, controlling labor costs and expanding the pool of talent, these elements directly benefit the business community as well.

Smart growth could further enhance the Corridor's (and the County's) long term economic competitiveness by including strategies to create:

- affordable, flexible work spaces and commercial zones that help companies respond quickly to changing technological or industry conditions;
- commercial centers attractive and convenient to customers and employees; and
- diverse and ample commercial space suitable for researchers, businesses, clients, suppliers, professionals and maintenance services, enabling them to locate in close proximity to one another.

Finally, it is important to emphasize that innovative land use planning and strong commitment to quality schools, services and infrastructure are the core of Montgomery County's livability and economic competitiveness. Maintaining these very high civic standards will be crucial to making Smart Growth work in the MD-355/I-270 Corridor.



Source: Round 7.0 COG Forecast

Corridor Job Growth Forecast

Detailed Findings: Demographics

The Corridor has a large, well-educated, affluent and diverse population.

- The Corridor is home to 410,000 people– 44 percent of Montgomery County's household population.
- Among Corridor residents ages 25 and over, 66 percent are college graduates. 37 percent also have earned a graduate, professional or doctoral degree.
- At \$84,860, the Corridor's median household income is slightly higher than the countywide median and \$39,000 above the U.S. median.



- Homeownership in the Corridor exceeds the national rate of 67 percent, with 73 percent of households occupied by owners. (Countywide, homeownership rates have risen across all racial groups, especially among Asian-Americans.)
- 40 percent of Corridor residents are minorities, including Asian/Pacific Islanders (14 percent), Hispanics (14 percent) and African-Americans (12 percent).
- Foreign-born residents account for 29 percent (117,000) of the Corridor's population.
- Among Corridor households, 36 percent have at least one foreign-born head of household or spouse. Among Corridor residents ages 5 and over, 36 percent speak a language other than English at home.

A very highly-educated population

Educational Attainment of Adults Ages 5 and over. (2005)



Source: M-NCPPC 2005 Census Update Survey; U.S. Census, 2005 American Community Survey (United States)

Corridor residents are not equally advantaged in education, income, English proficiency and other assets.

- Seven percent of adult residents lack a high school education—although this is smaller than the number of adults in the County (eight percent) or the nation as a whole (16 percent) who have not finished high school.
- One in ten residents is not proficient in English, a significant barrier to employment and social integration.
- Housing costs consume more than 30 percent of household income for 40 percent of renters and 17 percent of homeowners in the Corridor.



- New residents—owners and renters alike—typically pay higher than average costs for housing.
- More than a quarter of Corridor households have median incomes below \$50,000, qualifying them for Montgomery County's Moderately-Priced Dwelling Units program.
- Recent in-mover households have a somewhat lower median household income (\$72,035), reflecting the fact that young adults not yet in their prime earning years often are the people starting new households.
- Households with a foreign-born head or spouse earn 85 percent of the \$89,319 median income of native-born households.
- Heads of households working in Montgomery County typically have lower median household incomes than those employed outside the County.

The Corridor is home to almost half of Montgomery County's workforce, but more than one-third of the Corridor's employed residents commute to jobs outside the County.

- The Corridor is home to nearly half (45 percent) of Montgomery County's resident labor force.
- 46 percent of the Corridor's 235,000 employed residents commute to jobs outside Montgomery County, including 20 percent to Washington, DC and 8 percent to Virginia.
- Three out of four employed Corridor residents commute by car, with 16 percent taking public transit and 4 percent working from home. Commutes by car average 28 minutes, compared to 48 minutes by public transit.

The Corridor will become more densely populated over the next 25 years.

- One in five Montgomery County residents is new, having moved into the County between 2000 and 2005. Half of the County's new households settle in the Corridor.
- The Corridor will add an estimated 150,000 new residents—70 percent of Montgomery County's total population growth—over the next 25 years. By 2030, nearly half of Montgomery County's 1.2 million residents will live in the Corridor.
- High birth rates and rapid movement of people into the area—especially from abroad—is propelling population growth.

Nearly 30 percent of Corridor residents are foreign-born

Source: 2005 Census Update Survey



• Land use policies will channel most new housing into already-developed areas, giving the Corridor's built environment an increasingly urbanized, mixed-use character.

The expected demographic profile of future residents will in some ways be similar to the current population, but also more diverse.

- Much of the existing population is maturing in place. In 2005, around 45,000 Corridor residents—11 percent of the population—were age 65 or older. Half were over the age of 74.
- With baby boomer residents aging—and being more likely than prior generations to stay in their homes after reaching retirement age—senior citizens are expected to be the Corridor's fastest-growing age group.

As has been noted, most of Montgomery County's future population growth will be in the Corridor. The characteristics of people moving into the County suggest how the Corridor's demographic profile will evolve.

- Nearly 60 percent of Montgomery County's new residents come from outside the region. They are most likely to be highly-educated, married couples in their thirties with children.
- Half work outside Montgomery County.
- Most (53 percent) people moving into Montgomery County are (non-Hispanic) Whites. But White non-Hispanics also constitute an even higher proportion of people leaving the County. Consequently, minorities (including foreign-born residents) are fueling Montgomery County's net population growth.
- Households with foreign-born head or spouse typically are younger and larger (with more children) and more ethnically diverse, have greater extremes in educational attainment, and are more likely to carpool or take transit to work.

- Almost half (44 percent) of new residents speak a language other than English at home.
- More than half of new resident households rent their dwelling.
- Garden apartments are the first housing choice for 31 percent of new residents moving into the County from outside the Washington, DC metropolitan area. People moving in from Washington, DC, Maryland or Virginia are more likely to choose single-family dwellings.

Detailed Findings: Housing

The Corridor supplies a major share of Montgomery County's housing stock.

- There are 161,000 households in the Corridor—46 percent of households Countywide—with an additional 24,000 units approved for construction.
- The ratio of jobs to existing and approved housing is 2.49. By 2030, the Corridor will have an estimated 229,000 units, bringing the ratio of jobs to housing to 2.19.
- The Corridor contains a significant percentage of the County's senior housing resources, with more than 60 percent of all retirement community and assisted living facility units or beds, half of all nursing home units and a third of senior subsidized units Countywide.
- More than 85 percent of housing was built before 2000. Nearly 16 percent of single-family homes were built before 1950, when nearly all housing construction was of this type.

Source: 2005 Census Update Survey

Housing Stock in the I-270 Corridor



Housing Tenure

Owned v. Rent Units by Housing Type Source: 2005 Census Update Survey



Demand is high for all unit types in the Corridor.

- The majority (64 percent) of households are housed in single-family dwellings, of which most (62 percent) are in detached units versus 38 percent in townhouses, duplexes or other attached single-family units.
- Multi-family units supply the remaining share of Corridor housing, with 25 percent of households living in garden apartments and 11 percent in high-rise units.
- More Corridor residents—including families and empty-nesters—are opting for apartments and condominiums.

Homeownership opportunities exist in all categories of Corridor housing.

- Nearly all single-family dwellings (94 percent) are owner-occupied, compared to 36 percent of multi-family units.
- Garden apartments account for 59 percent of all renter households in the Corridor and high-rise apartments provide another 26 percent.

Housing costs are very high relative to incomes, putting homeownership increasingly out of reach of new homebuyers.

- High owner-occupancy rates mask the serious consequences of rapid housing price appreciation. Many homeowners could not afford to purchase their current homes today. Some residents have used equity windfalls to trade up, but this has become more difficult; middle- and lower-income residents and people moving in from less expensive regions are being shut out. Some businesses report that the cost of housing has made it much harder to recruit recent graduates and employees with young families.
- Montgomery County has the highest median homeownership and rental costs in Maryland. On average, Corridor homeowners spend \$1,668 on housing costs, and renters spend \$1,284.
- Median sales prices in all housing categories fall within 15 percent of the Countywide median. In 2006, all categories of housing sold for slightly below the County median price, with new condominiums sales prices lagging in particular. Existing detached single-family homes were an exception, selling around 11 percent above the County median of \$555,000.
- Purchasing a new single-family home in the Corridor at the median sales price of \$806,000 would require a household income of nearly \$226,000.
- With a median sales price of nearly \$280,000, existing condominiums were the only unit type affordable to households earning the area median income.

Corridor rents are higher than the County average, and vacancy rates are low.

- The Corridor contains half of Montgomery County's apartment stock.
- Renting is more expensive in the Corridor than in the County as a whole. In 2006, turnover rents in most of the Corridor averaged \$1,368 to \$1,550, compared to the \$1,212 Countywide rate. (Average rents in the small market area at the Corridor's northernmost end were \$986.)
- As in most of Montgomery County, the Corridor's apartment market is tight, with vacancies between 1.7 percent and 5.4 percent. Vacancies are lowest in Rockville and Bethesda-Chevy Chase submarkets.

Corridor home prices are steep

Median price of homes sold in the Corridor (2006)



New homebuyers need high incomes

Income needed to buy a median-priced home in the Corridor (2006)



Detailed Findings: Economic Activity

The MD-355/I-270 Corridor is Montgomery County's economic engine.

- More than 300,000 people work in the Corridor's 18,000+ business establishments for a total business payroll of more than \$15 billion.
- Between 1998 and 2004, the Corridor garnered three-fourths of Montgomery County's total growth in private-sector jobs and payroll, and added new business establishments at twice the pace of the rest of the County.
- Three major highways—I-270, the Capital Beltway and MD-355—as well as Metrorail and MARC commuter train lines serve the Corridor. Montgomery County's commercial space is concentrated along this transportation spine, with the Corridor's 91 million square feet of leased office, industrial, flex and retail space accounting for 78 percent of total leased County inventory.
- Lockheed Martin, IBM, Marriott International, MedImmune and Human Genome Sciences are among the globally-known companies that are headquartered or have a significant presence in the Corridor.
- The Corridor also contains two worldrenowned federal research campuses—the National Institutes of Health (NIH) and the National Institute of Standards and Technology (NIST)—and major satellite offices for the U.S. Department of Health and Human Services and the U.S. Department of Energy.

Fortune 1000 Companies based in the MD-355/I-270 Corridor							
Source: Fortune Magazine (2007)							
U.S. Rank	State Rank	Company	Revenues (\$billions)				
57	1	Lockheed Martin	\$39.6				
203	3	Marriott International	\$12.2				
313	4	Coventry Health Care	\$7.7				
452	6	Host Hotels & Resorts	\$5.0				
906	10	USEC	\$1.8				

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Fastest Growing Technology Companies based in the Corridor Source: Deloitte Fast 500 (2006)

			Rank	
Company	5-year growth	City	U.S. Fast 500	Maryland Fast 50
NexTone Communications	7901%	Gaithersburg	36	1
BroadSoft	2171%	Gaithersburg	99	4
WealthEngine.com	606%	Bethesda	250	10
Catapult Technology	567%	Bethesda	258	13
GenVec	501%	Gaithersburg	289	15
Systems Integration & Develop	oment 340%	Rockville	365	19
Digene Corporation	237%	Gaithersburg	456	23
EntreMed	218%	Rockville	489	24
CNSI	203%	Rockville	-	26
Optelecom-NKF	157%	Germantown	-	30
Infinite Computer Solutions	129%	Rockville	-	34
MedImmune	101%	Gaithersburg	-	36
OPNET Technologies	95%	Bethesda	-	37
Capital Technology Information	n Services 89%	Rockville	-	39
CoStar Group	85%	Bethesda	-	40
Gene Logic	83%	Gaithersburg	-	42
Human Genome Sciences	49%	Rockville	-	44
Savantage Solutions	48%	Rockville	-	45
Dataprise	46%	Rockville	-	47

Montgomery County's Economic Engine

Source: M-NCPPC analysis of 2004 County Business Pattern zip code data



The Corridor economy is predominantly service-driven.

- The 355/270 Corridor economy is strongly oriented to professional, technology, financial and consumer-supported services.
- Goods-producing sectors such as construction and manufacturing play a smaller role with roughly 10 percent of area jobs and establishments.
- The Corridor's professional, business and technology industry core, along with its large residential base, creates significant secondary demand for local construction, retail and support services.

Corridor employment base





The service sector is highly diversified, with advanced professional, research and technology services at the core.

- 30 percent of the Corridor's private sector jobs are in professional and business services. The Corridor contains 80 percent of Montgomery County's jobs in this sector. Advanced services—including information technology, biotechnology, legal, research and scientific services—alone account for the largest core of jobs (56,000) and business establishments (4,060) in the Corridor.
- Consumer-driven industries-such as health services, real estate and leisure services-together make up a third of the Corridor's economic base.
- The Corridor contains 78 percent of Montgomery County's trade and transportation industries, which supply around 20 percent of Corridor jobs and business establishments.
- Information sector industries—including software, data processing, telecommunications and publishing—account for only 5 percent of local employment.

Corridor business establishments



Advanced services and construction have led job growth in the Corridor.

- Professional, scientific and technical services outpaced all other sectors in job growth, adding more than 10,000 jobs between 1998 and 2004.
- The construction sector added jobs at the fastest rate—26 percent reflecting brisk building construction and remodeling demand in recent years.
- The information sector lost the greatest number of jobs, due to nationwide telecommunications restructuring soon after that industry had expanded rapidly in the Corridor during the 1990s. More recent data suggests this sector is beginning to rebound locally.
- The Corridor's manufacturing sector lost16 percent of its job base–an attrition well below the 24 percent national rate. Most of the nearly 10,000 manufacturing jobs that remain in the Corridor are in printing or high tech equipment-making establishments (both of which serve the region's large technology and professional service sectors).

Most Corridor businesses are small, but employers of all sizes support the job base.

- As in most areas, the great majority (94 percent) of Corridor business establishments are small, with fewer than 50 employees. More than half (55 percent) have fewer than 5 employees. Less than one percent (excluding government job sites) have 250 or more employees.
- However, larger employers supply more than half of all jobs in the Corridor, with 33 percent of jobs (100,000) in mid-sized establishments of 50 to 249 employees, and 21 percent (65,000) in job sites with 250 or more employees.

The biotechnology industry is a critical economic driver.

- The federal presence is and will continue to be a critical driver of biotech/ bioscience activity in the region, state, and county. The government's emphasis on biodefense and nanotechnology will positively impact Montgomery County.
- Montgomery County is not considered ideal for large-scale manufacturing. However, it does have the land and resources for additional research and development facilities.
- Montgomery County has the largest concentration of lab space in the region. Thus, the economies of scale already exist to add more lab space here than start from scratch elsewhere.
- Bioscience and other R&D space developers are keenly interested in the County's I-3 zoned land. Germantown has 400 acres and Clarksburg has 571 acres in I-3 zones.
- Industrially-zoned land that allows for light industrial uses, such as I-1 and I-4, also would appeal to certain types of biotech firms. These biotech firms might find Twinbrook a suitable location; however, locations that appear

lucrative may prove unsuitable because of size, ownership, and infrastructure issues.

 Montgomery County would be better positioned to influence the global and national biotech industry if its capital markets and technology transfer market were stronger.

Small and mid-sized establishments have supplied most recent job growth in the Corridor.

- Mid-sized establishments provided most (58 percent) job growth in the Corridor, adding nearly 15,000 jobs between 1998 and 2004. Small establishments added another 11,000 jobs, accounting for 43 percent of total job growth
- Most job growth (19 percent) was in 100-to-249 employee job sites, followed by 20-to-49 employee job sites (18 percent).

The Corridor has added business establishments of all sizes in recent years.

- Most businesses start small, so most new establishments are small.
 60 percent of new Corridor business establishments have fewer than 5 employees and 91 percent have fewer than 50 employees.
- The fastest growth—between 16 and 17 percent—was among mid-sized establishments with 50 to 249 employees.
- There was a modest 6 percent decline in the number of 250-to-499 employee job sites, which could be the result of decentralization (which could include distributing new and existing employees to smaller nearby spaces), downsizing or relocation.

Most new businesses are small, but business of all sizes produce job growth

Corridor job and establishment growth by establishment size (1999 to 2004) Source: M–NCPPC Research Center analysis of 2004 County Business Pattern data



Detailed Findings: Commercial Space

The Corridor is Montgomery County's primary office market.

- Nearly 80 percent of the County's leased office space is located in the I-270 Corridor. Current leased office space inventory is 49.5 million square feet, with 1.3 million square feet under construction. An additional 14.2 million square feet is proposed for delivery in 2008-2009.
- The Corridor contains 81 percent of Montgomery County's prime Class A office space. Half of the Corridor's total office square footage is in 164 Class A buildings-typically the most prestigious properties fetching aboveaverage rents. Class A office buildings are mostly in Bethesda and Rockville.
- After a downturn in recent years, the office market appears to be on a modest but clear rebound. At 7.1 percent, Class A vacancies are the lowest in a decade. Rents are rising for the first time since a tumble in 2001, and averaged \$32 per square foot in the prime Bethesda market.

Source: CoStar, 3rd guarter 2006

The market for Class B space—43 percent of the Corridor's total office inventory—is recovering from a sharp decline during 2001 to 2004. Vacancy rates in Class C buildings-8 percent of Corridor office space—have fluctuated between 5 and 8 percent in recent years, and currently are at the high end of that range.

The Corridor also contains the wealth of the County's industrial and flex space.

- With 5.325 acres of industrially-zoned land and 11 million square feet of leased industrial space, the Corridor accounts for 73 percent of the County's industrial acreage, 84 percent of its industrial land value and 85 percent of its leased space. Utilized industrial space ratios (a measure of development intensity) average 2.88, with the highest intensity of use in North Bethesda (4.69) and the lowest in Clarksburg (1.83).
- The vast majority of industrial uses are in light • Flex industrial I-1 and I-4 zoned land. Most I-1 land is 13% in the Shady Grove/Derwood area and in a few dispersed smaller pockets; I-4 land is concentrated near Twinbrook, the Montgomery County Airpark and

Commercial space is concentrated in the Corridor



Corridor Commercial Space by Type

Source: CoStar, 3rd quarter 2006



Clarksburg. The largest concentration of land zoned I-3 (Technology and Business Park) is in the Germantown/Clarksburg area, with 1,000 acres.

 Flex space also is concentrated along I-270 and MD-355, with more than 12 million square feet of leased space—85 percent of the Countywide total—in the area.

Market forces may undermine the future availability of industrial space for biotech and other uses.

- Competition from local business or residential service providers for existing light industrial/flex space—along with growing pressure to convert land to more profitable non-industrial uses—present a challenge to preserving, assembling and expanding space for biotech and other critical economic clusters.
- High land costs, strict environmental standards, a dearth of large industrial tracts, a workforce and other factors greatly limit the County's overall competitiveness as an industrial location.
- Light industrial and flex space in the Corridor often is taken up by business and residential service providers such as building materials, plumbing supply, landscaping, medical supply, electronic equipment and automotive supply companies. With strong local markets, these tenants generally can afford the Corridor's higher lease rates, and their stability makes them more attractive than startups and businesses in riskier sectors, including biotech.
- There is strong pressure to convert industrial space in all categories to office, retail and mixed-use developments, which generally offer higher returns to industrial landowners.

Detailed Findings: Retail Market

The Corridor contains more than half of Montgomery County's retail base.

- The Corridor accounts for 56 percent of retail sales Countywide.
- The majority of shopping centers in the County are located along the Corridor as well as Georgia Avenue, reflecting the fact that retail development typically follows residential development. The Corridor contains Montgomery County's largest and best-known retail outlets, including its two largest regional shopping centers (Bethesda's Westfield ShoppingTown Montgomery and White Flint Mall in North Bethesda). It also has two "power centers" (the I-270 Center in Gaithersburg and Milestone in Germantown). Bethesda Row exemplifies the "lifestyle center" model appearing in affluent communities across the country.
- Gaithersburg's Washingtonian represents the "omnicenter" model combining power center, lifestyle center and regional mall features.

The Corridor (and the County as a whole) is not meeting local retail demand.

- Despite multiple shopping opportunities retail spending by Corridor residents in 2005 exceeded local sales by \$1.5 billion annually—indicating that people are going outside the Corridor for many of their shopping needs.
- Research shows that Corridor residents are most likely to go outside the County to shop in (1) department stores and superstores; (2) home building and garden stores; (3) gasoline stations; and (4) drug stores.
- Recent analysis of a similar retail gap for Montgomery County as a whole suggests land use and zoning regulations may limit retail growth for aesthetic, environmental and other reasons. Examples include Rockville's restrictions on future big-box retail, or the County setting strict zoning and permit standards for certain types of large retailers. High land or lease costs and a lack of suitable properties also are factors. Within more mature suburban areas, obsolescent shopping centers currently occupy valuable land.