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RESOLUTION NO. 1217

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF REDMOND, WASHINGTON, ADOPTING THE TRANSPORTATION MASTER PLAN AS A FUNCTIONAL PLAN INTENDED TO IMPLEMENT THE TRANSPORTATION ELEMENT OF THE CITY'S COMPREHENSIVE PLAN.

WHEREAS, the Transportation Element of the City of Redmond's Comprehensive Plan calls for the City to develop and maintain a Transportation Master Plan (TMP) that contains the specific features comprising Redmond's transportation system, including the programs, projects, and services that are necessary to support planned land uses, and

WHEREAS, a draft TMP was developed by the Planning and Public Works staffs working with Charlier Associates, Inc., and the draft TMP was printed and began the City's formal review process in January 2005, and

WHEREAS, the Redmond Planning Commission reviewed the draft TMP over eight meetings beginning on February 9, 2005, and the Planning Commission forwarded the same to the Redmond City Council with a recommendation for approval with modifications on April 6, 2005, and

WHEREAS, the draft TMP was revised to reflect the Planning Commission's recommendations in July 2005, and

WHEREAS, the City issued a SEPA Determination of Non-Significance (DNS) for the draft TMP on March 4, 2005 and an appeal of the DNS was filed by Jason Kap and Eric Medeiros on March 31, 2005, and

WHEREAS, the Redmond City Council heard the DNS appeal and, after considering all testimony and evidence offered, decided to uphold the DNS and adopted findings and conclusions in support of that decision on September 20, 2005, and

WHEREAS, in addition to hearing the DNS appeal, the Redmond City Council held a number of meetings on the draft TMP and, after thorough discussion, determined that the July 2005 draft TMP should be adopted with certain revisions, now, therefore,

THE CITY COUNCIL OF THE CITY OF REDMOND, WASHINGTON, HEREBY RESOLVES AS FOLLOWS:

Section 1. TMP Adopted. The Redmond Transportation Master Plan dated July 2005 is hereby adopted, subject to the revisions set forth on Exhibit 1 attached to this resolution and incorporated herein by this reference as if fully set forth.

Section 2. Final Version. The City Planning and Public Works staffs are hereby directed to cause the revisions set forth on Exhibit 1 to be incorporated into a final version of the TMP and to have the same printed and made available for use by the City and the public.

Section 3. Implementation. The City Planning and Public Works staffs are hereby further directed to take such steps as are necessary to implement the Transportation Master Plan, including but not limited to bringing forward any necessary amendments to the Transportation Element of the Comprehensive Plan.

RESOLVED by the Redmond City Council this 15th day of November, 2005.

CITY OF REDMOND

MAYOR ROSEMARIE M. IVES

ATTEST/AUTHENTICATED:

CITY CLERK MALISA FILES

FILED WITH THE CITY CLERK: November 9, 2005
PASSED BY THE CITY COUNCIL: November 15, 2005
RESOLUTION NO. 1217

EXECUTIVE SUMMARY

Contents of this Chapter

This chapter provides a brief, policy-oriented summary of the Transportation Master Plan.

Topics discussed include:

- ✓ Council Priorities
- ✓ Transportation Master Plan Priorities
- ✓ Community Advice and Comment
- ✓ Long Range Needs and 2022 Realities
- ✓ Concurrency Management System
- ✓ Integrated Multimodal Plan
- ✓ Regional Transportation
- ✓ Action Orientation
- ✓ Performance Monitoring and Accountability

TMP priority graphic deleted as es1

This transportation master plan (TMP) will guide the City of Redmond's transportation programs and projects over the next five years. The TMP derives its policy direction from the City's comprehensive plan and is designed to support achievement of community goals and objectives. The document provides program guidance, policies, level of service objectives, project lists, a financial plan and a system for performance monitoring and reporting.

Redmond's multimodal transportation system – including its pedestrian facilities, streets and highways, transit routes and services, and bicycle facilities – provides a structural network that is essential to the community's daily life and commerce. However, while good mobility and freight movement are important outcomes, the City needs to balance the deeper goals for health, safety, quality of life, economic vitality, land use and community character when making transportation decisions.

This TMP applies the concept of **balance** to work out the many tradeoffs inherent in urban transportation planning. Balance is applied to the three elements of mobility – travel, circulation and access. Balance is applied to tradeoffs between modes (pedestrian, motor vehicle, transit, bicycle) with an emphasis over the next five years on key pedestrian and transit objectives. The special requirements of freight, delivery vehicles and emergency service vehicles need to be considered in the balance as well. Balance is applied in resolving conflicts between the need for traffic capacity and the need for safe, pleasant neighborhoods and commercial areas that reflect Redmond's green, small-town community character.

The primary infrastructure for travel, circulation and access by all modes in Redmond will continue to be the local and state network of highways and streets. The costs of planning, designing, improving and managing this network will represent the largest part of the City's investment program over the foreseeable future. This investment program will be inherently multimodal, with street improvements planned and designed to benefit all modes.

This TMP places particular emphasis on the development of a core network of multimodal corridors that will carry all modes and allow for seamless interconnections between modes. Another area of emphasis is improving community connectivity. Better connections within the community for all modes is needed to tie neighborhoods and commercial areas together, improving efficiency and economic vitality while promoting continued high quality of life. One of the key findings of this TMP is that

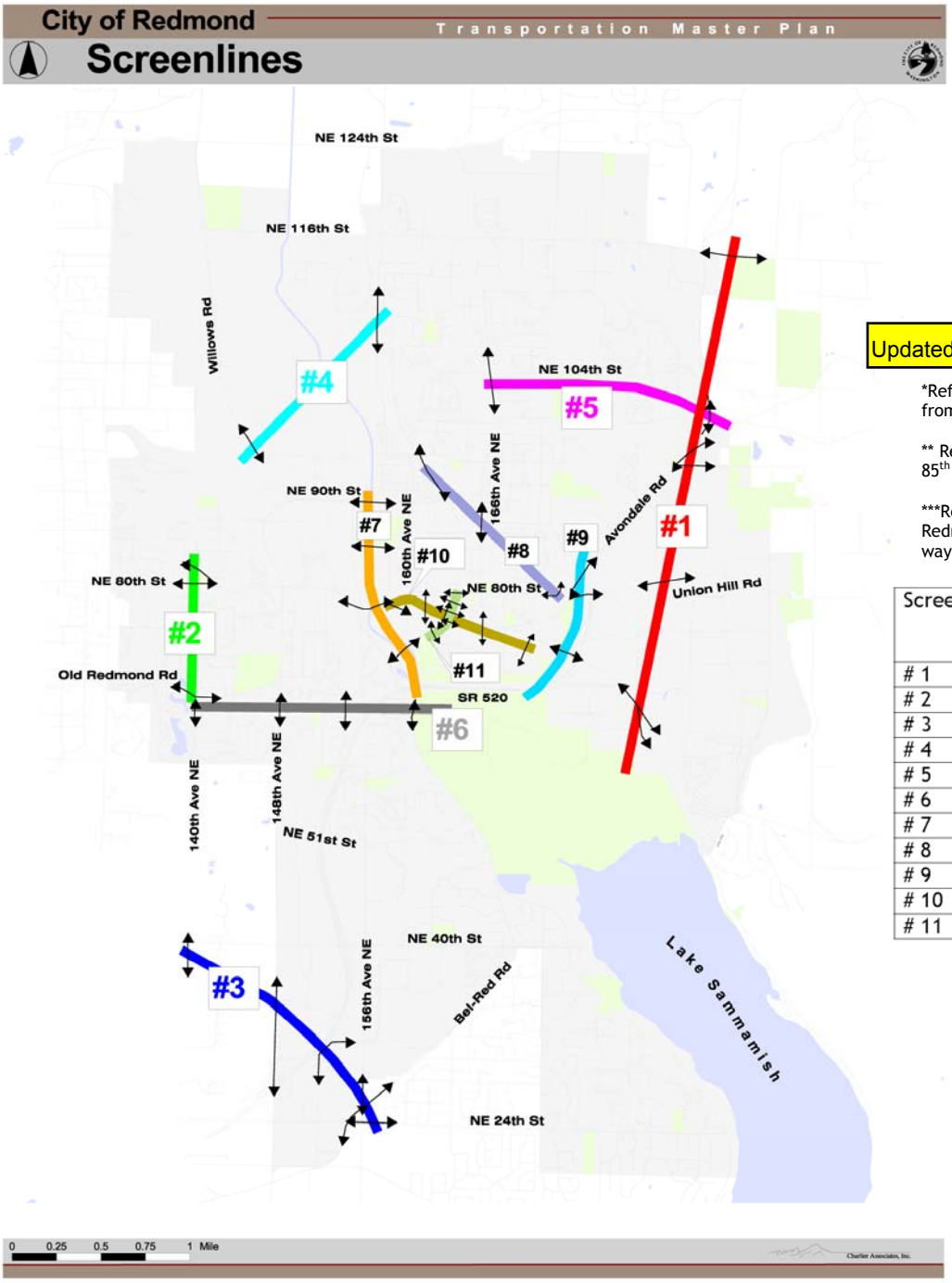
Figure 4.2 on next page shows the locations of these screenlines. Each screenline is made up of one or more specific locations along arterial roadways. More detail on these locations and on current LOS conditions is provided in Chapter 5, Section D – Thoroughfare Plan. The Transportation Facilities Plan (Chapter 6) is sufficient to achieve these measures by 2022. Thus, the actual concurrency management condition to be met is achievement of the Plan. Figure 4.2 also shows the current and 2020 number of general purpose lanes crossing each of the screenlines.

Redmond's system for annual reporting of roadway level of service is described in Chapter 7.

Updated V/C numbers with new model data

Screenline	Count Locations	Actual 2000 LOS	2022 Forecast LOS
1	East City Edge	0.94	0.96
2	West City Edge	0.87	1.10
3	Southwest City Edge	0.64	0.63
4	Northwest City Edge - Sammamish Valley	0.68	0.93
5	North Central Internal – Education Hill	0.60	0.86
6	Grasslawn North-South Internal	0.62	0.75
7	Downtown – West Edge	1.14	1.25
8	Downtown – Northeast Edge	0.88	1.01
9	Downtown – Southeast Edge	0.72	0.89
10	Internal Downtown North - South	0.44	0.51
11	Internal Downtown East - West	0.78	0.89

Figure 4.1 *Roadway LOS Criteria (PM Peak Hour, Bi-directional)*



Updated 2022 GP lanes table

*Reflects conversion of 166th from 4 to 3 thru lanes.

** Reflects conversion of NE 85th from 4 to 3 thru lanes.

***Reflects conversion of Redmond-Cleveland from one way couplet to 2 lane streets.

Screenline	2003 GP Lanes	2022 GP Lanes
# 1	13	16
# 2	8	8
# 3	18	18
# 4	4	4
# 5	8	7*
# 6	12	12
# 7	15	14**
# 8	8	7***
# 9	10	10
# 10	10	15
# 11	12	12***

Figure 4.2 LOS Screenlines Map

Updated with Jeff Palmer to include all streets

Sidewalk Guidelines

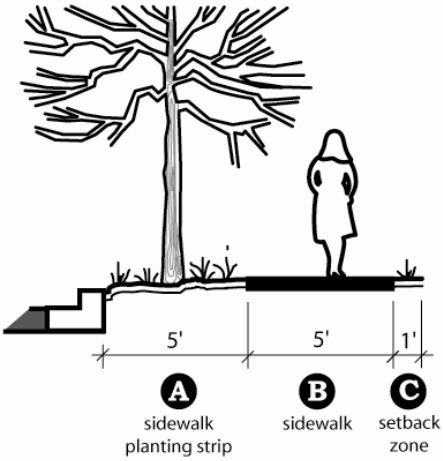
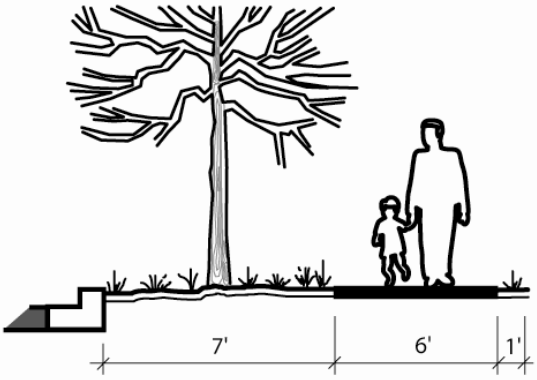
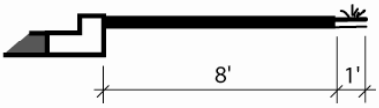
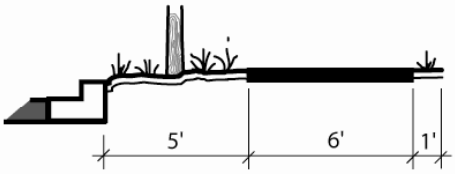
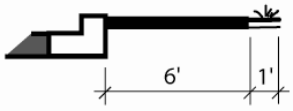
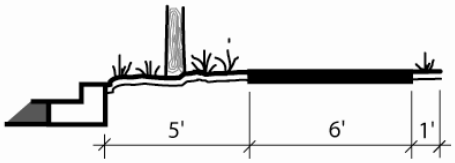
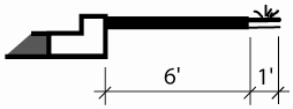
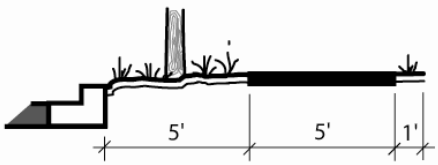
	posted speed	Pedestrian Tolerant Design	Pedestrian Supportive Design
Arterial Street (outside of multimodal corridors and pedestrian places)	≥ 45 mph		
	30-45 mph		
Collector Streets	25-35 mph		
Connector and Local Streets	≤ 25 mph		

Figure 5A.4a Criteria for sidewalk width and placement

D MIN. THROUGH WALKWAY

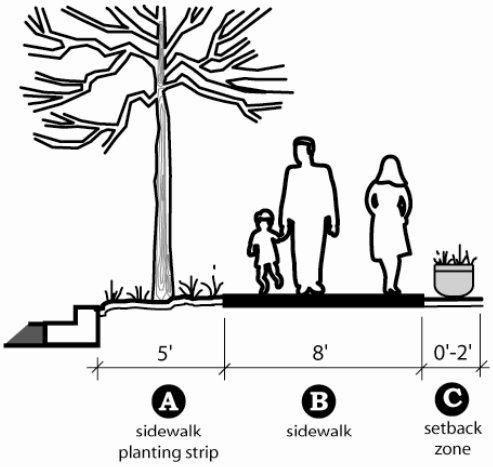
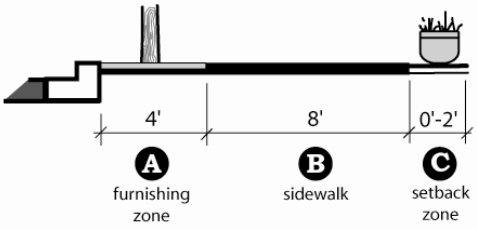
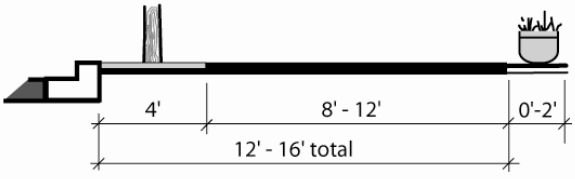
The through walkway may meander slightly to accommodate fixed objects such as benches, walls, fences, planters, and buildings. However, in all cases, a 5-foot minimum through walkway shall be maintained. This through zone also requires a vertical clearance free from obstructions to a height of 8 feet minimum.

Pedestrians require a shy distance of 2 feet from fixed objects, parked cars, and from other pedestrians, including window shoppers in commercial districts. While these features are desirable to create great pedestrian spaces, they narrow the functional through walkway space if not accommodated within design. Therefore, the through zone in mixed-use and retail areas shall be 8 feet minimum.

Newspaper racks, mailboxes, benches, trash receptacles, outdoor dining, and other street furniture shall not encroach into minimum through zone. Such items shall be placed either within the sidewalk furnishing zone or an expanded setback zone. Corner or mid-block curb extensions are also acceptable locations for street furniture as long as sight distance triangles are preserved so that pedestrians and drivers can see each other at street crossing locations.

Updated with Jeff Palmer to address MMC and streets going into places

Multimodal Corridor and Pedestrian Place Sidewalk Guidelines

	posted speed	Tolerant Design	Pedestrian Supportive Design
All Streets in multimodal corridors and pedestrian places (see figure 5a.7)	< 25 mph non-retail without on-street parking	not applicable	
	non-retail with on-street parking	not applicable	
	retail land use with on-street parking	not applicable	

*For City Center Pedestrian System see Section 20C.40.105-020 and 105-030 of Redmond Community Development Guide

Figure 5A.4b Criteria for sidewalk width and placement in Mixed-Use Activity Centers

Alternate Bicycling Corridors

Two desired primary bicycling corridors present significant obstacles for bicycle facility implementation. Both were ranked as critical missing links by the cycling community (*Map 5B.13)* and were identified as part of the priority multimodal corridors system (*Map 5E.7)*.

The following alternate bike routes are thus recommended to provide cyclists with continuous, barrier-free travel going east/west through downtown and north/south through west Redmond:

- **Corridor E/F** – *Redmond Way/BNSF*
  Redevelopment of the Burlington Northern Santa Fe railroad corridor as an urban bicycle path could be the preferred way for cyclists to move across downtown Redmond. Traffic calming on Redmond Way with the conversion to two-way traffic flow will additionally improve bicycling conditions on the parallel on-street route, but striping bike lanes is not likely feasible.

- **Corridor #10** –*148th Avenue NE*
  Neither on-street bicycle lanes or a parallel sidepath trail can be cost-effectively constructed on 148th Avenue NE from NE 24th to NE 90th. Thus a parallel north/south route will be developed as a primary bicycling corridor through the expanding Overlake Technology Center.

  Three missing links to complete this route are:

  - **#10a** – Construct a trail link from the BNSF corridor up to the T-intersection of Old Redmond Road at Redmond Way. Reconfigure intersection design and signalization to accommodate through bicycle travel. Add bike lanes to connect to Old Redmond Road.

  - **#10b** – Beginning at the access point of the SR 520 Trail, stripe bicycle lanes on the following streets through the Overlake Technology Center: NE 51st St, 150th Ave NE, 152nd AVE NE, and NE 36th St.

  - **#10c** – Construct a new two-lane roadway with bicycle lanes across the proposed SR 520 overpass to connect to the Overlake Mixed-Use Core.

  In addition, the existing SR 520 Trail provides another primary north/south bicycling route for through travel through the Overlake Technology Center.

Addressing Bicycling in Pedestrian Places

The key to creating places in Redmond where pedestrians feel comfortable is slowing motor vehicles to speeds more compatible with non-motorized modes. Narrowing travel lane widths, providing on-street parking, and "greening" street corridors are viewed as necessary to achieve this. So where do bicycles fit in?

A final bicycle facility issue to address is how to accommodate bicycles in Downtown Redmond and other places designed to give priority to the pedestrian. Additional operating space for bicycles (i.e. bike lanes or a parallel trail) is most needed on roadways with high travel speeds. A general rule of thumb is the greater the speed differential between cars and bikes, the greater the separation desired. When bicycles and motor vehicles are traveling at or near the same speeds, Class II on-street bike lanes are no longer a necessity.

However, the key to ensuring that bikes and cars can share the road is to slow traffic speeds. Doing nothing is not a solution. If bike lanes are not going to be provided within the City Center and Overlake to make key connections for Primary Bicycling Corridors, some level of traffic calming needs to be implemented. If not, many cyclists will likely end up riding on sidewalks, which should be reserved for pedestrian use and can be a safety issue.

One traffic calming option that shall be explored for implementation within pedestrian destination areas is narrowing travel lanes (potentially down to 10' widths) and using colored pavement to delineate space for bicycling and/or parking (which may also be narrower than typical AASHTO standards). An example of such treatment is depicted in *Figure 5B.7* and may be combined with other traffic calming treatments as appropriate.

Figure 5B.7 Traffic calming technique of narrowing vehicular lanes and coloring pavement for bicycling and/or parking along pedestrian-oriented streets

the Overlake Mixed Use Core; one at NE 40th Street, serving Microsoft and other portions of Overlake; one in the Downtown serving its employees, residents, and destinations; and one farther east in SE Redmond to intercept commuters with a major park and ride and multimodal facility. Redmond also anticipates that the most easterly of these stations may also be associated with a nearby maintenance facility.

With these concepts and principles as a guide, Redmond will work with its neighboring cities and other regional partners to advance the development of the Sound Move Long-Range Plan and Sound Transit Phase II and other similar initiatives.

Redmond recognizes its responsibility to take the lead in planning the transportation facilities and associated land development patterns required for all the HCT stations in Redmond. This may include identifying and protecting rights of way for an HCT corridor and space for station locations.

The City has initiated a planning effort for an HCT station and associated transit-oriented development in Downtown Redmond and an intercept station east of Downtown Redmond. This study, to be completed in 2005, will assess the best corridor for HCT in this area and the resulting best location for the HCT stations.

Redmond is also committed to working closely with Sound Transit as it continues to develop its plans for near-term and long-range HCT improvements.

❹ INTERIM STRATEGY FOR REGIONAL CONNECTIONS

The ultimate success of HCT on the Eastside will depend in part on how effectively the transit patronage market has grown in the years between now and 2022. Redmond will continue to work with Metro and Sound Transit to develop interim "time competitive" bus connections between centers. This includes improving bus transit travel times and service frequency at its centers. Transit connections must provide a time competitive alternative to driving during peak travel hours. In corridors where existing services are provided, routing alternatives should be explored to maximize efficiency between centers.

A direct, frequent transit connection between Overlake at NE 40th Street and the University of Washington represents an important near-term and long-term need. Such a connection between the Region's primary institution of higher learning and the Region's principal high tech employment area will provide benefits to the transit agencies, to the City of Redmond and to the people who provide the intellectual capital that has given this area its national stature.

The Overlake Center needs regional express bus service to other urban centers. As regional highways continue to reach capacity during peak hours, time competitive alternatives between Overlake and other urban centers should be provided.

Redmond's transportation system is also affected by continued growth in East King County. Redmond should continue to work with its neighboring jurisdictions to provide transit access into Redmond, with particular emphasis on connections to employment areas. These partnerships will become increasingly important in determining an appropriate eastern terminus for high capacity transit.

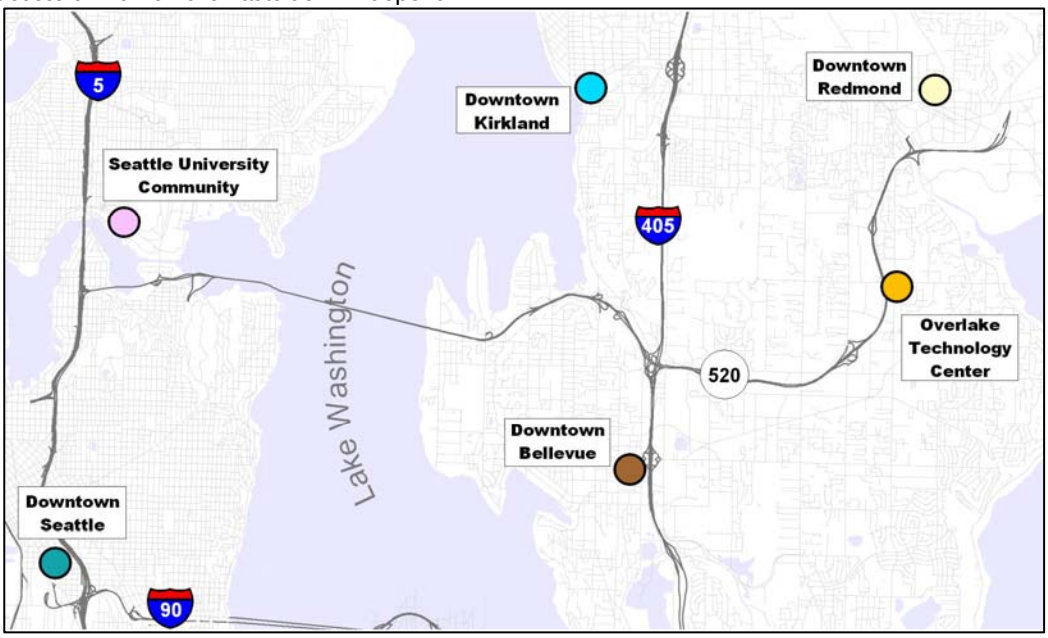


Figure 5C.10 Redmond's regional connections

Motor Vehicle Traffic Trends

Redmond's location at the eastern edge of a large, rapidly growing metropolitan region creates two sources of traffic growth: increasing size and density of the City itself, and ongoing regional growth and development. This Thoroughfare Plan reflects analysis of past and future traffic growth trends, which are summarized in the paragraphs below.

However, good street networks are not developed solely in response to traffic demand. Streets represent the most visible and influential infrastructure in the City; their size, appearance and operational characteristics shape everything around them. In addition to traffic demand, this Thoroughfare Plan reflects careful consideration of community character, urban design and quality of life.

Finally, Redmond's streets serve more than automobiles and trucks. The City's street network represents the principal infrastructure for all modes of travel: motor vehicle, public transit, pedestrian and bicycle. Redmond's community vision (see Chapter 2) calls for improving transportation (mode) choices and personal mobility. This will require that the streets function as well for public transit, pedestrians and bicycles as they do for personal motor vehicles and commercial trucks.

This will also require that all three elements of personal mobility – travel, circulation and access – are equally well served by the 2022 and build out street networks.

Traffic Volume and Growth

Traffic in Redmond will continue to grow over the next couple of decades. Figure 5D.2 is based on traffic modeling completed as part of preparing this Thoroughfare Plan. Total daily traffic on Redmond's streets (including the state highway system) will grow by 24% over the next 18 years. Daily vehicle miles of travel will grow by 26%, reflecting an 8% increase in average trip length.

While significant, the annual growth rate of 1.2% represents a slowing in traffic growth which has ranged from 2% to 3% annually over the past couple of decades.

Redmond's traffic growth has mirrored regional rates of traffic growth in the past. The forecasts in this TMP indicate this will continue to be the case as Redmond traffic trends will be similar to overall regional trends.

Updated table with new data

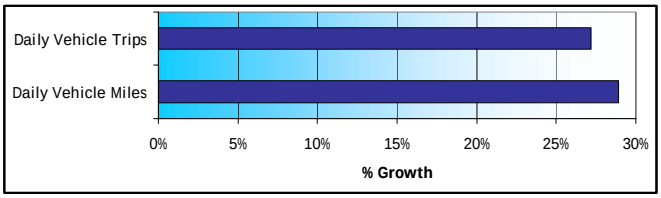
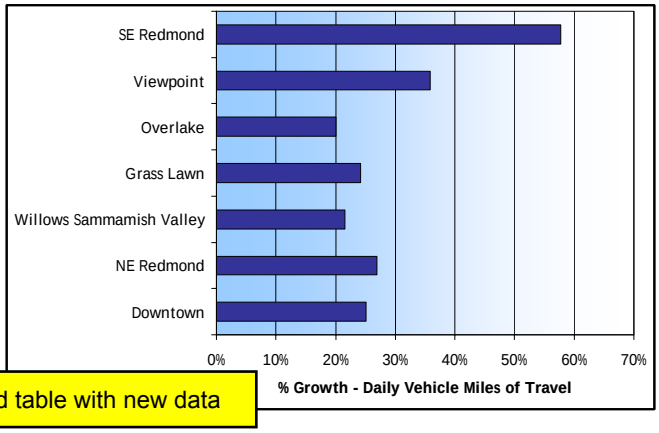


Figure 5D.2 Redmond Traffic Growth 2003 - 2022

This TMP is designed to respond not only to traffic growth but to the other forces of change in Redmond as well. There is time to address mobility needs in a comprehensive, integrated, multimodal manner, without having to embark on an aggressive street widening program.

During the years covered in this TMP, Redmond will emphasize projects designed to improve internal connectivity and multimodal functionality. The City will also continue implementation of the Redmond Intelligent Transportation System (RITS) to ensure that motorists are able to make the best use of available infrastructure.



Updated table with new data

Figure 5D.3 Traffic Growth 2003 – 2022 by TMD

Growing traffic will affect different parts of the roadway network to varying extent, as shown in Figure 5D.3 above and in Figure 5D.4 on the next page. While growth will occur throughout the City, it will be most pronounced in Southeast Redmond. The screenlines used in the map in Figure 5D.4 are the same as those used in Chapter 4 as concurrency management screenlines.

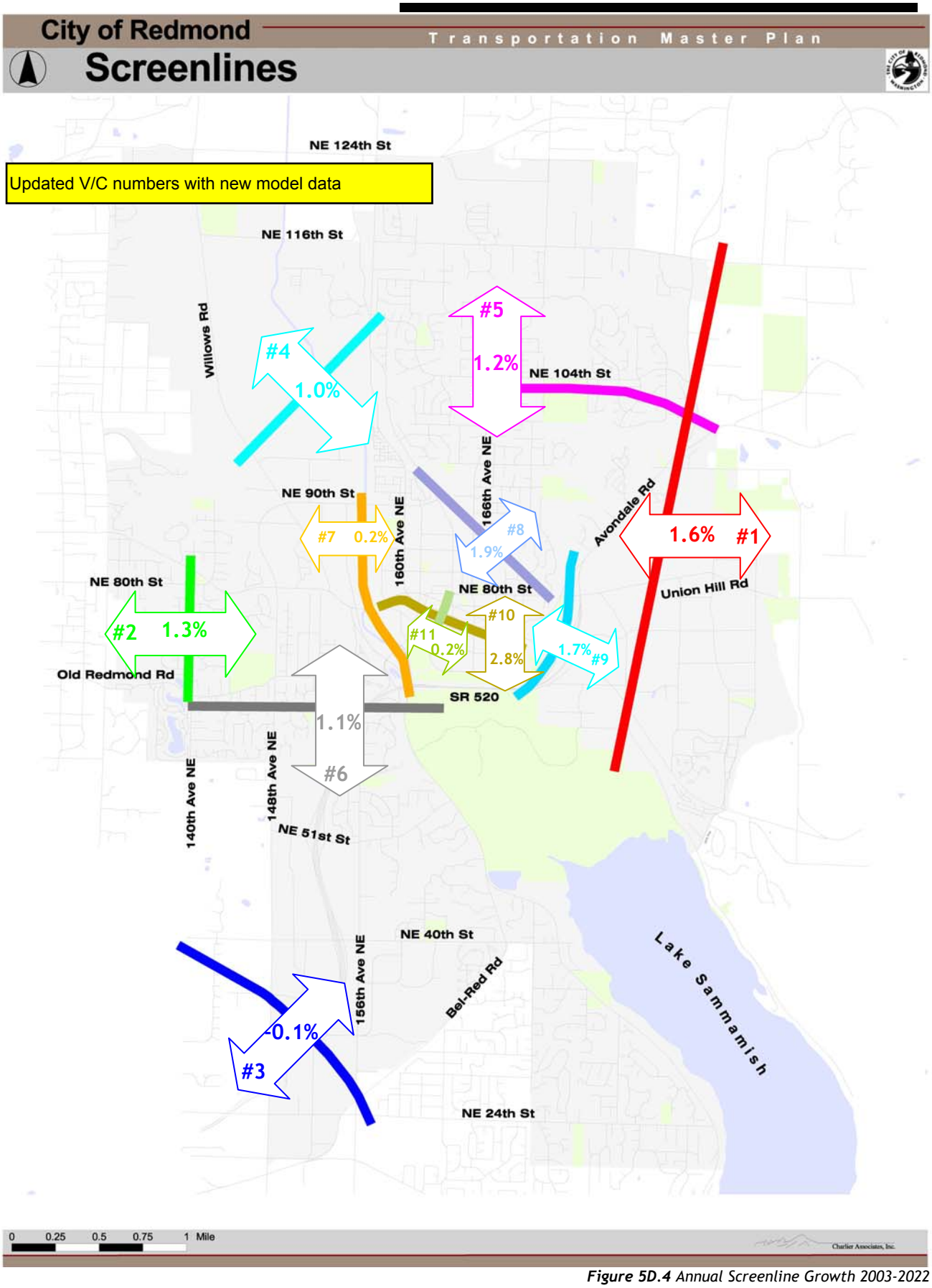


Figure 5D.4 *Annual Screenline Growth 2003-2022*

Pass-Through Traffic

A study of peak hour traffic in Downtown Redmond was conducted by the City in March 2004. The study tracked and matched license plates at points on the perimeter of Downtown. The study established that 36% to 37% of the traffic observed in the peak hour is "pass-through traffic," meaning it does not stop within the Downtown.

More significantly, almost three-fourths of the pass-through traffic makes no stops within Redmond. This traffic is passing through Downtown from somewhere outside Redmond to somewhere outside Redmond without stopping anywhere in Downtown or in the City.

Pass-through traffic rises in Downtown in the afternoon commute period in part because of eastbound congestion on SR 520 at that time of day. However, pass-through traffic occurs also in part because of Redmond's legacy of radial routes into the surrounding neighborhoods and countryside (Avondale Road, SR 202, etc.). These radial routes converge and bring traffic through the Downtown.

Equally significant, given the radial configuration of the street network, is the fact that nearly two-thirds of peak hour traffic observed in Downtown today either originates or stops in Downtown. These vehicles are carrying downtown employees, customers and residents. By 2020 this will represent most (73%) of the peak hour traffic in Downtown.

Redmond is adopting a balanced approach to addressing the Downtown street network, an approach that involves two parallel strategies. First, the City will work to provide routes for pass-through *travel* that is impacting but not benefiting the Downtown. This includes working with WsDOT to increase capacity of SR 520 so that pass-through traffic does not divert onto local streets unnecessarily. This also includes extending Bear Creek Parkway to handle non-freeway traffic that shows up in Downtown because of the radial the street network.

Second, Redmond will work to improve the functionality of the Downtown street network for internal *circulation* and *access*. This does not require increasing the capacity of downtown street corridors. Rather it includes improving the connectivity of the downtown network by extending 164th Ave NE and 161st Ave NE across the railroad corridor, building the Bear Creek Parkway extension (including the 161st connection) to improve connectivity between Downtown and Town Center, and converting the one-way pair (Redmond Way and Cleveland Avenue) to two-way operation. Other improvements to circulation and access in Downtown include 4-lane to 3-lane conversions to improve multimodal functionality.

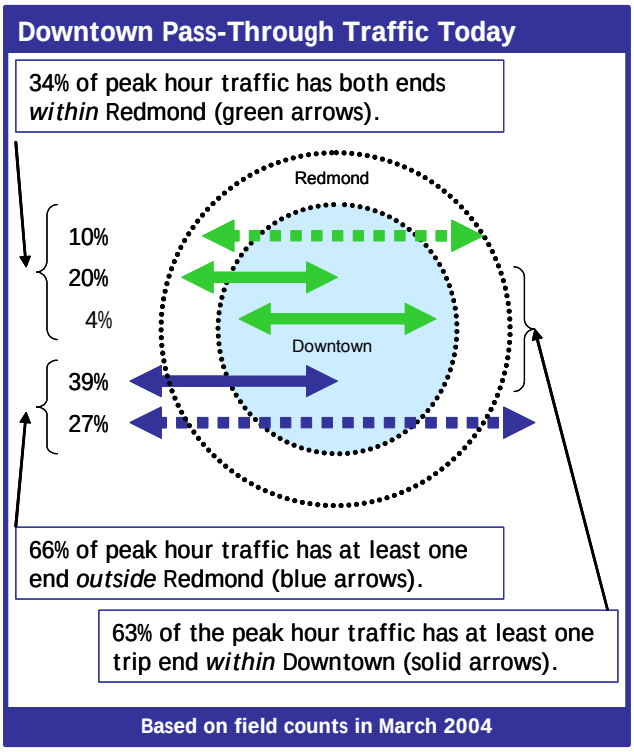


Figure 5D.5 Pass-Through Traffic in Downtown Redmond: 2004

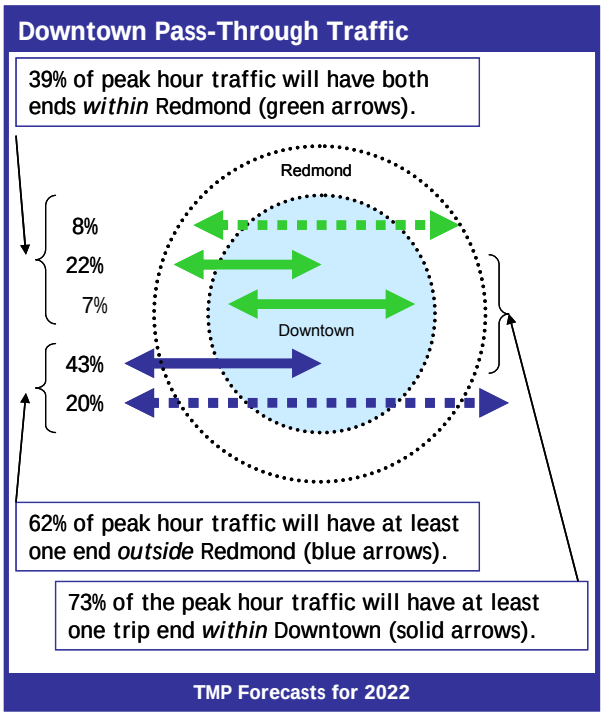


Figure 5D.6 Pass-Through Traffic in Downtown Redmond: 2022

Updated 5d.6 based on new model data

three-lane configuration may include a two-way continuous left turn lane.

Clearly-marked crosswalks will be provided at all legs of every signalized intersection where warranted. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip.

Traffic calming and speed reduction measures are generally applicable to Minor Arterials only in areas where sensitive land uses (residential property, schools, public parks and certain other public institutions) directly abut the roadway or are nearby. Minor Arterials will be designed with partial control of access through the City's access management system. On-street parking will be allowed only in commercial areas.

Minor Arterials in Multimodal Corridors shall include provision for transit circulation and access, including bus stops and pull-out bays. Bicycle circulation may be provided via on-street lanes even if there are parallel multi-use paths. Pedestrian facilities in the corridor will be designed to Multimodal Corridor standards.

Collector Arterial

Collector Arterials collect traffic from Connectors and Local streets within a district and deliver that traffic to Principal Arterials. Collectors are generally not intended to serve trans-regional trips and generally will not provide route continuity for more than a mile or two.

These roadways are generally contained entirely within the City and connect the neighborhoods of the City with each other. Adjacent land uses may include residential areas, commercial areas, open space, public lands, industrial sites and institutional sites.

Collectors terminate only at Principal Arterials, Minor Arterials or other Collector Arterials. Direct connections with other roadways will be provided via at-grade intersections. Collector Arterials will have only two through/general purpose lanes and will be undivided facilities. Turn lanes will be provided as turning movements warrant and may include left turn lanes and right turn lanes, or in a three-lane configuration may include a two-way continuous left turn lane.

Clearly-marked crosswalks will be provided at all legs of signalized intersections where warranted and in the vicinity of schools. On-street bicycle lanes may be provided even if alternative, close-by, parallel facilities are available. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip.

Traffic calming and speed reduction measures are applicable to Collector Arterials, primarily in areas where sensitive land uses (residential property, schools, public parks and certain other public institutions) directly abut the roadway or are nearby. Collector Arterials will be designed with partial control of access through the access management system. On-street parking will be allowed only in commercial areas.

Collector Arterials in Multimodal Corridors shall include provision for transit circulation and access, including bus stops and pull-out bays. Bicycle circulation may not be provided via on-street lanes if there are parallel multi-use paths. Pedestrian facilities in the corridor will be designed to Multimodal Corridor standards.

Connector

Connectors provide for direct vehicle, bicycle and pedestrian connections between adjacent neighborhoods, and between neighborhoods and commercial areas. Connectors do not serve trans-regional trips and provide no route continuity beyond the areas they connect. Adjacent land uses may include residential areas, commercial areas, open space, public lands, industrial sites and institutional sites.

Connectors terminate at Collector Arterials, Minor Arterials and/or Local streets. Direct connections with other roadways will be provided via at-grade intersections. Connectors will have only two through/general purpose lanes. Turn lanes will not be provided unless unusual circumstances warrant, in which case they may include left turn lanes only.
On-street bicycle lanes will not be provided; rather bicycle circulation will be accommodated in mixed traffic in the vehicle lanes. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by a buffer strip.

Traffic calming and speed reduction measures are applicable to Connectors as warranted by adjacent land uses and traffic characteristics. Connectors will be designed with partial control of access through the access management system. On-street parking will be allowed where adequate roadway width is available.

The City may map and specify future Connector alignments and may require dedication of rights of way for these facilities.

The Multimodal Corridor designation is not applied to Connector Streets.

Local Street

Local streets provide for direct vehicle, bicycle and pedestrian access to commercial and residential land uses. Local streets do not serve trans-regional trips and provide no route continuity beyond the areas they connect. Adjacent land uses may include residential properties, commercial areas, industrial sites and institutional sites.

Local streets may terminate at Principal Arterials, Minor Arterials, Collectors, Connectors or other Local streets. Direct connections with other roadways will be provided via at-grade intersections.

Local streets will have only two through/general purpose lanes. Left turn lanes may be provided only in unusual circumstances. Clearly-marked crosswalks will be provided at signalized intersections or at other locations where warranted because of the proximity of schools or significant pedestrian activity.

On-street bicycle lanes will not be provided; rather bicycle circulation will be accommodated in mixed traffic in the vehicle lanes. Sidewalks will be included on both sides of the street and will be separated from vehicle lanes by an appropriate buffer strip. Traffic calming and speed reduction measures are applicable to Local streets as warranted by adjacent land uses and traffic characteristics.

Local streets will be designed with partial control of access through the access management system. On-street parking will be allowed where adequate roadway width is available.

Street Design Standards

One of the advantages of a Thoroughfare Plan is the opportunity it provides to specify the maximum number of general-purpose lanes and maximum right of way needed for any street in the network. This will enable the City, through its development review function, to achieve locally-appropriate urban design without the need to require the dedication of unnecessary right of way because of uncertainty about future street widths.

The City seeks to keep streets as narrow as possible, given the intended function of each street. It is also important to avoid the inexorable widening of streets as has occurred in other cities. At the same time Redmond intends to ensure that all modes are adequately accommodated within city street corridors. This includes accommodations for trucks and emergency vehicles.

The widths and cross sections shown in Figure 5D.7 are "maximum" dimensions. In some cases, due to right-of-way constraints or existing abutting land uses, streets may be narrower than other streets in the same functional classification. For this reason, the table provides maximum dimensions for 4-lane facilities and for 2-lane facilities (referring to general purpose lanes). The 4-lane standards are designated with a (4) and the 2-lane standards are designated with a (2), down through Collector Arterial. Below that (Connector and Local), the basic standard calls for a 2-lane maximum (general purpose lanes).

The City will update its street design standards to reflect the Functional Classification provisions of this TMP. This Update is shown in Chapter 9 as a high-priority action item to be initiated within the first three years following TMP adoption.

Classification	Maximum General Purpose Lanes	Maximum Mid-block Curb-to-Curb Width	Maximum Mid-block Right of Way	Maximum Intersection Right of Way
Principal Arterial (4)	**4**	**71'**	**97'**	**133'**
Principal Arterial (2)	**2**	**47'**	**73'**	**97'**
Minor Arterial (4)	**4**	**85'**	**111'**	**135'**
Minor Arterial (2)	**2**	**61'**	**87'**	**99'**
Collector Arterial (4)	**4**	**85'**	**111'**	**135'**
Collector Arterial (2)	**2**	**61'**	**87'**	**99'**
Connector Street	**2**	**41'**	**67'**	**79'**
Local Street	**2**	**41'**	**67'**	**67'**

Figure 5D.7 Build-Out Maximum Right of Way

Functional Classification of Redmond Streets

The functional classification, future lanes and rights of way for all streets in the Thoroughfare Plan are provided in Figures 5D.8 – Figure 5D.10 below and on the next several pages.

The tables are designed so that actual paved lane widths can vary as appropriate within the standards. For example, general purpose lanes could vary from 10' to 12' in width, depending on right of way availability and other design considerations.

Principal Arterials

Updated to match the functional classification map

Principal Arterial Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
Avondale Rd. NE	4	4	✓
Redmond Way (East City Limits to Bear Creek Parkway, east)	4	4	✓
Bear Creek Parkway	3	4	
Bear Creek Parkway, west (exten)- Leary Way to Redmond Way	0	4	✓
Redmond Way (148th Ave NE to Bear Creek Parkway, west)	4	4	✓
Redmond Way (West City Limits to 148th Ave NE)	4	4	
Redmond-Woodinville Road - NE 116th St - NE 124th St	2	2	
Redmond-Woodinville Road - NE 90th St - NE 116th St	2	2	✓
W Lk Sammamish Pkwy NE-Bel-Red Rd to NE 51st St	2	4	✓
W Lk Sammamish Pkwy NE- 51st St to BNSF RR Bridge	4	4	✓
NE 24th St - 148th to Bell-Red Road	4	4	✓
NE 90th St - Willows Rd to 154th Ave NE	2	2	✓
NE 90th St - 154th Ave NE to 160th Ave NE	4	4	✓
NE 90th St - 160th Ave NE to Red-Wood Rd	2	2	✓
124th Ave NE - Willows Rd to Avondale Rd	2	2	
148th Ave NE - NE 20th St to Willows Rd	4	4	✓
154th Ave NE - BNSF RR Bridge to NE 85th St	4	4	
154th Ave NE - NE 85th St to NE 90th St	2	2	

Figure 5D.8 Principal Arterial Streets

Updated to match the functional classification map

Minor Arterials

Minor Arterial Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
Redmond-Woodinville Road/164th Ave NE - south of NE 90th St	4	2	
Redmond Way (159th Pl NE to 170th Ave NE)	3	2	✓
Avondale Way NE	4	4	✓
164th Ave NE (76th Ave NE to Cleveland Street)	0	2	✓
Bel - Red Rd	4	4	
E Lk Sammamish Pky NE	2	2	
Leary Way NE	4	4	✓
NE Union Hill Rd (188th Ave. NE to Avondale Way)	4	4	✓
NE Union Hill Rd (East City Limits to 188th Ave. NE)	2	4	
Novelty Hill Rd	2	4	
Old Redmond Rd	2	2	✓
W Lk Sammamish Pkwy NE (Bel-Red Rd to South City Limits)	2	2	✓
Willows Rd	3	4	
NE 24th St - City limits to W Lk Sammamish Pkwy NE	2	2	✓
NE 40th St	4	4	✓
NE 51st St (156th Ave NE to 148th Ave NE)	4	4	✓
NE 51st St (W. Lake Sammamish to 156th Ave NE)	2	2	
NE 80th St - Leary Way to 164th Ave NE	2	2	
NE 85th St	4	2	
140th Ave NE	2	2	
156th Ave NE (NE 20th to NE 51st St)	4	4	✓
170th Pl/Ave NE (Redmond Way to Avondale Way)	2	4	
188th Ave NE - between Union Hill Rd & Redmond-Fall City Rd	2	2	✓

Figure 5D.9 Minor Arterial Streets

Updated to match the functional classification map

Collector Arterials

Collector Arterial Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
Cleveland Avenue	3	2	
NE 20th St	4	4	
NE 60th St (154th Ave NE to 158th Ave NE)	2	2	
NE 76th St (Redmond Way to 192nd Ave NE)	2	2	
NE 80th St (132nd to 140th Ave NE)	2	2	
NE 80th St (164th Ave NE to 171st Ave NE)	2	2	
NE 83rd St (158th Ave NE to 166th Ave NE)	2	2	
NE 100th St (166th Ave NE to 171st Ave NE)	2	2	
NE 104th St/NE 109th St	2	2	
NE 111th St (166th Ave NE to 172nd Ave NE)	2	2	✓
NE 116th St	2	2	✓
152nd Ave NE (NE 20th St to NE 31st St)	4	2	✓
31st/36th St NE (148th Ave NE to 156th Ave NE) (incl. SR 520 bridge)	2	2	✓
150th Ave NE (NE 36th St to 51st St NE)	2	2	
154th Ave NE (NE60th St to Old Redmond Rd)	2	2	
154th Pl NE (Red-Wood Rd to NE 116th St)	2	2	
156th Ave NE - NE 51st St to NE 60th St	2	2	✓
159th Pl NE (Bear Creek Parkway to Leary Way)	2	2	
160th Ave NE (Redmond Way to NE 90th St)	2	2	
160th Ave NE (NE 90th St to Red-Wood Rd)	2	2	✓
161st Ave NE - NE 90th to Redmond Way	2	2	✓
161st Ave NE (Bear Creek Pkwy (exten) to Redmond Way)	0	2	✓
166th Ave NE (NE 76th St to NE 85th St)	2	2	✓
166th Ave NE (NE 85th St to NE 104th St)	4	2	✓
166th Ave NE (104th St NE to 111th St NE)	2	2	✓
169th Ave NE (NE 79th St to NE 80th St)	2	2	
171st Ave NE (NE 80th St to NE 100th St)	2	2	
172nd Ave NE (West Lake Sammamish Pkwy to NE 30th St)	2	2	
172nd Ave NE (NE 111th St to NE 116th St)	2	2	✓
180th Ave NE	2	2	
185th Ave NE - Union Hill Rd to SR-202 (Redmond-Fall City Rd)	2	2	

Figure 5D.10 Collector Arterial Streets

Connectors

Connector Streets	General Purpose Lanes		Multimodal Corridors
	Widest Existing	Future	
NE 65th St (185th Ave NE to 192nd Ave NE)	0	2	
NE 73rd St (185th Ave NE to 192nd Ave NE)	0	2	
NE 76th St (Leary Way to Bear Creek Parkway)	2	2	
NE 80th St (185th Ave NE to 188th Ave NE)	0	2	
158th Ave NE (NE 85th St to NE 83rd St)	2	2	
158th Ave NE (NE 83rd St to Redmond Way)	0	2	
168th Ave NE (NE 76th St to NE 79th St)	2	2	
172nd Ave NE (NE 116th St to NE 128th St)	2	2	
187th Ave NE (E. Lake Sammamish Pkwy to SR 202)	2	2	
192nd Ave NE (Union Hill Rd to NE 65th St)	0	2	

Figure 5.11 Connector Streets

For each corridor, *Figure 5E.6* summarizes the transportation infrastructure improvements desired for each mode, and the land use patterns and Comprehensive Plan recommendations needed to support multimodal travel.

Why Integrated vs. Separated Modes?

- Travel Efficiencies
  Providing for all modes in one corridor extends range of travel. Transit can be thought of as an extension of the walking trip; walking as an extension of the transit trip. Bicycling options are enhanced when bicycle parking facilities are provided at transit stops and Metro buses are installed with bike racks.

- Land Use Efficiencies
  Land uses that provide access to multimodal corridors facilitate trips from a wider range of users and begin to address "placemaking" strategies. Neo-traditional and new urbanism development patterns near multimodal corridors have shown high rates of walking, bicycling, transit ridership, and social interaction compared to corridors with limited transportation options.

- Public Infrastructure Cost Efficiencies
  Development of multimodal corridors maximizes capital expenditures vs. spreading infrastructure costs over many corridors. The multimodal corridor system recognizes strategic places where capital improvements will occur and capital dollars will be spent.

Bicycle Alternatives

Primary bicycle facilities should be integrated into the multimodal corridors. However, in certain circumstances, the bicycle mode may be accommodated in a parallel alternative corridor if seamless transitions and connections can be made. The goal of facilitating a long, continuous bicycle trip must be met.

Two examples are Multimodal Corridors #7: Redmond Way, and #10: 148th Avenue. (See *Figure 5E.7*)

Redmond Way shall be converted into a two-lane, two-way street with curb bulbouts and parallel parking. A preferred alternative bicycle route may be the parallel BNSF right-of-way, which shall be developed as an urban bicycle path parallel to transit accommodation. (See additional discussion on page 5B.8)

Due to cost constraints of a major roadway retrofit project to add bicycle lanes onto 148th Ave NE, bicycle routing on streets through the Overlake Technology Center is a preferred alternative. This alternate bike route must include a trail connection at the northern end, and construction of the new SR 520 overpass on the southern end. (See page 5B.8 and Figure 5B.10)

These alternate routes and all other multimodal corridors shall include facilities that meet primary bicycle corridor criteria and are designed to AASHTO and MUTCD standards.

Multimodal Intersection Design

Integrated public infrastructure design includes considering and accommodating all modes in every project.

Intersection design along the designated multimodal corridors, therefore, will differ from conventional roadway intersection design in that:

- ✓ Crosswalks will be marked
- ✓ Crossing areas will be highly visible
- ✓ Single diagonal curb ramps will be replaced with a pair of perpendicular curb ramps
- ✓ Signal timing will consider a slower walking speed of 3 ft./sec.
- ✓ Smaller curb radii will be used
- ✓ Pedestrian crossing distances will not exceed 48 feet (4 lanes of travel) without a pedestrian median refuge island provided
- ✓ Right-turn lanes should be carried through intersections as transit queue jumpers
- ✓ Bicycle lanes will not be dropped or built to substandard specifications whenever space becomes limited
- ✓ Bicycle lanes will be carried through intersections, with dashed striping to indicate merge areas for right turning vehicles and transit queue jumping

Corridor	Transportation Issues	Land Use	Community Character
3a. 172nd Ave NE & NE 111th Street	**Bike** – Primary Bicycle Corridor as an extension of 166th Ave NE. 111th segment can use an improved section of the Puget Power Trail; 172nd should have on-street bicycle lanes added. **Bus** – The current route to connect Education Hill with downtown is infrequent and circuitous. This proposed routing change will strengthen ridership market for teenagers and seniors. **Ped** – Corridor is tolerant. **Auto/EV**– Collector arterial. Any future facility improvements should be built to multimodal standards contained in Chapter 5D.	✓ Most of this corridor is developed at low-moderate densities of 4 dwellings per acre, though some continued infill is anticipated. ✓ Corridor provides connections to the Puget Power Trail. ✓ A priority for the residents is multimodal connections to the Downtown, particularly enhanced transit service.	✓ Design improvements to support and enhance the character of this corridor as a primarily residential area with mature trees and green spaces. ✓ A priority for residents is having gateway structures that identify significant entry points.
3b. 166th Ave NE	✓ **Bike** – Primary Bicycle Corridor. Recent conversion from 4- to 3-lane cross-section added bike lanes from Redmond Way to NE 87th Street. Continue treatment to the north. ✓ Bike lane extension and a trail connection to the south to access Marymoor Park ranked as a high priority by cyclists. ✓ **Bus** – The current route in the corridor connects Education Hill and downtown. The route is infrequent and circuitous. Ridership market is strong for teenagers and seniors. ✓ **Ped** – The pedestrian environments on the north and south end of the corridor are tolerant. The section from NE 85th St to NE 95th St is intolerant. ✓ **Auto/Truck/EV** – Collector arterial. Any future facility improvements should be built to multimodal standards contained in Chapter 5D.	✓ A portion of this corridor serves neighborhoods built at densities of 4 to 6 dwellings per acre. While this area is largely developed, continued infill is anticipated. ✓ The southern portion of the corridor serves residential areas of 20 dwellings per acre and a portion of the Downtown. ✓ Corridor serves Redmond Junior High and is a major access route connecting to other area schools, parks, and other major destinations. ✓ Some pedestrian connections east and west of 166th Ave NE help provide access to destinations in the neighborhood, though improved connectivity is a goal. ✓ A priority for residents is improved multimodal connections to the Downtown, particularly transit.	✓ Design improvements to support and enhance the character of this corridor as a primarily residential area with mature trees and green spaces. ✓ A priority for residents is having gateway structures that identify significant entry points.
3c. 164th Ave NE & Bear Creek Parkway	* Includes a new connection across the railroad corridor in Downtown. ✓ **Bike** – Primary Bicycle Corridor that connects Redmond Town Center to Downtown. When this corridor is connected, on-street bike lanes should be provided. ✓ **Bus** – Service in this corridor is only in the Bear Creek Parkway section. When this corridor is connected with downtown service frequent should be provided. Possible route for downtown circulator. ✓ **Ped** – Sidewalks and land use are pedestrian supportive. ✓ **Auto/Truck/EV** – Bear Creek Parkway is a principal arterial; 164th is a minor arterial north of 76th. Future improvements should be built to multimodal standards contained in Chapter 5D.	✓ Loops through the mixed-use Redmond Town Center area, a significant portion of the Downtown's retail and comparison shopping core. ✓ Redmond Town Center and adjoining Downtown districts provide significant opportunities for residential and mixed use development. ✓ Continuation of 164th Avenue NE north of the BNSF tracks would help provide access to additional transit-oriented development in the area. ✓ A priority for this area is to improve pedestrian connections with the rest of the Downtown. The area is also envisioned to include a graceful connection across SR 520 to Marymoor Park.	✓ Town Center is one of the City's primary gathering and entertainment places. Design improvements to encourage pedestrian activity, including informal gatherings, through street design and streetscape treatments. ✓ Also, design improvements to integrate with the rest of the Downtown and to retain and enhance traditional building styles, street patterns, and public amenities.

Figure 5E.6 Land use and transportation recommendations for Redmond's 14 multimodal corridors

Introduction

Contents of this Chapter

- ✓ Forecasts of Revenue
- ✓ Forecasts of Project Costs
- ✓ Project and Program Prioritization
- ✓ 2005 – 2022 Transportation Facilities Plan (Project List)

The Transportation Facilities Plan (TFP) is designed to meet the requirements of the Washington State Growth Management Act. The GMA calls for a Transportation Element within the City's Comprehensive Plan that includes a "multiyear financing plan based on the needs identified in the comprehensive plan."

This TFP describes anticipated revenues and planned program and project expenditures for the eighteen year period beginning in 2005 and including 2022. The TFP also describes the transportation investment priorities that were used to develop the 18-year project list included at the end of this chapter.

The TFP represents a high priority list of projects that can be implemented within forecast revenues during this 18-year planning period (2005 through 2022). The performance measures contained in Chapter reflect the interaction of the TFP project list with the forecast land uses, as set forth in the Redmond Comprehensive Plan. For example, a traffic forecast model (the BKR model) was used to estimate future screenline LOS in 2022, based on the TFP project list.

The TFP does not include all of the projects needed to fulfill the build-out modal plans contained in Chapter 5. A full list of projects needed to complete the build-out plans is provided in an appendix.

Because the primary infrastructure for all modes is the Redmond street network, most of the projects listed in the TFP appear to be street improvements. However, in virtually all cases, these projects are multimodal in intent and will be multimodal in design. In many cases, projects are needed and included primarily because of their multimodal benefit.

The TFP is balanced: anticipated revenues are roughly equal to estimated program and project costs, with each totaling about $250 million over the 18-year year period.

Further direction was provided by regional policies adopted by the Puget Sound Regional Council. Most importantly, PSRC has adopted a centers-based policy toward transportation system development. This has been reflected in this Plan by designing the TFP to ensure good access to and circulation within Downtown Redmond and Overlake.

Finally, the City's Planning Commission, City Council and Mayor provided guidance during development of the plan beyond the priorities outlined above. This followed the five themes outlined below

- *Centers*. Echoing the regional policies, the Council and Planning Commission wish to see the transportation program support the intensification of Overlake and Downtown as mixed use centers.

- *Regional Action.* City Council felt that Redmond should play a continuing, effective role in shaping regional policy and influencing regional decisions (Sound Transit, King County, Washington DOT, etc.).

- *Multimodal Plan.* City Council and Planning Commission both expressed a desire to see Redmond's transportation system become more modally balanced, with less auto-dependency and more reliance on public transit, in particular.

- *High Capacity Transit*. Both the City Council and the Planning Commission are determined to see the centers in Redmond connected to other regional centers by High Capacity Transit (HCT). They feel this TMP should begin setting the stage for the arrival of (and success of) HCT within this 18-year period or very shortly after 2022 at the latest.

- *Honoring Agreements*. City Council has been particularly concerned that the City should abide by its agreements with other entities. Most important in this context is the BROTS (Bellevue-Redmond Overlake Transportation Study) agreement.

This TMP differs from past documents in that it emphasizes four new concepts within these priorities:

- Support downtown Redmond and Overlake as vibrant mixed-use centers;

- Building multimodal corridors that function equally well for all modes;

- Making key street connections within Redmond where they are missing today

- Ensuring that future High Capacity Transit (HCT) connects directly into Redmond's centers.

Every project listed in the Transportation Facilities Plan (TFP) on the following pages directly contributes to realization of one or more of these priorities.

TMP priority graphic deleted as 6.2

Projects 046, 047 and 048 in January 2005 draft, but omitted from original July 2005 draft.

Project ID	Location	Description	TMP Code	Estimated Remaining Cost	Estimated Remaining Cost - Comment
RED-TMP-017	Cleveland St	Convert Cleveland St to 1 through lane in each direction. Improvements include parking, curb bulbouts, widened sidewalks, pedestrian amenities and realignment of street at eastern connection to Redmond Way to improve traffic flow.	18	$6,440,000.00	n/a
RED-TMP-018	Redmond Way	Convert Redmond Way from 159th Pl NE to 170th Ave NE to 1 through lane in each direction and center turn lane except at west end where there would be two westbound through lanes from 159th Ave NE to 160th Ave NE. Improvements include curb bulbouts, sidewalk improvements, pedestrian amenities and parking.	19	$6,075,000.00	n/a
RED-TMP-019	166th Ave NE	Reconfigure 166th Ave NE from NE 85th St to NE 104th St to 1 through lane in each direction, center left turn lane and bike lanes.	20	$300,000.00	Budget Placeholder.
RED-TMP-020	East Lake Sammamish Pkwy at 187th Ave NE	Install new traffic signal. Improvements include southbound left turn lane and reconstruct grade separated trail crossing.	V	$1,539,000.00	COR property related cost est. $37,414.
RED-TMP-042	Old Redmond Rd at West Lake Sammamish Way	Install new traffic signal. Improvements include modifications to better accommodate nonmotorized uses.	W	$500,000.00	Budget placeholder.
RED-TMP-044	Bicycle Facilities Improvement Program	Improve bicycle facilities throughout the City ($450,000 annually)	n/a	$8,100,000.00	n/a
RED-TMP-045	Sidewalk Improvement Program	Improve sidewalk facilities throughout the City ($1,000,000 annually)	n/a	$18,000,000.00	n/a
RED-TMP-046	Safety Program	Signalize and modify intersection and corridors to improve safety. Improvement locations would be identified by monitoring accident data to identify high accident locations and high accident corridors ($450,000 annually).	n/a	$8,100,000.00	n/a
RED-TMP-047	Bridge Repair Program	Provide repair and maintenance of the roadway bridges in the City ($50,000 annually).	n/a	$900,000.00	n/a
RED-TMP-048	Channelization Improvement Program	Provide street marking projects throughout the City ($50,000 annually).	n/a	$900,000.00	n/a
RED-TMP-050	Transportation Demand Management	Implement measures that eliminate trip making or support the movement of more people in fewer vehicles, and help to reduce traffic congestion ($450,000 annually).	n/a	$8,100,000.00	n/a

Figure 6.2 2022 TFP Project List

Updated VMT numbers from model

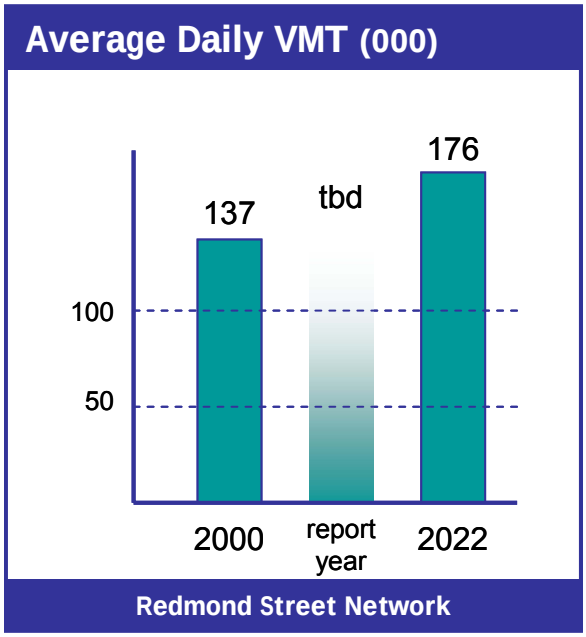


Figure 7.6 Average Daily VMT

Updated ADT numbers from model

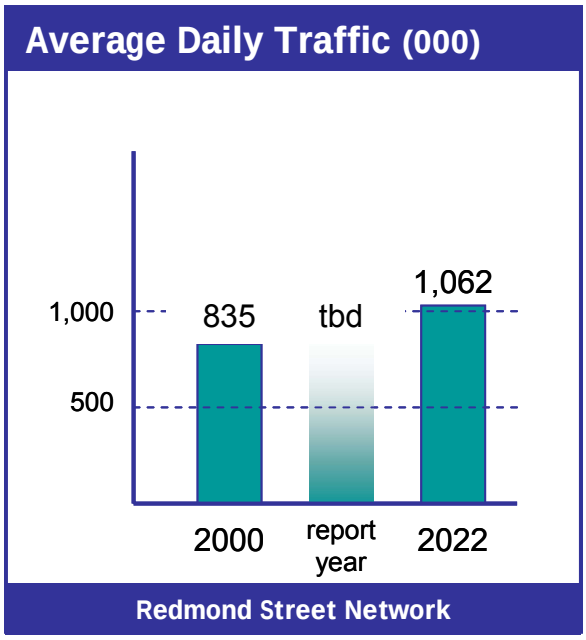


Figure 7.7 Average Daily Traffic

Average Daily Vehicle Miles of Travel (Figure 7.6)

One "vehicle mile of travel" (VMT) represents one vehicle traveling one mile within the City on the Redmond arterial street network (including state routes).

This measure cannot be directly observed or counted and thus must be estimated from other data. The estimate is for an average annual 24-hour weekday.

VMT is the best variable for measuring trends in the amount of daily vehicular traffic in Redmond. It is also utilized in estimating air pollution, congestion and other dependent variables.

Total vehicle miles of travel in Redmond can be obtained most readily by running the City's new traffic model (an updated version of the BKR model) for the report year. If this is not possible or does not occur, the data can be estimated using trends observed in the annual count program data.

This measure does not include travel on local streets. Most such travel shows up on arterials and it is not necessary to count traffic in both places to discern the overall trend. The traffic model that will be used in most instances to produce this data does not model traffic on local streets. Actual total VMT, including travel on local streets, would be slightly higher than this.

Average Daily Traffic (Figure 7.7)

Average daily traffic represents the number of vehicle trips that travel on some portion of the Redmond arterial street network (including state routes) on an annual average 24-hour weekday.

Again, this cannot be directly observed from count data because many vehicles will travel through more than one count station as part of a trip, leading to double counting of trips.

The best source of this data is the City's new traffic model (an updated version of the BKR model) for the report year. If an annual update of the model does not occur, the data can be estimated using trends observed in the annual count program data.

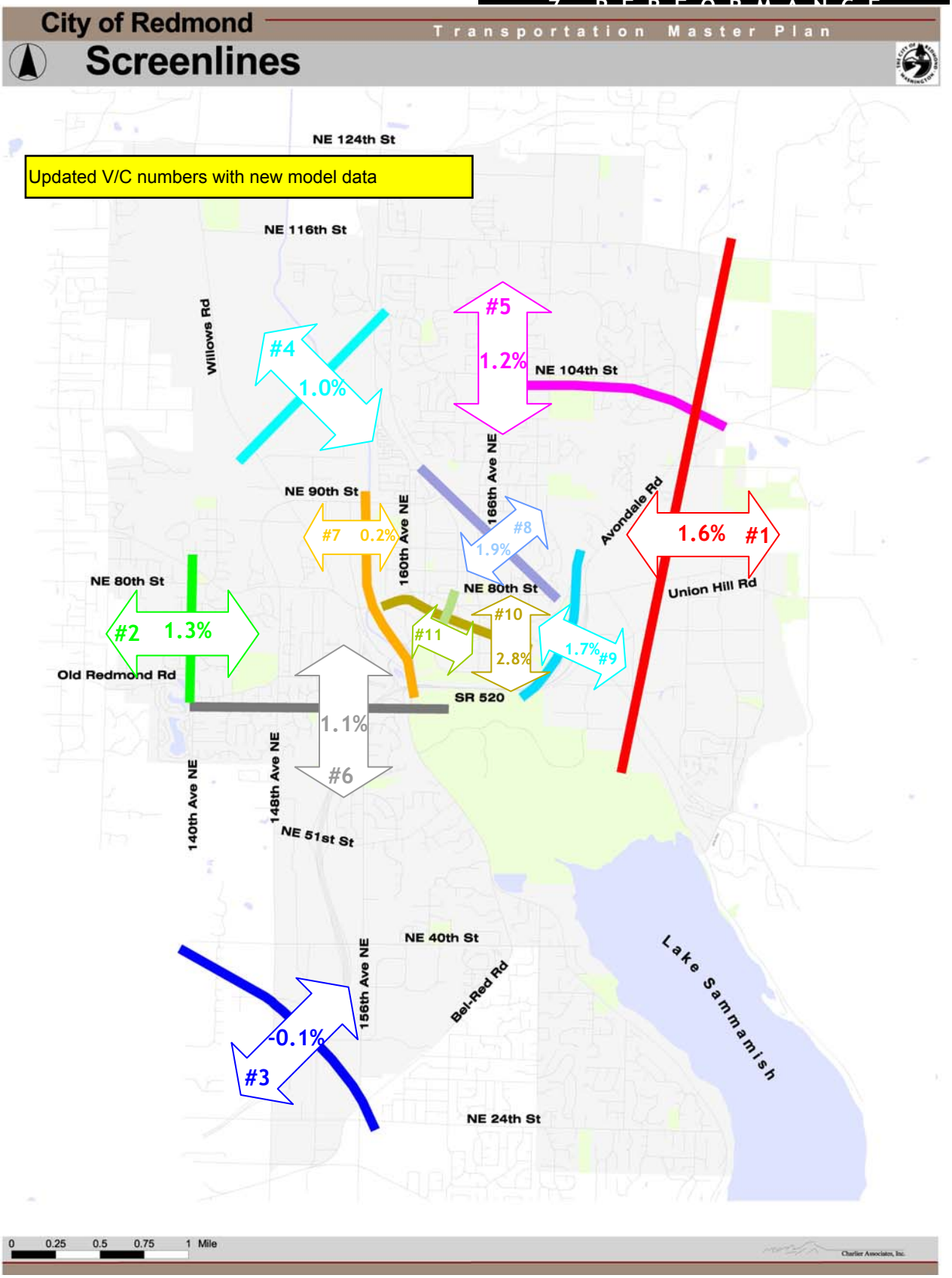


Figure 7.9 *Annual Traffic Growth at Screenlines 2003-2022*

Updated LOS numbers

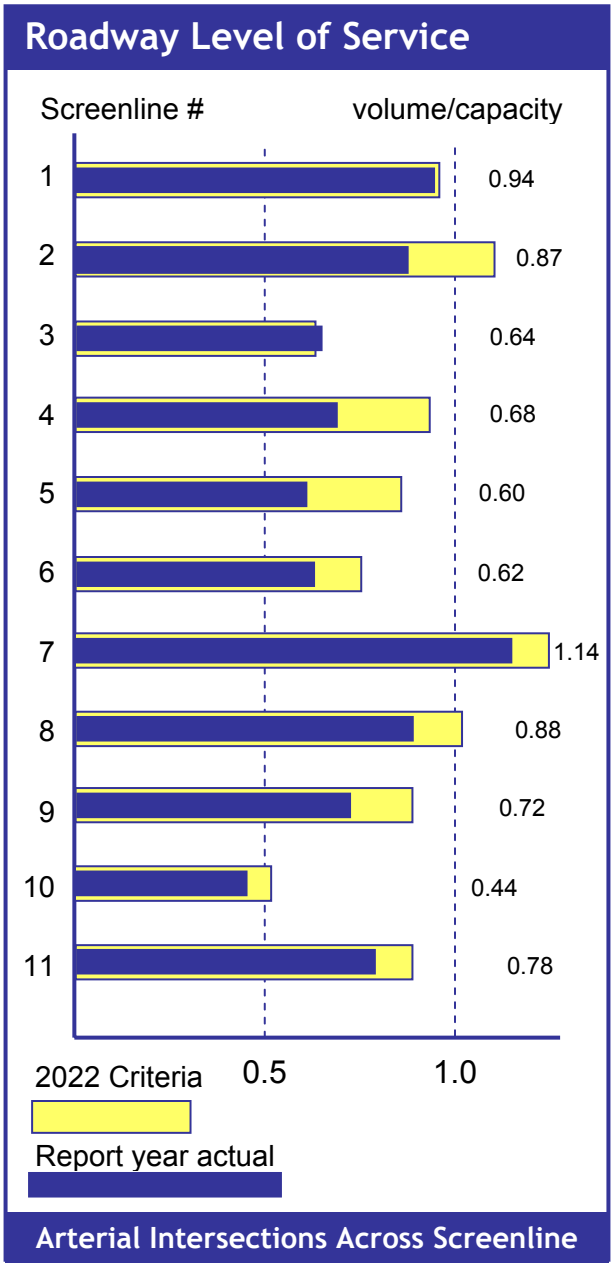


Figure 7.20 Roadway Level of Service

Roadway Traffic Level of Service at Screenlines (Figure 7.20)

LOS objectives for Redmond's arterial streets have been set by the City. These are described in Chapter 4.

This figure will be produced utilizing data from the City's annual traffic count program. Chapter 4 provides more information about the calculation of the V/C (volume to capacity) ratios.

Bicycle System Priorities and Implementation (Figure 7.21)

The City has set objectives for completion of specific corridors within the ultimate bicycle system plan shown in Chapter 5. These objectives identify priority corridors to be completed by 2022. The map in Figure 7.21 on the next page provides an annual report of cumulative progress toward these objectives. As segments of the bicycling network are completed, the dashed lines in the map will begin to go away.

Note that while the key shows Construction Initiated and Project Development lines, there no such lines shown on this map template yet. However, they will be, beginning with the first Mobility Report Card.

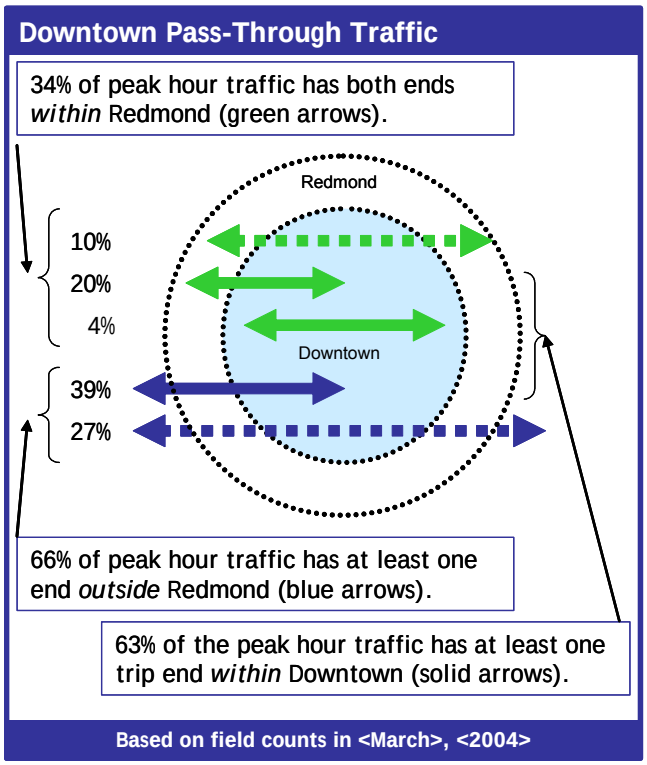


Figure 7.28 Report Year Pass-Through Traffic

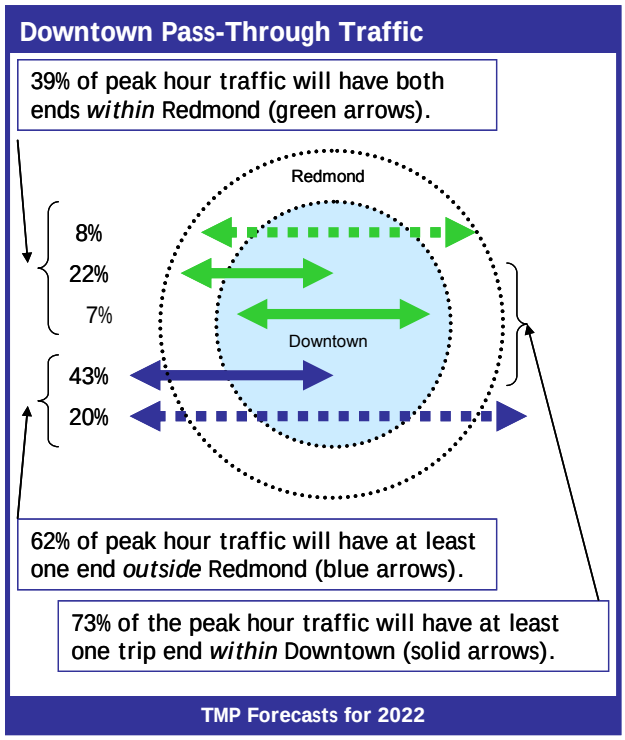


Figure 7.29 2022 Forecast Pass-Through Traffic

Updated 7.29 based on new model data

Five Year Transportation Status Report

Tracking Measures

The Tracking Measures contained in the Five Year Report will be the same as those contained in the Annual Mobility Report Card with the addition of the next several figures. Thus the Five Year Report will be similar in appearance to the Annual Mobility Report Card, except that it will contain five years of data (rather than one) and will have the following additional data.

Downtown Pass-Through Traffic
(Figures 7.28 and 7.29)

Background on this subject can be found in the Thoroughfare Plan (Section D of Chapter 5).

It is possible to estimate this data by running Redmond's traffic model (a version of the BKR model). However, one purpose of this data is to provide "calibration" (a reality check) for the model. For that reason, data will be obtained by replicating the pass-through traffic study completed by the City in March 2004.

The small blue circle in each figure represents Downtown and the larger circle represents the entire city. Because data is obtained from license plate match counts at the periphery of Downtown, the break-down of origins and destinations outside the Downtown cannot be directly observed and must be estimated from other sources.

Because of the cost of replicating the field survey, these figures will not be included in the Annual Mobility Report Card. In any event, the changes in the data from year-to-year will be too small compared to sampling error to make annual production of the data cost-prohibitive.

Five Year Transportation Status Report

Level of Service Objectives

The Level of Service Objectives contained in the Five Year Report will be the same as those contained in the Annual Mobility Report Card with the addition of the next several figures. Thus the Five Year Report will be similar in appearance to the Annual Mobility Report Card, except that it will contain five years of data (rather than one) and will have the following additional data.

Redmond also has accepted a role as the location for some additional employment growth, which again implies transportation demand from rural residential development. Given these impacts, it is important that Redmond support communities to the east in helping identify new and innovative funding to increase the levels of transit service from these areas into Redmond. These needs have been explicitly addressed in Chapter 5.

High Capacity Transit Network

Redmond advocates early development of a High Capacity Network (HCT) linking the Eastside centers and activity areas and connecting them with regional centers throughout the Puget Sound Region.

Redmond also believes that there should be an immediate and ongoing improvement in Eastside regional bus transit services provided through Sound Transit, both to meet current travel demand and also to build transit patronage in preparation for HCT.

This Transportation Master Plan anticipates that a direct HCT connection into Redmond will be under construction within the 2022 horizon of this Plan and will be in service by the end of that period. The City does not believe that continued regional growth can be accommodated on the Eastside beyond levels anticipated by 2022 without at least the key spine corridors of HCT being in place.

Redmond believes that the long-term development of HCT in the Region will require crossings of Lake Washington in both the SR 520 and I-90 corridors. It is imperative that any major changes or improvements to bridge crossings in either corridor must fully anticipate and provide for HCT development.

Redmond will work to support HCT development in both corridors.

Recognizing that HCT may initially connect the Eastside with Seattle through the I-90 corridor, Redmond has anticipated how that spine corridor will have to be located to adequately serve Bellevue and Redmond, as well as other Eastside needs.

The principal requirements in this respect are:

- The first HCT spine on the Eastside may come across Lake Washington in the I-90 corridor and connect into Downtown Bellevue. However, the extension of that corridor into Downtown Redmond with a station at Overlake will be as important for regional travel as the connection across the lake into Seattle.
- One potential corridor for HCT connecting Downtown Bellevue and Downtown Redmond is Bel-Red Road. However, HCT must connect directly into Overlake, ideally at the existing NE 40th Street transit center. From that point on, HCT should use the SR 520 corridor. Further, if the development of HCT is located in part through the Bel-Red Road corridor, this must not detract from the regional functionality of this route. The number of local stops must be limited and travel times must be kept short if HCT is to compete effectively with auto travel.
- The City is planning for four primary HCT stations in Redmond: one in the vicinity of 152nd Avenue NE to serve the Overlake Mixed Use Core; one at NE 40th Street, serving Microsoft and other portions of Overlake; one in the Downtown serving its employees, residents, and destinations; and one farther east in SE Redmond to intercept commuters with a major park and ride and multimodal facility. Redmond also anticipates that the most easterly of these stations may also be associated with a nearby maintenance facility.
- Ultimately, over the long term, a north-south HCT corridor linking Issaquah, Redmond and Woodinville will also be needed and should be included in Sound Transit plan development.

With these concepts and principles as a guide, Redmond will work with its neighboring cities and other regional partners to advance the development of the Sound Move Long-Range Plan and Sound Transit Phase II and other similar initiatives.

Redmond recognizes its responsibility to take the lead in planning the transportation facilities and associated land development patterns required for all the HCT stations in Redmond. This may include identifying and protecting rights of way for an HCT corridor and space for station locations.

The City has initiated a planning effort for an HCT station and associated transit-oriented development in Downtown Redmond and an intercept station east of Downtown Redmond. This study, to be completed in 2005, will assess the best corridor for HCT in this area and the resulting best location for the HCT stations.

Redmond is also committed to working closely with Sound Transit as it continues to develop its plans for near-term and long-range HCT improvements.

Metro Transit Services

This Transportation Master Plan places significant reliance on continued growth and improvement in King County Metro transit services. This is not directly within Redmond's ability to control or direct, but will require cooperation and collaboration between Redmond, Metro and other Eastside cities.

Over the life of this Plan (by 2022) transit demand to, from and through Redmond is expected to grow by at least 80% above 2003 levels. Some of the key service improvements needed to respond to this demand are:

- Better frequency of service to Redmond's centers (Downtown and Overlake);
- More direct, less circuitous routes, especially for those routes connecting Eastside centers;
- More direct and frequent internal service between locations within Redmond; and,
- More efficient service design, with less bus time in non-productive lengthy layovers.

These enhancements are described in more detail in Chapters 4, 5 and 7.

Redmond is committed to helping Metro make these improvements. The City has been active in helping to plan and implement the TOD (transit-oriented development) project at the Downtown Park and Ride. This important project should be completed and placed in service as soon as possible.

Redmond also sees a need for improved transit operations in the Overlake core, especially along NE 24th Street, which is a primary commercial street in that area and is not as well-served by local transit routes today as it should be in the future.

Bicycle System

This Transportation Master Plan includes a complete network of long, continuous bicycle corridors (described in Chapter 5). These are important to internal circulation and access within Redmond.

These corridors also will be important for regional bicycling. Some of the key facilities in this respect are:

- Puget Power Trail;
- East Lake Sammamish Trail;
- 520 Corridor Pathway; and,
- Sammamish River Trail.

The City will work with its sister cities and other regional partners to ensure that the Redmond bicycle network is accessible and well-connected to regional facilities and local facilities in neighboring communities.

Other Topics

Redmond will work with its regional partners on a wide range of issues and opportunities, not all of which are fully described in this chapter. Some other key processes and issues include:

- Continuing coordination and cooperation with the City of Bellevue on issues of mutual interest, including Overlake and continuing elements of the BROTS agreement;
- Continued participation in and support to the Eastside Transportation Partnership;
- Continued collaboration with Bellevue and Kirkland and PSRC on development and maintenance of the BKR traffic forecasting model (which was used extensively in development of this Transportation Master Plan);
- Continued coordination with the Puget Sound Regional Council on MPO (Metropolitan Planning Organization) business and on other initiatives as well (including the Prosperity Partnership);
- Continued coordination and collaboration with other Eastside governments on transportation funding initiatives; and,
- Participation in the PSRC's ongoing research and development regarding transportation pricing.
- Coordinate with the City of Woodinville and King County on the future Willows Road extension.

bounded on the north by NE 133rd St., on the south by SR 202, and on the west by Avondale Way. On the east the study will extend as far into rural King County as necessary to provide a thorough evaluation. The study will consider forecasted future growth patterns and will identify future roadway connections or expansion of existing roadways to serve this growth, implementing the functional classification provisions of Chapter 5 (including the Connector Street classification), and taking into account access needs associated with future high capacity transit station locations. The study will also address how to better facilitate the circulation of and provide priority treatment for non-SOV modes.

h. *Local Transit Service Study.* Perform a detailed examination of the needs, opportunities and feasibility of various local transit options. The study will also examine how best to serve Redmond's neighborhoods and activity centers, as well as connect local transit into the regional transit system.

i. *TDM Plans.* The City will undertake several initiatives to help mainstream TDM as part of its transportation solutions. These include:

- Identifying strategies, mechanisms and implementation plans to close the gap in getting people to and from multimodal corridors to help maximize the use of core transit infrastructure;
- Identifying and implementing ways to coordinate and integrate TDM with transportation infrastructure planning and implementation, including construction.
- Undertaking an analysis to evaluate the role, availability and efficient use of on-street parking needs to ensure consistency with the City's mobility goals.

j. *Freight and Goods Activity Study.* Undertake a study that identifies issues, types, and the needs of freight and goods movement in Redmond. This study should address how the current and future transportation facilities are affected.

k. Assessment of Redmond's north-south corridors and Willows Rd north.

Project Development

Before projects can be built they must be designed. The design process normally involves a preliminary engineering step and a final design step. Right-of-way mapping may be required, and in some instances special environmental studies may be needed. The major projects scheduled in the City's CIP will have budget and workload implications for the City in the years prior to actual groundbreaking.

The projects for which the City will undertake project development during this three-year period include:

a. Bear Creek Parkway Extension;

b. 164th Extension Across RR R/W;

c. Design conversion of One-Way Couplet to Two-Way operation;

d. 85th 4-Lane to 3-Lane Conversion;

e. 164th 4-Lane to 3-Lane Conversion;

f. West Lake Sammamish Parkway;

g. Union Hill Rd. (178th to Avondale);

h. Red-Wood Road (Preliminary Design);

i. BNSF Corridor; and,

j. 172nd Extension.

Major Construction Projects

During the next three years the City will initiate construction activities on the following projects:

a. SR 520 Bikeway Connection to Sammamish River Regional Trail;

b. 156th Ave NE Sidewalk Improvements from NE 59th St to NE 61st St;

c. Union Hill Rd Ph II from Avondale Rd to 178th Pl NE;

d. NE 116th St Phase I;

e. Redmond Way/NE 76th St Intersection Modifications;

f. East Lake Sammamish Pkwy Intersections

g. NE 83rd St -- 160th Ave NE to 161st Ave NE;

h. Old Redmond Rd -- 132nd Ave NE to 140th Ave NE;

i. Redmond Intelligent Transportation System Phase I (Overlake);

j. Redmond Intelligent Transportation System Phase II (Redmond Way);

Action Plan Schedule Summary and Timetable

Year of Project Initiation			
	2005	2006	2007
1. ORDINANCE AND COUNCIL ACTIONS			
1.a	TMP Adoption		
1.b	Concurrency Ordinance		
1.c		Business Tax Extension	
1.d		Impact Fee Ordinance Update	
2. STUDIES AND PLANS			
2.a	Downtown HCT Corridor/Station		
2.b	Transportation Funding and Impact Fee Update		
2.c	Overlake Plan		
2.d		Adequate Maintenance	
2.e		Street Design Standards	
2.f		Targeted Safety Program	
2.g			Union Hill/Novelty Hill Network
2.h			Local Transit Service Study
2.i		2005 Mobility Report Card	2006 Mobility Report Card
2.j			Freight and Goods Study
3. PROJECT DEVELOPMENT			
3.a	Bear Creek Parkway Extension		
3.b		164th Extension Across RR R/W	164th Extension Across RR R/W
3.c			Design Dntn Couplet Conversion
3.d	85th 4-lane - 3-lane Conversion		
3.e	164th 4-lane - 3-lane Conversion		
3.f		West Lake Sammamish Parkway	
3.g	Union Hill Road		
3.h			Red-Wood Road
3.i		BNSF Corridor	
3.j	172nd Extension		

Figure 9.1 Action Plan Schedule Summary and Timetable

Access: is the ability to get "in the door." Access is about physically reaching — gaining access to — destinations. Access is the most important element of overall mobility for business. Good access is essential to the delivery of both customers and freight.

Arterial Street: a major thoroughfare, used primarily for through traffic rather than for access to abutting land, that is characterized by high vehicular capacity and continuity of movement.

Average Daily Traffic (ADT): The total traffic volume during a given period (from 1 to 364 days) divided by the number of days in that period. Current ADT volumes can be determined by continuous traffic counts or periodic counts. Where only periodic traffic counts are taken, ADT volume can be established by applying correction factors such as for season or day of week. For roadways having traffic in two directions, the ADT includes traffic in both directions unless specified otherwise.

Average Weekday Daily Traffic (AWDT): The total traffic for an average weekday. An average weekday is a representative weekday computed as the mathematical average of several typical weekdays selected at random throughout the year.

Backbone Trails: large-scale regional facilities that link the city with surrounding jurisdictions.

Capacity: the ability of a transportation system to meet a wide range of mobility needs. The Redmond TMP reaches beyond traditional interpretations that only include roadway volumes as a measure of capacity.

Circulation: is the ability to move about within an area, connecting different localized land uses. Density and efficiency of local transportation networks affect circulation.

Collector-distributor street (collector road): a street that gathers and disperses traffic between larger arterial highways and smaller streets. It has intersections at grade and provides access to abutting properties.

Collector Trails: medium-scale facilities, typically within City street rights-of-way, that provide connections to the backbone trails.

Commute Trip Reduction (CTR): State Clean Air Act, enacted to reduce traffic congestion, air pollution and fuel consumption by reducing vehicle trips.

Connectivity: the ability of a public transportation network to provide service to the maximum number of origin-and-destination trip pairs through the optimal integration of routes, schedules, fare structures, information systems, and modal transfer facilities.

Corridor: in planning, a broad geographical band that follows a general directional flow or connects major sources of trips. It may contain a number of streets and highways and transit lines and routes.

Curb Extensions (bulbouts, neckdowns, flares, or chokers): reduce pedestrian crossing distance and improve the visibility of pedestrians to motorists and vice versa.

Destination 2030: a transportation action plan for the next 30 years of growth in King, Pierce, Snohomish and Kitsap counties, the central Puget Sound region of Washington state. The plan addresses traffic congestion and making it easier to move between home and work, school, shopping, and recreation.