



# Redmond Bicycle Wayfinding Design Manual

Adopted by Redmond Technical Committee

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## Contents

Introduction	1
Goals	1
System Design	2
Design User	2
Destinations	2
Routing	4
Sign Standards	5
Additional Wayfinding Treatments	6

## Introduction

Redmond is installing a bicycling wayfinding system in order to increase bicycle ridership by helping people navigate Redmond's diverse bicycle facilities. Wayfinding helps bicyclists find comfortable bicycle routes on the bicycle network, which can be a confusing combination of off street paved trails and on street facilities.

This Bicycle Wayfinding Design Manual has been created to ensure a consistent approach to bicycle wayfinding system design and design standards. Topics include bicycle wayfinding goals, the design approach (with details such as design user, destinations, and routing), design standards, and additional bicycle wayfinding treatments. More detailed information on the process, a complete list of destination names (and abbreviations), and a citywide system map can be found in the appendices.

## Goals

Redmond's bicycle wayfinding system builds on the guidance laid out in the Transportation Master Plan and will:

- Encourage increased bicycling citywide for all ages in Redmond and on the Eastside
- Support the eastside bicycle wayfinding system
- Help Redmond live up to its nickname, the "Bicycle Capital of the Northwest"
- Integrate with successful pedestrian signage systems
- Assist visitors in navigating the City by bike
- Create an continuous and clear bicycle wayfinding system that minimizes visual clutter, capital investment and maintenance costs
- Deliver the Bicycle Wayfinding Three Year Action Plan item in the Transportation Master Plan

These goals were used to develop all aspects of this Manual, from design user to the bicycle wayfinding system map.

## System Design

### Design User

Redmond’s bicycle wayfinding system is intended to increase bicycle ridership by helping residents, employees, and visitors navigate the bicycle network. Therefore the system will be designed to support users who desire comfortable bicycle facilities – reaching people that are interested in bicycling but concerned about the lack of comfortable biking facilities. This approach targets 2/3rds of the population (see Image 1 on the right) and supports Redmond’s greatest opportunity to increase bicycle ridership.

Interested but concerned users will be supported through the many design decisions necessary for the bicycle wayfinding system: routing, destinations, and design standards.

### Destinations

Redmond’s bicycle wayfinding system will create a comprehensive wayfinding system that helps bicyclists navigate to destinations in Redmond and the Eastside.

### Background

Bicycle wayfinding systems nationwide are being upgraded from the old “Bike Route” signs to destination based systems that provide much clearer bicycle navigation. Cyclists want to go to important trip generators and key bicycle facilities, so destinations are now being used to get bikers where they want to go – much more useful than informing bikers that a particular roadway is a “Bike Route.” There are numerous approaches to design a destination based system – Redmond’s approach is described below.

### Destinations

Though many trip destinations exist, ridership is most likely to be drawn to major trip generators and regional bike routes. Therefore only the most important destinations will be included in the bicycle wayfinding system, supporting the goal to create a continuous system while minimizing signage.

### Destination Tiers

A tiering system will be used to create a hierarchy of destinations to help determine which destinations to include on any given sign post. There are four tiers, with the first three to be used for the bicycle system and the final tier to be used exclusively on pedestrian systems<sup>1</sup>. Table 1, below, describes the



*The four types of transportation cyclists in Portland (by proportion of population).*

Image 1

<sup>1</sup> This tiering system only identifies destinations to include in the pedestrian wayfinding systems. The appropriate pedestrian wayfinding manuals continue to define all other design aspects of the pedestrian systems.

tier level of each type of destination on the bicycle wayfinding system. For a complete list of destinations, by tier, see Appendix B.

**Bicycle and Pedestrian Wayfinding Integration**

There are two existing pedestrian wayfinding systems with destinations that did not contemplate a bicycle wayfinding system and, in certain cases, have destinations that are more regional in nature. To resolve potential conflicts, both pedestrian and bicycle destinations were evaluated to determine which destination is most appropriate for which system. After staff and public input (see Appendix A), it was agreed upon that pedestrian wayfinding destinations will only include those in the quaternary tier (see Table 1). Destinations on existing signage, such as a primary tier destination like Bellevue, will only be included in the bicycle wayfinding system. Pedestrian signs will be retrofitted as maintenance or capital projects occur to match the tiering system below.

Table 1

<b>Primary</b>	<b>Secondary</b>	<b>Tertiary</b>	<b>Quaternary</b>
<i>regionally scaled areas</i>	<i>regionally scaled points</i>	<i>local points</i>	<i>Pedestrian wayfinding</i>
Urban Centers	Transit Centers	Core Urban Center Neighborhood Parks (Developed)	Public Facilities: Libraries, City Hall, Community Centers
Regional Parks	Community Parks (Developed)	Major Bike Lanes Without Other Destinations: PSRC Tier 1 regional routes	Shopping
Regional Trails	Well-known Neighborhoods		Dining
Other Cities	Non-Regional Trails (Paved)		Interior Pathways
	Neighborhoods in other Cities		Transit Centers

*Destinations to Per Sign*

The recommended number of destinations per sign is three and the maximum number of destinations is four. Primary destinations are appropriate within approximately 5 miles, Secondary within approximately 2 miles and Tertiary within approximately 1 mile (following the recommendation of East King County Bicycle Wayfinding Practice Guide).

Following these parameters, many signs will have more destinations than allowed. The process below identifies how to select which destinations to include on a given sign:

1. Primary destinations, recommended limit of 2 per sign
2. Adjacent destinations, recommended limit of 2 per sign

This allows each sign to provide longer distance guidance via primary destinations and inform users of nearby destinations.

### *Destination Order*

Destinations will be placed in order on the sign blade based on distance, with the nearest destination appearing at the top of the sign. When destinations indicate the same distance then destinations will be placed alphabetically.

### *Destinations Outside Redmond*

Public input strongly supported a seamless bicycle wayfinding system across city limits. Redmond has reached out and will work to connect to destinations in Bellevue, Kirkland, and Sammamish.

### **Complete Signage to Each Destination**

A destination will only be included on the bicycle wayfinding system if signage to the destination is provided at every turn. This ensures that users relying on the system will reach their destination instead of missing a turn because there was no sign directing the bicyclist to turn. For example, signage to Totem Lake will only be included on the bicycle wayfinding system in Redmond if there is signage within Redmond and Kirkland at each bicycle system intersection along the route.

### **Routing**

There are often numerous potential routes between bicycle wayfinding destinations. For Redmond's system, routes will support medium to high comfort users. Therefore the following routing rules apply:

- Routes will be located on roadways with a bicycle facility or on low volume, low speed local streets. However, when comfortable facilities are not present, certain roadway factors make bicycling uncomfortable for medium to high comfort users and are not eligible for bicycle wayfinding. These roadways have:
  - Speeds over 40 MPH, or
  - Five or more vehicle lanesException: Priority 1 regional bicycle network facilities
- Routing preference is given to higher comfort facilities (when out of direction travel is reasonable). As defined in Redmond's Transportation Master Plan, high comfort facilities are:
  - Paved, Shared-Use Paths
  - Cycle Tracks
  - Bicycle Boulevards
- One-way routes should be avoided to ensure a simple, easily navigable system

### **Wayfinding System Map**

The bicycle wayfinding system will connect to all destinations on a select set of routes to provide the highest value per investment and reduce sign clutter. The system map, found in Appendix C, will utilize comfortable bike facilities to take interested but concerned bicyclists to destinations around the City and the Eastside. Routes on the map fall into four categories: route, meets standard (see routing above); route, meets standard (2016), future (to be implemented once the route meets standard), and interim (to be implemented in the interim and replaced once the ultimate route meets standard).

## Sign Standards

### Sign Family

The bicycle wayfinding system will be built using Manual of Uniform Control Devices (MUTCD) bicycle wayfinding signs including the D1-c series (see image on right), and regional route signs (M1-8, M6 series). These signs meet Federal standards and have been proven to be effective improving navigation to destinations for bicyclists.

### Design Standards

The following guidance is included to expand on detail in the MUTCD and to provide an integrated system with other Eastside cities by utilizing standards in the East King County Bicycle Wayfinding Practice Guide.

#### *General*

- Signs will provide a minimum of three feet horizontal and seven feet vertical clearance.
- Signs will generally be placed 30 to 60 feet in advance of a turn

#### *D1-c series*

- Up to three destinations recommended, four maximum
- Mileage, down to the tenth of a mile (using decimal point), will be included for each destination unless the directional sign is located at the destination (no distance to travel to destination).
- A sign width of 36 inches is recommended

#### *Regional route signs*

- Paved bicycle or shared-use trail.
- Each sign post with D1-c series signage that is located on a paved bicycle trail will include trail/M1-8 signage. If the trail continues straight the sign will not include any directional (M6 series) signage. If the trail turns directional (M6 series) signage will be used.
- When entering a trail, a regional route sign will be used after the intersection to confirm the route.
- Trail signage will always be placed below the D1-c series signage.
- Wayfinding to a trail will use d1-c series signage.
- A pedestrian symbol may be added to the M1-8 sign on pedestrian/bicycle paved shared-use paths.

### Visibility

Bicycle wayfinding signs should be located in highly visible locations to ensure that bicyclists see the signage.



D1-3c

Image 2



## Additional Wayfinding Treatments

### **Road Network**

Each overpass/underpass should have a reduced size sign indicating the name arterial roadway being crossed over/under. Freeways are an exception because the only freeway in Redmond, SR 520, has the 520 Trail bicycle facility is on the bicycle wayfinding network (highlighting the location of 520 to the bicyclist).

### **Bike Dot**

A treatment called a “bike dot” may be used to supplement bicycle wayfinding signage. Bike dots provide route clarification where a bicycle wayfinding sign would be confusing. An example is moving bicyclist riding eastbound on 116<sup>th</sup> Street up onto the path on the 116<sup>th</sup> Street Bridge to enter the Sammamish River Trail at the intended bicycle/pedestrian ramp rather than continuing on due to curb at the bicycle/pedestrian ramp and entering the Sammamish River Trail via the Sixty Acres Park parking lot. Note: bike dots are not allowed in vehicular lanes or bicycle lanes.

## Appendix A: Process

This manual informed by the Pedestrian Bicycle Advisory Committee, neighboring jurisdictions, and a staff committee with staff from the Planning, Public Works, and Parks Departments. Input from these groups was used to create a draft manual, which was brought for discussion at the Planning and Public Works Committee. After the Committee supported the draft approach there was a public input process and additional refinement from the groups listed earlier. The Redmond Bicycle Wayfinding was adopted by the Technical Committee on **March 25**, 2015.

## Appendix B: Destinations

The following chart identifies the names of each destination under each tiered destination category. In addition, certain names will need to be abbreviated in order to fit on the bicycle wayfinding sign. Note that these potential abbreviations are based on the number of characters in a destination name, not a design layout of each name – the design layout of each name will ultimately determine the abbreviated name.

Tier	Category	Names	Potential Abbreviated Name
<b>Primary</b>	<i>Urban Centers</i>	Downtown Redmond	
		Overlake Village	
	<i>Regional Parks</i>	Marymoor Park	
	<i>Regional Trails</i>	East Lake Sammamish Trail	E Lk Samm Trail
		Sammamish River Trail	Samm River Trail
		SR 520 Trail	
	<i>Other Cities</i>	Bellevue	
		Bothell	
		Issaquah	
		Kirkland	
		Sammamish	
		Woodinville	
	<b>Secondary</b>	<i>Transit Centers</i>	Bear Creek Park & Ride
Overlake Park & Ride			Overlake P&R
Overlake Transit Center			Overlake Trans Ctr
Redmond Transit Center			Redmond Trans Ctr
<i>Community Parks (Developed)</i>		Farrel-McWhirter Park	Farrel-McWhirter
		Grass Lawn Park	
		Hartman Park	
		Idylwood Park	
		Juel Park	

	Perrigo Park	
	Sixty Acres Park	
<i>Neighborhoods colloquially named/well-known</i>		
	Education Hill	
	Willows	
<i>Non-Regional Trails (Paved)</i>		
	Bear Creek Trail	
	Evans Creek Trail	
	Puget Sound Energy Trail	PSE Trail
	Redmond Central Connector	Central Connector
<i>Other City Neighborhoods</i>		
	Bridle Trails	
	Crossroads	
	Downtown Bellevue	
	Downtown Kirkland	
	Downtown Woodinville	DT Woodinville
	Houghton	
	Rose Hill	
	Sammamish Town Center	Samm Town Center
	Totem Lake	
<b>Tertiary</b>		
	<i>Major Bike Lanes: PSRC Tier 1, route not already signed</i>	
	Avondale Road	
	Core Urban Center Neighborhood Parks (Once Developed)	
	Downtown Park	
	Overlake North Central Park	To Be Determined Pending Final Name
<b>Quarternary - See Downtown Pedestrian Wayfinding Manual, Overlake Village Pedestrian Wayfinding Manual</b>		

# Appendix C: Bicycle Wayfinding System Map

