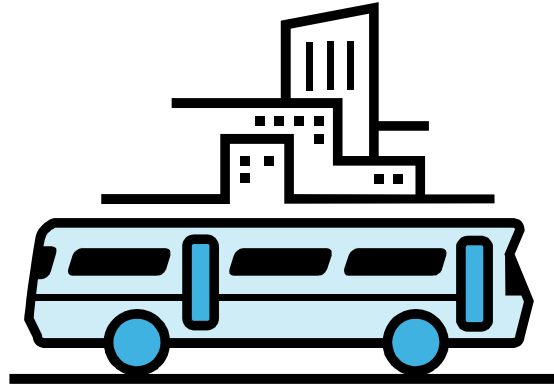


VII. Land Use Context for Transit in the Rogue Valley



This chapter describes how land use affects RVTD’s transit productivity, or how efficient each route performs based primarily on the number of passengers. This chapter also describes standards and land use characteristics that need to exist before transit services are implemented.

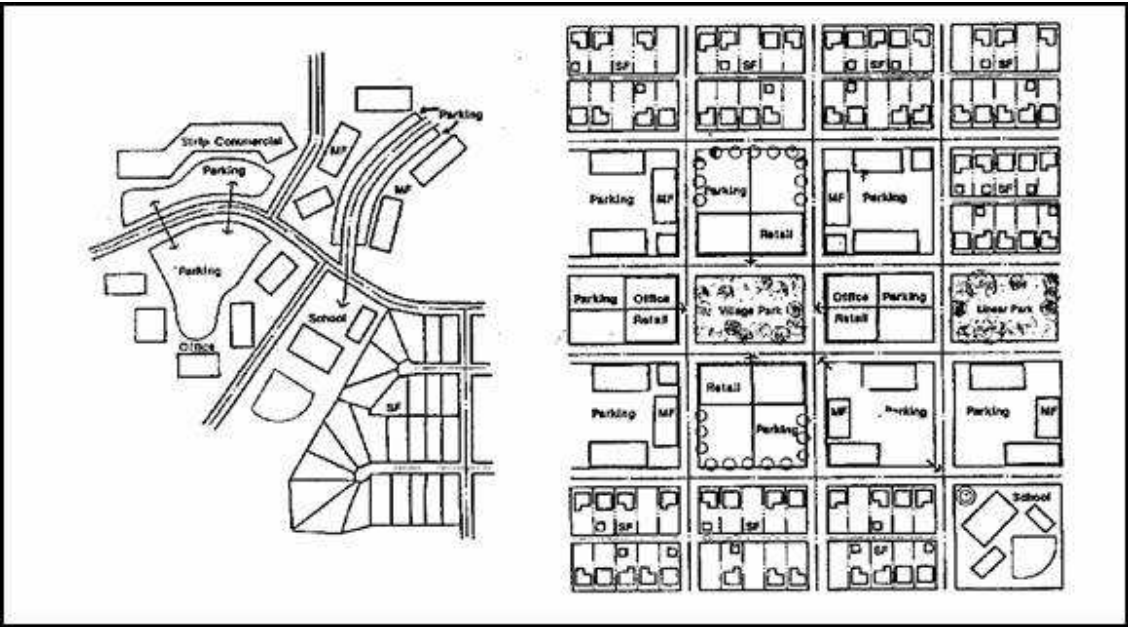
District Area, Street Systems and Urban Forms

The jurisdictional authority and geographic extent of the Rogue Valley Transportation District’s tax base is 158.5 square miles of urbanized area. Within this area RVTD serves seven cities and large portions of rural land types. Transit both competes with and complements other modes of travel in this type of land configuration. Its relationship with automobile travel tends to be competitive, not just for passengers, but also primarily because the urban forms that support automobile travel are less compatible with efficient and convenient transit service, and vice versa. In many ways transit complements walking and cycling because urban environments that are conducive to walking and cycling are also transit-supportive. People who make walking and cycling trips instead of automobile trips are also most likely to be transit users.

Street Systems

Urban forms and rural travel patterns have an incredible impact on the viability of a transit system to work efficiently and effectively. Compact development often incorporates a street system established along a grid network providing more direct travel and frequent links. Conversely, low-density development and arterial-based street systems often create obstacles to walking, cycling and ultimately limits access to the transit system. An example in the Rogue Valley is in east Medford where neighborhoods have very few connected streets and rely primarily on arterials for travel. For someone using an automobile, out of direction travel to reach an arterial may not be an inconvenience and would likely not deter them from making the trip. However, this will have a much greater impact on someone who relies on their own two feet for getting around. Figure 7.1 demonstrates these two urban forms with a disconnected road system illustrated on the left, having many dead-end streets requiring travel on arterials for most trips. A well-connected road system, illustrated on the right, allows more direct travel between destinations, offers more route options, and makes non-motorized travel more feasible.

Figure 7.1 Arterial Based versus Grid Road Systems¹



¹ VictoriaTransportPolicyInstitute,RoadwayConnec tivity,March2008

Communities adopt policies to reduce sprawling growth patterns for fiscal reasons, purposes of community identity and design and economic development strategies to name a few. Many local and state governments, including Oregon, actively pursue policies to discourage sprawl. Typically, funding for infrastructure, including transportation, is limited outside of urban areas. The public expenditures associated with building and maintaining transportation systems in particular are very sensitive to the compactness of a region's development patterns. Transit can be both a cause and an effect in the patterns of urban development.

Transit is affected by land development patterns in many ways. Service efficiency is very sensitive to the intensity of development along transit corridors. Since transit is most accessible by foot and by bike, the ratio of route miles to the population being served is inversely proportional to land use intensity. The effect on service cost per passenger is magnified by the fact that lengthier transit routes increase travel times, reducing convenience and reducing ridership.

Transit service impacts development patterns as well. Far-flung route extensions – especially if they serve low-density communities – can facilitate sprawl and higher land values, which could cause gentrification. RVTD currently provides service along primary corridors and more rural areas. Only in recent years has the pressures been felt to serve destinations more than 5 miles off a route line, yet within the district. Although 5 miles may seem nominal, it is approximately 35,000 more miles of travel per year. At \$5.74 per mile (system-wide 06-07 Operating costs) this 5-mile detour costs more than \$200,000.

Carefully designed standards for transit corridors can encourage development of compact urban and suburban nodes, with consequent savings on public expenditures and increases in prosperity.

Economic Development

Because transit can be used as a tool to help increase the intensity of land use, it is commonly a component of a community's economic development strategy. This is typically done by trading automobile access, which requires large dedications of land, for transit access. Sufficiently dense (and well-designed) development can bring about a "critical mass" of economic activity, increasing the opportunity cost of non-productive land uses, such as parking and multiple vehicular travel lanes. That is, the opportunity to use that space for more profitable pursuits would have to be forfeited to make room for automobile access, unless enough workers and residents could use transit instead. Parking and street width have an enormous impact on the degree to which automobiles dominate an area, and how much room there is for other forms of human activity. Reducing the amount of geographic space dedicated to automobiles can greatly reduce walking distances and improve the attractiveness of an area, and is therefore a key strategy for increasing economic activity and quality of life. In most cases, the amount of land devoted to automobiles can be greatly reduced without reducing auto access. An example of such a compromise is the use of multi-story parking structures or underground parking and charging for the use of parking will act as an incentive to walk or take the local transit system.

2005 Rogue Valley Population and Job Density Analysis

A key indicator of how accessible a transit system is, would be to look at the population working or living within $\frac{1}{4}$ mile of a transit route. Six maps have been created to accomplish this and are within Appendix E: Job Densities for North, Central and South Rogue Valley of 2005 and Population Densities for North, Central and South Rogue Valley of 2005. Inspection of the job and population density maps indicates locations of clusters that are not currently

served by transit routes. A location is considered “served” if it is within ¼ mile of a fixed route.

Transportation Demand Management

RVTD houses the region’s Transportation Demand Management program whose mission is to minimize private automobile travel to improve air quality, decrease congestion, improve health and mobility and enhance community. TDM is implemented in various forms from education and outreach to facility design and location. For the purposes of this chapter, in context with land use, TDM provides facility design that is compatible with transit access and convenience.

Several municipal codes exist at the city and county levels to support TDM design. However, the codes need to be enforced for the impact of TDM design to be realized. An example TDM code is to site buildings that are along transit routes closest to the street. This provides better access for pedestrians entering this building from a bus stop and creates a more aesthetically pleasing area to walk, thereby encouraging pedestrian trips. TDM assists in creating direct pedestrian and cycling facilities and can improve the livability and safety of a street by implementing traffic calming techniques. There are several locations that may not receive transit service where TDM still can improve travel for alternate modes. The majority of RVTD’s transit routes serve places with high trip generation and there is a common element seen at each of these: parking.

Parking is a finite resource for many business owners. The more limited the parking, the more important managing that resource becomes. Expanding parking is usually very expensive, making parking management a far more economical option. Free parking is the single most powerful incentive for an

employee to drive to work alone. Parking, of course, is never free. It is being paid for by either the employees, often indirectly, or the employer.

Business owners can choose to manage parking demand in the following ways:

- Encourage employees to use alternatives to driving solo.
- Shift work hours and work arrangements to ease demand.
- Use pricing to discourage employee parking.
- Employers might provide preferential parking for carpools and vanpools, and facilities that support bicycle commuting. Employers may also allow flexible schedules and telecommuting for their employees.

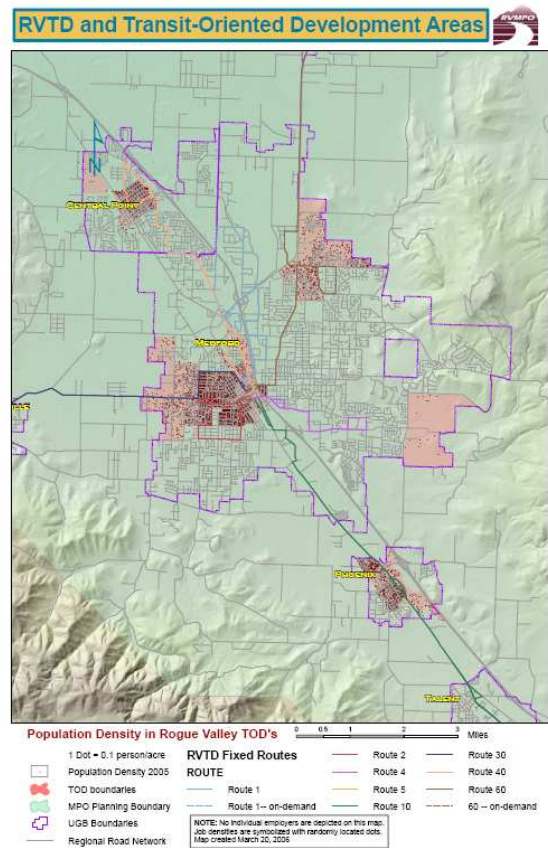
Transit Oriented Development

The basic elements of Transit Oriented Developments (TOD) include mixed-use development centered around public spaces featuring transit facilities and high frequency service. TOD's are intended to be very pedestrian-friendly, provide a variety of attractive commercial and/or civic destinations, and de-emphasize automobiles as the dominant mode of transportation. Generally, the densest housing is located in or adjacent to the commercial core. These kinds of development standards have been adopted for two of the TODs shown in the Regional Transportation Plan – the rest are either existing traditional downtowns, or are still in the conceptual stage. Besides expected benefits to the transportation system, localities can promote TOD areas for economic development, neighborhood revitalization, and community identity.

Subsequently it is likely that transit will become an increasingly integral part of the fabric of community development.

Although a TOD conjures the expectation that transit service will be provided, several factors need to be in place before a TOD is in all actuality *developed to*

orient people to use transit. A term has been coined recently to describe a growing problem. Transit Adjacent Development or TAD, simply means that a TOD was envisioned but not developed correctly. Creating a TOD is in many ways a science; it cannot be made with half-hearted attempts or negligence of pedestrian amenities. It is because of these factors that RVTD cannot guarantee that transit service will be provided simply because an area has the acronym TOD associated with it. With proper density levels at nearly full occupancy, safe and direct pedestrian and cycling facilities and incentives to use transit (such as charging for parking) RVTD will consider transit service as viable and it will likely be provided.



The map above right shows designated TOD areas throughout the Rogue Valley. Many of these are already served by transit or are planned for service. This map is also in Appendix G.

Transit Access Standards

The fleet of vehicles RVTD manages and operates has its own set of standards for determining where, and sometimes when, a bus can navigate an area. Many larger transit agencies have an entire document dedicated to bus stop design, locations and transit accessibility. This section gives a brief overview of what RVTD staff looks at when determining whether buses can or will travel

in certain areas for new bus routes, temporary detours or bus leases. A comprehensive description of the access standards is provided in Appendix H.

Local coordination: land development, architectural review

RVTD currently receives proposed land developments from each jurisdiction. The RVTD Planning Department coordinates with the Operations Department to look for opportunities to enhance the bus stop facilities along existing routes. When a route is planned for future service, or when a Transportation Oriented Development is being planned, staff requests preservation of right of way for future service when transit service may not be active yet.

Each jurisdiction is slightly different in its land development review and approval process. RVTD staff should become more involved at the first planning level, which is often at the architectural site review meetings. Jurisdictions have also requested more detailed bus stop placement and future plans for transfer stations. If RVTD staff can prepare and submit more details on future transit needs, the jurisdictions could provide more assistance and prepare the developers for this particular condition of their proposed development.

How Cities Can Plan For Transit

Prioritize primary corridor service so that the highest level of transit service is given to the most transit-supportive land uses.

To be a primary corridor, a street must be able to support transit service that is efficient and attractive to potential riders, to the degree of being competitive with the automobile for at least some trips.

The street corridor should ideally feature a mixture of residential, commercial, employment, and institutional destinations so that there is transit demand at all times of day. Development must be especially intense at the ends of primary corridors. Ideally, primary corridors end at nodes of commercial activity or at major institutions such as universities or regional hospitals.

The street corridor must have reached a threshold intensity of development, or be zoned for intense development, so that there are many residents or activities within walking distance of the transit route. For residential areas, an average density of at least seven (7) units per acre within 1/4 mile of the corridor is ideal. Typically, a primary corridor has a mixture of apartments, duplexes, and small-lot single-family homes, with highest densities adjacent to the transit street. Figure 7.3 is a chart from the Urban Land Institute showing the desired land use densities to support a transit route.

Figure 7.2

MINIMUM DENSITIES FOR SUPPORTING TRANSIT				
	Local Bus, Intermediate Service ¹	Local Bus, Frequent Service ²	Light Rail ³	Transit ⁴
Dwelling units per acre	7	15	9	12
Residents per acre	18	38	23	30
Employees per acre	20	75	125+	N.A. ⁵

Since primary corridors are where transit will be used most intensively, they would deserve a higher priority for amenities such as passenger shelters, direct pedestrian access, multi-modal facilities and pedestrian scale street amenities.

RVTD serves a unique geographic area and has challenges that are only intensified by planning and development that is not transit-friendly. With cooperation and coordination among cities and RVTD, the greater Rogue Valley should prioritize where TOD developments and nodal developments occur early

on. This will allow RVTD to become involved in the process and determine whether the location works well within the existing system, or if additional resources would be needed that may prove to be too costly to implement service.

The most important point this chapter has tried to convey is that creating livable communities, and multi-modal communities is a two-way street. RVTD relies on each city to encourage developments that foster non-automobile travel and to disallow developments that are auto-oriented, at least within proximity to transit. Cities rely on RVTD for providing viable transportation to populations that do not have access to an automobile, to relieve congestion and for minimizing the need to provide automobile infrastructure, such as parking. The more cooperation among the cities in providing sidewalks and transit-friendly developments, the better our entire community will be, and the viability for RVTD to provide superb service.