

## TRANSPORTATION NEEDS & IMPROVEMENTS

**TO:** Cooper Mountain Community Plan PMT  
**FROM:** Carl Springer, Kevin Chewuk and Rochelle Starrett | DKS  
**DATE:** December 8, 2020

### Purpose and Overview

---

The purposes of this memorandum are to:

1. Review and summarize prior and ongoing transportation planning studies for the greater Cooper Mountain and River Terrace areas
2. Identify key transportation issues and constraints for advancing urban development
3. Summarize transportation improvements that have been recently built and identify those that have not
4. Identify critical transportation issues yet to be resolved

The studies and projects discussed in this report have been under review for many years. This is reflective of the many transportation challenges, particularly funding, that exist for implementing needed transportation solutions and improving the area's transportation system. It is also reflective of the scale of the improvements that are needed, for example the extension of Tile Flat Road to connect to the River Terrace area and the introduction of transit to the area. This memo provides a snapshot of the needs, issues and constraints as they are currently known, and the implications for the Cooper Mountain Community Plan project.

The Cooper Mountain Community Plan's working goals are listed below. They provide the high-level outcomes that transportation needs and solutions should be aligned with. The working goals are:

- Create equitable outcomes for residents, including historically under served and underrepresented communities.
- Provide new housing in a variety of housing types and for all income levels.
- Preserve, incorporate, connect, and enhance natural resources.
- Improve community resilience to climate change and natural hazards.
- Provide public facilities and infrastructure needed for safe, healthy communities.
- Provide safe, convenient access to important destinations while supporting transportation options, including walking and biking.
- Provide opportunities for viable commercial uses, including places to work and places to buy goods and services.



- Identify feasible, responsible funding strategies to turn the vision into a reality.

## Recent and Ongoing Transportation Studies

---

Previous planning efforts for the South Cooper Mountain and River Terrace areas have identified a variety of issues and constraints of the existing transportation system, as well as projects to improve it. These studies include the South Cooper Mountain Community Plan, the River Terrace Community Plan in Tigard, the Urban Reserve Transportation Study (URTS) in Washington County, South Beaverton Transit Feasibility Study, and TriMet's Southwest Service Enhancement Plan. Together, these planning efforts set up a framework for an accessible and connected network of new streets, and facilities for pedestrians and bicyclists and for implementation of transit service in the future.

## Key Issues and Constraints

The Cooper Mountain Community Planning effort is an opportunity to further shape the transportation system framework of the area established by previous studies. Through the Cooper Mountain Community Plan, prior transportation system recommendations and outstanding issues and constraints for the Plan area summarized in the following sections will be reviewed to ensure they align with current goals and desired outcomes for the Plan area.

### Pedestrians and Bicyclists

The Cooper Mountain Community Plan area is largely rural today, characterized by high speed roadways that have not been improved to urban standards and generally lack accommodation for pedestrian and bicycle users. Significant segments of major streets connecting the study area to nearby services and amenities, including Scholls Ferry Road, 175<sup>th</sup> Avenue, Tile Flat Road and Grabhorn Road, lack pedestrian and bicycle accommodations.

Segments of Scholls Ferry Road and 175<sup>th</sup> Avenue have recently been improved to include pedestrian and bicycle facilities along the frontage of new development, and a short segment along Kemmer Road between 190<sup>th</sup> Avenue and 175<sup>th</sup> Avenue also provides a sidewalk on one side of the street, near the Cooper Mountain Nature Park. However, most existing roadways in the Plan area require users to walk or bike along the edge of the roadway due to the lack of facilities. The posted speeds along many of these roadways often range between 45 and 55 miles per hour and are generally not conducive to shared walking and biking travel.

The expansion of pedestrian and bicycle facilities near the Cooper Mountain Community Plan area will continue to incrementally occur over time as new development occurs and facilities are required as part of all new or reconstructed roadways. This includes the buildout of the pedestrian and bicycle networks planned as part of the South Cooper Mountain Community Plan, such as the on-street facilities associated with the Barrows Road extension to SW Tile Flat Road and SW Mountainside Way extension to SW Grabhorn Road (see Table 3 later in this document for more details).



The Cooper Mountain Community Plan area will establish a high-quality pedestrian and bicycle network to support access to residents' basic needs through safe, comfortable, and convenient facilities. The network will focus on the movement of people over the movement of vehicles and allow residents of all income levels equitable access to opportunities provided by the transportation system. This network of on-street pedestrian and bicycle facilities, off-street trails and shared use paths, and street crossing opportunities will allow all users to seamlessly reach destinations, including transit stops, schools, critical services, parks, open spaces and natural areas, and areas of employment.

## Transit

Transit service is not currently provided in the study area, and the nearest stop is located nearly two miles away at SW Scholls Ferry Road/SW Teal Boulevard/SW Horizon Boulevard intersection (greater than the typical trip length for the average walking or biking trip). However, TriMet plans to extend Route 56 down Scholls Ferry Road to serve South Cooper Mountain in FY 22/23.

Park and ride facilities are provided for transit users at several locations in Beaverton, with the closest to the study area being along Davis Road near Murray Boulevard and along Scholls Ferry Road, just north of Highway 217.

The future transit service expansion brings service closer to existing and future Cooper Mountain residents. This service extension will allow users to connect with other regional transit service at the Washington

Square Transit Center, making more goods and services throughout the Portland metropolitan area accessible. Although most Cooper Mountain residents will still be more than ¼ mile from transit stops associated with the service expansion into the South Cooper Mountain neighborhood, all residents should have direct, safe, and convenient access to transit. Any improvements should not preclude additional expansion of transit service into the Cooper Mountain Community Plan area and should be coordinated with bicycle and pedestrian improvements.

---

TriMet Line 56 currently connects Washington Square Mall, Raleigh Hills, Hillsdale and Portland City Center. TriMet's 2015 Southwest Service Enhancement Plan calls for the expansion of Line 56 to Progress Ridge and South Cooper Mountain. With passage of the 2017 state transportation package, TriMet moved forward with plans to expand their service boundary and implement new service to Progress Ridge and South Cooper Mountain starting FY 21/22.

In March 2020, the City Council approved a Resolution supporting a proposed service boundary expansion into South Cooper Mountain. However, the impacts on transit due to the COVID-19 pandemic have since delayed TriMet's plans. TriMet hopes to expand Line 56 in either September 2022 or March 2023 (FY 2022/23), one year later than originally anticipated. That is the earliest they foresee, but it may have to be later if revenues continue to decline.

---



## Street Connectivity

The existing roadways in the Cooper Mountain Community Plan area are significantly constrained by the sloping topography, which leads to high grades, narrow roads, and sharp turns. The topography combined with the rural development patterns significantly limits existing roadway connectivity in the Plan area. North-south vehicle traffic through the area are limited to indirect routes via SW Tile Flat Road, SW Grabhorn Road, SW 175<sup>th</sup> Avenue, and SW Roy Rogers Road. East-west routes, including SW Farmington Road and SW Scholls Ferry Road, are more direct through the area, although there is limited east-west local street connectivity beyond these corridors. The limited street connectivity also creates longer trip distances for users that walk or bike.

The South Cooper Mountain Community Plan included roadway extensions to complete the network and fill the connectivity gaps. Some of these roadways have been constructed with new development and many others are conditioned to be constructed with development in the near future (see Table 3 later in this document for more details). The Cooper Mountain Community Plan should plan for further extensions of these roadways into and through the area. This network will allow local trips to occur without traveling on the major regional roadway network but should be designed to fit seamlessly into the neighborhood and not become a barrier for pedestrian or bicycle travel.

## Intersection Operations

Recent traffic operational analysis at nearby intersections identified areas in need of improvements. These improvements were identified to address anticipated traffic growth resulting from development in the South Cooper Mountain Community Plan area, as well as other regional traffic growth. The traffic operations analysis completed to identify these locations relied on adopted mobility targets that were current when the analysis was originally completed. These targets are one tool used to identify projects to support motor vehicle travel, although additional criteria is considered with the motor vehicle needs (e.g. pedestrian and bicycle needs) to ensure the transportation system is accessible and connected for all users.

---

Mobility targets for streets and intersections provide a metric for assessing the impacts of new development on the existing transportation system and for identifying where capacity improvements may be needed. They are the basis for requiring improvements needed to sustain the transportation system as growth and development occur. The City of Beaverton<sup>1</sup>, Washington County<sup>1</sup>, Metro<sup>1</sup> and Oregon Department of Transportation (ODOT standards are consistent with the regional standards) have adopted standards that apply to nearby intersections.

---

Many of the previously identified locations have since had improvements implemented, such as the installation of traffic signals at the SW Scholls Ferry Road/SW Tile Flat Road,



SW Roy Rogers Road/SW Bull Mountain Road and SW Roy Rogers Road/SW Beef Bend Road intersections, and roundabout at the SW Kemmer Road/SW 175th Avenue intersection. A summary of the previously forecasted congested locations, along with the recommended improvement status, is shown in Table 1.

**Table 1: Previously Identified Operational Issues from South Cooper Mountain and River Terrace Community Plans**

Forecasted Congested Locations	Recently Constructed Improvements
<b>SW Riger Road/ SW 170th Avenue</b>	None; Planned traffic signal or roundabout
<b>SW Kemmer Road/ SW 175th Avenue</b>	Roundabout
<b>SW Scholls Ferry Road/SW Tile Flat Road</b>	Traffic signal
<b>SW Roy Rogers Road/SW Bull Mountain Road</b>	Traffic signal
<b>SW Roy Rogers Road/SW Beef Bend Road</b>	Traffic signal
<b>SW Scholls Ferry Road (SW Horizon Boulevard/SW Teal Boulevard to west of SW Roy Rogers Road/SW 175<sup>th</sup> Avenue)</b>	Widening to 5-lanes

The Urban Reserves Transportation Study (URTS) more recently completed an assessment of transportation needs within the urban reserve areas of Washington County, including within the Cooper Mountain Community Plan area. The URTS work assumed all the Washington County urban reserve areas would be fully developed by 2040. This is a conservative look in some areas given that the urban reserves represent a 50-year land supply and may not be fully developed by the 2040 horizon of the study. The new transportation projects identified through this process are intended to supplement the County system to make the long-term growth supportable. Most of the identified supplemental projects are not in the County's current TSP; these projects will be refined and adopted through the various local Concept Plans or TSPs that are currently underway (including the Cooper Mountain Community Plan). Ongoing coordination between the cities and county is required to determine the final alignments, timing, and funding sources for these projects.

The URTS reconfirmed the increased congestion through 2040 previously forecasted in the South Cooper Mountain Concept Plan along several major corridors in the area, including:

- SW Roy Rogers Road
- SW 175<sup>th</sup> Avenue
- SW Tile Flat Road
- SW Grabhorn Road



The URTS study suggested potential improvements to consider, including controlling access, Transportation System Management and Operations (TSMO), or other capacity enhancements. It also suggests constructing parallel routes, including through the Cooper Mountain Community Plan area, to provide travel options for local trips and help manage capacity of these major roadways. This study also identified future intersection capacity needs, summarized below in Table 2.

**Table 2: Identified Nearby Future Operational Issues from the Urban Reserve Transportation Study**

Forecasted Congested Locations	Identified Improvements
<b>SW 170<sup>th</sup> Avenue/SW Rigert Road</b>	New traffic signal or roundabout (included in South Cooper Mountain Community Plan)
<b>SW Clark Hill Road/SW Tile Flat Road</b>	New traffic signal or roundabout; (not included in South Cooper Mountain Community Plan)
<b>SW Scholls Ferry Road/SW Clark Hill Road</b>	None; Future study needed
<b>SW Clark Hill Road/SW Farmington Road</b>	None; Future study needed
<b>SW 185<sup>th</sup> Avenue/SW Bany Road</b>	None; Future study needed
<b>SW Tile Flat Road/SW Barrows Road Extension</b>	None; Future study needed

## Previously Recommended Transportation Projects

Recommended projects from the recent studies are summarized below in Table 3 and shown in Figures 1 and 2. Some of these projects have been constructed with new development and many others are conditioned to be constructed with development in the near future. These projects include street extensions and roadway upgrades with pedestrian and bicycle facilities, intersection improvements or crossing enhancements for vehicles, pedestrian and bicyclists, shared use paths, and other projects. Some of the previously identified shared use path projects are adjacent to existing or planned roadways. Although these projects are shown as separate projects from the roadway element, they combine to provide complete streets for all users. The Cooper Mountain Community Plan will address appropriate locations to construct on-street pedestrian or bicycle facilities (including roadway adjacent shared use paths), or off-street shared use path facilities to ensure that all new roadways are constructed as complete streets.



**Table 3: Summary of Previously Identified Projects from South Cooper Mountain Community Plan**

ID	Project Description	Status*	Cost Estimate (2020) **
<b>Projects Constructing or Realigning Streets On-Site</b>			
1	Extend 185th Avenue from Gassner Road to Kemmer Road as a 3-lane County arterial.	Planned	\$6,626,000
2	Realign 175th Avenue between Outlook Lane and Cooper Mountain Lane, as a 3-lane County arterial.	Planned	\$6,552,000
3	Realign the curve along Grabhorn Road near Stone Creek Drive, as a 3-lane County arterial.	Planned	\$5,263,000
4	Realign the curve along Grabhorn Road north of Tile Flat Road, as a 3-lane County arterial.	Planned	\$3,371,000
5	Realign Grabhorn Road east to provide a through connection with Tile Flat Road, as a 3-lane County arterial.	Planned	\$5,419,000
6a	Create a new east-to-west 3-lane City Collector street from Tile Flat Road to the new north-to-south Collector Street.	Development Condition of Approval; Incomplete	\$3,745,000
6b	Create a new east-to-west 3-lane City Collector street from the new north-to-south Collector Street to 175th Avenue.	Development Condition of Approval; Incomplete	\$12,620,000
6c	Create a new east-to-west 3-lane City Collector street from 175th Avenue to Loon Drive.	Development Condition of Approval; Partially complete	\$9,813,000
7	Extend Tile Flat Road between Scholls Ferry Road and the Roy Rogers Road/Bull Mountain Road intersection, as a 3-lane County arterial.	Planned	\$21,604,000
8a	Create a new north-to-south 2-lane City collector street between Grabhorn Road and the UGB, just south of the Alvord Lane Extension	Development Condition of Approval; Incomplete	\$10,888,000
8b	Create a new north-to-south 2-lane City collector street between the UGB, just south of the Alvord Lane Extension and Scholls Ferry Road	Development Condition of Approval; Incomplete	\$12,677,000
8c	Create a new north-to-south 2-lane City collector street between Scholls Ferry Road and the Tile Flat Road extension.	Development Condition of Approval; Incomplete	\$2,226,000



ID	Project Description	Status*	Cost Estimate (2020) **
<b>Projects Improving Existing or Proposed Intersections</b>			
9	Construct a traffic signal or roundabout at the Rigert Road/170th Avenue intersection.	Planned	\$2,301,000
10	Construct a roundabout at the Kemmer Road/175th Avenue intersection.	Completed	\$2,876,000
11	Construct a westbound right turn lane at the Scholls Ferry Road/ Horizon-Teal Boulevard intersection.	Planned	\$576,000
<b>Projects Upgrading Existing County Streets to Urban Standards</b>			
12	Improve Scholls Ferry Road from Roy Rogers Road-175th Avenue to Tile Flat Road as a 5-lane County arterial.	Development Condition of Approval; Incomplete	\$9,393,000
13a	Improve Tile Flat from Scholls Ferry Road to the UGB, north of the new east-to-west Collector Street, as a 3-lane County arterial.	Development Condition of Approval; Incomplete	\$3,480,000
13b	Improve Grabhorn Road from the UGB, north of the new east-to-west Collector Street, to the UGB, near Stone Creek Drive, as a 3-lane County arterial.	Planned	\$4,797,000
13c	Improve Grabhorn Road from the UGB, near Stone Creek Drive, to Gassner Road, as a 3-lane County arterial.	Planned	\$4,987,000
14a	Improve 175th Avenue from Scholls Ferry Road to the UGB, north of Alvord Lane, as a 3-lane County arterial.	Development Condition of Approval; Completed	\$8,162,000
14b	Improve 175th Avenue from the UGB, north of Alvord Lane, to Kemmer Road as a 3-lane County arterial.	Planned	\$4,533,000
15	Improve Kemmer Road from 175th Avenue to the 185th Avenue extension as a 3-lane County arterial.	Planned	\$2,980,000
16	Improve Gassner Road from Grabhorn Road to the 185th Avenue extension as a 2-lane County collector.	Planned	\$2,848,000
<b>Projects to Construct Community Shared-Use Path or Enhanced Street Crossings***</b>			
17a	Construct a community shared-use path (South Cooper Loop Trail) along the east side of Grabhorn Road and Tile Flat Road, between Scholls Ferry Road and the UGB.	Development Condition of Approval; Incomplete	\$650,000





ID	Project Description	Status*	Cost Estimate (2020) **
17b	Construct a community shared-use path (South Cooper Loop Trail) along the east side of Grabhorn Road and Tile Flat Road, between the UGB and the west side of the Cooper Mountain Nature Park.	Planned	\$1,456,000
18	Construct a community shared-use path (South Cooper Loop Trail) along the north side of Scholls Ferry Road, between Tile Flat Road and 175th Avenue.	Development Condition of Approval; Incomplete	\$1,151,000
19a	Construct a community shared-use path (South Cooper Loop Trail) along the west side of 175th Avenue, between Scholls Ferry Road and the UGB.	Development Condition of Approval; Completed	\$1,622,000
19b	Construct a community shared-use path (South Cooper Loop Trail) along the west side of 175th Avenue, between the UGB and Weir Road.	Planned	\$1,513,000
20	Construct a community shared-use path, along the south side of the proposed neighborhood route between the proposed north-to-south collector street and 175th Avenue.	Development Condition of Approval; Incomplete	\$748,000
21	Construct a community shared-use path, along the north side of the proposed neighborhood route connecting the proposed north-to-south collector street with the proposed east-to-west collector street, east of 175th Avenue	Development Condition of Approval; Incomplete	\$645,000
22	Install crosswalk and pedestrian activated flasher on 175th Avenue at Weir Road.	Planned	\$93,000
<b>Projects Identified in Previous Studies or Plans that were Re-Affirmed by the South Cooper Mountain Concept Plan</b>			
-	Widen 209th Avenue-Grabhorn Road to five-lanes, north of Leland Drive.	Planned	\$31,508,000
-	Widen Farmington Road to five-lanes through the 185th Avenue intersection.	Planned	\$27,608,000
-	Add a westbound right turn lane at the Murray Boulevard/Beard Road-Brockman Road intersection.	Planned	\$277,000
-	Install a traffic signal at the Roy Rogers Road/Bull Mountain Road intersection.	Completed	\$409,000
-	Widen Roy Rogers Road-175th Avenue to five-lanes from Scholls Ferry Road to just south of Beef Bend Road.	Under construction - estimated completion 12/31/21	\$38,059,000



ID	Project Description	Status*	Cost Estimate (2020) **
23	Construct a regional shared-use path (Cooper Mountain Regional Trail) between the 175th Avenue/Weir Road intersection, the 185th Avenue/Gassner Road intersection (along the west side of the 185th Avenue extension), and the Grabhorn Road/Gassner Road intersection.	Planned	\$3,354,000

\* Project status provided by Luke Pelz, City of Beaverton; \*\* 2020 cost estimate derived by factoring original 2015 cost estimate in the South Cooper Mountain Concept Plan; \*\*\* **Shared use paths are listed here for project identification and costing purposes as they were previously identified in the 2013 South Cooper Mountain Community Plan. Beaverton's current policy approach which plans and develops shared use paths as part of complete streets will be applied to refine these projects in the current planning process.**

Figure 1. Previously Identified Transportation Projects from the South Cooper Mountain Community Plan

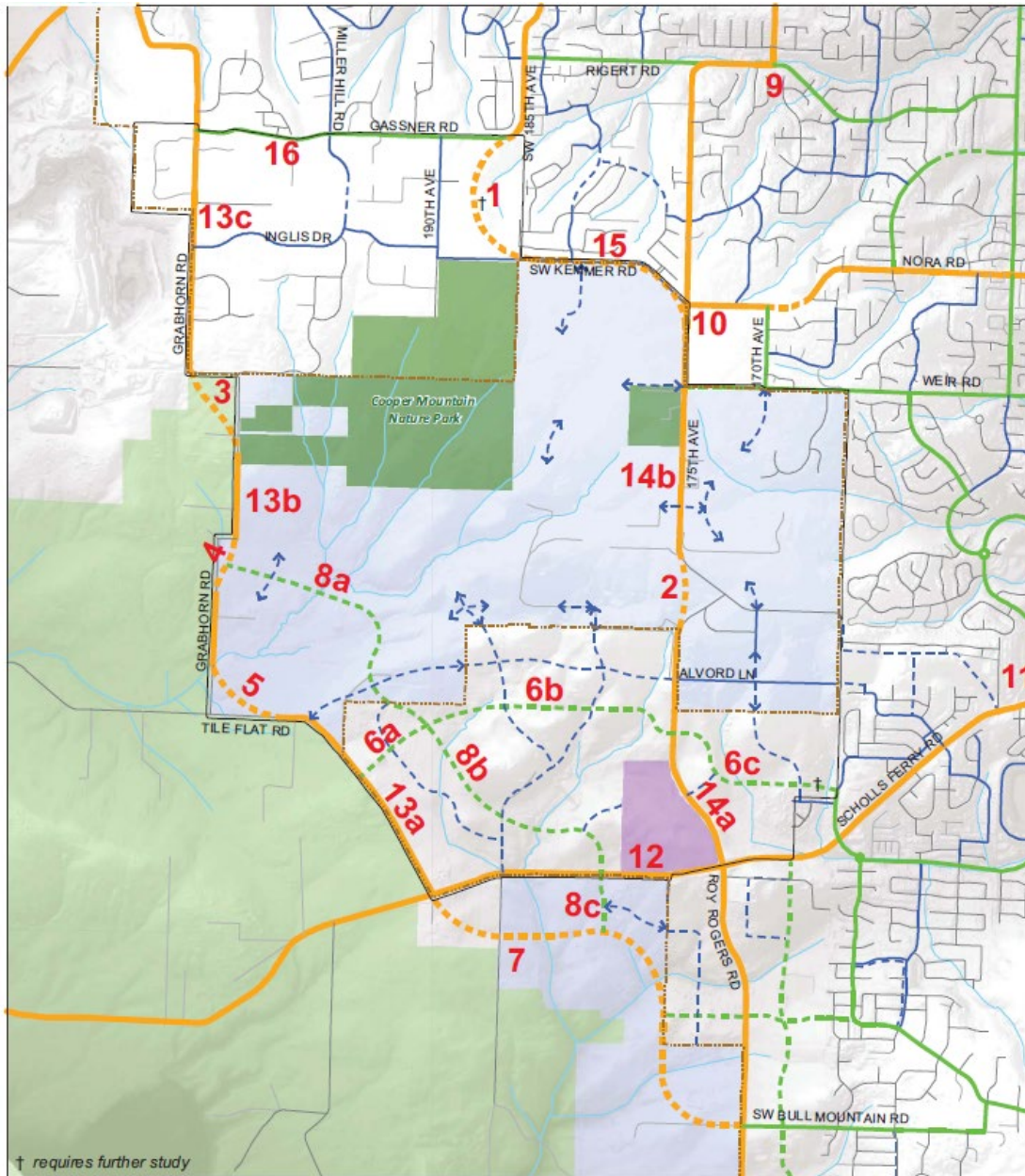
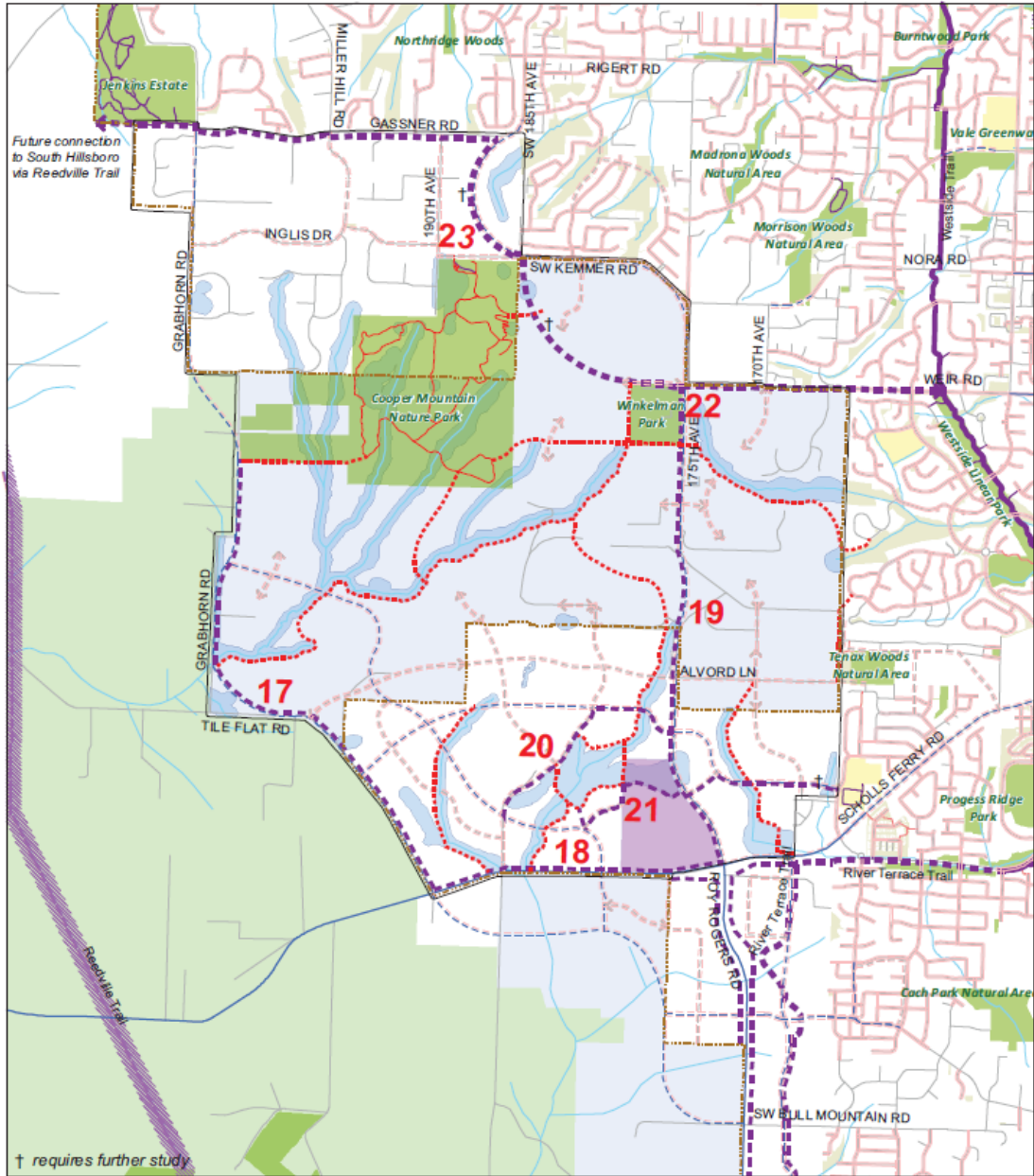




Figure 2. Previously Identified Pedestrian and Bicycle Projects from the South Cooper Mountain Community Plan



The URTS identified supplemental projects needed to support additional development in Washington County's urban reserve areas. Washington County staff and URTS Technical Advisory Committee members identified the following projects for additional feasibility analysis (see Figure 3). Many of these projects were previously recommended in the South Cooper Mountain Community Plan, as indicated below. Additional refinement and coordination with local agencies will be needed to determine the appropriate scale and design of these projects, including provisions for pedestrian and bicycle facilities.

1. SW 175<sup>th</sup> Avenue Widening and Realignment (SW Weir Road to SW Barrows Road)
  - This is consistent with Project 2 and 14b from the South Cooper Mountain Community Plan.
2. SW 185<sup>th</sup> Avenue Extension (SW Gassner Road to SW Kemmer Road)
  - This is consistent with Project 1 from the South Cooper Mountain Community Plan.
3. SW Tile Flat Road Extension (SW Bull Mountain Road to SW Beef Bend Road)
  - This is consistent with Project 7 from the South Cooper Mountain Community Plan.
4. SW Cornelius Pass Road Extension (SW Rosedale Road to SW Farmington Road)
5. SW Farmington Road Widening (SW 209<sup>th</sup> Avenue to SW Cornelius Pass Road Extension)
6. Local circulation within urban reserves, including Cooper Mountain
  - Consistent with Project 6a, 6b, 8a, 8b, and 8c from the South Cooper Mountain Community Plan.

**Figure 3. URTS Projects to be Further Studied**





## Implications for the Cooper Mountain Community Plan

---

Through the Cooper Mountain Community Plan, prior transportation system recommendations and outstanding issues and constraints for the Plan area will be reviewed to ensure they align with current goals and desired outcomes for the Plan area. Based on the findings in this memo, the following is a summary of the key transportation recommendations for the Cooper Mountain Community Plan.

- Refine previously planned projects through the Cooper Mountain Community Plan area to ensure they align with current objectives.
- Focus on the movement of people over the movement of vehicles.
- Establish a high-quality pedestrian and bicycle network to support access to residents' basic needs through safe, comfortable, and convenient facilities.
- Coordinate future transit service expansion with bicycle and pedestrian improvements to ensure that all residents have safe and convenient access to transit.
- Complete on-street and off-street network connectivity gaps that allow for shorter trip distances for users that walk or bike.
- Identify roadway extensions to complete the network and allow local trips to occur without traveling on major roadways.
- Design roadway improvements to fit seamlessly into the neighborhood and not become a barrier for pedestrian or bicycle travel.
- Define funding and implementation plans for the area's priority projects that will likely be led by the public sector.