City of Redmond

Redmond
WASHINGTON

Agenda

Study Session

Tuesday, March 25, 2025
7:00 PM

City Hall: 15670 NE 85th St; Remote: Comcast Ch. 21/321, Ziply Ch. 34, Facebook (@CityofRedmond), Redmond.gov/rctvlive, or 510-335-7371

City Council

Mayor
Angela Birney

Councilmembers
Vanessa Kritzer, President
Jessica Forsythe, Vice President
Jeralee Anderson
Steve Fields
Angie Nuevacamina
Osman Salahuddin
Melissa Stuart

Redmond City Council Agendas, Meeting Notices, and Minutes are available on the City's Web Site: http://www.redmond.gov/CouncilMeetings

FOR ASSISTANCE AT COUNCIL MEETINGS FOR THE HEARING OR VISUALLY IMPAIRED:
Please contact the City Clerk's office at (425) 556-2194 one week in advance of the meeting.

Meetings can be attended in person, viewed live on RCTV (redmond.gov/rctvlive), Comcast Channel 21/321, Ziply Channel 34, Facebook/YouTube (@CityofRedmond), or listen live at 510-335-7371

AGENDA

ROLL CALL

1. Transportation Master Plan Status Update

Department: Planning and Community Development, 60 minutes

Attachment A: Presentation
Attachment B: Issues Matrix
Attachment C: Bicycle Chapter
Attachment D: Freight Chapter

2. Purchasing Process Improvements

Department: Finance, 45 minutes

Attachment A: Presentation

3. Council Talk Time

10 minutes

ADJOURNMENT

Meeting videos are usually posted by 12 p.m. the day following the meeting at redmond.legistar.com, and can be viewed anytime on Facebook/YouTube (@CityofRedmond) and OnDemand at redmond.gov/OnDemand

15670 NE 85th Street
Redmond, WA

City of Redmond

Memorandum

Date: 3/25/2025
Meeting of: City Council Study Session

File No. SS 25-022 PL
Type: Study Session

TO: Members of the City Council
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Planning and Community Development	Carol Helland	425-556-2107

DEPARTMENT STAFF:

Planning and Community Development	Seraphie Allen	Deputy Director
Planning and Community Development	Michael Hintze	Transportation Planning Manager
Planning and Community Development	Francesca Liburdy	Senior Transportation Planner

TITLE:
Transportation Master Plan Status Update

OVERVIEW STATEMENT:
Following the adoption of the Comprehensive Plan Update, Redmond 2050, the City is working on updating the Transportation Master Plan (TMP). The TMP is the functional strategic plan that guides transportation investment and activities to support the Comprehensive Plan vision. This status update will include progress updates on the workplan for TMP completion, including a detailed review of strategies included in the Bicycle Network and Freight chapters. Bicycle strategies will focus on the development of a high-comfort separated bikeway system and other strategies to achieve the bicycle mode shift needed to achieve the green-house gas reduction goals in the City's Environmental Strategic Plan. Freight strategies will include maintaining Redmond's designated freight street network while enhancing last-mile delivery and planning for emerging technologies such as drone delivery. Staff will provide completed draft Bicycle and Freight TMP chapters. Finally, staff will highlight future Council touchpoints and milestones.

☐ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☒ **Receive Information** ☐ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  - **Redmond 2050**, **FW-TR-1**: Plan, design, build, operate, and maintain a safe transportation system that advances an equitable, inclusive, sustainable, and resilient community by providing for the mobility and access needs of all.
  - **Redmond 2050, FW-TR-2**: Maintain the transportation system in a state of good repair for all users

- **Redmond 2050, FW-TR-3**: Complete the accessible and active transportation, transit, freight, and street networks identified in the Transportation Master Plan in support of an integrated and connected transportation system.
  - **TR-**14: Prioritize transportation investments that reduce household transportation costs, such as investments in transit, bicycle and pedestrian system access, capacity, and safety.
  - **TR-**16: Prioritize the comfort, safety, and convenience of people using pedestrian and bicycle facilities over other users of the transportation system. Establish standards for bicycle and pedestrian facilities to attract users of all ages and abilities. Prioritize improvements that address safety concerns, connect to centers or transit, create safe routes to school, and improve independent mobility for those who rely disproportionately on the pedestrian and bicycle network
- **Redmond 2050, FW-TR-4:** Plan, design, build, operate, and maintain a transportation system that supports the City's sustainability principles.
- **Redmond 2050, FW-TR-5:** Influence regional transportation decisions and leverage regional transportation investments in support of Redmond's transportation policy objectives.
- **Redmond 2050, FW-EV-2:** Support policies that contribute to a high quality of life in Redmond, such as career and education opportunities, housing, transportation, and recreation choices, as well as a healthy natural environment.
- **Redmond 2050, FW-**LU-2: Ensure that the land use pattern in Redmond meets the following objectives:
  - Reflects the community values of sustainability, resilience, and equity and inclusion;
  - Advances sustainable land development and best management practices and a high-quality natural environment;
  - Promotes development sufficiently away from environmentally critical areas;
  - Encourages a mix of uses that create complete neighborhoods ;
  - Maintains and enhances an extensive system of parks, trails, and open space;
  - Supports and encourages flexible places for a resilient and adaptive economy that includes a mix of research, retail, health, technology, and manufacturing uses;
  - Ensure the siting and delivery of public infrastructure and community services to support preferred land use pattern; and
  - Promotes sufficient density for development pattern and urban design that enable people to readily use a variety of accessible and active forms of travel including but not limited to walking, rolling, bicycling, transit.
- **Redmond 2050, FW-CR-1:** Develop partnerships and programs to rapidly and equitably reduce greenhouse gas emissions and create a thriving, climate resilient community.

- **Required:**
  N/A
- **Council Request:**
  The TMP will be adopted by Council in its entirety when complete.
- **Other Key Facts:**
  N/A

OUTCOMES:

The Transportation Master Plan document has not been fully updated since 2013. The Transportation Master Plan communicates the strategies, actions, and programs to implement the policies of the Comprehensive Plan and achieve current City priorities as they relate to the transportation system.

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  - Capital Projects Ideas Mapping, Spring 2020
  - Routes to Rails Community Engagement Campaign, February-June 2023
  - Derby Days Questionnaire (seeking feedback about how community members would plan to access future light rail stations without a car), July 2023
  - City of Redmond Parking Questionnaire, March-April 2024
  - Sound Transit 2 Line Opening, April 2024
  - Safer Streets for All (SS4A) Action Plan Community Road Safety Assessment, May 2024
  - Redmond Pedestrian & Bicycle Advisory Committee (PBAC) Transit Open House, May 2024
  - Bike Everywhere Day, May 2024
  - Safer Streets for All (SS4A) Action Plan Staff Road Safety Assessment and Debrief Workshop, May-June 2024
  - Overlake Open Streets Festival, June 2024
  - Derby Days Festival, July 2024
  - Downtown Redmond Open Streets Festival, August 2024
  - Redmond PBAC Meeting, October 2024
  - Redmond PBAC Meeting, December 2024
  - Redmond PBAC Meeting, January 2025
  - Redmond PBAC Meeting, February 2025
  - City of Redmond Transit Questionnaire, February 2025 (ongoing)

- **Outreach Methods and Results:**
  Surveys, Questionnaires, Listening Sessions, Community Discussions
- **Feedback Summary:**
  While the community engagement process is still ongoing, some preliminary results are as follows:
  - Overall community interest in first/last mile connections to the existing and future transit network
  - Interest and desire for more multimodal connections to the existing and future transit network, specifically via pedestrian and bicycle modes
  - Desire for more bicycle infrastructure connecting Redmond to neighboring communities, including Kirkland and Bellevue
  - Desire for more education about and awareness of public transit programs, especially King County Metro programs such as Community Van and Metro Flex
  - Desire for safety measures to reduce pedestrian-bicycle conflicts on shared-use trails
  - Interest in using future light rail stations in Redmond, especially to access the airport when possible

BUDGET IMPACT:

Total Cost:
$400,000 in one-time funding was provided to support the TMP update.

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
0000310 - Mobility of People and Goods

Budget Priority:
Vibrant and Connected

Other budget impacts or additional costs: ☐ **Yes** ☐ **No** ☒ **N/A**
If yes, explain:
N/A

Funding source(s):
General Fund, Grant Funding

Budget/Funding Constraints:
N/A

☐ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
3/7/2023	Committee of the Whole - Planning and Public Works	Provide Direction
3/28/2023	Study Session	Receive Information
6/6/2023	Committee of the Whole - Planning and Public Works	Provide Direction
6/13/2023	Study Session	Receive Information
11/3/2023	Committee of the Whole - Planning and Public Works	Receive Information
11/14/2023	Study Session	Receive Information
6/18/2024	Committee of the Whole - Planning and Public Works	Receive Information
8/5/2024	Special Meeting	Receive Information
11/4/2024	Committee of the Whole - Planning and Public Works	Receive Information
11/19/2024	Business Meeting	Receive Information
1/7/2025	Business Meeting	Receive Information
1/28/2025	Study Session	Receive Information

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
N/A	None proposed at this time	N/A

Time Constraints:
Transportation components that are mandatory for the Comprehensive Plan have been included in the appendices of the Transportation Element of Redmond 2050. These components will be brought into the TMP, and in many cases, expanded upon with more specific policies and strategies.

ANTICIPATED RESULT IF NOT APPROVED:

The Study Session is for informational purposes and no direction is required at this time.

ATTACHMENTS:

Attachment A - Presentation Slides
Attachment B - Issues Matrix
Attachment C - Draft Bicycle Chapter
Attachment D - Draft Freight Chapter

Moving Toward 2050
Transportation Master Plan Status Update

Transportation Planning and Engineering Division

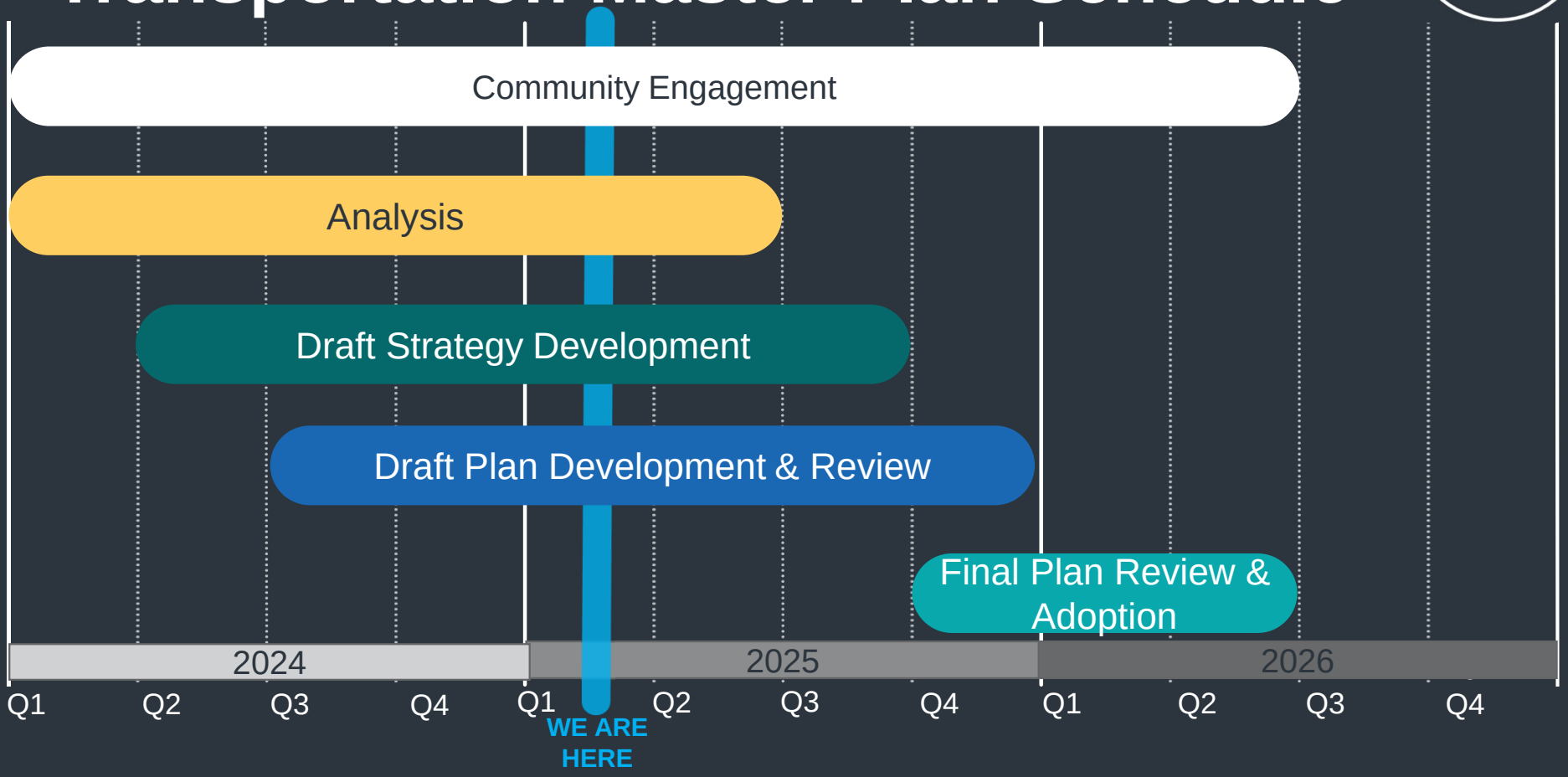
March 18, 2025

Redmond
WASHINGTON

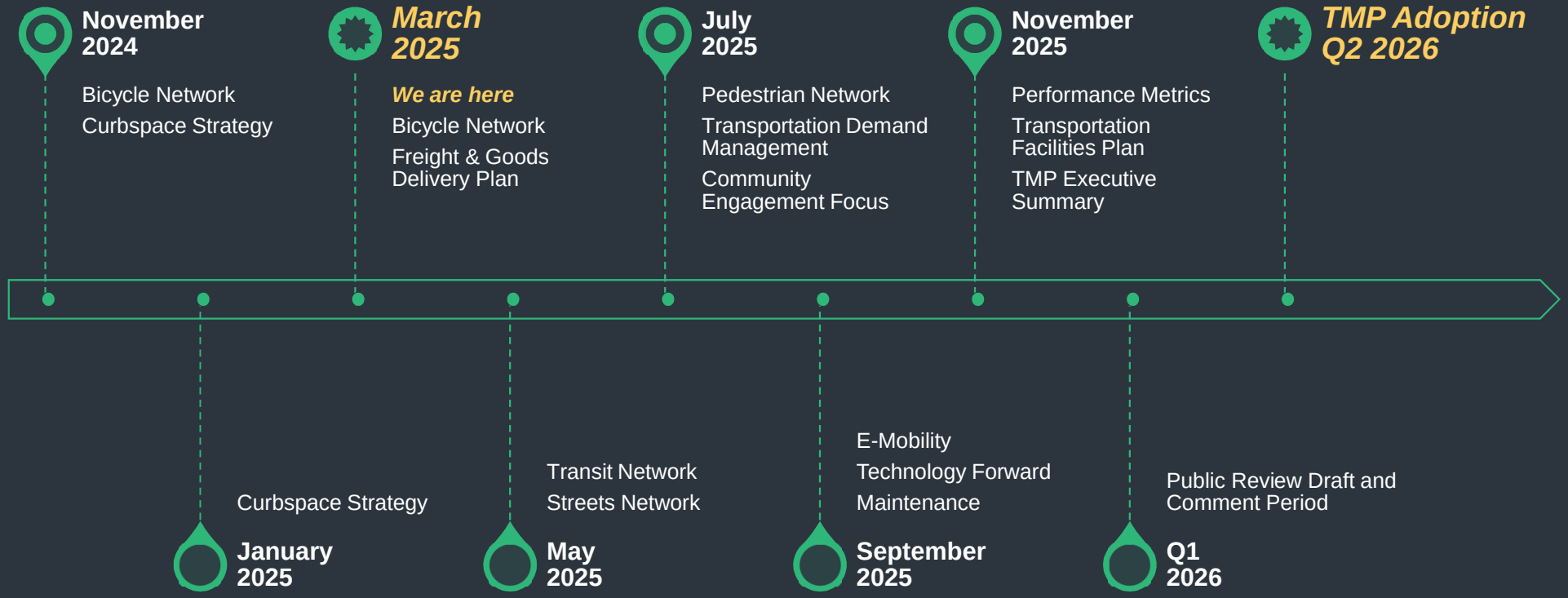
Agenda

- Schedule Updates
- Chapters in Progress
  - Bicycle Network Strategy
  - Freight & Goods Delivery Plan
- Upcoming Milestones

Transportation Master Plan Schedule



Transportation Master Plan
Anticipated Council Review Timeline



Note: Schedule subject to change

Bicycle Strategy Outcome Goals

- Bicycle and micromobility (scooters) mode share is 15% of all trips in urban centers, 5% citywide by 2035
- Reduce single-occupant vehicle (SOV) trips by 30% by 2035/50% reduction in per capita VMT by 2050
- Reduce greenhouse gas (GHG) transportation emissions 50% by 2030 (71% by 2050)
- Connect all key destinations with low stress bicycle facilities

Bicycle Network Principles

Connected

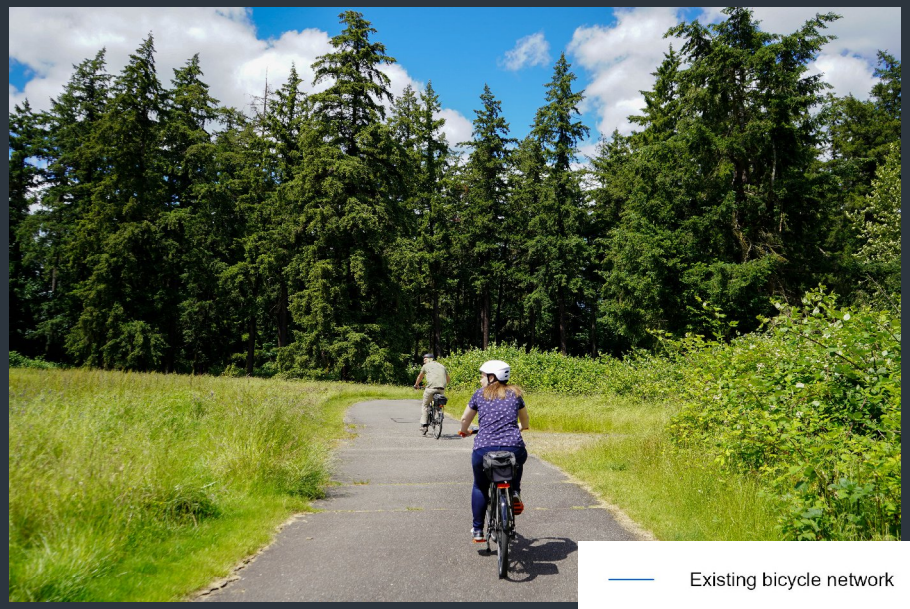
Direct

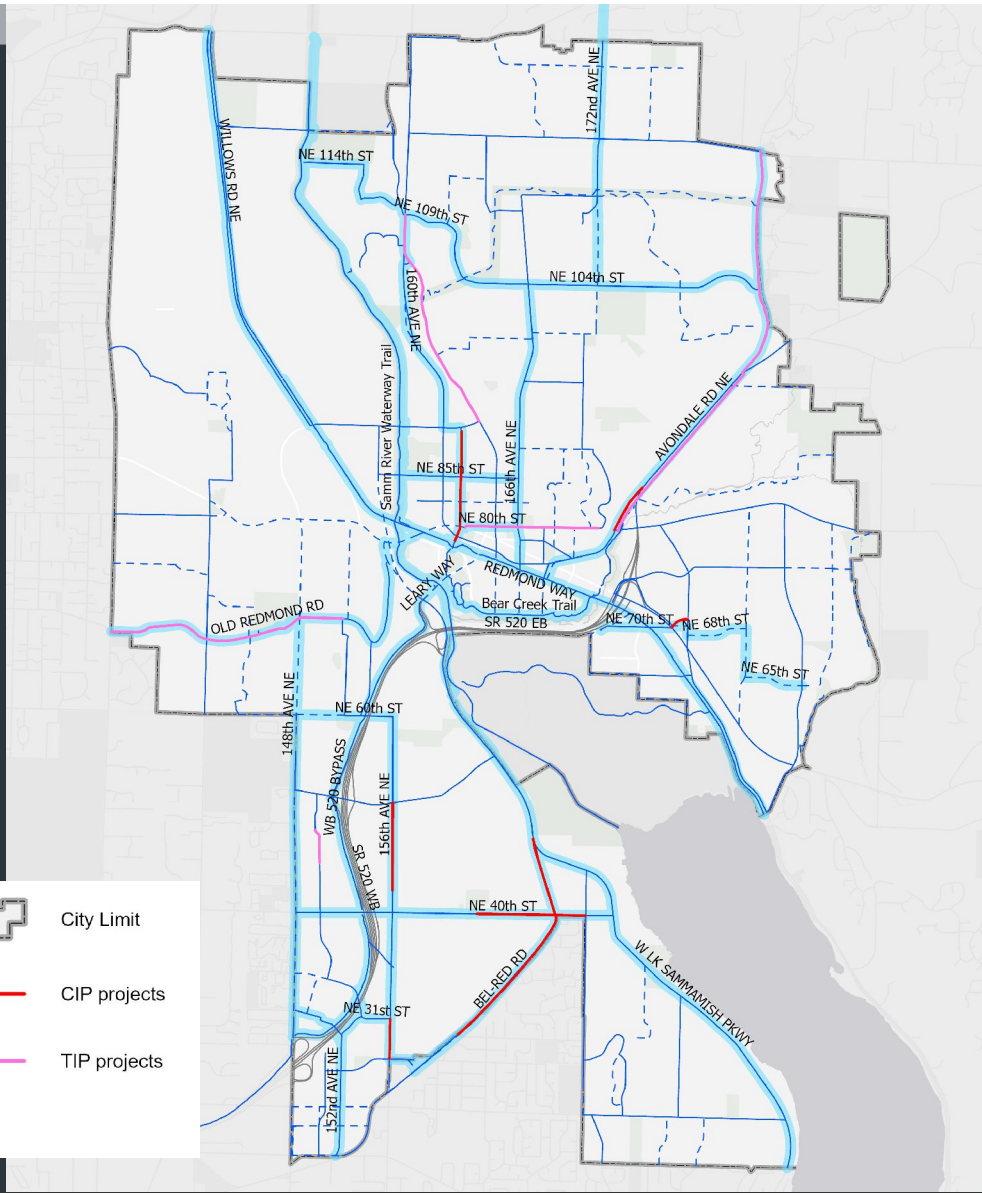
Cohesive

Safe & Comfortable

Multimodal

Draft Bike Network



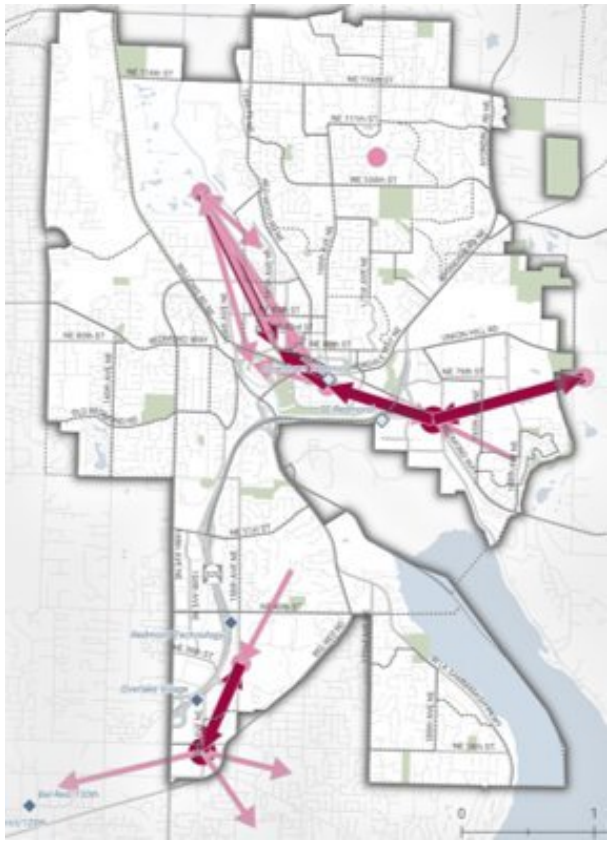


Bikeway Segment Prioritization Framework

- Safety
- Equity
- Proximity to Key Destinations
- Comfort
- Route Connectivity
- Topography
- Spine Network
- Short Trip Density Areas

Key Policies & Strategies

- Convert Short Trips
- Connect to Transit
- Implement Spine and Neighborhood networks
- Balance Modes
- E-Bikes and E-Scooters
- Secure bike parking



Freight & Goods Delivery Key Themes

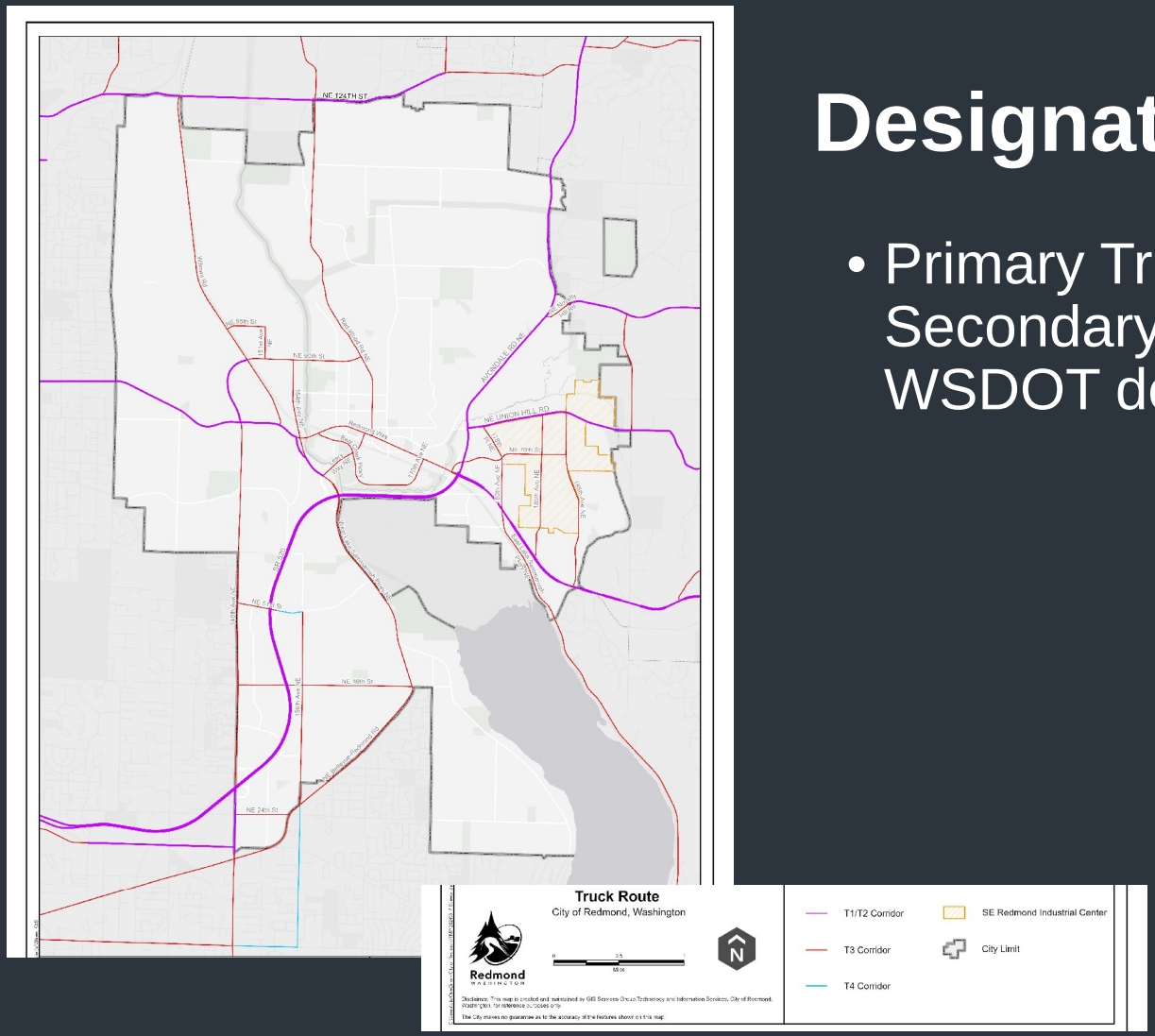
- Identify truck route network
- Address last-mile delivery demands
- New and emerging last-mile delivery technologies

Freight & Goods Delivery Strategies

- Identify a truck route system based on WSDOT Freight and Goods Delivery Transportation System (FGTS)
- Investigate options for improving freight data collection
- Explore innovative strategies to provide for safe and enhanced freight movement, reduced emissions, and application of clean technology (such as dedicated last-mile delivery loading zones, or accommodating autonomous delivery technologies)

Designated Truck Routes

- Primary Truck and Secondary Routes based on WSDOT designations



Next Steps

- Continuing to Develop TMP Content
- Upcoming TMP Study Sessions
  - March 25th
  - May 2025 (Transit Network and Streets Network chapters)
  - July 2025 (Pedestrian Network and Transportation Demand Management chapters, as well as a deeper look at the ongoing feedback from the Community Engagement process)

Questions?

Michael Hintze, mhintze@redmond.gov
Transportation Planning Manager

Redmond
WASHINGTON

Transportation Master Plan Update

Date	Issue	Notes & Recommendations	Next Steps
6/4/24	Would it be possible to get the Staff Report presentation ahead of time so we can have questions ready ahead of the discussion? *(CM Forsythe)*	This Staff Report will be a level set for Councilmembers to get a high-level idea of the variety of transportation plans that are in progress right now and how they relate to each other. This Staff Report will not delve deep into transportation topics but will give an overview of what Council can expect to review in the future. Councilmembers can also review the Redmond 2050 Transportation Element if they want to review Redmond's transportation vision more in-depth.	The Transportation Planning & Engineering team will continue to prepare materials for the Staff Report presentation.
6/4/24	With the opening of the light rail on the Eastside, there has been more community interest in first-last mile connections. Would it be possible to get more information on this during the Staff Report? *(CM Salahuddin)*	Yes, first-last mile connections will be discussed at the staff report.	The Transportation Planning & Engineering team will continue to prepare materials for the Staff Report presentation.
6/4/24	Would it be possible to provide use-case profiles or scenarios of what residents in Overlake, Education Hill, or other neighborhoods might experience in the transportation network? *(CM Fields)*	Yes, this information can be prepared for the Transportation Subcommittee and can be incorporated into the Transportation Master Plan document.	The Transportation Planning & Engineering team will continue to prepare materials for the Staff Report presentation.
6/4/24	Thank you for the work that you continue to do to provide safe facilities particularly for pedestrians and bicyclists. *(CM Nuevacamina)*	Staff will continue to provide updates on active transportation efforts in the Transportation Master Plan, including our bicycle network strategy efforts that will be discussed at the staff report.	The Transportation Planning & Engineering team will continue to prepare materials for the Staff Report presentation.
8/5/24	I've been hearing a lot of safety concerns / requests for a Left turn arrow at the intersection of Bel-Red and West Lake Sammamish Parkway. Currently, there is a bike lane (or space for bikes to move to the front safely) but the turn itself is viewed as unsafe when it is in conjunction with vehicles. The request is for a bike only left-turn arrow *(CM Forsythe)*	The Planning department will pass this information on to the Traffic Operations & Safety Engineering (TOSE) team in Public Works as they manage Redmond's signals. The Safer Streets Action Plan will include opportunities to reduce conflicts between bicycles and vehicles at Redmond intersections.	Further city staff coordination will be required.

Transportation Master Plan Update

Date	Issue	Notes & Recommendations	Next Steps
8/5/24	Will the curbspace chapter include geofencing for Lime scooters and bikes to have proper zones to park vehicles? *(CM Forsythe)*	The TMP curbspace chapter will include strategies for managing on-street parking and will provide guidance for prioritizing active modes on Redmond's roadway corridors. This could also include interfacing with Lime and promoting first-last mile solutions such as the Shared Micromobility program.	Finalize Curbspace chapter.
8/5/24	Will pick up and drop off zones for rideshare programs be included in the curbspace management plan? *(CM Forsythe)*	Policies around curb space priorities, including passenger loading will be included int the curbspace chapter. Specific areas where passenger loading will occur will be identified in the Citywide Right-of-Way Management Plan that will be developed by Public Works in 2025 and will support the strategies outlined in the TMP Curbspace chapter.	Finalize policies and strategies in the curbspace chapter, develop Citywide Right-of-Way Management Plan
8/5/24	Will the TMP provide opportunities to expand flexible transit access with King County Metro programs? Would like to hear more about this at the study session, if possible. *(CM Salahuddin)*	The upcoming August 13, 2024 Study Session will be focused on the development of the Safer Streets Action Plan; however, this topic will be included in the next TMP Staff Report. Promoting transit access and flexible transit options will be included in the transit chapter of the TMP.	Staff will continue to prepare materials for upcoming staff reports and will work with the consultant team assisting on the future transit network included in the TMP.
8/5/24	What parts of the plan will think more comprehensively about parking management (off street in addition to curbspace)? *(CM Kritzer)*	Parking management strategies will be included in the Curbspace chapter of the TMP. In addition, a more detailed parking management analysis will be included in the Urban Centers Parking Management Plans that will be developed for Overlake, Downtown Redmond, and Southeast Redmond/Marymoor.	Staff will integrate updated parking data into the curbspace chapter of the TMPr.
8/5/24	It is part of our obligation as a jurisdiction to have a responsible transportation plan. I would like to see strengthening of incentives and education of the public to work hand in hand with sustainability and tell the story of why we are encouraging people not just to drive everywhere. We want to tie the strategies in the TMP to GHG reductions. *(CM Fields)*	The TMP will include strategies and analysis that supports Redmond's goals for reduction of vehicle miles traveled (VMT) and greenhouse gas emissions (GHG). As sustainability is a Guiding Principle of the 2050 Transportation Vision, these concepts will be incorporated into all aspects of the TMP.	Staff will continue with development of the TMP.

Transportation Master Plan Update

Date	Issue	Notes & Recommendations	Next Steps
11/19/24	If community members want to get in touch with the TMP team, what is the best way they can do that? Do we have any open surveys or questionnaires? *(CM Stuart)*	Community members can go to the open Let's Connect page to give feedback, as questions, and take available questionnaires. Additionally, the Redmond Pedestrian and Bicycle Advisory Committee (PBAC) will discuss various chapters of the TMP and other related topics at ongoing monthly meetings. PBAC meets on the 2nd Monday of every month at 6:30 p.m., both in City Hall and via Microsoft Teams. For more details, email pedbikecommittee@redmond.gov or visit https://www.redmond.gov/pbac	The next Redmond PBAC meeting will be held Monday, January 13, 2025.
1/28/25	How do we continue to see a high turnover of on-street parking for local businesses while still promoting the park once and walk concept? *(CM Nuevacamina)*	Management of parking will be key. Setting right-sized timeframes of on-street parking and looking into the possibility of metered parking to allow for longer parking timeframes in the future will help maintain the turnover needed allow people to find parking. Implementing useful wayfinding and signage will also help people find parking easily and quickly, especially in our urban centers.	The Urban Centers Parking Management Plan will include specific strategies for achieving desired parking turnover and encouraging the park once and walk concept.
1/28/25	Having incoming light rail infrastructure alongside our curbspace management strategies will help bring more solutions on board to manage parking turnover. What is the Parking Benefit District mentioned in the curbspace strategies and what are the ways that this could be explored in Redmond? *(CM Stuart)*	The TMP puts forth strategies for curbspace management, and the forthcoming Urban Centers Parking Management Plan will explore the details of how these strategies will be implemented. A Parking Benefit District is typically created to cover the costs associated with the parking program at a minimum and can be used to for other public improvement projects within the same geographic area. More details on feasibility and how this would be structured will be developed as part of the Urban Centers Parking Management Plan.	The Urban Centers Parking Management Plan will explore this concept further.
1/28/25	What do we think is the right mix of publicly owned EV chargers and privately owned but publicly available chargers? Do we have a sense of the ratio that would be useful for a city of our size? *(CM Stuart)*	Transportation Planning & Engineering staff are working on our EV strategy as part of the E-Mobility chapter of the TMP and collaborating with Jenny Lybeck on sustainability programs as part of this effort.	More information will be shared as part of the E-Mobility chapter of the TMP.

Transportation Master Plan Update

Date	Issue	Notes & Recommendations	Next Steps
1/28/25	It's great to see all the ADA efforts in this chapter and how we're adding more accessible parking. Can you expand on how we are going to phase out the monthly parking permit and what the anticipated timeline on this would be? *(CM Forsythe)*	The specific timeline on phasing out this program would be defined in the Urban Centers Parking Management Plan. We want to be sure to phase this out in a measured approach to give permit holders plenty of advanced warning.	The Urban Centers Parking Management Plan will have a recommendation for phasing out monthly parking permits.
1/28/25	Would we consider implementing a residential parking permit zone as part of phasing out the monthly permit program? *(CM Forsythe)*	More information on this will be shared in the forthcoming Urban Centers Parking Management Plan. A separate presentation will be brought to Council to focus solely on this report.	The Urban Centers Parking Management Plan will have a recommendation for phasing out monthly parking permits.
1/28/25	Have we considered implementing dedicated rideshare pickup and drop off locations as part of our curbspace management strategies? *(CM Forsythe)*	Rideshare would fall under the access category for loading/unloading that is included in the curbspace prioritization categories. The forthcoming Curbspace Management Plan led by the Public Works department will expand on this work in more detail.	The Curbspace Management Plan led by Public Works will determine the appropriate quantity and location of loading zones.
1/28/25	How do we think about the level of detail of strategies that are included in the TMP Curbspace chapter vs. what will be included in future parking plans? I.e. does the strategy that mentions changing the time-limited parking near Anderson Park fit in the TMP? Also, how will we manage parking in spaces with community parks that may not have a dedicated parking lot? *(CM Kritzer)*	The strategy near Anderson Park was cited as an example of an area on the periphery of Downtown that would experience potential additional parking pressure if metered parking is implemented Downtown. Because of this, we would want to look at this area and others on the periphery of Downton as an opportunity to implement time-limited parking to alleviate that additional pressure.	The Urban Centers Parking Management Plan will provide recommendations for parking management within Urban Centers and consider impacts to adjacent areas.
1/28/25	Can you clarify the parking rule about moving your car to a new street in Downtown regarding the 2-hour time limited parking? *(CM Kritzer)*	We want our businesses to feel that these curbspace strategies are supporting their work. This is why we are recommending potentially having paid parking in our time-limited areas. We will also continue to look into the 2-hour limit and if it is appropriate for our time-limited parking areas. More information will be included in the Urban Centers Parking Management Plan. Regarding the current regulations, a vehicle can be parked on the same named street for 2 hours at a time. You cannot move to another part of that same named street later in the day due to the nature of the parking monitoring program. More information can be	Staff will identify code changes and other information that should be shared with public to explain parking regulations as part of the implementation of the Urban Center Parking Implementation Plan.

Transportation Master Plan Update

Date	Issue	Notes & Recommendations	Next Steps
		found at: https://www.redmond.gov/636/Downtown-Parking	
1/28/25	To what extent does paid parking influence the burden on current parking enforcement? *(CM Stuart)*	Paid parking allows for better compliance overall which also allows for fewer resources to be spent on parking enforcement. This is a benefit of implementing a paid parking system.	Parking enforcement is one factor to be evaluated as part of the decision to implement metered parking.
1/28/25	Can we look into the equity considerations of towing fees and the city's approach to towing in the parking or curbspace management plans? *(CM Kritzer)*	Generally, the City does not tow cars for parking violations.	Staff will look into whether or not there are criteria for when vehicles are subject to towing well-defined in city code and recommend criteria if there are currently none.

Transportation Master Plan Update

Chapter Review: Bicycle

Report Structure

1. Executive Summary
2. Introduction
3. Street System
4. Pedestrian
5. Bicycle
6. Transit
7. *Curbspace*
   - *Mayor reviewed Jan. 2025, Council reviewed Jan. 2025*
8. *Freight & Goods Delivery*
   - *Mayor reviewed Feb. 2025, Council review Mar. 2025*
9. Transportation Demand Management (TDM)
10. E-Mobility
11. Technology Forward
12. Maintenance
13. Monitoring Progress (Performance Metrics)
14. Appendices

Key Themes

- Use Level of Traffic Stress (LTS) rating to measure bicyclist comfort on existing and planned facilities, while planning for a high-comfort Spine Network
- Converting short vehicle trips (under 2 miles) to bicycle mode
- Proactively plan for bicycle facility maintenance needs
- Prioritize planned bicycle facilities by focusing on equity, safety, comfort, and proximity to key destinations

Review Timeline

- Director Review: 1/9/2025
- Mayor Review: 2/7/2025
- Planning Commission Presentation: 10/23/2024
- Council Staff Report: 11/19/2024, 3/18/2025
- Council Study Session: 3/25/2025

Bicycle Strategies

1. Convert short trips to bicycle trips
2. Connect to transit
3. Promote e-bikes and e-scooters
4. Implement a high comfort Spine Network
5. Implement the Neighborhood Bikeway Network
6. Balance modes
7. Provide convenient, plentiful, and secure bike parking

By implementing these strategies, Redmond can work toward the following outcomes:

- Bicycle and micromobility (scooter) mode share at 15% of all trips in urban centers by 2035
- Bicycle and micromobility mode share at 5% of all trips within city of Redmond by 2035
- Connect all key destinations with low-stress bicycle facilities

Bicycling in Redmond

TMP Update
March 2025

Bicycle Network Strategy

Introduction

Future of Bicycling in Redmond

Bicycling (and the use of other micromobility devices) will play a key role in creating a more sustainable, equitable, and livable Redmond. The bicycle provides a level of efficiency, affordability, accessibility, and freedom of movement unmatched by other forms of transportation while integrating easily with transit systems. Advancements in electric bike (e-bike) technology, affordability, and accessibility stand to further increase the importance of biking. The keys to unlocking the potential of bicycling in Redmond is to provide a bike network that most people feel safe using and conveniently connects people to where they need to go, and providing secure and convenient bike parking at destinations. By doing so, Redmond can encourage more people to bike more often while driving less.

What is Micromobility?

Micromobility refers to a range of small, lightweight devices operating at speeds typically below 15 mph. Micromobility includes both human-powered and electric scooters, bicycles, skateboards, one-wheels, hoverboards, cargo bikes, trikes and other similar devices. These devices offer flexible mobility and can provide efficient first-last mile connections to transit, and thus are an important component of Redmond's transportation system. In Redmond, micromobility devices are generally expected to operate within bikeways and trails, and not on sidewalks. While this chapter largely discusses bicycles, all network strategies pertain equally to micromobility.

How Bicycling Supports Redmond 2050 Guiding Principles

Equity and Inclusion

The Bicycle Network Strategy presented in this chapter will allow people of all ages and abilities to get from anywhere to everywhere by bicycle, or other micromobility device, safely, directly, and comfortably. In doing so, all Redmond community members will have an affordable, efficient, and healthy transportation option that complements other sustainable travel modes such as walking and transit.

Sustainability and Resilience

Redmond 2050 sets goals of a 50% reduction in per capita vehicle miles traveled (VMT)[1] and 71% reduction in transportation sector greenhouse gasses (GHG)[2] by 2050. The Redmond Environmental Sustainability Action Plan (2020) identifies intermediate targets to help move toward the 2050 goals. Namely, reducing GHG transportation emissions 50% by 2030 and reducing single-occupancy vehicle trips by 30% by 2025. Shifting trips from driving to biking can help Redmond achieve these goals and is a key objective of Redmond's Bicycle Strategy. Promoting new technologies such as the e-bike will create opportunities for increased mode shift away from motor vehicles (both internal

[1] From 2017 levels.
[2] From 2011 levels.

combustion and electric). In addition to reducing VMT and GHG emissions, shifting more trips to active travel and public transportation will offer other benefits like reduced congestion, more community space, improved air quality, and improved public health.

FIGURE 1 MICROMOBILIY SUCH AS E-SCOOTERS ARE A FLEXIBLE TRAVEL OPTION SUPPORTED BY THE BIKEWAY NETWORK. (IMAGE CREDIT: CITY OF REDMOND)

Goals and Performance Measures

Shifting vehicle trips to bicycling and micromobility is one component of a larger strategy to reduce vehicle miles traveled, particularly single occupancy vehicle trips. To shift trips from driving to biking, Redmond must expand and enhance its bikeway network and make biking an attractive choice, especially for short trips. The following outcome goals and related performance measures will be used to track and evaluate Redmond's implementation of this Bicycle Strategy, especially the development and expansion of the bikeway network.

Outcome Goal	Measures
Bicycle and micromobility mode share at 15% of all trips in urban centers by 2035	Bicycle and Micromobility mode share in Downtown Bicycle and Micromobility mode share in Overlake Bicycle and Micromobility mode share in Marymoor Village
Bicycle and micromobility mode share at 5% of all trips within city of Redmond by 2035	Bicycle mode share city wide for all trips
Connect all key destinations along the Spine Network with low stress bikeways by 2035	LTS 1 or 2 bikeways that connect directly to light rail stations, schools, and grocery stores[3]

Bicycling in Redmond Today

Estimates from the 2022 American Community Study and Move Redmond's recent surveys of Redmond employees, suggest that only 2% of work trips are by bicycle. Researchers and practitioners have categorized people based on their confidence interacting with motor vehicle traffic while biking. While the percentage varies by community, a national survey found that about 5 out of every 10 adults in major urban areas, labeled as "Interested but Concerned" riders, would like to ride a bicycle but do not currently do so, primarily due to concerns about traffic safety.[4]

The 2024 Bicycle Friendly Community Public Survey[5] received over 300 responses from Redmond community members about their experiences using Redmond's bicycle network. Of the survey responders, approximately 70% ride a bike in Redmond. Survey respondents use bicycle travel for varying purposes in Redmond, with approximately 35% primarily taking transportation or utilitarian trips (commuting, running errands, etc.), approximately 30% primarily riding a bicycle for recreation or leisure, and approximately 25% primarily riding a bicycle for exercise or fitness.

The City of Redmond's focus for the development of the bicycle network is serving people of all ages and abilities, which means building bikeways that are comfortable for the Interested but Concerned population. This strategy will encourage more bicycle trips, which will advance the City's goals around VMT and GHG reduction, while creating a more equitable transportation system that provides affordable and healthy travel options.

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[3] Destinations should have convenient and secure bicycle parking facilities.
[4] Dill, J, and Nathan McNeil, 2016, Revisiting the Four Types of Cyclists: Findings from a National Survey, Transportation Research Record: Journal of the Transportation Research Board, 2587, Retrieved from https://journals.sagepub.com/doi/10.3141/2587-11
[5] League of American Bicyclists 2024 Bicycle Friendly Community Public Survey

Existing Bike Network

The existing bicycle network is comprised of 98.8 miles of bikeways[6] of varying condition and suitability for people of all ages and abilities. This includes:

- 73.5 miles of bicycle lanes (includes buffered bike lanes)
- 2.5 miles of separated bicycle lanes
- 4.2 miles of shared lanes/bicycle boulevard
- 15.2 miles of paved shared use pathways

In addition to the formal bike network, other streets in Redmond can serve people biking. At low volumes and speeds of traffic, many people feel safe and comfortable sharing the street with traffic or crossing the street in unmarked crossings. As traffic speed and volumes increase, their perception of safety degrades significantly, resulting in a feeling of increased stress and discomfort.

Progress Made

Redmond has made notable progress in implementing important bikeway network connections over the past decade through both its capital investment program and requirements for new development. These investments include two new bridges over SR 520 at the Redmond Technology Center and Overlake Village light stations, substantial completion of the Redmond Central Connector, the striping of miles of bike lanes, and bringing e-bike/scooter share to the city. These accomplishments and others contribute to Redmond being the "Bicycle Capital of Washington", but there is much more work that needs to be done to honestly be able to claim that title. The work that needs to be done is the focus of this chapter.

[6] Includes funded bikeways to be constructed by 2027, including NE 40th St and 156th Ave NE shared use paths.

Level of Traffic Stress

Redmond's existing bikeways were assessed to determine their relative level of comfort using a bicycle Level of Traffic Stress (LTS) analysis, which factors vehicle speeds, vehicle volumes and the degree to which bicyclists are separated from vehicle traffic.[7] Higher vehicle speeds and volumes and less separation between bicyclists and vehicles results in stress and discomfort for bicyclists and according to research and feedback received from the Redmond community.

The results of the LTS analysis based on 2024 conditions show that 79% of existing designated on-street bikeway miles are high stress.[8] That means many of the major bicycle connections in Redmond are LTS 3 or 4. Research and real world examples show that LTS 1 and 2 bikeways are what will get a greater proportion of the population to feel comfortable bicycling.

The updated Redmond Bicycle Facility Design Manual (2023) designates the "Interested but Concerned" bicyclist as the design user. Recent bikeway network investments reflect the City's focus on building out a low-stress network, including separated bicycle lanes recently constructed on 156th Avenue NE and 152nd St Avenue NE, the protected intersection at 152nd Avenue and NE 24th Street, shared use path on NE 40th St, and the pedestrian and bicycle bridge connections to the Overlake Village Light Rail Station and the Redmond Technology Light Rail Station.

What is Level of Traffic Stress?

The Level of Traffic Stress (LTS) analysis, based on a methodology developed by Mekuria, Furth, and Nixon (2012), is a system that rates road segments or crossings based on the level of stress they place on bicyclists, ranging from LTS 1 (minimal stress) to LTS 4 (high stress). LTS 1 and 2 are considered suitable for most bicyclists, including children and Interested but Concerned riders, as they involve minimal interaction with traffic. LTS 3 and 4 are for more confident bicyclists, with LTS 4 being the most stressful, requiring high levels of skill and tolerance for high-speed traffic. The overall LTS for a route is determined by the highest stress level encountered along the route's segments.

[7] Mekuria, Maaza C. , Peter G. Furth, and Hilary Nixon. 2012. "LOW-STRESS BICYCLING and NETWORK CONNECTIVITY." Https://Transweb.sjsu.edu/Sites/Default/Files/1005-Low-Stress-Bicycling-Network-Connectivity.pdf. Mineta Transportation Institute. May 2012.

[8] Includes funded bikeways to be constructed by 2027.

FIGURE 2: SEPARATED BIKE LANES LIKE THIS ONE ON 156TH AVE NE PROVIDE A HIGHER LEVEL OF COMFORT AND SAFETY AND ATTRACT BICYCLISTS OF ALL AGES AND ABILITIES. (IMAGE CREDIT: CITY OF REDMOND)

Opportunities for Shifting Trips from Vehicles to Bicycles and Micromobility

Converting short motor vehicle trips of less than 2 miles to bicycling and micromobility offers a significant opportunity to reduce Vehicle Miles Traveled (VMT) and greenhouse gas (GHG) emissions.

In Redmond, areas with high numbers of short motor vehicle trips have been identified as key locations for targeted policies and infrastructure improvements that can encourage a shift from motor vehicle trips to more sustainable modes of transportation such as bicycling, micromobility, walking, and transit. As shown in Figure 3 the data suggests that Downtown Redmond, Overlake, and Southeast Redmond are the primary destinations for short motor vehicle trips under 2 miles. These areas, and routes connecting to these areas, are ripe for improved bicycle connections to facilitate access to the new light rail stations and other destinations and reduce reliance on motor vehicles.

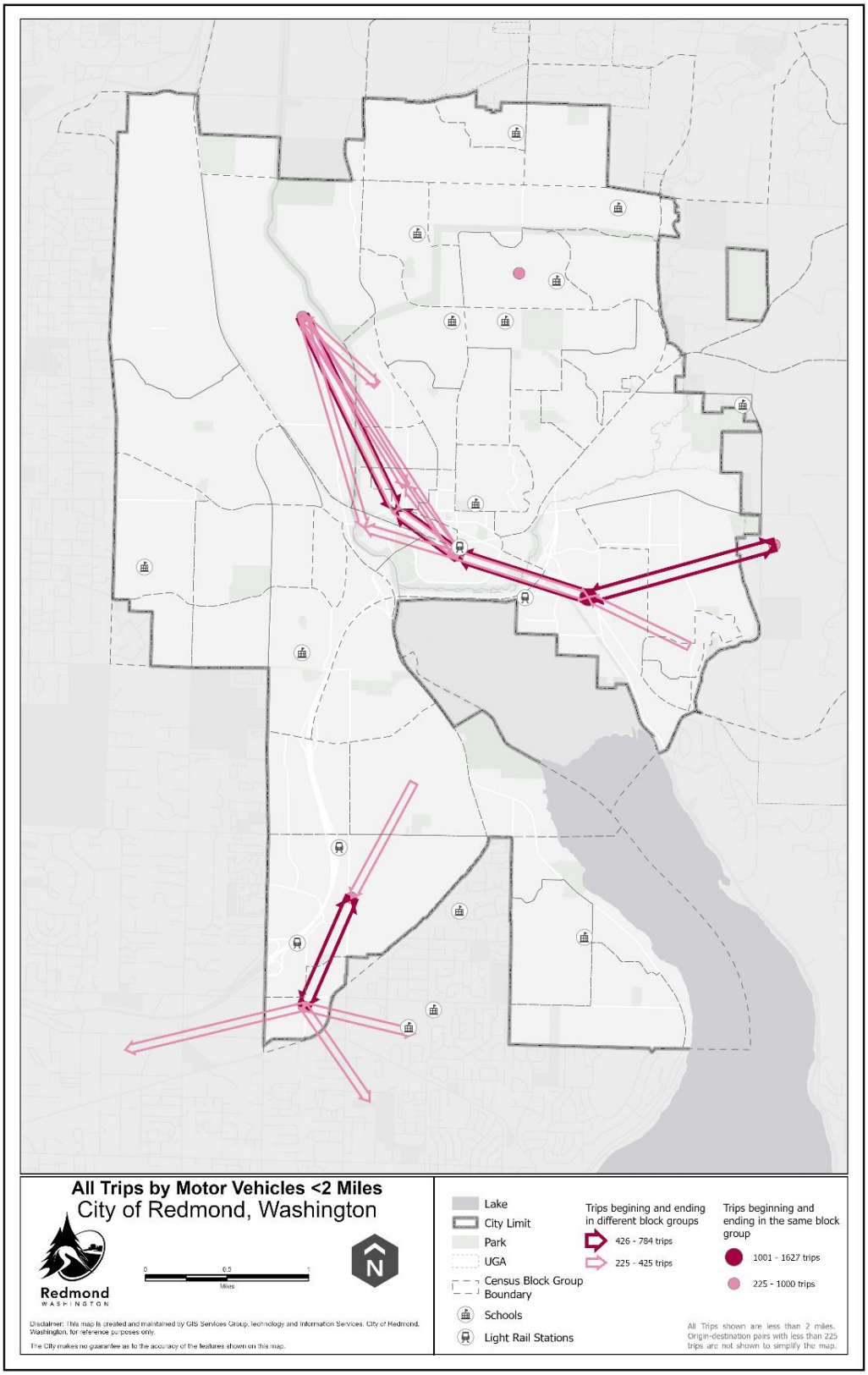

FIGURE 3:AREAS WHERE MOST TRIPS UNDER TWO MILES OCCUR IN REDMOND

Encouraging More People to Bicycle

When people are faced with the choice of whether to bike or take another mode of transportation for a trip, research suggests that there are several major categories of reasons that influence people's choice.[9] These reasons may include:

- Physical ability
- Seeing people biking
- Understanding benefits
- Automobile ownership
- Weather
- Topography
- Trip length
- Bicycle ownership or presence of bikeshare
- Traffic stress along the entire route
- Crashes
- Personal skill level
- Personal security
- Theft
- Access to transit

The relative weight between the above factors will vary by a person's individual needs and abilities. However, the aforementioned research indicates that the Interested but Concerned population (about half of all people) cite traffic safety concerns as the main barrier to bicycling more, and cite low-stress infrastructure (LTS 1 or 2) as the types of bikeways they feel comfortable using.[10] This indicates that to increase bicycle mode share among the largest group of potential bicyclists, people need access to safer, lower-stress bicycling facilities.

Peer City Focus:

Palo Alto, CA

The City of Palo Alto is similar to Redmond in terms of demographics, size and having an abundance of tech companies. Palo Alto is a Gold Bicycle Friendly Community and is currently updating its Bicycle and Pedestrian Transportation Plan (BPTP) to be completed in 2025.

Many of Palo Alto's proposed BPTP Update programs align with Redmond's TMP strategies and actions, including: developing a wayfinding plan, conducting an inventory of bike parking and monitoring bike parking usage, and implementing a proactive speed management program to lower speed limits and design speeds on streets within the city's bike network. Additionally, Palo Alto continues to focus on building high-comfort bikeways, especially as first/last mile connections to rapid transit at Caltrain stations. Palo Alto's Traffic Calming Program identifies speed management and multimodal safety measures that can be implemented quickly, and the City is prioritizing the addition of staff to this program who can focus on administering quick-build efforts.

The 2024 Bicycle Friendly Community Public Survey[11] asked respondents what their top priorities would be to make Redmond a better community for bicyclists. Three key themes emerged: providing

[9]Schneider, Robert J. "Theory of Routine Mode Choice Decisions: An Operational Framework to Increase Sustainable Transportation." *Transport Policy*, vol. 25, 2013, pp. 128–137., doi:10.1016/j.tranpol.2012.10.007.
[10] Sanders, Rebecca L., and Belinda Judelman. "Perceived Safety and Separated Bike Lanes in the Midwest: Results from a Roadway Design Survey in Michigan." Transportation Research Record: Journal of the Transportation Research Board, vol. 2672, no. 36, 2018, pp. 1–11., doi:10.1177/0361198118758395.

[11] League of American Bicyclists, 2024 Bicycle Friendly Community Public Survey

more bicycle lanes and bicycle paths, improving existing bicycle lanes to add protection for cyclists, and reducing vehicle speeds. Of the approximately 300 responses, 234 listed additional bike paths or bike lanes as a high priority, 179 listed improving existing bike lane protection, and 77 listed reducing vehicle speeds or providing traffic calming options. This data enforces that increasing bike lane milage and bike lane protection (e.g., making bike lanes more comfortable/less stressful) are high priorities for community members.

Strategic Approach to Increasing the Number of People Bicycling

Cities around the world have achieved their goals to increase the number of bicycling trips (i.e., mode shift) by applying focused strategies to improve bicycle network connectivity and comfort. While some of the examples that are show cased in this section may differ in size or urban form from Redmond, the commonality they all share is they have moved the needle in creating a more connected, high comfort bicycle network or have policies or programs that have increased bicycle ridership. These strategies can be wholly or partially applied in Redmond to significantly increase bicycle ridership.

Action 1: Convert Short Trips to Bicycle Trips

Focusing on providing bicycle infrastructure to serve trips under approximately 2 miles in length can maximize the mode shift return on investment. Short trips between 0.5 – 2 miles is a distance range where bicycling and micromobility can be the preferred mode of transportation, as they can be faster and more flexible than driving or using public transit and more time competitive than walking. Making biking (and micromobility) the most convenient choice for these short trips will encourage more people to bicycle and maximize the City's return on investment of bicycle infrastructure, reduce vehicle trips, and reduce GHG emissions. Complementary land use policies that support mixed use development and neighborhood siting of educational and care- facilities provides residents access to a variety of nearby destinations that are easier to get to by bicycle. Redmond 2050 embraces this "complete neighborhood concept" and
expands mixed-use development opportunities throughout the city.

Recommended Actions

- 1A: Prioritize bike infrastructure investments in areas where most short trips are occurring (Downtown Redmond, Overlake, and Southeast Redmond)
- 1B: Implement Redmond 2050 land use policies that reduce distances between residences and destinations that serve people's every day needs and support:
  - » Higher residential densities
  - » Transit-oriented development
  - » Mixed-use development
  - » Reduced parking requirements

Short Trip Focus

Austin's 2014 and 2023 Bicycle Plans focused on expanding bicycle facilities on routes with high concentrations of short trips in central Austin as well as to destinations such as schools, parks, business, and shopping districts in neighborhoods throughout the city. Protected bicycle lanes to transit stations and secure bicycle parking at these stations support linking shorter bicycle trips with longer trips on transit. Separated bicycle facilities, urban trails, and "quiet streets" with traffic calming devices for motor vehicles and wayfinding signage for bicyclists are key features of Austin's bicycle infrastructure.

- 1C: Support Transportation Demand Management (See Chapter X) and Safe Routes to Schools programs that encourage bicycling and walking, and reduce traffic volumes around schools.[12]

Bicyclist Safety

Building safe bicycle infrastructure and reducing vehicles speeds are the most effective strategies for making bicycling a safe mode of transportation. Good bikeway design and slower vehicle speeds promote safe interactions between bicyclists, micromobility users, pedestrians, and vehicles. Education does have a role to play in bicycle safety and should be focused on basic bicycle handling skills, understanding laws, and familiarizing people with new bicycle infrastructure such as bicycle signals, bike boxes, separated bike lanes, etc. Chapter X – Transportation Demand Management includes actions that address bicycle safety education (also as means of encouraging bicycling) and the Safer Streets Action Plan also includes an action focused bicycle safety.

[12] "City of Austin Bicycle Plan." 2023. https://www.austintexas.gov/sites/default/files/files/Transportation/Adopted%202023%20Bicycle%20Plan_FULL.pdf.

FIGURE 4: BICYCLING AND MICROMOBILITY ARE EASY AND FLEXIBLE WAYS TO ACCESS THE SERVICES AND AMENITIES OFFERED BY MIXED USE DEVELOPMENT (IMAGE CREDIT: CITY OF REDMOND)

Action 2: Connect to Light Rail and Bus

Creating low-stress bikeway connections to bus stops and light rail stations is an impactful "first-last mile" strategy to increase access to transit for both local and regional trips.

The new Overlake Village, Redmond Technology, Downtown Redmond, and Marymoor Village light rail stations are fantastic opportunities to connect bicycling with transit. Projected ridership of the East Link extension is 43,000-52,000 daily riders by 2026[13]. Building bicycle facilities that connect with these stations will expand the catchment area of the stations, help form new habits for light rail passengers to reach the station by bicycle and help grow transit ridership. Bicycle facilities that connect stations to destinations such as grocery stores, daycare centers, and schools will allow for trip chaining *en route* between transit and residences. These facilities are prioritized for implementation as described later in this chapter.

All Sound Transit and King County Metro buses have bicycle racks on which riders connecting by bicycle can place their bikes to have them transported to their destination. Ensuring that bus stops are accessible by the low-stress bikeway network can encourage bike to bus and bus to bike trips, particularly for more regional bus trips.

Recommended Actions

- 2A: Prioritize high-comfort bicycle facilities that connect to light rail and bus stops.
- 2B: Provide sufficient secure bicycle parking at transit centers and mobility hubs (see Transit Chapter).
- 2C: Ensure consistent availability of bike/scooter share at Transit Centers.

Bike to Rail

Integrating bicycles with transit expands the catchment area of stations from the typical ½ mile walking radius to 2-5 miles, a strategy successfully implemented in countries like the Netherlands where approximately 25-30% of urban bicycle trips are made to or from train stations, supported by a dense rail network and high-quality bicycle infrastructure. Extensive secure bicycle parking is offered at stations. This multimodal approach helps improve accessibility and convenience for all transit users.

In the United States, many cities' planned bicycle networks prioritize bikeway connections and wayfinding to transit hubs. Regional examples include the cities of Shoreline, Seattle, and Federal Way.

[13] "Downtown Redmond Link Extension | Project Map and Summary | Sound Transit." Www.soundtransit.org, www.soundtransit.org/system-expansion/downtown-redmond-link-extension.
Kager, Roland. 2022. Review of The Bike+Train Land-Use/Transportation System. Presented at the Planning the Cycling City Summer Course, July 2022.
"Renting the OV-Fiets | Door to Door | NS." n.d. Dutch Railways. https://www.ns.nl/en/door-to-door/ov-fiets.

FIGURE 5: THE NEW REDMOND TECHNOLOGY STATION BRIDGE CONNECTS BIKEWAYS, TRANSIT, AND EMPLOYMENT CENTERS (IMAGE CREDIT: CITY OF REDMOND)

Action 3: Promote E-Bikes and E-Scooters

The growing popularity of electric bikes (e-bikes) can be attributed to their ability to overcome challenging terrain and cover longer distances, making them a viable alternative to motor vehicles. The City of Redmond currently has a contract with a vendor that provides e-scooters and e-bikes for rent throughout the city. This service has proven to be very popular, with over 282,000 rides completed since the pilot program began in 2019. The median distance per trip has increased from 0.5 miles in 2020 to 0.9 miles in 2024, proving that Redmond's Shared Micromobility program is a viable first-last mile transportation mode.

Personal e-bike ownership is rapidly growing in the US and is expected to grow more than 15 percent annually between 2023 and 2030.[14] The rate of e-bike adoption (and its impact on greenhouse gas emissions and vehicle miles traveled) depends on the cost of e-bikes, individual choices, and the provision of infrastructure that is safe and comfortable for e-bike users.

An e-bike lending libraries is a strategy Redmond should explore to provide opportunities for more people to see what it is like to ride an e-bike. Such libraries lend e-bikes for an extended period of time (typically 1 to 3 months) so people can experience an e-bike and have time to use it for a variety of trip purposes to discover how they can effectively integrate an e-bike into their daily travel demands.

E-Bike Incentives

Denver has gained recognition for its successful e-bike incentives. The city launched an e-bike voucher program in April 2022, offering $400 vouchers for all residents and up to $1,200 for income-qualified individuals, with additional funds for e-cargo bikes. Since its launch, Denver has invested $4.7 million, providing vouchers to 4,734 residents.

A survey of recipients suggested notable changes in transportation habits, with participants riding an average of 26 miles per week and replacing 3.4 vehicle trips, collectively reducing vehicle miles traveled by 100,000 miles per week. Lower-income recipients were particularly active, averaging 32 miles per week.

Washington State DOT is launching its own e-bike rebate program in 2025. This program will offer qualifying applicants rebates for either $1,200 or $300 depending on household income. They expect to give out about 8,500 vouchers, an amount far less than expected demand.

[14] U.S. E-bike Market Size, Share & Trends Analysis Report By Propulsion Type, By Drive Type, By Application, By Battery, By End-use (Personal, Commercial), And Segment Forecasts, 2023 - 2030

Another way the City of Redmond can influence e-bike adoption is to provide financial incentives for people to purchase e-bikes. The Rocky Mountain Institute (RMI) developed a calculator that allows users to explore the potential benefits of e-bike incentives of various funding amounts and time horizons. The table below illustrates potential incentive scenarios and anticipated outcomes in terms of reductions in vehicle miles traveled and greenhouse gas emissions.

The RMI calculator estimates that replacing 25% of weekly car trips under 3 miles and 10% of trips under 5 miles with e-bikes over the next 10 years could reduce CO2 emissions and vehicle miles traveled (VMT) by 17% in Redmond. This tool can help Redmond assess the potential impact of various e-bike incentive programs. For example, with an annual $150,000 incentive over 10 years, annual citywide GHG reduction equates to approximately 3%. When annual incentives increase to $500,000 and $1,000,000 over 10 years, GHG reduction increases to 9% and 17%, respectively. More details are included in the appendix of the report.

Recommended Actions

- 3A: Support the establishment of e-bike lending libraries.
- 3B: Offer financial incentives for e-bike purchase at time of purchase.[15]
  - » Prioritize extensive and early outreach about e-bike incentive programs among lower income populations.
  - » Keep the e-bike incentive program application process simple and easy.
  - » Leverage relationships with local bike shops to support e-bike incentive program rollout and promote local purchase of e-bikes.
  - » Make a plan for how to collect data from individuals once they have purchased the e-bike[16]
- 3C: Develop safety and etiquette campaign that targets e-bike users. Bicycle safety education is discussed more in Chapter X – Transportation Demand Management and the Safer Streets Action Plan.

15 If e-cargo bikes receive a different level of incentive, try to make the definition of e-cargo bike as objective as possible.

16 City and County of Denver et al. Review of Denver's 2022 Ebike Incentive Program Results and Recommendations.

FIGURE 6: SHARED E-SCOOTERS AND E-BIKES ARE INCREASINGLY POPULAR IN REDMOND (IMAGE CREDIT: CITY OF REDMOND)

Action 4: Implement a High Comfort, Spine Network

The Spine Network (Figure 14) provides the primary, most direct connections between all of Redmond's neighborhoods and one or more Urban Centers. It is envisioned to be comprised of high comfort bikeways (level of traffic stress 1 and 2), including trails such as the Redmond Central Connector, Sammamish River Trail, and East Lake Sammamish Trail, separated bike lanes such as 156th Ave NE and Bel Red Rd, and bicycle boulevards such as 152nd Ave NE in the Grass Lawn neighborhood.

Implementation of the Spine Network is a high priority as these routes are expected to have the highest return on investment in terms of ridership given their directness to the major destinations people want to connect to. Some corridors on the Spine Network will take longer to implement due to costs while other segments can be more rapidly implemented using low-cost, "quick-build" materials. See Bicycle Network Strategy below.

Bicycle wayfinding and enhanced lighting along bikeways and shared use paths are investments that can increase the appeal of biking. Wayfinding signage helps direct bicyclists to key destinations. Good lighting and visibility at bicycle parking areas, on shared use trails, and at intersections will help enhance safety, personal security, and comfort.

Recommended Actions

- 4A: Complete "Spine Network" to include 100% high comfort bicycle facilities by 2035.
- 4B: Install wayfinding, lighting, and other features such as lean bars, bicycle near-side signals to enhance safety and comfort on the Spine Network.
- 4C: Install traffic diverters and traffic calming interventions on bike boulevards to complete local neighborhood network.
- 4D: Craft tailored messaging with compelling case studies and data to support bike network build out, especially when tradeoffs might be involved.[17]

Quick Build, Funding, and Communication

Jersey City, New Jersey, successfully implemented 10 miles of protected bike lanes in one year using quick-build materials, completing about a quarter of its planned bike network. Seattle used similar techniques for a rapid roll out of separated bike lanes on 2nd and 4th Avenues, with 4th Avenue recently receiving a permanent upgrade.

In 2020, the Cambridge, MA City Council amended its Cycling Safety Ordinance, setting ambitious requirements for 25 miles of separated bike lanes within seven years. Using a "quick build" approach with lightweight materials like flex posts and on-street parking lanes, the City rapidly installed 14.22 miles of separated lanes in four years.

In addition to infrastructure funding, coalition building, and targeted messaging are key to gaining community support for more rapid bike network expansion. The People for Bikes "Final Mile" program illustrates this point.

[17] "The Final Mile." 2022. Peopleforbikes.org. 2022. https://finalmile.peopleforbikes.org/.

- 4E: Deploy quick build and pilot projects.[18]
- 4F: Evaluate quick build and pilot projects, iterate designs as needed.
- 4G: Develop effective maintenance strategies for all bikeways (See Chapter X-Maintenance and Preservation).
- 4H: Update quick build and pilot projects with more durable, permanent infrastructure.
- 1I: Update the Bicycle Wayfinding Design Manual (2015) to align with current best practices and design standards.

[18] Streetfilms®. 2019. "Jersey City Uses Surveys, Rides & Tactical Urbanism to Generate a Bike Master Plan." YouTube. August 15, 2019. https://www.youtube.com/watch?v=G3I1_ud5c94.

FIGURE 7: QUICK BUILD MATERIALS SUCH AS THESE "ARMADILLOS" ON THE 150TH AVE NE BIKE LANE CAN BE USED TO ROLL OUT NEW HIGHER COMFORT BIKEWAYS MORE RAPIDLY (IMAGE CREDIT: CITY OF REDMOND)

Action 5: Implement the Neighborhood Bikeway Network

The Neighborhood Bikeway Network provides local connections between neighborhood destinations such as schools and parks, connects people to the Bicycle Spine Network and provides first-last mile connections to transit. The Neighborhood Bikeway Network is comprised primarily of bike boulevards, bike lanes, and short off-street paved pathway connections. Low vehicle speeds

achieved through traffic calming, wayfinding signage to help people navigate the network, and safe crossings of major streets are important components of the Neighborhood Bikeway Network. Infrastructure investments for the Neighborhood Bikeway Network include traffic calming, signage, pavement markings, and in some cases may require enhanced crossing treatments such as signals, crossing islands, etc. at major street crossings.

FIGURE 8: PATHWAYS SUCH AS THIS ONE CONNECTING TO 161ST COURT NE ENHANCE THE NEIGHBORHOOD BIKEWAY AND PEDESTRIAN NETWORKS BY PROVIDING MORE DIRECT ROUTING AND ACCESS TO SCHOOLS AND OTHER NEIGHBORHOOD DESTINATIONS.

Action 6: Balance Modes

Fulfilling Redmond 2050 goals and policies, and shifting trips from motor vehicles to bicycles requires making bicycling a competitive choice for travel in Redmond. Achieving this requires taking actions to rebalance Redmond's transportation system to strive for modal parity i.e., how Redmond allocates its public right of way and financial investments. It is important to consider how the entire population's

transportation needs are being served, especially those unable to drive and those who choose not to (potentially up to 25 percent of the driving age population[19]).

Balancing modes requires various actions that may reduce the convenience of driving, such as reducing motor vehicle speeds or space allocated to vehicle traffic or parking to create safer and more comfortable conditions for bicycling, as well as enacting various policies to discourage driving, especially for short trips (reducing car parking availability, charging more for parking, etc.).[20],[21]

Recommended Actions

- 6A: Implement traffic calming and traffic diversion measures to create higher comfort conditions for bicyclists of all ages and abilities.
- 6B: Establish parity in transportation funding and street space allocation to achieve mode shift and equity goals. For example, if the goal is to achieve 15 percent bicycle mode share, it would be reasonable to spend at least 15 percent of transportation funding on building a high comfort bike network.
- 6C: Within constrained corridors evaluate the expected costs and benefits of removing vehicle lanes to create space for high comfort bikeways, taking into account safety, vehicle congestion, VMT and GHG reduction.
- 5D: Prioritize high comfort bicycle access over on-street parking (see Chapter X – Curbspace Management).

Action 7: Provide Convenient, Plentiful, and Secure Bike Parking

The bicycle can be a door-to-door travel mode if bicycle parking is sufficient for both short- and long-term needs at neighborhood commercial centers, grocery stores, schools, transit facilities, and multi-family housing. Bike parking should be ubiquitous, easy to use, and free or very low-cost.

Changing Priorities

Portland, Oregon expanded its bike network in the 1990s by leveraging traffic calming and diversion in residential areas, creating a network of 100 miles of neighborhood greenways that are considered the "backbone of the city's Safe Routes to School network" and connect neighborhoods, parks, schools, business districts, and residences.

In addition to its neighborhood greenway program, Portland has a long history of supporting multimodal trips to its downtown central business district when it began limiting motor vehicle parking availability in the 1970s to address air quality issues. From 1975 to 1997, Portland maintained a cap on the total number of parking spaces allowed Downtown, even as the metro area's population increased by 50%.

[19] Nondrivers: Population, Demographics & Analysis, Final Report, January 31st, 2023. nondriversstudyfinalreportsummaryreport.pdf

[20] https://www.portland.gov/Transportation/What-Are-Neighborhood-Greenways.

[21] JAQUISS, NIGEL . 2003. "Lots of Trouble the Turf War over Portland's Parking Spaces Heats Up." Willamette Weekly. June 3, 2003. https://www.wweek.com/portland/article-2124-lots-of-trouble.html#:~:text=From%201975%20until%201997%2C%20Portland,the%20cap%20was%20a%20boon

Recommended Actions

- 7A: Conduct inventory of existing public bike parking and update inventory as new bike parking is installed.
- 7B: Explore partnerships to establish an on-demand secure bike parking system throughout the city with initial focus within Urban Centers.
- 7C: Incentivize existing multi-family housing to retrofit property to include secure bicycle parking inside property or contribute to other secure, sheltered parking facilities in the public right of way adjacent to the property.
- 7D: Retrofit existing public facilities such as parks and schools to provide secure and easy to access bicycle parking.
- 7E: Collaborate with Sound Transit to ensure sufficient secure bicycle parking is provided at light rail stations as bicycle use grows.
- 7F: Create a city program for short-term bicycle parking, for example, providing businesses and organizations bike racks within the adjacent public right-of-way upon request, which could include conversion of an on-street parking spot(s) to a bicycle parking corral where multiple bicycles can be parked[22], [23]

Retrofitting Bike Parking

Portland's Bureau of Transportation (PBOT) offers a bike parking program in commercial districts, allowing property owners to request up to two free bike racks for installation on the sidewalk in front of the property, with additional racks available for $150 each. PBOT also has a program that converts on-street parking spots into bike corrals (groups of 6-12 racks), which can accommodate 12-24 bikes in the space of one or two parking spots. These corrals are prioritized at street corners to increase parking, improve pedestrian crossings, and boost business visibility.

22 22 "Apply to Install Bike Racks on the Sidewalk." 2018. Portland.gov. 2018. https://www.portland.gov/transportation/walking-biking-transit-safety/apply-install-bike-racks-sidewalk.

22 "Apply to Install Bike Racks in the Street." 2024. Portland.gov. 2024. https://www.portland.gov/transportation/walking-biking-transit-safety/apply-install-bike-racks-street.

23 "Bicycle Parking | Ddot." 2022. Dc.gov. 2022. https://ddot.dc.gov/page/bicycle-parking.

FIGURE 9: SECURE BIKE PARKING CONVENIENTLY LOCATED IN THE STREET ENCOURAGES PEOPLE TO USE BICYCLES FOR RUNNING ERRANDS AND ACCESSING SERVICES. (IMAGE CREDIT: CYCLE HOOP)

Bicycle Network Strategy

The bicycle network strategy includes planned new connections and upgrades to existing bikeways to create higher comfort bikeways. The network builds upon the existing bikeways in Redmond and past planning efforts, with the ultimate goal of people of all ages and abilities being able to get from anywhere to everywhere by bike or other micromobility devices. The build out of the Spine Network and a local neighborhood network will support this goal. The prioritized implementation of the bicycle network will maximize the opportunity to convert short driving trips to biking. The bicycle network also includes connections to surrounding communities such as Bellevue, Kirkland, Sammamish, and Woodinville and their bikeways.

The planned bicycle network is grounded in the following principles:

- Connected: It is possible to get from anywhere to everywhere by bicycle. Emphasis is placed on creating a Spine Network and connecting people to light rail, schools, major employment centers, and commercial centers.
- Direct: Going by bicycle offers the most direct route to important destinations.
- Cohesive: Similar designs provide consistency, so bicyclists, pedestrians, and motorists know what to expect when they encounter a bicycle facility.[24]
- Safe and Comfortable: On streets with high motor vehicle traffic volumes and speeds, high comfort, separated bicycle lanes or shared use paths are provided. Protected intersections and other treatments provide safer continuity for bicycle facilities at intersections. Bicycle boulevards provide further comfort on streets with lower traffic volumes and speeds.
- Multimodal: Bicycling is the preferred mode to reach light rail stations and bus stops for trips 0.5 – 3.0 miles in length, with high comfort bicycle facilities provided to all existing and future light rail stations and other mobility hubs. Bicycle racks on buses support connections to transit in areas not connected by light rail.

The Bicycle Spine Network

Figure 14 below shows the foundation of Redmond's planned network of bikeways, a Bicycle Spine Network, which includes key links providing connectivity from and within each of Redmond's neighborhoods to key destinations and activity centers. The Spine Network will consist of high comfort (LTS 1 or LTS 2) bicycle facilities—primarily shared-use pathways, separated bike lanes, and bicycle boulevards. The City of Redmond's goal is to complete the Spine Network by 2035, recognizing that some corridors that have significant physical or environmental constraints and high costs could take longer to implement.

The Neighborhood Bikeway Network

This network will connect people's homes to neighborhood schools, parks, the Bicycle Spine Network, and serve as first-last mile connections to bus routes. It will focus on traffic calming and be comprised primarily of bike boulevards, bike lanes, and short off-street paved pathway connections.

[24] The 2023 updated Bicycle Facility Design Manual will support consistency in the design and construction of future bicycle facilities in Redmond.

Bikeway Types

Figure 15 later in this chapter shows the planned bicycle network, identifying existing bikeways and planned bikeways by bikeway type (e.g., separated bike lane, shared use path, etc.). These bikeway types, their design parameters, and compatibility with various contexts and conditions are explained in the Bicycle Facility Design Manual (2023). Figure 10, Figure 11, Figure 12, and Figure 13 illustrate some examples of existing high comfort bikeways in Redmond.

FIGURE 10: SEPARATED BIKE LANE ON 152ND AVENUE NE (IMAGE CREDIT: CITY OF REDMOND)

FIGURE 11: TRAFFIC CALMED BICYCLE BOULEVARDS SUCH AS THIS ONE ON 152ND AVENUE NE IN REDMOND PROVIDE IMPORTANT CONNECTIONS BETWEEN HOMES AND NEIGHBORHOOD DESTINATIONS LIKE SCHOOLS AND PARKS (IMAGE CREDIT: TOOLE DESIGN)

FIGURE 12: REDMOND'S SHARED USE PATHS (REDMOND CENTRAL CONNECTOR TRAIL SHOWN HERE) ARE POPULAR TRANSPORTATION AND RECREATIONAL FACILITIES (IMAGE CREDIT: CITY OF REDMOND)

FIGURE 13: WAYFINDING SIGNAGE HELPS BICYCLISTS NAVIGATE THE NETWORK AND CONNECT TO THEIR FINAL DESTINATION. (IMAGE CREDIT: CITY OF REDMOND)

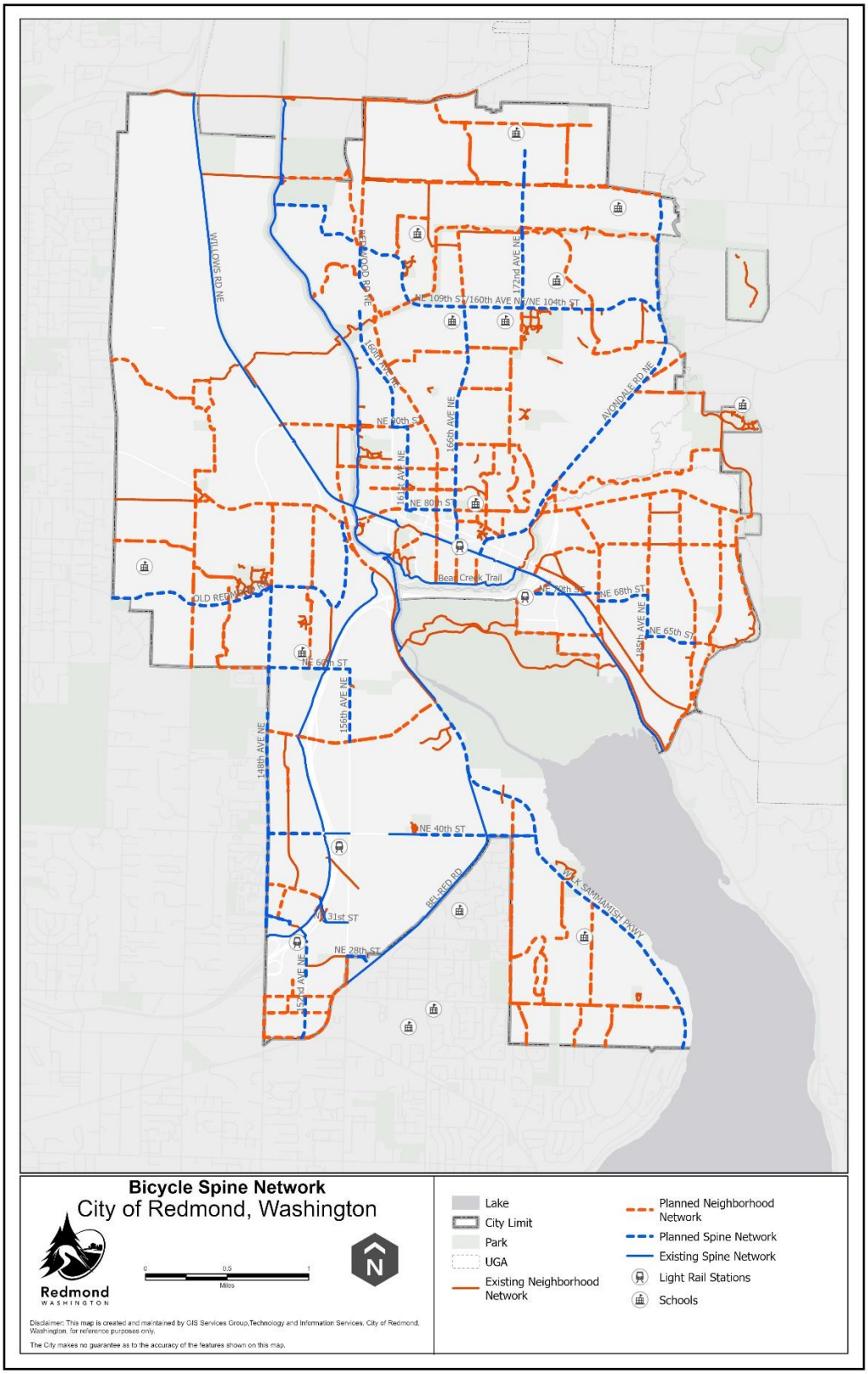

FIGURE 14:SPINE NETWORK

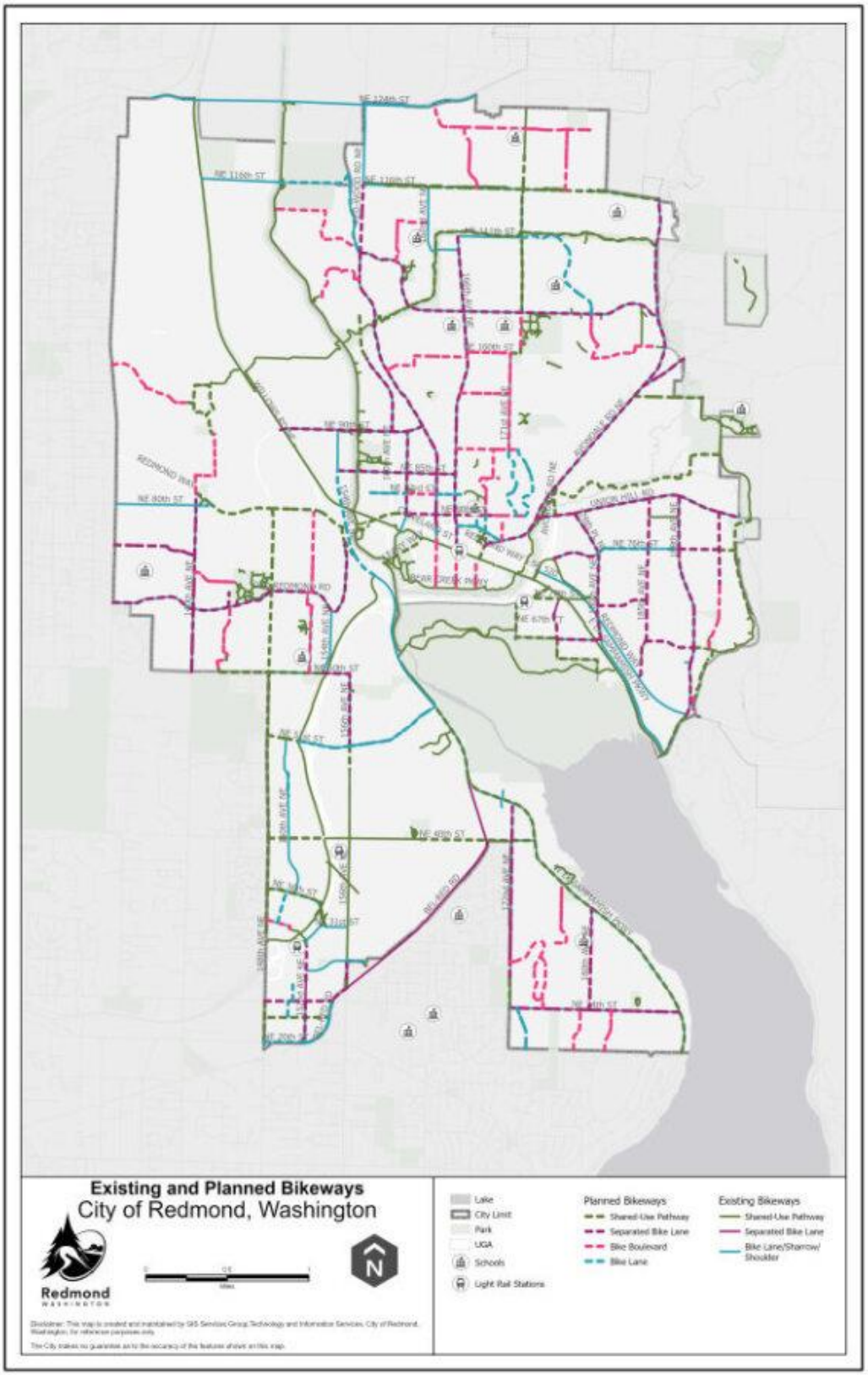

FIGURE 15: EXISTING AND PLANNED BICYCLE FACILITIES

Implementation

The City of Redmond will focus on implementing the Spine Network and other high priority projects identified in Figure 16 below. However, the City will also consider other factors when deciding what to build each year, such as the feasibility and cost of each project; opportunities to "piggyback" on other capital projects (e.g., stormwater); and time needed to plan, apply for grant funding, and conduct engineering and design.

Near-term vs. Long-term Implementation

To maximize bicycle and micromobility ridership the City of Redmond needs to implement a connected network of low-stress bikeways that connect people to destinations and allow them to meet their everyday needs, including schools, transit, parks, shopping, and services. Communities that have had the most success in significantly increasing the number of people bicycling have strategically invested in building out their bike networks and doing so quickly. Often these cities have relied on so called rapid implementation with a focus on using lower- cost quick build materials. While some critical connections in the planned bicycle network can be accomplished in the near-term (0-5 years) using rapid implementation methods, others will be longer-term (5-10 years or more) due to physical or environmental constraints and associated high costs.

Implementation Through Capital Projects

Typically, bikeway projects such as separated bike lanes, shared use paths, and bicycle boulevards are implemented through the City's capital improvement program, which dedicates City funds to implement capital projects (i.e., major infrastructure projects). These types of projects tend to have longer implementation timeframes as it may take time to allocate sufficient City funds to cover the total project costs given many other competing capital project funding needs and/or secure grant funding. Examples of bikeways that have been implemented in this way include the Bel-Red buffered bike lanes and Redmond Central Connector Trail.

Implementation Through Development

Redmond has been fortunate to have had a high level of commercial and residential development. Any development must pay transportation impact fees and may also be required to build infrastructure that has been identified in the City's Transportation Facilities Plan or determined to be necessary to mitigate impacts to the transportation system. The implementation timeline for these projects tends to be longer as it depends on new development occurring and often new development projects can take several years to construct from the time of initial application. Several key segments of Redmond's Bicycle Spine Network have been built by development, including shared use paths on NE 40th St and 156th Ave NE and separated bike lanes on 152nd Ave NE. As Redmond continues to grow there will be more opportunities to leverage this growth to build the planned bikeway network.

Rapid Implementation

More rapid implementation of bikeways is possible, in some cases. Such projects use lower cost quick build materials (e.g., flexible posts, c-curb) to separate bicyclists from motor vehicles. Projects that do not require modifications to other infrastructure such as traffic signals, drainage, etc., and that can be designed and implemented by City staff are typically the best candidates for rapid implementation. Many parts of the Neighborhood Bikeway Network are good candidates for more rapid implementation, however it is necessary to prioritize these connections given the extensiveness of the network and budget limitations. The City will look for these rapid implementation opportunities to close priority gaps in the bikeway network in the nearer-term until funding can be secured for longer-term, more permanent solutions.

Prioritization Framework

Planned bicycle facilities have been prioritized using a framework that reflects the goals and strategies outlined earlier in this chapter. Specifically, the following metrics were used to prioritize segments of the bicycle network for implementation:

- Safety: Locations with high density of fatal and serious injury (FSI) crashes received higher priority
- Equity: This metric prioritized projects that would serve people with greater needs for active transportation, based on the City of Redmond's Equity Analysis tool
- Proximity to key destinations (transit, schools, daycare centers, parks, and grocery stores): Prioritizes projects close to clusters of pedestrian and bicycle activity centers
- Comfort: Facilities designed to serve All Ages and Abilities provide a higher level of comfort and may attract more users. On steep streets, providing higher comfort is even more important to serve all users.
- Route Connectivity: Connection to one or more existing bikeways or modal corridors serves to extend the bike network and increase the ability for people to use the network to access destinations.
- Topography: Factors hilly routes into the prioritization of bicycle facility projects
- Spine Network: Projects along the Spine Network receive additional priority
- Short trip density areas: Locations where the highest density of short trips occur have the greatest potential for mode shift to reduce VMT and GHG emissions. Facilities in hilly areas with high short trip density may receive higher priority because if an area is flat, we may see more trip conversion from vehicle to bikes.

Table 1 below provides a summary of the planned bicycle facility mileage by bikeway type and priority level. The planned bikeway network includes 72.8 miles total of planned bikeways, including 22.4 miles of shared-use pathways and 29.3 miles of separated bike lanes. The planned Spine Network includes 24.7 miles of bikeways.

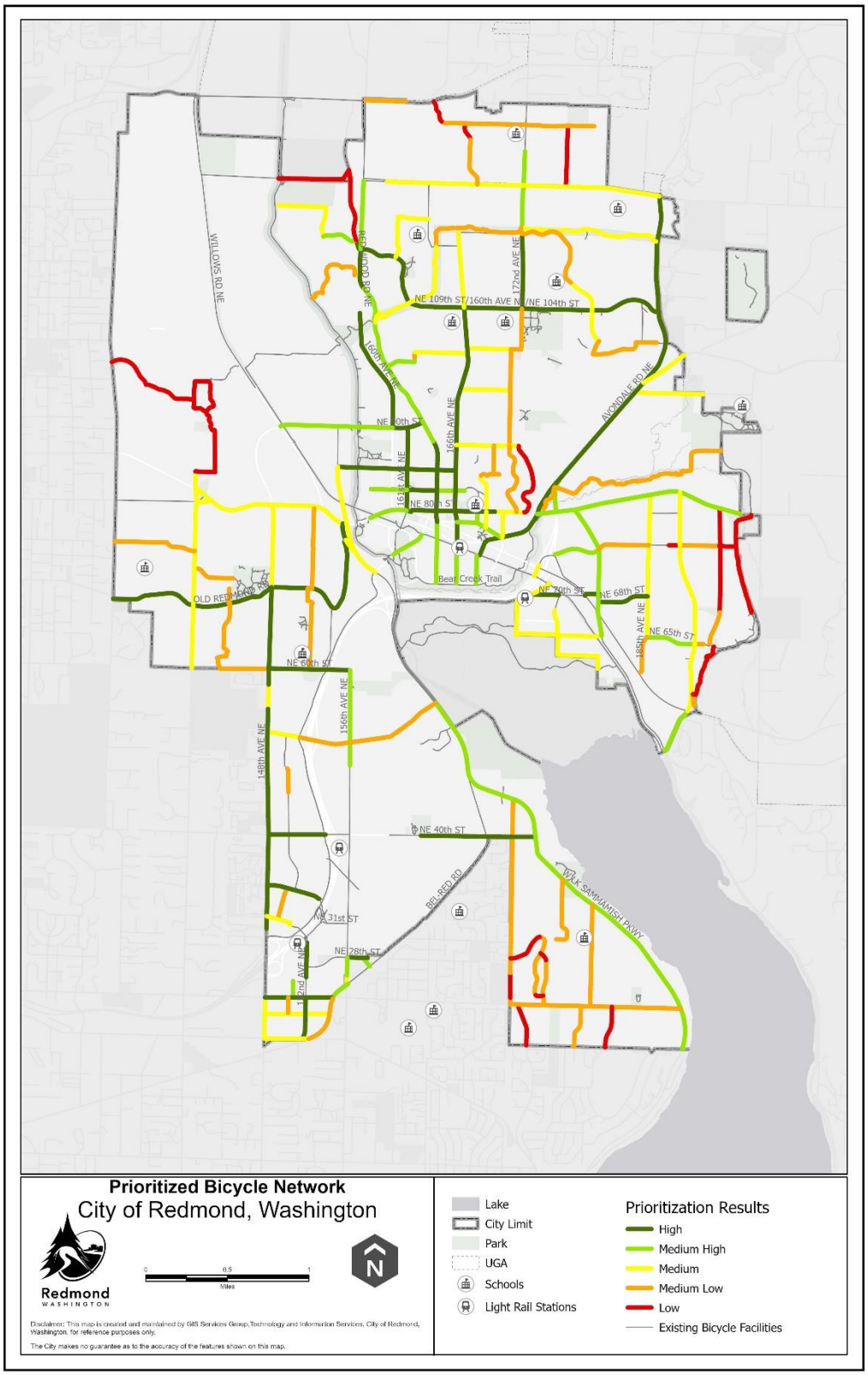

FIGURE 16: PRIORITIZED BICYCLE NETWORK

TABLE 1: PLANNED BICYCLE NETWORK MILEAGE BY BIKEWAY TYPE AND PRIORITY LEVEL

Priority Level → **Bikeway Type** ↓	High No. Miles	Medium High No. Miles	Medium No. Miles	Medium Low No. Miles	Low No. Miles	Total No. Miles by **Bikeway** Type
Shared-Use Pathway	8.3	1.8	7.6	3.2	1.6	**22.4**
Separated Bike Lane	15.9	4.7	4.7	3.6	0.4	**29.3**
Bicycle Boulevard	0.2	1.1	3.2	6.8	1.9	**13.3**
Bike Lane	0.6	0.6	1.4	3.3	1.7	**7.5**
Total No. Miles by Priority	**24.9**	**8.1**	**17.2**	**16.9**	**5.6**	**72.8** Total Miles Planned Bikeways
Spine Network	21.9	1.7	1.0	0.0	0.0	**24.7** Total Miles Spine Network

Spine Network

The Spine Network consists of separated bike lanes, shared use paths, and bicycle boulevards on low-speed, low-volume neighborhood streets. Table 2 below summarizes the remaining segments of the Spine Network and the anticipated timeframe (Near-term, or 0-5 years and Long-term, or 5-10 years) for their implementation. Some segments with near-term implementation timeframes may be good candidates for more rapid implementation (0 – 2 years), which will be determined by staff capacity, street work capabilities, and whether or not there are major costs items related to drainage, signals, etc.

TABLE 2: SPINE NETWORK IMPLEMENTATION TIMEFRAME

Street Name	From	To	Planned Bikeway	Status	Timeframe
148th AVE NE	Old Redmond Rd	NE 60th ST	Shared-Use Path	Planned	5-10 years
148th AVE NE	NE 51st ST	NE 40th ST	Shared-Use Path	Planned	5-10 years
148th AVE NE	NE 40th ST	NE 31st ST	Shared-Use Path	Planned	0-5 years
152nd AVE NE	NE Hopper Wy	Da Vinci NE	Separated Bike Lane	Planned	0-5 years
160th AVE NE	NE 90th St	Road End	Separated Bike Lane	Planned	0-5 years
161st AVE NE	NE 90th ST	Redmond Way	Separated Bike Lane	Planned	0-5 years

NE 28th Ave NE	156th Ave NE	Shared-Use Path between Bel-Red Road and NE 28th St	Bike Lane	Planned	0-5 years
NE 36th ST	148th AVE NE	SR 520	Shared-Use Path	Planned	0-5 years
NE 60th St	154th Ave NE	156th Ave NE	Shared-Use Path	Planned	0-5 years
OLD REDMOND RD	W Lake Sammamish Pkwy NE	132nd AVE NE	Separated Bike Lane	Planned	0-5 years
W LK SAMMAMISH PKWY	Bel-Red RD	NE 51st ST	Shared-Use Path	Planned	0-5 years
152nd AVE NE	NE 20th ST	NE 24th ST	Separated Bike Lane	Planned	5-10 years
160th AVE NE	Road End	NE 102nd Way	Shared-Use Path	Planned	5-10 years
166th AVE NE	Cleveland ST	NE 91st ST	Separated Bike Lane	Planned	5-10 years
166th AVE NE	NE 104th ST	NE 111th ST	Separated Bike Lane	Planned	5-10 years
AVONDALE RD NE	Redmond Way	NE Novelty Hill RD	Separated Bike Lane	Planned	5-10 years
AVONDALE RD NE	NE Novelty Hill RD	NE 116th St	Separated Bike Lane	Planned	5-10 years
NE 109th ST/160th AVE NE/NE 104th ST	Red-Wood Rd NE	Avondale RD NE	Separated Bike Lane	Planned	5-10 years
NE 40th ST	148th AVE NE	SR 520	Shared-Use Path	Planned	5-10 years
W LK SAMMAMISH PKWY	Southern City Limit	Bel-Red	Shared-Use Path	Planned	5-10 years
NE 40th ST	163rd AVe NE	172nd Ave	Shared-Use Path	Constructed by 2028	0-5 years
NE 85th ST	166th Ave NE	Sammamish River Trail	Separated Bike Lane	Constructed by 2027	0-5 years
NE 70th ST to 180th AVE NE Connector	Redmond Way	180th Ave NE	Shared-Use Path	Constructed by 2026	0-5 years
148th AVE NE	NE 40th ST	NE 36th ST	Shared-Use Path	Design	5-10 years
148th AVE NE	NE 36th ST	NE 31st ST	Shared-Use Path	Design	5-10 years
NE 90th ST	160th Ave NE	161st Ave NE	Separated Bike Lane	Planned	5-10 years
RED-WOOD RD NE	NE 106th ST	NE 109th ST	Separated Bike Lane	Planned	5-10 years

Related Plans, Policies, and Programs

The Bicycle Network implementation is supported by several complementary plans, policies, and programs, including:

- Bicycle Facility Design Manual (2023): The recently updated manual provides design guidance for bikeways to ensure consistent design of new bikeways in Redmond. Notably, the design user for the Manual is the "Interested but Concerned" bicyclist, someone who is not comfortable with bike lanes and

may bike on sidewalks if bike lanes are provided. These bicyclists prefer LTS 1 or 2, off-street or separate bikeways or quiet traffic-calmed residential streets.

- City of Redmond Municipal Code: 12.06 Complete the Streets: Code requiring all transportation projects to provide appropriate accommodation for persons of all ages and all abilities, including bicyclists, pedestrians, transit users, as well as automobiles, freight and buses, in comprehensive and connected networks defined in the City's Transportation Master Plan.
- City of Redmond Municipal Code: 21.52.010 Transportation Concurrency: All proposed new developments are required to analyze its impacts to the transportation system. If the new development is located in an area identified in the Transportation Facilities Plan for an improvement, such as a planned bikeway or sidewalk, the developer would be required to incorporate this as part of the project or pay impact fees to the City for its implementation. Many of Redmond's existing bikeways have been constructed as part of new development through the Transportation Concurrency program.
- City of Redmond Municipal Code: 21.52.020 Mobility Management Program: Requires building owners to implement a mobility management program to reduce the level of traffic generation during the a.m. and p.m. peak hours. Requires all development applications that warrant transportation mitigation to comply with this code's requirements.
- City of Redmond Municipal Code 21.40.020 Bicycle Parking Requirements and Standards: Purpose is to (1) Promote bicycling as an important and integral mode of transportation which enables healthy lifestyles, is affordable, and reduces greenhouse gas emissions; (2) Provide requirements and standards efficient and safe bicycling parking meeting the parking needs of specific uses; and (3) Provide the necessary bicycle parking facilities for a bicycle-friendly community.
- Safer Streets Action Plan (2025): This plan provides a roadmap for achieving zero fatal and serious injury crashes in Redmond. Grounded in the Safe System approach, it identifies policy, programmatic, a high risk network where safety improvements should be prioritized, and provides details on infrastructure improvements that should be made on specific corridors.
- Redmond School Pool Program: City of Redmond active travel to school encouragement program that works with Lake Washington School District schools located in Redmond to provide marketing materials, education on alternative commuting safety topics, and ideas for events like Walk to School Days to encourage a reduction in drive alone trips to school and Bike Rodeos to learn about road safety and bike handling.
- Parks, Arts, Recreation, Culture, and Conservation (PARCC) Plan: This plan identified completing and expanding trail system connections as one of the highest capital project priorities during the community engagement process, and walking was the top activity for Redmond residents. The plan supports improving trail access for transportation options as essential to maintaining a healthy and livable community and promoting alternatives to motor vehicle use.
- Stormwater and Surface Water System Plan: The City of Redmond Stormwater and Surface Water Systems Plan (SSWSP) guides actions to reduce and prevent flooding, protect and restore natural habitat, keep pollutants away from fish and wildlife, protect our drinking water aquifer, and keep our lake, river, and streams healthy for everyone to enjoy. The SSWSP identifies where stormwater and water system infrastructure needs be built or replaced, which can present opportunities to make modifications to the street, including construction of bikeways. Capital transportation projects are also opportunities to upgrade stormwater and water system facilities.
- Transportation Facilities Plan: The Transportation Facilities Plan (TFP) guides transportation investments that the City of Redmond expects to deliver by 2050.

- Six-Year Transportation Improvement Program: The six-year Transportation Improvement Program (TIP) is an annual planning document that outlines Redmond's transportation projects and programs for the next six years, based on the city's Comprehensive Plan and Transportation Facility Plan. It includes a list of projects with secured or expected funding, with the first three years typically fully funded, and the last three years often partially or completely unfunded.

Planning for Maintenance of Redmond's Bikeway Network

As Redmond plans and builds new bikeways, there will be a need for additional maintenance, potentially requiring increased staffing levels, additional funding, and/or the development of new maintenance protocols to maintain a level of service that supports safe and comfortable operation. This is particularly true for separated bike lanes that may require more frequent seasonal maintenance, specialized equipment, and have more pavement markings and other features requiring periodic maintenance and replacement. It is important for the City to proactively plan and account for these needs. Chapter X – System Maintenance and Preservation provides more discussion on maintenance of the bikeway network.

Transportation Master Plan Update

Chapter Review: Freight & Goods Delivery

Report Structure

1. Executive Summary
2. Introduction
3. Street System
4. Pedestrian
5. Bicycle
6. Transit
7. *Curbspace*
   - *Mayor reviewed Jan. 2025, Council reviewed Jan. 2025*
8. **Freight & Goods Delivery**
9. Transportation Demand Management (TDM)
10. E-Mobility
11. Technology Forward
12. Maintenance
13. Monitoring Progress (Performance Metrics)
14. Appendices

Key Themes

- Identify Redmond's designated freight route network
- Last-mile delivery
- Adapt to new and emerging last-mile delivery technologies

Review Timeline

- Director Review: 1/29/2025
- Mayor Review: 2/7/2025
- Planning Commission Presentation: likely June 2025
- Council Staff Report: 3/18/2025
- Council Study Session: 3/25/2025

Freight & Goods Delivery Strategies

- Maintain designated freight routes, including a three-tiered route system based on the size of truck and cargo tonnage.
- Investigate options for improving freight data collection
- Consider adoption of innovative strategies to provide for safe and enhanced freight movement, reduced emissions, and application of clean technology (such as dedicated last-mile delivery loading zones, or accommodating autonomous delivery technologies)

FREIGHT AND GOODS DELIVERY PLAN (DRAFT)

1. Introduction

The movement of goods and services is a critical component of Redmond's transportation system. Between long-haul arrivals and last-mile deliveries, Redmond's entire street system is used in the movement of goods and services. The Southeast Redmond Industrial Center is an important freight hub for the Eastside, where long-haul trucks arrive with goods that are then sent to destinations across the Eastside in smaller vehicles. E-commerce is expected to have sustained growth resulting in more package deliveries to residents. Between 2017 and 2050, the Puget Sound Regional Council forecasts that freight transported within Washington state will increase by more than 40%, and that imports and exports will grow by more than 50%. These trends point to a need to maintain Redmond's designated truck routes to ensure timely and reliable movement of goods and to be forward thinking in terms of new approaches and technologies last-mile delivery solutions.

Supporting the Redmond 2050 Comprehensive Plan

This chapter contains strategies for ensuring safe and efficient movement of goods and services to, from and within Redmond. Strategies consider the needs of freight operators, businesses, residents, and consumers (TR-28).

Supporting Redmond 2050 Guiding Principles of Sustainability, Equity & Inclusion, and Resiliency

Equity and Inclusion: Making sure freight delivery access is available to all Redmond residents and businesses.

Sustainability: Reducing overall GHG emissions by implementing electric or low emissions delivery and pick up systems.

Resiliency: Promoting freight delivery strategies that minimize energy use and impacts to the surface transportation network and livable Urban Centers.

2. Existing Conditions

Overview of Current Infrastructure:

Redmond's freight route network consists of truck routes that connect to regional truck routes and provide local access to industrial areas such as the Southeast Redmond Industrial Center. Lacking direct rail and port access, Redmond's freight network is completely road-based.

The Redmond truck route system is based on the Washington State Department of Transportation's Freight and Goods Transportation System (FGTS). The FGTS features a ranking system of truck routes based on volume data and estimated tonnage. T-1 and T-2 class routes, or primary truck routes, are recognized as the highest volume and tonnage truck routes in the State, carrying at least four million tons of gross truck tonnage per year. Secondary truck routes are made up of T-3 and T-4 truck routes. T-3 class truck routes carry between 300,000 to 4 million tons per year. T-4 class truck routes carry at least 100,000 to 300,000 tons per year.

Redmond maintains a 39.7-mile four-tiered freight route system that includes local arterials. The 7.3-mile section of SR 520 freeway within the city limits is maintained by WSDOT and included as part of the

City's freight route network. These routes currently have higher volumes of trucks and are predicted to have higher volumes of trucks in the future. Truck routes also connect the major industrial and commercial area in the Southeast Redmond neighborhood and support the movement of goods between manufacturing companies and regional truck routes, which are important to the economic vitality of manufacturing and freight distribution companies in Redmond. All truck routes are built to a standard that accommodates heavy truck loads and may be designed to also provide safe access for people walking, biking and taking transit as is discussed in Chapter X- Street System Plan.

It should be noted that two FGTS-designated T-3 truck routes are not included in the City's truck route network. These are West Lake Sammamish Parkway, from the Bellevue City Limits to Bel-Red Road and NE 116th Street, from Avondale Road NE to SR 202. The reason for excluding these two routes is that they operate in heavily residential neighborhoods and there are alternative truck routes. These are corridors where the city will take future action to discourage through truck traffic.

Figure 1-1 below shows a map of the Redmond truck route system. Table 1-1 below summarizes Redmond's truck route system miles by truck route classification.

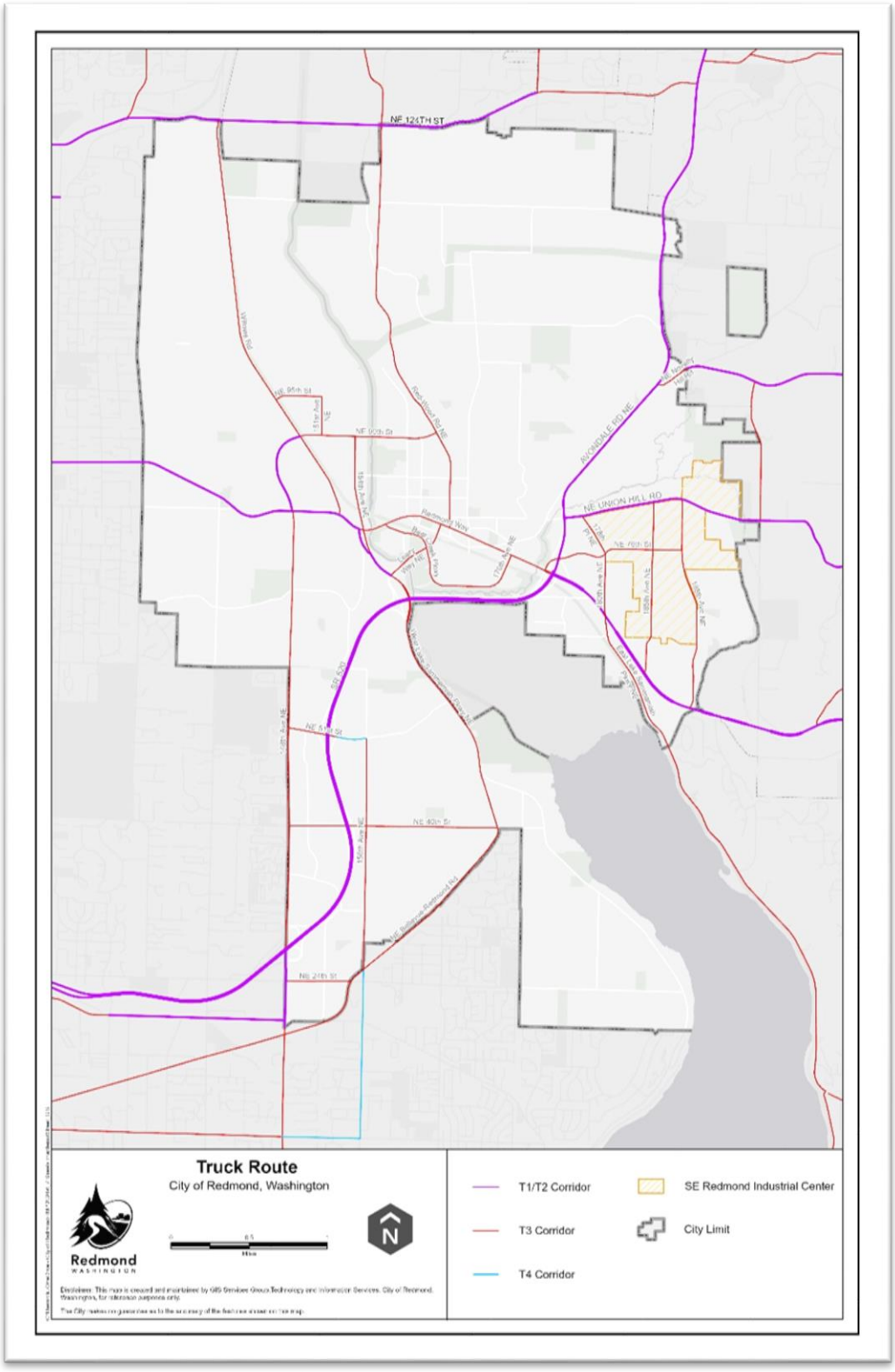

FIGURE 1-1: REDMOND TRUCK ROUTES

TABLE 1-1: REDMOND TRUCK ROUTE SYSTEM

Truck Route Classification	Centerline Miles
(Primary) T1/T2 Truck Route	17.9 (including 7.3 miles of SR 520)
(Secondary) T3 Truck Route	28.9
(Secondary) T4 Truck Route	0.2
	Total Miles: 47.0

Primary Truck Routes (T-1 and T-2) include:

- 148th Ave NE, from south city limits to SR 520
- 148th Avenue NE, from Redmond Way to Willows Road
- West Lake Sammamish Parkway NE, from Leary Way NE to Redmond Way
- Avondale Road, from NE Union Hill Road to north city limits
- NE Union Hill Road, from Avondale Road NE to east city limits
- Redmond Way, from 132nd Avenue NE to West Lake Sammamish Parkway NE

Secondary Truck Routes (T3 and T-4) include:

- 148th Avenue NE, from SR 520 to Redmond Way
- NE 90th Street, from Willows Road to SR 202 (Redmond-Woodinville Rd NE)
- 151st Avenue NE, from NE 90th Street to NE 95th Street
- NE 95th Street from 151st Ave NE to Willows Road
- West Lake Sammamish Parkway NE, Bel-Red Road to Leary Way NE
- 154th Avenue NE, from West Lake Sammamish Parkway NE to NE 90th Street
- 156th Avenue NE, from NE 28th Street to NE 40th Street
- 156th Avenue NE, from NE 40th Street to NE 51st Street
- Bear Creek Parkway, from Redmond Way to 168th Ave NE PVT
- 170th Avenue NE, from 168th Ave NE to SR 202 (Redmond Way)
- East Lake Sammamish Parkway NE, from South City Limits to SR 202 (Redmond Way)
- 180th Avenue NE from SR 202 (Redmond Way) to NE 76th Street
- 178th Place NE, from NE 76th Street to NE Union Hill Road
- 185th Avenue Northeast from SR 202 (Redmond Way) to NE Union Hill Road
- 188th Place NE, from SR 202 (Redmond Way) to NE Union Hill Road
- Bel-Red Road from NE 20th Street (City Limits) to NE 24th St (City Limits)
- Bel-Red Road, from 3200 Block (City Limits) to NE 40th Street
- Bel-Red Road, from NE 40th St, West Lake Sammamish Parkway NE
- Leary Way NE, from West Lake Sammamish Parkway, Redmond Way
- NE 124th Street, from SR 202 (W C/L), East City Limits
- NE 24th Street, from 148th Avenue NE (C/L), Bellevue-Redmond Rd (C/L)
- NE 40th Street, from 148th Avenue NE, SR 520

- NE 40th Street, from SR 520, Bel-Red Road
- NE 51st Street, from 148th Avenue NE, SR 520
- NE 76th Street, from SR 202 (Redmond Way) to 180th Ave NE
- NE 76th Street, from 180th Ave NE to 188th Ave NE
- NE Novelty Hill Road, from Avondale Road NE to East City Limits
- Redmond Way from West Lake Sammamish Parkway NE to SR 202 (164th Avenue NE)
- Willows Road from Redmond Way to NE 124th Street (Kirkland City Limits)
- NE 51st Street, from SR 520 to 156th Avenue NE

3. Strategies and Actions

3.1 Maintain Designated Primary and Secondary Truck Routes:

Redmond's freight network includes a two-tier street system comprising:

- Primary T-1 and T-2 Truck Routes: Key routes for high truck volumes, directly connecting Redmond with regional highways such as SR 520 and SR 202. These roads are designed for durability with features like strong pavement to support heavy vehicles. A minimum travel lane width of 11 feet is prioritized along these routes to provide more operating space for larger freight vehicles.
- Secondary T-3 and T-4 Truck Routes: These streets will generally operate with lower truck volumes and weight and provide more local access to businesses.

Action 3.1A: Consider efficient and safe truck movement in all street planning and design.

3.2 Restrict or Discourage Truck Traffic Where Incompatible

Whereas all Redmond streets are open to some degree of truck traffic – whether through truck traffic on major roads or last mile delivery on local streets – there may be streets where certain types of truck traffic is incompatible with surrounding land uses or other expected transportation modes.

Action 3.2A: Establish internal policies and procedures for restricting or discouraging truck traffic in corridors where such traffic is deemed incompatible with surrounding land users and/or transportation modes.

3.3. Investigate Options for Improving Freight Data Collection

Redmond uses traditional multi-modal traffic count methods for collecting freight data, which are time consuming, expensive and don't capture the performance of new and emerging freight movement strategies. New technologies, such as using commercial vehicle truck fleet data and other technology sources such as onboard GPS-enabled navigation systems, and cellphone-derived data supplied by third-party vendors for tracking vehicles may provide more efficient ways to collect freight data that can be used to better manage freight vehicle performance, thereby improving mobility on local city streets.

Action 3.3A: Explore and adopt new technologies or data sources to better track freight movement within the City.

3.4 Adopt innovative strategies to provide for safe and enhanced freight movement, reduced emissions, and application of clean technology.

3.4.1 Last-Mile Delivery Solutions

The increasing demand for last-mile delivery in urban areas requires innovative solutions. Strategies to reduce congestion and improve delivery efficiency for local businesses and residents, include:

Action 3.4.1A: Dedicated Loading Zones and Parking Regulations: Reduce congestion in high-demand areas like Downtown through strategically placed loading and unloading zones combined with improved parking regulations ensures smooth freight delivery operations and fair usage of high-demand urban areas.

Action 3.4.1B: Curb Space Delivery Reservations: As Redmond's Urban Centers attract more residents and businesses, demand for curb space will continue to intensify. Efficient, safe, and timely delivery of goods to businesses is critical to supporting thriving businesses and livable Urban Centers. As part of its overall curb space management efforts, the city will explore the use of an app-based curb space delivery reservation system where curb space demands are highest within Urban Centers. Preference within specific zones in Urban Centers could be given to zero-emission delivery vehicles.

Action 3.4.1C: Urban Micro-Consolidation Centers (UMCCs): UMCC's are locations where deliveries within a certain radius are dropped and reconsolidated to be delivered by more sustainable last-leg modes. They may be located within the public right-of-way or off-street sites. The City will work with shipping and logistic providers and support siting of UMCCs within or proximate to its Urban Centers where there are higher concentrations of package deliveries.

Action 3.4.1D: Parcel Lockers and Pickup Points: Explore regulatory or incentive-based approaches to implementation of parcel lockers and/or pickup points in Urban Centers to reduce the number of individual deliveries and resultant congestion and curbspace demand generated by delivery vehicles. Parcel lockers are convenient, centralized locations where consumers retrieve packages, cutting down on individual deliveries. Amazon Locker is an example of a parcel locker service. Pickup points are locations where online orders or parcels can be sent to or dropped off. This service is also known as out-of-home delivery and provides more flexibility than home delivery. Customers can choose the pickup location based on their convenience and schedules. UPS Stores are an example of a pickup point.

3.4.2 Autonomous and Drone Delivery Accommodation

Action 3.4.2A: Explore options and applicable federal and state regulations for future drone and autonomous vehicle zones to support safe, efficient last-mile operations.

Action 3.4.2B: Drone-Compatible Infrastructure: Investigate regulatory framework and infrastructural needs for establishing small landing and pickup areas for future drone delivery services.

- Autonomous Vehicle Types:

- Modular freight vehicles (gas or electric-powered) are one in which substantial components of the vehicle are interchangeable. This modularity is intended to make repairs and maintenance easier, or to allow the vehicle to be reconfigured to suit different functions.
- Shared autonomous vehicles, driverless vehicles that can sense and navigate their environment without human operations.
- Automated guided vehicles are driverless robots used to transport materials in warehouses, distribution centers (DCs), and manufacturing facilities using designated pickup and delivery routines.

3.4.3 Emissions Reduction and Clean Technology

Action 3.4.3A: Support expansion of EV charging infrastructure and explore establishing zero-emission delivery zones inside Urban Centers to promote zero emission last-mile freight and goods delivery.

Action 3.4.3B: Promote the use of small, low- or zero-emission delivery vehicles including electric cargo bikes and tricycles, and electric carts through sensible regulation and bikeway, pathway, and sidewalk design that accommodates such vehicles.

3.5. Consider Application of Freight-and-Bus Only Lanes

In the Puget Sound region, jurisdictions and transit agencies have adopted a strategy to reconfigure travel lanes on congested arterials to allow for special use conditions. One of these strategies are Business and Transit-only Lanes, or BAT lanes, which are curb lanes used only by right-turning vehicles and buses. They help buses move more efficiently through traffic and provide better access to local businesses.

Action 3.5A: Willows Road, a designated Secondary truck route, may present an opportunity for a variation of BAT lanes that would also permit freight vehicles. A northbound freight and bus only lane (FAB lane) would be added by repurposing existing bike lanes (no longer needed with the Redmond Central Connector) north of the 9900 Block to 124th Street and replacing one general purpose lane south of 9900 Block. This type of reconfiguration would remove slower operating transit and freight vehicles from general purpose lanes thereby, improving operations for all vehicles.

4. Related plans or policies

- WSDOT Freight System Plan–Freight Policies
- Puget Sound Regional Council, Regional Transportation Plan, Freight Policies
- King Countywide Planning Policies-Freight

15670 NE 85th Street
Redmond, WA

City of Redmond

Memorandum

Date: 3/25/2025
Meeting of: City Council Study Session

File No. SS 25-023 FIN
Type: Study Session

TO: Members of the City Council
FROM: Mayor Angela Birney
DEPARTMENT DIRECTOR CONTACT(S):

Finance	Kelley Cochran	425-556-2748

DEPARTMENT STAFF:

Finance	Adam O'Sullivan	Financial Services Manager
Finance	Haritha Narra	Deputy Finance Director

TITLE:
Purchasing Process Improvements

OVERVIEW STATEMENT:
The Finance Department is initiating a project to review city purchasing processes, procedures, and policies. The scope of work entails policy review, sealed bidding solution, updating contract boilerplates, contract management process review and system implementation, training and resource guides, vendor portal and vendor collaboration, A/P automation, developing citywide spend analytics system and reporting process, and completing the report development for: DEI, Environmental Sustainability, and spend reports. Data and information supporting the project includes historical contract data, analysis of staff time, and data from other municipalities.

Purchasing Division staff have already been working on policy revisions and recommendations for Council Signing and Approval Thresholds, and Council Threshold for amendment approvals.

During the March 25, 2025, study session, Council will have an opportunity to provide input for the proposed changes in the Purchasing Policy regarding the contract signing approval authority for Council, and for the policy requirements for when contract amendments would require Council approval.

☒ **Additional Background Information/Description of Proposal Attached**

REQUESTED ACTION:

☐ **Receive Information** ☒ **Provide Direction** ☐ **Approve**

REQUEST RATIONALE:

- **Relevant Plans/Policies:**
  Purchasing Policy, Resolution No. 1503
- **Required:**

N/A

- **Council Request:**
  Council requested the City review its purchasing policies and procedures.
- **Other Key Facts:**
  N/A

OUTCOMES:
Process and policy improvements will bring efficiencies for staff, City Council, and vendors.

COMMUNITY/STAKEHOLDER OUTREACH AND INVOLVEMENT:

- **Timeline (previous or planned):**
  N/A
- **Outreach Methods and Results:**
  N/A
- **Feedback Summary:**
  N/A

BUDGET IMPACT:

Total Cost:
$200,000
- $75,000 in 2025
- $125,000 in 2026

Approved in current biennial budget: ☒ **Yes** ☐ **No** ☐ **N/A**

Budget Offer Number:
297 (Fiscal Accountability)

Budget Priority:
Strategic and Responsive

Other budget impacts or additional costs: ☐ **Yes** ☐ **No** ☒ **N/A**
If yes, explain:
N/A

Funding source(s):
General Fund

Budget/Funding Constraints:
N/A

☐ **Additional budget details attached**

COUNCIL REVIEW:

Previous Contact(s)

Date	Meeting	Requested Action
N/A	Item has not been presented to Council	N/A

Proposed Upcoming Contact(s)

Date	Meeting	Requested Action
N/A	None proposed at this time	N/A

Time Constraints:
N/A

ANTICIPATED RESULT IF NOT APPROVED:
N/A

ATTACHMENTS:
Attachment A: PowerPoint - Purchasing Process Improvements - March 2025

Purchasing Process Improvements

March 2025

Redmond
WASHINGTON

Purpose

To solicit input from the Council on the proposed scope of work for the purchasing improvement initiative funded in the 2025-2026 biennial budget. An overview of the current state of the purchasing division and process improvement efforts made so far will be presented to provide context for the discussion.

- Overview of the Purchasing division
- Current Purchasing policies
- Proposed policy revisions
- Proposed signing revisions
- Statistics

Agenda

- Overview of purchasing division
- Prior process improvements and efficiencies gained
- Proposed scope of work for new improvement initiative
- Current policy review effort
  - Contract Amendment Approvals policy – Proposed change
  - Signing Limit Authorities – Proposed change

Purchasing Division Overview

Purchasing Division

Ensures legal compliance with purchasing practices:

- Issuing formal solicitations (requests for proposals, bids and qualifications)
- Obtaining informal quotes
- Matching needs to vendors
- Validating appropriate city approvals
- Preparing and maintaining purchase orders and contracts
- Prevailing wage documentation for public works
- Work with AP to resolve payment issues and process invoices for payment
- Insurance and bonding validation
- Small Works Roster
- Surplus
- Uniforms
- New Vendor Setup
- Vendor Collaboration

Purchasing Division

Staff overview and statistics

- Three Senior Purchasing Agents
- 2080 PO's issued in 2024
- 173 PO's per month (average)
- 50 formal solicitations issued in 2024
- 933 invoices paid per month (average)
- 325 PR/PO NBU line workflow approvals per month (average)
- $27,690,176.61 spent from PO's in 2024

Process Improvements & Efficiencies

Streamlining PO/PA process, PO's for most purchases
Labor PO tracking process
Policies and Procedures
Template updates
Improved uniform order process
Approvals
PO rollovers/Year-end process
Data collection for spend and programs
Concur
Electronic bids
Sustainable Purchasing guidelines

Proposed Scope of Work

2025-2026 Initiative

- Sealed bidding
- Contract boilerplates updates
- Contract management process review and system implementation
- Training and resource guides
- Continued Purchasing policy review
- Request for proposals (RFP), information (RFI), qualifications (RFQ), and Invitation for Bid (IFB) processes review
- Bidding process review, Solicitation advertising notifications
- Vendor Portal
- A/P Automation
- Develop citywide spend analytics system and reporting process
- Complete report development
  - DEI (Diversity, Equity & Inclusion)
  - Environmental Sustainability
  - Spend reports

Policy Review

Contract Threshold Amendment Approvals – Proposed Change

Drivers for Proposed Change

(Contract Threshold Amendment Approvals)

The policy is in place to ensure that Council approval in sought when required.

Drivers:

- Existing policy is unclear on how cumulative amendments affect the Council threshold
- Proposed policy would create consistency, provide clear path for amendment approval requirements
- Increase internal controls
- Create process efficiency

Contract Amendment Approvals

Current Policy

For non-public works contracts, a contract with no renewal provisions is approved within the guidelines for the classification of the purchase type (i.e. a contract amendment needs Council approval when the amendment itself exceeds the Council threshold).

Proposed Policy

For non-public works contracts, an amendment will need Council approval under the following conditions:

- If a contract was not initially routed to Council but the total cumulative contract amount is now greater than the Council threshold.
- If a contract was initially routed to Council and now the total cumulative amendment amount exceeds the Council approval threshold (when there are no renewal provisions)
- Exception (no change to existing policy): if a contract was approved by Council and contained renewal provisions, then there is no requirement to take the renewal agreement back to Council

Policy Review

Contract Signing Authority Limits – Proposed Change

Drivers for Proposed Change

(Contract Signing Authority Limits)

The policy is in place to comply with RCW's and City Policy.

Drivers:

- Evolving economic landscape
  - Inflation
  - Tariffs
  - New period of risk to global supply chain
  - Rising construction costs
- Improved procurement procedures
  - Strengthened internal controls
  - Increased reporting and auditing capabilities
- Efficiencies for staff, City leadership, Council, and vendors
  - Avoid delays to project schedules and season-specific work
  - Clarity to the purchasing policies

Threshold Policy

Current Policy

Bidding and signing limits are currently based on the annual amount of a contract.

Exception: For Public Works and Architectural & Engineering Services, bidding and signing limits are based on the total project amount.

Proposed Policy

For all purchase types, the bidding and signing limits are based on the total contract amount, regardless of the number of calendar years in the contract term.

Council Signing Authority and Proposed Changes

Type of Purchase	Current Threshold	Proposed Threshold
Operating Supplies & Equipment	None	None
Operating Services, Repair & Maintenance, and General Services	None	None
Professional Services (including Technology)	Over $50,000 annually	Over $150,000 total project
Instructional & Artistic Services	Over $75,000 annually	Over $150,000 total project
Architectural & Engineering Services	Over $50,000 total project	Over $150,000 total project
Public Works	Over $300,000 total project	Over $700,000 total project
Sole Source	Over $50,000 annually	Over $50,000 total project
Interlocal Agreements (including Grants)	All	All
Collective Bargaining Agreements	All	All

Next Steps

- Council Direction

- Council briefings and discussions at milestones and decision points.

Thank You

Any Questions?

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Haritha Narra, Deputy Finance Director: 425-556-2163

Adam O'Sullivan, Financial Services Manager: 425-556-2199

Redmond
WASHINGTON

Memorandum

Date: 3/25/2025
Meeting of: City Council Study Session

File No. SS 25-024
Type: Study Session

Council Talk Time