Chapter 4

Financial Analysis

METRO

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4.0. Introduction

In order to evaluate whether the 2020 Preferred System defined in the previous chapter is a viable strategy to address the growth in travel demand in the region, it is necessary to analyze transportation revenues and the costs of providing that 2020 Preferred System.

This chapter is organized as follows:

Revenue Sources and Forecast: This section defines existing sources of revenues available for transportation and forecasts the amount of revenue they will produce during the planning period of the years 2000 through 2020.

Projected Costs of the 2020 Preferred System: This section defines several cost categories for constructing, operating and maintaining the Preferred Transportation System and estimates the costs of these categories through the year 2020.

Assignment of Revenues to Costs and Funding Shortfall for the Preferred System: This section compares the revenues available to the costs of providing and maintaining the Preferred Transportation System and defines the revenue shortfalls for the several categories of transportation costs;

Potential New Revenue Sources: This section describes potential revenue options that could be created to provide new revenues for transportation needs that currently have no identified source of funding.

Conclusions: This section summarizes the issues associated with funding the 2020 Preferred System.

4.1 Revenue Sources and Forecast

4.1.1 Traditional Sources

Federal

Highway Trust Fund. For road-related projects, Congress provides these revenues to the Metro region through the Federal Highway Administration (FHWA) to the Oregon Department of Transportation (ODOT) and then to Metro and the local cities and counties. For transit related projects, Congress provides these revenues to the Metro region through the Federal Transit Administration (FTA) to TriMet, South Metropolitan Area Rapid Transit (SMART, providing transit in the Wilsonville area) and Metro.

Metro allocates the spending of these revenues by transportation agencies and local jurisdictions for projects in this region. The original source of these monies is primarily the federal gas tax and various truck taxes. Allocation and distribution of federal funds, other than routine maintenance, are

accounted for in the Metropolitan Transportation Improvement Program (MTIP). Refer to Section 6.5 in Chapter 6 for more discussion on the MTIP. Some of these revenues are limited by FHWA to a particular purpose, such as highway bridge replacement and rehabilitation. Most of the funds, however, are flexible in that they can be spent on roads, bikeways, sidewalks, transit capital, transportation system management (TSM) and transportation demand management (TDM)/air quality programs.

Metro estimates approximately $934 million of federal trust fund money to be allocated directly to the Metro region during the years 2000 through 2020. This includes:

- $308 million of Regional Surface Transportation Program (STP) funds. These funds may be used for virtually any transportation purpose short of building local residential streets.

- $185 million of Congestion Mitigation/Air Quality (CMAQ) funds. The purpose of CMAQ funds are to assist urban areas to achieve or maintain air quality standards for ground-level ozone and carbon monoxide. Typically, CMAQ funds support alternative mode and demand management programs.

- $94 million of bridge funds. The highway bridge replacement funding program was established to repair or replace bridges that have structural deficiencies and physical deterioration.

- $29 million of enhancement funds. Enhancement funds is limited to a list of 10 eligible activities relating to alternative modes to the single occupant vehicle, preservation of right-of-way, historic preservation, and environmental mitigation for transportation projects.

- $29 million of safety funds. The hazard elimination system program funds safety improvement projects that cost less than $500,000.

- $230 million of demonstration funds. These funds are for specific projects designated by Congress to receive funds.

- $59 million of Borders and Corridors funding. This represents a new category of federal funding for the purpose of funding projects vital to economic trade. Projects identified as part of the I-5 Trade Corridor Study could be eligible for these funds.

Additionally, the Oregon Department of Transportation will use federal trust fund money for transportation projects in the Metro region. At this time, ODOT limits the spending of these monies to road preservation and safety projects.

Transit Formula Funds. These funds are primarily for transit capital purchases such as buses and transit maintenance facilities. As the local transit providers, TriMet and SMART propose and Metro approves requests to the U.S. Department of Transportation for use of these monies. Approximately $642 million in federal transit formula funds is estimated to be available to the Metro region during the years 2000 through 2020. These funds will be used to maintain TriMet's current fleet and operations. Capital expenses related to expansion of transit service needs to be funded from other sources.

Transit Discretionary Funds. These funds are for major new transit capital projects. In this region, these funds have primarily been used to provide the federal portion of capital cost construction of the light rail system. Other eligible uses include bus purchases, bus rapid transit and system capital improvements. As the regional transportation planning agency, Metro determines which large transit capital projects will be given priority in the region to receive these funds. Once the priority has been determined, TriMet applies to the Federal Transit Administration for transit discretionary funds to build the project. Based on the region's past success in acquiring these funds, it is estimated the region will continue to secure transit discretionary funds and could receive approximately $227 million of transit discretionary funds for projects exclusive of light rail during the 20-year plan period.

Additionally, if the region can provide matching funds and comply with federal planning and environmental requirements, transit discretionary funds could be provided to the region in the following amounts for the following light rail projects that are included in the 2020 Preferred System:

- $257.5 million for Interstate Avenue light rail
- $500 million for South light rail (to Clackamas town center)
- $150 million for Interstate Avenue light rail extension to Clark County
- $75 million for South Corridor bus capital projects
- $25 million for commuter rail between Wilsonville and Beaverton
- $100 million to begin a light rail extension to Oregon City

These revenues would only be available to the region if the specific light rail projects are built; the revenues are not transferable to other uses.

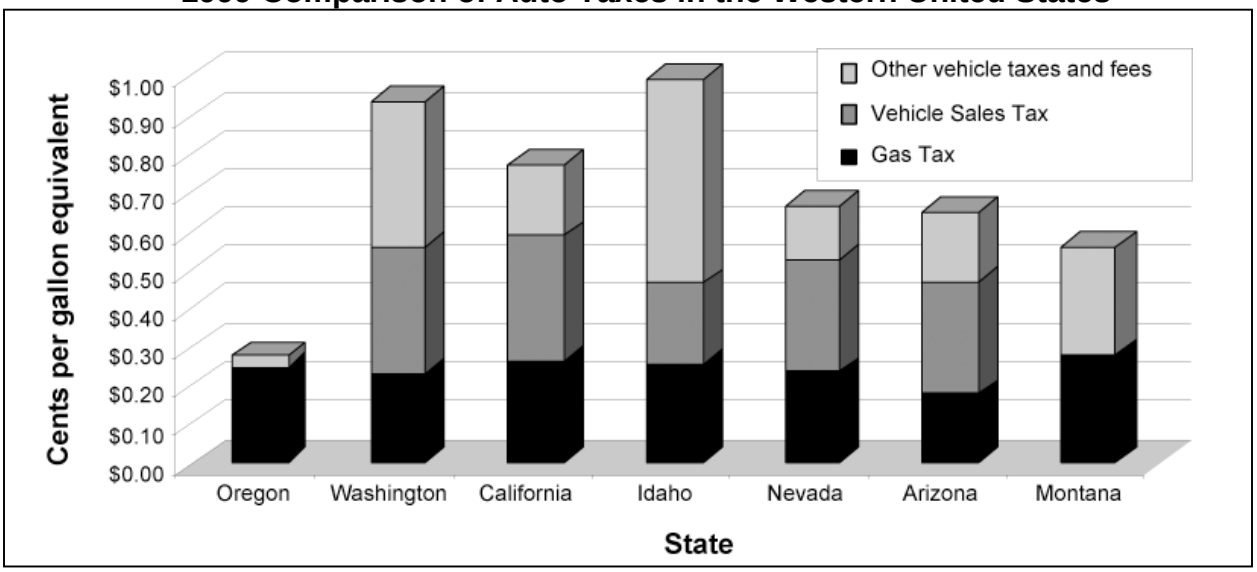
Federal Forest Receipts. Forest receipts are revenues sent to counties by the federal government based on the amount of forest logging revenues realized on federal forest land within a county. Counties have historically used these revenues for transportation projects and maintenance. Clackamas and Multnomah counties are expected to receive $17.8 million in federal forest receipts during the 20-year plan period.

State

State revenues for transportation projects are distributed by the Oregon Transportation Commission, in accordance with state statutes, from the State Highway Trust Fund. The fund derives its revenues from the statewide gas tax, vehicle registration fee and truck weight/mile tax. Use of trust fund monies is limited to road and bridge construction, maintenance and preservation of the existing transportation system.

Figure 4.1

1999 Comparison of Auto Taxes in the Western United States[1]



[1] Although Figure 4.1 does not factor in the Washington voter-approved rollback of transportation taxes in 1999, motor vehicle related taxes are still significantly higher in Washington than in Oregon.

Source: Metro

Oregon has the lowest combined motor vehicle tax structure in the western United States. After collection costs, approximately 8 percent of the trust fund is dedicated to highway modernization. This amounts to about $53 million in the year 2000, increasing to $65 million in the year 2000. Of that money, approximately $12.7 million will be spent by ODOT for modernization in the Metro region, increasing to $15.8 million in the year 2020.

Of the remaining monies, approximately 60 percent of the State highway trust fund revenues are distributed to ODOT. Oregon counties receive approximately 24 percent of the trust fund revenues and Oregon cities approximately 16 percent. Of the state highway trust funds distributed to ODOT, the department generally allocates about 24 percent of that money to the Metro region. This amounts to an estimated $135 million in the year 2000, increasing to $165 million by the year 2020.

As prescribed by state statute, the Oregon Transportation Commission distributes the state highway trust fund money to Oregon cities and counties. Generally, trust fund money is distributed to counties based on the number of vehicles registered in that county. The metropolitan portion of Clackamas, Multnomah and Washington counties currently accounts for approximately 37 percent of all state trust fund revenues distributed to Oregon counties. The distribution of state trust fund money to Oregon cities is based on population. Cities in the Metro area currently receive approximately 47 percent of all state trust fund monies distributed.

Local

Many of the cities and counties in the metropolitan region provide other sources of revenue to operation, maintenance and preservation (OMP) and new construction to the regional transportation system. The amount of revenue applied to the system is controlled by each jurisdiction and is spent within their boundaries. Based on historical trends and expected future growth, Metro has forecast how much revenue is expected to support the regionally significant transportation system from the following local revenue sources.

Local Portion of State Highway Trust Fund. As noted, 40 percent of state trust fund revenues are distributed to the cities and counties of Oregon. Based on historical trends, $104 million of state trust fund money is expected to be available to the cities and counties of the metropolitan region in the year 2000, increasing to $126 million by the year 2020.

Local Gas Tax. Multnomah County levies a 3 cents per gallon gas tax and Washington County levies a 1 cent per gallon gas tax. Both counties share these revenues with the cities within their boundaries. These revenues may be used for road maintenance and road expansion. Approximately $9.3 million of local gas tax revenue is expected in the year 2000, increasing to $11.3 million in the year 2020.

Payroll Tax. TriMet levies a payroll tax of .6176 percent to all employers in its district, estimated to generate $147 million in the year 2000 and $509 million by the year 2020. TriMet's payroll rate is limited to the current rate by state statute. Raising TriMet's payroll rate would require action by the state legislature. SMART is funded through a .3 percent payroll tax in the Wilsonville area, estimated to generate $1.7 million in the year 2000 and $3.9 million by the year 2020. This revenue is used to support operations and maintenance of the transit systems. Growth of the regions employment is expected to support approximately a 1.5 percent annual increase in service hours of the transit system.

TriMet Passenger Fares and Other Revenues. TriMet passenger fare revenues also support operation of the transit system and, if the Preferred Transit system is implemented, expected to generate approximately $54 million in the year 2000 and $167.5 million by the year 2020. SMART is a fareless transit system.

4.1.2 Development-Based Sources

Development-based sources of transportation funding are fees collected by local jurisdictions based on the development or use of land. These fees provide funding for transportation and other public improvements as deemed appropriate by the local jurisdiction that collects the fees and allocates the revenue. In some cases, the projects receiving these funds are transportation projects of regional significance and therefore a portion of these revenues estimated to be spent on regional projects is estimated based on historical trends and included in this forecast. These include:

- transportation system development charges levied on new development, estimated to provide $89.5 million during the planning period,

- traffic impact fees on commercial properties, estimated to provide $218.1 million for projects of regional significance during the planning period, and

- urban renewal funding, estimated to provide $129.8 million for projects of regional significance during the planning period.

These revenues are collected by the cities and counties in the region for use within their jurisdictions. These revenues are generally limited to providing transportation projects to serve the new development on the assessed properties.

4.1.3 Special Funds and Levies

A final source of transportation funding for the Metro region is special funds and levies. This category includes:

- Property taxes such as the Washington County's Major Streets Transportation Improvement Program (MSTIP), which are approved by popular election and expected to generate $242.2 million during the 20-year plan period.

- Local improvement districts (LIDs), such as the Lloyd District in the City of Portland, where a group of commercial property owners agree to provide money, in addition to their regular taxes, for public improvements and services (including transportation projects) within the district. In the Portland Central Business District, a local improvement district will contribute to construction of the Portland Streetcar project.

- Vehicle parking fee revenues from the City of Portland public parking garages and meters. These revenues will contribute to construction of the Portland Streetcar project.

- Port of Portland transportation improvement fund revenues, which are expected to provide $138 million during the 20-year plan period. These revenues are derived from passenger facility charges, parking revenues and lease revenues, and are limited to fund projects or services on Port property. Investment of these revenues is guided by the Port of Portland Transportation Improvement Plan (1999) and approval by the Port Commission. These revenues are expected to leverage $42 million of private investment in transportation projects, particularly from freight railroad companies.

4.2 Projected Costs of the 2020 Preferred System

4.2.1 Highway and Road-Related Costs

State highway operations, maintenance and preservation costs

ODOT had estimated operations, maintenance and preservation (OMP) costs at $135 million in the year 2000, increasing to $199 million in the year 2010 to achieve 90 percent of state highways in fair or better condition with the Metro area by the year 2010. This does not include costs for a safety or access management program. As the use of highways continues to increase and inflation impacts the

ability to provide services, OMP costs for state highways are expected to increase to $270 million per year by the year 2020.

State highway capital costs

Construction of new or improved state highway facilities in the 2020 Preferred System, including projects such as the Sunrise Corridor, the I-5 to 99W connector, US 26 and the I-5/Highway 217/Kruse Way interchange, is expected to cost $2.29 billion (1998$).

Regional road operations, maintenance and preservation costs

Based upon information provided by cities and counties, Metro has estimated that to achieve 90 percent of the roads in the Metro region in fair or better condition by the year 2020, annual operations, maintenance and preservation (OMP) cost is expected to be $180 million in the year 2000. This cost is expected to increase to $365 million per year in the year 2020. To keep roads at their existing level of repair and not increase the size of the backlog of deficient pavement is expected to cost $122 million per year in the year 2000, increasing to $248 million in the year 2020.

Regional road-related capital costs

Construction and improvement of city and county owned regional road facilities in the 2020 Preferred System is expected to cost $2.85 billion (1998$). This includes all projects that expand road capacity and/or improves right-of-way for freight, vehicles, bicycles and pedestrians, and programs such as the regional transportation demand management (TDM) program and the regional transit oriented development (TOD) program.

4.2.2 Transit-Related Costs

Transit operations and maintenance

Implementation of the 2020 Preferred System is expected to occur incrementally during the plan period leading to full implementation by the year 2020. Increasing TriMet and SMART service by 4.5 percent each year would fully implement the 2020 Preferred System by the year 2020. Annual operating costs of the 2020 Preferred System are expected to be $254 million in the year 2000 and $899 million in the year 2020, accounting for the approximately doubling of cost due to inflation and a doubling of the amount of transit service provided.

Transit capital

Capital costs for transit include construction of light rail, commuter rail and streetcar rail systems, acquisition of additional buses and expanded maintenance facilities, right-of-way improvements such as bus shelters, bypass lanes and signals and new or upgraded transit centers and park-and-ride lots. Total transit capital costs for implementation of the 2020 Preferred System is expected to be $4.3 billion in 1998 dollars.

4.3 Assignment of Revenues to Costs and Funding Shortfall for the Preferred System

4.3.1 Highway and Road-Related Revenue Shortfall

State Highway Operations, Maintenance and Preservation. The 1999 Oregon Highway Plan describes the Oregon Department of Transportation policy on funding priorities for Oregon highways.[1] This policy describes a progression of four funding levels that range from current funding levels to a significant increase in funding availability.

For the purpose of developing this financial plan, however, it is assumed that all operations, maintenance and preservation of the road network are a priority to receive road-related revenues prior to expansion of the existing road system. Properly maintaining and preserving roads ensures that more costly road reconstruction of inadequately maintained roads is not necessary at a later date. Therefore, only revenues in excess of road OMP needs and revenue sources specifically dedicated to highway modernization and expansion have been assumed to be available for road capital costs. In addition, State Highway Trust Fund revenues distributed to ODOT have been assigned to state highway OMP costs, with any remaining revenues above defined OMP needs assigned to state highway capital costs.

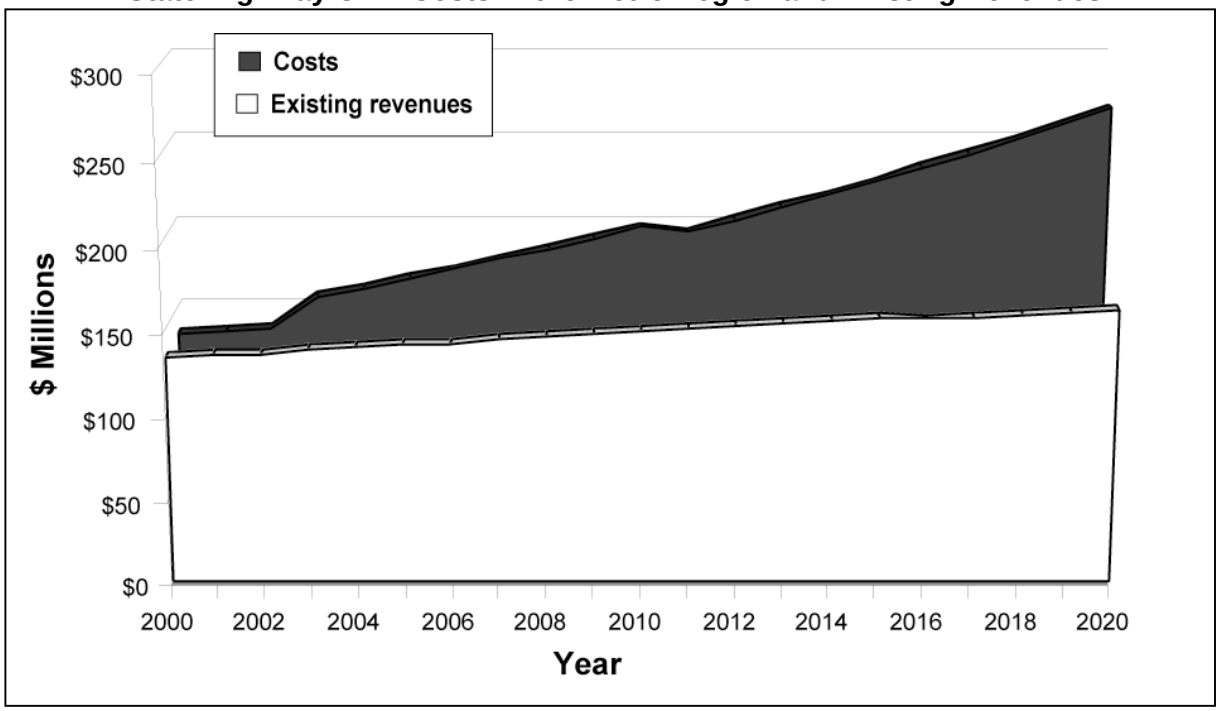
Assuming this allocation scenario, ODOT will spend an estimated $135 million on highway OMP in the year 2000, increasing to $163 million in the year 2020 and operations, maintenance and preservation of the state highway system is expected to be fully funded in the metropolitan area through the year 2002. After 2002 a combination of inflation, increased road use and an increased percentage of highways and bridges reaching their design-life to require major rehabilitation creates a shortfall of revenue available for needed OMP costs. This shortfall ranges from $8 million in the year 2003 to $107 million in the year 2020.

It is expected that at current funding levels, all state trust fund monies after the year 2002 that are not legally dedicated to road modernization would have to be used for highway OMP purposes. This amount of funding would still fall short of money needed to adequately maintain the state highway system in the metropolitan area. As such, a backlog of maintenance needs will develop and, if not addressed, lead to more expensive reconstruction of these highways. Figure 4.2 shows the growing gap between state highway operations, maintenance and preservation costs and existing revenues.

[1] Oregon Highway Plan, pages 5-2.

Figure 4.2

State Highway OMP Costs in the Metro Region and Existing Revenues



Source: Metro

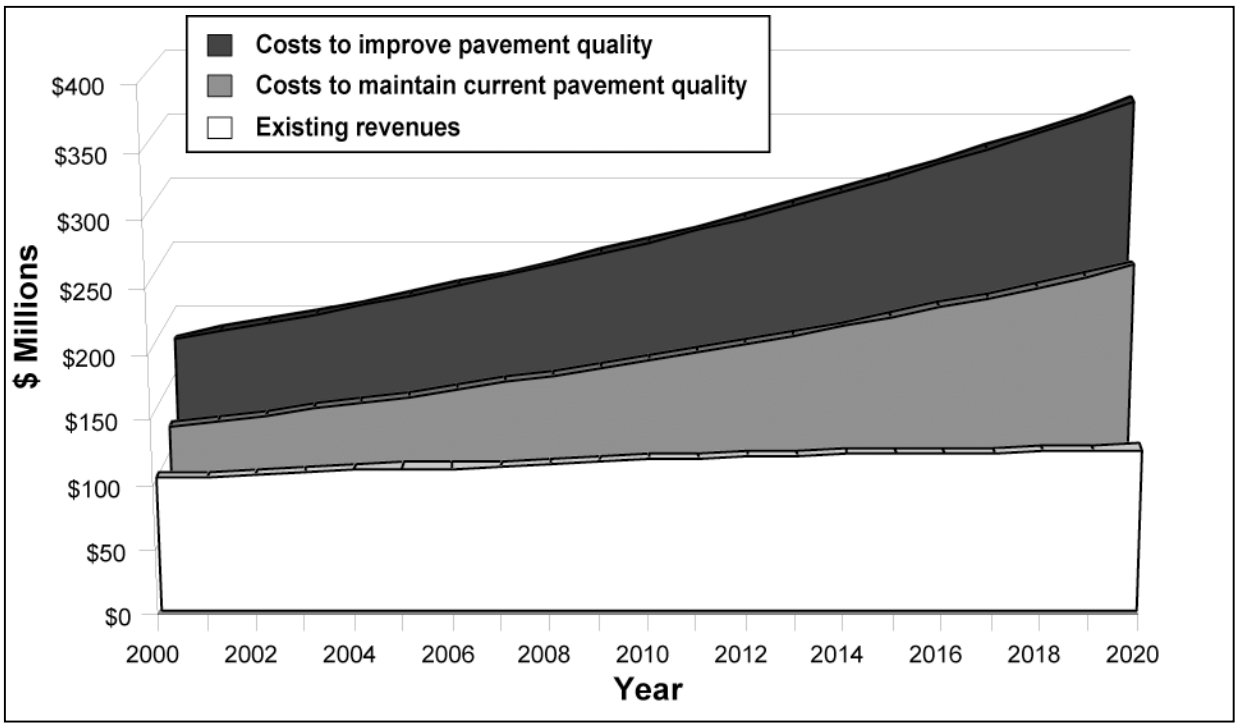
State Highway Modernization and Expansion. New construction of state highways and freeways in the 2020 Preferred System is expected to cost $2.11 billion (1998$). Approximately $359 million dollars is expected to be available for modernization and expansion of state highways in the metropolitan area during the 20-year plan period. This results in a shortfall of $1.93 billion of revenues to build the 2020 Preferred state highway system. See Figure 4.5 for a comparison between 2020 Preferred System state highway capital costs and existing revenues.

Regional Road Operations, Maintenance and Preservation (OMP). Based on the need to address OMP costs of local roads in the Metro area and the historical spending of these revenues towards OMP costs, State Highway Trust Fund revenues that are distributed to cities and counties are expected to continue to pay for regional road OMP costs. All local gas tax revenues from Multnomah and Washington counties and some City of Portland parking revenues have also been assigned to regional road OMP costs.

With these revenues, a shortfall of $18.6 million is expected in the year 2000 to maintain local roads at current pavement condition (77 percent in fair or better condition). This shortfall is expected to grow to $121.8 million by the year 2020. To address the backlog of maintenance and preservation needs and achieve a pavement standard of 90 percent of roads in fair or better condition by the year 2020, the region is expected to need an additional $76.6 million in the year 2000, growing to an additional $239.5 million by the year 2020. Figure 4.3 shows the growing gap between regional road-related operations, maintenance and preservation costs and projected revenues.

Figure 4.3

Regional Road OM&P Costs and Existing Revenues



Source: Metro

Regional Road Modernization and Expansion. New construction of regional roads and bridges in the 2020 Preferred System is expected to cost $2.85 billion ($1998). Local development based sources and special funds and levies dedicated to road projects have been assigned to regional road capital costs.

Between these revenues and the local portion of state highway trust fund money, there is expected to be approximately $966 million dollars available for modernization and expansion of regional roads and bridges during the course of the 20-year plan period. This results in a shortfall of $1.88 billion of revenues to construct regional road system projects included in the 2020 Preferred System. See Figure 4.5 for a comparison between the 2020 Preferred System road-related capital costs and existing revenues.

4.3.2 Transit-Related Revenue Shortfall

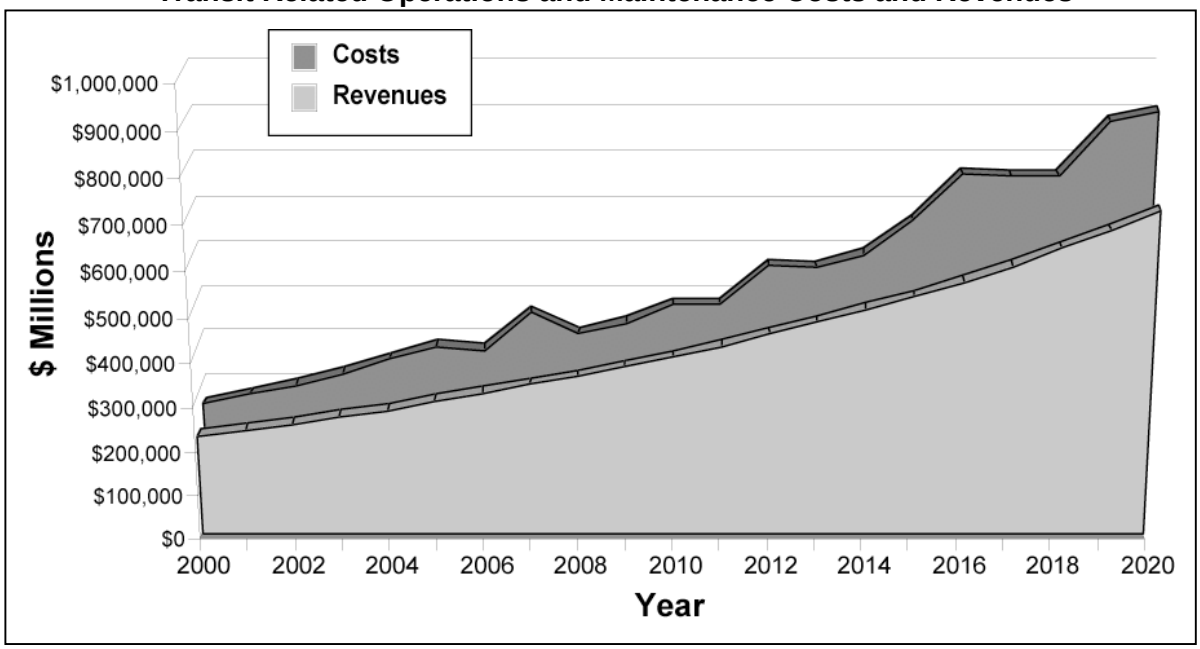
Operations and Maintenance
All payroll tax revenues and passenger fares revenues are used for transit operations and maintenance costs. Transit formula funds that would be used to replace existing buses and facilities have also been assigned to cover these operations and maintenance costs.

Even with expected payroll tax, passenger fare and transit formula fund revenues, funding operations and maintenance of the preferred transit system is expected to require an additional $31.7

million in the year 2000. In the year 2020, the projected revenue shortfall is expected to be $185.7 million.

Figure 4.4

2020 Preferred System
Transit Related Operations and Maintenance Costs and Revenues



Source: Metro

Capital
All federal transit discretionary and all transit formula funds for buses and facilities that would provide new transit service have been assigned to transit capital costs. There are also assumptions of federal trust fund money to the Interstate light rail transit project. Port of Portland, city of Portland, TriMet and private funds have been assumed to fund the light rail transit extension to Portland International Airport. Finally, some Portland parking and local improvement district revenues have been assigned to fund construction of the Portland streetcar project and City of Portland urban renewal district funds have been assigned to fund the construction of the Interstate Avenue light rail project.

With transit capital costs of $4.30 billion dollars ($1998) and expected revenues for transit capital of $1.46 billion (federal discretionary funds and local funds) there is an expected $2.94 billion shortfall of revenue needed for capital costs of the preferred transit system.

See Figure 4.5 for a comparison between the capital costs of building the 2020 Preferred transit system and projected revenues available to build the system.

4.3.3 Flexible Revenues

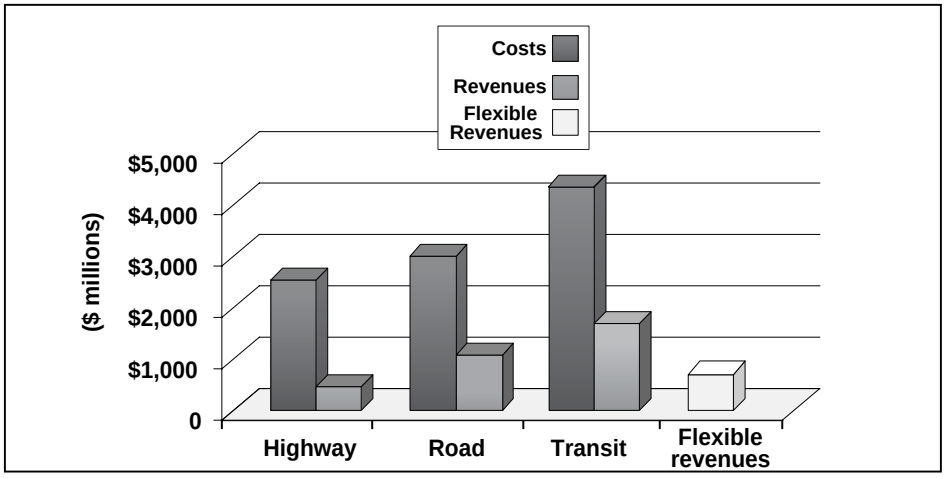
There are several sources of funds that could generally be applied to any of the categories of revenue shortfalls. These include Regional STP funds ($308 million), congestion management and air quality (CMAQ) funds ($185 million), enhancement funds ($29 million), federal forest receipts ($17.8 million) and local urban renewal funds ($130 million). These revenues total $658 million.

These revenues could not be spent on any project in the 2020 Preferred System, but could only be applied to projects that meet the criteria of the particular funding source. However, each category of funding (highway, road, and transit capital and O&M) contains projects that would be eligible for these revenues. See descriptions of these funding sources in Section 4.1 for an explanation of projects that could qualify for funding.

Figure 4.5 demonstrates how these revenue sources compare to the funding shortfalls for state highway, regional roads and transit capital costs. The MTIP process, described in Section 6.5 in Chapter 6, will determine which projects become eligible for the Regional STP, CMAQ and enhancement funds. The jurisdiction within which an urban renewal district is located will determine which projects will get funded with urban renewal funds.

Figure 4.5

2020 Preferred System
Highway, Road and Transit Capital Costs and Revenues



See Section 4.1 for a description of spending restrictions of the flexible revenue sources.

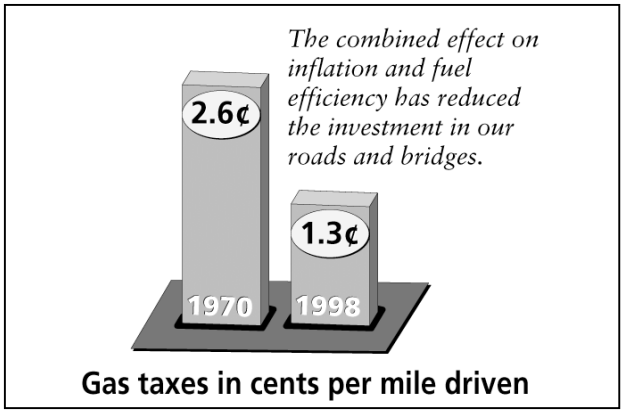
Source: Metro

4.4 Conclusion

The preceding financial analysis identifies a large funding gap in every category of costs to implement the 2020 Preferred System. In addition, the combined effect of inflation and fuel efficiency has reduced the investment in the region's roads and bridges, as shown in Figure 4.6.
This demonstrates the need to raise additional revenues to fund the region's transportation system needs.

Figure 4.6

Inflation and Fuel Efficiency



Source: Metro

While operations, maintenance and preservation costs are drastically under-funded in the long-term, the short -term gap in funding could be addressed with moderate amounts of additional revenues to keep highways and roads at current pavement conditions. Addressing the backlog of maintenance needs and improving pavement conditions will require more substantial amounts of additional revenue.

Capital costs for modernization and expansion of the highway and regional road system are more severely under-funded. Additional revenue sources and innovative financing methods will be needed to provide additional modernization of the highway system. The regional road system will also require additional revenues; approximately ten times the existing resources currently dedicated to road modernization and expansion. Flexible revenue sources could be applied to either the road or highway capital funding needs, but even if all of the flexible resources were applied to either category, the needs of either category would not be fully funded.

Operation and maintenance of the 2020 Preferred transit system would be 14 percent under-funded in the year 2000, growing to 25 percent under-funded by the year 2020. An additional revenue source that begins to close this funding gap and provides additional stability to funding revenues would be desirable.

Transit capital costs of the 2020 Preferred System are expected to be only 25 percent funded with existing revenue sources. A large portion of the expected revenue sources would only be made available for a few specific light rail projects that also require local match funding, potentially limiting revenues available to other capital projects unless new revenue sources are created.

As an alternative to finding new sources of revenue to fully fund the 2020 Preferred System, Chapter 5 of this plan will identify a transportation system, referred to as the 2020 Priority System that is less expensive than the 2020 Preferred System. This system would still provide the most critical transportation projects and programs needed to adequately address the impacts of future growth on

our regional transportation system. Section 5.4 will identify several strategies for policy makers to consider for generating additional transportation revenues to fund the 2020 Priority System.