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About the Fellow

Gabriel Terrell is currently a Master of Public Affairs and Master of Science in Urban and Regional Planning at the University of Wisconsin-Madison where he studies how urban planning and public policy can enable all to experience the benefits of high-quality, zero-emission, public transit.

Gabriel interned with the Montgomery
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projects eligible for grant program
funding under the Bipartisan
Infrastructure Law and drafted the
narrative for one such grant application.



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Executive Summary

The Bus Rapid Transit (BRT) corridors in Montgomery County have the potential to provide high-quality transit service to people of all income levels. To allow everyone to benefit from high-quality BRT service, Montgomery County will need to balance the pressure to develop both market-rate and affordable housing units within BRT corridors as well as provide safe access from the neighborhood to BRT stations. Both access to stations and affordable housing are components of Equitable Transit-Oriented Development (ETOD).

This research will benchmark those components of ETOD to the BRT corridor along Veirs Mill Road and suggest three recommendations to align with emerging ETOD regulations and best practices:

- Use the master planning process to study the use of TOD overlay zones within a quartermile of a BRT route to increase the number of affordable housing units built alongside market-rate housing.
- 2) Implement infrastructure improvements from neighborhoods to BRT stations to support more frequent, safer, and more accessible connections to BRT stations for all people.
- 3) Consider public-private partnerships as a means to introduce ETOD components such as short-term preservation and longer-term construction of affordable housing units.

Part I: Introduction

Transit-Oriented Development

Transit-Oriented Development (TOD) seeks to increase pedestrian-oriented, mixed-use development around public transit hubs. Situating office, retail and a mix of housing alongside public amenities and green space within walking distance to a transit hub provide an alternative to neighborhoods where amenities are typically traveled to by automobile.

Transit-oriented development has the potential to create neighborhoods that are both more livable and walkable oriented towards transit hubs that connect the community with the region. However, TOD investments may not reach all communities that have TOD potential and may actually increase the growth pattern disparities between communities in the region.

The City of Chicago studied TOD development approved between 2016 and 2019 and found that nearly 90% of new TOD projects were focused on the North Side, Northwest Side, Downtown, and around the West Loop whereas only 10% of TOD occurred over the entire South and West sides, areas where predominately non-white residents live.

In addition, TOD contributes to the unequal displacement of certain residents. The City of Chicago found that in areas where TOD had occurred between 2016 and 2019, the white population increased while the black population decreased and the Hispanic/Latinx population increased in some areas and decreased in others. In contrast, those living in adjacent communities near Chicago Transit Authority (CTA) stations that were eligible for, but did not experience TOD, contain 40% more residents of color, 23% more low-income residents, and 16% more residents without a high school education.¹

¹ City of Chicago, Equitable Transit-Oriented Development (ETOD) Policy Plan, 1-6, Sept. 15, 2020. https://www.chicago.gov/content/dam/city/sites/etod/Pdfs/ETOD-Full-Policy-Plan-with-Appendices-6-15-21.pdf

Equitable Transit-Oriented Development in the Context of Chicago

Equitable Transit-Oriented Development (ETOD) works to ensure that all people experience the benefits of a compact, pedestrian-oriented, mixed-use potential for development near transit hubs, regardless of their socio-economic status or identity. To achieve this goal, ETOD prioritizes both investments and policies to reduce the likelihood of socioeconomic disparities emerging in areas with TOD potential for historically marginalized communities. These intentional policies center racial inclusion into community wealth building and provide the means so that ETOD may drive the positive transformation of neighborhoods into a more resilient, prosperous, and better-integrated community in the region.

In June 2022, the Office of Chicago Mayor Lori E. Lightfoot, introduced the Connected Communities Ordinance, the result of over two years of collaboration with community and civic groups that developed the City's first-ever ETOD Plan in 2021. In light of the TOD development findings between 2016 and 2019, the Connected Communities Ordinance facilitates more investment near transit on the South and West side, while preventing displacement and promoting affordable housing options on the North and Northwest sides.

In general, for high-cost and gentrifying neighborhoods, the ordinance strengthens both affordability requirements and incentives while reducing barriers to moderate-cost housing and protecting naturally occurring lower-cost housing from deconversion.² In lower and moderate-cost neighborhoods, the ordinance lowers the barriers to community investments in existing TODs which has led to 12 affordable and mixed-income TOD developments in the South and West sides over the last year.

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² City of Chicago, Connected Communities Ordinance, June 2022. https://www.chicago.gov/content/dam/city/sites/etod/Pdfs/Connected-Communities-Ordinance.pdf

The Connected Communities Ordinance supports Chicago's ETOD Policy Plan so that future development does not concentrate on poverty and racially segregate people from socio-economic opportunity. Without an equity lens to guide TOD, transit access such as access to jobs, and both a livable and walkable neighborhood, are more likely to be concentrated in areas that have greater wealth or displace residents of color thereby creating disparities in wealth and access.

ETOD in the Context of the Purple Line

Montgomery County has also begun to plan and implement Equitable Transit-Oriented

Development policies. In 2019, the Purple Line Equitable Transit-Oriented Development

Collaborative received a JP Morgan Chase PRO Neighborhood award. The award provides an opportunity for three community development financial institutions (CDFIs) to begin lending to develop and preserve affordable housing and small business along the Purple Line light rail corridor between Prince George's and Montgomery counties in Maryland.

The Collaborative identified three key areas along the Purple Line to implement ETOD strategies.³ The Collaborative selected these areas because they share a higher concentration of nonwhite households, the median household income is less than \$70,000 and they have larger amounts of naturally occurring affordable housing in areas where residents spend a higher percentage of their income on housing.

In addition, the Purple Line highlights the region's stark wealth divide: the line runs from the east in New Carollton in Prince George's County where the median household income is \$67,000 to the west through Bethesda in Montgomery County where the median household income is \$164,000. The resource gap between the two areas underscores the necessity of centering racial equity in transit-oriented development in the eastern sectors of the Purple Line.

³ Mary Bogle, et al., Year 2 Evaluation of the PRO Neighborhoods Purple Line Collaborative, 1-27, April 2022. https://www.urban.org/sites/default/files/2022-

^{04/}Year%202%20Evaluation%20of%20the%20PRO%20Neighborhoods%20Purple%20Line%20Collaborative.pdf

The Purple Line Equitable Transit-Oriented Development Collaborative has three main goals. The first is to develop affordable housing, with the intent to deploy capital and preserve at least 1,000 units of affordable housing along eastern sections of the Purple Line corridor. The second goal is to provide loans and technical assistance to the estimated 200+ small businesses along the corridor. The Purple Line ETOD Collaborative's third goal is to expand community engagement with local stakeholders and residents to develop common Equitable Transit-Oriented Development goals with government and development partners.

Two years into the grant award, the Purple Line ETOD Collaborative has made progress in setting up loans to preserve affordable housing and small businesses along the eastern sections of the Purple Line light rail corridor. While the ETOD Collaborative surpassed its goal to deploy loans to create 250 units of affordable housing, the Collaborative only arranged loans to preserve 97 units of affordable housing, below the goal to preserve 750 units of affordable housing. In addition, the ETOD Collaborative has preserved 155 small businesses, near their overall goal to preserve 210 businesses, and have helped local organizations retain 104 jobs, nearly half of their goal to retain 210 jobs. To preserve and expand affordable housing and small businesses through policy and partnership, the ETOD Collaborative has engaged over 500 residents and partners to successfully gain commercial rent control along the corridor.

Part II: Research Scope and Framework

ETOD in the Context of the Research Project

In 2020, the City of Raleigh published their guidebook on ETOD around Bus Rapid Transit (BRT) stations, and in 2022 both Spokane and Chicago introduced regulations around ETOD to include BRT stations given their published guidebook on ETOD around high-frequency transit corridors. While the City of Austin is still developing its ETOD study, they are on track to develop an ETOD policy plan by 2023 and to have City regulation in 2024.

Montgomery County can better share the benefits of transit-centered neighborhoods for residents of all income levels by integrating Equitable Transit-Oriented Development strategies into its BRT

network and master planning process. Key strategies to support Equitable Transit-Oriented

Development include land use policies that expand affordable housing near BRT stations, that peer governing agencies have adopted over the past few years. These ETOD strategies provide opportunities to add affordable housing and services within BRT corridors; not only to increase incomes, access to jobs, and reduce travel times but also to reduce displacement and ensure that all of Montgomery County is open to current and future residents.

The BRT corridor along Veirs Mill Road between Wheaton and Rockville provides a case study from which to develop an ETOD framework that could be applied to other BRT corridors within Montgomery County. Already the Veirs Mill Corridor Master Plan, and the Veirs Mill Road Flash BRT planning study include many elements of ETOD best practices. This research will recognize the work toward ETOD along the Veirs Mill BRT corridor in the context of ETOD regulation around BRT stations that cities across the United States have begun and to regulate within the last four years.

Station Area Typologies

ETOD begins with station area planning, a framework from which to add distinct planning layers to support Equitable Transit-Oriented Development as set out in Spokane's TOD Station Area Planning and Regulatory Guidebook. Together, these layers provide the framework from which to design appropriate Equitable Transit-Oriented Development policies by distance from a central high-frequency transit station.

The first layer centers the BRT station as the central node and radiates outward a quarter-mile to consider the distinct neighborhood that the BRT station is integrated into. The second layer to support Equitable Transit-Oriented Development is a street hierarchy, which integrates the multi-modal five-minute walk or bike network radiating outward from the central BRT station. The third layer to support Equitable Transit-Oriented Development is the development typology itself which

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⁴ City of Spokane, Transit-Oriented Development Framework Study, 7-26.

generally includes a mix of zoning uses and density ranges within the quarter-mile radius of a BRT station.



Figure 1: Spokane TOD Planning Area and 5-Minute Network

Connecting Central Nodes: BRT Corridor Routes

BRT stations are typically spaced further apart along a bus route than regular bus stations to reduce time efficiency for riders. Equitable Transit-Oriented Development recommends that parallel paths be introduced along existing throughways so that users may connect easily to nearby BRT stations. While standalone paths separate from traffic are considered ideal along a BRT corridor, shared use paths that are part of a bi-directional protected bikeways infrastructure are common and are planned for (via Complete Streets Guidelines) in Montgomery County along Veirs Mill Road.⁵

⁵ Maryland-National Capital Park and Planning Commission, Veirs Mill Corridor Master Plan, 6-56, April 2019. https://montgomeryplanning.org/wp-content/uploads/2020/01/Veirs-Mill-Corridor-Master-Plan-Approved-and-Adopted-WEB.pdf



Figure 2: A Complete Street on Veirs Mill Road

BRT Corridor Routes: Implementation Plans Along Veirs Mill Road

The combination of Veirs Mill Road as a Complete Street aligns with ETOD best practice to connect BRT Stations with separated parallel paths that provide continuous pedestrian areas protected by two-way separated bike lanes and buffer areas to the road. The addition of Vision Zero to a Complete Street redesign on Veirs Mill Road establishes a new standard for ETOD BRT Corridor Routes that allows users to reach a BRT station safely and easily along a dedicated pedestrian path.

In addition, the Veirs Mill Master Plan calls for a redesign of Veirs Mill Road that incorporates both Vision Zero initiatives for pedestrian and bike safety, while also providing continuous trails for bikes and pedestrians between BRT stations through use the of neighborhood greenways and contra flow bike lanes along frontage roads. The new side paths along much of the sections in the Connecticut Avenue & Randolph Road District should recognize that new side paths have the potential to prioritize access to BRT stations, as well as provide safe and direct access to these stations along Veirs Mill Road.

However, ETOD calls for infrastructure improvements beyond direct paths between BRT Stations, to the network of a complementary walk and bike infrastructure to support a safe and direct 5-

minute walk or bike ride to connect to a BRT station. Station Access Routes are critical infrastructure to bring the benefits of ETOD into surrounding neighborhoods and to address barriers to connect with BRT stations.

Station Access Routes

Station Access Routes paths and infrastructure connecting a BRT station to its neighborhood, are critical links to provide a 5-minute walk or roll to a BRT station that is safe, direct, and generally considered a priority infrastructure improvement in ETOD.

Station Access Routes may consist of "bike greenways" which are shared-use roadways between buses, bikes, and autos on low traffic and low-speed routes or shared-used trails integrated into a bi-directional protected roadway. Station Access Routes may also include Collector Trails to integrate BRT station access into existing regional off-road recreational trails and are seen in combination with the BRT Corridor in the Spokane Station Access Framework.

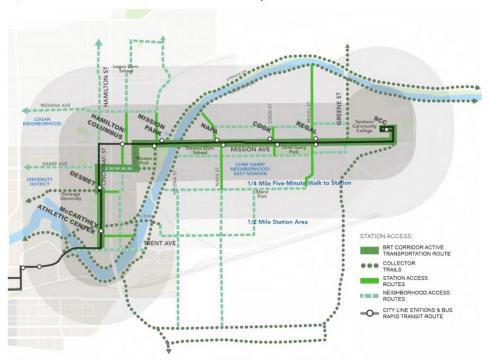


Figure 21: Station Area Access Framework- CITY LINE Study Area Corridor

Figure 3: Station Area Access Framework- CITY LINE Study Area Corridor

Station Access Routes: Implementation Status Along Veirs Mill Road

As stated in the Veirs Mill Master Plan, BRT construction will provide infrastructure improvements to access Veirs Mill Road stations at many access points. On November 10, 2021, Michael Mitchell, Project Manager for Veirs Mill BRT implementation, spoke to an audience regarding preliminary designs of Station Access Routes designed to make it easier and safer to get to BRT stations along Veirs Mill Road from neighborhood streets.⁶

"During the preliminary design where feasible we have reduced the length of the crossing distances the crosswalks by making it easier for pedestrians to cross and have eliminated or narrowed the right turn slip lanes at intersections to make it safer for pedestrians to cross the street to access stations and support the County's goal to reach Vision Zero."



Figure 4: Veirs Mill Road Corridor Advisory Meeting #11 (Making it Easier and Safer to get to Flash stations)

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⁶ Veirs Mill Rd (MD 586) Corridor Advisory Committee, Meeting #11, Nov. 10, 2021. https://www.youtube.com/watch?v=LANEHRvz0K4

While the Veirs Mill Master Plan does emphasize providing a continuous bicycle corridor along Veirs Mill Road, the Master Plan looks to the long-term to provide dedicated bike lanes to Veirs Mill Road with select intersecting streets to align with the Bicycle Master Plan. These Station Access Routes are compiled in the following Table from the Veirs Mill Corridor Master Plan.

Roadway	Limits	Designation / Type
Veirs Mill Road (North Side)	Plan Boundary to Havard Street	Sidepath
	Havard Street to Bushey Drive	Separated Bike Lanes and Sidewalk
	Bushey Drive to Galt Avenue	Sidepath
Veirs Mill Road (South Side)	Plan boundary to Montrose Parkway East/Parkland Drive	Sidepath
	Montrose Parkway East / Parkland Drive to Plan boundary	Separated Bike Lanes and Sidewalk
Twinbrook Parkway	Veirs Mill Road to Plan Boundary	Sidepaths (Both Sides)
Rock Creek Mill Road Extended	Twinbrook Parkway to Rock Creek Mill Road	Neighborhood Greenway
Aspen Hill Road	Veirs Mill Road to Plan Boundary	Sidepath (North Side)
Parkland Drive	Veirs Mill Road to Plan Boundary	Sidepath (Side TBD)
Montrose Parkway East	Veirs Mill Road to Plan Boundary	Sidepath (North Side)
Havard Street	Veirs Mill Road to Colie Drive	Sidepath (East Side)
Colie Drive	Havard Street to Randolph Road	Sidepath (South Side)
Gridley Road	Selfridge Road to Colie Drive	Shared Street
Barbara Road	Colie Drive to Plan Boundary	Sidepath (Side TBD)
Selfridge Road	Gridley Road to Ferrara Drive	Neighborhood Greenway
Ferrara Avenue / Ferrara Drive	Veirs Mill Road to Selfridge Road	Neighborhood Greenway
Randolph Road	Plan Boundary South to Plan Boundary North	Separated Bike Lanes and Sidewalk
Connecticut Avenue	Plan Boundary to Brightview Street	Contra-Flow Bike Lane (West Side Access Road)
Connecticut Avenue	Brightview Street to Plan Boundary	Sidepath (West Side)
Connecticut Avenue	Plan Boundary to 400 Feet North of Veirs Mill Road	Contra-Flow Bike Lane (East Side Access Road)
Connecticut Avenue	400 Feet North of Veirs Mill Road to Veirs Mill Road	Sidepath (East Side)
Valleywood Drive	Veirs Mill Road to Plan Boundary	Sidepath (Side TBD)
Newport Mill Road	Plan Boundary to Parker Avenue	Sidepath (East Side)
Parker Avenue	Newport Mill Road to Plan Boundary	Sidepath (Side TBD)
Broadview Road	Wheaton Claridge Local Park to Parker Avenue	Trail
Glorus Place	Veirs Mill Road to College View Drive	Neighborhood Greenway
College View Drive	Glorus Place to Veirs Mill Road (Via Pleasant View Park Off-Street Trail)	Neighborhood Greenway
Veirs Mill Road Residential Service Roads	Interim bikeways on residential service roads adjacent to Veirs Mill Road.	Neighborhood Greenway

Table 1: Improved Bicycle Infrastructure Connecting BRT Stations and Neighborhood School, Parks, and Community Facilities

Part III: Application of Station Typologies to Veirs Mill Context

Station Typologies and ETOD Development Strategies

Equitable Transit-Oriented Development integrates not only the connections to a transit station but considers the development typology around the station. Recognizing that the area around a transit station is zoned and developed in similar patterns provides the context to develop ETOD

strategies across general station typologies as illustrated by the Veirs Mill Road Flash BRT Concept

Displays 2022.⁷

Center Station along the Veirs Mill BRT Line

Along BRT routes, Center Stations are located within medium to high-density housing that supports street-oriented retail, commercial, and employment uses in addition to public spaces like parks, plazas, and water features. Center stations are served by safe, direct, and convenient walk and bike access between stations and destinations through the separation of pedestrians and bicycles from auto traffic. The Wheaton Metro BRT Station is an example of a Center Station and has the potential to increase the number of affordable housing units alongside future, high-density development.



Figure 5: Veirs Mill BRT Wheaton Station Design

Corridor Station along the Veirs Mill BRT Line

Along BRT routes, Corridor Stations are located within an area characterized by a mix of land uses that typically extends for several blocks around the transit station and has medium to high-density

⁷ Montgomery County Department of Transportation, Concept Displays 2022, Jan. 2022. https://www.montgomerycountymd.gov/dot-dte/Resources/Files/VeirsMillBRT/VeirsMill_ConceptDisplays_Jan%202022.pdf

housing alongside retail, employment, and commercial uses that are both street-oriented and accessible by safe walk or bike access. The University Boulevard BRT Station along Veirs Mill Road reflects the general nature of a corridor station.

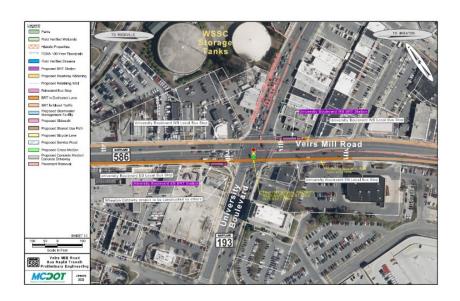


Figure 6: University Boulevard BRT Station along Veirs Mill Road

ETOD Density Strategy at Corridor Stations

While transit-oriented development encourages higher density development close to transit stations, the term density does not necessarily require tall buildings but rather a compact urban form. In Figure 6 above, the University Boulevard and Veirs Mill Road BRT station show, several parking lots that could 1) allow for relatively higher densities in a mixed-use area, with 2) minimum heights for new buildings designed to complement pedestrian-friendly street frontage. In addition, the intersection at University Boulevard and Veirs Mill Road could provide a context where building height 3) decreases from the station as development extends to the surrounding neighborhood.

ETOD Parking Strategy at Corridor Stations

Improved parking strategies can improve the effectiveness of both transit and Equitable Transit-Oriented Development, especially near BRT Stations like the one at University Boulevard which has many dispersed parking lots and leans toward an auto-oriented urban form. Parking strategies to reduce the amount of land dedicated to large surface lots within station areas can increase the compact urban form. Existing parking along BRT corridors along Veirs Mill Road, especially within commercial districts, reflects car dominant culture where parking is placed adjacent to sidewalks that constrain the space available for other modes of transit and reduce the area for public space, active sidewalks, and internal plazas and pedestrian ways as evidenced in the contrasting figures in the Raleigh ETOD Guidebook.⁸



Figure 7: Managing Parking Effectively (Non TOD)



Figure 8: Managing Parking Effectively (TOD)

Campus Station along the Veirs Mill BRT Line

Campus Stations are found along BRT routes that are located to support transit to primary employment, educational or medical campuses. At these stations, safe and direct access to and

⁸ City of Raleigh, Equitable Transit-Oriented Development Guidebook, 42-61, July 2020. https://cityofraleigh0drupal.blob.core.usgovcloudapi.net/drupal-prod/COR22/EDATGuidebook.pdf

from the campus pose a high priority for station design. The Montgomery College BRT Station is a clear example of a Campus Station.

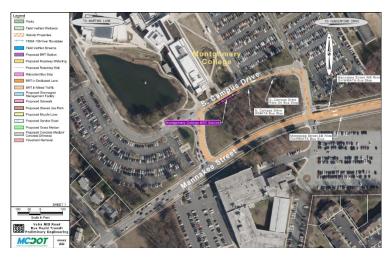


Figure 9: Montgomery College BRT Station Aerial



Figure 10: Montgomery College BRT Station Design

Neighborhood Station along the Veirs Mill BRT Line

Neighborhood Stations along BRT routes are typically located in neighborhoods with medium-density housing and also have nearby retail or commercial districts, parks, and schools that support the neighborhood. Neighborhood Stations require safe and direct walk and bike access to the station and into the surrounding neighborhood typically through enhanced separation of transit paths for on-street, non-auto travelers or wide sidewalks or other designated off-street paths. The Randolph Road BRT Station along Veirs Mill Road is an example of a Neighborhood Station.



Figure 11: Randolph and Veirs Mill Road BRT Station Aerial



Figure 12: Randolph and Veirs Mill Road BRT Station Design

ETOD Density Strategy at Neighborhood Stations

The greater proportion of properties within a quarter-mile buffer zone around Neighborhood Stations, like the Randolph Road BRT station, has already been developed meaning that infill and adaptive re-use development will likely be used to support Equitable Transit-Oriented Development. However, given the current zoning around the Stoney Mill Square and Colonial Veirs Mill Shopping Centers, redevelopment is likely within the quarter-mile BRT buffer zone that should focus on creating an inclusive, vibrant, and affordable urban center.

Similar to the Corridor Station, like the University Boulevard BRT station, greater density redevelopment is essential to create an urban center supported by nearby medium and moderate

mixed-use density projects. As density decreases from the urban center, so too do building heights that step down through townhouse development projects that can support the low-density neighborhoods with potential for re-use projects of small-footprint retail.

Neighborhood-Residential Station along the Veirs Mill BRT Line

Neighborhood-Residential Stations along BRT routes are typically located in neighborhoods that serve predominately single-family housing or local parks and schools. The Neighborhood-Residential Station requires safe and direct walk and bike access to encourage non-auto travel from the station into the neighborhood and is typically supported by enhanced intersection safety design for pedestrians and wide sidewalks or separated on-street bike lanes from traffic. The Aspen Hill, Twinbrook Parkway, and Edmonston Drive BRT Stations reflect the general design of a Neighborhood-Residential Station.



Figure 13: Twinbrook and Veirs Mill BRT Station Aerial



Figure 14: Twinbrook and Veirs Mill BRT Station Design

Part IV: Strategies to Increase Affordable Housing

Development Along BRT Corridors versus ETOD Regulations: Affordable Housing

A noticeable difference between planning for a BRT corridor and introducing ETOD regulation is the emphasis to expand housing options for all income levels around station areas through regulatory means. This section will review efforts in Montgomery County to increase housing through present and potential future MPDU development and introduce ways in which ETOD regulations work to also increase the number of affordable housing units for individuals to equitably receive the benefits of BRT through ETOD overlay zones.

Montgomery County's Moderately Priced Dwelling Unit Program

Montgomery County's MPDU program was the first successfully implemented inclusionary zoning program in the country. A goal of the Montgomery County Housing Policy states that affordable housing should be available to people of all incomes. To help achieve this goal, the County Council passed the Moderately Priced Housing (MPH) Law in 1974. A key provision in the MPH Law requires that between 12.5% and 15% of the houses in new subdivisions of 20 or more units be moderately priced dwelling units.

Each year, the Department of Housing and Community Affairs (DHCA) submits to the Council President a report on the Montgomery County MPDU program for the previous calendar year. The report for the calendar year 2020 includes a chart showing pending development applications that include MPDUs. The pipeline MPDU projects as of 12/31/2020 indicate that 734 MPDUs have signed agreements to be built; however, none of the 18 developments containing these units are located within the quarter-mile buffer zone around the Veirs Mill BRT stations. Of the 74 pipeline projects that have not yet signed an agreement to build, there is one location, slightly outside of the quarter-mile buffer zone around the Veirs Mill BRT station. This development, the Wheaton

https://www.montgomerycountymd.gov/DHCA/Resources/Files/housing/affordable/publications/mpdu/annual_report_mpdu-2020.pdf

⁹ Department of Housing and Community Affairs, Annual Report on the Moderately Priced Dwelling Unit (MPDU) Program, March 29, 2021.

Grandview project on Grandview Avenue southeast of Ennals Avenue, will support 62 MPDUs. Most of the MPDUs, available for sale or rent, along the Veirs Mill BRT line are clustered around Wheaton as indicated in the red or blue dots within the green quarter-mile radius from BRT stations in Wheaton.

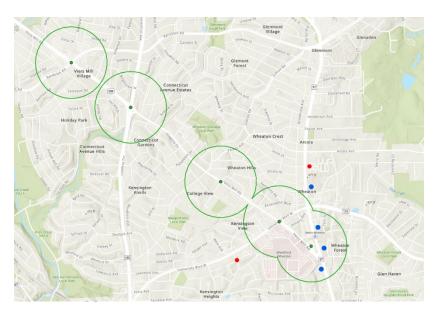


Figure 15: MPDUs Within a Quarter-Mile from Wheaton BRT Stations

Greater Affordable Housing Units along the Veirs Mill BRT Corridor: Residential Capacity Analysis In 2020, Montgomery County Planning completed a Residential Development Capacity Analysis (RDCA) which can be used to estimate the total potential residential development capacity that could be built in Montgomery County under assumptions of market trends and zoning rules. ¹⁰ While the RDCA is not meant to speak to a specific parcel's ability to develop or redevelop, the estimate is helpful in underscoring the potential to increase affordable housing units alongside other development.

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¹⁰ Montgomery Planning, Residential Development Capacity 2020, July 13, 2022. https://montgomeryplanning.org/planning/housing/residential-development-capacity-analysis/

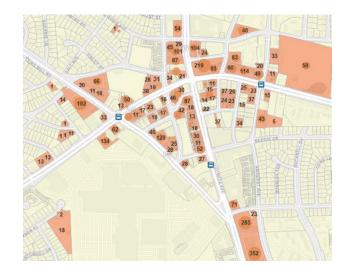




Figure 17: RDCA in Wheaton

Figure 18: RDCA at the Veirs Mill and Randolph Road BRT Station

ETOD Overlay Zones

While many jurisdictions have encouraged affordable housing or higher-density developments around transit stations through revisions to zoning codes or ordinances, other tools may also be implemented to encourage affordable housing developments. For example, transit-oriented development overlay zones may set standards for development around building height, land use, parking, and affordable housing. A key component to integrate Equitable Transit-Oriented Development into the planning and development process is the overlay zone. The addition of an overlay zone within a quarter-mile of BRT stations onto the existing zoning map provides a key regulatory framework to build and maintain ETOD.

Raleigh's Equitable Transit-Oriented Development Guidebook introduces two types of overlay zones to achieve ETOD and encourage walkable, mixed-use community development, and expand affordable housing options near BRT stations. ¹¹ The first overlay zone applies to mixed-use zones within a quarter-mile radius of BRT stations and includes a density bonus to developers who provide affordable housing units. Within the overlay zone, minimum parking requirements are

¹¹ City of Raleigh, 83-87.

removed, buildings are required to front on the street and new development requires bicycle infrastructure and wider sidewalks. The second overlay zone applies to residential zones within a quarter- or half-mile distance of BRT stations, encourages the development of missing middle housing, limits the maximum lot size for single-unit residential use, and also removes minimum parking requirements:

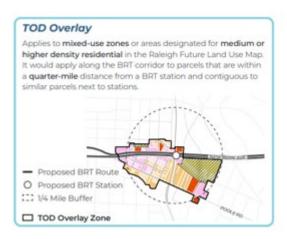


Figure 19: Raleigh TOD Overlay for Mixed-Use Zones



Figure 20: Raleigh TOD Overlay for Residential Zones

Density Bonus

The City of Raleigh's strategy to support densities along BRT corridors recognizes the density bonus as a critical piece of its zoning strategy. ¹² The density bonus provides an opportunity for developers to add additional floors to a parcel that meets the additional requirements to support ETOD for new development within an overlay zone. There are several ways to structure a density bonus, for example, jurisdictions like Montgomery County can calculate a density bonus as an increase in the floor area ratio (FAR), or the ratio of the total usable floor area of a building on a site to the total area of the lot. However, other jurisdictions like Raleigh have provided bonus height exemptions from height restrictions that allow for the construction of additional stories.

¹² City of Raleigh, 88-95.

The density bonus in Raleigh's ETOD Development Guidebook allows for 50% additional height over the existing base zoning. For example, in areas where a three-story building is allowed, a density bonus to introduce affordable housing would allow a five-story building to be constructed. The City of Raleigh sets affordability terms at 50% annual median income, in line with their overall policies to provide affordable housing options in transit corridors. In addition, the City of Raleigh requires that at least 30% of the bonus units be set as affordable housing units. The City's Equitable Transit-Oriented Development guidebook recognizes that the density bonus is likely to be most utilized in districts that are currently zoned for three to four stories rather than in areas that are zoned for five and six stories because the density bonus for taller buildings would entail a different, more costly high-rise construction costs:



Figure 16: Raleigh Density Bonus for Affordable Housing Near BRT Corridors

Employment Bonus (Height)

The height bonus would also apply to commercial development to incentivize the creation of jobs near transit. What the City of Raleigh calls an Employment Bonus, would only be an increase of 25% of additional height over the existing base zoning so as to not discourage residential use of a height bonus. By combining a height bonus for both employment and affordable housing, the zoning overlay provides an alternative to a decentralized employment and housing strategy that often relies on commute and vehicle travel.

Restrictions on Parking and ETOD: Raleigh and Chicago

The City of Raleigh also recognizes that with Equitable Transit-Oriented Development, residents are less likely to require parking spaces for cars and instead rely on commuting via easy access to BRT and public transit. Removing parking minimum requirements allows new development to only include as much parking as is believed to meet market demand, rather than over-supply parking based on local regulation. Allowing multifamily residential buildings to separate their rental costs for living space with the cost of renting a parking spot would also provide an incentive for renters to rely less on single occupancy vehicles in transit-oriented development overlay zones.

Similar to the City of Raleigh's ETOD overlay zones, Chicago Mayor Lightfoot introduced the Connected Communities Ordinance which includes a flexible ETOD overlay zone to align with the City's ETOD Policy Plan. ¹³ The ordinance expands the existing TOD radius from a quarter-mile around rail stations to one-half mile and also increases the TOD radius from high-frequency bus stations and bus corridors a quarter-mile.

Chicago's ETOD Policy to Increase Affordable Housing: Connected Communities Ordinance

The Connected Communities Ordinance also reduces the cost and reduces the time to build affordable housing. Similar to Raleigh's ETOD overlay zone, Chicago's Connected Communities

Ordinance requires buildings that receive TOD density benefits to build affordable units. Like Raleigh's ETOD overlay zone policy to remove parking minimum requirements to incentivize public transit use, Chicago's ordinance eliminates on-site parking requirements for affordable housing which reduces development costs and removes a resident's requirement to pay for parking. To complement the policy that eliminates on-site parking, Chicago's ordinance allows new developments to exchange parking for additional affordable units. In addition, Chicago's ETOD ordinance would introduce a parking maximum to cap the number of on-site parking spaces that a building may provide at one spot per two units, and the option to build one spot per one unit.

¹³ Office of the Mayor, Mayor Lightfoot Introduces Connected Communities Ordinance, June 22, 2022. https://www.chicago.gov/content/dam/city/depts/mayor/Press%20Room/Press%20Releases/2022/June/ConnectedCommunitiesOrdinance.pdf

To increase the pace of affordable unit development within Chicago's ETOD zones, under the Connected Communities Ordinance, if the Committee on Zoning does not take action on an affordable zoning application within 180 days, the applicant can force a vote that, if not voted on for 60 days, becomes an automatic recommendation to approve the development and is automatically sent to the City Council for final development approval.

In addition to increasing the number of affordable units near rail and high-frequency bus stations, the Chicago Connecting Communities Ordinance also removes the ban on three-flats near transit in high-cost neighborhoods. The two- and three-flats are Chicago's most naturally affordable type of housing and the ordinance removes the ban to build this type of housing near transit in much of the city. To maintain the stock of three-flats, the ordinance also prevents deconversions of three-flats in low-affordability communities and communities facing displacement without first obtaining a zoning change.¹⁴

Makes it possible to build more affordable housing—and to do it faster, at lower cost, and in every neighborhood.

- **3.** Between 1993 and 2018, 90% of City subsidized affordable units were built outside of predominantly white, low-poverty areas. Increasing the diversity of housing options will not only provide more equitable access to public transportation, but also tackle Chicago's racial and socioeconomic segregation. To encourage affordable and diverse housing near transit, this ordinance:
 - Requires that every affordable development in a high-cost area gets an up-or-down vote in Zoning Committee.
 - Requires buildings receiving TOD density incentives to build more affordable units (above the current requirements) and allows developments to swap parking for more affordable units.
- Eliminates on-site parking requirements for affordable housing—lowering development costs so residents don't have to pay to store cars they're less likely to own in the first place.
- Prevents deconversions in low-affordability communities and communities facing displacement which means that affordable 3-flats can't be gutted and turned into expensive single-family homes without a zoning change.

Figure 17: Chicago ETOD Ordinance and Affordable Housing

¹⁴ City of Chicago, Connected Communities Ordinance, https://www.chicago.gov/city/en/sites/equitable-transit-oriented-development/home/connected-communities-ordinance.html

Part V: Financing ETOD

Financing Tools and Affordable Housing

A key recommendation to enable comprehensive ETOD in Montgomery County is the introduction of ETOD overlay zones to increase requirements for housing affordability and density of development and is appropriate for both land use in transit-oriented contexts and responsive to local development markets. However, funding this type of development requires many different financing tools and a long-term time horizon for a successful ETOD project to be completed. The next section will introduce financing tools that jurisdictions have developed with local partners to accelerate the pace of new construction that includes affordable housing units.

Metropolitan Atlanta Rapid Transit Authority (MARTA) Affordable Housing Preservation Fund
In January 2021, the Metropolitan Atlanta Rapid Transit Authority (MARTA) announced its
partnership with Morgan Stanley and the National Equity Fund (NEF) that created a \$100 million
Greater Atlanta Transit-Oriented Affordable Housing (TOAH) Preservation Fund. Access to finance
assistance from the Fund allows owners and landlords of multi-family affordable housing unit
projects to keep rents at a level that does not displace lower-income households as overall rents
increase given the parcel's location near transit. Using the Fund to preserve affordable housing
units in the short-term provides time to develop additional affordable housing units in the area
over a longer time horizon. Over the long-term, the Fund will acquire and preserve existing
affordable multi-family housing units by acquiring projects and converting them to be rentrestricted.

In March 2021, MARTA announced a new \$100 million TOD Fund with Goldman Sachs to finance new affordable housing developments within a mile of MARTA stations. ¹⁶ The Fund, known as the Atlanta Affordable Housing and Transit-Oriented Development (TOD) Initiatives supports medium

¹⁵ Martel Sharpe, "MARTA Announces \$100 million Fund Preserve Affordable Housing Near Rail Stations," The Atlanta Voice, Jan. 11, 2021. https://theatlantavoice.com/marta-announces-100-million-fund-preserve-affordable-housing-near-rail-stations/

¹⁶ National Academies of Sciences, Engineering and Medicine, Coordination of Public Transit Services and Investments with Affordable Housing Policies, 31-78, 2022. https://doi.org/10.17226/26542.

to long-term affordable housing development projects by providing Low-Income Housing Tax Credit equity, joint venture equity, and traditional construction debt. In little over a year after the formation of the TOD Fund Goldman Sachs announced an additional \$100 million increase to the TOD Fund as well as the groundbreaking of a 250-unit affordable housing community at the terminus of MARTA's planned BRT corridor, financed by TOD Fund.¹⁷

Amazon Housing Equity Fund in the Washington, DC Metropolitan Area

The Amazon Housing Equity Fund was established in January 2021 with a \$2 billion commitment to both preserve and create more than 20,000 affordable housing units in communities where large numbers of Amazon employees live and work. In June 2021, Amazon announced a \$125 million commitment with the Washington Metropolitan Area Transit Authority to create 1,000 new affordable housing units near high-capacity public transit areas. Over the first year, Amazon committed over \$25 million in low-rate loans for the construction of affordable housing at the New Carrollton Metro station. The project, planned by Urban Atlantic, will provide 291 homes that are affordable for residents earning under 80% of the area median income (AMI) and will remain income-restricted for 98 years. The New Carrollton Station serves the Metro, Metrobus, Amtrak, and MARC trains, and Prince George's County's "TheBus," and will be a future stop along the Purple Line light-rail project.

In addition to low-rate loans to construct the ETOD project at the New Carrollton Station, the Amazon Housing Equity Fund also provided a \$56 million low-rate loan to construct 451 affordable homes at the College Park Metro Station for residents earning under 80% of AMI for 98 years. In addition to the two new transit-oriented developments in the Washington, DC metropolitan area,

¹⁷ MARTA, "MARTA, Goldman Sachs Announce \$100 Million Increase to Atlanta Affordable Housing and Transit-Oriented Development Initiative," Saporta Report, March 28, 2022. https://saportareport.com/marta-goldman-sachs-announce-100-million-increase-to-atlanta-affordable-housing-and-transit-oriented-development-initiative/thought-leadership/marta/

¹⁸ Amazon, The Amazon Housing Equity Fund Year in Review, 2-15, March 23, 2022. https://assets.aboutamazon.com/9b/22/e2347f43413e8b051b4eb3da9f3b/2022-hef-report-march-23.pdf ¹⁹ "Residential Complex Part of Transit-Oriented Development," Washington Informer, July 6, 2022. https://www.washingtoninformer.com/residential-complex-part-of-transit-oriented-development/

the \$125 million Housing Equity Fund sets aside \$25 million to fund development led by minority developers. The public-private partnership with Amazon has accelerated the rate at which affordable transit-oriented development has become available in the Washington Metropolitan region.

Raleigh ETOD Financing Tools: Housing Equity Fund

To support Equitable Transit-Oriented Development, an equity fund would set aside new tax revenue within the quarter-mile buffer zones along the entire BRT corridor for affordable housing. The new tax revenue to support ETOD initiatives would be generated from new and existing development that is above the existing property tax collections, an approach to fund community benefits that are known as synthetic tax increment financing. For example, if new development within a synthetic tax increment financing zone increased tax revenue by \$19 million, the Housing Fund could receive any percentage of the \$19 million up to 100%.²⁰

Part VI: Conclusion

Recommendations

The BRT corridors in Montgomery County have the potential to provide high-quality transit service to people of all income levels, however access to BRT stations, and housing affordability within a quarter-mile of the BRT corridor pose barriers for Equitable Transit-Oriented Development in Montgomery County. To overcome potential barriers to ETOD, first, TOD overlay zones should be developed to provide the regulatory framework to increase the number of affordable housing units and provide a way to lower the costs for new development. Second, investments in infrastructure to complete sidewalk, and trail networks to BRT stations, should be implemented to reduce the likelihood of conflicts with traffic and increase the safety for people to reach BRT stations and the resources that the BRT can connect people to. Third, successful ETOD in Montgomery County will likely require public-private partnerships to more effectively leverage existing and new financing tools to create and preserve affordable housing units.

²⁰ City of Raleigh, 96-98.

ETOD Overlay Zones

An ETOD overlay zone would either extend a quarter-mile from a BRT corridor, or within a quarter-mile radius of BRT Station. Either configuration would likely use two types of overlay zones that would increase the number of affordable housing units within a more compact, mixed-use community. Montgomery County could study ETOD overlay zones guidance around BRT corridors in Raleigh to determine the similarity and feasibility of introducing similar ETOD overlay zones along BRT corridors in Montgomery County.

Montgomery County Planning could begin to study two types of ETOD overlay zones. The first type of overlay zone would apply to mixed-use zones. These zoning areas would extend a quarter-mile from BRT stations and provide an opt-in density bonus of 50%, where a percentage of the bonus units would be made affordable at a percentage of area median income for a set number of years.

Capital Facilities Investments to Improve Neighborhood Access to BRT Stations

To allow more people in Montgomery County to access BRT stations, capital facilities investments for trails and sidewalks should expand beyond the BRT road corridor and planned Complete Streets improvements. The networks for people to reach BRT stations should be considered a priority to ensure safe and direct access to an expanded BRT network in Montgomery County. The improved infrastructure can be achieved in three ways.

First, as Montgomery County builds its BRT network, careful attention should be paid to add missing sidewalk and bike facilities, especially in the quarter-mile around BRT stations. Second, Montgomery County should consider the design and funding of intersection improvements within a quarter-mile from a BRT station to increase pedestrian and bicycle safety, with a priority towards areas that are within a Vision Zero High Injury Network, or an Equity Emphasis Area. Third, where possible, Montgomery County should extend its existing bicycle trails along BRT corridors, in a manner envisioned in the Veirs Mill Master Plan, for example.

New Financing Tools for Affordable Housing

This past year, the County Council approved a \$6.3 billion budget that allocates \$200 million in the upcoming fiscal year towards preserving naturally occurring affordable housing, allocating funding for new affordable housing, and rental assistance for lower-income residents. Additional guidance could be integrated to prioritize preserving naturally occurring affordable housing in areas within a quarter-mile of BRT corridors. In addition, Montgomery County could explore additional ways to preserve naturally occurring affordable housing like the Greater Atlanta Transit-Oriented Affordable Housing (TOAH) Preservation Fund which preserves affordable housing units in the short-term by offsetting the rent increase of affordable housing units in areas that face rent increases given the parcel's location to high-quality transit like BRT.

In addition, Montgomery County should continue to work with local partners who are providing loans to preserve or create affordable housing units along fixed-rail corridors in the region, to see if strategies to preserve or create affordable housing could scale to BRT corridors. This year, the Urban Institute released its favorable evaluation of the Purple Line Equitable Transit-Oriented Collaborative that found members of the Collaborative were successfully providing technical guidance and loans to preserve 1,000 units of affordable housing along the Purple Line Corridor. Secondly, Montgomery County should work towards the opportunity to increase the number of affordable housing units that could be financed by the Amazon Housing Equity Fund's low-rate loans. Already, within the past year, the Fund has accelerated the construction and preservation of several affordable housing units in the Washington Metropolitan region, most recently in July with the groundbreaking of the New Carrollton station development that will provide 291 affordable housing units.

The City of Austin and its partners are currently developing a systemwide ETOD Policy Plan which is on track to be released in September 2022. After the ETOD Policy Plan is released, the City will

²¹ Steve Bohnel, "Montgomery County Officials Tout County's Historic Investment in Affordable Housing Funding," Bethesda Magazine, May 31, 2022. https://bethesdamagazine.com/bethesda-beat/government/montgomery-county-officials-tout-countys-historic-investment-in-affordable-housing-funding/?mc_cid=805fd4b5db&mc_eid=b34c99a718

enter its final phase of engagement and then develop an ETOD Policy Plan & Regulatory Implementation. The City of Raleigh developed an ETOD Development Guidebook, rather than a comprehensive policy plan and regulatory implementation, as a planning framework to guide future growth around BRT corridors. Finally, the City of Chicago has introduced an ETOD ordinance, the result of two years of engagement with over 80 community and civic stakeholders to build an ETOD policy. The ordinance requires that new buildings that receive a TOD bonus build more affordable units than currently required and lowers the cost of construction by eliminating the onsite parking requirements for affordable housing within TOD areas. The Ordinance also prevents the loss of naturally occurring affordable housing through deconversions of structures to expensive single-family homes. All three jurisdictions, Chicago, Austin, and Raleigh are beginning to implement ETOD policies. As one of the nation's leaders in inclusionary zoning policy, Montgomery County should consider ETOD overlay zones along BRT corridors in their master planning as more research, implementation, and policy regulation around ETOD along BRT corridors emerges in the near future.