

DATE: May 18, 2023
TO: Guy Benn, Fiona Lyon, Miles Anderson, TriMet
FROM: Ian Carlton, Jennifer Cannon, James Kim, ECONorthwest
SUBJECT: REVISED DRAFT Beaverton Transit Oriented Development Barriers and Opportunities,
Better Red Station Area Planning - West

This memo addresses Task Order 4 of The Better Red Station Area Planning Project, focusing on Transit Oriented Development (TOD) potential at three station areas located within the City of Beaverton, Oregon. The overarching goal for this Task Order 4 work is to augment the understanding of the core barriers for community-serving Transit-Oriented Development (TOD) based on a prototypical site representing the Millikan Way Park and Ride, Beaverton Creek Park and Ride, and the Elmonica Park and Ride station areas in the City of Beaverton.

This memo includes the five following sections:

Section 1. Introduction including Transit Oriented Development Background, Study Area Description, and Key Characteristics of the Beaverton Station Areas

Section 2. Summary of the Main City of Beaverton Regulations and Incentives Associated with Transit Oriented Development

Section 3. Summary of Joint Development Feasibility and Massing Study Results

Section 4. Overall Transit Oriented Development Obstacles and Opportunities and Conclusion

Section 5. Appendix

The team interviewed key stakeholders, met with City of Beaverton and Washington County staff to garner insights, and completed a massing study and development feasibility analysis to help provide recommendations on the main TOD regulatory barriers and opportunities.

Section 1. Introduction

The Better Red Station Area Planning Project focuses on serving additional stations and improving the reliability on the MAX Red Line extending from the Portland International Airport through Downtown Portland to the City of Hillsboro. A consulting team, led by ECONorthwest, assisted TriMet by augmenting their knowledge about the realm of station area development possibilities at certain key station areas. The overarching purpose of this project is to stimulate catalytic projects that will shape growth on the MAX Red Line. This project builds on TriMet's tradition of Transit-Oriented Development (TOD), with a focus on equitable development outcomes.¹ This project work was split into six task orders beginning with Task Order 1 work, initiating the project and setting the stage for Task Orders 3 and on.

This memo concludes Task Order 4 work focusing on studying the TOD potential at three station areas in the City of Beaverton. The Beaverton stations selected for Task Order 4 work are the Millikan Way Park and Ride, Beaverton Creek Park and Ride, and the Elmonica Park and Ride (all on property owned by TriMet). The overarching goal for Task Order 4 is to improve the understanding of the core barriers for community-serving TOD at these station areas and provide a preliminary vision of joint development potential.

As outlined below, the findings in this memo were informed by work completed previously as a part of this task order.

- ECONorthwest held stakeholder interviews with local housing and TOD developers and City of Beaverton planners to gain their perspective on key community assets, the market, and TOD development challenges (April and May 2022). *Key findings are integrated in Sections 2 to 4 of this memo.*
- Perkins & Will prepared a design review and completed a physical conditions assessment that illustrated the necessary planning and physical contexts (May 2022). They also generally described the main City of Beaverton development requirements. *Key findings are integrated in Section 2 of this memo.* ECONorthwest augmented this work by reviewing the City of Beaverton regulations in comparison to TOD best practices. *Key findings are integrated in Sections 2 to 4 of this memo.*
- Perkins & Will designed a prototypical site based on common characteristics of the three station areas and drafted two Massing Scenarios for this prototypical site (August 2022). *Key findings are integrated in Sections 3 and 4 of this memo.*
- ECONorthwest assessed the financial feasibility of physically viable back-of-envelope development prototypes based on the three Beaverton station areas (Fall 2022). *Key findings are integrated in Sections 3 and 4 of this memo. Additional background on the analysis is provided in the Appendix.*

¹ Transit-Oriented Development (TOD) is a pattern of land use and development that integrates a mix of residential and commercial uses at higher density or intensity within walking distance from transit stations.

Summary of Findings

- **Incentives.** ECONorthwest assessed the financial feasibility (using pro forma analysis) of the massing scenarios presented in this report. Two scenarios were developed to explore variations in different types of TOD possibilities. The primary difference between the scenarios is related to Scenario 2 integrating ground-floor retail development as a component of multifamily buildings, while Scenario 1 focuses on providing slightly more market rate housing. Both scenarios included ample market rate multifamily housing, 13 townhouse units, a parking garage structure, and 67 multifamily units affordable to households earning 60 percent of the AMI or less (this tends to be described as low-income households). Overall, the financial feasibility findings showed that as proposed, the development scenarios would not be feasible to build without more extensive financial incentives. Subsidies were required even when applying the Vertical Housing Development Zones tax exemption incentives.
- **Parking.** The high cost of structured parking for residential development is a major barrier to development feasibility and would be cost prohibitive. Although the City of Beaverton has updated its policy on parking ratios for development near transit stations that supports TOD, lower parking ratios are insufficient on their own to make development feasible. Parking will still need to be provided to meet the relatively high existing parking demand in this transit-served market, where very few residents would likely be willing to pay market rents without parking spaces. New station area development will need to determine market demand to best utilize this regulatory flexibility while remaining financially feasible.
- **Phased Development.** Phased development is recommended for these station areas to help ease improve feasibility and ease in parking management associated with removing parking spaces freely available at the park-and-ride facility. Incrementally reducing park and ride spots can avoid a difficult shift for the community, where many residents are accustomed to the availability of these parking spaces. Phasing can also help to structure projects in a way that reduces the burden of financing public benefits such as affordable housing and community facilities.
- **Housing Types.** The current demand for townhouses near the analyzed MAX stations in Beaverton is not high enough to offset development costs. The financing gap of affordable housing is too large to warrant immediate development, thus a phased development approach should be explored that is structured in a way to delay the development of affordable housing. This could also be delayed to when there are changes to development standards to reduce construction costs, or when macroeconomic financial conditions improve, or when gap financing is available.
- **Regulatory Considerations.** This assessment also identified some regulatory barriers for the Beaverton station areas and opportunities for TOD primarily related to residential development densities. The maximum residential density in the station community zones was often too low when calculating the floor area ratio on a total site scale. Fortunately, City staff is in the process of updating station community development

regulations and parking regulations. The barriers vary from station to station and are most significant for the Millikan Way station due to its location in a floodplain and an environmentally sensitive habitat area. Ideal TOD should also incorporate active uses in addition to residential uses, such as retail, civic, cultural, and educational uses and social infrastructure. Many of these are currently allowed, but some are conditionally allowed.

- **Coordination.** Overall, we found that TriMet should partner early on with the City of Beaverton to discuss TOD proposals and develop approaches for challenges such as coordinating on a regional level on shared stormwater basin facilities. As the City implements changes to its code, it should also consider further engagement with the development community to understand difficulties with specific detailed design guidelines and standards.

Additional project and station area background along with more in depth findings for this project are provided below. The findings are based on what we learned from developer and jurisdictional partner interviews and meetings, design review and a physical conditions assessment, massing study and development feasibility analysis results, best practices review, and an assessment of the main TOD regulatory barriers and opportunities.

Transit-Oriented Development Background

TriMet defines Transit-Oriented Development (TOD) as the creation of compact, walkable, pedestrian-oriented, mixed-use communities centered around high-quality transportation systems to facilitate shorter trips, better lifestyles, and a more efficient use of city resources (Draft TOD Plan, 2022). TriMet 's TOD program aims to increase transit ridership, reduce congestion and pollution to meet climate action goals, and provide healthier more livable neighborhoods.

Seven TOD goals are recognized by TriMet, as shown below, with the ultimate goal of being a driver of positive transformation for more vibrant, prosperous, and resilient neighborhoods connected to opportunities throughout the region.

TriMet's Seven TOD Goals

1



Integrated and Multi-Modal:

Transit-oriented development should be integrated into TriMet's transit network as much as possible, creating mobility hubs that maximize connectivity and accommodate a variety of mobility options.

2



User-Friendly to Promote Transit Use:

Projects should be transit-oriented and transit-integrated, and not merely transit-adjacent. This includes consideration for wayfinding, building orientation, and a multi-modal pedestrian-scale design in addition to maximizing exposure to transit and related services.

3



Financially Viable:

Project costs must be justifiable from a project benefit perspective in order to ensure the long-term sustainability of the project and the broader TriMet TOD Program.

4



Safe, Vibrant, and Accessible:

Transit-oriented development should create accessible and vibrant station areas by providing community-oriented services in safe places where anyone who chooses can live, work, and visit.

5



Balanced Mixed-Use:

Transit-oriented development should include, whenever possible, a complementary balance of different uses that provide options for all residents and visitors to live, work, shop, and play. This includes a variety of housing styles at a wide range of price points, promotion of small business retail and office space, scalable industrial uses, and other uses.

6



Deliver Density:

Transit-oriented development should include the principles of density and compatible off-peak secondary uses to create resource-efficient, high-quality, and environmentally healthy developments that maximize the social and economic returns from constrained infill sites.

7



Provide Housing:

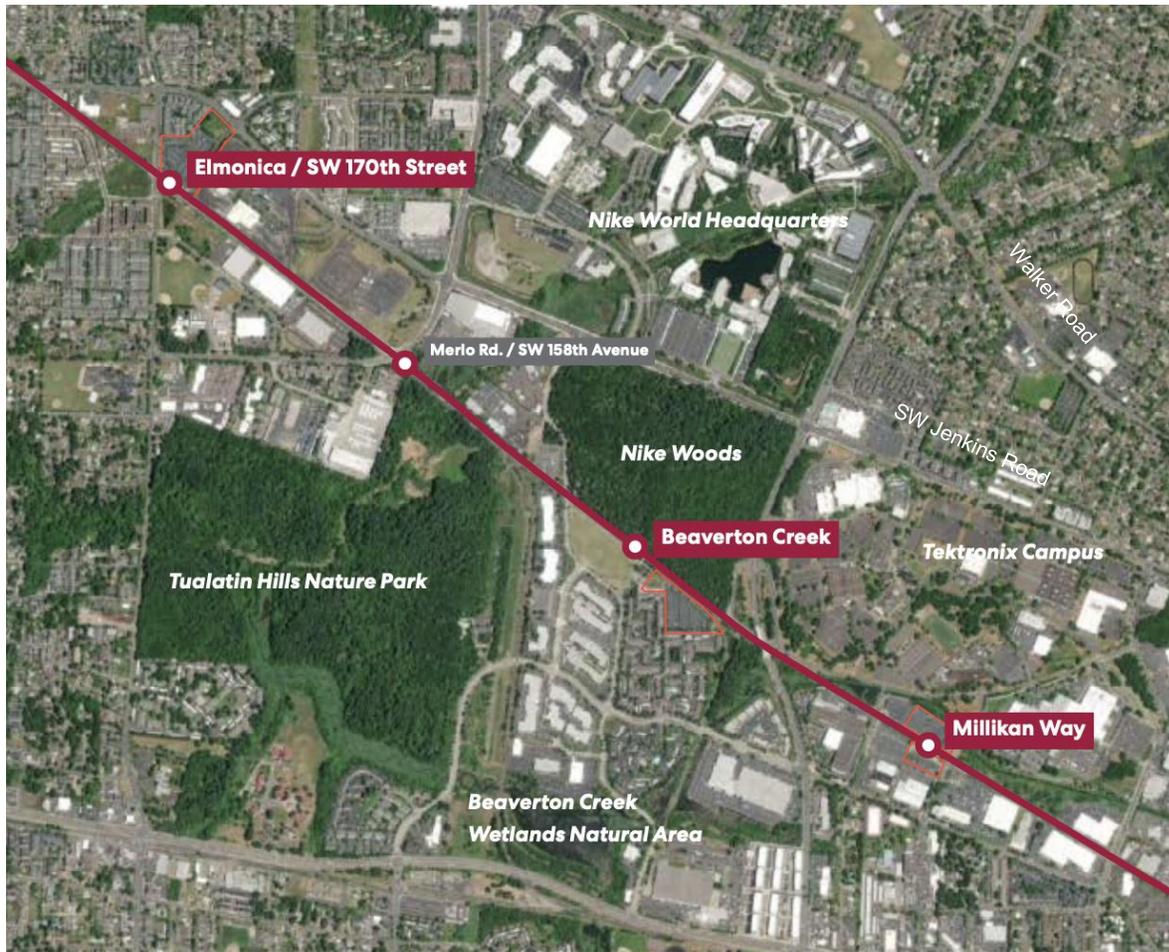
Transit-oriented development should strive to include as much housing as appropriate, considering the appropriate mix of housing types, affordability, and use and equity-based lens to minimize displacement of low-income communities, Black, Indigenous, Asian Pacific Islander, LatinX, and other People of Color. TriMet applies a portfolio-wide goal that ensures at least 30% of residential units in existing and future TriMet TOD projects are for low or very low-income residents.

Description of the Study Area

The three Beaverton stations, including Elmonica/SW 170th Ave, Beaverton Creek, and Millikan Way, were analyzed holistically at a high level for this task order. They are located along the MAX Blue Line, and the extension of the MAX Red Line will go through them. The following map (Exhibit 1) shows the location of the three stations areas along the MAX route. The Beaverton Creek Station area is located south of the Nike Woods natural area and the Nike World Headquarters. Further east, the Millikan Way station area is located south and adjacent from the Tektronix Campus. The Elmonica/SW 170th Street station is located further west than the other two stations in an area nestled between residential and commercial development. Each station has a Park and Ride facility with between 400 to 435 parking stalls and ranges in size from 4.1 acres to 7.8 acres. Overall, the station communities have a diverse mix of housing stock including multi-family development.

Exhibit 1. Analyzed Station Areas in Beaverton

Source: Perkins&Will



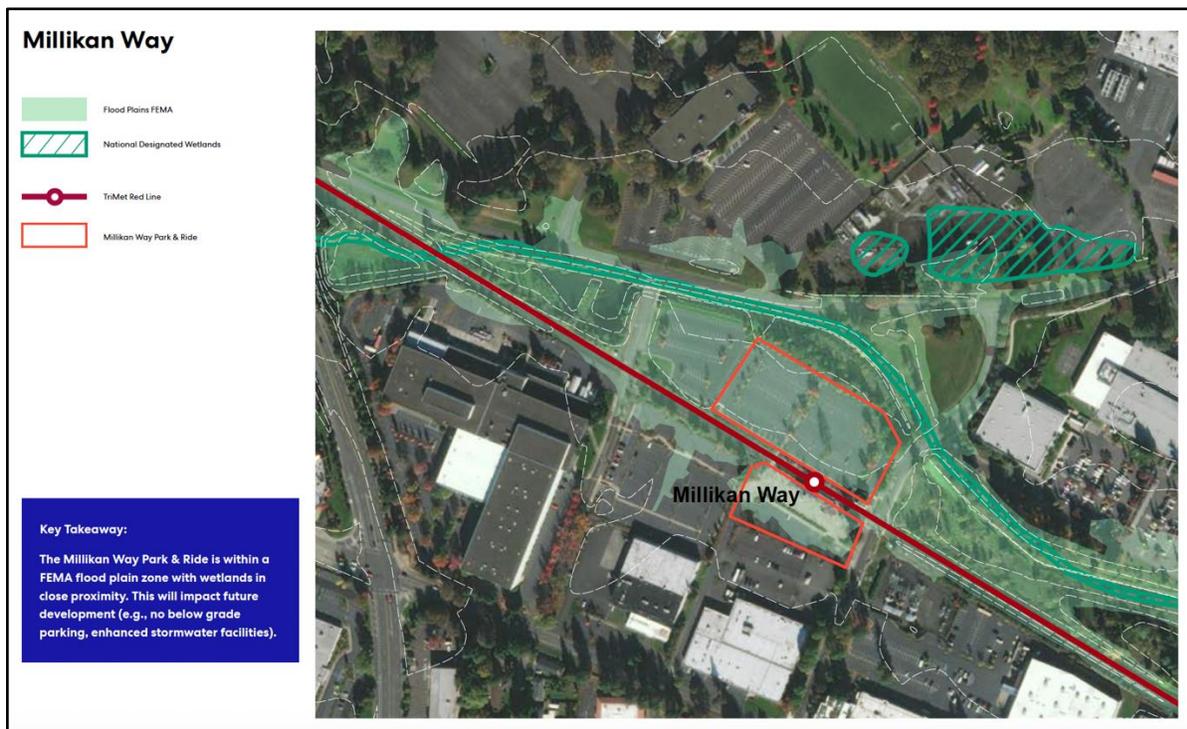
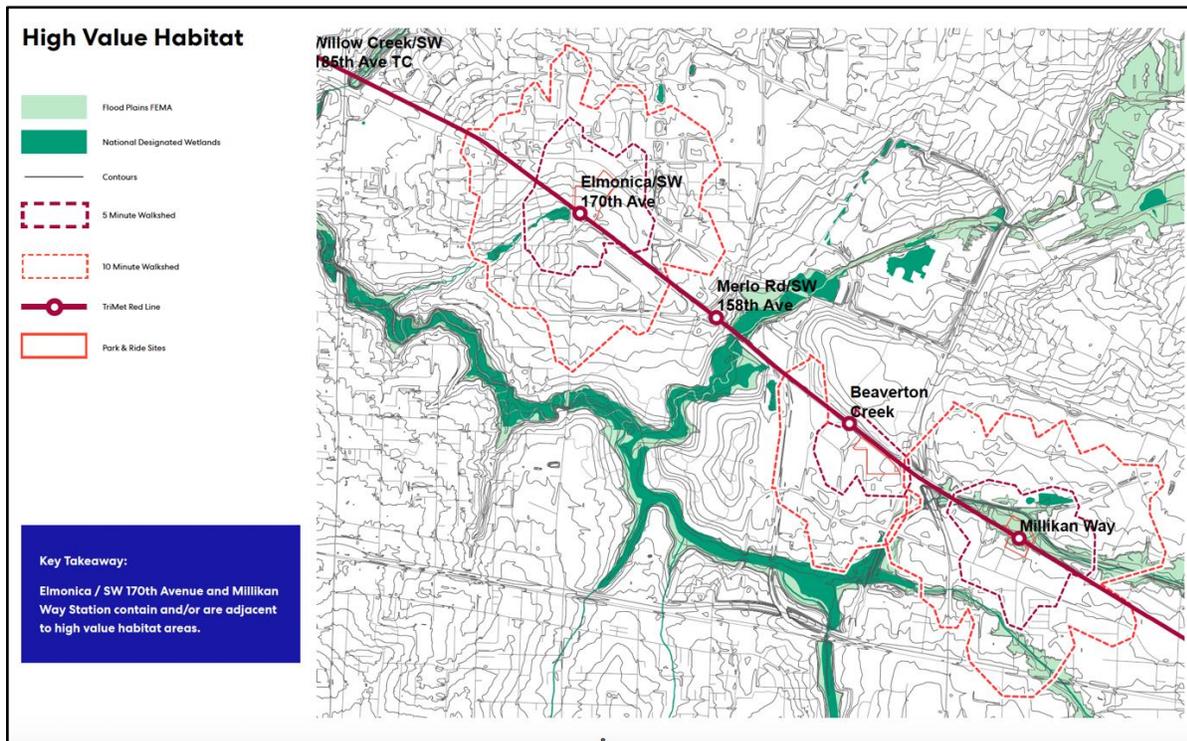
The project team assessed the major physical barriers and environmental constraints associated with the three station areas. This analysis helped to identify known major environmental constraints relevant to the Beaverton station areas. As shown below in

Exhibit 2, the Elmonica station area is located east from a high value habitat area. The Millikan Way station area is situated entirely in a FEMA flood zone area and is closely located to the south of a wetland area.² The environmental constraints identified in the Millikan Way station limits its development potential or in the very least, poses major challenges with the layout and extent of TOD that could be developed at the site.

² This information is based on the analysis of GIS data. A detailed survey of the specific site should be completed to ascertain precise locations of wetland areas and floodplain boundaries.

Exhibit 2. High Value Habitat and Millikan Way Flood Zone

Source: Perkins&Will



Key characteristics associated with each Beaverton station area are compared below.

Key Characteristics of Beaverton Station Areas

Elmonica/SW 170th Avenue Station

- Total Size of Parcels: 7.8 acres
- Location: Five Oaks-Triple Creek Neighborhood, City of Beaverton
- Park &. Ride Spaces: 400
- Zoning: Station Community – Multiple Use (SC-MU) and Station Community – Employment (SC-E); Vertical Housing Development Zone (VHDZ)
- Elmonica is adjacent to high value habitat areas (to the west across the street).



Beaverton Creek Station

- Total Size of Parcels: 4.8 acres
- Location: Five Oaks-Triple Creek Neighborhood, City of Beaverton
- Park &. Ride Spaces: 417
- Zoning: Station Community High Density Residential (SC-HDR) with a small area in SC-MU; VHDZ



Millikan Way Station

- Total Size of Parcels: 4.1 acres
- Location: Central Beaverton Neighborhood, City of Beaverton
- Park &. Ride Spaces: 435
- Zoning: SC-E
- Millikan Way is entirely within a FEMA Floodplain and a Habitat Benefit District



Section 2. Summary of City of Beaverton TOD Regulations and Incentives

As a part of this project, the team assessed the main City of Beaverton regulations associated with zoning, parking, main permit review requirements, and other major development requires to help identify the main requirements related to TOD development. The City of Beaverton development regulations are complex with details and code nuances intertwined within a broad range of chapters throughout the Beaverton Development Code.

The following section provides a summary of the core development regulations that would affect TOD including the zoning and land use requirements (development intensity), parking regulations, and landscaping requirements. Many of the regulations summarized in this section (2) are evaluated in Section 4 to understand how they serve as obstacles or opportunities to TOD. This is not an exhaustive review of all the regulations impacting community-serving TOD; rather it is a summary of the main regulations affecting TOD.

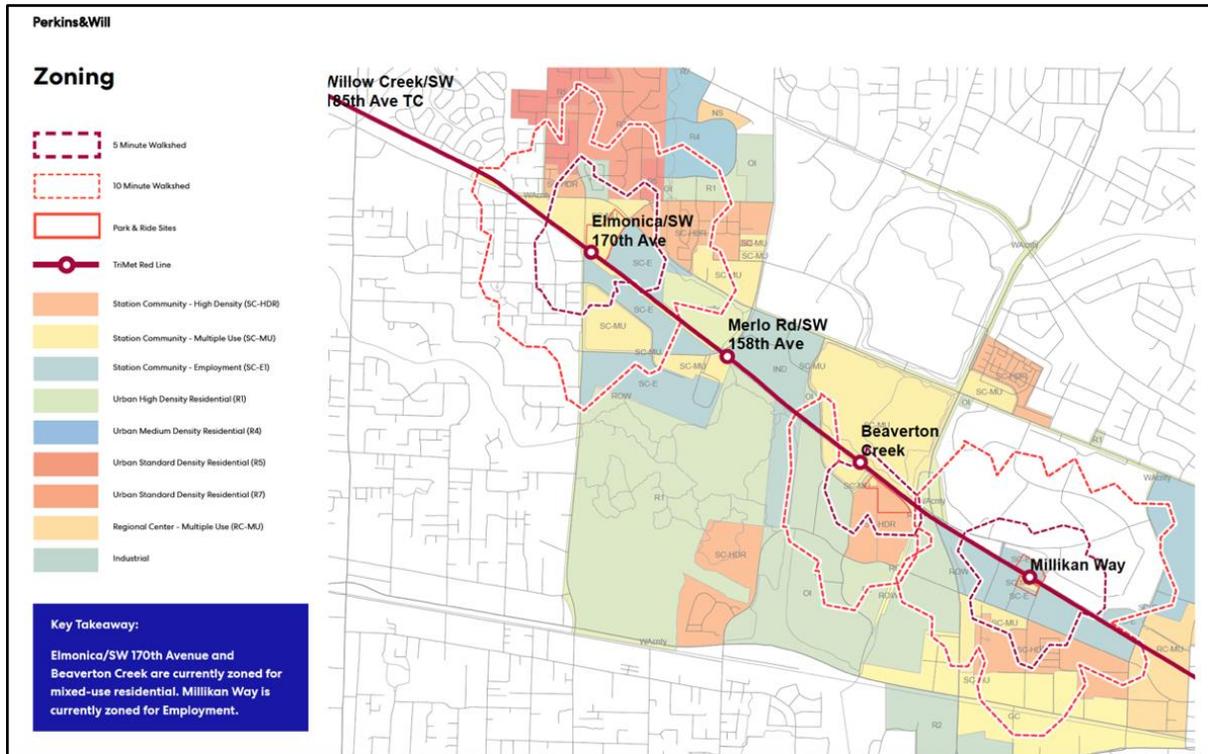
The City of Beaverton acknowledged that their codes could be out of date with state-of-the-art TOD practices. Further, they plan to update the codes to reflect best practices and conform to new statewide policies, including those that impact low-intensity residential zones and parking codes more broadly.

Zoning Designations

The applicable zoning designations from the City of Beaverton's Development Code are Station Community – High Density Residential (SC-HDR), Station Community – Multiple Use (SC-MU), and Station Community – Employment (SC-E) zones. All these zones fall within the Multiple Use Districts. The zoning designations within and around the three analyzed station areas are shown in the following map (please see Exhibit 3).

Exhibit 3. Zoning At and Around MAX Red Line Stations in Beaverton

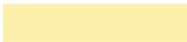
Source: Perkins&Will



At a basic level, these station community zones share similar regulations, except for the SC-E zone in Millikan Way due to residential uses not being allowed. Another key difference is in the SC-HDR zone located at the Beaverton Creek Station, where up to 1.2 Floor Area Ratio (FAR) is allowed, whereas up to 2.0 FAR is allowed in the two other zones (SC-MU and SC-E1). As explained in the following subsection, there are some areas possibly with no maximum residential density limits. The Code mostly indicates that there are no minimum setbacks for the front side and rear except for situations when on a major pedestrian route and when detached dwellings and duplexes fronting common greens and shared courts are proposed (Code Section 20.20.15). The major development standards associated with the three applicable zones are documented further in Exhibit 4 and in the following section.

Exhibit 4. SDC-HDR, SC-MU, and SC-E Zones in Beaverton

Source: Perkins&Will. Data source: City of Beaverton Development Code.

Zoning	SC-HDR	SC-MU	SC-EI
	Station Community - High Density Residential 	Station Community - Multiple Use 	Station Community - Employment 
Jurisdiction	City of Beaverton		
Minimum Density	.40 FAR 30 DU/Acre	.40 FAR 30 DU/Acre	.35 FAR Residential Density: N/A
Maximum Density	1.20 FAR	2.0 FAR	2.0 FAR
Maximum Height	100 Feet	100 Feet	100 Feet

Additional Zone Requirements from the City of Beaverton Development Code³

- Station Community – High Density Residential, SC-HDR:** This zone is generally located within one-half mile from light rail station platforms (such as TriMet’s Beaverton stations). **Primary permitted uses are for high density residential neighborhoods with minimum density requirements depending on proximity to a station platform and no maximum residential density.** Other uses include commercial uses and parks that do not rely upon vehicular traffic access. Office and retail uses are only allowed within multiple use developments along with other restrictions. Quite a few uses are permitted including eating/drinking establishments, retail, and multi dwellings; however Planned Unit Development is conditionally allowed and there are several nuances to be aware of in the footnotes (Code Table 20.20.20.A).

³ [Development Code of Beaverton, Chapter 20- Land Uses, 20.20.05. Multiple Use Areas](#): Full [urban services](#) are to be provided. Multiple Use [zoning districts](#) establish varied levels of residential and commercial uses, supporting transit and pedestrian oriented [development](#) with minimum density and intensity requirements.

- **Station Community – Multiple Use, SC-MU:** Similar to the SC-HDR zone, this zone is generally located within one-half mile from light rail station platforms (such as TriMet’s Beaverton stations). **Primary permitted uses include office, retail, and service uses. Multiple use and residential developments are also permitted with no maximum residential density.** Manufacturing and industrial uses are limited. Minimum densities and intensities are required. Quite a few uses are permitted including eating/drinking establishments, retail, and multi dwellings; however Planned Unit Development is conditionally allowed and there are several nuances to be aware of in the footnotes (Code Table 20.20.20.A).
- **Station Community – Employment (SC-E) zones, SC-E1:** The SC-E1 and SC-E3 Districts are intended to direct and encourage development that is transit supportive and pedestrian oriented in areas within approximately one-half mile of light rail transit stations. **Areas zoned SC-E are characterized by a mix of light industrial, institutional, and office uses with an overall expectation for development to achieve a district-wide intensity of 40 employees per acre.** The maximum residential density for residential only projects (per acre) is listed as N/A for SC-E1 and SC-E2 zones which indicates that residential uses are not allowed. The purposes of the regulations that follow are to stimulate development that:
 - A. generates sufficient intensity (number of employees or transit users) to be supportive of transit services available in the area;
 - B. contains a complementary mix of land uses; and
 - C. provides for limited industrial activities that could be incompatible if located in other Station Community zoning districts.

Off-Street Parking Requirements

City of Beaverton Code Section 60.30.05 provides vehicle parking requirements for new development projects (not including on street parking).⁴ The Beaverton TriMet station areas are within the Parking Zone B since they are within one-quarter mile of the light rail station platforms. However, as of January 2023, no off-street parking is required within this buffer around light rail stations.

Code Section 60.30.10. Parking Zone B. Parking Zone B reflects the maximum number of permitted vehicle parking spaces allowed for each listed land use. Parking Zone B areas include those parcels that are located within one-quarter mile walking distance of bus transit stops, one-half mile walking distance of light rail station platforms, or both, or that have a greater than 20 minute peak hour transit service. Parking Zone B areas also include those parcels that are located at a distance greater than one-quarter mile walking distance of bus transit stops, one-half mile walking distance of light rail station platforms, or both.

The parking ratios are based on spaces per 1,000 square feet of gross floor area, unless otherwise noted. The required parking spaces should be available for parking operable passenger automobiles and bicycles of residents, customers, and employees (not used for storage of

⁴ City of Beaverton Off-Street Parking Code and the Table providing the City of Beaverton Parking Ratio Requirements for Motor Vehicles: <https://online.encodeplus.com/regs/beaverton-or/doc-viewer.aspx#secid-160>

vehicles or materials or for parking of trucks used in conducting the business or use). Table 60.30.10.5 (shown below) provides the required minimum and maximum vehicle parking requirements.

The Beaverton zoning code currently requires 1.0 parking spaces for multi-dwellings with two or more bedrooms in multiple use zones is, and for Zone B the maximum permitted parking spaces would be 2.0 parking spaces per unit. Parking space requirements for light commercial land uses such as retail, office, and medical clinics vary generally from 2.7 to 3.9 parking spaces per 1,000 square feet of gross floor area for Zone B.

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Exhibit 5. Vehicle Parking Requirements for Select Areas in the City of Beaverton

Source: City of Beaverton Municipal Code

Table 60.30.10.5.A. - PARKING RATIO REQUIREMENTS FOR MOTOR VEHICLES (Excludes uses in Regional Center zoning districts - See Table 60.30.10.6)				
Land Use Category	Required Parking Spaces		Maximum Permitted Parking Spaces	
	Multiple Use Zones	All Other Zones	Zone A	Zone B
Multi-Dwelling				
One bedroom (per unit)	1.0	1.25	1.8	1.8
Two bedrooms (per unit)	1.0	1.50	2.0	2.0
Three or more bedrooms (per unit)	1.0	1.75	2.0	2.0
Dwellings, Live/Work (per unit)	1.25	1.25	1.8	1.8
Dwelling, Accessory Unit	N/A	N/A	1.8	1.8
Mobile Homes (per unit)	1.0	1.0	2.0	2.0
Residential Care Facilities (per bed, maximum capacity)	0.25	0.5	0.5	0.5
Rooming, Boarding, or Lodging Houses (per guest room)	1.0	1.0	1.25	1.5
Commercial Amusements				
Arena/Stadium (per seat, maximum occupancy)	N/A	N/A	0.25	0.25
Movie Theaters (per seat, maximum occupancy)	0.3	0.3	0.4	0.5
Sports Clubs/Recreational Facilities	4.3	4.3	5.4	6.5
Tennis/Racquetball Courts	1.0	1.0	1.3	1.5
Institutions				
Hospital (per bed)	2.0	2.0	3.0	4.0
Public Buildings or other Structures	2.7	2.7	3.4	4.1
Welfare or Correctional Institution (per bed)	0.3	0.3	0.5	0.75
Fire Station	1.0	1.0	2.0	2.0
Shelters: Domestic Violence, Emergency, or Mass	N/A	N/A	N/A	N/A
Commercial Uses				
Retail, including shopping centers	3.0	3.3	5.1	6.2
Offices, Administrative Facilities	2.7	2.7	3.4	4.1
Bank, Financial Institutions	3.0	3.3	5.4	6.5
Service Businesses	3.0	3.0	5.1	6.2
Rental Businesses, including vehicle and trailer rental	2.7	3.3	3.5	4.1
Medical, Dental Clinics	3.9	3.9	4.9	5.9
Mortuaries (per seat, maximum occupancy)	0.25	0.25	0.5	0.75
Eating, Drinking Establishments				
Fast Food with drive-through service in the, SC-MU, and SC-HDR zones.	5.0	N/A	12.4	14.9
Fast Food with drive-through service in all other zones.	10.0	10.0	12.4	14.9
Other eating, drinking establishments in the, SC-MU, and SC-HDR zones.	5.0	N/A	19.1	23.0
Other eating, drinking establishments in all other zones.	10.0	10.0	19.1	23.0
Temporary Living Quarters (per guest room)	1.0	1.0	1.25	1.5

However, the Oregon Climate Friendly and Equitable Communities rulemaking that went into effect January 1, 2023, changes this requirement for the stations for this analysis. As of that date, the City no longer requires off-street parking for any uses if the lot is at least partially within three-quarters of a mile from light rail transit stops.⁵ This interim policy is implemented by staff directly.

As with other aspects of the zoning code, the City of Beaverton anticipates updating its parking regulations in the near future to align with this policy. These changes will comply with State of

⁵ Beaverton Parking Policy and Code Project: Draft Development Code changes - <https://apps2.beavertonoregon.gov/DevelopmentProjects/StaffReport/Parking%20Policy%20and%20Code%20Project%20Memo.pdf>

Oregon Climate Friendly and Equitable Communities Requirements that set limits on local jurisdictions' parking regulations. They will be reflected in a formal update to the Development Code by June 30, 2023.

Landscape and Open Space Requirements

The City of Beaverton Code Section 60.05.25 covers landscape, open space, and natural area design standards.⁶ This code details the minimum landscaped portion of the total gross lot area. A minimum of 15 percent of the site needs to be set aside for landscaping for commercial and mixed-use development with conditional use requirements in residential districts. A minimum of ten percent of the site needs to be set aside for landscaping for all other types of development in multiple use zoning districts. Environmentally sensitive areas and above-ground landscaped water quality treatment facilities can be counted towards this minimum landscape requirement.

All new development and redevelopment in the City subject to Design Review also needs to comply with the landscape buffering requirements. A landscape buffer is required along the property lines between different zoning district designations such as between non-residential land uses and parks in Residential zoning districts.

Table 60.05-2 provides the minimum landscape buffer requirements.⁷ The Station Community zones (SC-MU, SC-HDR, SC-E) require a landscape buffer of 10 feet if abutting Residential Mixed A (RMA) or Multi-Unit Residential (MR) zones or five feet if across the street from RMA or MR zones. The landscape buffer requirements for Station Community zones (such as the zones in the Beaverton stations) are not applicable for areas adjacent or across the street from Station Community zones.⁸

Vertical Housing Development Zone Incentive

Incentives supporting TOD should also be recognized. As shown in Exhibit 6, the Elmonica and Beaverton Creek station areas are in Vertical Housing Development Zones (VHDZs), which were established to encourage new mixed-use housing development. The City incentivizes housing projects that are high-density, mixed-use, and integrating ground floor commercial use.⁹ Qualifying projects are eligible for up to an 80 percent tax abatement on the value of the improvement over 10 years.

Projects in a VHDZ, in compliance with state and city provisions, may be eligible to apply for VHDZ certification if they activate the primary street with ground floor, commercial / non-residential use. A minimum of 50 percent of the primary street's frontage must be 1) built to

⁶ City of Beaverton Landscape, Open Space, and Natural Areas Design Standards Code: <https://online.encodeplus.com/regs/beaverton-or/doc-viewer.aspx#secid-853>

⁷ City of Beaverton Table 60.05-2 providing the minimum landscape buffer requirements: <https://online.encodeplus.com/regs/beaverton-or/doc-viewer.aspx#secid-861>

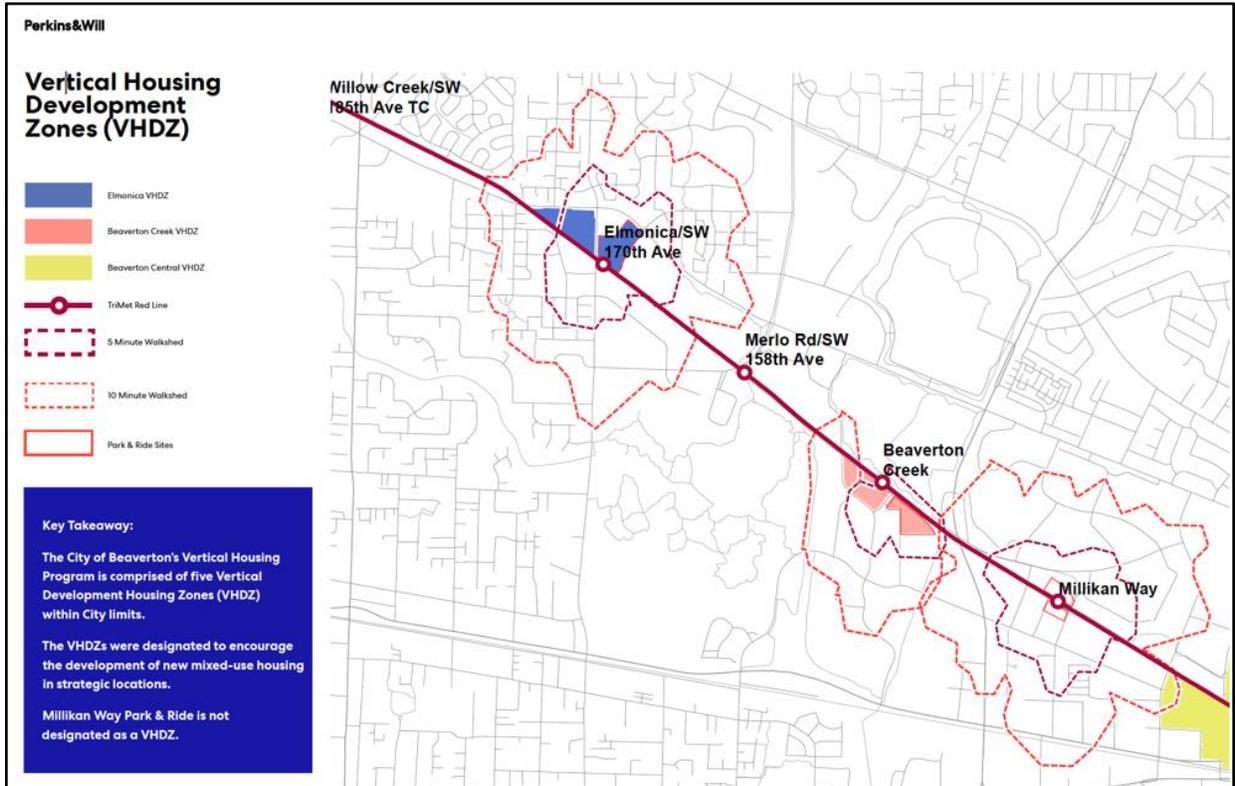
⁸ Requests for changes in buffer widths and buffer standards shall only be authorized in review of the Design Review Guidelines for Landscape buffering and screening (60.05.45.11).

⁹ VHDZ information: <https://www.beavertonoregon.gov/1131/Vertical-Housing>.

commercial standards and 2) the use must be non-residential. The City of Beaverton can use funds at its discretion to buy down a percentage of the units to designate as affordable housing options in VHDZs. Annual compliance will include verification that units remain affordable for the duration of the buy down and while the tax abatement is active. Before applying, staff must review the final design to confirm the project meets all the criteria for that zone.

Exhibit 6. Vertical Housing Development Zones Near Analyzed Stations

Source: Perkins&Will



Section 3. Summary of Joint Development Feasibility and Massing Analysis Results

The team assessed TOD potential at three Beaverton stations, owned and operated by TriMet by completing a massing study and development feasibility analysis. Perkins & Will designed a prototypical site based on common characteristics of the three station areas and drafted two Massing Study Scenarios for this prototypical site. ECONorthwest assessed the financial feasibility of physically viable back-of-envelope development prototypes based on the three Beaverton station areas. The results from this work are provided in this section.

TOD Massing Study Results for Two Scenarios

The feasibility analysis and massing study mitigated differences across the station areas by designing a prototypical site that fits within each Park and Ride facility and generalizes the site characteristics. The prototypical site is composed of three blocks that measure 260 feet by 260 feet, consisting of a total of 6.2 acres with overall site dimensions of 520 feet by 780 feet. The three blocks and developments on them are designed to be compatible for all three Beaverton station areas.

Below, Exhibit 7 helps visualize the prototypical site analysis Perkins & Will used as a basis for developing a generic station area to study TOD massing scenarios. Perkins & Will drafted two massing scenarios based on the analysis of a prototypical site that could work on all three station areas.

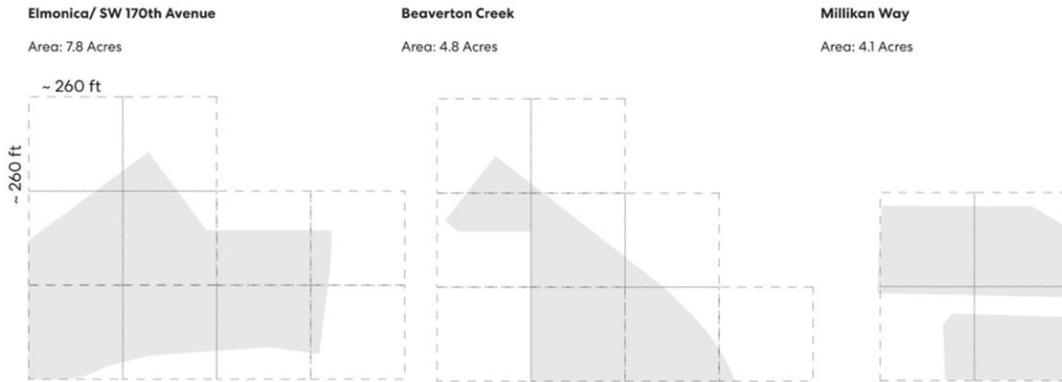
The massing scenarios considered TriMet's role as a transit agency and its goal to promote TOD. They are intended to deliver desired densities and uses for future developments and align with many principles of TOD while being context appropriate for these submarkets and locations in Beaverton.

The conceptual design scenarios adhere to the allowable land use, open space requirements, building height, and minimum residential density specified in the SC-MU and SC-HDR zones. With new City rules as of January 2023, they also comply with interim parking policy which removes off-street requirements. The design scenarios do not adhere completely to all the standards specified in the base zones such as by exceeding the maximum Floor Area Ratios (this is further described in Exhibit 14).

Exhibit 7. Prototypical Site Analysis

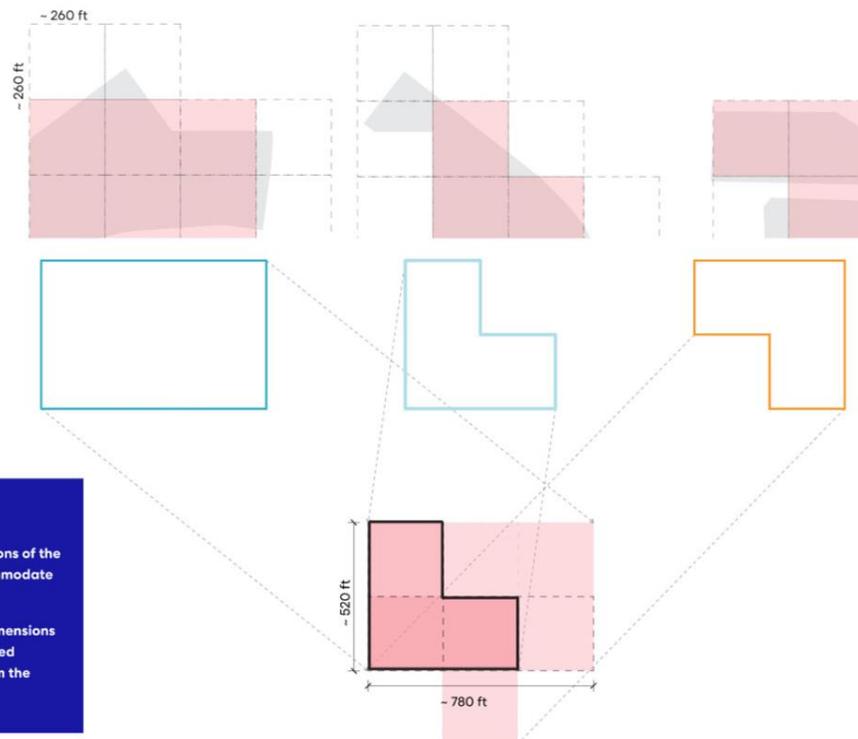
Source: Perkins&Will. Note: The prototype analysis for this task order is generalized to generic conditions yet the land uses and green edges vary across station areas. Consequently, test fits should be further evaluated at a site-specific level to configure the development in a way that sensitively responds to high value habitat areas and transportation infrastructure, and in how the development design transitions to multi or single-family homes.

Park & Ride Sites Prototype Analysis



Why 260 feet x 260 feet:

260 feet includes a typical downtown Beaverton block size (200 feet x 200 feet) with appropriate buffer to accommodate 60 foot rights-of-way. This will ensure new development is compact and walkable.



Methodology:

The red boxes indicate the portions of the irregular parcels that can accommodate the compact grid.

An average acreage and site dimensions for a prototypical site is calibrated by overlaying the red boxes from the respective Park & Ride sites.

The massing scenarios yield conceptual designs of several different use types (residential and non-residential) at varying development scales. More specifically, the two conceptual design scenarios include two scales of multifamily buildings with a parking garage, two scales of podium-style multifamily buildings, one scale of townhouses, and one multifamily building providing affordable housing.

Each of the two massing scenarios are organized into three blocks (Blocks A, B, and C) that measure about one acre each without right-of-way (they would measure about 1.5 acres with right-of-way). On all sides of the blocks are 10-feet of pedestrian right-of-way, 5-feet of tree canopy area, and 10-feet of roadway (i.e., one-lane road). Two adjacent blocks would form a two-lane road. As shown below in Exhibit 8, the three blocks include the following features:

- The conceptual design of **Block A** scenarios includes a standalone multifamily building (including market rate housing) with an attached parking garage. Scenario 2 differs from Scenario 1 by providing ground floor retail in the multifamily building. The parking garage serves both residential and non-residential uses in Scenario 2 and only residential uses for Scenario 1. The parking garage includes parking for TriMet riders, essentially serving as a Park & Ride facility.
- Under both scenarios, **Block B** focuses on providing market-rate housing development and is composed of a podium-style multifamily building and townhouses. *(As described in the following section, the financial feasibility of each use is analyzed separately.)*
- Finally, **Block C** is designed to include a multifamily building providing affordable housing. Block C is the same across the two scenarios.

These three blocks reflect varying scales and approaches to TOD in Beaverton, allowing the team to evaluate a sample of TOD typologies within a single concept. For example, one could imagine variations of the concept that replicates Block A three times, Block A once and Block B twice, and so on. TriMet can compare the conceptual designs to understand strengths and weaknesses of each before moving forward with a preferred station area strategy.

Comparison of the Two Scenarios

As discussed previously, the feasibility analysis and massing study mitigated differences across the station areas by designing a prototypical site that fits within each Park and Ride facility and generalizes the site characteristics. The prototypical site is composed of three blocks that each measure 260 feet by 260 feet to encompass a total of 6.2 acres.

Two scenarios were developed to explore variations in different types of TOD possibilities. The primary difference between the scenarios is related to Scenario 2 integrating ground-floor retail development as a component of multifamily buildings, within the TOD (in Block A). In contrast, Scenario 1 focuses on providing slightly more market rate housing (around 7 additional units) and does not include any retail development.

Both scenarios include ample market rate multifamily housing with Scenario 1 providing 167 total market rate multifamily units and Scenario 2 providing 160 total market rate multifamily

units. Both scenarios include a parking garage structure, at least 13 townhouse units, and 67 multifamily units affordable to households earning 60 percent of the AMI or less (this tends to be described as low-income households). In total, Scenario 1 would provide 247 new housing units while Scenario 2 would consist of 240 housing units. A tabular summary of the two massing scenarios is provided below in Exhibit 8.

Exhibit 8. Comparison of Massing Study Scenarios

Block	Use	Massing Scenario 1	Massing Scenario 2
A	Multifamily (Market-Rate)	6 story multifamily building including: <ul style="list-style-type: none"> 83 market rate housing units 	5 story multifamily building including: <ul style="list-style-type: none"> 63 market rate housing units 14,240 sq. ft. of ground floor retail
	Parking Garage	A 4-story parking structure attached to a residential building including: <ul style="list-style-type: none"> 83 parking stalls for residential use <p>Another 5-story parking structure including:</p> <ul style="list-style-type: none"> 212 parking stalls for Park & Ride 	A 5-story parking structure attached to a residential building including: <ul style="list-style-type: none"> 63 parking stalls for residential use 43 stalls for retail use (3.1 stalls per 1,000 sq. ft.) 320 parking stalls for Park & Ride
B	Multifamily (Market-Rate)	A 5-story multifamily building including: <ul style="list-style-type: none"> 84 market rate housing units 65 parking stalls on first two floors (0.77 stalls per unit and below the requirement in place in 2022 but compliant with policy as of Jan. 2023) 	A 5-story multifamily building including: <ul style="list-style-type: none"> 97 market rate housing units 2,400 sq. ft. of ground floor retail 57 parking stalls for residential use (0.59 stalls per unit and below the requirement in place in 2022 but compliant with policy as of Jan. 2023) 8 parking stalls for retail use (3.33 stalls per 1,000 sq. ft.)
	Townhouse (Market-Rate)	13 townhouse units with 1,564 square feet and one-car garage each	13 townhouse units with 1,741 square feet and two-car garage each
C	Multifamily (Affordable)	A 5-story multifamily building including: <ul style="list-style-type: none"> 67 housing units (affordable at 60 percent AMI) 36 parking stalls (0.54 stalls per unit and below the requirement in place in 2022 but compliant with policy as of Jan. 2023) 	
All Blocks		<ul style="list-style-type: none"> Each block is about 1 acre without right-of-way and about 1.5 acres with right-of-way. Each block is assumed to be buffered/surrounded by 10 feet of pedestrian right-of-way (sidewalk), 5 feet of landscape/furnishings, and 10 feet of roadway. Two adjacent blocks would form a two-lane street. Landscape area between sidewalk and roadway could include tree canopy with 1 tree per 30 feet and a wayfinding device/marker. 	

Beaverton Scenario 1

The massing diagrams for Scenario 1 are visually shown in

Exhibit 9 and Exhibit 10, provided below. Details regarding the first scenario and its associated distinguishable features are provided below.

- **Block A** includes a 6-story multifamily building with 83 dwelling units with an average unit size of 900 square feet. It is attached to a 4-story parking garage with 83 parking stalls, resulting in a parking ratio of 1.0 parking stalls per unit.
 - A 5-story parking garage with 212 parking stalls for TriMet riders is also in Block A. It would replace about half of the existing parking stalls.
- **Block B** has a 5-story podium-style multifamily building with 84 dwelling units on the upper floors. **Block B** also has 13 townhouses with an average unit size of 1,564 square feet each with one-car garages. This building also includes 65 parking stalls in the podium floors, resulting in a parking ratio of 0.77 parking stalls per unit. This parking ratio would be below the required minimum per City of Beaverton Development Code Section 60.30.10 that was in place as of 2022, but compliant with interim City policy as of January 2023 which will be formalized through Development Code changes by June 30, 2023.
- **Block C** has a 5-story multifamily building with 67 income-restricted, affordable units. The average unit size is 900 sq. ft. About a third of the site is an open area. There are 36 surface parking stalls, resulting in a parking ratio of 0.54. The parking ratio is below the required minimum per City of Beaverton Development Code Section 60.30.10 that was in place as of 2022, but compliant with interim City policy as of January 2023.

Exhibit 9. Scenario 1 Massing Image A

Source: Perkins & Will. Notes: Parking structures are in grey. Market-rate multifamily buildings are in bright yellow. Townhouses and affordable multifamily are in beige. Green represents open areas.

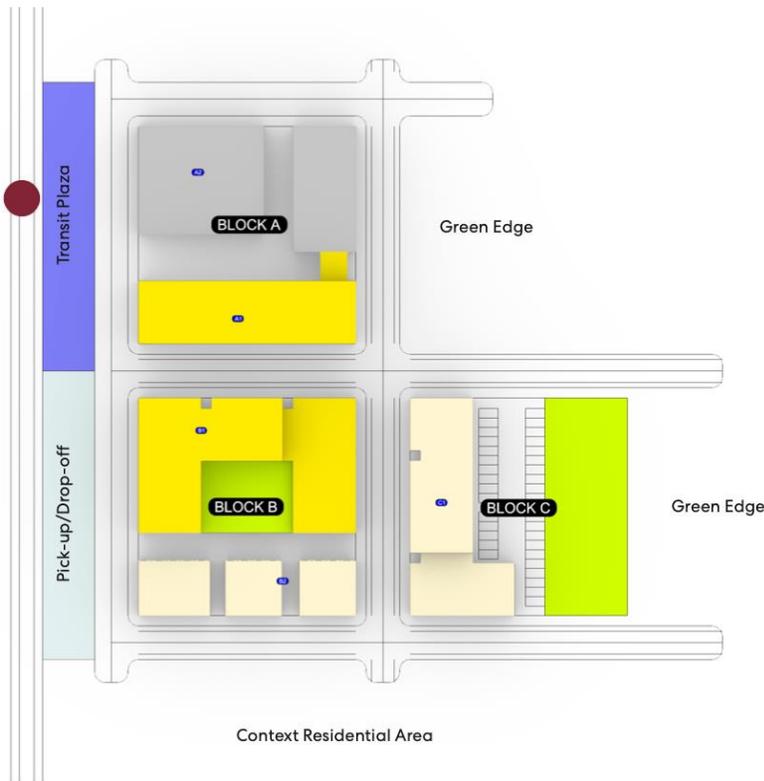
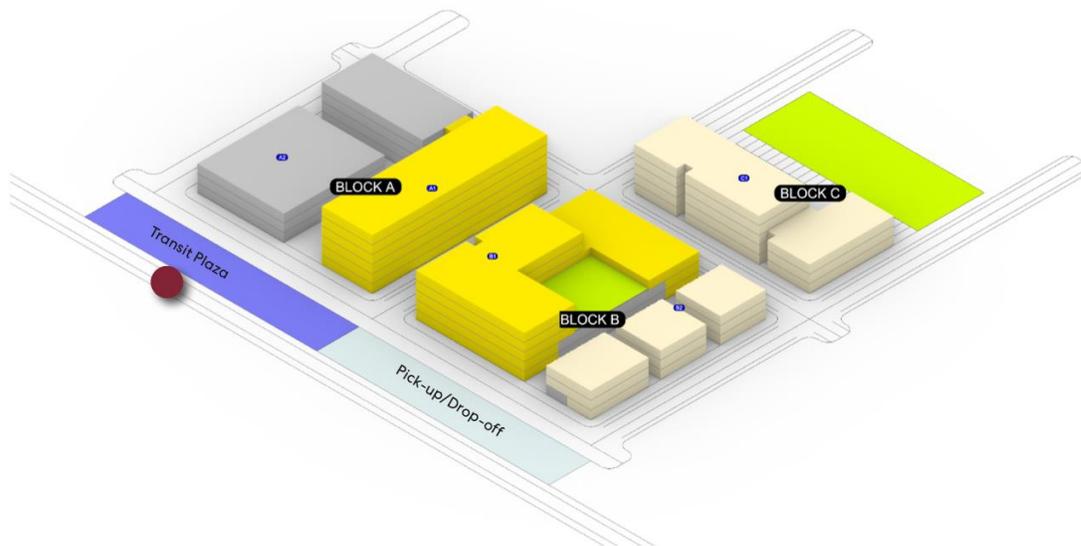


Exhibit 10. Scenario 1 Massing Image B

Source: Perkins & Will. Notes: Parking structures are in grey. Market-rate multifamily buildings are in bright yellow. Townhouses and affordable multifamily are in beige. Green represents open areas.



Beaverton Scenario 2

The massing diagrams for Scenario 2 are visually shown in

Exhibit 11 and Exhibit 12. Details regarding the second scenario and its associated distinguishable features are provided below.

- A 5-story multifamily building in **Block A** has 63 units with an average unit size of 900 square feet and 14,240 square feet of ground floor retail. It is attached to a parking garage with 426 parking stalls.
 - 63 of the stalls are for residential use, resulting in a parking ratio of 1.0 stalls per unit.
 - 43 of the stalls are for the retail use, resulting in a parking ratio of 3.1 stalls per 1,000 square feet of retail space.
 - The remaining 320 spaces are for TriMet Riders. It would replace 75 to 80 percent of the existing stalls within the prototypical Beaverton station area.
- **Block B** has a 5-story podium-style multifamily buildings with 97 dwelling units on the upper floors. **Block B** also has 13 townhouses with an average unit size of 1,741 square feet, each with two-car garages (these townhomes are slightly larger than the scenario 1 townhomes). The podium floors would have approximately 2,400 square feet of retail space and 65 parking stalls.
 - 57 of the stalls are for residential use, resulting in a parking ratio of 0.59 parking stalls per unit. The parking ratio would be below the required minimum per City of Beaverton Development Code Section 60.30.10 that was in place as of 2022, but compliant with interim policy as of January 2023.
 - 8 of the stalls are for the retail use, resulting in a parking ratio of 3.33 parking stalls per 1,000 square feet of retail space.
- **Block C** has a 5-story multifamily building with 67 income-restricted, affordable units. The average unit size is 900 sq. ft. About a third of the site is an open area. There are 36 surface parking stalls, resulting in a parking ratio of 0.54. The parking ratio is below the required minimum per City of Beaverton Development Code Section 60.30.10 that was in place as of 2022, but compliant with interim policy as of January 2023.

Exhibit 11. Scenario 2 Massing Image A

Source: Perkins & Will. Notes: Parking structures are in grey. Market-rate multifamily buildings are in bright yellow. Townhouses and affordable multifamily are in beige. Green represents open areas.

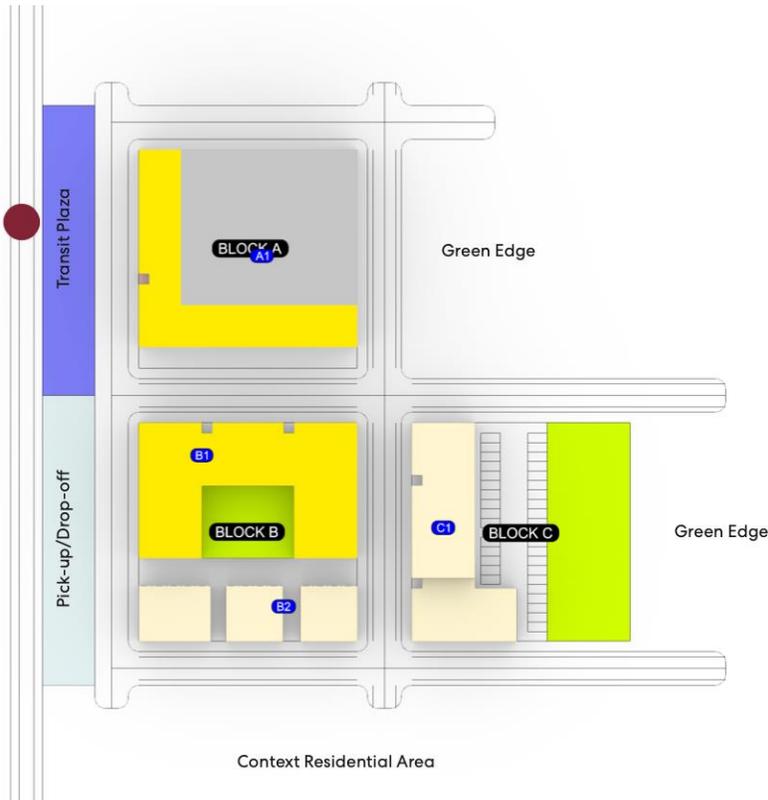


Exhibit 12. Scenario 2 Massing Image B

Source: Perkins & Will. Notes: Parking structures are in grey. Market-rate multifamily buildings are in bright yellow. Townhouses and affordable multifamily are in beige. Green represents open areas.



Development Feasibility Results

Based on the two TOD massing study scenarios described in the previous section, this section summarizes the results from analyzing the financial feasibility for developing the prototypical Beaverton station area site. The financial analysis work relies on pro forma models to quantify the financial viability of different TOD conceptual design options. Real estate professionals regularly use pro forma analysis to model the revenues and costs of potential developments, evaluate their returns, and understand sources of funding needed for the project to move forward. Many pro forma inputs come from recent comparable market examples, which we describe in Appendix 5.

For affordable housing developments, ECONorthwest calculated affordable rent at 60 percent of the 2022 Area Median Income (AMI)¹⁰ for the Portland-Vancouver-Hillsboro Metropolitan area and assumed they would be financed by the 4-percent Low-Income Housing Tax Credit (LIHTC) program and a permanent loan at 5.5 percent interest rate (more details on LIHTC are provided at the end of this section). The loan size is dependent on each building type's ability to generate revenue net of operating expenses. For each block in the two scenarios, ECONorthwest assumed a land price of \$50 per square foot (psf), or approximately \$2.2 million per acre.

Overall, the pro forma analysis of the conceptual design scenarios showed that as proposed, the two development scenarios would not be feasible to build without more extensive financial incentives than those included in the analysis. Sensitivity tests were conducted on selected variables to understand the drivers of development feasibility. The sensitivity tests changed one variable at a time, but it is possible that change in one variable would have cascading effects on other variables that are not estimated for the sensitivity tests. For example, a higher rent would likely require greater amenities, total development costs, and/or parking supply. The analysis generated the following key takeaways.

The high cost of structured parking for residential development is a major barrier to development feasibility.

Podium-style multifamily buildings would not be feasible to develop if they included a parking ratio of 1.0 parking stalls per dwelling unit in a structured parking format. This finding assumes an average monthly rent of \$2,100, and a land price of \$50 psf.

- With structure parking, the parking should be lowered (at 0.35 parking stalls per unit) for the development to pencil at current market rents, with all else being equal. However, this low of a parking ratio could be unrealistic since it would be difficult to charge a monthly rent of \$2,100 with fewer than one parking stall per unit unless there

¹⁰ The U.S. Department of Housing and Urban Development (HUD) defines an area's Median Family Income (MFI), but AMI is often used interchangeably. When AMI is qualified to a percentage of AMI or adjusted for family size, it is calculated based on the MFI, which represents a median income level for a family of four. See "FY 2018 Income Limits Frequently Asked Questions" (www.huduser.gov/portal/datasets/il/il18/FAQs-18r.pdf) for more detail. This analysis used the 2022 Portland-Hillsboro-Vancouver MFI levels.

were other factors, such as additional building amenities and premium unit features, that drive higher residential rents in the new development, which would add costs.

- The development would be more feasible if it included surface parking rather than a parking garage since surface parking is less costly to build. For example, the development could be feasible under today's conditions if the development was to utilize surface parking, which would also require the development to include fewer units to occupy a similar overall footprint (building plus parking area).
- The feasibility threshold for the proposed development (with 1.0 parking stall per dwelling unit) would yield an average monthly rent of \$2,300 which is about 9.5 percent higher than the current market rent, all else being equal. It is optimistic to think that the TOD envisioned may be feasible if the building can target and attract a niche tenant mix with a higher willingness to pay for typical multifamily housing in this location because any additional amenities or features that might be required to attract the target tenant could add costs or reduce leasable areas, thus requiring even higher rents.
- Even land priced at \$0 would not make the development feasible if rents, parking type, land price, and policy landscape did not change.
- Policy interventions, such as tax exemptions or grants, could alter the development feasibility.

Lower parking ratios may enable creative development strategies but are insufficient on their own to make development feasible.

Even when the parking ratio in the TOD is assumed to be lower than required by the City of Beaverton (as of 2022), and in light of the new flexibility allowed for development near light rail stations, target rents still need to be higher than current market rents, which are found in existing buildings that provide substantially more parking. Even with off-street parking requirements removed by recent City policy, the market today will likely have an expectation for it. This suggests that it will be difficult for podium-style multifamily buildings to be viable in this submarket until parking demand shifts considerably or target tenants with high willingness to pay and low car ownership can be identified.

Specifically, we analyzed the Block B multifamily building with parking ratios below the City requirement¹¹ and the parking supplied in comparable buildings (0.77 stall per dwelling unit for Scenario 1 and 0.59 stall per dwelling unit for Scenario 2). The development would not be feasible based on an average monthly rent of \$2,100 and a land price of \$50 psf, though it would be difficult to find a target population willing to pay \$2,100 in monthly rent in a building with this level of parking availability, especially when considering existing rental options that offer greater parking availability at the same or better price. The breakeven rent for the Block B

¹¹ This analysis was completed in 2022, before the parking ratios were lowered. With new interim City policy to comply with Oregon's Climate Friendly and Equitable Communities rulemaking, there is no off-street parking requirement. Updates to the Development Code will be formalized by June 30, 2023.

multifamily building in Scenario 1 would be \$2,250 per month and the breakeven rent for Block B multifamily building in Scenario 2 would be \$2,200 per month.

Vertical Housing Development Zones tax exemption incentives are insufficient on their own to make the TOD concepts feasible.

The Vertical Housing Development Zone (VHDZ) is applicable only for multifamily developments in Scenario 2 because it assumes an active ground floor use with retail.¹² The tax exemption is insufficient to support development feasibility when parking ratios and rents are keeping with the market. Such incentives will help support higher land values in the station areas, are a complement to other TOD policies, and can lead to development sooner than could be achieved without these subsidies. Nonetheless, they are not a silver bullet for making prototypical TOD viable in these locations.

A new parking garage would be cost prohibitive.

Structured parking is expensive, about \$59,000 per stall in today's market. Although a stacked parking structure would open up more space in the Park and Ride facilities for a TOD project, the value generated from any projects on this site is unlikely to be high enough to recoup the costs of a parking garage that serves TriMet riders. Shared parking strategies could reduce the number of stalls required in a garage and TriMet could seek out public funds to fill the funding gaps for a publicly or privately developed garage. We are unaware of any grant funding sources that are at a scale sufficient for a project of this scale.

The current demand for townhouses near the analyzed MAX stations in Beaverton is not high enough to offset development costs.

Townhouses modeled in the TOD concept studies are not financially feasible partially due to current construction costs and land costs (this is based on an assumed land price of \$50 psf). They would be feasible if the land cost was about \$25 psf or if the townhouses could sell for \$495,000 to \$515,000 per unit, instead of the \$470,000 to \$490,000 per unit assumed based on recent sales transactions, which would require a 5 percent price increase without any increase in construction costs, an unlikely scenario.

The financing gap of affordable housing is too large to warrant immediate development.

The analyzed affordable housing development in Block C includes a third of the site dedicated to open space, assumes units affordable to households earning 60 percent of AMI, and assumes 4-percent Low-Income Housing Tax Credit (LIHTC) would be awarded. The development of affordable housing currently has a financing gap of \$267,000 per unit, or \$17.9 million total.

TriMet could consider using a phased development approach that is structured in a way to delay the development of affordable housing. Affordable housing development could become more feasible when there are changes to development standards to help reduce

¹² The Elmonica and Beaverton Creek station areas are in Vertical Housing Development Zones (VHDZs), which were established to encourage new mixed-use housing development. The City incentivizes housing projects that are high-density, mixed-use, and integrating ground floor commercial use.

construction costs, when macroeconomic financial conditions improve, or when additional gap financing is available.

- Removing the open space area from the design reduces the financing gap to \$255,000 per unit, or \$17.0 million total.¹³
- TriMet could provide flexibility on the target income level and potential LIHTC funding sources that would be used. Although the 9-percent LIHTC program is more competitive to obtain, targeting a lower income level (between 30 and 50 percent of AMI) with the 9-percent program could be more viable than targeting 60 percent of AMI with the 4-percent program.

More About the Low-Income Housing Tax Credit (LIHTC)

LIHTC is a major funding source for affordable housing, administered by the Oregon Housing and Community Services (OHCS). At a minimum, the program requires either 40 percent of the units to be affordable to households earning 60 percent of the median family income (MFI) or 20 percent of units to be affordable to households earning 50 percent of the MFI.

LIHTC is a competitive program that tends to be awarded to projects with a greater share of affordable units or lower income levels. Thus, ECONorthwest modeled all the units in the projects as rent-restricted (qualifying for the LIHTC program) rather than a smaller portion of the units.

There are two categories of LIHTC programs:

The 4-percent LIHTC program is intended to fund about 30 percent of a project's costs and is paired with funding from tax-exempt bonds (also referred to as private activity bonds). The program's funding limit is tied to the state's capacity to issue the tax-exempt bonds and generally considered to be more abundantly available, although the high utilization of the tax-exempt bonds in Oregon has made the program's funding less available in recent years.

In contrast, annual funding for the **9-percent LIHTC program** is decided by the federal government and generally is less accessible than the 4-percent LIHTC program. It has traditionally been considered the most "competitive" program of the two LIHTC programs and is more desirable because it is intended to fund about 70 percent of a project's costs (rather than 30 percent of a project's costs). Projects must score comparatively high on the state's pre-determined and annually adjusted criteria called the Qualified Allocation Plan, or QAP.

¹³ Open space as shown in the scenarios would not be required under the City of Beaverton zoning regulations.

Section 3. TOD Obstacles and Opportunities

Introduction

This section provides a summary of the central regulatory obstacles and opportunities for community-serving transit-oriented development at the Beaverton station areas. These findings are based on insights and feedback from developer interviews and meetings with City of Beaverton staff and results from the barriers/opportunities analysis, massing study, and feasibility analysis. The project team conducted interviews with stakeholders, including developers, affordable housing organizations, and Beaverton city staff. Both regulatory and non-regulatory barriers can serve as obstacles for constructing TOD; however, this memorandum focuses on regulatory barriers.

Overall, the City of Beaverton Comprehensive Plan promotes TOD and offers aspiration goals for TOD in the area. For example, Goal 3.6.2.p) *promotes public realm improvements that support vibrant, pedestrian and transit-oriented development particularly in the Downtown and provide amenities that spur development*. Also, Goal 4.1.1.c) *encourages high density residential development on mixed use and commercially zoned sites with proximity to transit and amenities*. Although the Comprehensive Plan might promote TOD through goals, the layers of various Code requirements for TOD pose obstacles. The regulatory detail in the Code and the accumulation of requirements does not always make it easy for a developer to achieve TOD.

The City of Beaverton development regulations are complex and involve many nuances and details in a broad range of chapters. The Code can be challenging to navigate and interpret particularly when interpreting overlapping requirements and the layering of requirements associated with a particular area. For example, the project team learned during an interview that development applicants tend to overlook the detailed challenges presented in Chapter 60, a chapter described as containing a broad range of miscellaneous requirements.

Interviewees noted that bulk and building height restrictions tend to be mostly sufficient for TOD but the detailed site development requirements for development over two stories face several obstacles detailed in this section. City requirements can lead to unintended burdens that can ultimately lead to a developer avoiding development at certain sites. For example, building design orientation requirements can lead to very odd designs and counterintuitive building layouts that may make it impractical to deliver a project. The city should be aware of this and work to ensure the code and its application process afford some level of flexibility so that the City and real estate interests can land on win-win solutions rather than be deterred from pursuing development on a site based on the code language or difficulties arising from the application of regulations. In general, as a part of any TOD related development code update process, the City should consider soliciting feedback from developers and architects on the detailed development obstacles and ways the code could be improved to better support TOD.

Future Regulatory Updates and the State of Oregon Climate Friendly and Equitable Communities Requirements

The City of Beaverton reported various code update processes planned for the future to address changes needed to adhere to the State of Oregon’s Climate Friendly and Equitable Communities (CFEC) requirements (particularly those associated with parking) and to the city’s urbanization goals associated with improvement the Multiple-Use zones development regulations.

The State of Oregon’s Climate Friendly and Equitable Communities provisions requires the City of Beaverton to adopt regulations for Climate Friendly Areas (CFAs) allowing walkable mixed-use development within their urban growth boundaries, likely within existing neighborhood centers.¹⁴ These rules provide a set of minimum development requirements for designated CFAs that should be adopted. The CFA must allow mixed-use development including residential, office, retail, services, and public uses (such as childcare and schools) as outright permitted uses and they should be served by high quality pedestrian, bicycle, and transit services. The CFAs should allow building heights no less than 85 feet, allow at least 25 dwelling units per acre at a minimum (no maximum residential density), and not require parking spaces. Current zoning on the sites in this analysis has height, density, and parking standards that mostly comply with these standards for CFAs. The relaxation of parking requirements has important implications for the feasibility of multifamily housing development on TriMet’ Park and Ride facilities in Beaverton.

The City of Beaverton’s interim policy as of January 1, 2023, complies with state rulemaking by removing off-street parking requirements for certain types of development. This includes any uses on a lot a lot that is at least partially within three-quarters of a mile from rail transit stops. Other uses covered by this policy include childcare facilities, affordable housing, emergency shelters, and other designated uses. These rules will be applied directly by City staff until they are formalized in a Development Code update by June 30, 2023.

TOD Barriers and Opportunities in the City of Beaverton

The following section offers guidance from the perspective of establishing regulations that will minimize barriers to TOD for the three City of Beaverton station areas. It provides a menu of preliminary obstacles and opportunities to consider and evaluate and does not exhaust the possible policy improvements that might be useful to promoting TOD.

Commonly Recognized TOD Barriers

TOD can face a wide range of barriers; some are related directly to planning and land use requirements, while others are related to a variety of other factors. The table below shows general TOD barriers and not necessarily specific barriers of TOD for the Beaverton station areas. Any regulatory requirements can lead to unintended burdens that ultimately inform the actions of developers, including scaling back a project or avoiding a site altogether. TriMet and their jurisdictional partners should be aware of these potential hurdles and work to ensure

¹⁴ Climate-Friendly Areas Methods Guide, 2023, Oregon Department of Land Conservation and Development. Retrieved from: <https://www.oregon.gov/lcd/CL/Documents/ClimateFriendlyAreasMethodsGuide.pdf>

regulations and incentives and their implementation provide an adequate level of flexibility so that it can create mutual wins for the community, public agencies, and real estate developers. The table below summarizes common barriers identified in best practices TOD literature.

Exhibit 13. General Research Findings for Common TOD Barriers

Source: Case Studies on Transport Policy¹⁵. These barriers listed below are a summary of general barriers and not necessarily all applicable to the City of Beaverton Station Areas .

Barrier Type	Description
Planning, Land Use, and Zoning Barriers (PLUZ)	
Regional and Local Planning	<ul style="list-style-type: none"> • Lack of integration of TODs with the comprehensive planning processes • Lack of consideration of land uses around each transit station in the context of their impact on system-wide ridership • Lack of sound planning that reduces uncertainties in the development process • Lack of integrated transportation and land use decision-making
Zoning	<ul style="list-style-type: none"> • Fiscal zoning: big-box retail favored over TODs; single-family over-zoned and multi-family under-zoned; higher level of retail required than market can bear • Parking-related challenges: high minimum parking in TODs; inflexible parking standards; on-site parking requirement; unbundled or shared parking prohibited; replacing parking for one mode with other modes prohibited • Barriers to mixed-use TODs: zoning prohibits mix of uses; excessive ground floor retail; zoning changes to allow TODs risky and resource-intensive • Density-related barriers: maximum density requirements; building height restrictions; setback and buffering requirements; minimum street width requirements; building height and FAR restrictions; complicated zoning and building permitting processes; environmental regulations • Institutional factors: Limited or no PLUZ powers to transit agencies; local public agencies' opposition to granting PLUZ powers to transit agencies; lack of clear legal authority to transit agencies to use PLUZ powers; piecemeal legislation
Urban Design	<ul style="list-style-type: none"> • Need to move beyond the design-related standards for the built environment that focuses on street connectivity only • Poor urban design and aesthetic appeal of the TOD
Other Barriers	
Economics and Financial/Fiscal	<ul style="list-style-type: none"> • Weak economy and real estate market • Lack of financing for TODs • Rigid loan underwriting standards • High level of parking • High construction costs and risks
Organizational/Institutional	<ul style="list-style-type: none"> • Lack of coordination/collaboration among stakeholders • Lack of expertise to implement TODs • Transit agencies' view of themselves as transit operators, not developers • Suburban cities' majority on transit agencies' boards
Political Barriers	<ul style="list-style-type: none"> • NIMBYism and spot congestion • Weak regional governance • Advocacy by park-and-ride patrons for station area parking • Weak national, regional, and local support for TODs
Policy Barriers	<ul style="list-style-type: none"> • Lack of consensus regarding goals of TODs • Node-place conflict • Lack of state-level policy on TOD

¹⁵ Shishir Mathur and Aaron Gatdula, "Review of Planning, Land Use, and Zoning Barriers to the Construction of Transit-Oriented Developments in the United States," Case Studies on Transport Policy 12 (June 2023): 100988, <https://doi.org/10.1016/j.cstp.2023.100988>.

Regulatory Barriers	<ul style="list-style-type: none"> • States may prohibit transit agencies from pursuing real estate development • Lack of enabling state-level legal environment for transit agencies to use tools such as eminent domain and joint development agreements • State laws requiring sale of state-owned lands to highest bidder • Statutes prohibiting TODs around transit agencies
Transit System Quality	<ul style="list-style-type: none"> • Low transit accessibility and mobility compared to automobiles

Best Practices for Addressing Regulatory TOD Barriers, Based on the Beaverton Stations

This section focuses on the TOD barriers related to land use policies and zoning by comparing current standards in the City of Beaverton with ideal TOD scenarios. Local jurisdictions can implement a number of regulatory measures to overcome barriers to TOD and encourage projects that maximize benefits for the community. These include changes to allowed residential and nonresidential uses, density limits, dimensional standards, design standards, and parking. Although configuration of land use policies and zoning can be highly contextual to different communities, these best practices focus on supporting feasible TOD in Beaverton and they often are in alignment with previous work and efforts underway, at the City of Beaverton.

In addition to findings gleaned based on development analysis and interview insights, a set of key resources were reviewed to provide references and supplemental insight on best practices for regulatory standards that can support TOD. Oregon’s Climate Friendly Areas Methods Guide provides insight to new requirements and recommendations for CFAs, which overlap many considerations for TOD to create dense, well-connected communities.¹⁶ The Federal Transit Administration also provides guidance for jurisdictions with multiple materials, including a practitioner’s guide for local planning based on extensive research of transit and land-use planning across the United States.¹⁷ Sound Transit’s Model Code Partnership Project provides helpful case studies from communities throughout the western United States working in partnership with transit agencies, including Honolulu Area Rapid Transit (HART), Bay Area Rapid Transit (BART), and Denver’s Regional Transportation District (RTD).¹⁸

Allowed Land Uses

In general, best practices suggest allowing outright for a range of housing types, and other active uses including offices, retail, and public services. Oregon’s state law already requires that middle housing must be permitted in residential areas. The Climate Friendly Areas rulemaking requires that CFAs allow outright both multifamily residential and attached single-family residential, as well as offices, childcare, schools, non-auto dependent retail, services, and

¹⁶ Oregon Department of Land Conservation and Development (DLCD), “Climate-Friendly Areas Methods Guide,” April 2023, <https://www.oregon.gov/lcd/CL/Documents/ClimateFriendlyAreasMethodsGuide.pdf>.

¹⁷ Federal Transit Administration (FTA), “Planning for Transit-Supportive Development: A Practitioner’s Guide,” June 2014, https://www.transit.dot.gov/sites/fta.dot.gov/files/FTA_Report_No._0057.pdf.

¹⁸ Sound Transit and City of Everett, “Model Code Partnership Project TOD Case Studies,” Municipal Research and Services Center, January 2022, <https://mrsc.org/getmedia/477122ee-16fe-4bf8-87f0-a69ecea24b9a/Sound-Transit-TOD-Case-Studies-Report.pdf>.

other public and commercial uses.¹⁹ Similarly, the FTA’s research defines successful TOD areas as those which “[include] a mix of at least three different land uses, including retail, housing, office, entertainment, transit facilities, and/or transit-facility parking.”²⁰ Sound Transit’s findings recommend prioritizing active uses for any nonresidential ground-floor space, such as retail, restaurants, and entertainment.²¹ Local jurisdictions should integrate flexibility on the amount of required non-residential uses on the ground floor, as strict requirements can be limiting.

Density Minimums and Maximums

Best practice for code standards to support TOD generally seek to maximize the number of residential units to use land efficiently, while ensuring that the community’s needs are met.

Removing maximum density requirements and/or including minimum density standards can help to achieve this through setting FAR limits or a certain number of dwelling units per acre. Oregon’s Climate Friendly Areas guidelines require removing residential density maximums altogether and introducing a minimum density of at least 25 dwelling units per acre for a city the size of Beaverton. Best practice studies from Sound Transit’s research implemented density minimums through FAR, with a tiered system of requiring at least 0.5 FAR within one mile of transit stops and 1.0 FAR in a quarter mile buffer area.²²

In an extensive study of successful projects, the FTA’s guidance found a median density of 36 dwelling units per acre in urban TOD and 11 units per acre in suburban areas (with a median FAR of 2.1 in urban areas and 1.3 in suburban locations). This FTA report notes that this is often with a combination including both multifamily buildings and townhomes and “Based on common practice, a FAR of 1.2 overall, or approximately 87 residents and jobs per acre, is needed to support a vibrant mix of uses, public transit, and walking over driving.”²³

Dimensional Standards

Best practices suggest providing flexibility for building heights, setbacks, and lot coverage, and in some cases implementing height or lot coverage minimums and setback maximums.

Building height plays an important role in determining the type of development building prototypes that would be feasible to be built, the number of units that may be possible to include in a project, and how efficiently the land can be used. Sound Transit’s best practice research highlights projects with a minimum building height of two stories, and some with phased maximum heights around transit stations ranging from five to 14 stories.²⁴ Oregon’s CFA guidance also recommends a range of different height requirements, including a limit up to 85 feet of height in cities the size of Beaverton and smaller limits for other jurisdictions.²⁵

¹⁹ DLCDC, “Climate-Friendly Areas Methods Guide,” 14.

²⁰ FTA, “A Practitioner’s Guide,” 5-2.

²¹ Sound Transit and City of Everett, “Model Code Partnership Project,” 19.

²² Sound Transit and City of Everett, “Model Code Partnership Project,” 32.

²³ FTA, “A Practitioner’s Guide,” 5-11.

²⁴ Sound Transit and City of Everett, “Model Code Partnership Project,” 33.

²⁵ DLCDC, “Climate-Friendly Areas Methods Guide,” 6.

Setbacks are also a context-dependent choice influenced by the scale of the development which help to balance open space and active pedestrian uses. Generally, removing or reducing minimum setback requirements can ensure that land is used efficiently around transit stations. In one of Sound Transit’s highlighted example from Honolulu, standards in transit station areas require a maximum setback of 10 to 15 feet.²⁶ Some jurisdictions’ guidelines also dictate lot coverage, with a best practice guide from Indianapolis suggesting that community center areas with moderate density should seek between 80 to 100 percent coverage.²⁷

Parking

The City of Beaverton’s parking policy provides better flexibility for TOD by removing required parking minimums, but this might not be aligned with market demand. Given the suburban character of surrounding areas, it is likely that there will still be demand for parking both from residents of the TOD area and station area visitors. In an example from a Bay Area Rapid Transit (BART) project included in Sound Transit’s best practices, the City implemented a parking maximum of 0.8 spaces per multifamily residential unit outside of Downtown areas and one space per 530-1,000 square feet for offices.²⁸

Comparison of Existing Development Standards to Ideal TOD

The table below (Exhibit 14) assessed key existing City of Beaverton development regulations applicable to TOD to help understand ways to better support community-serving TOD. The table includes the following information.

- The existing regulations for the main station area zones, including Station Community-Multiple Use (SC-MU) and Station Community – High Density Residential (SC-HDR) is provided to show baseline conditions.
- This information is compared to two massing study scenarios completed for this project, that were also analyzed for development feasibility. Essentially, these massing studies explored TOD possibilities through conceptual designs of several different use types (residential and non-residential) at varying development scales to yield insights on key development standards needed to develop TOD at these stations. The primary difference between the scenarios is related to Scenario 2 integrating ground-floor retail development as a component of multifamily buildings, while Scenario 1 focuses on providing slightly more market rate housing and no retail development.

Another scenario, referred to as the “Ideal TOD” scenario in the table below, was added to demonstrate additional ways to advance TOD (this is also visualized through

²⁶ City and County of Honolulu, “TOD Building Placement & Design: Yards and Setbacks,” April 20, 2023, <https://www.honolulu.gov/tod/projects/dev-resources/tod-design-guidelines/yards.html>.

²⁷ Indianapolis Metropolitan Planning Organization, “Transit Oriented Development Design Guidelines,” June 16, 2020, <https://www.indympo.org/who-we-are/regional-panels/tod-panel>, 16

²⁸ Sound Transit and City of Everett, “Model Code Partnership Project,” 25.

- Exhibit 15 provided by Perkins & Will). Ideal TOD should include active uses in addition to residential uses such as retail, civic, cultural, and educational uses; social infrastructure (such as, health clinics, childcare facilities, libraries, and community rooms) or maker spaces/co-worker spaces.

Compared to the two massing study scenarios, the ideal TOD scenario includes higher maximum residential density. Due to their placement near light rail transit stops, the sites are eligible for a greater maximum building height and FAR than the typical standards permitted by the development code. SC-HDR zoned parcels within 400 feet of a light rail station platform and SC-MU parcels within 1,320 feet are eligible for increased building height and FAR allowances. For parcels that meet this criteria, maximum height increases from 60 to 100 feet and maximum FAR increases from 1.0 to 1.2 (for SC-HDR) or 2.0 (for SC-MU).

Overall, the table below illustrates the need for density related changes and additional considerations for key regulations most influential to TOD. The main regulations discussed more in depth in the following section are related to 1) parking, 2) mixed use development, 3) stormwater facility, 4) design review, and 5) development fees.

Exhibit 14. Comparison of Existing Standards to TOD Scenarios and Ideal TOD Standards

Standard	SC-MU Zone	SC-HDR Zone	Massing Scenario 1 (more market housing)	Massing Scenario 2 (ground floor retail)	Ideal TOD Recommendations	Standards align with TOD Best Practices?
Allowed Housing Types	Primarily multiple use residential, triplex, quadplex townhouse	Primarily high density residential and multi dwellings, triplex, quadplex townhouse	Multifamily	Mixed-Use	Mixed-Use (encouraged, but commercial uses not required)	Yes – Development Code allows a range of middle housing types, multi-dwelling buildings, and multiple use developments.
Allowed Commercial Uses	Primarily allows office, retail, and service and education uses	Various commercial, office and retail including eating/drinking establishments and education uses	No commercial proposed	Retail proposed	Active Uses including retail; civic, cultural, and educational uses; social Infrastructure such as health clinics, childcare facilities, libraries, and community rooms; or maker spaces and co-working spaces.	Generally, yes –office, retail, and services are permitted outright. Code restricts the proportionate square footage of nonresidential uses. Public services, recreational facilities, meeting facilities, and social organizations are conditional use only, but best practices recommend permitting outright.
Minimum Density	0.4 FAR, 30 dwelling units/acre	0.4 FAR, 30 dwelling units/acre	Net FAR: 2 Gross FAR: 1.28 Gross: 59 dwelling units/acre Net: 83 dwelling units/acre	Net FAR: 2, Gross FAR: 1.34 Gross: 57 dwelling units/acre Net: 81 dwelling units/acre	Total Site Calculation: Net FAR: 3.0 Gross FAR: 2.3 Gross: 100 dwelling units/acre Net: 142 dwelling units/acre	No – Maximum FAR permitted is lower than what is shown in our ideal TOD scenario. The massing scenarios use a higher FAR than current standards, even with the sites' eligibility for increased density because of proximity to light rail transit. Minimum FAR is not in conflict with this analysis and aligns with Oregon's CFA guidelines that call for a minimum allowance of 25 du/acre (although this only
Minimum Density with PUD	0.3 FAR	0.3 FAR	N/A	N/A	N/A	

Standard	SC-MU Zone	SC-HDR Zone	Massing Scenario 1 (more market housing)	Massing Scenario 2 (ground floor retail)	Ideal TOD Recommendations	Standards align with TOD Best Practices?
Maximum Density	2.0 FAR, no max residential density	1.2 FAR, no max residential density	2.3	2.7	Total Calculation: Site FAR: 2.3 Block FAR: 4.6	applies within a fairly tight 400 ft radius of transit stations). To ensure density around station areas in alignment with TriMet's TOD Goal #6, best practices suggest exploring a minimum of 1.0 FAR.
Front Maximum Setback on Major Pedestrian Route (MPR)	Front yard setbacks for parcels on Major Pedestrian Routes are governed by the Design Review Design Standard in Section <u>60.05.15.6</u> .		10 feet	20 feet	For Mixed Use Active Ground Floor Uses, Max Setback: 20 feet.	Mixed – Current standards would restrict Scenario 2 since it proposes ground floor retail and would require a greater setback (this is not the case for Scenario 1). Best practices recommend requiring a shorter setback of 10 to 15 feet for all uses to support a pedestrian friendly environment.
Front Maximum Setback not on MPR	With ground floor retail: 20 feet, without ground floor retail: 10 feet		10 feet	10 feet	10 to 15 feet	
Maximum Building Height	100 feet for sites within 400 feet from a Light Rail Station for SC-HDR, and 1,340 feet for SC-MU		60 feet	60 feet	100 feet	Yes – But proximity requirement for SC-HDR may be restrictive. Oregon's guidance for climate-friendly planning recommends implementing a maximum height of at least 85 feet for cities and urbanized county areas with greater than 50,000 residents. Other successful TOD projects have used minimum building heights in a quarter mile of station areas that taper off in residential neighborhoods.
Minimum Landscape Area	10 percent set aside for landscaping in multiple-use districts		12 percent	12 percent	10 percent minimum	Yes – 10 percent is an appropriate minimum landscape area. A required landscape area minimum over 20 percent is generally not supportive of TOD. The PUD chapter of the zoning code (Chapter 60.35) specifies 20 percent of the site area, which can be an appropriate threshold if the proposed development has a significant amount of residential density. This could be a part of a bonus FAR incentive.

Standard	SC-MU Zone	SC-HDR Zone	Massing Scenario 1 (more market housing)	Massing Scenario 2 (ground floor retail)	Ideal TOD Recommendations	Standards align with TOD Best Practices?
Off-Street Parking Ratio	<p>Multi-dwellings with 2 + bedrooms: Minimum 1.0 spaces per unit</p> <p>For Zone B, maximum permitted parking spaces: 2.0 parking spaces per unit. Light commercial: 2.7 to 3.9 parking spaces per 1,000 sf</p> <p>As of January 2023, interim City policy removes these requirements for all uses within three-quarters of a mile from rail transit stops</p>		<p>0.77 parking stalls per unit (market); 0.54 parking stalls per unit (affordable)</p>	<p>0.59 parking stalls per dwelling unit; 0.54 parking stalls per unit (affordable); 3.1 parking stalls per 1,000 sf of retail</p>	<p>0 to 0.5 parking stalls per dwelling unit.</p> <p>0.5 parking stalls per unit (affordable).</p> <p>1.8 parking stalls per 1000 sf of retail</p>	<p>Yes – Recent updates to City policy (although not yet formalized in the Development Code) exceed typical best practices.</p>

Notes: Code Section 20.20.12 and 20.20.15 Site Development Standards indicates there are no min/max parcel areas, no minimum width or depth for the lot dimensions, and mostly no setback requirements (except what is shown above) in the SC-MU and SC-HDR zones. Note: The City of Beaverton anticipates updating its zoning regulations in the near future. Code: <https://online.encodeplus.com/regs/beaverton-or/doc-viewer.aspx#secid-440>.

1. Parking Requirement Obstacles and Opportunities

Parking matters largely because of the ample space it requires. More space required for parking means less room for housing and mixed-uses, additional costs, and less resources for multimodal and pedestrian-friendly design.

Scenario testing took place during 2022, before the effective date of Oregon's Climate Friendly and Equitable Communities rulemaking. The TriMet station areas are within the City of Beaverton's Parking Zone B area where the Development Code technically requires parking spaces for multi-dwellings with two or more bedrooms in multiple use zones is 1.0 per dwelling unit and the maximum permitting parking spaces is 2.0 parking spaces per dwelling unit. Parking space requirements for light commercial land uses such as retail, office, and medical clinics vary generally from 4.1 to 6.2 parking spaces per 1,000 square feet of gross floor area for Parking Zone B. As of January 2023, this is no longer being enforced by City staff.

The existing parking requirements for the Beaverton station areas are an obstacle to transit-friendly development since it will require extensive space for parking, changes the ground floor experience, and increases construction costs. However, interim policy and expected updates to the Development Code provide more flexibility. Developers have struggled to make their projects pencil due to the high parking ratio requirements in the past. A few considerations for parking obstacles are described below:

- In areas with high-quality transportation such as frequent transit service, best practice is that dedicated parking requirements should be lower. The Climate Friendly Areas provisions call for the City to not require parking spaces in the station areas. **With upcoming code revisions, CFA areas will allow below one parking space per housing unit and give developers more flexibility and to support development feasibility. As the City formally updates its requirements in the Development Code (which will apply to TriMet station areas), this could be a TOD opportunity rather than a barrier.**
- **The parking demand in the station areas are below 1.0 parking stall per unit, but it is unclear whether 0.75 or 0.5 would be sufficient to meet the demand.** Even parking requirements do not apply, the market will demand some level of parking from new development. Depending on the development type and station area location, developers might be willing to go below 0.75 parking stalls per unit. The feasibility analysis indicates that even with parking ratios near 0.75 or 0.5 stalls per unit additional financial incentives such as Vertical Housing Development Zone would be necessary for multifamily development to pencil.
- The City of Beaverton staff informed the project team about a complete streets design manual being drafted. **Consequently, future development standards could be influenced by upcoming changes related to the complete streets manual, particularly if the provisions are mandated.**

2. Mixed-Use Zone Development Limitations and Opportunities

Detailed development regulatory updates for multi-use zones are high priority level for the City of Beaverton but are not yet underway. These updates are intended to help the city be aligned with Metro's Functional Plan and the new Climate Friendly Area rules. Overall, development standards taken together need to leave room for a reasonable development size to make the project feasible to finance and rent.

Currently, the relevant Beaverton Station Community zones allowing residential uses include the Station Community – High Density Residential (SC-HDR) and the Station Community Multiple Use (SC-MU) zones. The SC-HDR zone allows up to 1.2 Floor Area Ratio (FAR) whereas up to 2.0 FAR is allowed in the SC-MU zone. Both zones have a minimum residential density of 30 dwelling units per acre and a maximum building height of 100 feet.

Our assessment of the SC-HDR zone found that the FAR is too low when calculating the FAR on a total site scale. Assuming that an applicant would be developing the entire park and ride site, as opposed to a single block, the ideal TOD FAR would be 2.3:1 (gross) and 3:1 (net). Although minimum density was not a barrier in this analysis, best practice recommends implementing a higher minimum FAR to ensure denser development near transit stations as well as higher maximums. This will enable sufficient buildable square footage for 8-story residential buildings with ground floor retail/active spaces directly adjacent to the TriMet station. Our design scenario shows a 20-foot ground floor-to-ceiling height. However, if the FAR is calculated per block, the allowable FAR would need to be significantly higher. **To achieve the optimal TOD development on the blocks closest to the station, the FAR would need to be 4.6:1.**

The Code mostly indicates that there are no minimum setbacks for the front side and rear except for situations when on a major pedestrian route and when detached dwellings and duplexes fronting common greens and shared courts are proposed (Code Section 20.20.15). **However, Code Section 60.05 has various detailed building design and orientation restrictions that can be challenging for TOD and ultimately, can limit the flexibility in the design.** For example, buildings located in Multiple Use zones should be no further than 20 feet from the property line and when abutting a Class 1 Major Pedestrian Route, they must occupy at a minimum of 50 percent of the street frontage (Code Section 60.05.15.6). Another code provision requires that the height of any portion of a building at or within 20 feet of the property line abutting a Major Pedestrian Route shall be a minimum of 22 feet and a maximum of 60 feet. Building heights greater than 60 feet are allowed if the portion of a building that is greater than 60 feet is at least 20 feet from the property line that abuts the Major Pedestrian Route (Code Section 60.05.15.7).

In Scenario 2 (Mixed-use), all buildings are a maximum of 20 feet from the property lines. The building height ranges from 30 feet to 60 feet tall which complies with the building height requirements along Class 1 Major Pedestrian routes. In the TOD recommendation scenario (see

Exhibit 15), all buildings are a maximum of 20 feet from the property lines. Buildings higher than 60 feet are setback 20 feet from the property line. While the team was able to make this provision work within the prototypical site, we would advocate for more flexibility with the setback requirements.

Finally, a mixed-use development offers a potentially catalytic development opportunity that can attract sufficient capital. The ground floor retail component for mixed-use development may be less valuable to a residential development because it takes up space that could otherwise be used for housing units or parking. However, if done properly, it can promote the development of a more walkable community and enhance the desirability of living in or near the new development. In turn, market-rate rents and investors' willingness to take a risk in the development could increase. Also, ground floor retail would qualify the development for VHDZ tax exemptions.

The City of Beaverton anticipates updating its mixed-use zoning regulations in the near future.

3. Stormwater Facility Requirements and Opportunities

The City of Beaverton Clean Water Services standards for stormwater treatment facilities and sanitary sewer are likely to pose challenges to TOD projects. One station area identified (Millikan Way) is completely within a floodplain, posing significant barriers for viably managing stormwater on site. The management of stormwater will be different for each site since it is influenced by topography, existing site infrastructure, and the configuration of the building and transportation facility development. A certain percentage of the site would need to be set aside for stormwater retention particularly in areas within a high-water table and this can end up consuming a large portion of the development site, limiting the area that can be developed. The City of Beaverton staff noted that 13 percent of the station area sites could need to be set aside for stormwater due to the high-water table.

The City is currently working to develop approaches involving coordination on a regional level that could include a shared stormwater basin jointly used by various nearby developed parcels. Use of this shared basin would be allowed for a fee in lieu. Overall, the City said they might be able to partner to help overcome these barriers for more dense TOD projects that are not located in a floodplain. This presents an opportunity to TriMet particularly for the Beaverton Creek and Elmonica/SW 170th Avenue station areas.

4. Design Review Process Obstacles and Opportunities

The purpose for Design Review is to promote aesthetic quality with a high-quality pedestrian environment, discourage inharmonious development, and demonstrate how the project meets Design Guidelines (Code Section 40.20.05). The scope of the design review is limited to the "exterior of buildings, structures, and other development and to the site on which the buildings, structures, and other development" (Code Section 40.20.10).

The City of Beaverton has three levels of design review processes differing based on the type and scale of the proposed development project. The three design review applications include:

- Design Review Compliance Letter,

- Design Review Two, and
- Design Review Three (Code Section 40.20.15).

Design review 2 or 3 is more applicable to TOD development. Design review 2 is required for many different types of larger development projects such as construction involving 50,000 square feet or less of non-residential floor area not adjacent to any Residential District, or for multi-dwellings in any zone where multi-dwellings are a Permitted or Conditional Use.

Approval or denial of a type 2 Design Review is made by the Director and the Director could impose conditions of approval (Code Section 40.20.15). Design Review 3 is for larger projects such as projects with more than 50,000 square feet of non-residential floor area not abutting a residential district. The Planning Commission provides the approval or denial and could impose conditions of approval for a type 3 Design Review (Code Section 40.20.15). The City noted that a TOD project would most likely require approval by the Planning Commission.

In general, development with affordable housing has more flexibility in adjusting development standards. Chapter 40 of the City's Development Code which sets out policies for land use applications includes major and minor adjustments specifically for affordable housing. Regulated affordable housing development serving households at or below 60 percent AMI (for a guaranteed period of at least 60 years) is eligible under chapter 40.10 for a 10 percent adjustment in most site development requirements for a minor adjustment and up to 50 percent for a major adjustment. Overall, the permit review process that TOD must go through is an important factor in whether the project will be built or not. The City of Beaverton staff reported that land use approvals could be valid for up to 6 years (2 base years, plus 2 rounds of 2-year extensions completed on an as-needed basis).

Interviewees noted that the master planning approach or Planned Unit Development (PUD) approach for TOD tends to work better. Although there are more design and open space standards, the PUD process allows for more flexibility in the development design. However, there would be more discretionary approval requirements with a PUD permitting process. Phased construction would also be a potential appealing route for a TOD project. As mentioned earlier, the duration of a land use approval is two years, with up to two extensions for two-years (for a total of six years). If there is an approval for multiphase development that doesn't occur in the initial timeframe, it is better if City staff can anticipate extensions so they can frame the original land use approval accordingly. It might mean that one section goes through another round of review, but staff could set it up with a 'master plan lite' approach.

Overall, interviewed City of Beaverton staff emphasized the need to have early conversations about TOD proposals. As part of its upcoming code revision process, City staff should work to identify additional design requirements that may create burdens for TOD and other types of development in Beaverton.

5. Development Fees Impacts and Opportunities

The City of Beaverton and Washington County collect System Development Charges (SDCs) or impact fees for new development for the added cost of services they place on infrastructure. These fees vary greatly in the amount and type depending on the type of development and overall, they can comprise a significant portion of development costs. TriMet should identify

ways to get credit for fees for the public amenities and benefits provided for the proposed TOD. For example, the City of Beaverton Parks provider (Tualatin Hills Parks & Recreation District) offers SDC credit for projects including open space type public amenities.

The Washington County Transportation Development Tax (TDT) charge offers a discount for certain developments such as transit improvements that could remove vehicle trips on the county's major roadway system, as approved by the Director (Washington County TDT Chapter 3.17, 2014). The improvement must provide additional capacity to meet future transportation needs or be built to address an existing safety hazard. The fee amount is calculated based on a formula varying by the development uses and the number of units (see Code Section 3.17.050).

6. Opportunity for the Station Area Design to Emphasize Placemaking

The City staff emphasized utilizing opportunities to tailor station area sites to connect to light rail station and weave into the edges around nearby communities to create a sense of place for future residents and users. Encouraging stakeholders to engage early in the design process can help build community support and achieve context-sensitive design goals.

There should be dynamic site planning and design that responds to context in a final land use application. The City is looking for a collaborative design process that focuses on placemaking and considers station-specific contexts to make people want to come and stay.

The City told the project team that transitions in development scale from the station area to surrounding neighborhoods are not necessarily needed from a code perspective except for the landscaping buffer requirements. It is important to be responsive to the context and all areas now allow for middle housing options. Thoughtful development design features can help provide a transition.

'Green Edges' make sense for the Beaverton Creek and Millikan sites, but not as much for the Elmonica/SW 170th station area. Elmonica station development could buttress all the way to Baseline/Jenkins. In some areas they have major pedestrian routes, which are areas of high walkability and pedestrian engagement.

Conclusion of Task Order 4, Beaverton Station Area TOD

The work summarized in this memo is part of the Better Red Station Area Planning Project focusing on improving the reliability of the MAX Red Line extending from the Portland International Airport through Downtown Portland to the City of Hillsboro. A consulting team, led by ECONorthwest, assisted TriMet by improving their knowledge about the realm of station area development possibilities at certain key station areas through a series of task order projects to help stimulate catalytic projects that will shape growth on the MAX Red Line.

The overarching goal for this Task Order 4 work is to provide a preliminary vision of TOD potential and augment the understanding of the core barriers for community-serving Transit-Oriented Development (TOD) at the three TriMet Beaverton station areas. The station areas are the Millikan Way Park and Ride, Beaverton Creek Park and Ride, and the Elmonica Park and Ride, located along the existing MAX Blue Line, in the area of the MAX Red Line extension.

As a part of Task Order 4 work, the team interviewed key stakeholders, met with City of Beaverton and Washington County staff to gain insights, summarized core TOD related regulations and incentives, and completed a massing study and development feasibility analysis. The results of this work helped shape Beaverton area TOD barriers and opportunities recommendations.

Perkins & Will designed a prototypical site based on common characteristics of the three station areas and based on this prototypical site, they provided Massing Study Scenarios. The massing scenarios incorporated conceptual designs of several different use types at varying development scales including two scales of multifamily residential buildings with a parking garage, two scales of podium-style multifamily residential buildings, one scale of townhouses, and one multifamily residential building providing affordable housing (for households earning 60 percent AMI). Scenario 2 integrated ground-floor retail development as a component of multifamily buildings while Scenario 1 did not include retail development but focused on providing slightly more market rate housing.

ECONorthwest then assessed the financial feasibility of these massing scenarios. Overall, the financial feasibility findings showed that as proposed, the development scenarios would not be feasible to build without more extensive financial incentives (subsidies were required even when applying the Vertical Housing Development Zones tax exemption incentives). The high cost of structured parking for residential development is a major barrier to development feasibility and would be cost prohibitive. Lower parking ratios are insufficient on their own to make development feasible because parking will still need to be provided to meet the relatively high existing parking demand in this transit-served market. The current demand for townhouses near the analyzed MAX stations in Beaverton is not high enough to offset development costs. The financing gap of affordable housing is too large to warrant immediate development, thus a phased development approach should be explored that is structured in a way to delay the development of affordable housing.

This assessment also identified a few regulatory barriers and opportunities for TOD. Ideal TOD should incorporate active uses in addition to residential uses, such as retail, civic, cultural, and educational uses and social infrastructure. In addition, the maximum residential density in the station community zones was often too low when calculating the floor area ratio on a total site scale. Fortunately, City staff is in the process of updating station community development regulations and formalizing parking policy changes. Overall, we found that TriMet should partner early on with the City to discuss TOD proposals and develop approaches for challenges collaboratively. This assessment was completed to help TriMet deliver community-serving equitable transit-oriented development in the Beaverton area. Ideally TOD should help create compact, walkable, pedestrian-oriented, mixed-use communities centered around high-quality transportation systems to facilitate shorter trips, healthier lifestyles, and a more efficient use of city resources. Work should continue to further advance TOD in the City of Beaverton and throughout the region, ultimately to create more vibrant, prosperous, and resilient neighborhoods connected to opportunities throughout the region.

Section 5. Appendix

Development Feasibility Analysis Background, Comparable Market-Rate Developments

ECONorthwest analyzed the rents and sales prices of recently built market-rate developments in Beaverton to understand housing demand and likely achievable rents at the three station areas. The feasibility analysis assumes the rents and sales prices of comparable developments can be achieved in all three station areas if similar levels of amenities, including parking, is provided.

The three market-rate uses relevant to this feasibility analysis is Podium Apartments, Townhouses, and Mixed-Use Retail. The data on apartments and retail are from CoStar and the data on townhouses are from Zillow. The following section describes the three development types and their associated assumptions.

1. Podium Apartments

Podium apartments are generally 5 to 7 stories tall. It is structurally composed of a podium area on the first one or two floors where structured parking, retail, and/or residential uses are located. The upper floors are residential use only. In some cases, the podium floors are difficult to distinguish from the upper floors, especially when there are residential units on the ground floor.



The Arc Central at Beaverton

Central Station is the nearest comparison for newly built, podium apartments in a station area with mixed uses.

- The average rent for 1-bedroom (715 sq. ft.) is about \$2,100 per month.
- The average rent for 2-bedroom (1,080 sq. ft.) is about \$2,800 per month.

However, the Arc Central is surrounded by other multifamily apartments, a hotel, a performing arts center, various restaurants, and many other amenities that contribute to a strong sense of place and foot traffic around Beaverton Central Station. In contrast, the three analyzed station areas are characterized by relatively low-density residential uses, lack of retail or active

streetscape, and natural barriers that are unlikely to be redeveloped in the future. Therefore, the market-rate rents at the Arc Central is likely unachievable at the three station areas.

Other recently built multifamily buildings in Beaverton include LaScala Apartments and Verso. These two buildings are in Central Beaverton, close to the Beaverton City Library, and surrounded by low-density residential and some non-residential uses. Unlike the Arc Central, the two apartments are not adjacent to other established retail uses that generate heavy foot traffic, though they are only a few blocks away from a busy retail/restaurant area.

There are two key differences between the two apartments is active ground floor use. First, the LaScala Apartments has a food hall²⁹ with 4 vendors, whereas the Verso is a residential building without retail uses. Second, the units in the Verso are larger and rent for more than the units in the LaScala Apartments, as show in Exhibit 16.

Other newly built, high-density multifamily apartments in Beaverton include Baseline 158 and West End District. These apartments are about a half mile away from the nearest MAX station. As shown in Exhibit 16, their unit sizes are at not too different from other apartments (though slightly higher than some), 1-bedroom rents are about \$1,900 to \$1,950, and 2-bedroom rents are about \$2,200 to \$2,400.

Exhibit 16. Average Unit Sizes and Rents for New Apartments in Beaverton

Source: CoStar

Note: Units are rounded

	One Bedroom Unit Size	One Bedroom Rent	Two Bedroom Unit Size	Two Bedroom Rent
Arc Central	715 sq. ft,	\$2,100	1,080 sq. ft.	\$2,800
LaScala Apartments	600 sq. ft.	\$1,650	930 sq. ft.	\$2,000
Verso	730 sq. ft.	\$1,700	1,040 sq. ft.	\$2,200
Baseline 158	745 sq. ft.	\$1,950	1,120 sq. ft.	\$2,200
West End District	750 sq. ft.	\$1,900	1,030 sq. ft.	\$2,400

Based on gathered information on comparable developments, the estimated achievable maximum rent for podium-style apartments is around \$2,100 per month for an average unit size of 900 sq. ft.

²⁹ <https://lascalafoodhall.com/>

2. Townhouse

There are many townhouses of various sizes and prices in Beaverton. However, there are very few townhouses near Beaverton Creek Station and Millikan Way Station. Sales records available through Zillow shows 27 townhouses were sold in the past 6 months (April 2022 to October 2022) near Elmonica/SW 170th Ave Station. Another 28 townhouses were sold near Willow Creek Station and Quatama Station, the next two stops (to the west) along the planned MAX Red Line. Exhibit 17 shows a summary of those transactions. Prices observed in the past 6 months are relatively reliable because housing prices have not changed much during the time. But sales transaction data from before 2022 will likely require adjustments to account for housing appreciation.



Source: Zillow

Exhibit 17. Recent Townhouse Transactions Near Planned MAX Red Line

Source: ECONorthwest, Zillow

Location	Minimum Unit Size	Maximum Unit Size	Minimum Price	Maximum Price	Count
Elmonica/SW 170 th Ave Station	1,184 sq. ft.	1,597 sq. ft.	\$350,000	\$489,000	27
Willow Creek and Quatama Stations	1,118 sq. ft.	2,304 sq. ft.	\$312,000	\$550,000	28

A closer look at the data filtering for units between 1,500 and 2,000 sq. ft. showed 21 sales transactions with prices between \$400,000 and \$495,000.

Based on gathered information on comparable developments, the estimated achievable sales price for a newly built townhouse in the three analyzed station areas is between \$470,000 and \$490,000.

3. Mixed-Use Retail

CoStar estimate for the annual lease rate near the analyzed station areas is between \$26 and \$32 per square foot (psf). Retail spaces in West End District Apartments were recently leased at \$28 psf.

Based on gathered information on comparable developments, the estimated achievable annual lease rate for retail space as a component of a mixed-use apartment is \$29 psf.