Chapter 5: System Plans

GRESHAM TRANSPORTATION SYSTEM PLAN

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Overview

This chapter presents Gresham's preferred transportation system. It consists of a multimodal functional classification system plan and specific system plans for the pedestrian, bicycle, transit, freight and transit modes as well as for travel demand management, transportation system management/intelligent transportation systems and parking management. The system plans provide the framework for how Gresham's multimodal transportation system works to support and respond to the surrounding community and environment. This chapter is organized as follows:

1. Functional Classification
2. Pedestrian System Plan
3. Bicycle System Plan
4. Public Transit System Plan
5. Truck and Rail Freight System
6. Travel Demand Management
7. Transportation System Management and Intelligent Transportation Systems
8. Parking Management

People rolling, biking, and driving interact at Eastman Parkway.

1. Functional Classification

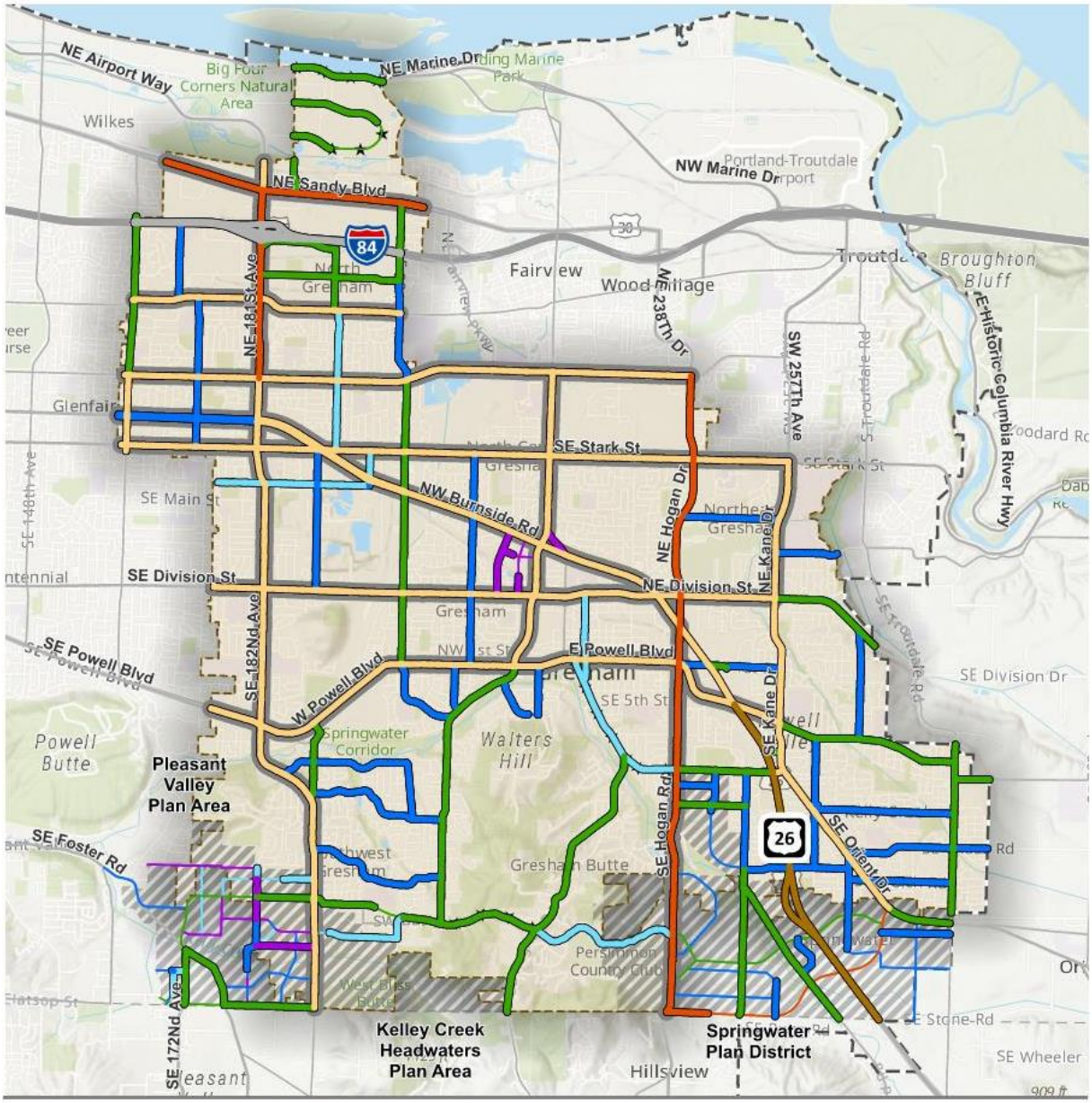
The functional classification system plan defines the function and design of the city's roadways to serve all travel modes, support existing and planned land uses, create aesthetic streets, and accommodate stormwater management. Gresham's preferred functional classification system plan was refined for the TSP through the lens of meeting three objectives:

- Ensure street function supports existing and future land uses
- Ensure street design is responsive to the community's needs and vision
- Ensure feasibility of development costs

The refinements also create consistency in planning for the transportation network. The TSP has incorporated the planned Pleasant Valley, Kelley Creek Headwaters, and Springwater Plan areas and their road classifications into one classification map. Figure 5-1 shows the updated functional classification system. The classifications vary in their functional parameters (typical traffic volume, design speed and lane number and width) as well as design elements (parking, bicycle facilities, medians, sidewalks and planter strips). Table 5-1 identifies the functional parameters and design elements for each arterial and collector classification. The stated volume ranges in Table 5-1 are used as one factor in determining the appropriate classification for a given facility and represent the parameters under which, in most cases, that classification will operate at an acceptable level; the ranges do not represent a standard.

The actual capacity of roadways is typically governed by traffic operations at intersections along with other roadway features such as turning movements, grade, number of lanes and hourly traffic variations. Detailed engineering studies may determine that the actual capacity of a particular road section falls outside these ranges. The arterial and collector streets create a grid-like network based upon county road spacing. The arterials and collectors generally run on north-south and east-west alignments, intersecting at right angles. The local streets generally follow this pattern though some follow more organic alignments due to geographic constraints such as buttes or streams. The arterials are generally spaced one mile apart, with the exception of Powell Boulevard to Butler Road, which are spaced over one mile apart where Gresham Butte creates a topographic barrier. Collectors generally are spaced one half-mile from the arterials. Local streets fill in the spaces between the arterials and collectors, providing internal circulation and connectivity.

Figure 5-1. Functional Classification



FUNCTION AND OPERATING PARAMETERS

The following sections describe the general function and operating parameters for each classification. The right-of-way requirements are provided along with generalized cross-sections. More specific design details and requirements are provided in the Gresham Community Development Code and Gresham Public Works Standards. Some intersections may require auxiliary turn lanes that may necessitate additional right-of-way or easements.

Table 5-1. Functional Classification System: Arterial and Collector Functional Parameters and Design Elements

	Functional Parameters		Design Elements							
Street	Average Daily Trips[1]	MPH[2]	Vehicle Lanes	Bicycle Lanes	Parking	Median/ Center Turn Lane	Landscape Strip	Sidewalk	Curb & Gutter	Total Cross-Section Width
Major Arterial	25,000-60,000	35-40	4 lanes 12′ wide	Yes 5′ wide + 2′ buffer	Not allowed except where designated boulevard, then optional.	Yes	Yes 8′ wide	Yes 6′ wide	2′	104′
Standard Arterial	15,000-40,000	35-40	4 lanes 12′ wide	Yes 5′ wide + 2′ buffer	Not allowed except where designated boulevard, then optional.	Yes	Yes 8′ wide	Yes 6′ wide	2′	96′
Minor Arterial	10,000-20,000	25-35	2 lanes 12′ wide	Yes 5′ wide + 2′ buffer	No	Yes	Yes 6′ wide	Yes 6′ wide	2′	74′
Major Collector	1,000-10,000	25-35	2 lanes 12′ wide	Yes 6′ wide	Yes 7′ wide	No	Yes 6′ wide	Yes 6′ wide	2′	74′
Standard Collector	1,000-10,000	25-35	2 lanes 12′ wide	Yes 6′ wide	No	No	Yes 6′ wide	Yes 5′ wide	2′	60′
Minor Collector	1,000-10,000	25-35	2 lanes 12′ wide	No	Yes 7′ wide	No	Yes 6′ wide	Yes 5′ wide	2′	60′

Bicycle lanes:

- Required on all streets except for minor collectors.
- Where bicycle lanes are not required, bicycle travel will occur within the travel lanes. Sharrows or other bicycle travel indicators may be used to provide bicyclists with directional information and to inform motorists of bicyclists on the road.

Parking:

- Parking on standard and major arterials designated as boulevard have an "optional" requirement.
- Where adequate right-of-way allows for on-street parking on boulevards, it should be built.
- Where adequate right-of-way does not exist, the developer may choose to dedicate right-of-way and provide on-street parking. The on-street parking must meet Public Works Standards.

ODOT facilities (I-84 and Highway 26 south of Powell Boulevard) are not included in the Functional Classification System Table because they are within ODOT's jurisdiction and will be managed by ODOT according to state standards.

The following section provides the cross-sections associated with each classification.

STREET DESIGN/CROSS-SECTIONS

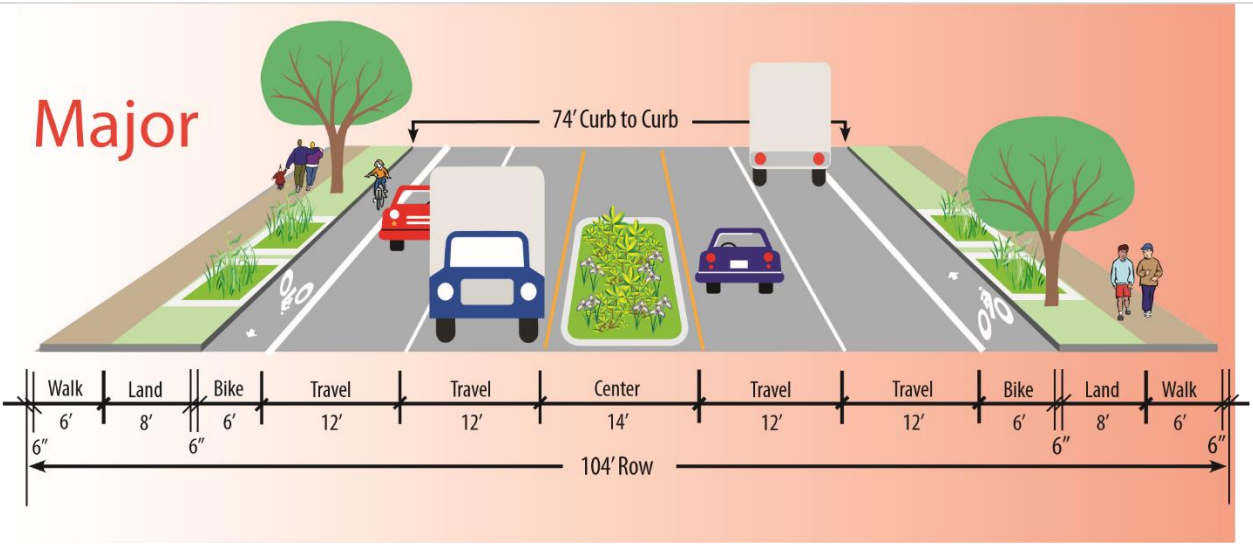
Major and Standard Arterials

Major and standard arterials are moderate speed, high volume streets that accommodate the majority of regional travel through Gresham. They consist of four travel lanes, bicycle lanes and a center lane designed as a turn lane or raised median as needed for travel safety and mobility. The major and standard arterials provide access to major activity centers and facilitate travel from collector streets to the freeway and principal arterials. They carry traffic volumes typically between 15,000 and 30,000 and maybe as high as 40,000 vehicles per day.

Primary bus routes are provided on the arterial street system, with frequent bus stops located to serve major destinations. Sidewalks and planter strips behind the street curb are also provided for pedestrian mobility, street aesthetics, and stormwater management.

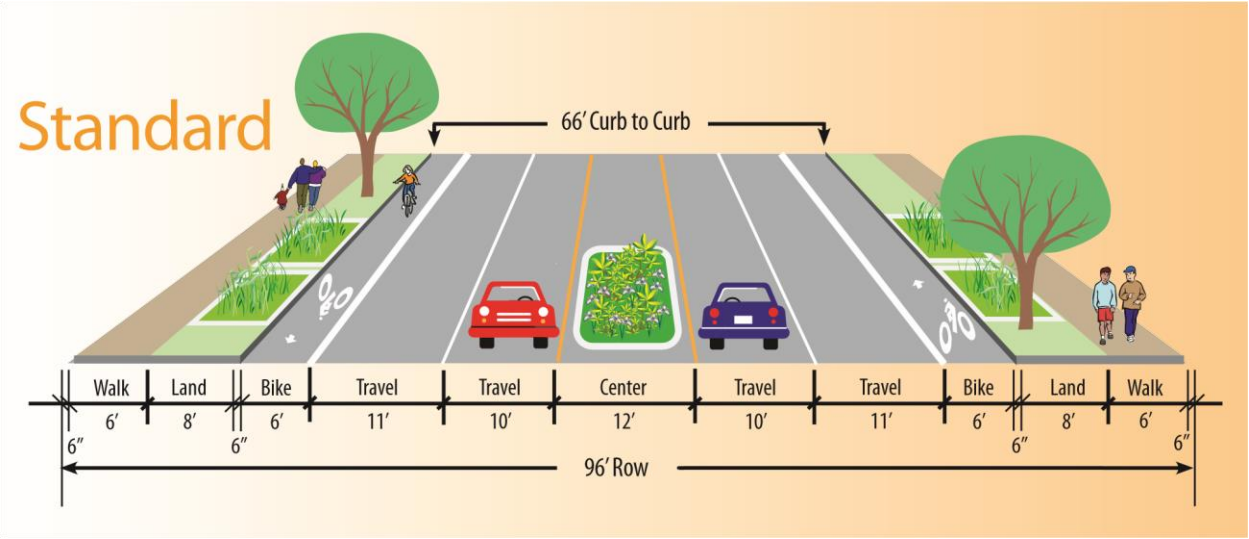
MAJOR ARTERIAL

Major arterials are designed to facilitate high demand travel needs of Gresham's valuable industrial and employment land uses. Gresham's major arterials are Sandy Boulevard and Hogan Drive. Sandy Boulevard serves Gresham's Title 4 industrial/employment land. Hogan Drive serves north/south freight movement and will increase freight volumes as the industrially significant Springwater Plan Area develops. The major arterial has one 11' and one 12' auto travel lanes in each direction and a 14' median to accommodate the turning radii of large freight vehicles, 7' buffered bicycle lanes, 8' planter strips and 6' sidewalks. A raised median is preferred where functionally appropriate for travel safety and mobility.



STANDARD ARTERIAL

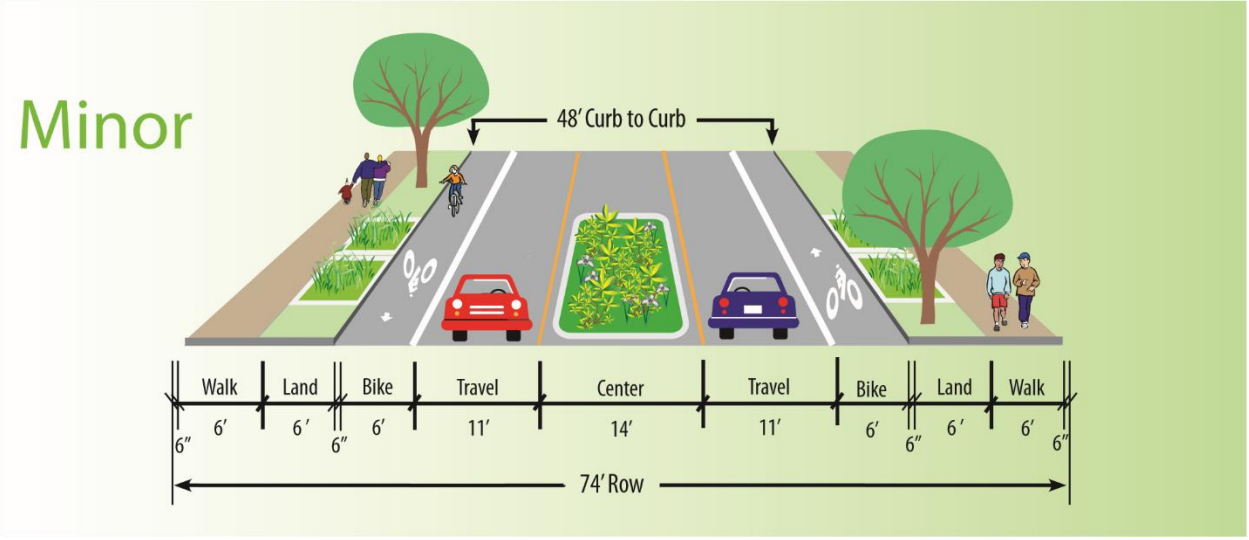
Standard arterials are designed to accommodate high traffic volumes at a community level scale. The standard arterial has two 10′ travel lanes in each direction and a 12′ center lane for autos, 7′ buffered bicycle lanes, 8′ planter strips, and 6′ sidewalks. A raised median is preferred where functionally appropriate for travel safety and mobility.



MINOR ARTERIAL

Minor arterials provide access between neighborhoods or from neighborhoods to the arterial system. Emphasis is on collection and distribution of trips within an arterial grid. Minor arterials consist of one 11′ travel lane in each direction with a 12′ center lane for a turn lane or planted median, 7′ buffered bicycle lanes, 6′ planter strips, and 6′ sidewalks. Left turn lanes are provided at local streets and major driveways. A continuous left turn lane may be provided where necessary for access within commercial and industrial areas. Raised medians are preferred where

functionally appropriate for travel safety and mobility.



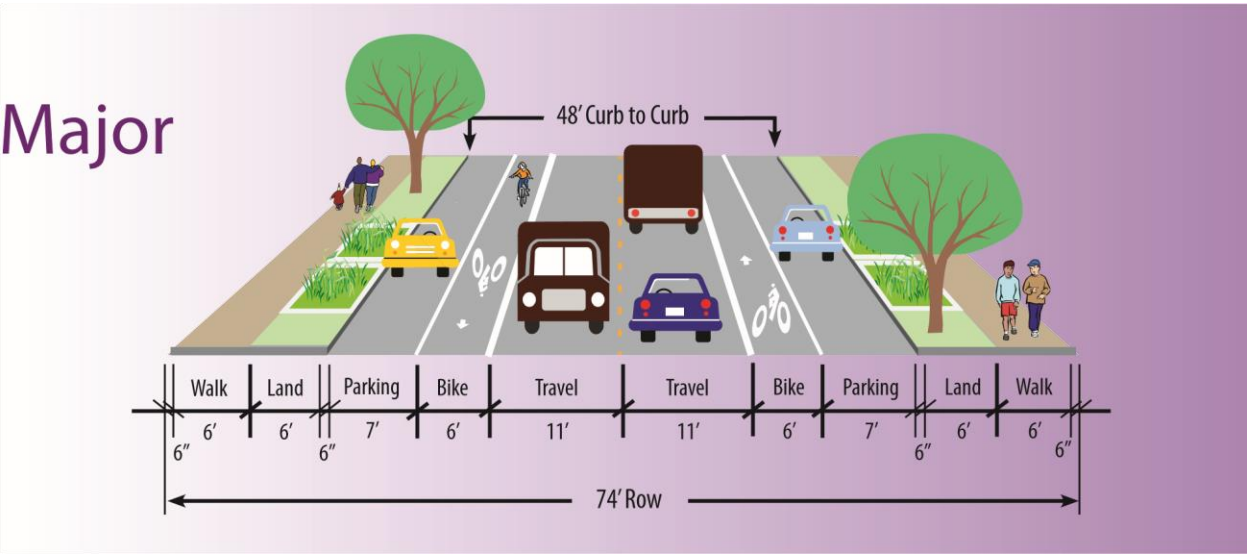
Major, Standard and Minor Collector

Major, standard and minor collectors facilitate travel within the community and neighborhoods, with an emphasis on serving adjacent land uses. Traffic volumes are typically 1,000-10,000 per day.

Transit service, where provided, consists of neighborhood circulation routes. Sidewalks and bicycle lanes or shared automobile/bicycle travel lanes facilitate neighborhood access.

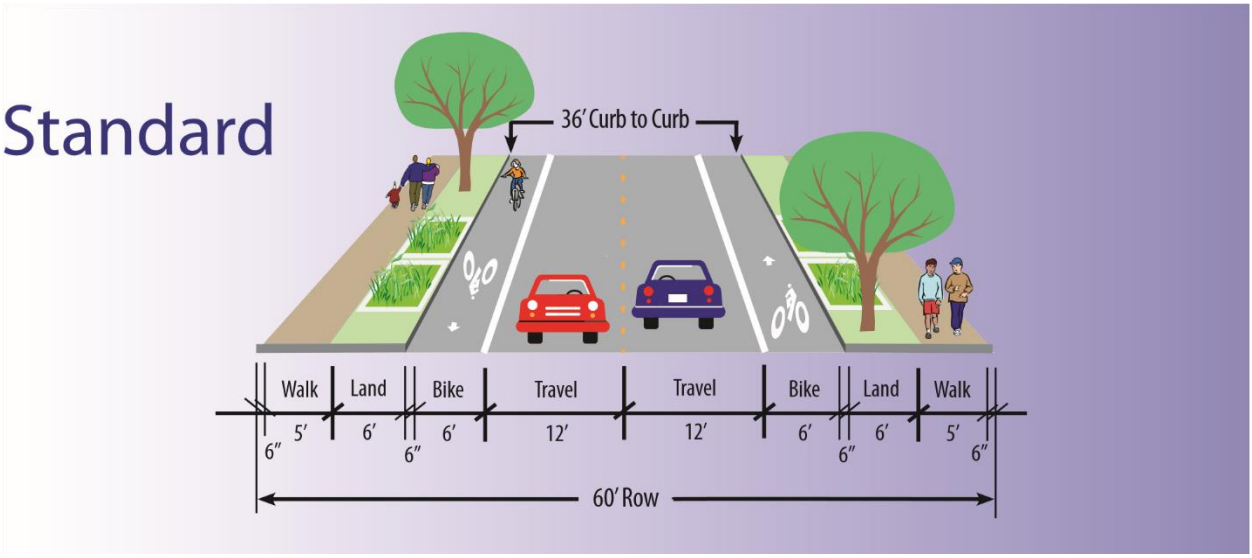
MAJOR COLLECTOR

Major collectors consist of two 11′ auto lanes, 6′ bicycle lanes, 7′ parking zones, 6′ planter strips, and 6′ sidewalks and on-street parking. They are located primarily in the specially planned areas of Civic Neighborhood and Pleasant Valley.



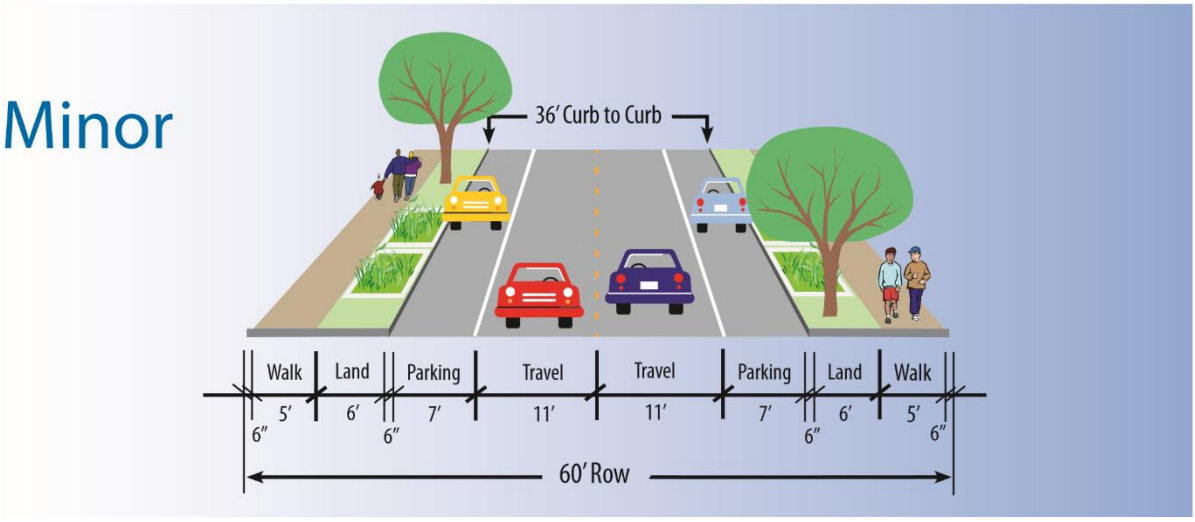
STANDARD COLLECTOR

Standard collectors consist of two 12′ auto lanes, 6′ bicycle lanes, 6′ planter strips, and 5′ sidewalks. On-street parking will be provided by the adjacent local street network.



MINOR COLLECTOR

Minor collectors consist of two 11′ auto lanes, 7′on-street parking, 6′ planter strips, and 5′ sidewalks. Bicycle travel will be provided within the motor lanes. Sharrows, or other bicycle indicators may be utilized to illustrate the shared nature of the minor collector's motor/bicycle lane.



Transit Streets

The transit street designation is not a functional classification, per se, but rather relates to specific land development standards to ensure adjacent land uses support the use of adjacent high quality transit service. To promote the use of pedestrian and transit modes to access retail and commercial uses the transit design criteria in Gresham's Community Development Code:

- Provide convenient, direct, safe, and accessible pedestrian routes to and from transit facilities via sidewalks and bicycle facilities.
- Provide standards for windows and walls designs to increase surveillance opportunities, avoid a monotonous pedestrian environment, and prevent fortress-like facades along public streets.

Special Street Cross-Sections

The functional classification system plan identifies several streets with "special street" cross-sections. These streets are not able to be built to the design standards noted in the sections above due to environmental constraints, impacts to historically designated properties, or unknown development configuration. Alternate designs for these streets ensure they remain able to adequately serve all modes of travel.

MARINE DRIVE

Marine Drive is located along the Multnomah County Drainage District's Columbia River levee. The portion of Marine Drive within Gresham is configured with an auto and bicycle lane in each direction but without a planter strip or sidewalk behind the curb. This is due to slope and environmental constraints. However, a multi-use path is planned on top of the levee along this portion of Marine Drive and will accommodate both bicycle and pedestrian traffic. Therefore, a special street designation is applied to Marine Drive because it still serves all modes and includes stormwater management via the levee system. Marine Drive remains a minor arterial due to its expected traffic volumes and function as an east/west arterial.

RIVERSIDE PARKWAY

Riverside Parkway is planned to be constructed as a loop that connects with Portal Way. However, should the adjacent property develop in a fashion that does not require the looped connection, per the Development Code and Public Works Standards, (i.e. with a large lot development), the connection may not be required.

BUTLER ROAD

Butler Road is an important east/west route in southern Gresham. The existing built configuration is comprised of one travel lane in each direction and no sidewalks or bicycle lanes. The special street section of Butler, between Towle Avenue and Regner Road, has Metro owned property to the north and south, with a multi-use path along the south side. The long-term plan for this land is open space. As such, access to the adjacent property may be unnecessary. When Butler Road is considered for redevelopment, multimodal aspects should be incorporated but a center lane may be unwarranted.

ROBERTS AVENUE

Roberts Avenue, between Powell Boulevard and Regner Road, is surrounded by many of Gresham's historic homes and graced by well-established trees. Roberts Avenue is classified as a minor collector but not currently built to that standard; the required 60' right-of-way would encroach on front yards and require removal of several trees. The special street designation shown in Figure 5-2 retains the existing built configuration along Roberts Avenue.

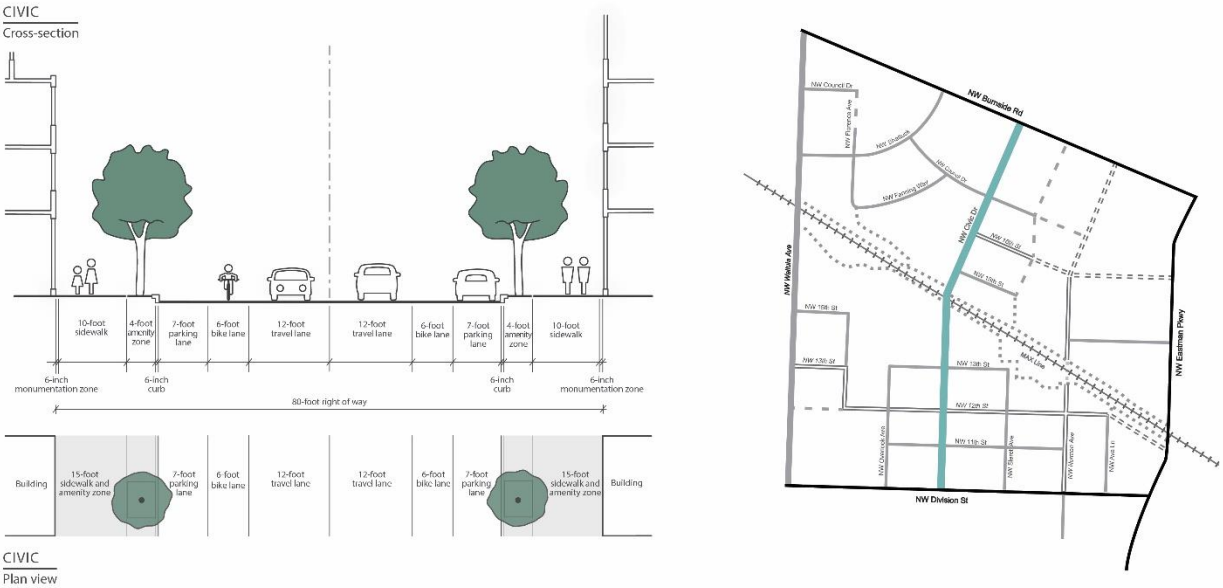
Figure 5-2. Roberts Avenue Special Street Design

View of Roberts Avenue, classified in the TSP with “special street” cross-sections

CIVIC

Civic street types typically include the cross-section shown in Figure 5-3.

Figure 5-3. Civic Street Types



BOULEVARDS AND MULTI-USE PATH DESIGN

Multi-use paths and streets with a boulevard designation are intended to be active multimodal spaces. Boulevards are located in the Gresham Regional Center and Central Rockwood Plan Area to support adjacent high-density, mixed-use and transit-oriented development. They are designed to slow traffic, encourage commercial activity and provide a pleasant pedestrian atmosphere. Primary bus routes provide service on boulevards with frequent bus

stops. On-street bicycle and parking lanes are provided and 10′ wide sidewalks accommodate high levels of pedestrian travel.

Boulevard improvements on SE Stark Street in the Central Rockwood Plan Area.

The multi-use paths identified on the functional classification map are adopted in the Regional Transportation Plan and this TSP as shown on Figure 5-5. . Where multi-use paths are adjacent to the City's streets, the streets are to be designed with a 14′ multimodal path and a parking lane based upon the adjacent street's functional classification.

Gresham's Centers

Major and standard arterial streets within Gresham's Regional Center and Central Rockwood Plan areas that are not designated as boulevards must be designed with a 10′ sidewalk in order to create an inviting pedestrian environment within these areas.

Planned Area Street Design

As indicated on the functional classification map, Gresham's Downtown and Civic Neighborhood have adopted street designs. The following plans should be referenced to determine if a street design applies:

- Community Development Plan, Section 4.1100, Downtown Plan District Design Manual
- Community Development Plan, Section 4.1200, Civic Neighborhood Plan District

Local Streets

The local street system provides circulation and direct access to individual properties. Local streets carry neighborhood traffic and make up the largest percentage of total street mileage in the city. They are all shared road bicycle facilities as they carry lower traffic volumes at lower speeds. The local streets are designed with sidewalks and planter strips for a quality pedestrian environment that is also enhanced with lower volume and speeds conditions. There are five local street types. The TSP does not identify the type of each local street. Local street type is determined upon development and as dictated by the City of Gresham's Community Development Plan and Public Works Standards.

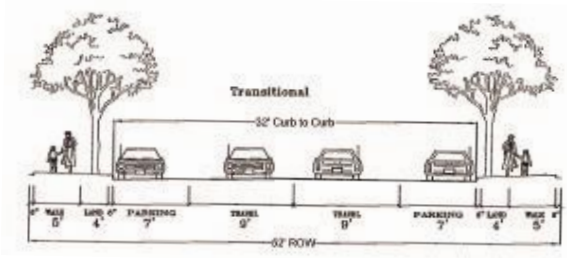
Required local street designs are shown below. Green street design standards for each street is available in the City's Public Works Standards. The green street design features a 6' wide landscape strip that may be utilized for stormwater management.

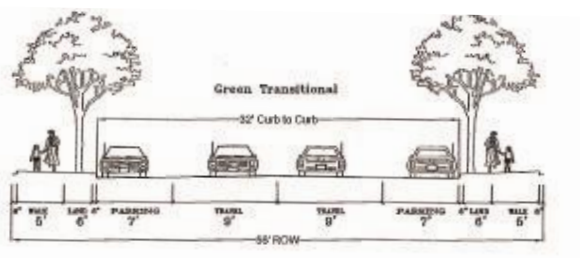
TRANSITIONAL

Transitional streets are low volume, low speed local streets that serve neighborhood access needs. They provide two 9' auto lanes and two parking lanes. Traffic volumes are typically 1,000 vehicles or less per day. Transitional streets are used to continue existing local streets in established neighborhoods, in mixed-use neighborhoods where density precludes queuing streets due to insufficient off-street parking, on primary emergency response routes, when a street must be terminated in a cul-de-sac, or on local streets where volumes are expected to exceed 800 vehicles per day.

INDUSTRIAL

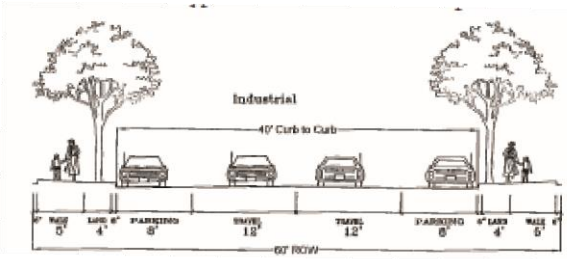
Industrial local streets are low volume, low speed streets that serve primarily industrial access needs. They provide two 12'auto travel lanes and two parking lanes. Traffic volumes are typically 1,000 vehicles or less per day.

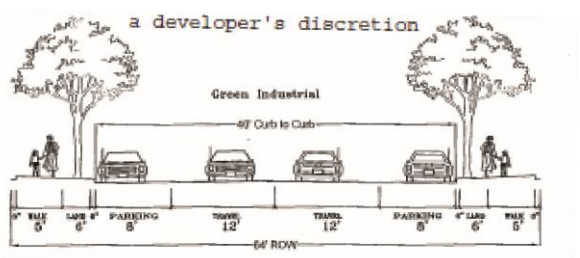




COMMERCIAL

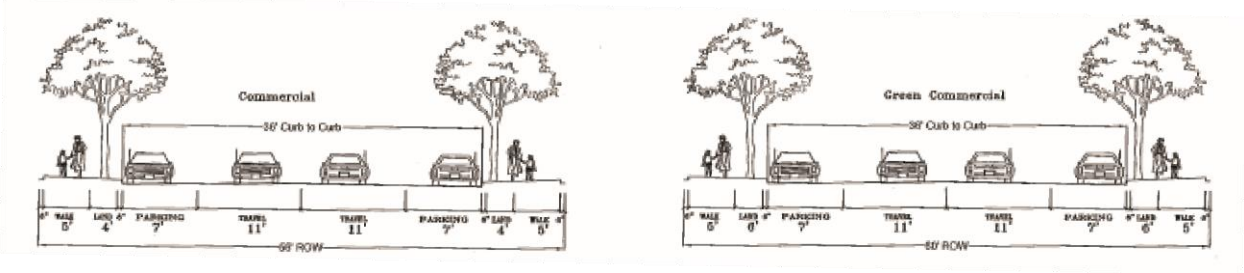
Commercial local streets are low volume, low speed streets that serve primarily commercial access needs. They provide two 11'auto travel lanes and two parking lanes. Traffic volumes are typically 1,000 vehicles or less per day.





QUEUING

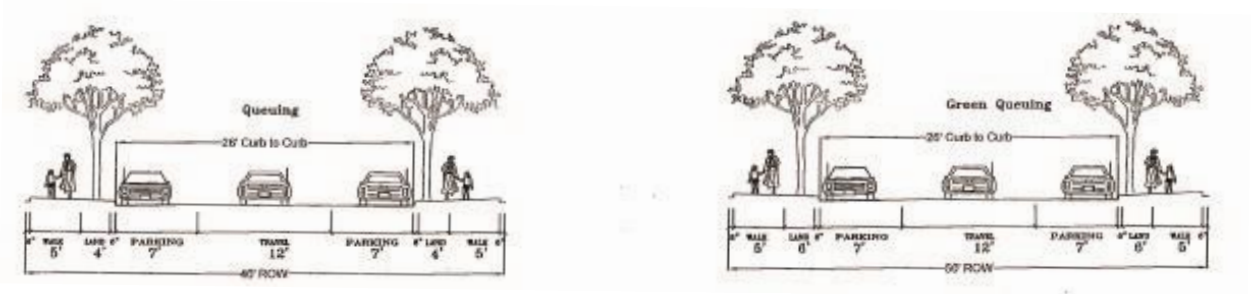
Queuing streets are low volume, low speed through streets intended for two-way auto travel. They provide one 12' auto travel lane and two parking lanes. When two vehicles meet on a queuing street, one vehicle must



yield by pulling into a vacant segment of the adjacent parking lane. Queuing streets are the primary local streets for new residential development. Queuing street block lengths are limited to 400 feet. Traffic volumes are typically 800 vehicles or less per day.

MINOR ACCESS

Minor access streets provide public street access to lots created as part of an infill process, where there is no



opportunity for connection to another public street by a lane or other local street. A minor access street may serve no more than six dwelling units and may not exceed 150 feet in length. Additional off-street parking for residents and visitors must be provided because no on-street parking is allowed. Sidewalks are not required because of the extremely low traffic volumes on the street.

ALLEY

Alleys can be useful in providing property access and allowing efficient property use when direct public street access is either not possible or is undesirable. The use of alleys in residential neighborhoods can enhance front yard pedestrian orientation to adjacent streets and reduce the number of individual driveways, improving pedestrian safety. Alleys may also be useful in commercial areas to separate service vehicle traffic from other vehicle and pedestrian traffic.

In all cases, alleys must connect to a street at each end. All adjacent lots must also have frontage on a public street. Additional parking spaces may also be necessary if parking is restricted on the adjacent public street.

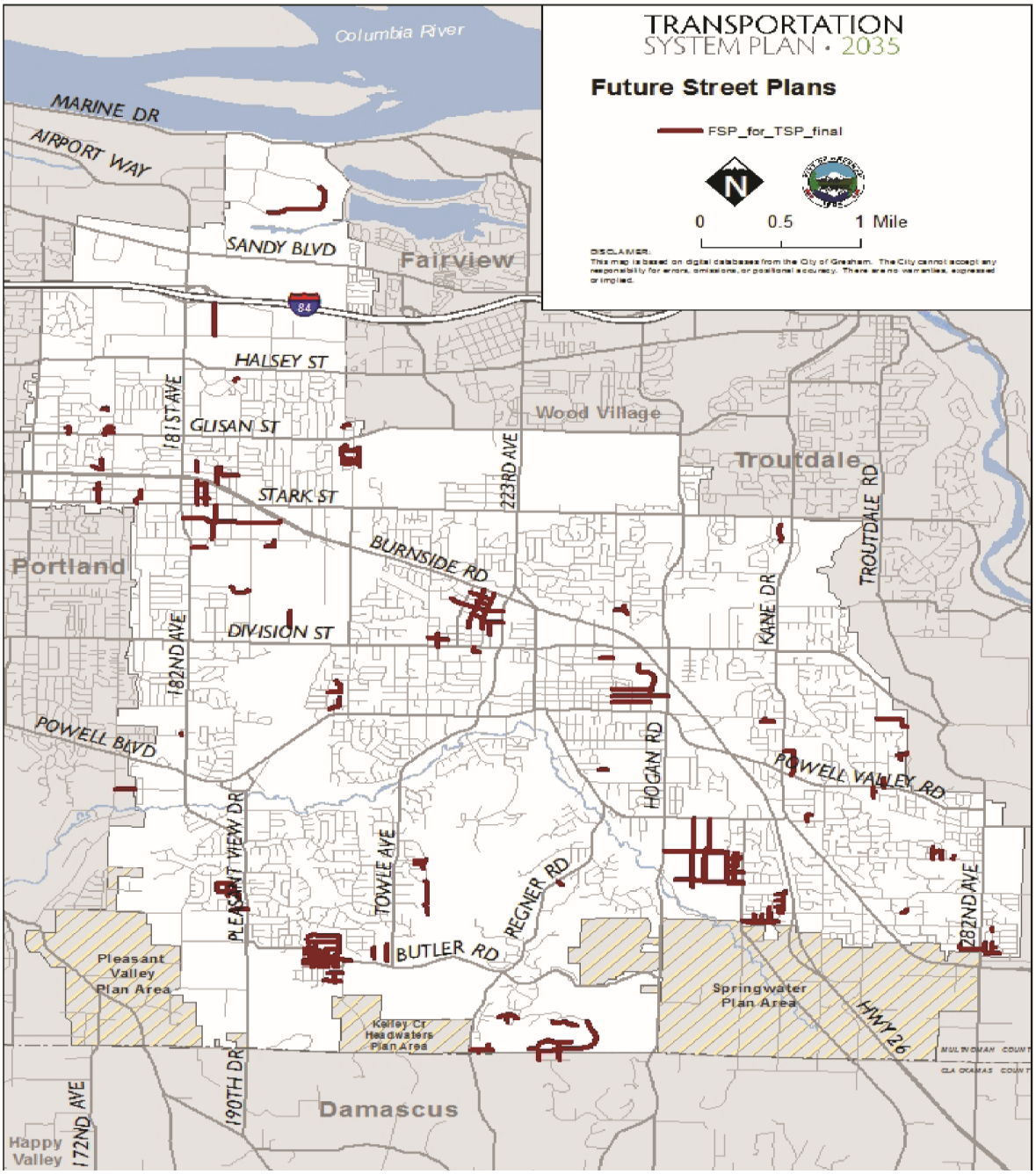
FUTURE STREETS PLAN

The Future Streets Plan (FSP) implements the city's policy to ensure a well-connected street network. It provides a guide for transportation connectivity and circulation to a developing site and its immediate area.

The conceptual alignments on Figure 5-4 show how streets, primarily local streets, may connect in the future and how access may be provided to other properties in the immediate area. They are conceptual in that they do not establish a precise alignment. A precise alignment is established through the Site Development Review process with the Urban Design and Planning Department. Any proposed changes to future streets shown in Figure 5-4 will be in accordance with the Community Development Code and the FSP modification process outlined in Section 9.0712.

The FSP and functional classification system plan serve as the conceptual map of new streets per Title 1, Street Design Sec 3.08.110D. The City will undergo a community outreach process to identify additional future street plans as an action item from this TSP.

Figure 5-4. Future Street Plans



ODOT ROADS

As discussed in the existing conditions Chapter 2, ODOT maintains jurisdiction of two road sections within Gresham's study area: I-84 and US-26 south of Powell Boulevard. They are shown on the functional classification system plan and discussed below as they perform a vital role in the transportation system plan. However, their design and function is managed by ODOT.

Freeway

Freeways are high speed, high volume corridors that facilitate through movements of regional, statewide and interstate travel. They include grade separated interchanges, four to eight travel lanes with median separation and fully controlled property access. Volumes can be in excess of 60,000 vehicles per day. Interstate 84 is the only freeway facility in Gresham. It is within ODOT jurisdiction and any improvements will be addressed through ODOT and Gresham coordination.

Transit service, if it is provided, consists of express buses or fixed-guideway service such as light rail. Bicycle and pedestrian travel within these corridors is provided on either parallel streets or on dedicated pathways. I-84 features a parallel 10' wide multi-use path, providing bicyclists and pedestrians a major east-west travel arterial.

Principal Arterial

Principal arterials are high speed, high volume arterials that provide a high level of mobility for regional and inter-regional travel. Principal arterials include four to six travel lanes, raised medians and street intersections generally limited to signalized intersections with arterial and collector streets. Traffic volumes are typically between 35,000 and 50,000 vehicles per day, and may be as high as 60,000 vehicles per day.

Transit service will generally consist of regional or express bus service with relatively infrequent stops. On-street bicycle lanes are provided along with wide sidewalks separated from the street.

Right: Highway 26/Mt. Hood Highway south of Burnside Road is Gresham's only principle arterial. It is within ODOT jurisdiction and any improvements will be addressed through ODOT and Gresham coordination.

ACCESS MANAGEMENT PLAN

The City's access management policy is to require new development to consolidate, relocate, and share driveways.

Future road widening projects may incorporate raised, planted median barriers as space allows. Planted medians help to reduce conflicts between turning vehicles and with mature trees can help to give streets a sense of enclosure that reduces speeds.

2. Pedestrian System Plan

The City supports a safe, pleasant, and continuous pedestrian network throughout the city. There are many types of infrastructure to improve safety and comfort for all pedestrians, from creative crosswalks to sidewalk planters. The pedestrian system is largely incorporated into the functional classification system plan which calls for wide sidewalks, planting strips, on-street parking in centers and a flexible use of medians. It creates an accessible environment compliant with the Americans with Disabilities Act (ADA).

The following programs enhance the functional classification system by addressing specific pedestrian circulation needs.

PEDESTRIAN DISTRICTS

Downtown, Civic Neighborhood and Rockwood have been identified as pedestrian districts within Gresham. All have land use plans supporting pedestrian-friendly development. The plans include minimum or zero setback buildings, higher densities, building orientation toward the street and transit corridor designations, among other pedestrian amenities.

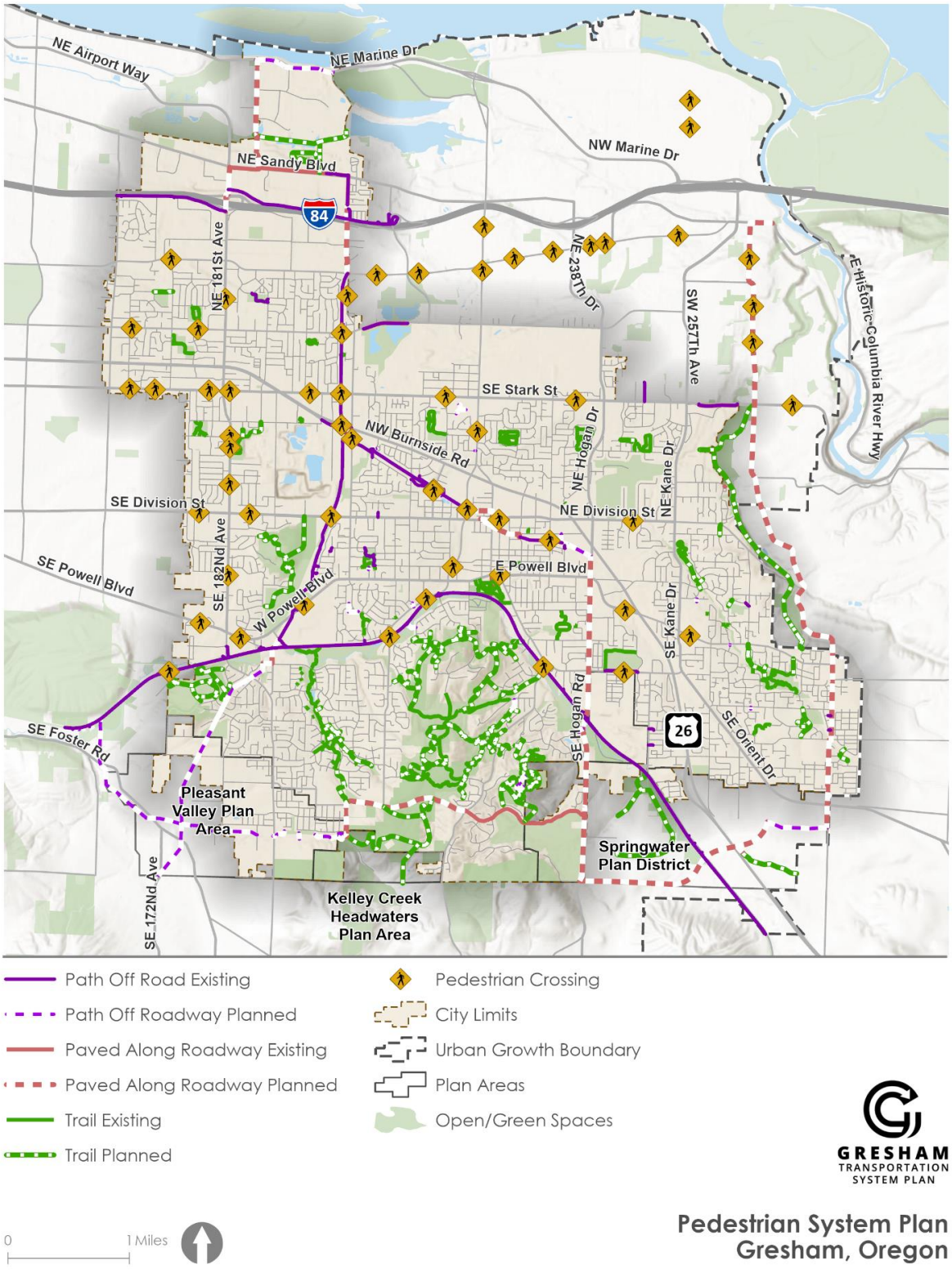
View of pedestrian-friendly development.

The existing street standards in Downtown and Civic Neighborhood also support these areas as pedestrian districts. The Civic Neighborhood street standards have 11 to 15 foot sidewalks with tree wells or planter strips that provide a more urban character. Downtown streets call for 8 to 12 foot sidewalks with street trees in tree wells, pedestrian-scale lighting, underground utilities, curb extensions, on-street parking and narrow travel lanes. Moreover, the Downtown street standards include a shared street classification. A shared street is shared by all travel modes but designed for pedestrians as the predominant mode, such as Beech Street located just north of the Arts Plaza. Autos are allowed but must travel at a walking pace to operate safely. The street is intended for local access and provides a continuous and connected street grid pattern.

SIDEWALKS

Sidewalks are a key part of the pedestrian system, linking neighborhoods to other local destinations, such as schools, parks, transit stops, and commercial areas. Many streets in Gresham have a curb in place, but the sidewalk was never constructed. New development is required to build sidewalks, but they may not link to the existing sidewalk network, leaving small gaps in the system. Sidewalk infill is prioritized on arterial and collector streets and then local streets, using the criteria from the Active Transportation Plan: Key Destinations, Transit Access, Safety, Level of Comfort, Health, Equity.

Figure 5-5. Pedestrian System Plan



STREET CONNECTIVITY

A very important element of the pedestrian system is adequate local street connectivity. A well-connected local street system provides convenient connections between neighborhoods, schools, parks, shopping and transit. The City has adopted neighborhood circulation and street connectivity standards for new residential and mixed-use development. These requirements have resulted in the development of several future street plans that guide the construction of new local street connections with land use development and redevelopment.

CURB RAMPS

The Americans with Disabilities Act (ADA) requires appropriate street accommodations for all users. Curb ramp retrofits and new installations are required of new street construction and major street reconstruction. However, relying on street projects to implement the City's curb ramp program is inadequate. The curb ramp program works independently from street repair to install and upgrade curb ramps citywide. Priority areas for ramp construction are the identified pedestrian districts of Rockwood, Downtown and Civic Neighborhood. School zones will also take priority.

An ADA-compliant curb ramp on SE Rene Avenue.

MULTI-USE PATHS

Off-street paths are designed to establish safe and convenient routes separate from vehicle traffic for walking and other non-motorized users. Multi-use paths form the backbone of the pedestrian and bicycle system, providing connectivity to and through neighborhoods. The following additional paths will complete the network:

Kelley Creek Trail: The proposed multi-use path will parallel Kelley Creek and connect to the Springwater Corridor at Powell Butte Nature Area. The trail will provide pedestrian access across Pleasant Valley.

Sandy River to Springwater Multimodal Corridor: The planned multi-use path runs north/south along 282nd Avenue. It will enhance bicycle access for the neighborhoods in southeast Gresham. The path will connect with the Springwater Trail for full access to the multi-use path network.

East Buttes Loop Trail: The East Buttes Loop Trail will cross east/west through Gresham Butte and Pleasant Valley and will have connectivity with the Springwater Corridor Trail.

SAFE ROUTES TO SCHOOL

Gresham's Safe Routes to School (SRTS) program works with schools and partners on projects that improve safety for students walking and rolling to school. For instance, the City recently installed an asphalt pathway along the east side of Hogan Drive to improve safety for students crossing the busy arterial to get to Dexter McCarty Middle and East Gresham Elementary. To support infrastructure improvements, the City works on programming that encourages students to walk and roll, such as 'Walk and Roll to School' events, and provides transportation safety education in partnership with Multnomah County.

3. Bicycle System Plan

Gresham aims to provide a bicycle system that continues to attract new cyclists and realize the policy of integrating bicycling into daily life. Bicycles are legally classified as vehicles and are allowed on most roadways except urban freeways. Just like auto drivers, bicyclists need well-designed facilities to operate safely. The city's functional street classification system aims to provide safe, well-designed, connected, and accessible facilities. Bike lanes are required on streets classified as major, standard and minor arterial streets as well as major and standard collector streets. Minor collector streets are shared bicycle facilities. All street improvements require the construction of applicable bicycle system components.

The bicycle system plan has three primary elements: off-street multi-use paths, bike lanes and Gresham Greenways. The system plan develops a connected bicycling network that establishes direct and convenient access to all significant destinations within the city and provides comfortable facility types for different types of cyclists. Figure 5-6 shows the planned bicycle network.

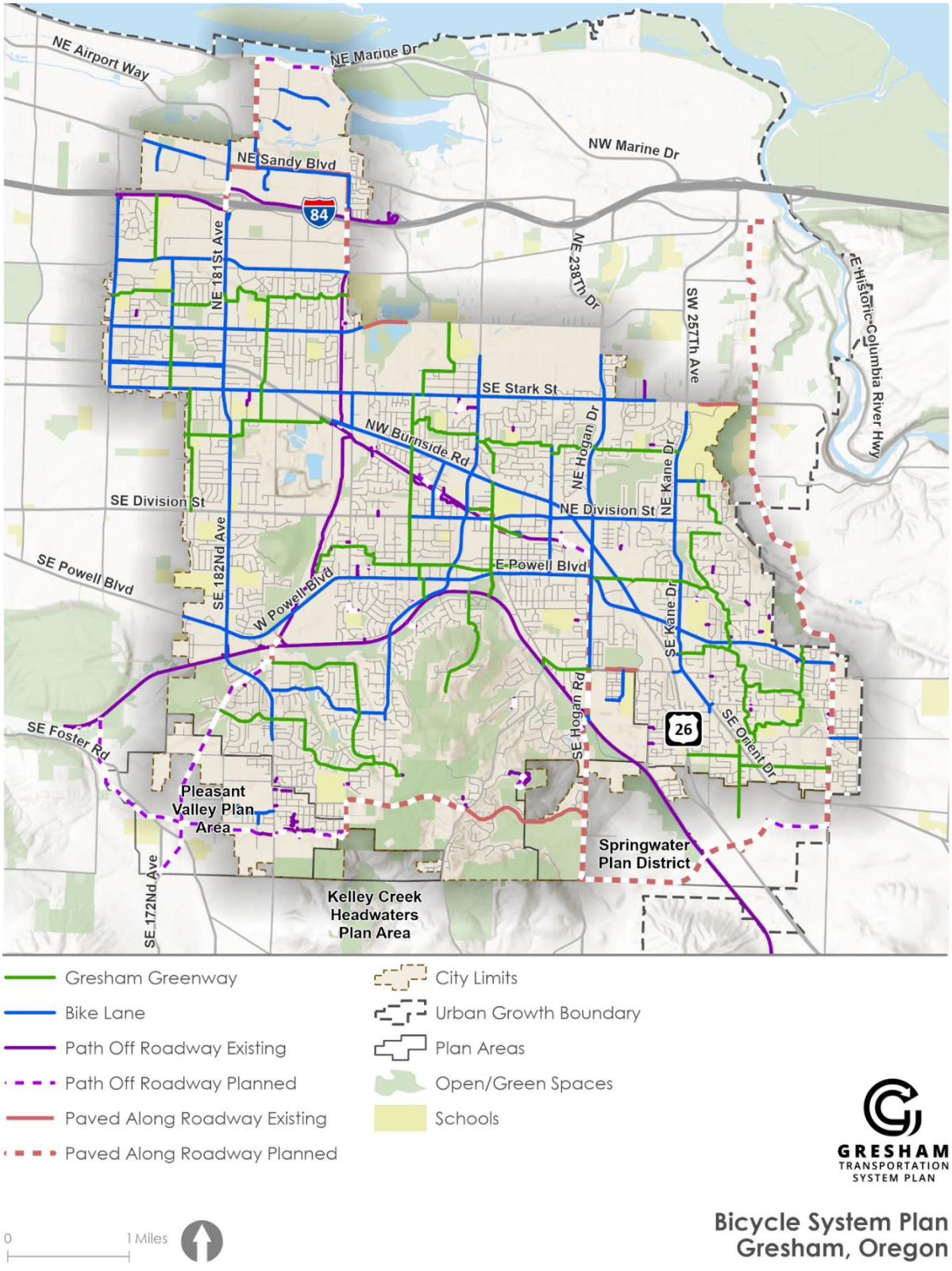
MULTI-USE PATHS

Off-street paths are designed to establish safe and convenient routes separate from auto traffic for cycling, walking and other non-motorized users. They are essential to completing the bicycle system since not all users are comfortable using on-street facilities. They also often serve as an "expressway" for bicycle commuters because there are typically fewer stops required along paths compared with the street system.

Gresham's existing off-street, multi-use paths are the Springwater Corridor Trail, Gresham-Fairview Trail, Wy'East Way and I-84 Path. Per findings from Gresham's bi-annual counts discussed in the Existing Conditions chapter, they are well-used facilities that provide a backbone framework for bicycle access.

The Springwater Spur Trailhead at Main City Park, completed in 2013, is part of the City's Bicycle System Plan to provide a system that continues to attract new cyclists to Gresham

Figure 5-6. Bicycle Plan



The following three additional paths are proposed to complete the network:

- **Kelley Creek Trail:** The proposed multi-use path will parallel Kelley Creek and connect to the Springwater Corridor at Powell Butte Nature Area. The trail will provide bicycle access across Pleasant Valley.
- **East Buttes Loop Trail:** The East Buttes Loop Trail will cross east/west through Gresham Butte and Pleasant Valley and have connectivity with the Springwater Corridor Trail.
- **Sandy River to Springwater Multimodal Corridor:** Gresham's off-street access to Portland and within Gresham is improving. However, greater access to the east is needed. The Sandy River to Springwater

Multimodal Corridor is a proposed north/south multi-use corridor aligned along 282nd Avenue in Gresham and north along Troutdale Road to the Sandy River. The new path will link to the Springwater Corridor Trail through Springwater for full access to the multi-use path network. It will enhance bicycle access for the neighborhoods in southeast Gresham.

ON-STREET BICYCLE LANES

All streets should be accessible by bicycle and the functional street classification assures this by requiring striped bicycle lanes on major, standard and minor arterial streets as well as on major and standard collector streets. Any substandard street will be upgraded to include the required bicycle facility at time of construction.

The streets of highest priority for new bicycle lanes include: Sandy Boulevard, Wallula Avenue, Cleveland Avenue between Burnside Road and Stark Street, Regner Road, Palmquist Road, and Orient between Salquist Road and the planned Springwater arterial. These streets are prioritized because they complete significant links in the bicycle network and provide access to major destinations in and around Gresham. Future streets and redevelopment of existing streets will require bicycle lanes per the Functional Classification Plan.

GRESHAM GREENWAYS

Gresham Greenways is a network of low-stress streets and multi-use paths that connect key destinations across Gresham. The network was developed from the Active Transportation Plan's Bike Routes for Everyone network. To create the Bike Routes for Everyone a "Level of Comfort" analysis was done on streets with good connectivity. The analysis looked at how street design elements (such as posted speed limit and number of travel lanes) impact the experience for bicyclists of all skill levels. The analysis informed design options for infrastructure improvements, such as sharrows and signage, throughout the network to make it safer and more comfortable for all users.

STREET CONNECTIVITY

A very important element of the bicycle system is adequate local street connectivity. A well-connected local street system provides convenient connections between neighborhoods, schools, parks, shopping, and transit. The City has adopted aggressive neighborhood circulation and street connectivity standards for new residential and mixed-use development. These requirements often result in the development of future street plans that guide the construction of new local street connections with land use development and redevelopment.

BIKE SIGNAGE

Signage for safety and wayfinding is a best practice along all of Gresham's bicycle infrastructure. Bicycle signage was originally installed in June of 2010. The 78 signs were installed along major bike routes and multi-use trails showing multiple destinations. Directional arrows, mileage and time markers are included on the signs. There were 35 of these wayfinding signs that showed access to trails from major streets and an additional 32 rider signs that pointed out food, transit, or trails.

ENCOURAGEMENT

The City implements programming that encourages bicycling across the city. In 2017, Gresham was awarded a Bicycle Friendly Community rating of Silver by the League of American Bicyclists. This score is based on Gresham's number of bicycle facilities, education, encouragement activities, and safety statistics.

A wayfinding sign directs people biking to bike routes in Gresham.

Students cross on the first day of school at a new crosswalk near Davis Elementary.

The City of Gresham's Bike Month promotes cyclist activities for all ages through events, including Bike-to-Work Day, a "bike rodeo" to teach children rules of the road, and group bike rides through Gresham trails.

In 2017, the Gresham Area Chamber of Commerce received grant funds to promote bicycle tourism in the greater Gresham Area. Part of that effort included Gresham Parkways, a city-wide event to encourage cycling along Gresham's multi-use paths. Over 800 cyclists of all ages participated as they bicycled along the Gresham Fairview Trail, Wy'East Way Path, and Springwater Trail.

EDUCATION

Education is an important element to increasing bicycling by improving the safety skills of cyclists. The City's Safe Routes to School (SRTS) program provides support for making walking and biking to school a fun and safe experience. The City partners with Metro, Multnomah County, and staff from the three school districts (Centennial, Gresham-Barlow, and Reynolds) to support the program.

The City has worked with partners to develop school Action Plans that identify key routes to school and necessary infrastructure improvements. In 2019, SRTS staff worked with Davis Elementary on an Action Plan that identified improvements and received grant funding to install new sidewalk and a new crossing on routes to the school.

These efforts are supported by ongoing traffic safety education and encouragement events, such as Walk + Roll to School Days.

BICYCLE PARKING

Having a safe place to park your bike at your destination is essential to creating a welcoming environment for bicyclists and encouraging people to use bicycles for everyday trips. Appropriate bicycle parking is metal, securely anchored to the ground and supports the frame of the bicycle allowing for secure locking.

The Gresham Development Code requires bicycle parking at all new developments. There are provisions for both long term parking for employees and short term parking for visitors, which are provided on private property. Some bicycle parking is provided in the right of way, most notably in Downtown Gresham.

4. Public Transit System Plan

TriMet, the region's largest transit service provider, and Sandy Area Metro (SAM) are the two transit providers that serve Gresham. The transit network consists of a hierarchy of service designated to provide the highest possible service to Downtown, Civic Neighborhood and Rockwood, employment areas and along major regional arterials. Neighborhood access and circulation routes provide more flexible transit service to connect outlying low-density neighborhoods to the regional centers and other transit lines. Map 25 is the public transit plan.

TRIMET FORWARD TOGETHER

Working with the community, TriMet developed the Forward Together service concept to guide bus service improvements over the coming years. Forward Together responds to post-pandemic needs and ways people travel. The goal is to increase ridership and expand service, especially for people experiencing low and limited incomes. Forward Together will bring bus service to 50,000 more people and weekend service to 100,000 more, with significant increases to frequent bus service, connecting more people to jobs and opportunity. Forward Together 1.0 is the fiscally-constrained plan, reflected in Figure 5-7. TriMet is also drafting Forward Together 2.0, which would identify other strategic investments in the region's transit system.

HIGH CAPACITY TRANSIT

In 2023 the Metro region updated the High Capacity Transit (HCT) Plan that identifies priority high capacity transit corridors within the region. Within Gresham, the following HCT corridors were identified:

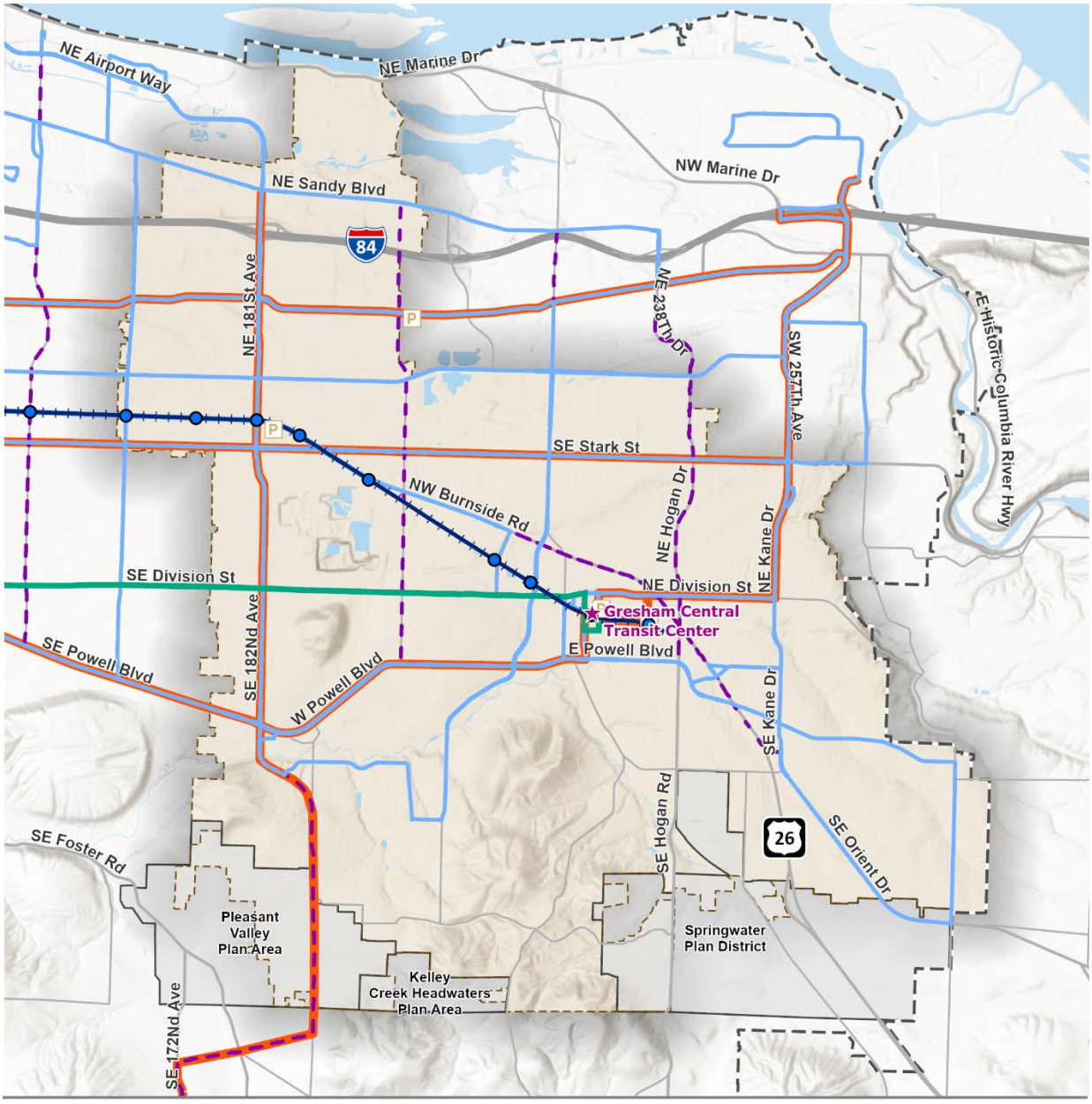
- Tier 2: Next Phase Corridors: C19: Portland to Gresham via Burnside
- Tier 3: Developing Corridors: C1: Portland to Gresham in the vicinity of Powell Corridor and C18E: Hollywood to Troutdale
- Tier 4: Vision Corridors: C10: Gresham to Troutdale LRT extension and C15: Happy Valley to Columbia Corridor via Pleasant Valley

Exact alignment and mode for these lines will be identified through a public process when funding is available.

TRANSIT STOPS

Transit stops should provide a high degree of transit passenger comfort and access. TriMet owns and maintains all bus stops and shelters and coordinates with the City on their location and amenities. At major transit stops, such as MAX Stations and FX bus stops, more amenities should be provided to accommodate the higher level of ridership, such as lighting, benches, shelters, and trash receptacles. Other features may include real time transit information, special lighting or shelter design, public art, or bicycle parking.

Figure 5-7. Public Transit System Plan



5. Travel Demand Management

A key component of the TSP is the establishment of targets to increase the number of trips made by walking, biking, and taking transit. This is called "modal share". Within the Metro region, targets for increased modal share have been established and agreed-upon. Table 25 shows the non-vehicle modal targets established by the Regional Transportation Plan, totaling near 45%.

Mode	2045 Mode Share Target
Transit	11.9%
Pedestrian	22.2%
Bicycle	10.4%

The TSP establishes many projects, programs, and strategies designed to increase the use of transit, walking, bicycling, work schedule changes, and telecommuting, particularly during the most congested times of the day. Increasing options to driving alone allows people to eliminate some trips or switch to another mode of travel, and helps maximize the efficiency of the transportation system. The strategies included in the TSP to manage and reduce travel demand over time include:

- Promoting effective employer incentive programs that reduce the number of people driving alone and dependence on the automobile. The City will continue to utilize TriMet's regional rideshare matching and promotional assistance, and guaranteed ride home programs, to increase vehicle occupancy and reduce automobile use during peak travel periods.
- Prioritizing pedestrian and bicycle amenities as well as improved connections to transit to increase non-auto trips.
- Supporting transportation management associations (TMAs) in the Gresham Regional Center, Rockwood Town Center, and industrial and employment areas.
- Improving end-of-trip facilities that support alternative transportation modes. For example, the Transit System Plan identifies transit facility improvements at major transit stops and along primary transit routes as a high priority.
- Promoting private and public sector programs and services that encourage employees to use non-SOV modes or changes to commuting patterns. The City will continue to encourage all large employers to join the City in participating in the state's Employee Commute Options (ECO) program by compiling travel information in a survey every two years.

In addition, there are many provisions included in the Gresham Community Development Code that help reduce overall travel demand and improve non-SOV mode share:

- The City provides tax incentives for transit-oriented developments within the Rockwood Town Center and Gresham Regional Center through the Transit Oriented Development Tax Exemption program (TOTE). To qualify for the tax exemption, the development must show public benefit through pedestrian, bicycle or transit facilities.
- The City also provides reductions of transportation system development charges (SDCs) – also referred to as "traffic impact fees (TIFs)" – for developments near light rail and designated transit streets and corridors. The reductions for other developments are allowed based on a specific transportation demand reduction strategy submitted by the developer.

6. Parking Management

Parking management has a number of benefits to the parking supply and to community livability. By managing parking operationally and through the development code the City can:

- Enhance economic activity by encouraging parking turnover near businesses
- Utilize parking efficiently to avoid building excess parking
- Create order among different users
- Encourage transportation options to reduce parking demand
- Create walkable places with active building faces

Oregon's Climate Friendly and Equitable Community rules, adopted in 2023, regulate where cities can require parking minimums. In alignment with the state rules the City removed all parking minimums, as analysis showed the other rule alternatives were more onerous to implement. Even though parking is not required by private development, it is expected that developers will provide some parking due to Gresham's suburban context and the expectations of renters and customers.

In anticipation of the new parking rules the City created a Parking Management Manual to guide implementation of parking management in areas where parking becomes constrained. Parking Counts from 2023 show that in Downtown, Civic, and Rockwood there is ample public parking, though it may be a block or two away from busy destinations. The Parking Management Manual provides strategies for the City to follow as parking circumstances change, both in our centers and in neighborhoods impacted by parking.

The City retains parking maximums in its parking code in compliance with Title 2 of the **Regional Transportation Functional Plan**. In addition, the Code requires a minimum amount of carpool and vanpool parking spaces for industrial and office developments, allows and encourages the use of shared parking facilities, allows reduced parking ratios and requires minimum bicycle parking spaces.

Guiding Principals

- Identify priority users for different areas
- Ensure safety and ADA accessibility
- Communicate clearly to users
- Gather and use data to guide decisions
- Collaborate with businesses and neighbors on shared solutions

The Rockwood Park and Ride lot at 18324 E. Burnside St

7. Transportation Systems Management and Operations

The City of Gresham uses various strategies to manage the existing and forecasted supply of traffic without expanding roadways. These strategies are referred to as Transportation System Management and Operations (TSMO) or Intelligent Transportation Systems (ITS). The purpose of these strategies is to enhance travel time efficiency and reliability, safety, and use of existing roadway capacity. Strategies include multimodal traffic management, traffic incident management, and traveler and real-time information. Projects referenced in other modal plans and in the Transportation Demand Management section support and work in concert with TSMO.

Signals at the NE Burnside Road/Civic Drive.

SIGNAL OPTIMIZATION

In 2013 Gresham and Multnomah County, in coordination with the City of Portland and the Oregon Department of Transportation, developed the East Metro Connections ITS Project. This project was a result of the extensive East Metro Connections Plan Study conducted by Metro in 2009-11. The project is intended to implement several TSM strategies to accommodate growth in northbound and southbound traffic along corridors through East Multnomah County. Specifically, it expands the signal communications in Rockwood, Fairview, and Wood Village; upgrades signals with modern controllers and Ethernet communications; updates signal coordination timing; expands the City of Gresham's Scats Traffic Adaptive (SCATS) system; and installs the City's first arterial changeable message sign on northbound 181st Avenue approaching the I-84 freeway. It also complements the City of Portland I-84 Active Corridor Management project by upgrading signals and communications on two of the managed arterial corridors, Glisan Street and Halsey Street, between the City of Portland boundary and the NE 238th Avenue interchange with I-84.

TRANSIT SIGNAL PRIORITY

Gresham received a grant from the Metro TSMO program and will replacing aged controllers across the City. The installation of these new controllers allows for transit signal priority at all signalized intersections in Gresham. Installation is expected in 2026-2027.

Gresham has been working with TriMet to implement the new cloud based TSP with the existing SCATS signal system. Beaverton and Washington County also maintain SCATS systems at numerous signals and coordination across the region is ongoing. Early ideas are for custom software solutions or integrating a 3rd vendor that can translate between the two systems.

REAL-TIME TRAVELER INFORMATION AND INCIDENT MANAGEMENT

The East Metro Connections ITS project will install a new arterial changeable message sign (CMS) for northbound 181st Ave. south of I-84. ODOT will be installing similar arterial signs approaching I-84 interchanges in Fairview, Wood Village, and Troutdale, as well as installing a new freeway signs on westbound I-84 near NE 201st Avenue. All of these signs, which will be operated 24 hours a day by ODOT's Traffic Management and Operations Center in downtown Portland, will warn drivers of congestion on the freeway and suggest alternate routes.

The arterial and freeway CMS will also be used, together with special traffic signal timing plans, to operate the I-84 Active Corridor Management system. , the Active Corridor Management system will provide a relatively high-capacity parallel travel route when the freeway is blocked or severely reduced in capacity.

The Traffic Signal System and Communications Master Plan includes the planned construction of arterial CMS at the following locations:

- On Hogan Drive south of Glisan Street.
- On NE 181st Avenue south of Halsey (southbound).
- On US-26 south of Palmquist Road (both directions, freeway-sized CMS).

A long-term goal is to provide drivers on the I-84 freeway and highway US-26 with travel time information on the four major north-south routes through East Multnomah County. Using sensors that pick up unique identifiers from passing vehicles (such as Bluetooth sniffers), the system would calculate real-time travel times and then display them on the eastbound freeway CMS and northbound US-26 CMS signs. This service would work to spread traffic congestion evenly across the four major routes, allowing for the fullest possible use of the existing arterial infrastructure in East County.

8. Truck and Rail Freight System

Freight mobility is essential to the movement of goods and services. National and international freight movement contributes significantly to the city's regional and local economies. The "2045 Commodity Flow" analysis completed by Metro for the region, predicts freight volume growth to exceed 70% between 2020 and 2045[1].

The significant growth in freight projected by the 2045 Commodity Flow Analysis indicates the need to ensure adequate land for expansion of intermodal facilities, manufacturing, wholesale and distribution activities, and to maintain and enhance the freight transportation network. Figure 5-8 is the freight network plan.

TRUCK FREIGHT

Trucks are a critical part of moving goods within the Portland metropolitan region. Gresham continues to build out the network defined by the **East Metro Connections Plan** to ensure adequate mobility and access for freight movement to, through, and from Gresham. The City and the Port of Portland continue to collaborate on transportation improvements that support Gresham Vista Business Park, a shovel-ready employment site that continues to attract industrial development.

- Stark & 223rd Intersection: This project adds left turn lanes to clear congestion from this main route to I-84. Stark & 223rd Intersection construction 2026.
- Stark & Hogan Intersection: Planned for SCATS upgrade to signal.
- Hogan/242nd widening: This project adds additional roadway capacity along this corridor, particularly south of Powell, along with opportunities for access and safety enhancements to the existing conditions.
- Springwater Plan Area evaluation: The City is currently evaluating the future land uses in the Springwater Plan Area, which are currently industrial, but face multiple barriers to development.
  - ***Catalyst projects:*** *Intersection improvements on Stark and Glisan.*
- Identify and correct safety problems on the freight network including roadway geometry and traffic control deficiencies, at-grade rail crossings, and truck-infiltration into neighborhoods.

RAIL FREIGHT SYSTEM

The Union Pacific heavy rail line serves the Rockwood-Banfield Corporate Park industrial areas. This line crosses the north side of the city and has two parallel branches, the mainline north of and parallel to Sandy Boulevard (1.8 miles) and the branch line parallel to I-84 (2 miles) that provides direct rail service to Rockwood-Banfield Corporate Park industrial areas and several large manufacturing and distribution uses. The area enjoys tri-weekly rail service. The Gresham industrial areas served by the Union Pacific allows the City to more effectively encourage the location of businesses needing direct and efficient rail service with the assurance that rail service will continue to be provided for those businesses.

[1] https://www.oregonmetro.gov/sites/default/files/2024/04/23/Metro_CmmdtsMvmtStdy_Final-Report.pdf

Figure 5-8. Freight System Plan