Understanding Opportunities and Challenges: A Review of the Purple Line Transit Corridor

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Contents

Executive Summary

The Purple Line will bring significant changes to the northern and northeastern inner suburbs of the Washington, DC, metropolitan area. The Purple Line Corridor Coalition, administered by the National Center of Smart Growth Research and Education, has drafted this report to depict the baseline data of communities within the Purple Line Corridor, in order to prepare for these changes and to take advantage of opportunities to enhance local community development. The report also explains some of the expected economic and community benefits of the Purple Line. The Purple Line Corridor is divided, based on socio-demographic characteristics, into five subareas: Bethesda-Chevy Chase, Silver Spring, International Corridor, University of Maryland, and Riverdale-New Carrollton. Communities within the corridor are defined as those within a half-mile from the tracks.

The report consists of seven chapters. The first chapter introduces the Purple Line. The second chapter provides a regional context and a brief history of the Purple Line. Chapters 3 through 6 discuss the Purple Line Corridor in terms of demographics, employment, housing, and land use. Chapter 7 provides a summary of major findings. Highlighted findings include:

- **Context:** Healthy metro area, extensive transit system in and out of urban center, first radial light rail line to connect east-west suburban Maryland communities and business centers.
- **Demographics:** A diverse population comprises the Purple Line Corridor, with white and high-income concentrated in the west, a predominantly African American demographic in the east, a Hispanic concentration in the International Corridor, and students surrounding the University of Maryland. The demographic is highly transit supportive since 25 percent of the workforce commutes via public transportation. According to the FEIS, 65 percent of these communities are Environmental Justice areas.
- **Employment:** The Purple Line Corridor connects four employment centers and specializes in knowledge/skill-based service industries, such as the University of Maryland. Among the five subareas, the International Corridor has the fewest jobs while Bethesda-Chevy Chase has the most. Currently, jobs and housing are not well balanced. The Purple Line will significantly increase job accessibility for low- and medium-skilled workers.
- **Housing:** Overall housing density is medium to high along the corridor. Single family property values vary by county, and multi-family housing is clustered near existing transit stations and Takoma/Langley Park along University Boulevard. Housing costs for renters, particularly for low-income and Hispanic residents, are extremely high. Subsidized housing faces the risk of expiring financial support. Affordability needs to be preserved.
- **Land use:** High-density residential and commercial land is concentrated at Bethesda, Silver Spring, Takoma/Langley Park, and Riverdale Park. New Carrollton has industrial land adjacent to the transit station. Open space in parts of the corridor will enable walkability to the proposed Purple Line stations. Areas with limited access to affordable, healthy food, known as food deserts, need special attention.

All maps are accessible from the Purple Line Corridor Coalition webpage:
http://smartgrowth.umd.edu/plccmaps

Chapter 1 Introduction

What is the Purple Line?

The Purple Line will bring east-west light rail transit (LRT) service inside the I-95/I-495 Capital Beltway, north and northeast of Washington, DC, in approximately 2020. Conversations about a suburban rail line began about three decades ago. In 1988, Montgomery County purchased the Georgetown Branch Railroad right-of-way for the intended use as a transitway and a trail. An early 1992 study called for transportation improvement through Montgomery and Prince George's counties. It wasn't until 2007 that John Porcari, then Secretary of the Maryland Department of Transportation, formally initiated detailed planning for the project. Between 2003 and 2008, the Federal Transit Administration (FTA) and Maryland Transit Administration (MTA) examined various alternatives and design concepts under a National Environmental Policy Act (NEPA) process and retained eight alternatives for study in the Alternative Analysis/Draft Environmental Impact Statement (AA/DEIS). After considerable public input and debate, Maryland Governor Martin O'Malley identified a Locally Preferred Alternative (LPA) in August 2009. Four years later, in September 2013, the Final Environmental Impact Statement (FEIS) and Draft Section 4(f) Evaluation (also federally required) was published for a 30-day public comment period. In November 2013, the Board of Public Works gave its approval to deliver the Purple Line through a Public-Private Partnership (P3), in which a private team would be tasked with design, construction, operation, and maintenance of the Purple Line, as well as providing a portion of the financing for the project. The Federal Transit Administration issued the Federal Record of Decision in March 2014, giving federal approval to proceed with the project. MTA then issued requests for proposals for the Purple Line P3. Construction was planned for 2015, with the aim of opening the Purple Line to service in 2020.

Analysis in this report focuses on the corridor selected for the LPA. The LPA will have 21 stations. Seventeen stations will be at street level, three will be on aerial structures, and one will be in a tunnel portal. The typical station will be platform style, 200 feet long, with shelters, benches, and fare vending machines. The stations will be more substantial than a bus stop, but smaller than the average Metrorail station. The LPA will not provide new station parking; passengers will access the Purple Line by walking, bicycling, transferring from other transit lines, or parking at existing facilities. The LPA will include reconstructing a permanent Capital Crescent Trail, funded by Montgomery County, from Bethesda to Silver Spring. The LPA will connect to the Washington Metropolitan Area Transit Authority (WMATA) Metrorail network at Bethesda, Silver Spring, College Park, and New Carrollton, and to MARC at Silver Spring, College Park, and New Carrollton. Sites in the Lyttonsville and Beacon Heights/Glenridge neighborhoods were selected for yard and maintenance facilities.

[Map 1-1-1 Purple Line stations]

The Purple Line will be the first light rail system in the Washington metropolitan area (all others are heavy rail) and will operate primarily at grade level. The current end-to-end travel time

between Bethesda and New Carrollton is 55 minutes on Metrorail, and the travel time for peak hour bus service between Bethesda and New Carrollton currently is 92 minutes. Under a No Build scenario in which the economy grows but no Purple Line is built, the travel time by bus would increase to 108 minutes. In 2040, if the Purple Line is constructed, the total travel time on the planned Purple Line would be 63 minutes, including stops at all stations. The shorter light rail travel time is due partly to the Purple Line's operation in dedicated or exclusive lanes for 13.9 miles of its 16.2-mile length. It will be free from traffic congestion, allowing for greater efficiency and reliability.

Chapter 2 Regional Context

The Washington D.C. metropolitan area, also known as the Washington-Arlington-Alexandria, DC-VA-MD-WV Metro Area by the Census Bureau, had a population of more than six million in 2014, making it one of the largest metropolitan areas in the United States. Over six square miles, the region includes Washington, D.C., counties of Maryland, and part of Northern Virginia. The Washington D.C. metropolitan area is the richest and most educated in the U.S.[i] According to the 2013 5-year American Community Survey (ACS), per capita income in Washington D.C. metropolitan area was $42,897, which is about 1.5 times that of the United States. Median household income is $90,149, more than 1.5 times the amount in United States ($52,250). Ninety percent of the population received a high school degree or higher, and almost half the population has Bachelor's degree or higher.

The Washington D.C. metropolitan area's demographics and built environment are both transit supportive. Among all commuters, about fourteen percent take public transportation to work, which is about three times more than the national level of five percent. In addition, a lot of smart growth projects have emerged in the area, particularly near transit stations. For example, several town centers with compact and intense development, mixed land use, and well-designed pedestrian environment have created vibrant places to live, work, shop, and play; the Capital Bikeshare program provides low-cost, healthy, and sustainable alternative to driving; several waterfront development projects have been reshaping the open space into great cohesive public space.

Montgomery and Prince George's counties are two Maryland counties in the Washington D.C. metropolitan area. Located at the northern border of Washington, D.C., the two counties have been playing important roles. Washington D.C. is the national capital as well as a top employment center, yet it has very limited developable land. Therefore, a lot of employee who works in D.C. live in these two counties. In addition, Montgomery and Prince George's counties themselves are important job centers. According to the 2007 Survey of Business Owners, there are 115,471 companies in Montgomery County, 72,759 companies in Prince George's County. Six out of twenty-three statewide employment centers are located in these two counties, providing in total 571,566 jobs.

2.1 The Regional Transit Network

Majorly there are three categories of transit services in the Washington D.C. metropolitan area: regional level service, state level service, and local level service. Washington Metro Area Transit Authority (WMATA) was created in 1967 by an interstate compact to plan, build, and operate a regional transportation system. The Metrorail subway system includes six lines, 86 stations, and 106.3 lines of track.[ii] Metrorail is complemented by Metrobus, which runs approximately 1,500 buses over 338 routes.

At the state level, the region has Maryland Transit Administration (MTA) and Virginia Rail Express (VRE). MTA is a division of the Maryland Department of Transportation that operates local and commuter buses, a light rail, Baltimore's Metro Subway, Maryland Area Regional Commuter (MARC) Train Service, and other transit systems. As of 2011, MTA has an annual ridership of 109,743,301 and an average weekday ridership of 371,773.[iii] County buses and shuttle buses further enhance local transit connectivity. VRE provides commuter rail service from the Northern Virginia suburbs to Alexandria, Crystal City and downtown Washington, D.C., along the I-66 and I-95 corridors. Currently, VRE operates 29 trains from 18 stations. The average ridership is 19,000.[iv]

Local level transit services complement the regional and state services, and function as the last-mile solutions. In the regional, major local transit services include county bus service (such as Fairfax county bus system *Connector*) and city bus service (such as Alexandria's *Dash*).

Transit networks in the proposed Purple Line corridor includes two major transit agencies—Washington Metro Area Transit Authority (WMATA) and Maryland Transit Administration (MTA)—and several local transit authorities/special transit services, including TheBus of Prince George's County, RideOn of Montgomery County, and University of Maryland's shuttle bus system.

The proposed Purple Line would improve the regional transit network by adding east-west connections. The existing transit network is a radius, with the center in downtown Washington, DC. Deficiencies in east-west transit services in Montgomery and Prince George's counties have been identified by regional studies and local plans for more than two decades. Bus service is the only option available for east-west travel, but it is often slow and unreliable since it operates on a congested roadway system. The Purple Line will give commuters in suburban Maryland a faster, more direct, and more reliable way to reach other Maryland suburbs without traveling through DC in order to do so, all while providing additional connections to the existing Metrorail and MARC systems.

Map 2-1-1 illustrates the DC metropolitan area's future transit network with the planned Purple Line in place. The Purple Line greatly improves the network by connecting west (Bethesda in Montgomery County) and east (New Carrollton in Prince George's County).

[Map 2-1-1 Future transit network with Purple Line]

2.2 Corridor Subareas

The Purple Line transit corridor includes block groups whose geographic centers are located within half mile distance from the Purple Line, and those block groups with more than 50 percent area in the Purple Line half-mile buffer. Off=The Purple Line transit corridor includes many diverse neighborhoods. To better convey the demographic of the corridor, this report clusters neighborhoods into five subareas:

- Bethesda-Chevy Chase
- Silver Spring
- International Corridor
- University of Maryland
- Riverdale-New Carrollton

Bethesda-Chevy Chase includes downtown Bethesda, combined with residential neighborhoods in Chevy Chase. Major facilities in the area include Walter Reed National Medical Center and the National Institutes of Health. Both neighborhoods are mainly white and affluent, with many residents commuting into DC or working locally in Bethesda.

Silver Spring is a mixed use, postwar center east of Bethesda-Chevy Chase. Included in this subarea are Silver Spring, Woodside, Lyttonsville, East Silver Spring, and Long Branch. Woodside and Lyttonsville, located west of Silver Spring, are mostly suburban and residential, with a small light industrial area. Silver Spring itself includes an older commercial center that has transformed to a vibrant mix of office, retail, and residential uses. East Silver Spring and Long Branch are suburban as well, with a more mixed-income population.

Located mostly in Prince George's County, the International Corridor is composed of Takoma Park, Langley Park, Adelphi, and Lewisdale. This region mainly comprises residents of Hispanic and Asian origin. It is mixed-income, with most residents commuting to work via carpool. Major landmarks include churches, schools, and the Maryland Drafting Institute.

The University of Maryland subarea is located primarily in College Park and is dominated by the University and a neighboring research center. The population mainly consists of University students, faculty, and staff members.

Riverdale-New Carrollton is the corridor's easternmost subarea, and where the Purple Line meets the blue/orange lines at New Carrollton. The community is suburban, mixed income, and diverse, with a higher African American concentration. The Social Security Administration is the dominant ….

[Map 2-2-1 Subareas along Purple Line Transit Corridor]

Chapter 3 Demographics

The Purple Line corridor is a region of great demographic diversity and rapid demographic change.

3.1 Population and Households

In 2000, the Purple Line transit corridor had a population of 213,145 and 80,458 households. Population by 2010 had increased by 15,111 to 228,256; households had increased by 3,825 to 84,283. The subarea growing most rapidly over the last decade is the University of Maryland subarea, where population grew by twenty-two percent and households grew by ten percent. The subarea growing most slowly is the Riverdale-New Carrollton subarea, where population grew by four percent and households grew by one percent.

Bethesda-Chevy Chase population increased from 37,199 to 38,433, and the number of households increased from 16,766 to 17,585. Silver Spring experienced an increase in population from 45,610 to 49,642, and an increase in households from 20,554 to 22,619. The International Corridor's population increased by 2,482, yet the number of households only increased by 168. The University of Maryland subarea experienced the most growth of all five subareas, with a population increase by almost 5,000, while adding 546 households. The Riverdale-New Carrollton subarea had a population increase of 2,379, and an increase in households by 229.

Table 3-1. Census population statistics, 2000 and 2010

	2000 Population	2010 Population	2000 Households	2010 Households
Bethesda-Chevy Chase	37,199	38,443	16,766	17,585
Silver Spring	45,610	49,642	20,554	22,619
International Corridor	54,183	56,665	18,258	18,426
University of Maryland	23,066	28,040	5,591	6,137
Riverdale-New Carrollton	53,087	55,466	19,287	19,516
Corridor	213,145	228,256	80,458	84,283

Source: Census 2000; Census 2010

Within the Purple Line corridor, 48 percent of residents are white (76,624), 31 percent have Hispanic origin (45,674), 29 percent are African American (49,128), and 7 percent are Asian (11,246). Populations of Hispanic origin are clustered primarily around the Langley Park area, and the African American population is concentrated to the east. Non-native English speakers also are clustered at Langley Park.

[Map 3-1-1 Percentage of white population]
[Map 3-1-2 Percentage of population of Hispanic origin]
[Map 3-1-3 Percentage of African American population]
[Map 3-1-4 Percentage of Asian population]

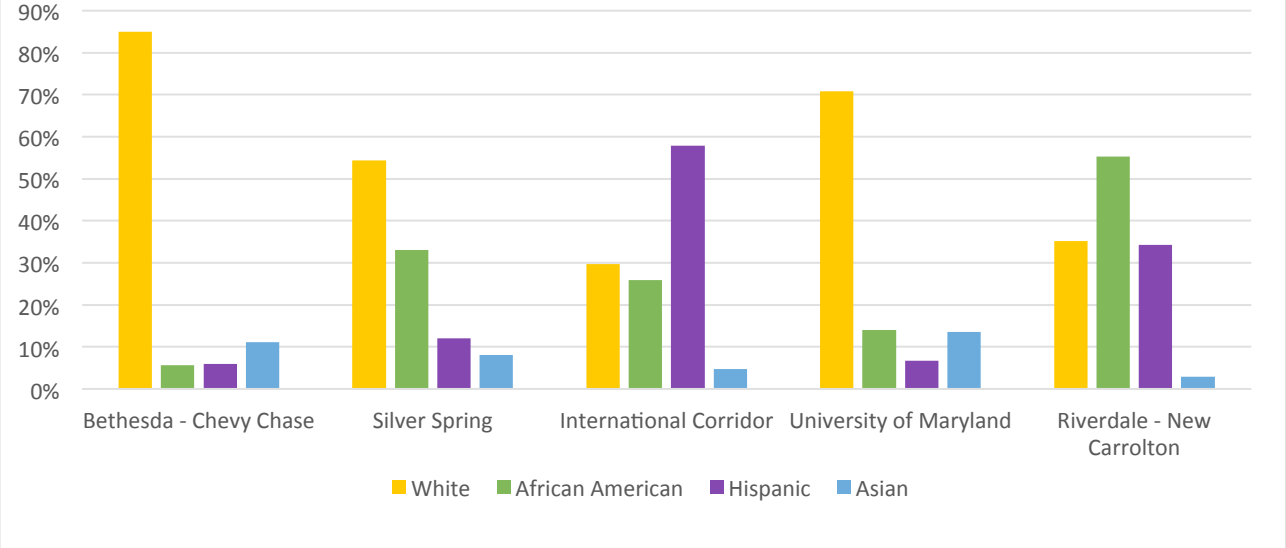
[Map 3-1-5 Percentage of population who do not speak English well]

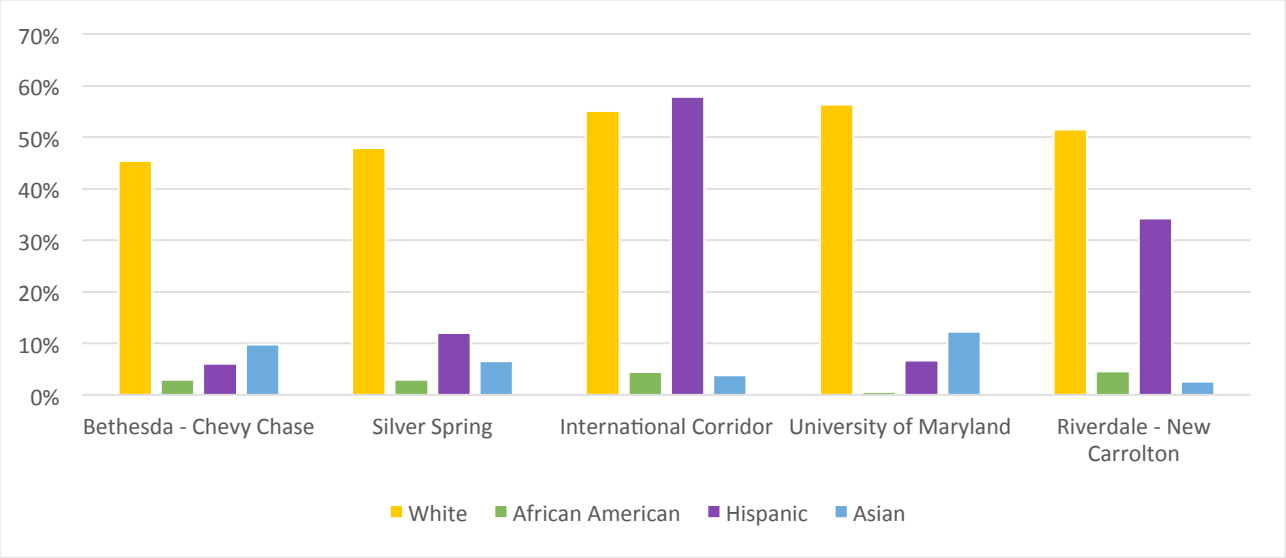
As Table 3-2 shows, the majority of residents of Bethesda-Chevy Chase, University of Maryland, and Silver Spring are white. The African American population is highest in Riverdale-New Carrollton, comprising 35 percent of the population. The African American population is lowest at Bethesda-Chevy Chase subarea (6 percent). The International Corridor subarea has the highest Hispanic population (58 percent) and Riverdale-New Carrollton the second highest (34 percent). The largest Asian population (14 percent) is located in the University of Maryland subarea, partly due to international students attending the University.

Table 3-2. Population demographics by subarea

Subarea	White	African American	Hispanic	Asian
Bethesda - Chevy Chase	85%	6%	6%	11%
International Corridor	30%	26%	58%	5%
Riverdale - New Carrolton	35%	55%	34%	3%
Silver Spring	54%	33%	12%	8%
University of Maryland	71%	14%	7%	14%
Corridor	48%	29%	31%	7%

Figure 3-1. Population demographics as percentage of the population by subarea





Federal law requires that the environmental effects of federal agency actions on minority and low-income populations are appropriately identified and addressed. Following strategies developed under FTA Circular 4703.1, environmental justice communities within 500 feet of the alignment and proposed stations were identified and assessed in FEIS. Based on CEQ guidance on environmental justice, FTA determined that if the proportion of the minority or low-income population of one census tract is 10 percent higher than the surrounding jurisdictions, the census tract should be identified as an EJ area. Using the American Community Survey five-year average data for 2006-2010 and for minority populations, the U.S. Census of 2010, an EJ area is further defined as census block groups (1) with higher than 50 percent minority households (10 percent higher than minimum 42 percent minority proportion), (2) with more than 16 percent low-income households (10 percent higher than 6 percent low-income proportion), or (3) both. Among all 155 census block groups within 500 feet of the Purple Line, 93 blocks are identified as representing EJ populations, with 86 exceeding the 50 percent minority criteria, 29 meeting or exceeding the 16 percent low-income criteria, and 22 exceeding both the minority and low-income EJ criteria. A population of 158,261 in these blocks takes up 68 percent of the total study area population.

[Map 3-1-6 Environmental Justice areas]

Among 53 residential displacements, 41 (77 percent) would be in EJ areas. Thirty-five out of all 60 commercial business displacements (58 percent) are located in EJ areas. Beside concerns about displacement, according to FEIS, EJ areas also have concerns about the construction impacts on businesses, rent increases, potential reduction in availability of affordable housing, and future maintenance facilities' negative impacts such as noise.

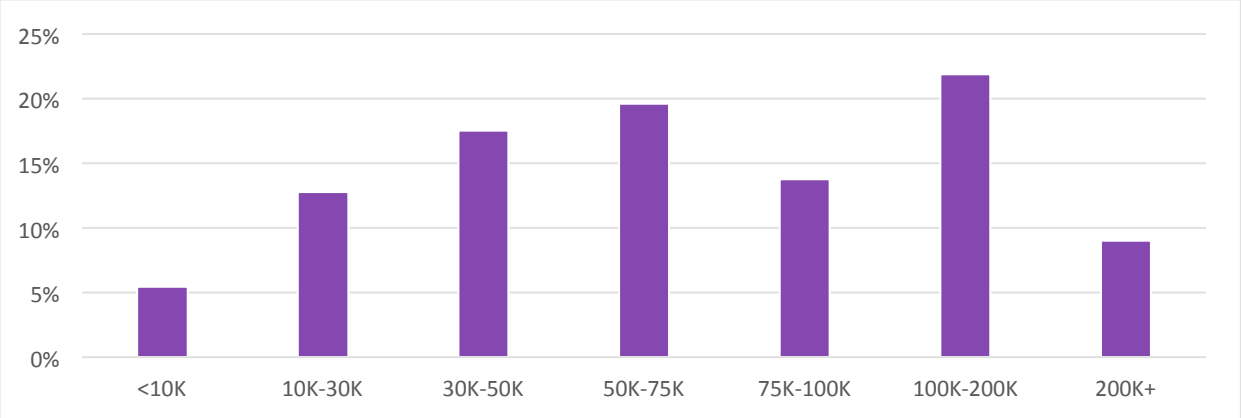
3.2 Income, Unemployment, and Poverty

The unemployment rate along the corridor is 7 percent, and the poverty rate is 4 percent. The highest unemployment and poverty rates are near Langley Park and Riverdale-New Carrollton. The subareas with the lowest poverty and unemployment rates are Silver Spring and Bethesda.

[Map 3-2-1 Poverty rate]
[Map 3-2-2 Unemployment rate]

As Figure 3-2 illustrates, the average median household income in the Purple Line transit corridor was $81,066 in 2010, with 31 percent of households earning more than $100,000 annual income, 9 percent earning more than $200,000 annually, and 15 percent making $30,000 or less each year. The greatest proportion of households is the 36 percent who make between $30,000 and $75,000 per year.

Figure 3-2. Corridor-wide percentage of households by income level



High income in the $200,000–$250,000 range is concentrated on the western side of the corridor, around Bethesda and Chevy Chase. Income levels decline as one moves east along the Purple Line corridor. The lowest income levels can be found in parts of the University of Maryland subarea. This can be attributed to the high number of students in the area. Low-income households, defined as those with an annual household income lower than $50,000, are concentrated in the Langley Park and University of Maryland campus areas.

Table 3-3. Median household income by subarea

Subarea	Median Household Income
Bethesda-Chevy Chase	$141,331.35
Silver Spring	$62,219.77
International Corridor	$63,095.94
University of Maryland	$82,899.56
New Carrollton	$62,977.38

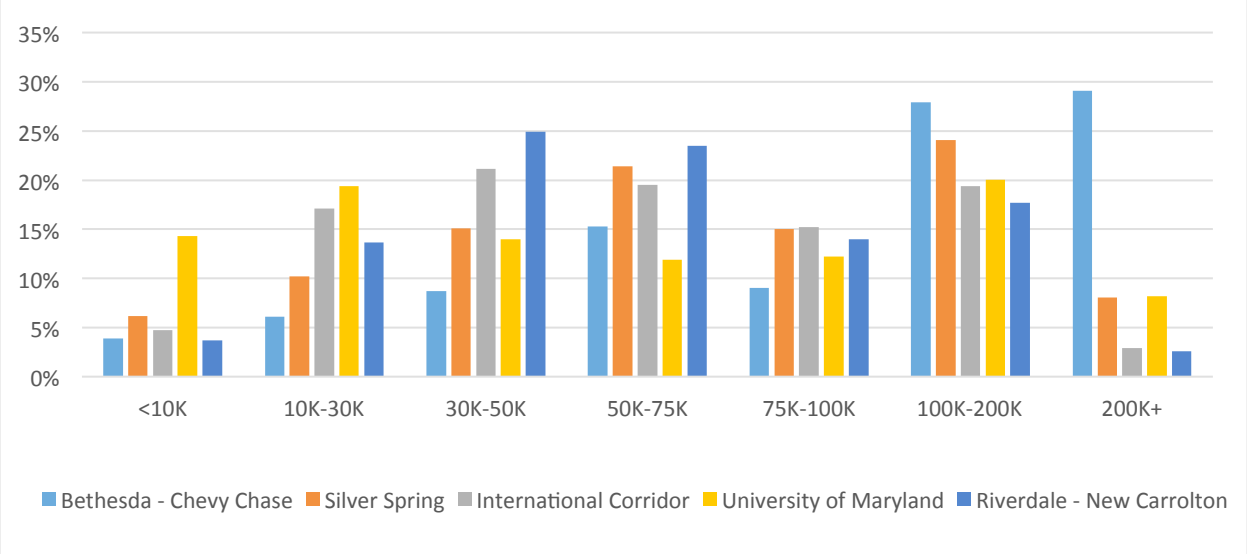
[Map 3-2-3 Median household income]

The Bethesda-Chevy Chase subarea has the highest percentage of households with an annual income exceeding $100,000, as shown in Table 3-4 and Figure 3-3. The majority of households in Riverdale-New Carrollton have median incomes ranging between $30,000 and $75,000. University of Maryland experiences two extremes, with a large population earning less than $30,000 and another large segment earning between $100,000 and $200,000.

Table 3-4. Percentage of household income level by subarea

Subarea/annual household income	<10K	10K-30K	30K-50K	50K-75K	75K-100K	100K-200K	200K+
Bethesda-Chevy Chase	4%	6%	9%	15%	9%	28%	29%
Silver Spring	6%	10%	15%	21%	15%	24%	8%
International Corridor	5%	17%	21%	19%	15%	19%	3%
University of Maryland	14%	19%	14%	12%	12%	20%	8%
Riverdale-New Carrollton	4%	14%	25%	23%	14%	18%	3%

Figure 3-3. Percentage of household income level by subarea



3.3 Residents' Travel Behavior

The current travel patterns of residents within the corridor supports the need for the Purple Line. Corridor-wide, 25 percent of workers (age 16 and above) use public transportation to commute. The number is very high compared to Maryland's state average of 9 percent and the national average of 5 percent. In particular, 35 percent of residents in the Silver Spring subarea take public transportation to work. About 47 percent of residents drive alone to work, much lower than outside the corridor. The lowest rate of public transit use takes place in the University of Maryland subarea, where students are more likely to walk (31 percent) and use other means of transit such as bicycle and motorcycle. The Bethesda-Chevy Chase subarea has

diverse travel modes: public transportation, walking, and work-at-home rates are all high. The International Corridor and Riverdale-New Carrollton see the highest shares of carpooling in the nation, partly due to their low- and moderate-income characteristics.

Figure 3-4. Commute modes

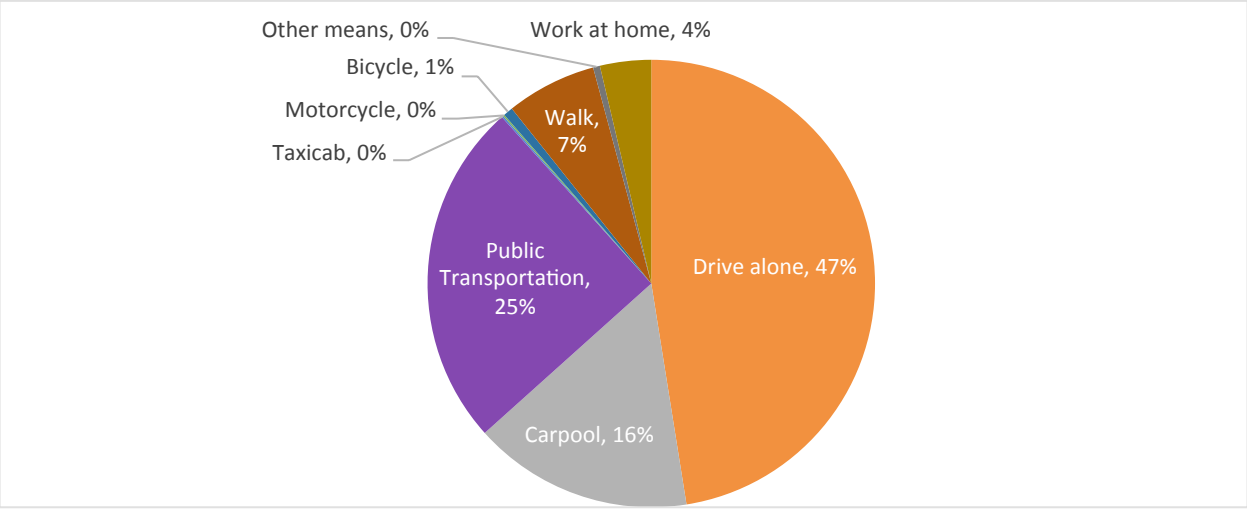


Table 3-5. Comparison table of mode shares

	Drive alone	Carpool	Public transportation	Walk	Other means	Work at home
Bethesda-Chevy Chase	52%	5%	22%	9%	3%	8%
Silver Spring	45%	8%	35%	5%	1%	6%
International Corridor	45%	25%	25%	2%	1%	2%
University of Maryland	38%	8%	12%	31%	5%	5%
Riverdale-New Carrollton	58%	20%	19%	2%	1%	1%
Purple Line Corridor	47%	16%	25%	7%	1%	4%
Prince George's	64%	12%	18%	2%	6%	3%
Montgomery	66%	10%	15%	2%	9%	5%
Maryland	73%	11%	9%	2%	8%	4%
National	76%	10%	5%	3%	9%	4%

[Map 3-3-1 Percentage of population who drive alone to work]
[Map 3-3-2 Percentage of population who carpool to work]
[Map 3-3-3 Percentage of population who use public transportation to work]
[Map 3-3-4 Zero car housing units]

3.4 Residents Spend Significant Time Commuting to Work

The University of Maryland subarea has the highest proportion of people who spend 30 minutes or less commuting to work, largely due to students who live near the campus. Bethesda also has a cluster of people who spend less than 30 minutes commuting to work. Those who spend more than 60 minutes commuting to work are clustered mainly between

University of Maryland and Riverdale-New Carrollton. Those who are located near the Metro in Silver Spring, Bethesda, and University of Maryland all have commute times that are under 60 minutes.

[Map 3-4-1 Percentage of population with commute time less than 30 minutes]
[Map 3-4-2 Percentage of population with commute time less than 45 minutes]
[Map 3-4-3 Percentage of population with commute time less than 60 minutes]
[Map 3-4-4 Percentage of population with commute time greater than 60 minutes]

3.5 Transit Dependent Populations

Most of the region's senior population is concentrated just north and east of Bethesda, south of the University of Maryland, and east of New Carrollton. Less than 5 percent of the population in Langley Park, Silver Spring, and University of Maryland is over age 65. Areas with large populations under the age of 15 include the International Corridor, with 21 percent to 25 percent, and New Carrollton, with 26 percent to 44 percent. Silver Spring, Bethesda, and University of Maryland have little or no population younger than 15 years old.

[Map 3-5-1 Percentage of population over 65]
[Map 3-5-2 Percentage of population under 15]

Chapter 4 Employment

This chapter will analyze the employment characteristics of the Purple Line Corridor. Employment characteristics will include the number and types of jobs available in the Corridor as well as businesses and industries found within the Corridor. Data is gathered from the Longitudinal Employer-Household Dynamics (LEHD), part of the US Census, as well as the Quarterly Census of Employment and Wages (QCEW), part of the Bureau of Labor and Statistics.

4.1 The Purple Line Connects the Corridor to Four Employment Clusters

Twenty-three employment centers in Maryland are defined as Transportation Analysis Zones (TAZ), with more than nine workers per acre and a total of at least 10,000 employees. The Purple Line will connect four main TAZs within the corridor—Bethesda-North Bethesda, Silver Spring, Route One in College Park/Prince George's County, and New Carrollton/Landover—allowing workers to commute more efficiently while mitigating traffic congestion.

[Map 4-1-1 Employment density]
[Map 4-1-2 Access to employment clusters]

As seen in Table 4-1, the Purple Line corridor has 129,613 total jobs within the Workplace Area Characteristic (WAC) census blocks. The Bethesda-Chevy Chase subarea has the most jobs, 41,091, while the International Corridor has the least, 7,636.

Table 4-1. Number of jobs by subarea

Subarea	Total Number	Percentage of Jobs of Corridor
Bethesda-Chevy Chase	41,091	31.7%
Silver Spring	30,043	23.2%
International Corridor	7,636	5.6%
University of Maryland	22,204	17.1%
New Carrollton	28,639	22.1%

The Purple Line transit corridor is home to many large employers. As Table 4-2 shows, the 10 largest companies/organizations (by the number of jobs) employ 41,858 workers. Among them, the University of Maryland, College Park is the real anchor, with 14,526 employees. University of Maryland University College, one of the nation's largest distance learning institutions and a member of the University System of Maryland, has about 3,500 employees. WMATA, the Maryland-National Capital Park and Planning Commission (MNCPPC), and US Treasury Inspector General for Tax Administration, three public employers located in the Riverdale-New Carrollton subarea, each provide about 4,000 jobs. National Oceanic and Atmospheric Administration, another public sector agency located in College Park, employs 2,400. Three top 10 private sector employers—CVS, Starbucks, and Red Coats—as well as National Institutes of Health and Walter Reed National Military Medical Center are all located in the Bethesda-Chevy Chase subarea.

Table 4-2. Top 10 employers within the Purple Line Corridor

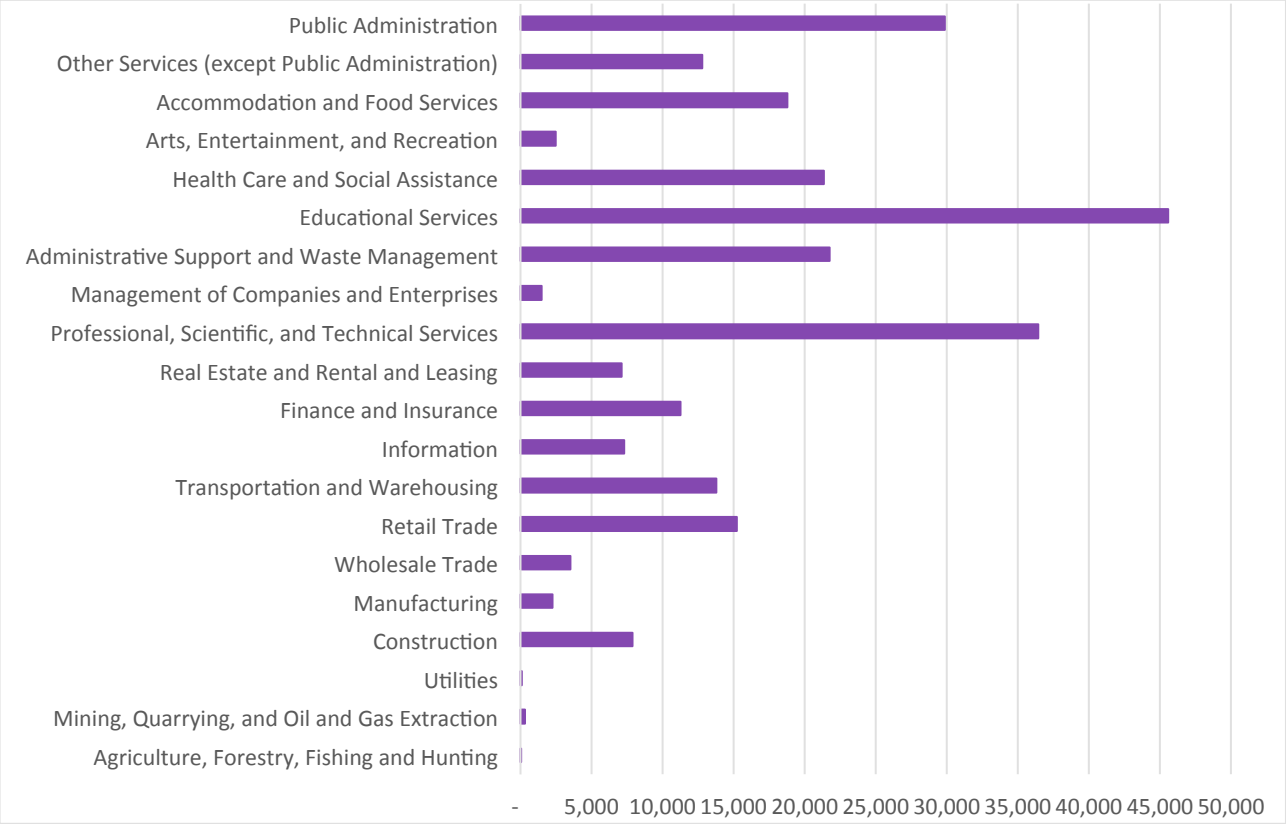
	2012 Employment	Industry	Subarea
University of Maryland, College Park	14,526	611310 Colleges, Universities, and Professional Schools	University of Maryland
Washington Metropolitan Area Transit Authority (WMATA)	4,559	485111 Mixed Mode Transit Systems	Riverdale-New Carrollton
Maryland-National Capital Park and Planning Commission (MNCPP)	4,232	925120 Administration of Urban Planning and Community and Rural Development	Riverdale-New Carrollton
US Treasury Inspector General for Tax Administration	3,681	921130 Public Finance Activities	Riverdale-New Carrollton
Maryland CVS Pharmacy, LLC	3,603	446110 Pharmacies and Drug Stores	Bethesda-Chevy Chase
University of Maryland University College	3,461	611310 Colleges, Universities, and Professional Schools	University of Maryland
National Oceanic and Atmospheric Administration, Department of Commerce	2,370	541712 Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology)	Silver Spring
National Institutes of Health, US Department of Health and Human Service	2,090	923120 Administration of Public Health Programs	Bethesda-Chevy Chase
Starbucks Corporation	1,771	722515 Snack and Nonalcoholic Beverage Bars	Bethesda-Chevy Chase
Red Coats, Inc.	1,565	561720 Janitorial Services	Bethesda-Chevy Chase

4.2 The Purple Line Specializes in Education, Professional, and Public Administration Industries

A high number of professional jobs are located within the DC beltway. Due to its location within the DC metropolitan area, the Purple Line corridor is most dense in education, professional, and public administration industries. As shown in Figure 4-1, 30,000 jobs are in public

administration, 45,000 are in education primarily due to the University of Maryland, and 37,000 are in professional, scientific, and technical services.

Figure 4-1. Employment by industry



4.3 The Purple Line Fosters Opportunities for Small Business

Small businesses, defined as businesses with fewer than 50 employees, are interspersed along the Purple Line corridor. The majority of medium and large businesses, those with 50 employees or more, are concentrated in Bethesda, Silver Spring, Langley Park, and New Carrollton. A mix of small and large businesses exists within each of these areas, with more small businesses in the spaces between these commercial centers. The Purple Line will allow for small business growth, as stations will create new commercial clusters with increased foot traffic and more customers.

[Map 4-3-1 Business establishments by size]

Table 4-3. Number of establishments by size

Size	Number of establishments

500 +	18
50–499	363
≤ 49	6,027

Source: QCEW 2012

According to the LEHD Workplace Area Characteristics, and as illustrated in Table 4-3, there are 25,277 small-business jobs in the Purple Line corridor. The Bethesda-Chevy Chase subarea has the highest number of small-business jobs, 10,737, comprising 26.1 percent of all jobs in the subarea. The University of Maryland subarea has the least number of small-business jobs with 1,362 jobs.

Table 4-4. Total number of jobs at small businesses per subarea

Subarea	Jobs at small businesses	Percentage of total jobs
Bethesda-Chevy Chase	10,737	26.1%
Silver Spring	8,966	29.8%
International Corridor	2,005	26.3%
University of Maryland	1,362	6.1%
New Carrollton	2,207	7.7%

[Map 4-3-2 Number of jobs for workers at small firms]

Medium-sized businesses are defined as those with 50 to 499 employees. According to the LEHD Workplace Area Characteristics, 21,527 jobs at medium-sized firms exist within the Purple Line corridor. As shown in Table 4-5, the highest number of medium-sized firms is found in the Bethesda-Chevy Chase subarea, followed closely by the Silver Spring subarea. More than 8,000 jobs at medium-sized firms are found in each subarea. The lowest number of jobs at medium-size businesses is in the University of Maryland subarea, which has 681 firms.

Table 4-5. Total number of medium sized firms per subarea

Subarea	Jobs at medium-sized firms	Percentage of total jobs
Bethesda-Chevy Chase	8,884	21.6%
Silver Spring	8,363	27.8%
International Corridor	967	12.7%
University of Maryland	681	3.1%
New Carrollton	2,632	9.2%

[Map 4-3-3 Number of jobs with workers at medium sized firms]

Table 4-6 shows the spatial pattern of large firms, defined as businesses with 500 or more employees. The Purple Line corridor has 35,025 jobs in large-sized firms, comprising 27 percent of all jobs in the corridor. The Bethesda-Chevy Chase subarea has the highest number of large firms, with 18,994 jobs. The University of Maryland subarea has the lowest number of large firms, with 1,149 jobs.

Table 4-6. Number of jobs at large firms per subarea

Subarea	Jobs at large firms	Percentage of total jobs
Bethesda-Chevy Chase	18,944	46.1%
Silver Spring	8,263	27.5%
International Corridor	1,493	19.6%
University of Maryland	1,149	5.2%
New Carrollton	5,176	18.1%

[Map 4-3-4 Total number of jobs at large sized firms]

4.4 Jobs and Housing Do Not Balance in the Purple Line Corridor

Households earning low monthly wages are interspersed throughout the Purple Line corridor, with the highest concentrations in Silver Spring, around Langley Park and the International Corridor, and east of New Carrollton. Residences with higher average monthly wages can be found between the four main commercial areas and near the University of Maryland, but most regions contain at least some with low monthly wage jobs.

[Map 4-4-1 Number of jobs with low monthly wage by residence]

Low monthly wage is defined as monthly earnings of less than $1,250. As shown in Table 4-7, the Purple Line transit corridor has 25,702 low monthly wage jobs, composing 19.8 percent of the total number of jobs. The Bethesda-Chevy Chase subarea has the highest number of low monthly wage jobs, at 8,359, while the International Corridor has the least number of low monthly wage jobs, at 2,217. Speaking in terms of total jobs, 29 percent of all jobs in the International Corridor are low monthly wage jobs, the highest among the subareas, while the lowest is 14.5 percent in New Carrollton.

Table 4-7. Low monthly wage jobs by subarea

Subarea	Jobs with low monthly wages	Percentage of total jobs
Bethesda-Chevy Chase	8,359	20.3%
Silver Spring	5,862	19.5%
International Corridor	2,217	29.0%
University of Maryland	5,119	23.1%
New Carrollton	4,145	14.5%

[Map 4-4-2 Number of jobs with low monthly wage]

A medium monthly wage is defined as monthly earnings between $1,250 and $3,333. The largest clusters of jobs with earnings at this level are in Bethesda, Silver Spring, and Langley Park. The smallest clusters are in the University of Maryland subarea.

[Map 4-4-3 Number of medium monthly wage jobs by residence]

Table 4-8 shows that the Purple Line corridor has 33,656 medium-wage jobs. The Bethesda-Chevy Chase subarea has the most medium monthly wage jobs, 11,663. The International Corridor has the fewest medium monthly wage jobs, 2,992. The International Corridor subarea comprises 39.1 percent of total medium monthly wage jobs.

Table 4-8. Total number of jobs with medium monthly wage

Subarea	Jobs with medium monthly wages	Percentage of total jobs
Bethesda-Chevy Chase	11,663	28.3%
Silver Spring	8,683	28.9%
International Corridor	2,992	39.1%
University of Maryland	5,675	25.6%
New Carrollton	4,643	16.2%

[Map 4-4-4 Number of jobs at medium monthly wage]

High monthly wage is defined as monthly earnings exceeding $3,333. The number of residences with high monthly wage jobs is evenly distributed along the corridor. University of Maryland has zero—perhaps because most University of Maryland residents are students. There are small sections with high concentrations near the Bethesda, Silver Spring, and New Carrollton metro stops. Most regions contain an average number of high monthly wage households.

[Map 4-4-5 Number of jobs with high monthly wage by residence]

As seen in Table 4-9, 70,255 jobs in the Purple Line corridor are characterized by high monthly wage jobs. High monthly wage jobs comprise 54.2 percent of all workplace jobs within the Purple Line corridor. The Bethesda-Chevy Chase subarea has the highest number of jobs with a high monthly wage, 21,069, constituting 51.3 percent of all workplace jobs within the Bethesda-Chevy Chase subarea. The International Corridor subarea has the lowest number of high monthly wage jobs, at 2,427.

Table 4-9. Total number of jobs with high monthly wage

Subarea	Jobs with high monthly wages	Percentage of total jobs
Bethesda-Chevy Chase	21,069	51.3%
Silver Spring	15,498	51.6%
International Corridor	2,427	31.9%
University of Maryland	11,410	51.4%
New Carrollton	19,851	69.3%

[Map 4-4-6 Number of jobs with high monthly wage]

4.5 The Purple Line Connects Workers to Educational Resources that Prepare Them for Better Jobs

Job skills are measured by level of education completed. Low-skill workers are defined as those who do not have high school diplomas. As Table 4-10 shows, the Purple Line corridor hosts a total of 11,672 jobs for low skill workers. Low skill workers are defined as those who have obtained less than a high school degree. The International Corridor has the lowest number of jobs for low skill workers, 1,102 jobs; however, these jobs make up 14.4% of the total jobs for the subarea. The Bethesda-Chevy Chase subarea has 3,889 jobs for low skill workers, which is 9.5% of the total number of jobs.

Table 4-10. Total number of jobs for low-skill workers

Subarea	Jobs for Low Skill Workers	Percentage of Total Jobs
Bethesda – Chevy Chase	3,889	9.5%
Silver Spring	3,040	10.1%
International Corridor	1,102	14.4%
University of Maryland	1,465	6.6%
New Carrollton	2,176	7.6%

[Map 4-5-1 Number of jobs for low-skill workers]

Medium-skill workers are defined as those who have a high school diploma or associate's degree. As seen in Table 4-11, the Purple Line corridor has a total of 47,805 jobs for medium-skill workers. The Bethesda-Chevy Chase subarea has the highest number of medium-skill jobs, 14,360, while the International Corridor has the lowest number of medium-skill jobs, 2,902.

Table 4-11. Total number of jobs for medium-skill workers

Subarea	Jobs for medium-skill workers	Percentage of total jobs
Bethesda-Chevy Chase	14,360	34.9%
Silver Spring	10,779	35.9%
International Corridor	2,902	38.0%
University of Maryland	7,439	33.5%
New Carrollton	12,325	43.0%

[Map 4-5-2 Total number of jobs for medium-skill workers]

High-skill workers are defined as those who have a bachelor's or advanced degree. A total of 42,148 jobs for high-skill workers exist in the Purple Line corridor. The Bethesda-Chevy Chase subarea has the highest number of jobs for high-skill workers, 12,677. Of all jobs in the University of Maryland subarea, 39.7 percent consist of jobs for high-skill workers. The International Corridor subarea has the fewest high-skill jobs, 1,790.

Table 4-12. Total number of jobs for high-skill workers

Subarea	Jobs for high-skill workers	Percentage of total jobs
Bethesda-Chevy Chase	12,677	30.9%
Silver Spring	9,443	31.4%
International Corridor	1,790	23.4%
University of Maryland	8,808	39.7%
New Carrollton	9,430	32.9%

[Map 4-5-3 Total number of jobs for high-skill workers]

Several training and education facilities for workers are found in the Purple Line corridor. Most of these facilities specialize in professional and management development training and are located in Bethesda and Silver Spring. There are also seven exam preparation and tutor training facilities, and seven colleges and universities, the largest by far being the University of Maryland, College Park. Three cosmetology and barber schools are found in Silver Spring and New Carrollton.

[Map 4-5-4 Workforce training facilities]

4.6 The Purple Line Connects Low- and Moderate-Income Households with Employment Opportunities

The Purple Line improves accessibility to jobs, providing low- and moderate-income households more exposure to employment opportunities.

A commute shed captures the geographic coverage of places one can travel within a certain amount of time via one or more transportation modes. Modeling shows that the Purple Line will improve commute sheds starting from every proposed station.

[Map 4-6-1 Commute shed without/with Purple Line]

For example, starting from Takoma/Langley Transit, as Figure 4-2 shows, one can access 17,560 low- and medium-wage jobs within 30 minutes using all combinations of public transportation modes (i.e., walking, bus, and/or rail). However, access to 40,898 jobs will be available after the Purple Line is built. The increase is as high as 133 percent. The number of low- and medium-wage jobs accessible within 45 to 60 minutes is also greatly improved (by 29 percent and 17 percent, respectively). Similarly, as Figure 4-3 illustrates, one currently can access 13,916 low- and medium-skill jobs. With the Purple Line, that number jumps to 35,424, an increase of 155 percent.

Figure 4-2. Low- & medium-wage jobs within commute shed of Takoma/Langley Transit Station

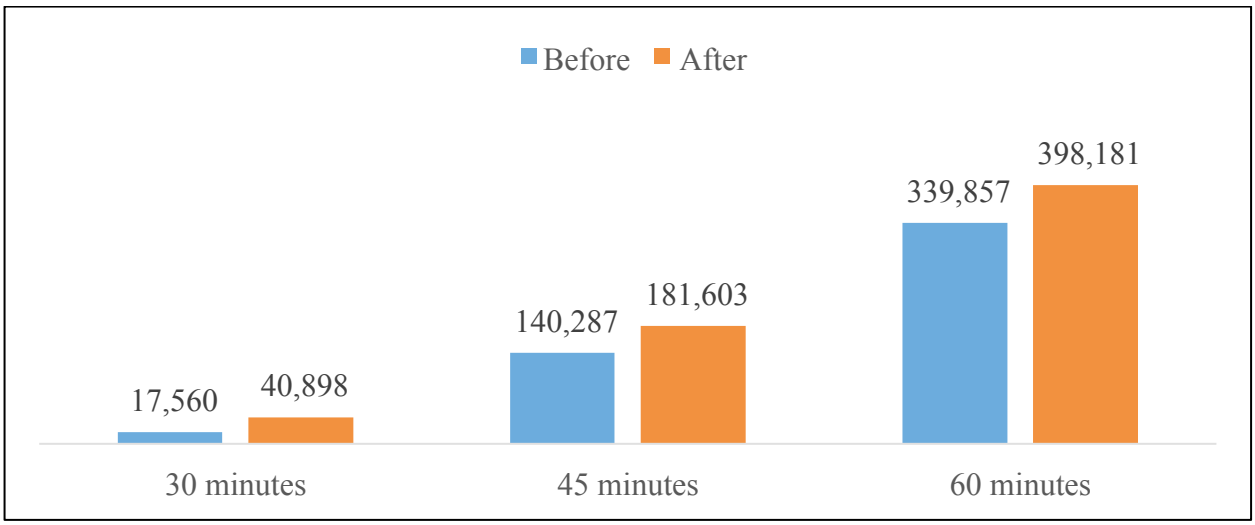
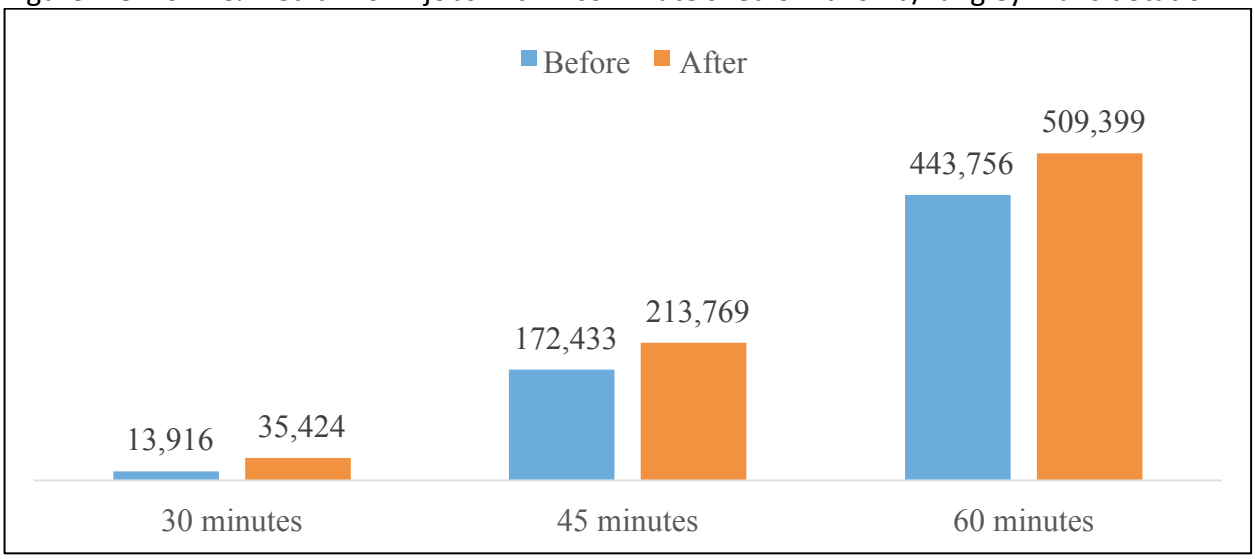


Figure 4-3. Low- & medium-skill jobs within commute shed of Takoma/Langley Transit Station



Chapter 5 Housing

This chapter analyzes the residential communities within the corridor and the different residential units within each subarea. The chapter explores housing density around existing stations, examines the number and location of multifamily housing units and property values within the corridor and in each of the subareas, and reviews housing affordability and subsidized housing units within the corridor and within each of the subareas.

5.1 Existing Transit Stations Have Higher Housing Density and More Newly Built Units

The highest housing density in the Purple Line corridor is found near the existing transit stations at Bethesda (Red Line) and Silver Spring (Red Line) and in parts of the International Corridor, largely due to multifamily units. For example, large numbers of apartments are located near the Silver Spring station. The high density surrounding existing stations suggests that housing density around certain other Purple Line stations may increase as well.

[Map 5-1-1 Housing density]

The existing stations at Bethesda, Silver Spring, and College Park are located in areas where new development is taking place. The oldest houses are found in parts of the New Carrollton subarea and in southern parts of the Bethesda-Chevy Chase subarea. The average home in the Purple Line corridor was built in 1960. The majority of homes found in the corridor were built in the 1950s and 1960s.

[Map 5-1-2 Median year built]

In the Purple Line corridor, the largest number of housing units built after 2005 is found in Silver Spring. Few new developments have been built in the International Corridor and University of Maryland subareas.

[Map 5-1-3 Percentage of housing units built after 2005]

5.2 Multifamily Housing Clusters at Existing Transit Stations, Langley Park, and University Campus.

Multifamily housing units are well distributed throughout the Purple Line corridor, with the largest clusters located near existing stations at Bethesda and Silver Spring, in Langley Park, and near the University of Maryland campus.

[Map 5-2-1 Percentage of multifamily housing units]

As shown in Table 5-1, more than 35 percent of the total housing units found in the Purple Line corridor are single family housing units. The areas with the smallest number of single family

housing units are near proposed and already existing transit stations. The University of Maryland subarea has the largest percentage of single family housing units, while the Silver Spring subarea has the smallest.

[Map 5-2-2 Percentage of single family housing units]

Table 5-1. Single family housing units

Subarea	Percentage of Single Family Housing Units
Bethesda-Chevy Chase	38.84%
Silver Spring	26.11%
International Corridor	31.76%
University of Maryland	59.65%
New Carrollton	44.21%

Along the Purple Line corridor, 40 percent of the houses are occupied by the owner, as illustrated in Table 5-2. The highest rates of owner-occupied housing units occur south of Bethesda, in the Bethesda-Chevy Chase subarea. The lowest rates occur near Silver Spring, Langley Park, and the University of Maryland.

[Map 5-2-3 Percentage of owner-occupied housing units]

Table 5-2. Percentage of owner-occupied units

Subarea	Percentage of Owner-Occupied Housing Units
Bethesda-Chevy Chase	48.71%
Silver Spring	30.70%
International Corridor	38.32%
University of Maryland	42.92%
New Carrollton	45.32%

Renter-occupied housing units account for 53.47 percent of all housing units in the Purple Line corridor (see Table 5-3). Renter-occupied units are highest in the Silver Spring subarea, specifically near Silver Spring. Other high rates are found in Langley Park and near the University of Maryland.

[Map 5-2-4 Percentage of renter-occupied housing units]

Table 5-3. Percentage of renter-occupied housing units

Subarea	Percentage of Renter-Occupied Housing Units
Bethesda-Chevy Chase	43.41%
Silver Spring	64.82%
International Corridor	53.05%
University of Maryland	49.61%
New Carrollton	47.96%

The Purple Line corridor includes detached single family houses, townhouses, condominiums, and apartments. Small clusters of apartments and condominiums are found in the Bethesda-Chevy Chase subarea, while large clusters of apartments and townhomes are found in the International Corridor. Small clusters of townhomes can be found along the transit line in the New Carrollton subarea.

[Map 5-2-5 Residential property type]

Table 5-4 shows that 14 percent of the households in the Purple Line corridor have more than 5 residents. The highest concentrations of these households are found around the University of Maryland and in parts of the New Carrollton subarea that border the University of Maryland. The International Corridor also has high numbers of households with more than 5 people, specifically within Langley Park.

[Map 5-2-6 Percentage of households with more than 5 people]

Table 5-4. Percentage with households with more than 5 residents

Subarea	Percentage of Households With More Than 5 Residents
Bethesda-Chevy Chase	5.35%
Silver Spring	5.6%
International Corridor	22.4%
University of Maryland	13.5%
New Carrollton	16.2%

5.3 Property Values Vary Between Two Counties

Residential property values decline markedly as one moves east through the Purple Line corridor. Many of the properties in the Bethesda-Chevy Chase area are valued at $500,000 and up, while homes in the International Corridor, University of Maryland, and New Carrollton subareas are valued between $200,000 and $300,000.

The average median property value in the Purple Line corridor is $439,761. The highest median property value, $722,588, is found in the Bethesda-Chevy Chase area, in the western part of the corridor. The further east one goes in the Corridor, the more property values diminish.

[Map 5-3-1 Median property value]

Table 5-5. Median property value

Subarea	Median Property Value
Bethesda-Chevy Chase	$722,588.00
Silver Spring	$518,235.00
International Corridor	$339,918.52

University of Maryland	$399,000.00
New Carrollton	$273,389.00

[Map 5-3-2 Property value]

5.4 Rent is Not Always Affordable

The median gross rent in the Purple Line corridor is $1,384, as shown in Table 5-6. The largest concentration of areas with rent exceeding $1,500 is found in Bethesda and Chevy Chase, around the University of Maryland, and in a few areas in the New Carrollton subarea. The lowest median gross rents are found throughout the International Corridor.

Table 5-6. Median gross rent

Subarea	Median Gross Rent
Bethesda-Chevy Chase	$1,840.00
Silver Spring	$1,134.96
International Corridor	$1,245.58
University of Maryland	$1,478.12
New Carrollton	$1,385.93

[Map 5-4-1 Median gross rent]

The majority of renters pay more than 30 percent of their gross monthly income for housing. More than 60 percent of renters surrounding the University of Maryland and north Langley Park have this burden. The most severe housing affordability problem occurs near the University of Maryland campus, where renters (mostly students) pay more than 50 percent of their gross monthly income for housing.

[Map 5-4-2 Overburdened renters at 30%]
[Map 5-4-3 Overburdened renters at 50%]

Housing cost burden for low-income families is, of course, proportionately higher. Low-income families are defined as those whose income is less than or equal to 30 percent of housing urban development area median family income (HAMF). Low-income families who pay more than 50 percent of their gross monthly income for housing live in four of the subareas, particularly the International Corridor, where more than 20 percent of low-income renters spend more than 50 percent of their income on housing every month.

[Map 5-4-4 Housing cost burden for low-income families]

Hispanic families who rent have the highest housing cost burdens. More than 40 percent of households in the International Corridor and its northern and southern extensions spend more than 30 percent of their income on rent, with some census tracts indicating that more than 80

percent carry this heavy housing cost burden. Lyttonsville, between Bethesda and Silver Spring, and Riverdale Park also see high proportions of Hispanic renters bearing housing cost burdens.

Hispanic families paying more than 50 percent of their income on housing costs are located in Langley Park, particularly at New Hampshire Avenue and University Boulevard.

[Map 5-4-5 Hispanic renter with housing cost burden at 30%]
[Map 5-4-6 Hispanic renter with housing cost burden at 50%]

Overcrowding, defined as more than 1.5 people per room, is an indicator of housing affordability. In the Purple Line corridor, the International Corridor has the most crowded housing units. The census tracts at New Hampshire Avenue and University Boulevard show more than 60 percent of housing units crowded. Riverdale Park also has overcrowded units.

[Map 5-4-7 Overcrowded rental housing]

5.5 Subsidized Housing is at Risk

A large majority of subsidized housing units within the Purple Line corridor are found in the Silver Spring subarea. Many of these units are in close proximity to the planned transit line and stations. Other subsidized housing units are found in the International Corridor subarea. There are relatively few subsidized units in the Bethesda-Chevy Chase and University of Maryland subareas.

[Map 5-5-1 Subsidized housing units]

Housing subsidy programs within the Purple Line corridor include Section 8 (Housing Choice Voucher), Low Income Housing Tax Credit (LIHTC), and Federal Housing Administration (FHA) mortgage insurance on loans. The majority of subsidized housing units are financed using the LIHTC program. Many of these units are clustered in the International Corridor subarea.

[Map 5-5-2 Subsidized housing by program]

Subsidies for a number of assisted housing communities in the Purple Line corridor will expire by or before 2020. A large number of these units are in the International Corridor. There are few subsidized units in the Bethesda-Chevy Chase subarea or within the University of Maryland subarea.

[Map 5-5-3 Subsidized housing at risk]

Chapter 6 Land Use

6.1 The Purple Line Has Transit-Supportive Land Uses

The Purple Line corridor has diverse land uses. Located in the inner suburban area, the corridor has very few low-density residential areas (identified as 0.2 dwelling units/acre to 2 dwelling units/acre). Medium-density residential land, identified as areas with density between 2 dwelling units /acre and 8 dwelling units/acre, can be found in the majority of the corridor. High-density residential land, zoned for more than 8 dwelling units per acre, is clustered in the Bethesda, Silver Spring, Takoma Park, Langley Park, Riverdale Park, and New Carrollton station areas. Commercial areas follow the spatial patterns of high-density residential areas.

Institutional land uses include the University of Maryland, College Park, one of the country's largest universities, which dominates the University of Maryland subarea. The National Institutes of Health and Walter Reed National Military Medical Center are located to the north of the Bethesda station. Other institutions include the National Museum of Health and Medicine, Montgomery College, College Park Aviation Museum, Washington International Church, and other schools, military installations, churches, and medical and health facilities.

Industrial land uses are clustered to the east of the New Carrollton station and near the Lyttonsville station and yard.

[Map 6-1-1 Current land use]

Existing land use within the Purple Line transit corridor was rated as "medium" by the Federal Transit Authority (FTA) in 2011. Land use character of three proposed station areas in Bethesda and Silver Spring have been found transit supportive. In addition, Montgomery County and Prince George's County both have specific sector plans for proposed Purple Line stations to concentrate growth and provide incentives for high-density housing and mixed-use infill and redevelopment. [v]

6.2 The Purple Line Connects Public Amenities

The Purple Line corridor is rich in public amenities; however, certain areas have higher concentrations of facilities than others. The Purple Line will link residents in areas with few amenities to areas with a high concentration of educational, medical, and entertainment facilities. Few high schools and middle schools are located within the corridor, while elementary schools are spread throughout. Numerous elementary schools are found within the Silver Spring and International Corridor subareas.

[Map 6-2-1 Elementary/middle/high schools]

The Purple Line will connect residents within the corridor to health facilities. Few medical facilities are located in the New Carrollton and University of Maryland subareas, while higher densities of medical offices and hospitals are clustered in Silver Spring and Bethesda-Chevy Chase. Additionally, the Silver Spring subarea has a large concentration of child day care services, while the University of Maryland and New Carrollton subareas have relatively few.

[Map 6-2-2 Health facilities]

The Bethesda-Chevy Chase and Silver Spring subareas have several entertainment and arts amenities, including theaters, museums, golf courses, and recreational centers. The University of Maryland offers the Clarice Smith Center and other educational and entertainment possibilities.

[Map 6-2-3 Entertainment and arts amenities]

6.3 The Purple Line Improves Access to Open Spaces

The Purple Line corridor includes abundant green space, some of which shapes a sense of community. Major elements include Rock Creek, Lake Artemisia, Indian Creek, and Paint Branch. The Purple Line will link residents within the corridor to multiple options for open spaces and outdoor recreation. Residents will benefit from connections to Rock Creek Park, between the Bethesda-Chevy Chase and Silver Spring subareas, and Greenbelt Park, operated by the National Park Service, at the edge of the University of Maryland subarea.

[Map 6-3-1 Open space system]

The Capital Crescent Trail (CCT) is a well-known open space. Located on the previously abandoned right-of-way of the Georgetown Branch rail line, the CCT connects Georgetown, DC, with Silver Spring. In 1988, the Montgomery County Government voted to purchase the right-of-way under the National Trails System Act of 1968 and turned it into a rail trail. Today, the CCT is one of the most heavily used trails in the nation, and was named the best open place in 2005 by the Project for Public Spaces.

The Purple Line, under the Local Preferred Alternative, is proposed to run on the 3.3-mile-long segment of the trail between Bethesda and Lyttonsville, called the Georgetown Branch Trail. The FEIS states that a permanent paved trail will be built to replace the existing trail. The proposed new trail will also complete the segment from Lyttonsville to Silver Spring.[vi]

[Map 6-3-2 Capital Crescent Trail and Purple Line]

In addition to the construction of the Capital Crescent Trail from Bethesda to Silver Spring, the FEIS also commits to providing trail connections to the Rock Creek Trail, the Metropolitan Branch Trail, the Green Trail, and the extension of the Green Trail to the Sligo Creek Trail.

6.4 The Purple Line Mitigates a Food Desert

Access to fresh food is important. A food desert is defined as a place with no or limited access to groceries, especially fresh fruit, vegetables, and meat. If no food stores are located within a half-mile of the center of a block, that block will be identified as a food desert. Food stores include supermarkets, grocery stores, convenience stores, and specialty markets like fish or meat markets. Several food deserts are identified in the Purple Line corridor, such as University of Maryland and Riverdale.

[Map 6-4-1 Food desert]

Chapter 7 Summary

Demographics

The Purple Line transit corridor is growing rapidly. From 2000 to 2010, the corridor experienced a 7 percent increase in population and a 5 percent increase in number of households. The addition of the Purple Line will improve this quickly growing region by increasing connectivity for those who live and work in the corridor. With the Purple Line, those who were once restricted by a lack of public transit will have the opportunity to increase their ability to travel to new places of work, residence, recreation, and retail.

As shown, the Purple Line corridor is rich in diversity. Factors such as demographics, population density, employment, and income levels vary throughout the corridor. The Bethesda-Chevy Chase and Silver Spring subareas boast employment and retail centers. The International Corridor is home to numerous ethnic groups and an array of community centers. The University of Maryland subarea has educational and research facilities and is home to University students and faculty members. In contrast, Riverdale-New Carrollton, the most eastern subarea, comprises the most single family housing units, mixed income levels, and the highest African American population in the corridor.

Over half of the residents in the Purple Line Corridor, 52 percent, identify as white, while about 30 percent identify as Hispanic, 6 percent identify as Asian, and 3 percent identify as African American. The Hispanic population is clustered within the International Corridor subarea, while the African American population is concentrated in the Riverdale-New Carrollton subarea.

The addition of the Purple Line will increase the accessibility to those living in regions with few employment opportunities to regions with high employment density. The Bethesda-Chevy Chase subarea has the largest percentage of jobs in the corridor, while the International Corridor has the least. Of the top 10 employers in the region, four are located in the Bethesda-Chevy Chase subarea, three are in the Riverdale-New Carrollton subarea, two are in the University of Maryland subarea, and 1 is in the Silver Spring subarea. In addition to increasing accessibility to employment opportunities, the Purple Line will connect residents to areas for employment and educational training centers.

Employment

The Purple Line corridor has 130,000 jobs in total. The Bethesda-Chevy Chase subarea has the largest number of jobs, about 41,000, or 32 percent. Silver Spring, New Carrollton, and the University of Maryland have about 30,000 jobs each. The International Corridor subarea has the smallest number of jobs, about 8,000, or 6 percent. Four out of 23 employment centers in the state of Maryland are located in the Purple Line corridor, Bethesda-North Bethesda, Silver Spring, Route One, and New Carrollton/Landover, each of which has more than 10,000

employees. With direct accessibility, the Purple Line will increase job opportunities for people who live in the corridor.

The educational services industry hires the most employees. University of Maryland, College Park has 15,000 employees, more than 10 percent of total jobs of the corridor. Besides education, the Purple Line corridor also has a significant share of other knowledge- and skill-based tertiary industries, such as professional, scientific, and technical service, public administration, and health care and social assistance.

Small businesses are important in the corridor. Out of 6,408 establishments, 6,027, or 94 percent, have fewer than 50 employees. Only 18 have more than 500 employees. In terms of the number of jobs, small and medium businesses (with fewer than 500 employees in each establishment) hire 46,804 workers, or about 57 percent. The impact of the Purple Line can be two-sided. With increased accessibility, the Purple Line corridor will provide better locations for existing businesses while attracting new ones. On the other hand, the competition may result in increased rent and the consequential price-out of local small businesses. Particularly, those located within 500 feet of the tracks may suffer more negative impacts during the construction period.

The Purple Line significantly increases job accessibility for low- and medium-wage/skilled workers. An advanced GIS tool has been developed to locate places accessible within certain distances from elements of a multi-modal transit network. The example of the Takoma/Langley transit station shows that the number of jobs accessible within 30 minutes will increase by 33 percent, with jobs increasing by 29 percent and 17 percent for 45-minute and 60-minute commutes, respectively.

Housing

Housing in the Purple Line corridor varies by location. In terms of housing density, Silver Spring and Langley Park have the highest density due to the clustering of multifamily housing. Silver Spring, as an emerging town center, has the largest proportion of new housing units built after 2005. Multifamily housing concentrations are also found at Bethesda, University of Maryland, and New Carrollton, partly due to their access to transit systems and students' low rate of car ownership. Similarly, areas with the most multifamily housing units have the most renters.

Property values along the corridor differ by county. Montgomery, in the west, has universally higher property values than Prince George's County in the east. Bethesda and Chevy Chase show the highest values. University Park, a jurisdiction to the south of the University of Maryland, has the highest property values in Prince George's County, with values similar to those in Silver Spring. The difference is dramatically significant at the county border, where Langley Park's property values are much lower than in Long Branch, the neighborhood to its immediate west, but in Montgomery County.

The cost burden for renters in the corridor is high. The median rent is $1,384. Bethesda and Chevy Chase have the highest rent, while Takoma Park and Langley Park have the lowest. Due to the larger proportion of students, residents of the University of Maryland subarea have the heaviest housing cost burden. More than 60 percent pay more than 50 percent of their household income on housing. Hispanic renters in Langley Park have the most severe burden, in that more than 80 percent of residents in some blocks pay more than 50 percent of their household income in rent. Severe overcrowding, defined as more than 1.5 people sharing a room, is also an issue in Langley Park.

Subsidized housing faces the risk of elimination in the Purple Line corridor. Currently, 28 housing projects in the corridor receive various subsidies. While most LIHTC housing is located between Silver Spring and Langley Park, these areas have projects with the largest number of housing units. Subsidies will expire by 2020 on 13 properties out of 28. Considering the Purple Line's impact on rent and property value, the risks to housing affordability may increase.

Land use

The Purple Line corridor has diverse land uses. Residential uses are mainly in medium-density and high-density areas clustered in existing/proposed transit stations, as in the International Corridor. Commercial uses follow the high-density residential patterns and concentrate around stations, as well as along Route 1 in College Park. Institutional land, including universities/colleges, churches, schools, and health facilities, are situated on portions of land and play the anchor roles in the corridor. The Purple Line will improve access to these institutions and other public amenities and thus enhance the quality of life in the corridor. With the FEIS commitment to add new permanent trails, development in the corridor will support transit-oriented and walkable development.

The Purple Line Corridor is a region with diverse residents, employment opportunities, community facilities, and housing choices. Residents who once lacked public transportation options to get to their destinations will experience an increase in possibilities now accessible to them by public transit. This new transit option will allow those who live in areas lacking employment opportunities, commercial options, or community facilities to easily gain access to them.

About the Purple Line Corridor Coalition

Our Mission

The Purple Line Corridor Coalition engages organizations active in the planned Purple Line light rail corridor and provides valuable information to help assure that investments in the Purple Line will achieve the maximum possible economic, social, and environmental benefits to the residents and businesses of the corridor.

The Purple Line Corridor Coalition aims to:

- Stimulate economic development
- Strengthen neighborhoods
- Engage historically under-represented communities
- Support distinctive places to live, work and play
- Provide people of all backgrounds with better access to opportunities
- Establish the Purple Line corridor as a world class, multi-ethnic corridor of major research and development institutions, small business incubation, and an affordable place to live.

For more information visit www.smartgrowth.umd.edu/plcc and www.smartgrowth.umd.edu/plccmaps.

Who Supports Us

Our work is made possible by the generous contributions of our members and by contributions from Maryland Transit Administration, Enterprise Community Partners, and the University of Maryland.

Endnotes

[i] [i] http://www.washingtonpost.com/wp-dyn/content/article/2006/06/08/AR2006060800133.html
[ii] Commuting to Washington, DC – Transportation Options in the DC Metro Area. http://dc.about.com/od/transportation/a/Commuting-To-Washington-DC.htm.
[iii] Maryland Transit Administrations. http://mta.maryland.gov/about-mta
[iv] Virginia Rail Express. http://www.vre.org/about/index.htm
[v] Maryland National Capital Purple Line. http://www.fta.dot.gov/documents/MD_Maryland_Purple_Line_Profile_FY14.pdf
[vi] FEIS. http://www.purplelinemd.com/images/studies_reports/feis/volume_01/06_PL%20FEIS_Vol-I_Ch%202%20Alternatives.pdf

http://www.smartgrowth.umd.edu/plcc