



February 2, 2015

LONG RANGE PLANNING ISSUE PAPER NO. 2015-01B

Cooper Mountain Transportation Planning: Issues and Options

Issue

The City of Beaverton recently completed the South Cooper Mountain Concept Plan (Concept Plan), which includes the South Cooper Mountain Annexation Area (SCMAA), Urban Reserve Area 6B (Urban Reserve), and North Cooper Mountain (*Figure 1*). The Concept Plan includes land use, transportation and natural resource recommendations for the above three areas pursuant to Title 11 of Metro's Urban Growth Management Functional Plan. Title 11 guides local planning efforts in the preparation of *concept plans* for urban reserves and the more detailed and comprehensive *community plans* required for areas recently added to the UGB.

During the concept planning process, transportation issues and options were a large part of the discussion. Three key elements of the transportation framework developed through the Concept Plan address identified transportation issues for Washington County. These elements are discussed in this Issue Paper and include: dispersing and balancing regional traffic, providing a well-connected street network, and providing a functional pedestrian and bicycle network.

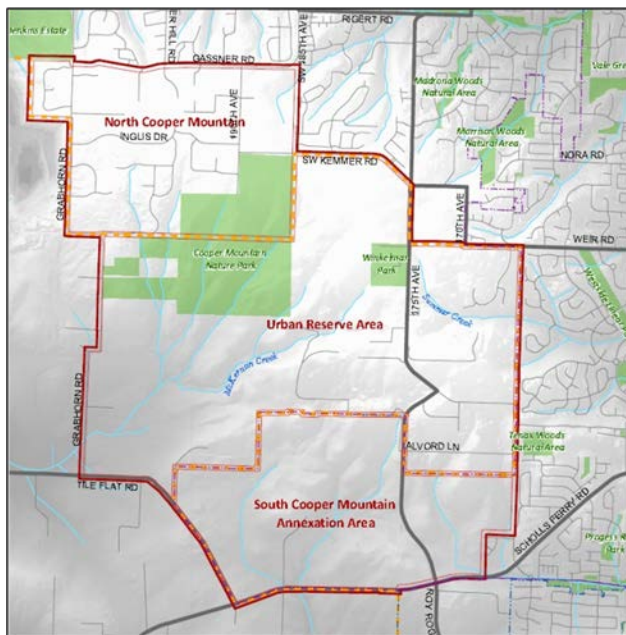


Figure 1

This Issue Paper discusses policy issues and timing questions specific to Cooper Mountain **transportation** planning to allow for potential action by the Board of Commissioners on substantive questions as well as timing relative to this year's Work Program. Issues and options related to land use and natural resources are presented in Issue Paper 2015-1A.

Recommendation

Staff recommends the Board provide direction to include **transportation** elements of the South Cooper Mountain Concept Plan as part of a Transportation System Plan (TSP) update in 2015 as outlined in this Issue Paper.

**Department of Land Use & Transportation · Planning and Development Services
Long Range Planning**

155 N First Avenue, Ste. 350 MS 14 · Hillsboro, OR 97124-3072
phone: (503) 846-3519 · fax: (503) 846-4412 · www.co.washington.or.us

Background

Title 11 of Metro's Urban Growth Management Functional Plan requires concept plans for urban reserve areas outside the UGB and more detailed community plans for areas newly added to the UGB. Concept plans are non-regulatory documents designed to inform the necessary specifics required in community planning. Concept plans generally provide a relatively broad context in the identification of transportation, housing, and resource preservation needs. Specific uses are mapped generally across particular locations.

Community plans and other elements of the Comprehensive Plan, on the other hand, ensure that areas are urbanized efficiently through more detailed descriptions and mapping and include supporting documents that refine agreements specific to urban service provision, funding options, and implementation strategies. Land use designations and transportation networks are described and mapped, the number and types of housing units is determined, and areas are set aside for the provision of public uses such as parks and schools. Metro typically requires community planning to be completed within two years of addition into the UGB.

Washington County's Transportation System Plan, an element of the Comprehensive Plan, serves as the guiding document establishing the policies, projects and programs necessary to achieve Washington County's transportation goals. The TSP addresses the major roadway system, transit, pedestrian, bicycle and freight transportation issues and focuses on specific system requirements. The TSP designates major transportation system elements and provides classifications indicative of their existing and/or planned function, right-of-way needs, general location and general size.

South Cooper Mountain Concept Plan:

Metro Ordinance No.11-1264B added the SCMAA into the UGB and directed the City of Beaverton, with county support, to lead concept planning for the SCMAA and the Urban Reserve. The inclusion of North Cooper Mountain as part of the concept planning area was formalized in a February, 2013 Intergovernmental Agreement between Beaverton and Washington County. Combining these three areas into one concept planning area recognized the need to holistically plan for transportation, residential development, and natural resource considerations for the entire south slope of Cooper Mountain.

Prior Board discussion

On January 20, 2015, the Board of Commissioners acknowledged the South Cooper Mountain Concept Plan through Resolution and Order 2015-4. At that time, Board members expressed concern regarding certain proposed transportation system improvements in the Concept Plan area. As detailed below, staff recommends some elements of the transportation framework developed in the SCMCP should be incorporated into the county's TSP and that county staff should continue coordination with the City of Beaverton on its Implementation Plan, as appropriate.

Transportation Considerations

Cooper Mountain has primarily rural roads that serve urban transportation needs. The key transportation challenge is how to plan for growth and ensure solutions are delivered for multiple inter-related needs: high volumes of regional through-traffic; intersections and road sections with

known safety and capacity issues; almost no existing pedestrian and bicycle system; and the vision to provide transportation options. Transportation planning for the North Cooper Mountain area is folded into the broader transportation planning for the entire South Cooper Mountain Concept Plan area (Figure 2).

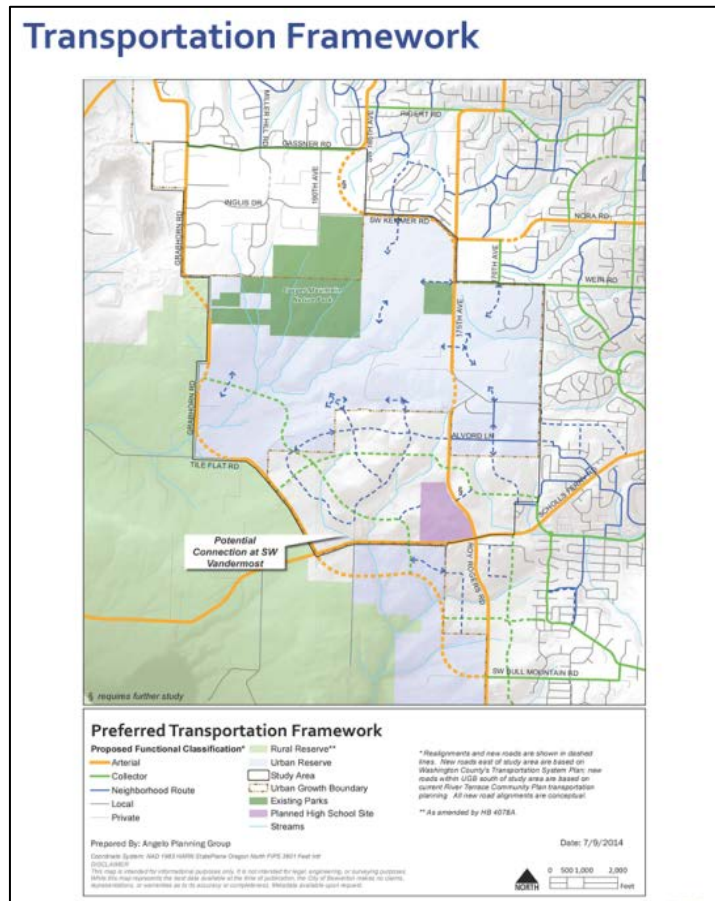


Figure 2

Transportation-related issues generated the most discussion among attendees at Beaverton’s open houses and at the county’s Oct. 29 open house. The majority of comments addressed congestion and whether existing road capacity and proposed road improvements will accommodate expected new development for the SCMAA and regional growth in general. Some attendees expressed a strong preference for diverting regionally-based traffic around Cooper Mountain using Tile Flat Road and Clark Hill Road. Safety concerns resulting from urban-to-urban traffic traversing unimproved Collector and Arterial roadways were noted in multiple conversations and in submitted written comments. Many of the comments staff has received to date respond to proposed improvements for SW 175th Avenue and a future alignment needed to connect SW 175th Avenue and SW 185th Avenue.

These comments include:

- Requests to not improve the “kink”, since it currently acts to calm traffic;
- Divert any future funding to improve SW 175th Avenue to other priorities;
- Improve the existing alignment of SW Gassner, SW 190th Ave and SW Kemmer as an alternative to extending SW 185th; and
- A preference for a straight alignment of the 185th extension.

A citizen group (Save 175th Avenue) organized in opposition to the proposed transportation improvements for the segment of SW 175th Avenue within the Concept Plan area. The group consists primarily of property owners adjacent to or near SW 175th Avenue. The group’s primary interest is to direct future regionally-based traffic around Cooper Mountain rather than over the top of the mountain. Current state rules and regulations pertaining to planning outside an urban growth boundary limit our ability to explore certain major north-south route alternatives (i.e. around the mountain). However, this issue will be considered over the next 18 months as

part of the Washington County Transportation Study. Staff will continue to meet with this group when requested to address concerns and explore future options.

Analysis

For transportation issues, many residents voiced a desire for road safety projects such as intersection improvements on county roads that form the perimeter of the North Cooper Mountain planning area, in addition to adding new sidewalks and bicycle lanes.

As noted above, Concept Plan road improvements for 175th Avenue, a frequently used urban-to-urban arterial that currently is two lanes and typically has heavy traffic during commuting hours and at other times of the day, were often referenced as concerns by area residents. Some residents want improvements that could help minimize the existing traffic burden on this street, whereas many residents that live adjacent to the street want traffic either slowed for safety or funneled to another regional connecting route.

The county remains engaged with Beaverton and appropriate service providers in addressing these issues and in coordinating the transportation recommendations contained in the Concept Plan.

Three key elements of the transportation framework developed through the Concept Plan address identified transportation issues for Washington County, as discussed below. These elements are to disperse and balance regional traffic, provide a well-connected street network, and provide a functional pedestrian and bicycle network.

Disperse and Balance Regional Traffic

It is well documented that north-south traffic in the Concept Plan area is over-reliant on one corridor: the Roy Rogers/175th to 170th Avenue corridor. The solution is to reduce that reliance and disperse regional flows through a combination of improvements and new connections that result in a more complete network (*Figure 2*). Key projects to accomplish this include:

- A. *Improve 175th at high priority locations such as the “kink” and the Kemmer/175th Avenue intersection (Figure 2a).*

Straightening the “kink” is already planned in the Washington County Transportation System Plan (TSP). This proposal was adopted by the Board through A-Engrossed Ordinance No. 588 in 2002.

Beaverton’s Infrastructure Plan for the Concept Plan Area calls for a combination of funding sources including TDT, a proposed Supplemental System Development Charge (still under development), and MSTIP to pay for both the Kemmer/175th Avenue intersection and “kink” projects. No funding has been allocated. The Implementation Plan calls for continued



Figure 2a

coordination on project development for the “kink” improvement with potential construction by 2025.

Staff Recommendation: *No amendment to Washington County’s TSP is necessary. However, continued coordination with the City of Beaverton will be required to implement the proposed improvements and achieve the desired functionality of the 175th Avenue corridor.*

- B. *Connect 175th Avenue to 185th Avenue via Kemmer Road and a new road east of 190th Avenue (Figure 2b).*

The Concept Plan shows a future connection of 175th Avenue and 185th Avenue via an extension of 185th Avenue, an arterial designation of Kemmer Road between Mayberry Place and 175th Avenue and an improved Kemmer/175th Avenue intersection. Staff received a number of comments from property owners directly affected by the proposed 185th Avenue extension. There are five options for the Board to consider as part of future ordinance work:

Option 1: Do nothing.

Analysis: A new connection from 175th Avenue to 185th Avenue is necessary to accommodate future traffic volumes. By not taking action, if once urban-level zoning is applied to the North Cooper Mountain Area and property owners seek to redevelop, the county risks not preserving the ability to extend 185th Avenue. Additionally, while limited development is currently allowed in this area, putting the connection on the map would preserve the opportunity to ultimately construct a roadway.



Figure 2b

Option 2: Amend the TSP to redesignate the existing alignment of SW Gassner, SW 190th Ave and SW Kemmer to an arterial as an alternative to extending SW 185th.

Analysis: This option may be feasible by realigning the 90-degree curves at Gassner/190th Avenue and 190th Avenue/Kemmer. Further study is required to determine the feasibility of this option. At a minimum this alternative affects a total of six or more properties, including properties that are approximately one-acre lots with single-family residences.

Option 3: Amend the TSP to show the preferred alternative in the Concept Plan (Figure 2b).

Analysis: This alternative was preferred as it minimizes the impact on the headwaters of Johnson Creek and has a lower associated cost. This alternative affects two to three undeveloped properties and one to two properties with single-family residences and out buildings. Engineering for this proposal has not occurred and future project design could change.

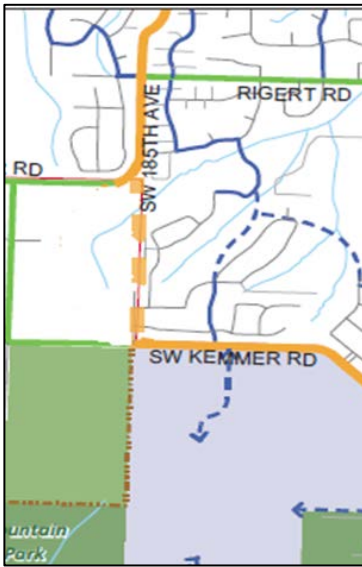


Figure 2c

Option 4: Amend the TSP to show a straight alignment of the 185th extension between Kemmer and Gassner Roads (Figure 2c).

Analysis: Although this alternative minimizes impact to existing properties and residences, a straight alignment requires spanning a ravine over Johnson Creek and significantly increases the cost of the project.

Option 5: Amend the TSP to show the 185th Avenue extension between Gassner Road and Kemmer Road from 190th Avenue to 185th Avenue as a “Refinement Area” (Figure 2d).

Analysis: Refinement Areas are identified locations where further study is needed to determine the mode, function and/or general location of a future transportation improvement. Further study of a Refinement Area may occur through a transportation planning process, capital project development or the land development process. A Refinement Area designation requires a developer to demonstrate how future transportation improvements will not be precluded by a proposed development.

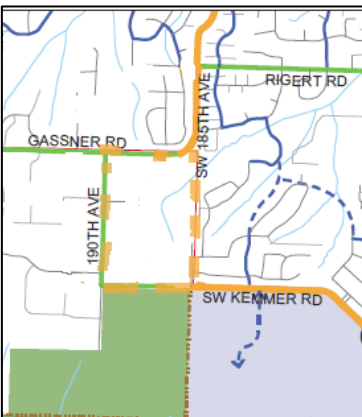


Figure 2d

Staff Recommendation: Staff believes doing nothing is not a viable alternative, but that further analysis is required to determine a preferred alternative. Therefore, staff recommends designating the 185th Avenue extension between Gassner Road and Kemmer Road from 190th Avenue to 185th Avenue as a “Refinement Area” in the Washington County TSP.

C. Reclassify and realign Tile Flat and Grabhorn Roads to help facilitate their function as arterials (Figure 2e).



Figure 2e

Tile Flat Road and Grabhorn Road were reclassified from Collectors to Arterials in the 2014 TSP update. The redesignation results in a consistent functional classification from Scholls Ferry Road to Tualatin Valley Highway. The Concept Plan includes realignments of the three 90-degree corners along Grabhorn Road to improve safety and mobility. There are three options for the Board to consider in addressing the proposed realignments:

Option 1: Do nothing.

Analysis: According to the Concept Plan, the projected need for improving Grabhorn Road is in the 10-20 year timeframe. As the 90 degree corners along Grabhorn Road are either located in

an urban or rural reserve, there is minimal risk of precluding a future realignment of Grabhorn Road as shown in the Concept Plan. Furthermore, the realignments may be allowed (pursuant to OAR 660-012-0065) without amending the TSP.

Option 2: Amend the TSP to reflect the alignments shown in the Concept Plan.

Analysis: Realignment is allowed without an exception to Statewide Goal 3 pursuant to OAR 660-012-0065. Further analysis is required to determine how the urban and rural reserve designations affect the county's ability to amend the TSP to show the realignments.

Option 3: Amend the TSP to show a Rural Road Enhancement Corridor along Tile Flat and Grabhorn Roads.

Analysis: The 2014 TSP update identified Rural Road Enhancement Study Corridors where conflicting travel needs of different users must be considered and monitored. Minor enhancements, including realignments, (consistent with OAR 660-012-0065) may be appropriate to consider along these corridors as resources allow.

Staff Recommendation: *Staff believes doing nothing is a viable alternative in the near-term as the timeframe associated with improving Tile Flat/Grabhorn Road is fairly long-term and the realignments may be achieved without amending the TSP. However, development adjacent to the roadways may preclude or constrain opportunities for roadway improvements.*

D. Improve Scholls Ferry Road to 4/5 lanes west of 175th to Tile Flat Road.

The Concept Plan identified the need to widen Scholls Ferry Road to 4/5 lanes as necessary to accommodate future traffic volumes. Accordingly Beaverton's TSP was amended designating this section of Scholls Ferry Road as 4/5 lane arterial. There are two options for the Board to consider:

Option 1: Do nothing.

Analysis: The north side of Scholls Ferry Road is within the UGB and incorporated to the City of Beaverton. The area south of Scholls Ferry Road is currently outside the UGB and designated as urban reserve and/or undesignated. In the near-term any land use and/or right-of-way implications will be along the north side of Scholls Ferry Road, as development occurs.

Option 2: Amend the county's TSP to incorporate the Concept Plan recommendation of Scholls Ferry Road as a 4/5 lane arterial.

Analysis: Scholls Ferry Road is similar to other roads in the county that divide urban and rural areas. West Union Road is another example of a road that is designated as an urban arterial that establishes the UGB boundary. There are challenges with implementing the planned 4/5 lane designation along these facilities due to the land use restrictions outside the UGB. There has been a number of requests to further evaluate how to achieve the planned network while meeting statewide planning goals and preserving the rural characteristics

adjacent to the roadway. The issue of how to achieve and design these urban/rural roadways will need additional attention at a later time.

Staff Recommendation: *Staff recommends the Board direct staff to amend the county's TSP to be consistent with Beaverton's TSP and designate Scholls Ferry Road as 4/5 lanes west of 175th Avenue/Roy Rogers Road to Tile Flat Road. Staff believes there is little risk in amending the county's TSP to incorporate the Concept Plan recommendation. Staff is not aware of any issues raised through the public process related to this proposal.*

E. Connect Tile Flat Road to Roy Rogers Road (long term).

The Concept Plan identified the need to connect Tile Flat Road and Roy Rogers Road to reduce reliance on 175th Avenue, disperse regional flows, and alleviate pressure on the intersection of Scholls Ferry Road and 175th Avenue. There are two options for the Board to consider:

Option 1: Do nothing.

Analysis: The proposed connection would bisect the area south of Scholls Ferry Road, which as previously mentioned is currently outside the UGB and designated as urban reserve and/or undesignated. Current state rules and regulations pertaining to planning outside an urban growth boundary limit our ability to amend the county's TSP to show the proposed extension of Tile Flat Road. The Concept Plan included the Tile Flat extension as a long-term project, beyond the 20-year horizon. Once the areas south of Scholls Ferry Road are brought into the UGB (in 20-50 years) and additional planning occurs, the Concept Plan will inform decision-making and the Tile Flat extension will be evaluated at that time.

Option 2: Take an exception to state rules and amend the county's TSP to incorporate the Concept Plan recommendation to connect Tile Flat Road and Roy Rogers Road.

Analysis: Further analysis would be required to determine the feasibility of seeking an exception

Staff Recommendation: *Do nothing. Staff believes it is unnecessary to take action on this until the area south of Scholls Ferry Road is brought into the UGB or other policy direction warrants making the connection sooner.*

Provide a Well-Connected Street Network

The Concept Plan’s Transportation Framework set the stage for a connected, walkable local street system that provides transportation choices. Local street connectivity is required with development.

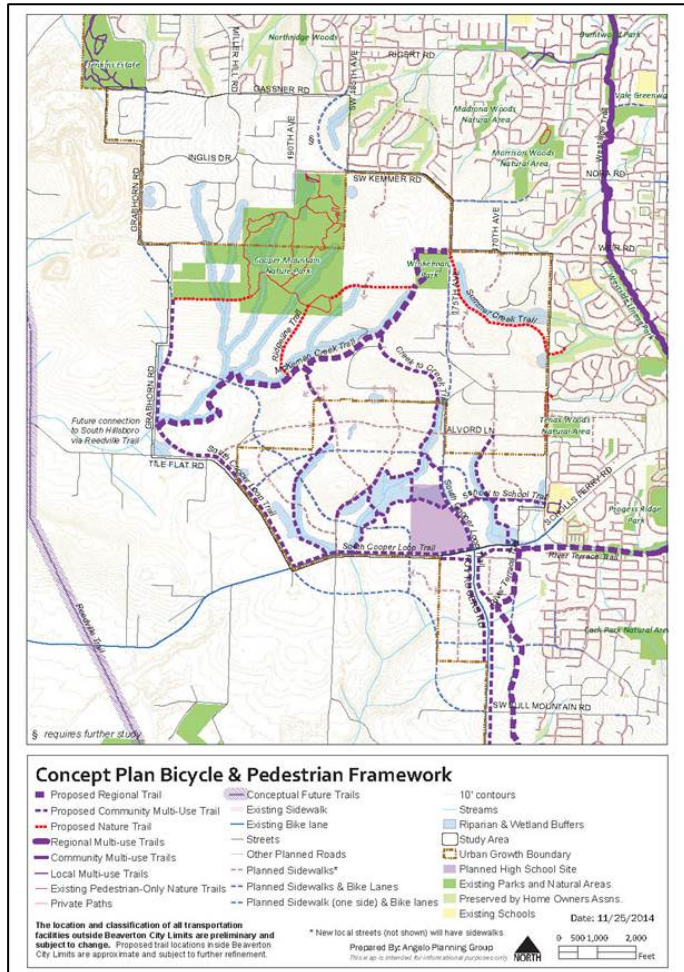


Figure 3

TSP to be consistent with Beaverton’s TSP including some notation that suggests future analysis is required in order to connect a neighborhood route to an arterial.

Analysis: The Concept Plan identified a local street network (city collectors and neighborhood routes) within the SCMAA. No new streets were identified in the other subareas, including North Cooper Mountain, except the 185th Avenue extension discussed above. There were a number of issues and concerns raised by county staff regarding inconsistencies with county access management standards and the proposed local street network connecting to county arterials. The county’s access management standards limit access to arterials from collectors or other arterials. The Concept Plan and subsequent Beaverton TSP amendments show several neighborhood routes connecting directly to county arterials. Footnotes were included in the TSP and Concept Plan with the county’s access management standards as a caveat for future analysis. It is standard practice to amend the county’s TSP to be consistent with a city’s adopted TSP.

Staff Recommendation: Staff recommends the Board direct staff to amend the county’s

Provide a Functional Pedestrian and Bicycle Network

The overall strategy is to provide many types of facilities that will achieve a functional transportation network that can be feasibly implemented. The specific strategies and recommendations are to: (1) ensure all streets are “complete” by providing for pedestrians and bicycles as well as vehicles; (2) plan for multi-use paths that parallel one side of perimeter arterials that frame the area; and (3) complete the Cooper Mountain Regional Trail that provides access to and through resource areas and to Cooper Mountain Nature Park (see Figure 3).

Analysis: Provision of a diverse and connected bicycle and pedestrian network is one of the great opportunities for Cooper Mountain. North Cooper Mountain has one proposed Regional Multi-Use Trail: the Cooper Mountain Regional Trail. This trail will ultimately connect the regional Westside Trail to the planned Reedville Trail (formerly called the BN Powerline Trail) as well as linking to Cooper Mountain Nature Park.

The Concept Plan also proposes multi-use trails adjacent to and/or within county right-of-way, where appropriate. These are assumed to be paved paths that accommodate both pedestrians (including those with disabilities) and bicyclists. They may follow roads, separated from the roadway by a landscaped area, or be located in their own separate right-of-way. Trail width may range from 10 to 14 feet depending on context and surrounding constraints (with 2-foot gravel shoulders wherever feasible). Continued coordination with city and agency partners will be necessary to develop design standards, address land development implications, as well as maintenance and operations of the trails.

Staff Recommendation: *Staff recommends the Board direct staff to amend the county's TSP Bicycle and Pedestrian Modal Plans to be consistent with Concept Plan Bicycle and Pedestrian Framework to show the regional and community multi-use trails.*

South Cooper Mountain Concept Plan Recommended Actions

The completed South Cooper Mountain Concept Plan will function in the future as a guiding document for Beaverton, the county, and area service providers to coordinate and implement future transportation and land use changes for the south slope of Cooper Mountain. The majority of transportation improvements recommended in the Concept Plan are at least 10 years from project development and initiation. Other projects are on a shorter timeline, as noted in Beaverton's Implementation Plan

The Implementation Plan for this study recommends 13 near-term Action Items that the city intends to move forward. Washington County is included as a lead sponsor or shared sponsor (with Beaverton) of the two transportation related Action Items below. The timeframes associated with each Action Item are listed and were current as of November 26, 2014.

- Washington County TSP Amendments: fall 2014-fall 2015.
- 175th Avenue "kink" realignment study – Phase 1: no specified timeframe (see attached).

County TSP amendments for the 2015 long range and transportation planning ordinance season are recommended in this Issue Paper. These proposed amendments are:

- Designation of the 185th Avenue extension between Gassner Road and Kemmer Road as a "Refinement Area";
- Designate Scholl's Ferry Road as 4/5 lanes west of 175th Avenue/Roy Rogers Road to Tile Flat Road;
- Provide consistency with the Beaverton TSP by showing the local street network of the SCMAA; and

- Provide consistency with the Concept Plan Transportation Framework by amending the County TSP Bicycle and Pedestrian Modal Plans.

Depending on Board direction regarding the timeframe for TSP amendments, a modified timeframe may be necessary. Planning and improvements to 175th Avenue do not currently have a timeframe associated with project development.

Summary

This issue paper, along with the associated Issue Paper 2105-1A, addresses South Cooper Mountain Concept Plan recommendations specific to Washington County. The Board is asked to consider the transportation options as discussed in this Issue Paper and to provide direction to staff as part of a Transportation System Plan (TSP) update in 2015. Upon inclusion of any or all proposed recommendations in the TSP update, staff will coordinate with Beaverton and applicable service providers and continue to refine the Concept Plan transportation proposals.



3

WASHINGTON COUNTY TRANSPORTATION SYSTEM PLAN UPDATE

Project Description		Lead/Sponsor Organization
This action will create and adopt amendments to the Washington County Transportation System Plan (TSP) to implement the South Cooper Mountain Concept Plan.		Washington County Department of Land Use and Transportation
Rationale		
This action is needed to update the County TSP so it is consistent with, and implements, transportation-related recommendations from the SCM Concept Plan. The updates will solidify the extensive City-County coordination which occurred related to transportation facilities and funding. The updated TSP will set the stage for coordinated project planning and delivery in the future.		
Implementation steps and schedule	<ol style="list-style-type: none"> 1. Include TSP information in public information posted regarding North Cooper Mountain (NCM) plan and code amendments - ongoing 2. Prepare draft amendments – Winter, 2015 3. Work sessions with County Planning Commission and Board of County Commissioners – Spring, 2015 4. Hearings and adoption – By October 31, 2015 <p>TSP amendments must be completed by the end of the 2015 County “ordinance season”, or held over to the next year.</p>	
Public outreach	See above. Outreach was extensive during the Concept Plan. This action will continue the practice of providing on-going information for NCM and Urban Reserve Area residents. A primary point of contact at the County should be designated and communicated on the City and County web pages.	
Partners and roles		
City of Beaverton – The City should keep its SCM web page up to date with information and links to Washington County’s web page and contacts.		
Estimated Cost	Funding Sources	
\$ NA	Staff time	



#4

175th AVENUE "KINK" – PHASE 1

Project Description	Lead/Sponsor Organization
<p>This action will conduct the preliminary design and coordination work needed for the realignment of 175th Avenue between Outlook Lane and Cooper Mountain Lane (3-lane County arterial, actual cross-section tbd). Phase 1 is a first step of a multi-year process to design the project and work with property owners in the area – leading to project construction by 2025. The land is currently outside the Urban Growth Boundary (UGB) and therefore will initially be improved to County rural arterial standards if it remains outside the UGB at time of construction.</p>	<p>A Partnership of:</p> <p>City of Beaverton Public Works</p> <p>Washington County Department of Land Use and Transportation</p>
Rationale	
<p>This project was identified in the SCM Infrastructure Funding Plan as one of the 0-10 year priorities. It is needed to correct steep grades and the sharp turn at the “kink”, and bring this section of 175th Avenue into compliance with adopted standards for a 3 lane arterial. Due to the adjacency to the UGB and near-term development in the Community Plan area, it is a high priority project to initiate. It is particularly important that this project be conducted with on-going outreach and communication with affected property owners.</p>	
Implementation steps and schedule	<p>The following steps are preliminary. At County request, no dates have been included.</p> <ol style="list-style-type: none"> 1. Establish partnership agreement and approach to the project, and verify staff resources. 2. Establish staff leadership for the project, including an engineering manager and public outreach planner within the partner agencies. 3. Prepare a project schedule and outreach program. 4. Obtain survey information and base mapping.. 5. Prepare a preliminary design and cost estimate. 6. Prepare updated funding plan. <p>Notes:</p> <ol style="list-style-type: none"> a. Phase 1 will conclude with a preliminary design. Future phases will include: Phase 2 – Commitment of project funds; Phase 3 - right-of-way acquisition; Phase 3 – Final design and construction.
Public outreach	<p>Effective, open and on-going public outreach is essential to this project. As noted above, a public outreach program should be prepared as part of Phase 1. At a minimum: information should be available on the City’s web site; a point of contact (i.e. public outreach planner) for the public should established; and a pro-active approach to public information and communication with property owners should be</p>

	established.
Partners and roles	
Key partners: City of Beaverton Public Works, City of Beaverton Community Development, Washington County Department of Land Use and Transportation.	
Estimated Cost	Funding Notes
\$ 40-50,000	Costs are for survey and consultant assistance. Potential funding is the SCM transportation SCD and/or dedicated TDT funds for Phase 1.