
Red Line Transit Corridor Technical Report

Adopted by the
Baltimore County Planning Board
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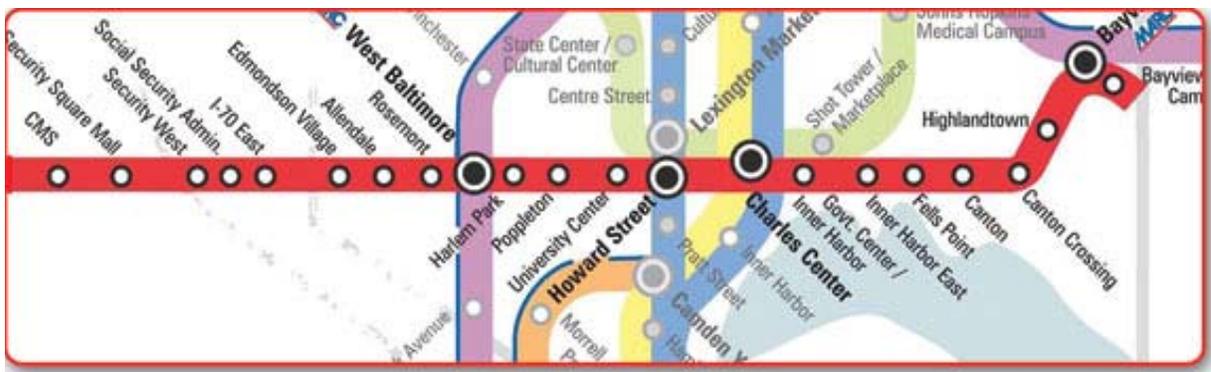
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Introduction and Background

The Baltimore County Council approved Resolution 25-09 on April 20, 2009, asking the Planning Board to “prepare a Red Line Transit Corridor Plan in support of the Red Line Transit Project.” The Red Line Transit Project is considered the most important transportation priority and investment for the Baltimore region, which has been supported in numerous documents including the Baltimore County Master Plan 2010, Baltimore Regional Rail Plan, Transportation Outlook 2035.

The proposed Red Line Transit Project is a 14 mile, east-west transit facility connecting the areas of Center for Medicare and Medicaid Services (CMS), Woodlawn, Edmondson Village, West Baltimore, downtown Baltimore, Inner Harbor East, Fells Point, Canton and the Johns Hopkins Bayview Medical Center Campus. The Red Line would provide enhanced mobility and connecting service to Baltimore’s existing transit systems - Local Bus, Metro Subway, Light Rail and MARC - while also serving major employers such as the Social Security Administration (SSA), the University of Maryland downtown campus and medical centers, and downtown, schools, churches, parks and tourist attractions.



The Baltimore County portion of the Red Line Transit Project extends from Baltimore City near the I-70 terminus and extends westward to CMS. The alternative preferred by Baltimore County is LRT Alternative 4C, which has 4 proposed stations. Traveling from east to west, the proposed stations are I-70 East, SSA, Security Square and CMS. This report will focus its analysis on the alignment and stations associated with 4C.

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Master Plan

Baltimore County’s Master Plan 2010 was adopted February 22, 2000. This document is intended to chart a path of growth for Baltimore County that will ensure its residents have a healthy and prosperous place to live, work and play in the future. Several of the Master Plan’s stated goals include references to a healthy transportation network to “preserve the county’s significant investment in its established communities”, “maintain the URDL” and “ensure that all residents have access to opportunities”.

In addition to the over arching policies, the Master Plan 2010 has specific policies for transportation. The main transportation strategy for Baltimore County is to, “provide and maintain infrastructure that supports diverse travel needs of residents and visitors, responsible land use decisions, and provide for county’s economic growth strategies.” Baltimore County has made significant progress towards this goal through a tradition of policies that aim to achieve this objective, including:

- Coordinating land use and transportation planning, specifically in the designated growth areas, so that the transportation system can accommodate potential travel demand.

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- Investing in new transportation infrastructure to support master plan economic development initiatives, such as the Middle River Employment Area.
- Efforts to develop a comprehensive transit system, with emphasis on improving suburb to suburb transit options.
- Continue to improve bicycle and pedestrian linkages within and between residential and commercial areas and transit.

At the time of its adoption, the Master Plan 2010 identified the Western Transit Study, as a transportation project intended to improve the county's transportation network under the established criteria for meeting future transportation needs. The Western Transit Study was mapped and identified in the same corridor as the Red Line Transit Project. It was identified as a project that was not funded in Baltimore County's Capital Improvement Program or the Maryland Department of Transportation's Consolidated Transportation Program (CTP).

The recommendation in the Master Plan 2010 for the Western Transit Study is consistent with the recommendation that was made in Master Plan Baltimore County 1989 – 2000, which was adopted by the County Council on February 5, 1990.

Baltimore Regional Rail Plan

An Advisory Committee appointed by the Maryland Secretary of Transportation adopted the Baltimore Regional Rail System Plan in March 2002. As part of the plan adoption process, the Advisory Committee of the plan conducted extensive outreach to business, civic, community leaders and elected officials to develop consensus among all the regional jurisdictions on the regional rail system. The Regional Rail System Plan established 10 guiding principles to foster the development of the regional rail system. The Red Line is identified as a priority project that will provide the basis for a regional transit network by establishing the first east – west rail line.

The Red Line conforms to the guiding principles stated in the Baltimore Regional Rail System Plan by:

- Serving congested corridors with large populations.
- Providing a connection to the major activity and employment centers.
- Alleviate congestion along the existing corridor by providing a fast and safe alternative transportation option.

Transportation Outlook 2035

Transportation Outlook 2035 is the long-range transportation plan for the Baltimore region adopted by the Baltimore Regional Transportation Board (BRTB) with support from the Baltimore Metropolitan Council (BMC) in November 2007. The BRTB is the region's elected officials representing the various jurisdictions in the Baltimore region. The Transportation Outlook 2035 is a multi-modal transportation investment plan that satisfies federal mandates for Safe, Accountable, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) and the Clean Air Act.

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The Transportation Outlook 2035 lists seven goals for the Baltimore region's transportation system that have consensus from their members, and specific policy actions that fulfill these goals. The seven goals include:

- Improve Safety
- Maximize Transportation System Management and Operations
- Increase Accessibility and Mobility
- Preserve the Environment
- Improve Transportation Security
- Link transportation investment to land use and economic development
- Foster inter-jurisdictional participation and cooperation

The proposed Red Line fulfills all seven goals listed in the Transportation Outlook 2035 because it reduces vehicular congestion, provides alternative transportation, reduces sprawl, and links major destinations in the Baltimore region, such as the Social Security complex. This makes the Red Line a "Regionally Significant Project" and is therefore a priority for the entire Baltimore region as stated in the Transportation Outlook 2035 plan.

For at least 19 years transit in the Security Boulevard corridor has been publicly discussed, recommended and endorsed via several planning documents. With each planning document the details have gotten more specific about how transit in this corridor would be implemented and benefit Baltimore County and the region. The importance of the Red Line to the future health of the Baltimore region is highlighted in every plan, and has therefore been designated a priority project for the region.

MTA's Project Planning Effort

In FY 2003 Project Planning funding was included in the Maryland Department of Transportation's CTP for the Red Line Transit Project. Since then, the Mass Transit Administration (MTA) has been working with Baltimore County and Baltimore City toward the submission of a formal application to the Federal Transit Administration's (FTA) "New Starts" program for preliminary design and final engineering matching funds. The MTA has held four open house events in the communities to educate, inform and engage the residents and businesses of Baltimore County as to the importance and effects of building the Red Line. The open houses occurred in November 2004, November 2005, May 2006, and November 2007. Between each open house the MTA refined alternatives based on the input that was received from the stakeholders at the open house meetings.

Based on the alternatives presented and input from local stakeholders, Baltimore County has endorsed Alternative 4C. Light Rail Vehicles are recommended with Alternative 4C and has four proposed stations. Traveling from east to west, the proposed stations are I-70 East, SSA, Security Square and CMS. On December 11, 2008 Baltimore County Executive Jim Smith joined Baltimore Mayor Shelia Dixon at the proposed Security Square Station and endorsed Alternative 4C. County Executive Jim Smith recommended Alternative 4C because Alternative 4C has "the greatest re-development and renaissance opportunities for the Security Square Mall and other potential transit oriented development sites."

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MTA plans to submit the preliminary design of the Red Line project to the FTA for approval in Fall 2009 requesting federal funding to continue the project with preliminary engineering.

Integrating Transit with Land Use

For many generations land planners and transportation planners have tried to incorporate the desired outcomes from each perspective into a cohesive end result. Technology advances and decision-making timelines have dramatically influenced how transportation systems and the built environment have been able to integrate transportation systems and land use decisions.

Since the 1970s, researchers and planning practitioners have instituted a balanced perspective to assimilating transit with land use. The contemporary intention for combining transit with land use is called Transit Oriented Development (TOD). The intention is to create compact, high density, walkable neighborhoods with amenities around transit stations. These kinds of communities are able to leverage the capital investment necessary in creating a transportation alternative that is successful. TOD differs from a conventional style development built adjacent to transit stations or a traditional neighborhood development in that the transit station is the focus of the community. There is usually civic space near the transit stations that reinforces the focus of the community, thereby encouraging transit ridership. TOD is considered a smart growth strategy, because it not only embarks upon the issue of growth location from a regional sustainability perspective but also strengthens environmental stewardship by reducing development pressure on outlying communities.

Accepted TOD Principles

TODs vary in design or scale; reflecting the specific location, land value, nearby development pattern, local demographics, history of the area, and other relevant factors. Public policy can also have a powerful impact on the nature, magnitude, and timing of transit-oriented developments. A key to the successful implementation of a transit program is to include transit installation in the approval requirements for large-scale developments in urbanized areas. The principles for achieving a TOD take account of:

- Designating a zoning overlay in the transit station area at the early stage of the planning process to encourage clustering, high-density uses around stations
- Augmenting a transit-supportive intensity of housing and employment within a comfortable walking distance
- Creating a mixture of vibrant uses such as retail, commercial services, dining places, offices, parks, schools, libraries, and other community facilities
- Providing a variety of housing choices particularly for working families in conjunction with better access to downtown jobs
- Designing a pedestrian-oriented station area complemented with tree-lined streets, landscaped open spaces, adequate lighting, and seating areas
- Enhancing an interconnected street network with sidewalks and pedestrian paths accessible to transit station areas

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- Constructing civic plazas to define the neighborhood character by contributing a gathering and vital focus of public life and activities
- Placing a location-efficient development with vigorous economic conditions and a strong real estate market demand for TOD
- Applying value capturing approaches to maximize the potential value of existing properties near a transit station

Among all the TOD principles, the station area planning, zoning to support high-density and mixed-use (see the chart below), and the market (economic vitality and demand for a TOD) are fundamental for accomplishing a true TOD. On the basis of TOD principles, a long-term framework for private development and public improvement needs to be established. Proximity to transit can ensure the development entitlement and promote public-private partnerships resulting in a direct subsidy for the TOD project or other beneficial investments in communities at both the local and regional magnitude. The value capturing strategy requires that vacant or underutilized properties be situated near a transit station.

General Guidelines for TOD:					
TOD Location	Allowable Size of TOD (Acre)	Land Devoted to Mixed Use Core	Land Devoted to Other Uses		
			Employment (outside Core)	Residential (outside Core)	Civic (in or out TOD)
Transit-way, rail, bus transfer station	60-125	10% - 40% of TOD area	20% - 50% of TOD area	20% - 50% of TOD area	10% minimum
Guidelines for Mixed-Use Core of TOD:					
TOD Location	Minimum Net Floor Area Ratio	Maximum Gross Residential Density (Units/Acre)	Maximum Block Size (Acre)		
Transit-way, rail, bus transfer station	0.5	30	4		

Steuteville, R., et al (References and Sources, 13).

An urban fabric must exist in order to link TOD into surrounding land uses. The overall goal of TOD is to create a lively, urban neighborhood in a strategic location. The housing components of TOD projects give residents easy access to trains, streetcars and buses for commuting to work or elsewhere. The commercial components create jobs that people residing in other places can easily reach by public transportation. Urban design criteria ought to guide the development’s vehicular and pedestrian circulation, architecture, parks, parking, and signage.

Environmental Benefits for Transit

In addition to the land use benefits associated with TOD, the environmental benefits can have impacts on a global scale. The recent book, *Growing Cooler*, funded by the Urban Land Institute, details the impact of carbon dioxide (CO₂) associated with vehicle miles traveled (VMT) and compact urban development. The book’s conclusion implies that to dramatically reduce the growth of green house gases “all policies and practices, funding, and spending, incentives, and rules and regulations” must be focused on smart growth

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and away from sprawl. The smart growth and land management policies identified in the Master Plan 2010, the Baltimore Regional Rail Plan, and the Transportation Outlook 2035 have an underlying effect of improving the environment and being efficient with Baltimore County's land resources.

Case Studies Showcasing TOD

TODs range from high-density, urban projects such as the Fruitvale Transit Village in Oakland, California to a full-scale neighborhood at Orenco Station in Hillsboro in Portland, Oregon. The Fruitvale Transit Village project is the result of a broad-based partnership among public, private, and nonprofit organizations working together to revitalize a community applying TOD. In 1999, groundbreaking took place on a \$100 million mixed-use development adjacent to the Fruitvale Bay Area Rapid Transit District (BART) station in Oakland, California that is a low-income, predominantly minority community experiencing economic stress.

The 190-acre Orenco Station in Portland, Oregon has become one of the more successful. It had 1,834 residential units and 500,000 square feet of commercial, including a town center and office district. The rail connection, which was in place right from the beginning, is part of an alternative lifestyle offered by the station. The rail stop is several blocks from the town center.

Also noteworthy is the Rosslyn-Ballston corridor, a series of dense, walkable, infill developments clustered around five subway stations in Arlington, Virginia. This TOD has boosted transit rider-ship and reduced growth of automobile use along the corridor.

Toronto in Ontario, Canada has been advocating for a massive multi-line transit expansion called "Transit City" since 2007. The light rail transit system in its own right-of-way will offer a high level of service for transit riders. While the city's two major rapid transit routes focus on the downtown area, the new light rail projects will improve cross-town connections. As a result, instead of simply reinforcing the centrality of the core, Toronto will provide mobility improvements and TOD possibilities to residents throughout the metropolis.

In Singapore, a city-state in southeast Asia, the Mass Rapid Transit (MRT) System has been fully operational since 1990. Tracts and stations have been built to connect the main housing areas with the city, allowing people to travel more comfortably and in a shorter time. MRT links areas densely filled with houses, apartment buildings, industrial parks, or high-rise office buildings. In addition, concerts or art exhibitions have been held at some transit stations to make the music and art accessible to people.

TOD Conclusion

Existing TOD in a variety of cities help illustrate the benefits of planning and successfully implementing concentrated development around transit stations. Successful TOD can improve pedestrian safety, enhance the supply of affordable housing, generate revenues around transit stations, mitigate vehicular traffic congestion, boost transit rider-ship, improve air quality, preserve green fields and natural resources, conserve energy, provide medium or low-income families with access to economic opportunities, meet needs of changing demographics, serve central business districts, and strengthen a revitalizing industrial corridor. Enjoying the benefits associated with TOD increase the likelihood that the policies outlined in the Master Plan 2010 will get implemented.

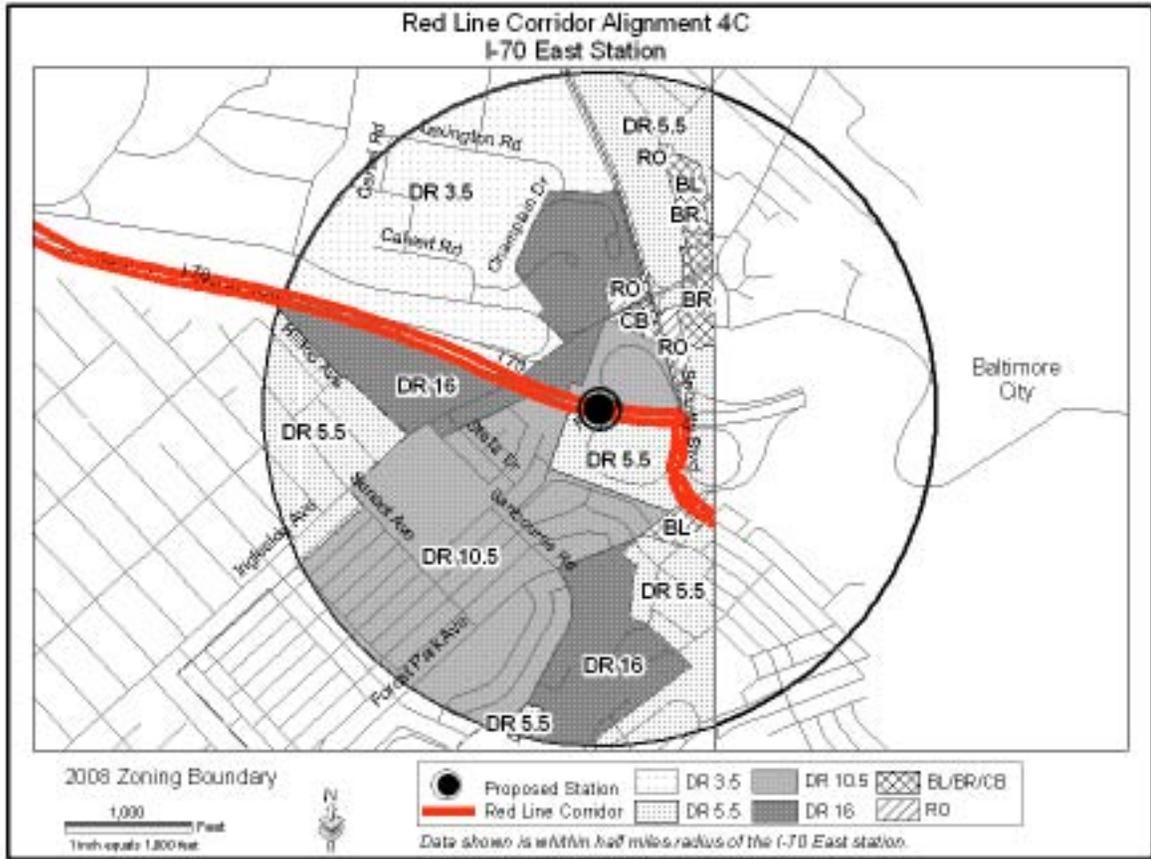
Existing Conditions around Proposed Stations

To better understand the current state of the communities along the Red Line Transit Corridor and comprehend the potential impacts associated with the construction of the Red Line and its associated development, various levels of information will be reviewed. This will create a baseline picture that will help develop recommendations and identify actions necessary to move forward to improve the quality of life in the Red Line Corridor and Baltimore County.

Zoning

The first data examined is the zoning within a ½ mile around the proposed stations. This will be called the catchment areas. Zoning is a system of land use regulation that controls the physical development of land. It is a legal mechanism by which local government is able to regulate an owner's right to use privately owned land for the sake of protecting the public health, safety, and/or general welfare. Land is mapped into different zones with the primary purpose of promoting compatible land uses and to separate incompatible uses. Decisions regarding how land is zoned are determined, in part, by the County's master plan, which lays out broad policies to implement a shared vision for the future, and adopted community plans.

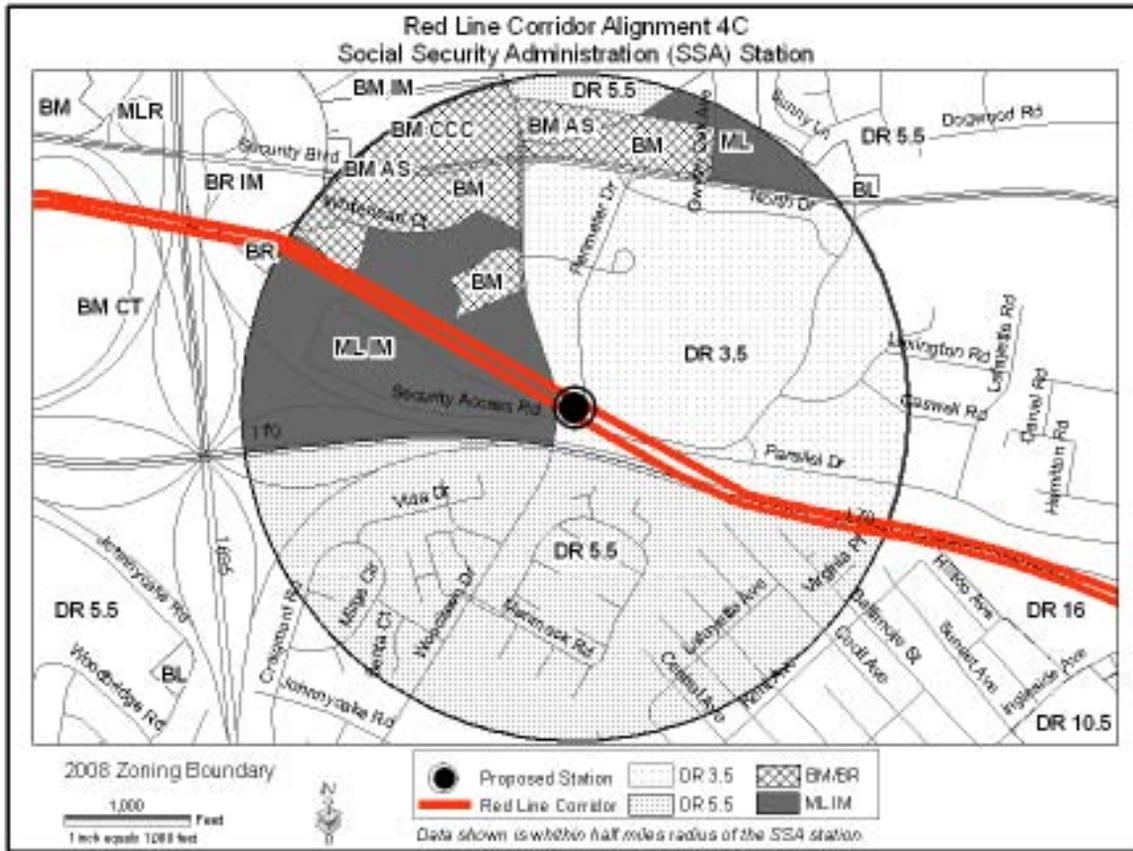
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Zoning within a 1/2 mile catchment area of the I-70 East Station	
Zoning	Acreage
BL	6
BR	5
CB	2
DR 3.5	78
DR 5.5	94
DR 10.5	102
DR 16	68
RO	4
Within Baltimore City	144
Totals	503

About 1/3 of the acreage of the catchment area falls within Baltimore City, which is comprised of park and residential uses. The Baltimore County acreage around the I-70 East proposed station is split between single family detached and multi-family residential zoning with small amounts of commercial zoning.

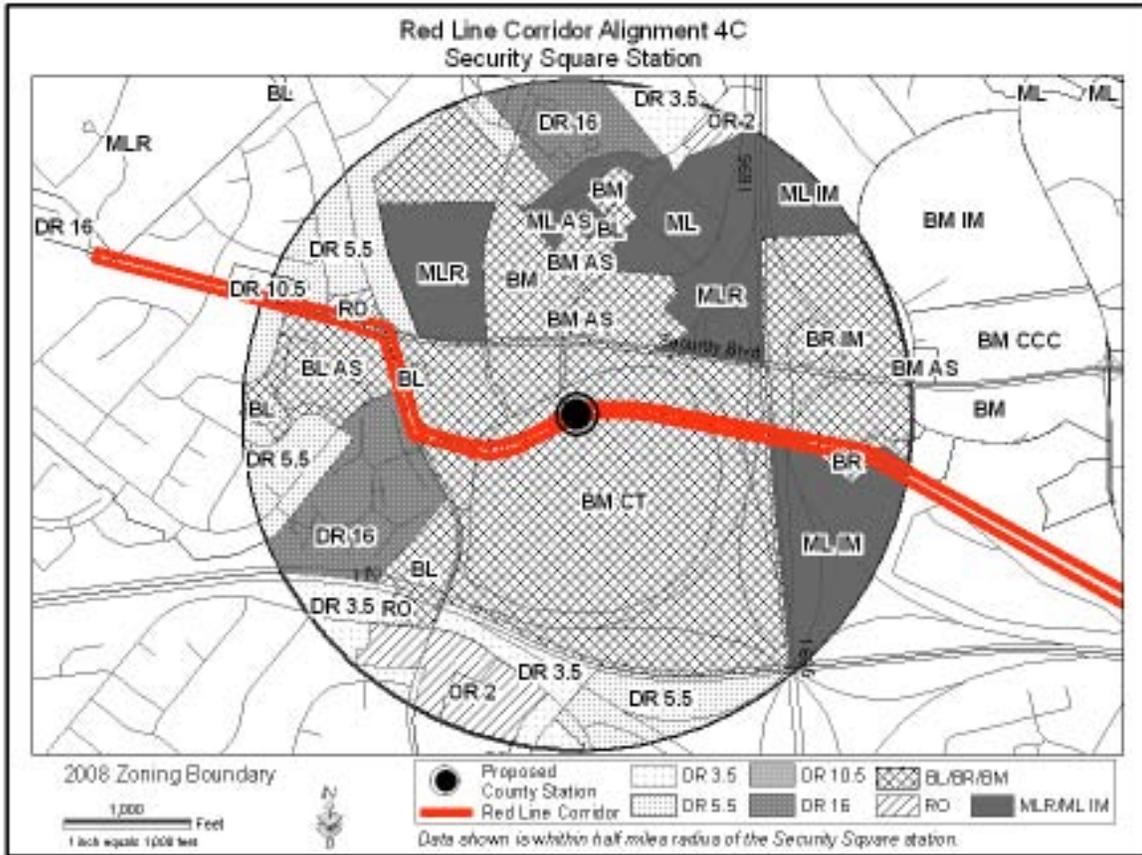
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Zoning within a 1/2 mile catchment area of the Security Administration Station	
Zoning	Acreage
BM	31
BM AS	5
BM CCC	14
BR	3
BR IM	1
DR 3.5	158
DR 5.5	200
ML	11
ML IM	80
Totals	503

The prominent zoning in this catchment area is medium density residential. The zoning classifications in the catchment area do not accurately reflect how the land is being use. This is because the federal government operates the Social Security Administration on residentially zoned land. The federal government is not regulated by local zoning codes. The remaining zoning is reflective of the supportive businesses for the Social Security Administration.

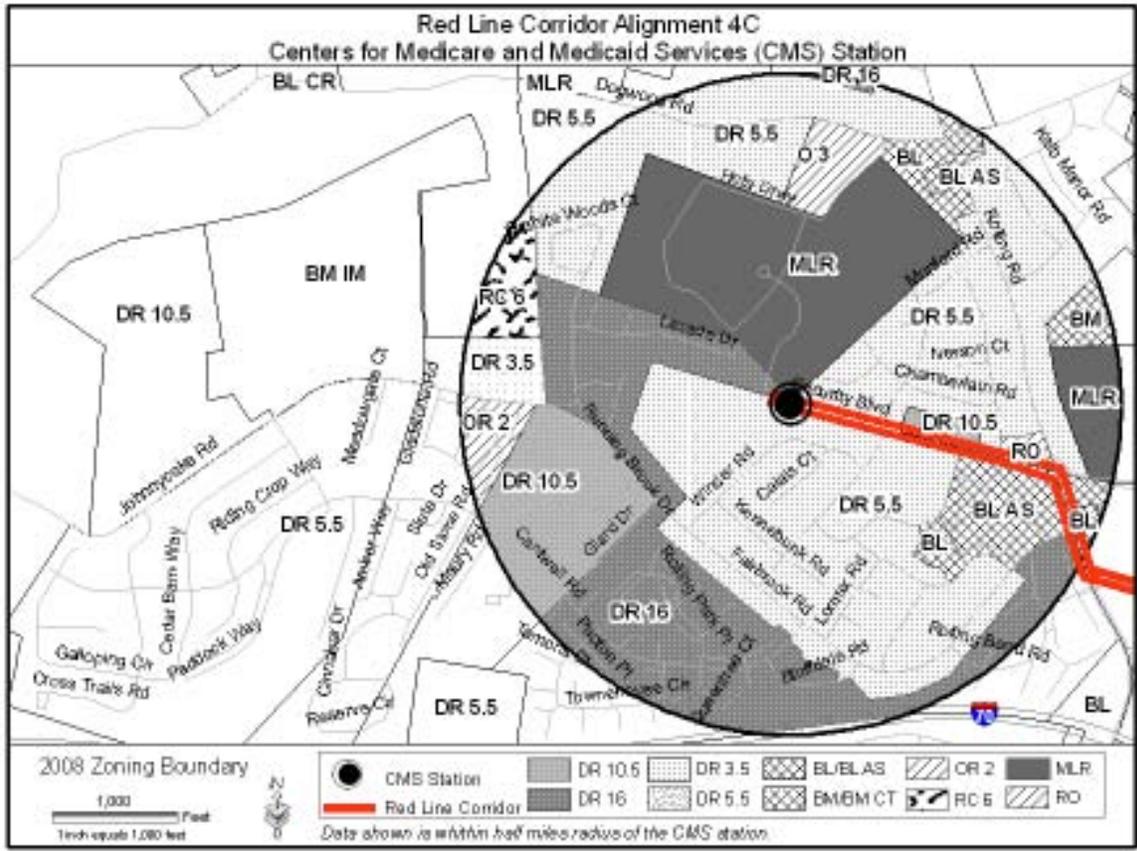
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Zoning within a 1/2 mile catchment of the Security Square Station	
Zoning	Acreage
BL	13
BL AS	16
BM	40
BM AS	4
BM CT	152
BR	4
BR IM	38
DR V3.5	26
DR 5.5	51
DR 10.5	2
DR 16	41
ML	5
ML AS	2
ML IM	35
MLR	52
OR 2	19
RO	3
Totals	503

The prominent zoning in this catchment area is commercial. Security Boulevard and Rolling Road are the main arterial roadways in the catchment area and drive the commercial nature of the catchment area. The zoning classification in this catchment area is BM CT. The CT district is an overlay that allows the mixed use density needed for supporting TOD as previously discussed.

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Zoning within a 1/2 mile catchment area of the Center for Medicare and Medicaid Services (CMS) Station

Zoning	Acreage
BL	11
BLAS	17
BM	5
BM CT	3
DR 3.5	9
DR 5.5	220
DR 10.5	35
DR 16	96
MLR	81
O 3	8
OR 2	7
RC 6	9
RO	2
Totals	503

The prominent zoning in this catchment area is residential. There is commercial zoning, which reflects the edge of the Security Boulevard and Rolling Road intersection. The manufacturing zoning reflects the office use associated with the Center for Medicare and Medicaid Services (CMS). This catchment area has a small amount of rural zoning, which will be discussed in greater detail in later text.

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History of CZMP Issues

The Comprehensive Zoning Map Process (CZMP) takes place every four years on a schedule specified in the County Code. This process allows any citizen to request a zoning change on any property in the County, although the usual participants in the process are individual landowners, contract purchasers, community organizations, County staff, the Planning Board, and the County Council.

The CZMP covers a period of approximately 12 months and results in zoning decisions that are reflected in a final log of issues. The County Council makes the final decision on each request as to whether to retain the existing zoning or to enact a different zone(s) or district(s). Generally, each issue is a single property, but an issue may cover many adjoining properties and might even cover many hundreds of acres.

On August 26, 2008 the County Council approved the following legislative bills: 85-08, 86-08, 87-08, 88-08, 89-08, 90-08, and 91-08. These bills reflect the County Council's decisions for the rezoning requests made through the 2008 CZMP. A short history of zoning issues for each proposed station's catchment area is described below and will help indicate how the area has changed over the years.

I-70 East Station

- 1996 CZMP No Issues.
- 2000 CZMP 1-007.
- 2004 CZMP 4-014.
- 2008 CZMP No Issues.

The zoning surrounding the proposed I-70 East Station has remained virtually unchanged since 1992.

SSA Station

- 1996 CZMP No Issues.
- 2000 CZMP No Issues.
- 2004 CZMP 4-031, 4-068.
- 2008 CZMP No Issues.

Less than 5 acres changed from manufacturing zoning to commercial zoning around the proposed SSA Station over the last 16 years

Security Square Station

- 1996 CZMP 1-001, 1-053, 1-058, 2-037.
- 2000 CZMP 1-009, 1-026, 1-039, 2-045 (repeat of 1996 2-037).
- 2004 CZMP 1-002, 1-003, 1-015.
- 2008 CZMP 1-015, 1-029.

The zoning changes around the proposed Security Square Station over the years have resulted in small changes in strategic locations for specific projects. The 1996 CZMP changed small acreages to office zoning. The 2000 and 2004 CZMP saw small increases in office and commercial zoning. The 2008 CZMP saw a small amount of manufacturing zoning converted to commercial zoning.

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CMS Station

1996 CZMP No Issues.

2000 CZMP 1-017, 1-026, 1-028, 1-034, 1-035, 1-047, 1-048, 1-049, 1-050, 1-051, 1-058.

2004 CZMP 1-008, 1-010, 1-011, 1-035, 1-058, 4-040.

2008 CZMP 1-002, 1-015, 1-026, 1-036.

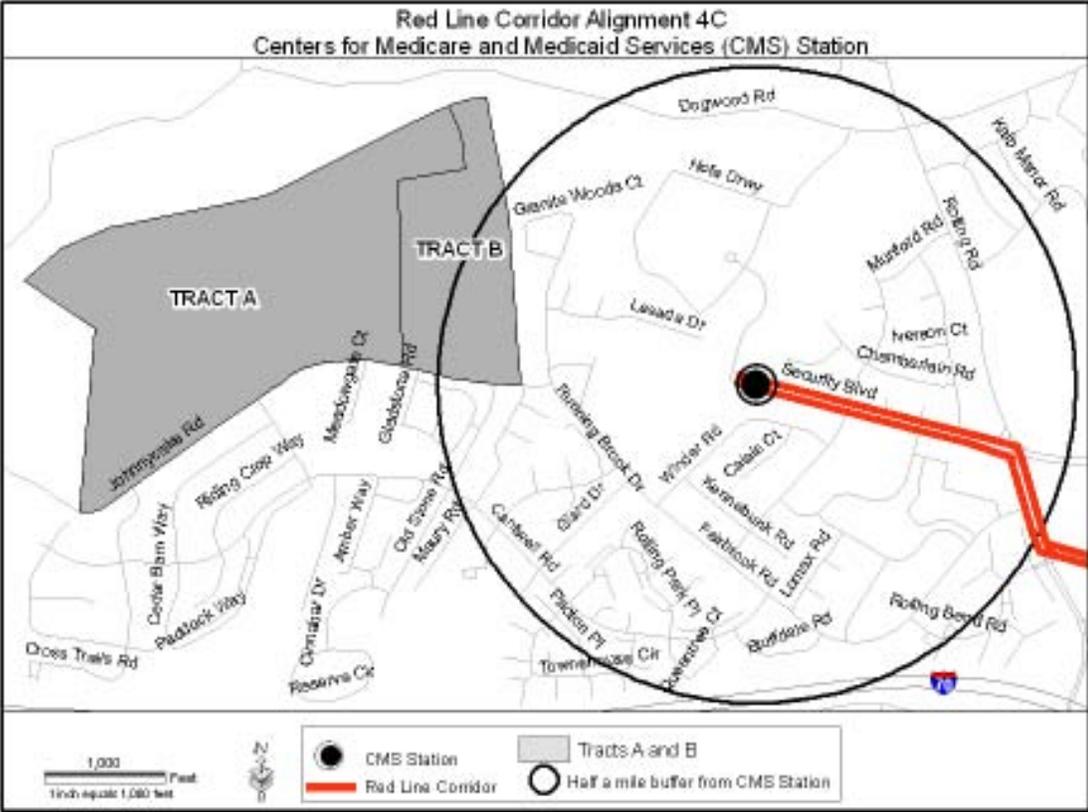
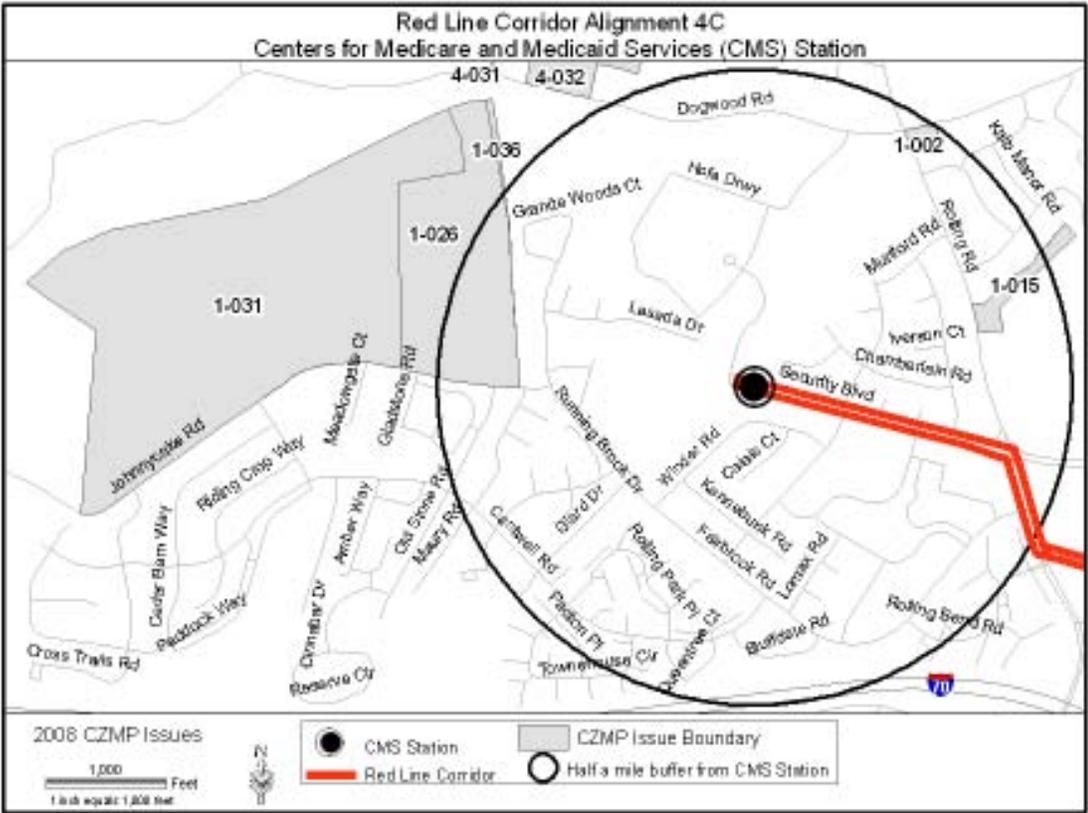
When the Baltimore County Council adopted the Baltimore County Master Plan 1989-2000 on February 5, 1990, it removed the Granite Patapsco Area as a designated growth area. The proposed CMS Station catchment area is just inside the boundary of the Granite Patapsco Area. The proposed CMS Station catchment area falls on the edge of the URDL, which will be described in more detail in later text. The land use and zoning for this area has constantly been debated.

During the 2000 CZMP small increases in office and commercial zoning occurred around major intersections. Zoning close to the URDL started to see changes that strengthened the distinction between urban area and rural areas. DR5.5 zoned land was reduced to DR 3.5 and RC 3 zoned land was changed to RC 6.

The pattern initiated during the 2000 CZMP continued during the 2004 CZMP. Substantial additional acreage changed from DR 5.5 to DR 3.5 and RC 3 changed to RC 6.

Once again the 2008 CZMP reflected the debate concerning the transition from the urban part of the county to the rural part of the county. A large rural tract, 121 acres, just 325' to the west of the proposed CMS Station catchment area requested office zoning and was granted high density residential and commercial zoning. In future text, this tract will be referred to as Tract A. A second large rural tract, 40 acres, partly within the proposed CMS Station catchment requested commercial and office zoning. The requested change in zoning was denied. In future text, this tract will be referred to as Tract B. This inconsistency in zoning creates an unclear definition of where the urban part of the county ends and the rural part of the county begins. As additional conditions are reviewed, Tracts A and B will be included with the data for the proposed CMS Station catchment area because of the disjointed zoning, and the size, density and proximity to the catchment area.

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URDL / PFA

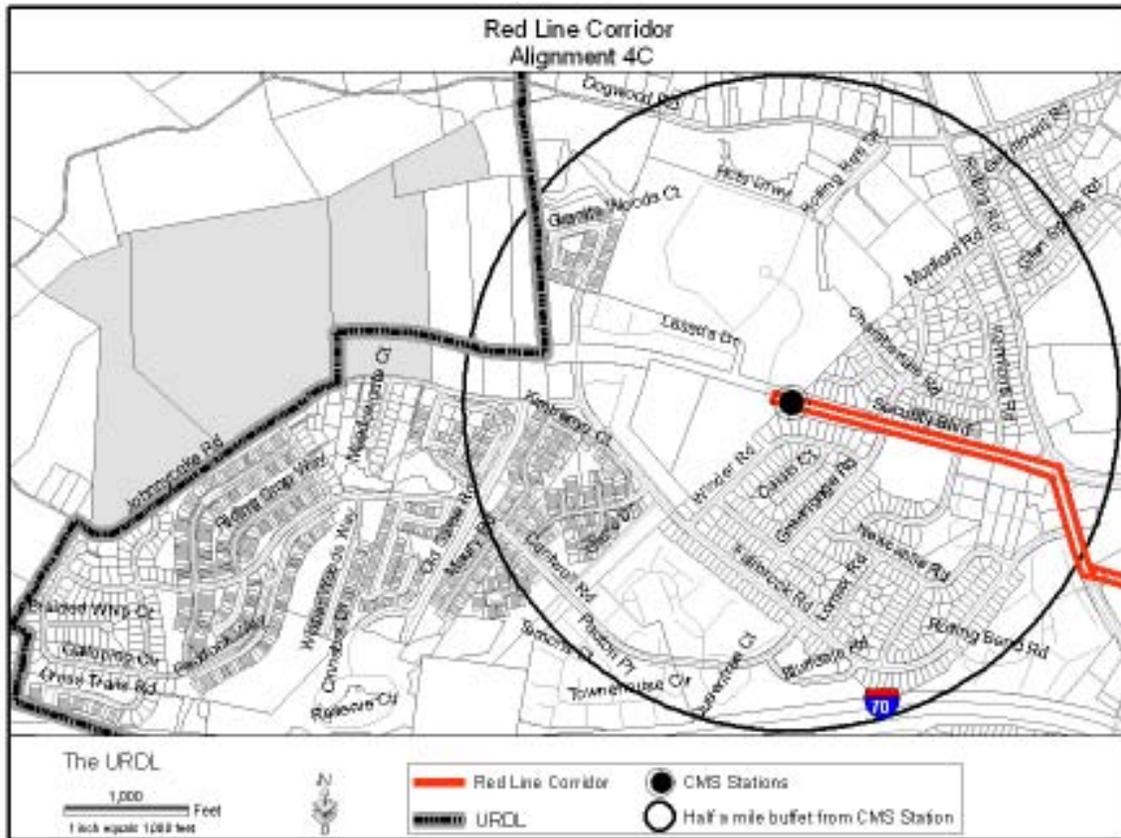
The county has developed using two distinct land management areas — the urban area and the rural area. This concept manages growth in a manner that preserves important natural and agricultural resources and maximizes the efficiency of county revenues spent on transportation improvements, utilities, and other capital projects. An urban rural demarcation line (URDL) was established in 1967. The urban areas of the county were those that had or would receive public water and sewer infrastructure, and therefore would accommodate development, including employment, retail, and residential uses. In the rural areas, reliance on private well and septic systems would limit the amount of development that could be accommodated, and thereby help ensure the area's continued use for agricultural and natural resource protection and low density rural residential uses. Baltimore County has a long history of using the URDL as a land management strategy. By planning for the majority of development to occur within its urban areas, where public services are more economically provided, the most efficient use is made of tax dollars.

In 1997 the State of Maryland required local jurisdictions to map Priority Funding Areas (PFA). The intent of this mapping was to support state funding for Smart Growth in order to help reduce sprawl and target where growth should occur. Baltimore County's PFA is coincident with the URDL.



The proposed Red Line transit facility and all four proposed stations fall within the urban portion of the county based on the location of the URDL. Only a small portion of the proposed CMS station catchment area falls within the rural portion of the county based on the existing location of the URDL.

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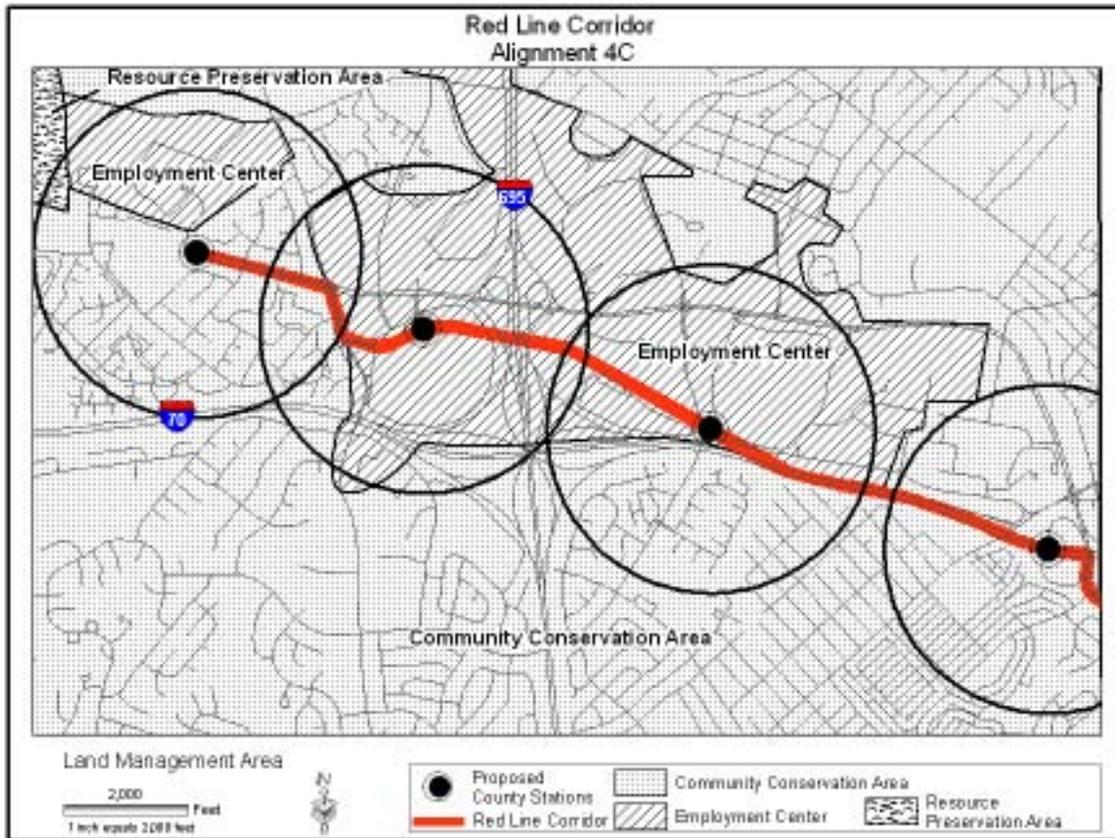


Presently, almost all of Tract A is located outside of the current URDL. The URDL splits Tract B along the zoning line between RC 6 and DR 3.5. The property owners of Tracts A and B have petitioned the Planning Board to move the URDL so their properties are inside the URDL. At the present time these petitions have not been addressed.

Growth Management

The URDL is used to separate the urban and rural areas of Baltimore County. Growth Management Areas are then used to separate the areas within the urban and rural parts of the county. For the urban part of the county the Growth Management Areas include: Community Conservation, Urban Center, Employment Center and Growth Area. For the rural part of the county the Growth Management Areas include: Agricultural Preservation Area, Resource Preservation Area, Rural Commercial Center, and Rural Residential Area. The Baltimore County Master Plan 2010 has specific policies for each Growth Management Area.

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The Red Line Corridor and the proposed station catchment areas are comprised two Growth Management Areas, Community Conservation and Employment Center. There is a small amount of Resource Preservation Area that will be discussed with the proposed CMS station catchment area.

Listed below are the Master Plan 2010 policies for Community Conservation Areas

- Target public capital resources to community conservation areas for the maintenance and upgrading of neighborhood streets, alleys, parks, schools, and other facilities.
- Facilitate the consolidation and redevelopment of abandoned and underused properties for uses that enhance community conservation areas.
- Enhance and market the positive attributes of the older neighborhoods.
- Nurture community stability by actively promoting home ownership.
- Encourage property owners to update existing homes to increase their future marketability.
- Encourage attractive and well-maintained rental housing.
- Ensure that the permitted use and density of “infill” parcels enhances established communities.
- Preserve or create open space parcels in established communities, particularly those with higher densities.
- Ensure that community services address community needs and are accessible to residents.
- Encourage the development of housing for the elderly close to town and community centers.
- Encourage the accommodation of citizens with disabilities in new housing design.
- Foster civic pride, appreciation for diversity, and community involvement.

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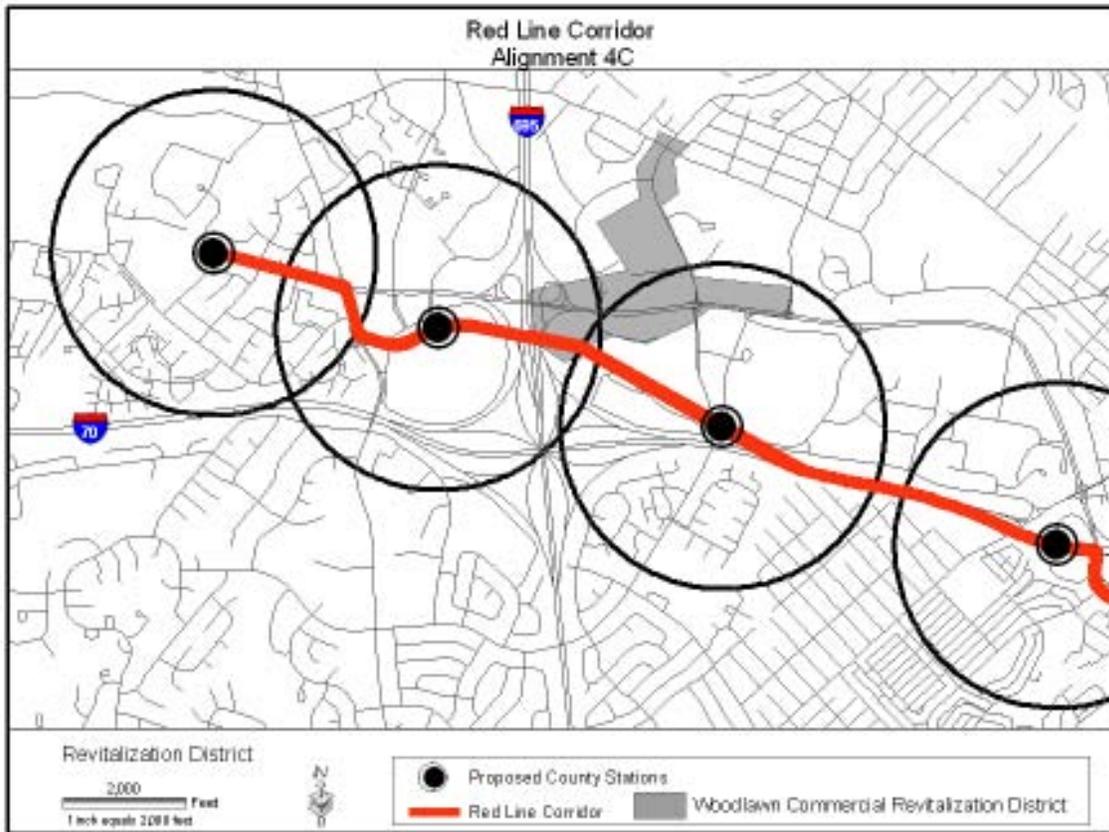
Commercial Revitalization District (CRD) is a sub-category of the Community Conservation growth management area. The Master Plan 2010 policies for CRDs are listed below.

- Assist existing businesses with current and future needs.
- Institute strategies to strengthen the overall well being of the CRDs.
- Promote regulatory mechanisms that improve the CRDs.
- Attract new investment and compatible development.
- Continue existing relationships, resources, and mechanisms to stimulate quality development, and investigate establishing others.
- Enhance the physical capacity of the CRDs through capital improvements, streetscape enhancements, and infrastructure upgrades.

In addition to the policies geared to supporting the CRDs, the Department of Economic Development has specific programs for the businesses located in the CRDs. Those programs with a short description are listed below.

- Architect-On-Call - Architect-On-Call offers up to ten free hours of professional architectural design services to businesses improving the exteriors of their buildings. After an initial site visit and meeting, the architect prepares a digital rendering of the building with design recommendations and a rough cost estimate. The service is free when improvements are certified as complete.
- Building Investment Loans - Business Improvement Loan Program provides interest-free loans for business improvements. Eligible exterior improvements include windows, facade replacement, siding, and painting. Eligible site improvements include landscaping, signage, lighting, and parking lot improvements. Eligible interior improvements include painting, flooring, drywall, plumbing, electrical, HVAC systems, and store fixtures.
- Baltimore County Small Business Loan Partnership - This fund provides real estate and fixed-asset loans through a partnership between Baltimore County and the area's leading financial institutions.
- Baltimore County Business Growth Loans - This fund is primarily used to assist significant redevelopment projects. The maximum loan amount is \$250,000 and can be used for the acquisition and improvement of land, buildings, and equipment, including new construction and the renovation of existing facilities. Terms and interest rates are based upon the economic impact of the project.
- Commercial Revitalization Tax Credit - For larger projects, this benefit provides a five-year real property tax credit if physical improvements increase the assessed property value by \$50,000 or more. A ten-year credit is available if improvement costs exceed \$10,000,000.
- Maryland's Neighborhood Business Development Program - This state program provides loans from \$25,000 - \$500,000 for pre-development, development and start-up costs. Loans have flexible interest rates and terms.
- Revitalization Advantage - This program offers a ¼ percent discounts off standard interest rates to qualifying businesses looking to refurbish or develop commercial property or finance equipment purchases.

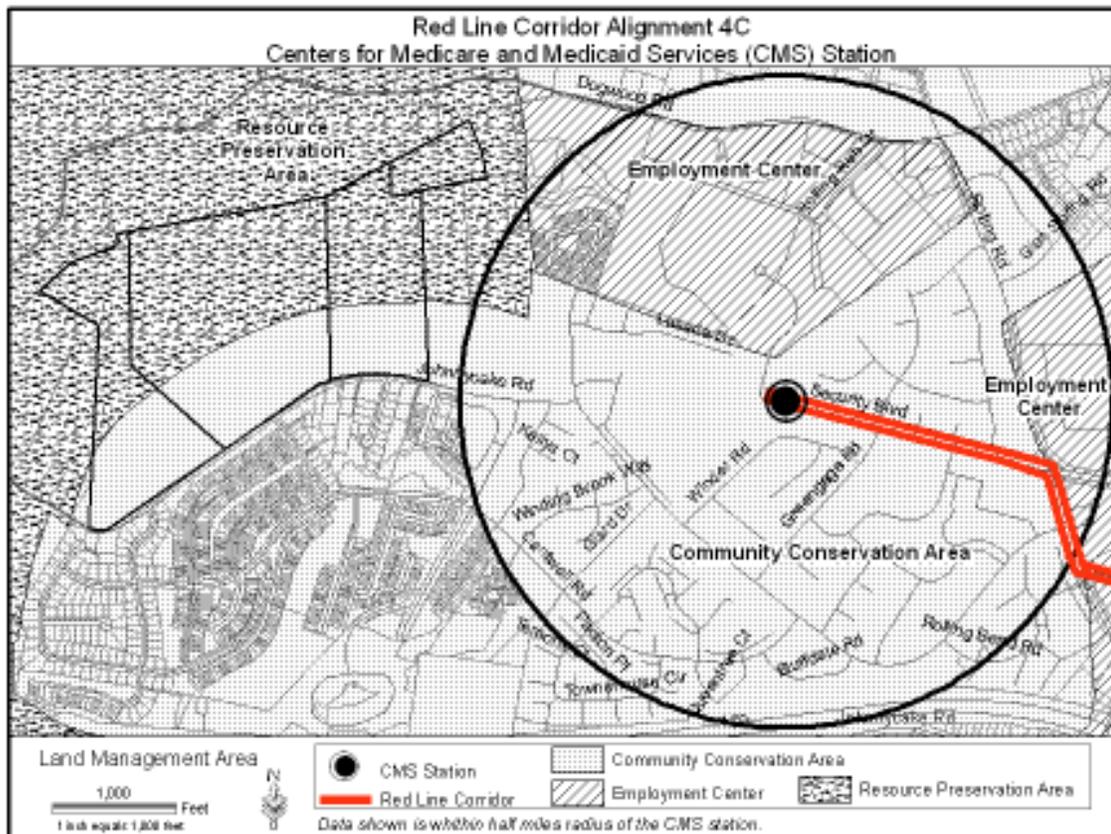
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Listed below are the Master Plan 2010 policies for Employment Center.

- Direct land planning efforts to support appropriate development within employment centers, recognizing that a strong economic and industrial base is needed to provide revenue, job opportunities, and sustainable communities.
- Work to ensure that the development and redevelopment of the county's employment centers contributes to the stability of surrounding communities.

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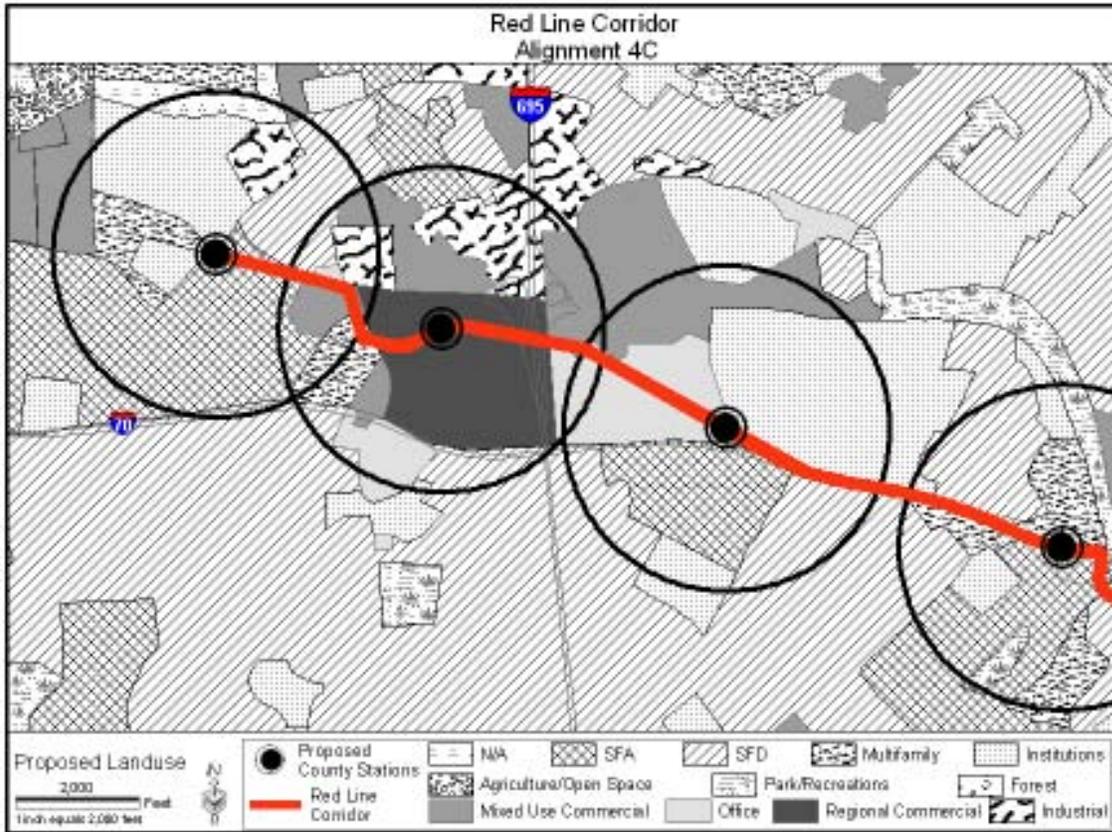


Tract A and Tract B are primarily located within a Resource Preservation Area. The Master Plan 2010 policy for Resource Preservation Area states ‘Preserve the county’s valuable cultural, historic, recreational and environmental resources by limiting residential development and acquiring available land for public benefit.’

Proposed Land Use

The Master Plan 2010 has a “Proposed Land Use Map,” which provides general recommendations for future land use in the county and is based on the policies within the Master Plan 2010. The map is conceptual and general; it is intended to reflect land use patterns rather than identify the land use of individual properties or parcels. The proposed map is designed to provide general guidance for rezoning recommendations in the Comprehensive Zoning Map Process, the Cycle Zoning Process, and the Out-of-Cycle Zoning Process, as well as in the review of water and sewer master plan petitions and development projects. The proposed land use map provides general direction for county land use decisions and may be amended periodically as needed. The proposed land use map was developed without knowing the proposed 4C alignment of the Red Line Transit Project and the associated station locations.

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The proposed land uses shown on the map are not substantially different from the existing land uses. The characteristic of a mature jurisdiction will not have substantial difference between proposed land use and existing land use.

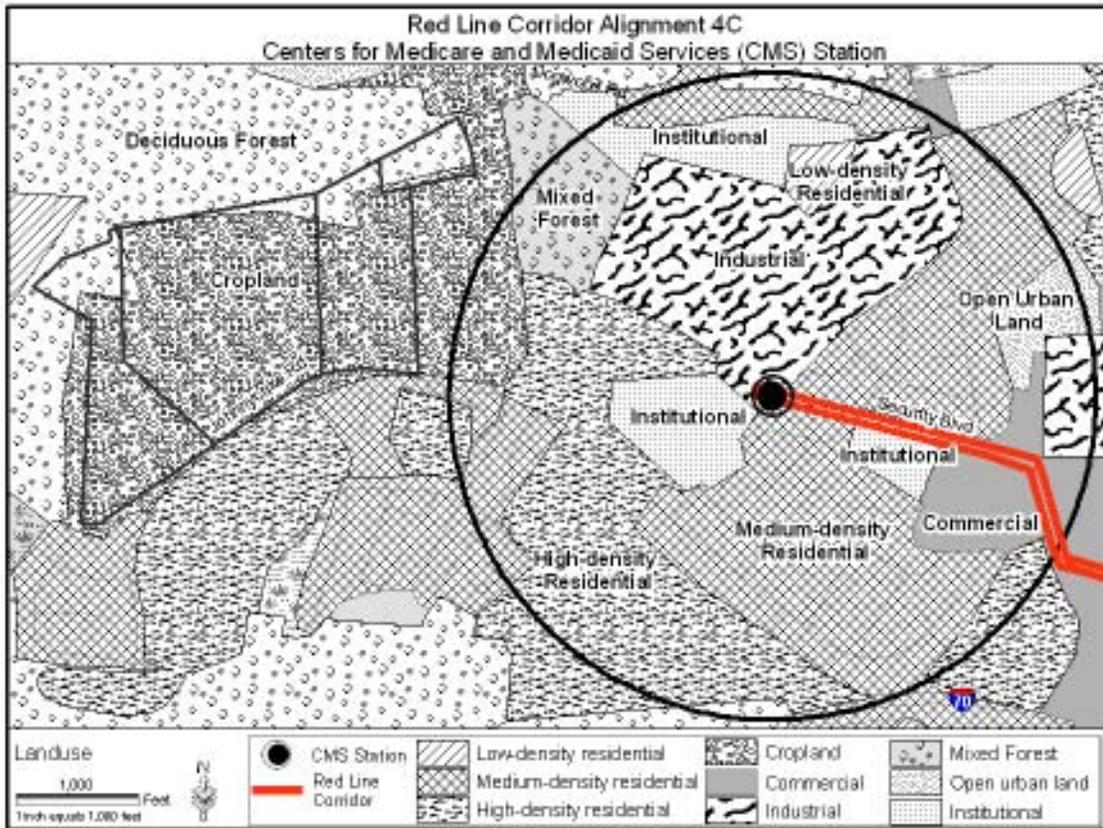
The proposed land use for the I-70 East station and catchment area is comprised of mostly residential uses. There is an equal mix of single family detached, single family attached and multi-family residential proposed residential uses.

The proposed land use for the SSA station and catchment area has two different personalities. North of I-70 the proposed land use reflects the large Social Security complex and the supporting and ancillary uses around it. South of I-70 the proposed land use reflects the existing residential uses.

The proposed land use for the Security Square station and catchment area is dominated by the regional commercial use associated with the Security Square Mall. The remaining proposed uses are split between mixed use commercial, industrial and residential.

Residential uses account for approximately 75% of the proposed land use for the CMS station and catchment area. The CMS institution represents almost all of the remaining proposed land use. The proposed land use for Tract A and B is cropland and forest.

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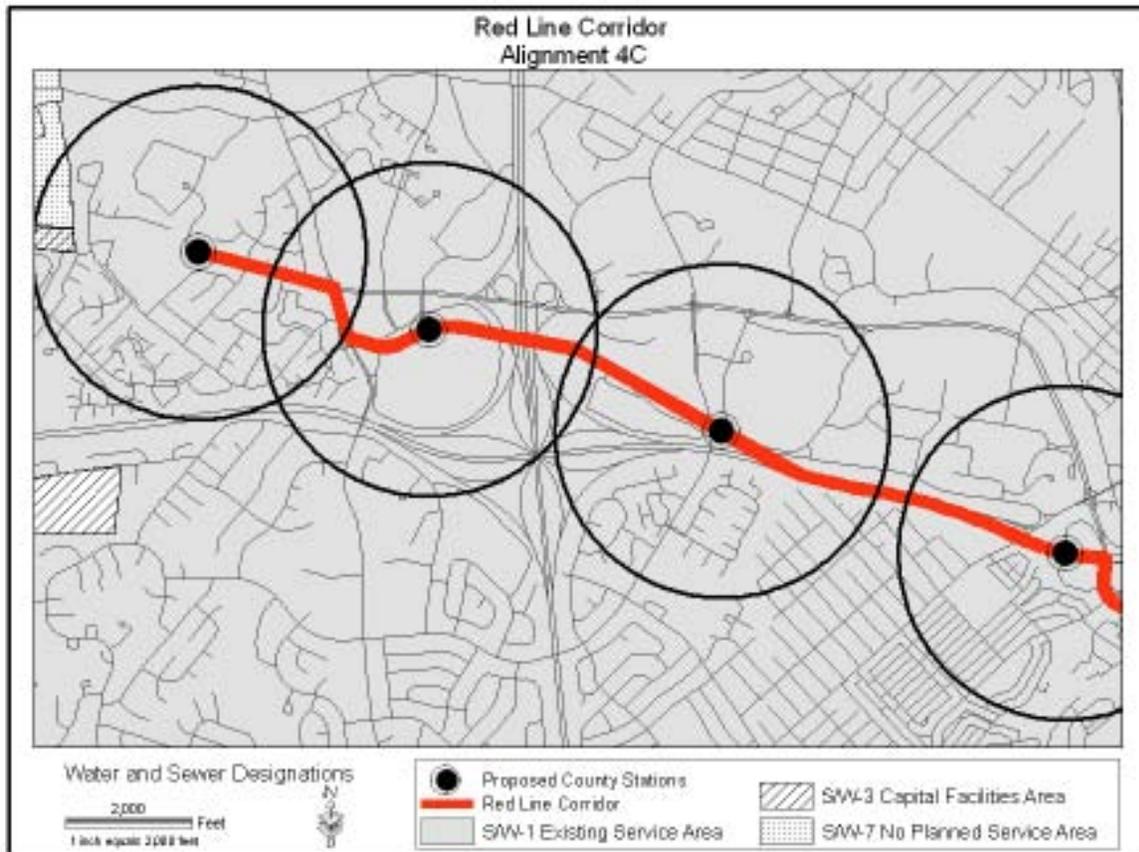


Water and Sewer Designations

The previous discussion regarding land within the URDL indicated that it either has or can be provided with public water and sewer connections. The Baltimore County Department of Public Works uses a coding system to identify and distinguish both water and sewer designations, which represent different levels of water and sewer service and different times for constructing the utilities. The designations with their definitions are shown below.

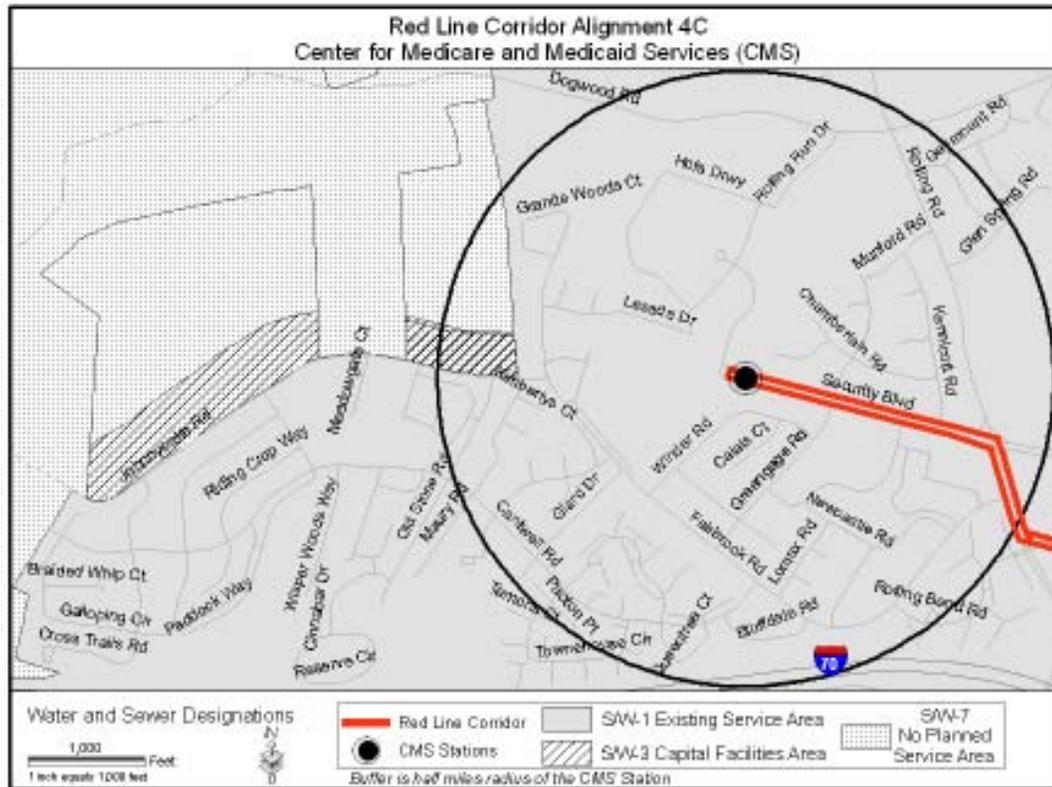
Water & Sewer Designation	Water & Sewer Definitions
W1/S1	Areas with existing water & sewer service
W3/S3	Facilities are anticipated within the 6 yr capital program period
W5/S5	Facilities should be provided in accordance with the Master Plan
W6/S6	Facilities may be expected beyond the Master Plan time frame
W7/S7	No planned service areas

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Almost the entire area within the Red Line Corridor has the S1/W1 sewer and water designation, meaning it is inside the URDL and existing development is served by water and sewer utilities.

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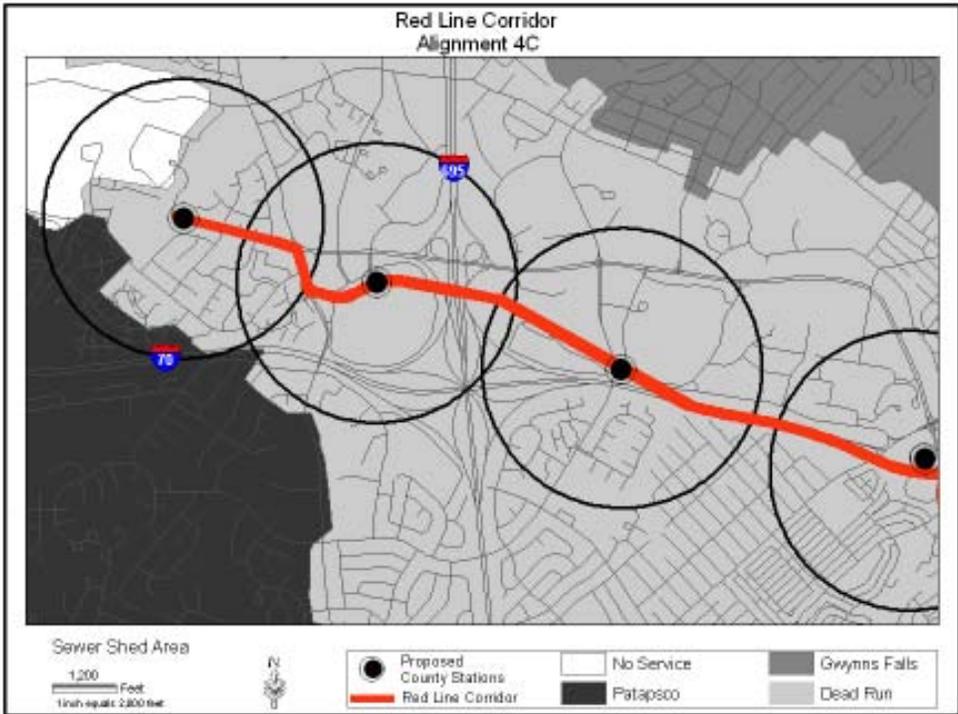
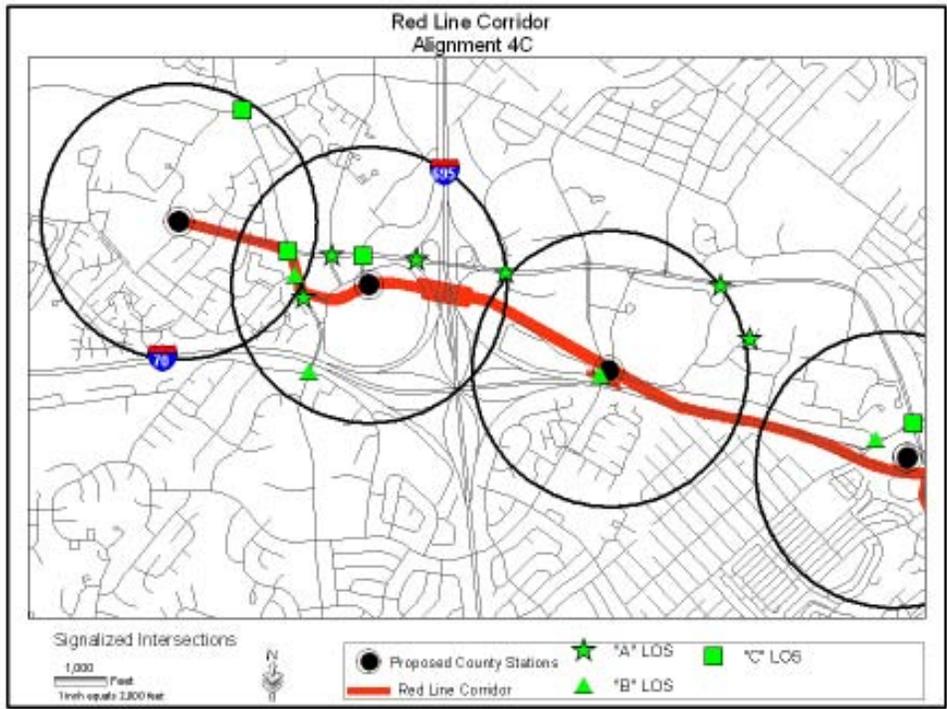


The water and sewer designation of S7/W7, no planned service, are applied to most of the land associated with Tract A and Tract B.

The property owners of Tract A and Tract B have petitioned Baltimore County to revise the sewer and water designations to S3/W3, facilities are anticipated within the 6 year capital program. The petitions are in progress at this time.

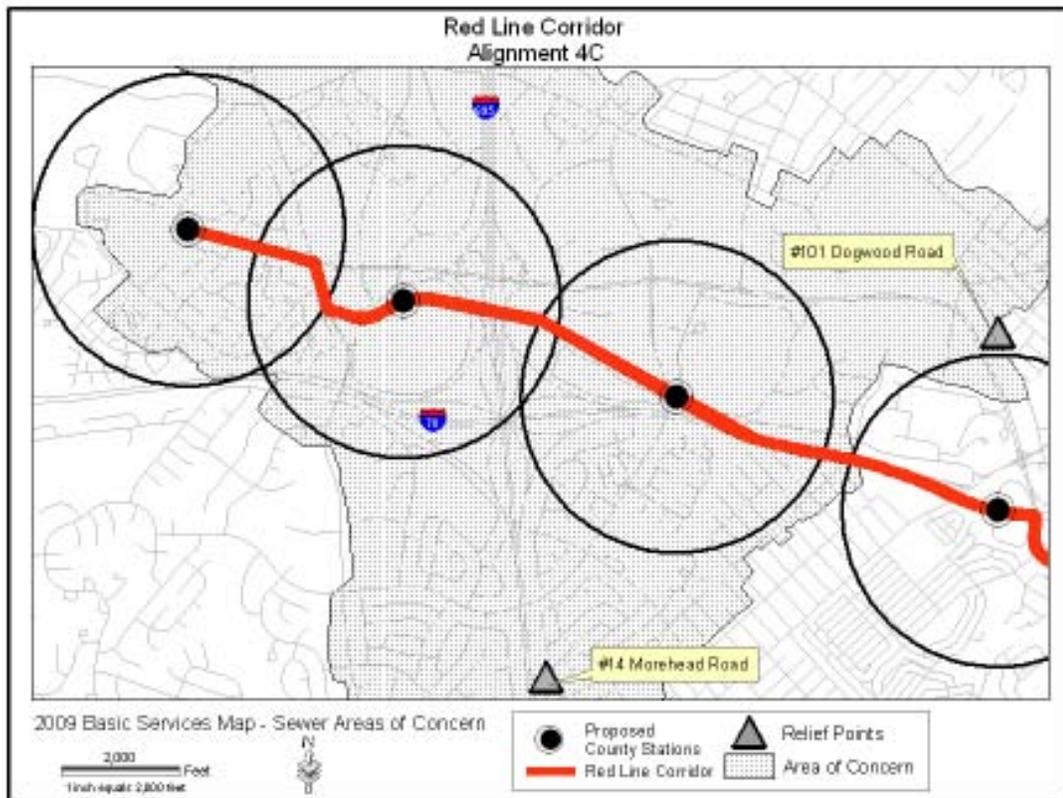
Annually Baltimore County assesses the level of service for sewer, water and traffic intersections, known as the Basic Services Maps. These maps indicate where there are deficiencies that would prevent new development from occurring until the developer improves the infrastructure to an adequate level of service. There are no deficiencies for water utilities and traffic intersections in the Red Line Transit Corridor.

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The 4C alignment for the Red Line Transit Project and most of the catchment areas for the four proposed stations fall within the Dead Run sewershed, an area of special concern on the Sewer Basic Services Map. New development proposed in an area of special concern must be carefully evaluated to ensure the sewer system has adequate capacity to accommodate the projected flows from the sites.

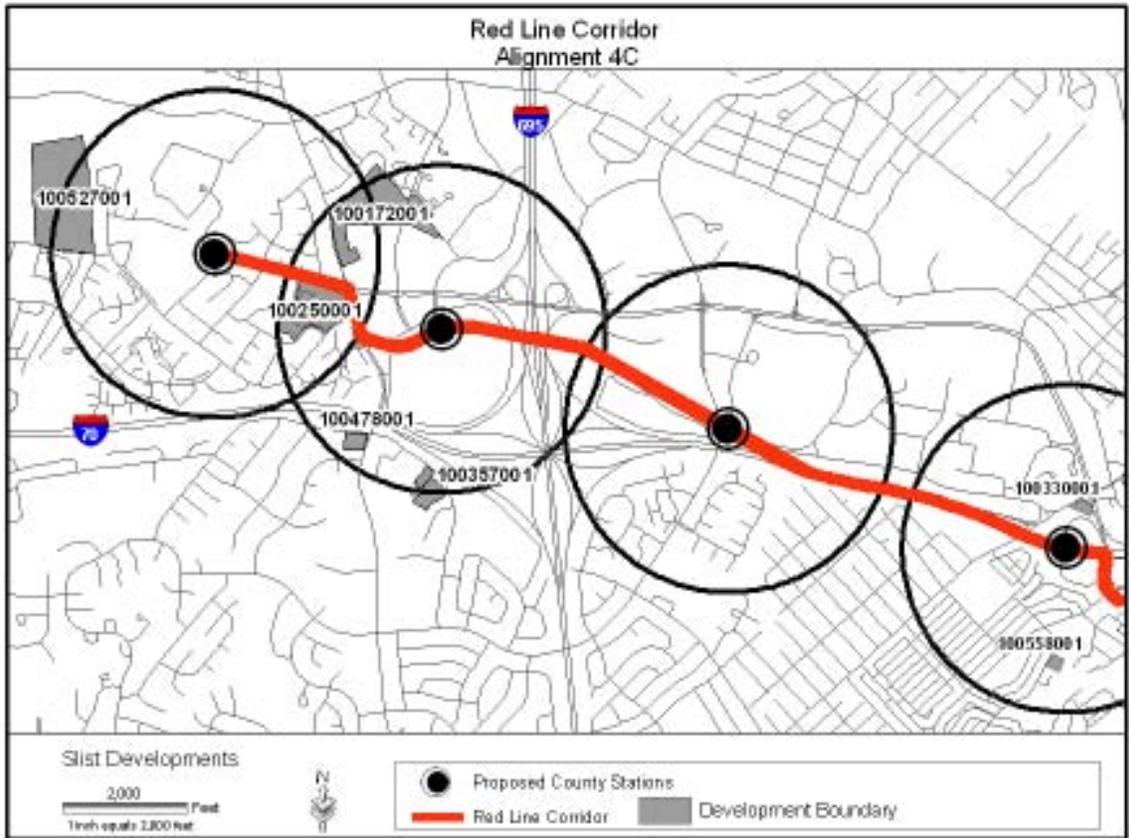
RED LINE TRANSIT CORRIDOR TECHNICAL REPORT



A system of gravity and pressure sewers convey sewage from the Dead Run sewershed to the city owned Patapsco Wastewater Treatment Plant (PWWTP). The PWWTP is currently undergoing upgrades to the treatment processes. Until all upgrades are completed, the available capacity of the PWWTP cannot be determined. A jurisdictional agreement also exists between Baltimore City and Baltimore County that limits the volume of sewage conveyed from the Dead Run sewershed. The volume of sewage treated at PWWTP is also limited by the jurisdictional agreements between Baltimore City, Baltimore County, Howard County, Anne Arundel County, and the Maryland Aviation Administration. Both agreements must be considered in areas tributary to PWWTP that are proposed for significant redevelopment. The sewer mains and interceptors that convey sewage in the Dead Run sewershed may require upgrades for any new substantial development proposals.

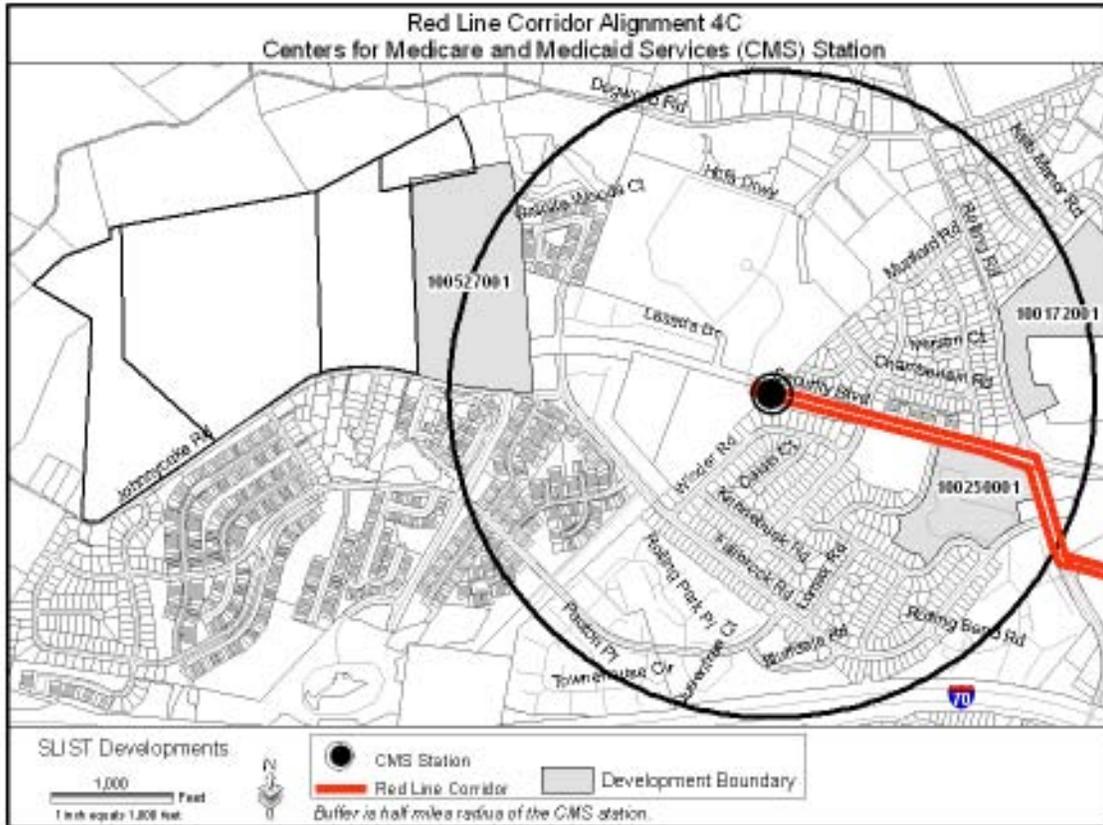
In addition to the issue of conveying sewage from the Dead Run sewershed to the PWWTP, Baltimore County must address utility infrastructure upgrades associated with the Consent Decree. On July 26, 2005, the Department of Justice, the Environmental Protection Agency, and the Maryland Department of the Environment lodged a major Clean Water Act settlement, the Consent Decree, with Baltimore County. Combined with a joint federal-state settlement against the City of Baltimore, the Consent Decree is designed to prevent chronic sewage overflows to local waterways, including the Chesapeake Bay. Gravity sewers and pumping stations are particularly susceptible to overflows during rain events when additional water infiltrates the system. During the 14.5 year period of the consent decree, Baltimore County's sewage system will be monitored for compliance and evaluated for any necessary infrastructure upgrades required

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- I-70 East Station - 16 apartment units have been approved but not yet built.
- SSA Station - There are no projects in the development pipeline. The predominance of land used by SSA in this catchment area limits the available land for development.
- Security Square Station – There are two approved shopping center developments that have a single commercial lot available. 15 acres of vacant commercially zoned land is available. A proposal for an office building on the Security Square mall property is being reviewed by county agencies.
- CMS Station – The only proposal for this catchment area that is not also captured in the Security Square Station is a request for 33 single family detached units. This project was not approved. The Master Plan 2010 road projects previously discussed impacted this proposal.

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Red Line Transit Project Current Status

In FY 2003 Project Planning funding was included in the Maryland Department of Transportation's CTP for the Red Line Transit Project. Since then, the MTA has been working with Baltimore County and Baltimore City toward the submission of a formal application to the FTA's "New Starts" program for preliminary design and final engineering matching funds. In the current CTP, covering the six-year period 2009 to 2014 (state fiscal years) funding projected for the Red Line includes:

Phase	Total Estimated Cost
Planning	\$ 38,141,000
Engineering	\$ 80,000,000
Right-of-Way	\$ 44,000,000
Construction	\$ 54,914,000
Total	\$ 217,055,000

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The MTA published an Alternatives Analysis/Draft Environmental Impact Statement (AA/DEIS) in September 2008 and held hearings on the AA/DEIS in November 2008. Public comments received at the public hearings and during the 90-day comment period, along with comments received from regulatory agencies, was considered by the MTA in reaching an informed decision on the Locally Preferred Alternative. Governor Martin O'Malley, in consultation with local government and elected officials selected Alternative 4C as the Locally Preferred Alternative. The Locally Preferred Alternative and New Starts Package will be submitted to the FTA. MTA plans to submit the preliminary design of the Red Line project to the FTA for approval in Fall 2009 requesting federal funding to continue the project with Preliminary Engineering and drafting the Final Environmental Impact Statement.

If FTA concurs that the Locally Preferred Alternative merits consideration, FTA will approve proceeding to the next step of Preliminary Engineering/Final Environmental Impact Statement (PE/FEIS). This normally requires one to two years and includes addressing all outstanding issues and developing the project in greater detail. The PE/FEIS stage includes significant public participation. After completion of the PE/FEIS, approval is sought from FTA to move into Final Design engineering. This request likely will be made in 2010 - 2011. Typically, if a project moves into Final Design it ultimately will be constructed. Therefore, 2010 - 2011 likely will represent the time when a final decision is made on building the Red Line.

The total estimated construction cost for Alternative 4C is \$1,631,000,000. The financing for the construction cost is expected to come from the Federal Government through the FTA, from the State of Maryland through the Department of Transportation's Consolidated Transportation Trust Fund, and possibly from local governments and the private sector. The vast majority of federal support for the Red Line will come from the FTA's Capital Investment Program for "New Starts."

FTA "New Starts" Program

The FTA "New Starts" program is a discretionary capital grant program where projects from throughout the country can request up to 80 percent federal share of the construction costs of major transit projects, such as a new rail transit line, extension of an existing line or construction of a bus or transit guideway. Because requests for these funds are so numerous, projects from around the country compete against one another. Congress has limited the federal share to 50 percent and nearly all project requests for federal assistance are in the area of 50 percent.

The MTA submits a "New Starts Criteria" package to the FTA as part of the process to get the project into the "funding pipeline". This package is developed after an Alternative Analysis is completed and a locally preferred alternative is selected. This happens prior to entering the Preliminary Engineering phase. The package provides information describing the proposed project as well as information on a number of criteria that are used to rate the project against others from around the country that are in competition for the limited pool of "New Starts" funds. The criteria include:

- Mobility improvements (travel time savings; low-income households served)
- Environmental benefits (changes in pollutant and "greenhouse gas" emissions and regional energy consumption)
- Operating efficiencies (operating cost per mile)

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In order to be eligible to submit a “Request to Initiate Preliminary Engineering”, a project must emerge from the Alternative Analysis phase with a Locally Preferred Alternative that is in the state’s fiscally constrained long-range plan and has an FTA “New Starts” rating of at least a Medium. During the Preliminary Engineering (PE) phase, the project will undergo detailed planning and preliminary engineering, complete federal and state environmental impact statements and prepare project management and financial plans. At the completion of the PE phase, the “New Starts” Criteria for the project is updated and re-submitted for a new rating and recommendation.

Once a project finishes the PE phase and receives a New Starts rating from FTA, it submits a “Request to Initiate Final Design”. In this phase, final construction plans are developed, and property acquisition, construction and equipment procurement occur. A key element of this phase is negotiating a “Full Funding Grant Agreement” (FFGA) between the sponsoring agency and FTA on the amount and payout schedule for the federal share of funds. Then construction can commence.

There are three major remaining phases of the project that must be completed prior to construction. The Planning/Draft Environmental Impact Statement phase will be completed in 2009, the Preliminary Engineering/Final Environmental Impact Statement phase in 2010 - 2011, and the Final Design/Right-of-Way (ROW) acquisition phase in 2012 - 2013. Construction could be initiated at the completion of Final Design/ROW in 2012 - 2013. These dates are contingent upon both federal and state funds being available for the project.

FTA’s “New Starts” program and the funds associated with the program are part of the federal surface transportation authorization bill known as SAFETEA-LU (Public Law 109-59). SAFETEA-LU is set to expire in September 2009. The Obama administration is proposing an 18 month extension with SAFETEA-LU. Transportation Secretary Ray LaHood urged Congress to adopt the extension to stabilize the transportation trust fund, which is due to run out of funding in August, and make additional time to consider key reforms.

With an extension of SAFETEA-LU, it is expectant the “New Starts” program will not be radically altered. The adoption of a new federal surface transportation bill provides an opportunity for modifying the “New Starts” program. A new federal surface transportation bill also provides an opportunity to earmark funds for specific transportation projects.

Conclusions/Recommendations

Since 1990, a transit facility in this corridor has garnered public support as evidenced by transit studies included in the Baltimore County Master Plan of 1990 and 2000. The 2002 Baltimore Regional Rail Plan and the most current Baltimore Regional Transportation Plan support and encourage the Red Line Transit Project as the number one transit priority for establishing a legitimate transit system for the Baltimore Region.

A functional regional transit system provides numerous benefits, including facilitating connections to major activity and employment centers, preserving and improving the environment, increasing accessibility and mobility, supporting economic development initiatives, improving safety and providing a cost effective alternative mode of transportation.

A functional regional transit system has supportive land use at its stations. Mixed uses concentrated around a transit station provide residents the opportunity to access jobs, retail, and other services without having to take an automobile trip from place to place. Should the land use around the transit station lack a particular function, a short transit ride to another transit station provides easy access to a completely different set of jobs, housing, recreation, entertainment or retail. The concentration of land uses around the stations also concentrates the capital infrastructure that state and local jurisdictions must build. The regional transportation plan, Transportation Outlook 2035, states that in 2005 drivers in the Baltimore region traveled 56.5 million miles every day. By 2035, the vehicle miles traveled are expected to increase by 34% to 75.5 million miles daily. A functioning transit system with supporting land use will help reduce the increase in vehicle miles traveled, which ultimately helps to reduce green house gases.

In April 2008, to encourage Baltimore County to help reduce green house gases and become more environmentally friendly, the Baltimore County Administration, in conjunction with the County Council established the Office of Sustainability to develop a Sustainability Strategy for Baltimore County. The strategy is intended to provide the organizing framework and identify future areas of interest and need to ensure that today's generation maintains our quality of life without diminishing the ability of future generations to meet their needs.

Through the collaboration of the County Administration, in conjunction with the County Council, the Baltimore County Sustainability Network (BCSN) was created including representatives of major conservation organizations, the private sector and departments in Baltimore County involved with growth management, operations and the built environment. The main components of the strategy include:

- Management of our natural resources,
- Operations of County facilities,
- Education and Outreach, and
- Maintaining the current status of the environment.

The Red Line Transit Project has the ability to transform Baltimore County and the Baltimore Region in many ways similar to County Executive Jim Smith's efforts to create a Renaissance in Baltimore County. It

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works together with many of the current efforts of Baltimore County to improve the quality of development, create mixed-use sites, make neighborhoods walkable, and to reduce the dependency on automobiles.

With these positive outcomes, the political leadership of Maryland Governor Martin O'Malley, Baltimore County Executive Jim Smith and Baltimore City Mayor Shelia Dixon pledged support for the construction of Alternative 4C of the Red Line Transit Project. They have directed their staff to work toward obtaining FTA approval for federal funding.

As previously discussed, the MTA must follow the FTA's approval process in order to receive federal funding for this project. FTA's approval process involves multiple submissions with each one providing progressively more detail and evidence that all parties are making tangible contributions to ensure the success of the project. Two main components of FTA's metrics are supportive land use and the ability to finance the local share of construction and operating costs.

Baltimore County's current land use pattern supports transit. However, to receive FTA's approval and successfully compete against all other transit projects vying for FTA's "New Starts" funding, Baltimore County must modify and improve its land use pattern to demonstrate its commitment to making the Red Line Transit project successful. Detailed recommendations for modifying land use patterns are discussed below.

FTA established a cost effectiveness ratio as one means of assessing a project's ability to move forward financially. Subsequent submissions to FTA will require additional information on funding mechanisms for the construction and operating costs associated with the Red Line Project. MTA has currently met the threshold for FTA's cost effectiveness ratio and is performing additional studies for managing the funding needs for this project.

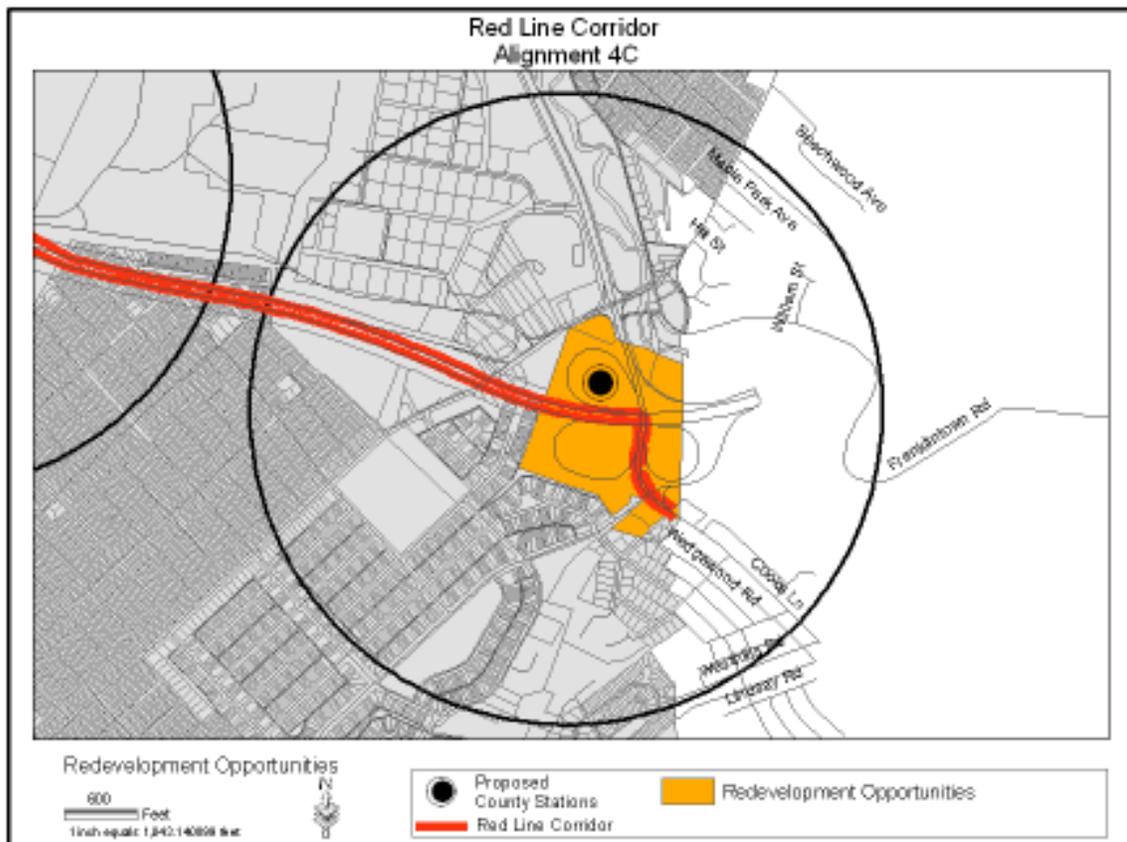
Implementing a new transit project utilizing federal funds is a long methodical process. At each step of the process the federal government will use benchmarks to gauge progress made by state and local governments towards those benchmarks. Adding to the complexity, there are funding uncertainties for constructing the Red Line Transit Project at the federal, state and local levels.

Baltimore County must demonstrate it is moving in the direction necessary to address the benchmarks necessary for FTA "New Starts" funding parameters. Two areas where Baltimore County can make improvements toward the FTA benchmarks are with its land use pattern and funding commitments. Historically, Baltimore County has been conservative in its approach to committing infrastructure investment long before the development demands are ready to utilize new infrastructure. Maintaining this approach, the funding commitments from Baltimore County should parallel funding commitments from the federal and state governments. Because of the lead time required before construction of the project, this report will focus on land use recommendations and allow the funding commitments to unfold as the request moves through the approval process.

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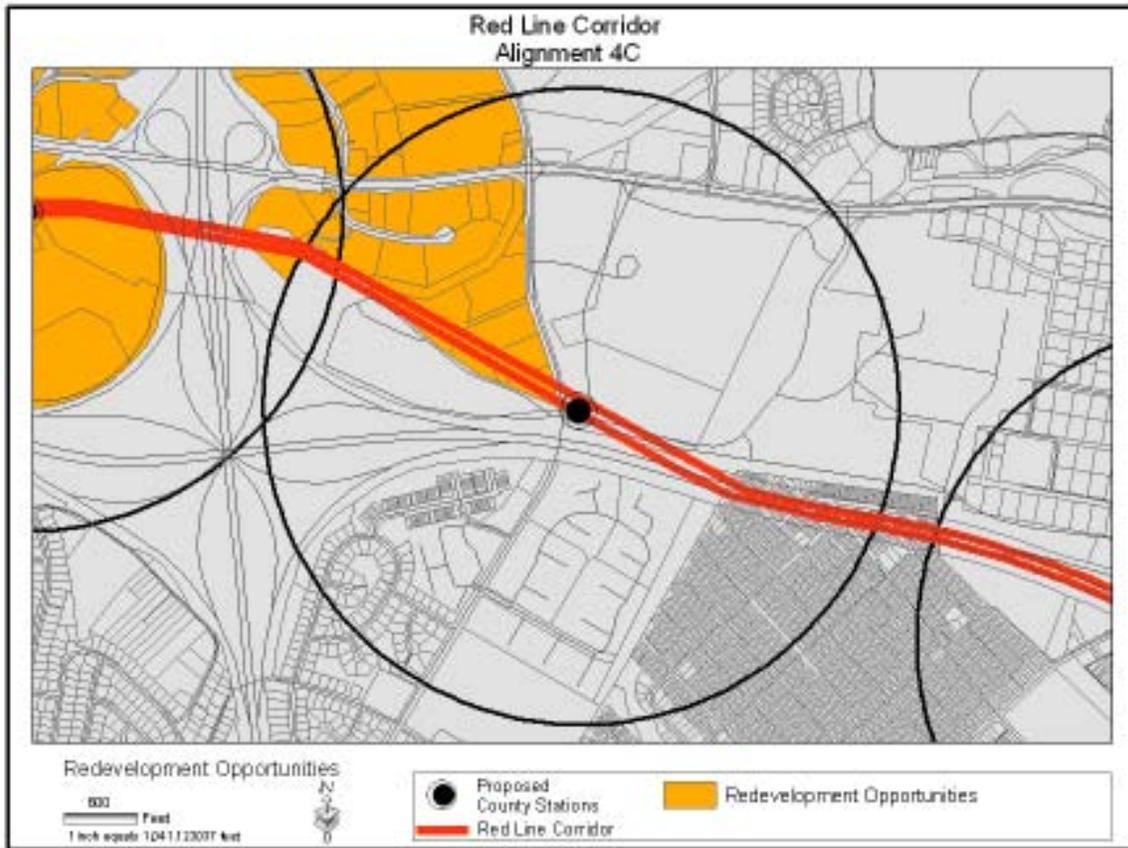
Redevelopment Opportunities

Previous sections discussed the need to have a mix of land uses and higher densities located near transit stations to make the transit facility successful. Under the current land use patterns around the proposed stations, Baltimore County does not have the optimal mix of land uses nor the densities necessary to support transit. The land use patterns were examined within each proposed station catchment area. Redevelopment sites were identified based on the size of the land mass necessary to meet the criteria for TOD, the number of property owners, the proximity to the proposed station, and the level of utilization on the existing use.



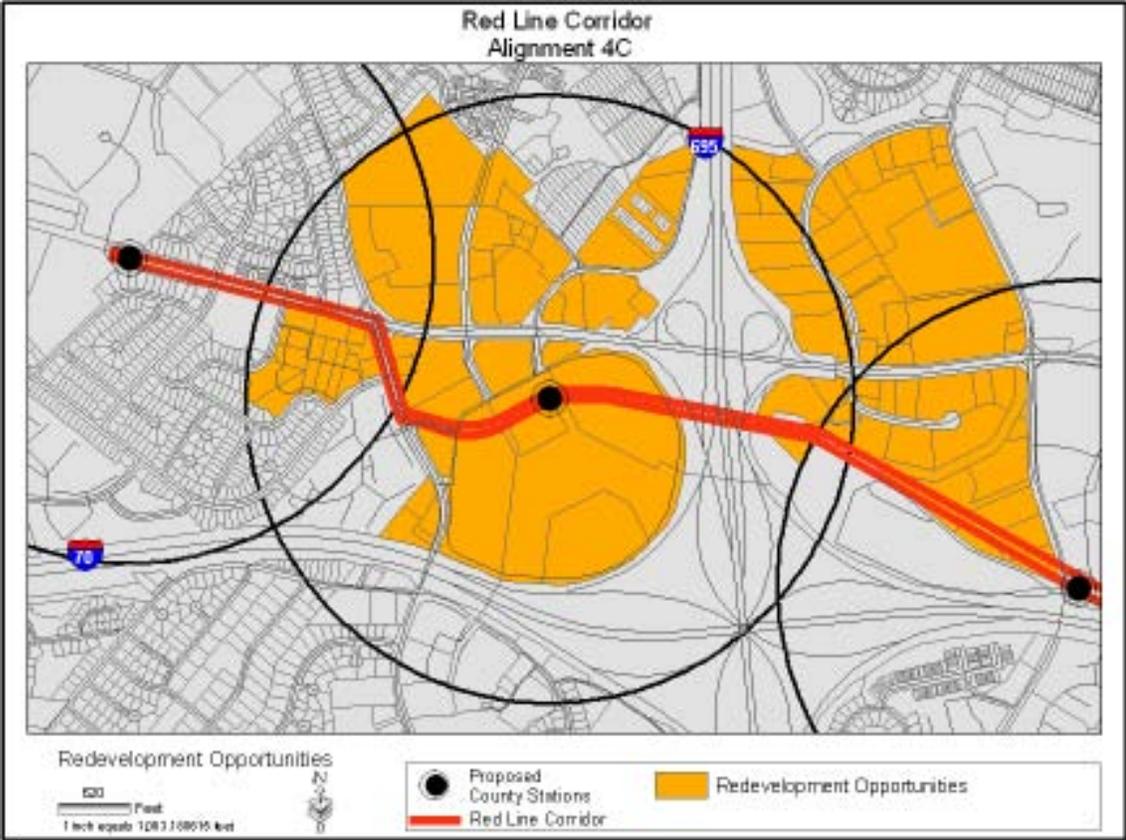
The MTA drafted a detailed plan to change the area surrounding the I-70 Park-and-Ride station, which will increase the redevelopment opportunities within this study area. The I-70 interchange will be rerouted to provide enough space for the Red Line and parking for the station. This will create redevelopment opportunities immediately surrounding the station. Besides the immediate station site, the rest of the catchment area is significantly restricted by existing residential neighborhoods and Leakin Park in Baltimore City. This leaves few opportunities for redevelopment in the I-70 Park-and-Ride study area, reducing the county's ability to capitalize on a significant investment.

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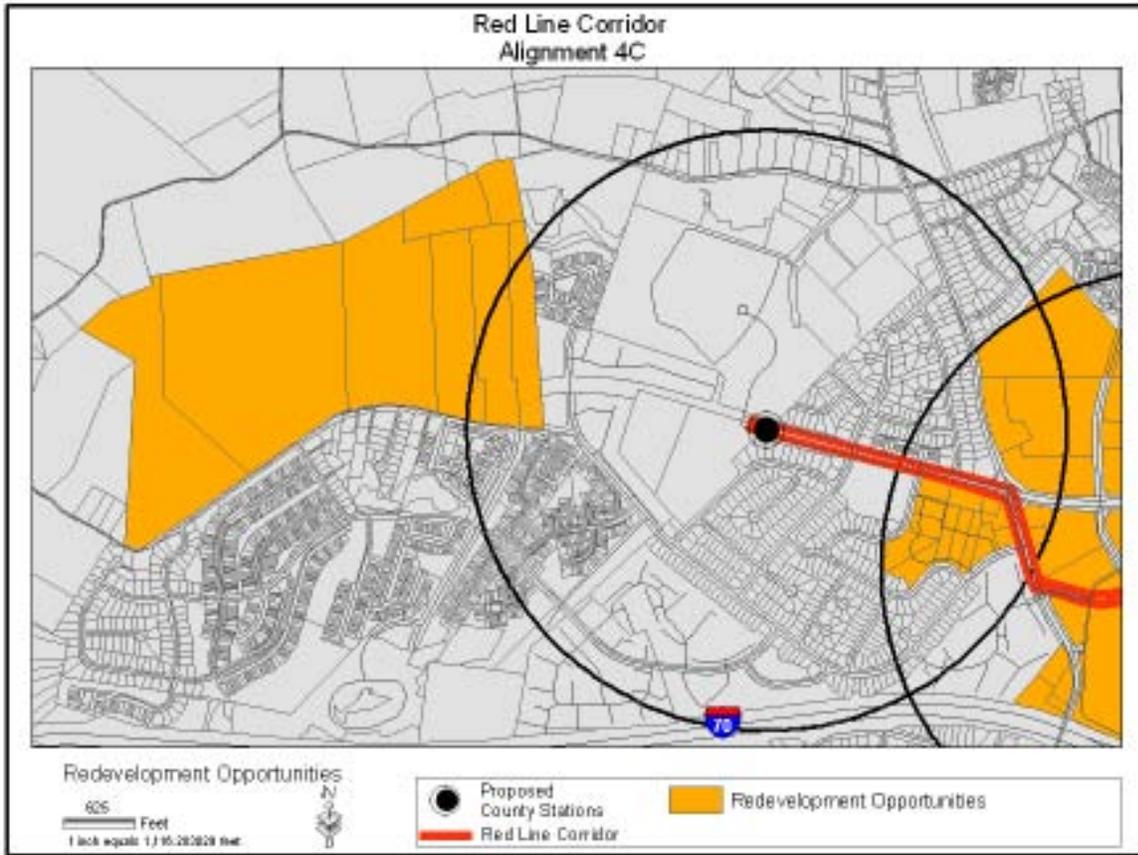
The SSA station has a continuous strip of redevelopment opportunities concentrated northwest of the station. The northwest area of the catchment area is currently occupied by one-story warehouse buildings, which provide an opportunity for redevelopment. Half of this strip is located within the study area. Interstate I-70, and the Social Security Administration complex provide physical barriers to other areas of redevelopment. Dense residential development in the southern half of the study area, also limits redevelopment opportunities.

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The Security Square station area has many potential redevelopment locations. The area surrounding the proposed station on the Security Square mall is zoned for high density commercial and retail and connects with other redevelopment opportunities both north and west of the mall, providing a large continuous strip for redevelopment. The area outside of the immediate vicinity of the station also provides several redevelopment opportunities because there are large tracts of one-story office and retail buildings. Interstates I-70 and I-695 serve as physical barriers to other parts of the catchment area.

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The CMS station area has limited redevelopment opportunities within the catchment area because of existing dense residential development; the large land masses associated with CMS and Chadwick Elementary School. The few potential redevelopment opportunities within the catchment area are associated with the Security Square Station.

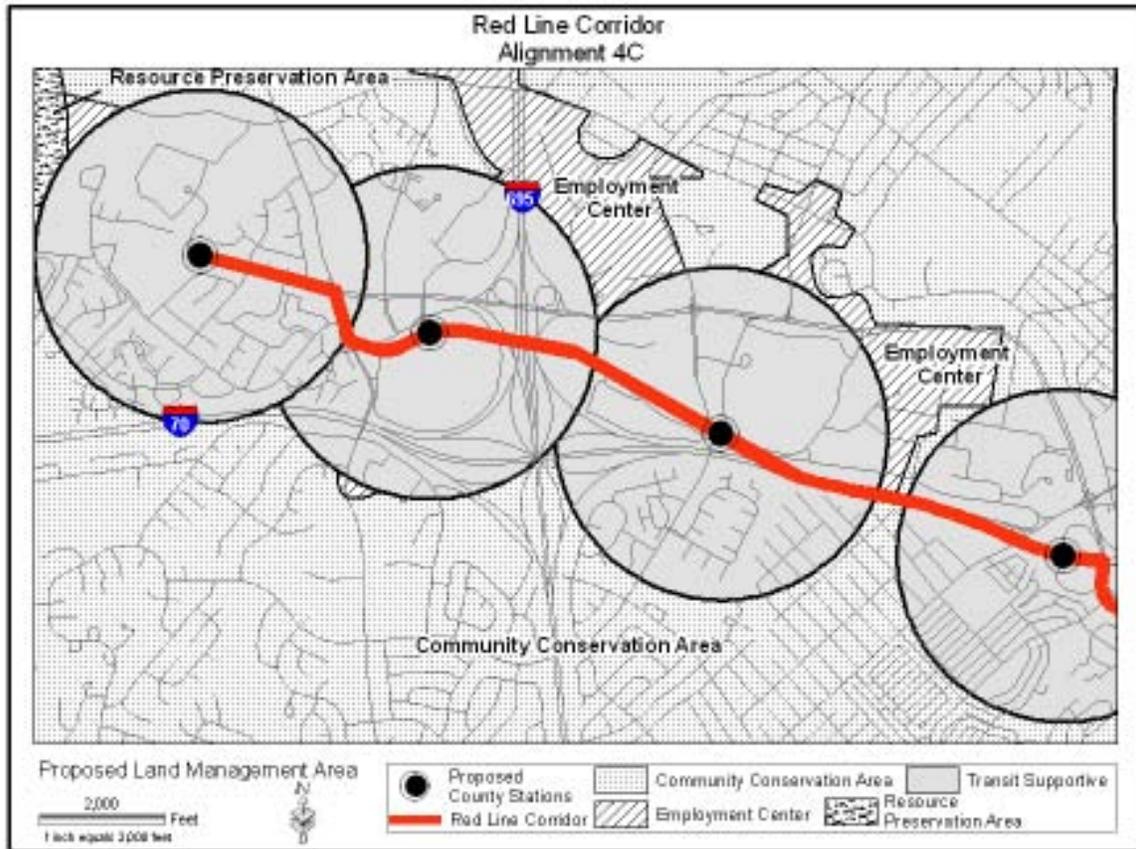
As discussed in the existing conditions section, the Proposed Land Use Map and the Growth Management Areas Map contained in the Master Plan 2010 are used as policy guides and are advisory in nature. The URDL has this same characteristic. The legal mechanism for implementing land use pattern is zoning. With the zoning decision made by the County Council during the 2008 CZMP, the policy guides should be updated to reflect that decision.

In regards to the limited redevelopment opportunities within the station catchment area to create transit supportive land use, Baltimore County should take advantage of Tract A. The zoning on Tract A can provide residential and commercial densities high enough to support transit. The zoning on Tract B would need to be changed to a zone that supports high residential and commercial densities to create a continuous land mass of transit supportive land use patterns near the proposed station. This potential block of transit supportive land use is the right density level, but not in the optimal location. Extra effort would be required to ensure the connection to the transit station is direct and inviting.

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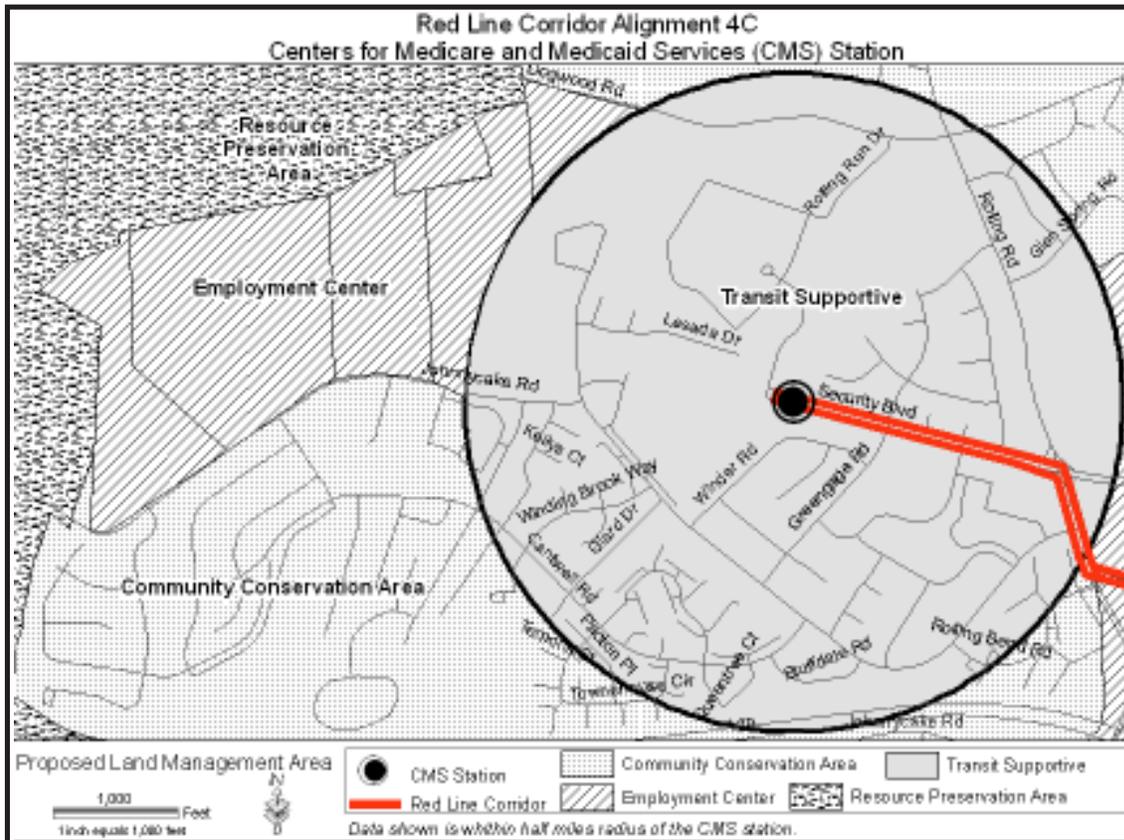
The approval process associated with the FTA's "New Starts" program is lengthy, having multiple reviews. Baltimore County should parallel its efforts to demonstrate its commitment to supporting the Red Line with the timing of the review and approval with the MTA's submission to FTA. The following recommendations should be considered Phase I of a multiple phase effort for supporting the Red Line Transit Project.

The Growth Management Area Map should be amended to add areas that are defined as Transit Supportive. At this time, the suggested areas for Transit Supportive areas in the Red Line Transit Corridor would match the catchment areas based on a 1/2 mile radius around each of the proposed stations.



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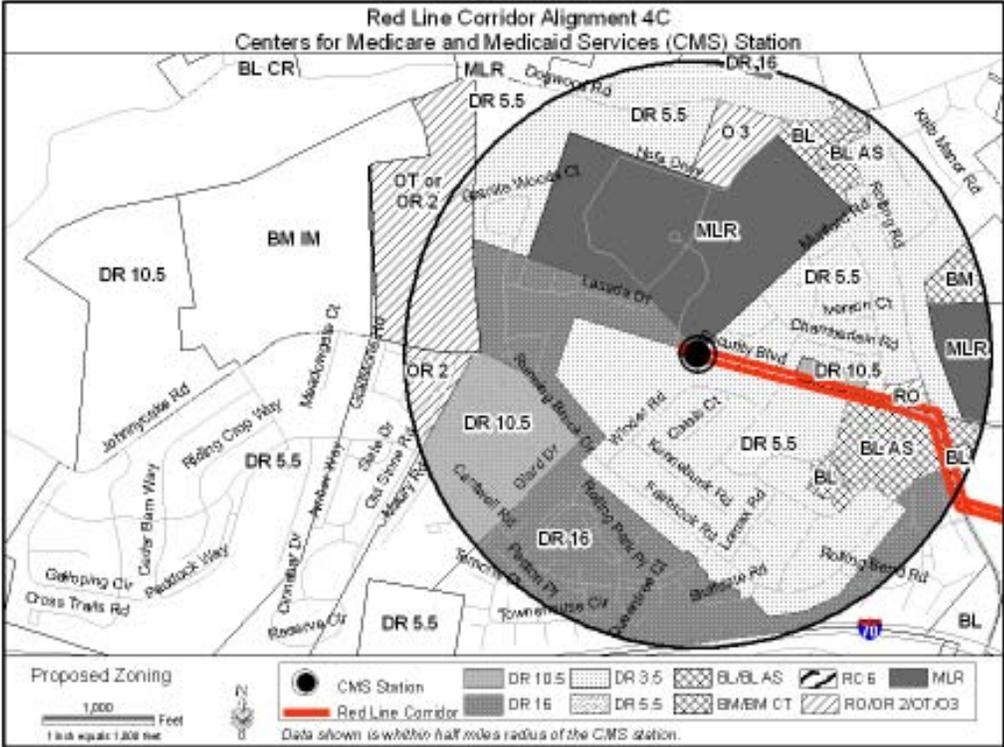
Tract A and part of Tract B fall just outside of the catchment area and, based on the underlying zoning, the Growth Management Area designation should be Employment Center.



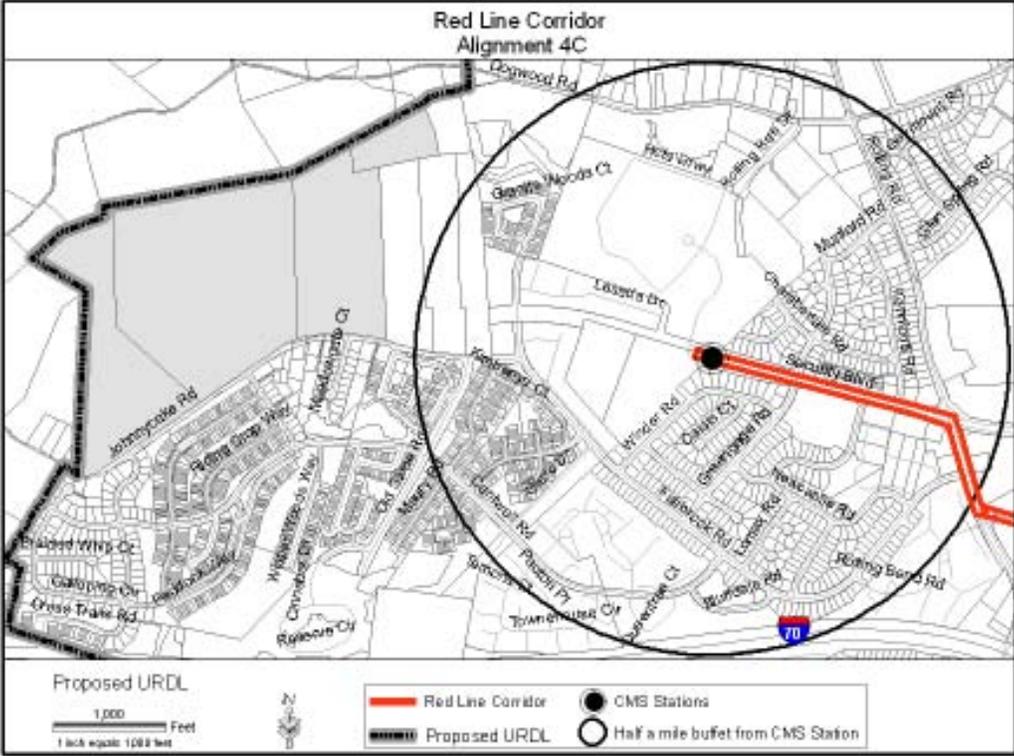
Similar to other Growth Management Areas identified in the Master Plan 2010, policy guidelines will need to be developed for these areas. A second phase or effort for this recommendation would be to develop the policy guidelines and to examine the areas in greater detail for any modifications to the areas designated Transit Supportive.

Information in the existing condition section identified the inconsistency in land use patterns in the area just west of the CMS station catchment area. The relationship in zoning between Tract A and Tract B relative to the location of the CMS station creates gap in land use supporting transit. A suggested zone of OT, Office Technology, or OR 2, Office Building Residential, on Tract B would provide a larger block urban zoning at a density necessary to support transit and the proposed CMS station. The zoning change should occur during the 2012 CZMP.

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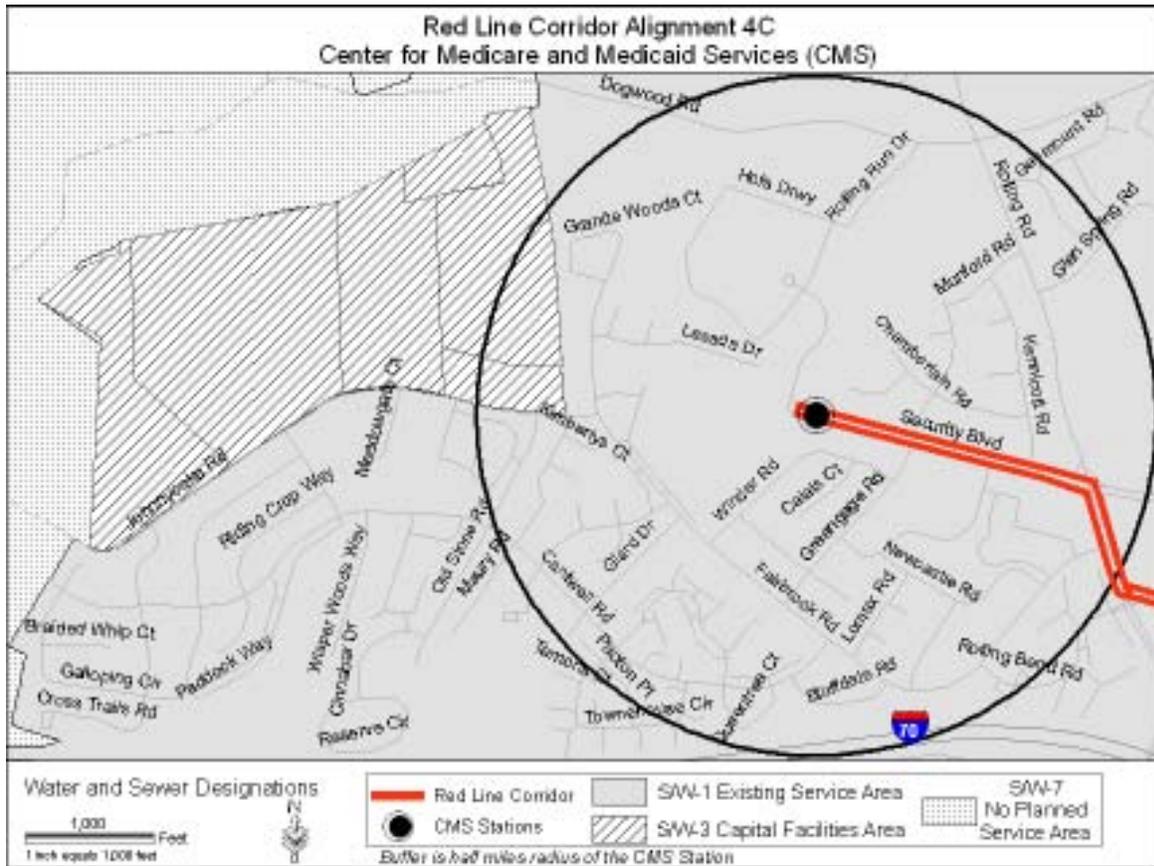


The URDL should be amended to include Tract A and Tract B, which is suggested be rezoned to OT or OR 2.



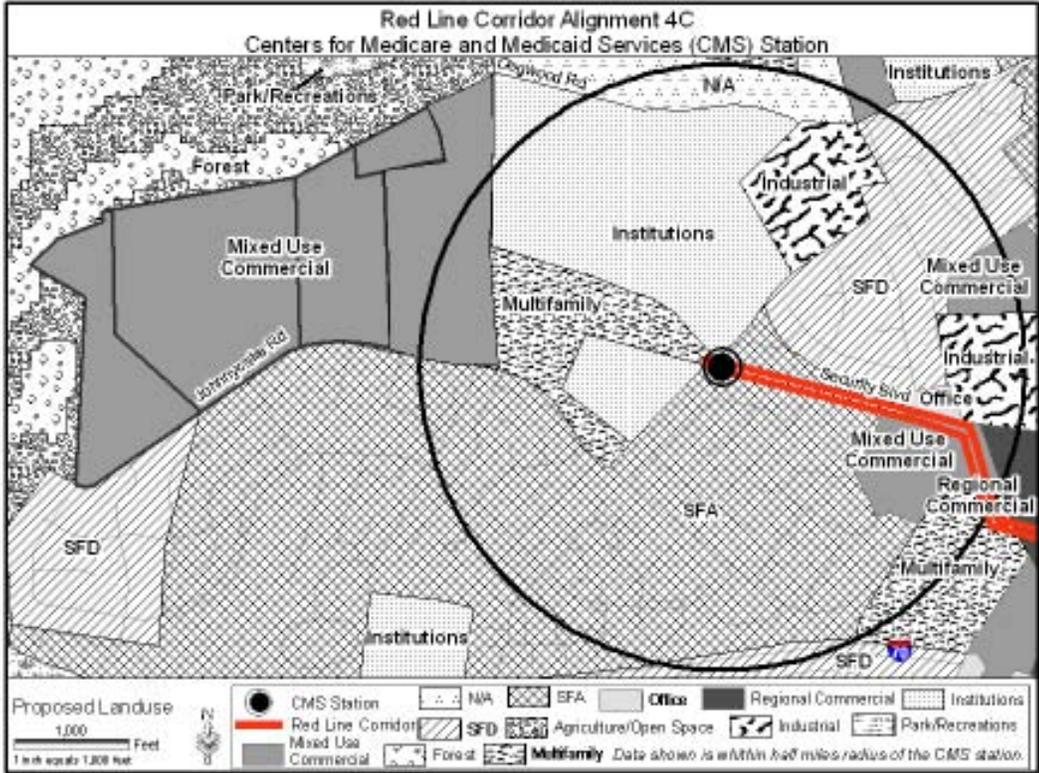
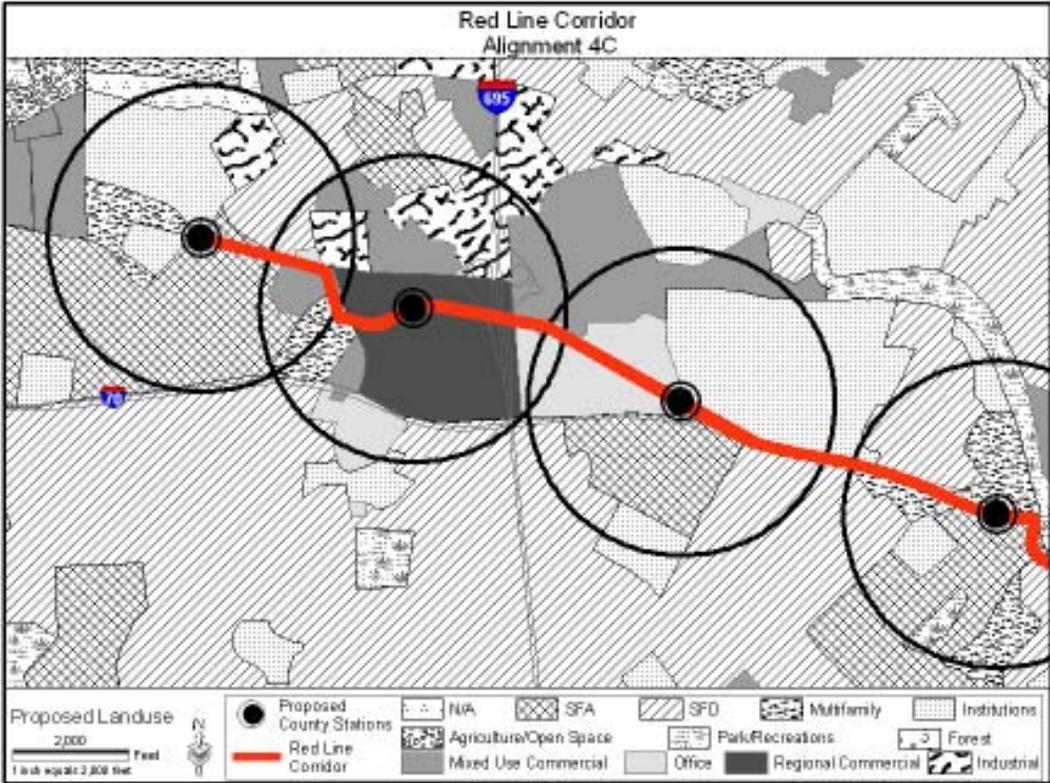
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The water and sewer designation should be changed to W3/S3 on Tract A and Tract B to reflect the existing zoning and the proposed zoning change.



The Proposed Land Use Map should be updated to reflect the existing and proposed zoning changes for Tract A and Tract B.

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The recommended broad-spectrum changes to the Proposed Land Use Map, the Growth Management Areas Map, the URDL, the Zoning Map and the Water and Sewer Designations should be considered Phase I recommendations of the Red Line Transit Corridor Plan. This phase of recommendations are basic land use modifications that will help demonstrate Baltimore County's commitment to the Red Line Transit Project.

Additional land use and planning work is necessary and should parallel MTA's effort to obtain federal funding from the FTA for this project. A second phase of recommendations should be developed. The second phase recommendations should develop specific actions with greater detail about how each station and the surrounding area should be treated.

Phase II efforts will include developing growth management polices for the areas designated as Transit Supportive on the Growth Management Areas Map and developing a detailed station plan for each proposed station. The work on the growth management polices for area designated Transit Supportive may move forward as part of the Red Line Transit Corridor Plan or could be addressed in the update of the Master Plan 2010.

The individual station plans should examine and produce specific recommendations on types of use and level of density, parking improvements, road improvements, pedestrian improvements, and design guidelines. Developing these detailed station plans is a larger task that must have the cooperation and effort from all county agencies as well as participation from state agencies, property owners, and other stakeholders. The examination should also identify the level and costs of infrastructure needed to achieve the recommendation associated with each station plan. This fiscal examination should reflect the local share of construction funding for the Red Line Transit Project.

The Red Line Transit Project has many tasks to address in order to obtain federal funding for the project. Should the project meet an obstacle that spoils the effort at the federal, state or local level, the Phase I recommendations should be reevaluated. There are reasonable check valves to address land use and growth management decisions should the Red Line Transit Project not receive federal funding under FTA's "New Starts" program. The annual Water and Sewer Amendment Process, the annual review of the Capital Improvement Program, the development of the next Master Plan, and the 2012 CZMP are activities that should appraise the Red Line Transit Project and the accompanying effort to support the project with supportive land use.

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