M E M O R A N D U M

METRO

To: JPACT / Metro Council

From: Andy Cotugno

Re: Region 2040 Reserve Allocation- Next Steps Date

Date: May 30, 1995

With adoption of Resolution No. 95-2139A (attached), we are proceeding with a second phase of the evaluation process to conclude this funding allocation. The schedule and process proposed by TPAC is reflected on the attached sheet. Of particular note are the following activities:

1. Based upon comments from TPAC and JPACT, Metro staff will be reviewing the technical ranking for the projects on the "short list" to ensure these projects are properly ranked, to identify any administrative criteria that may apply and to provide any supplementary information about these projects that may be relevant. In addition, we will be determining whether a "phase" of one of these projects is viable and will rank these phases separately.

2. Based upon comments made at JPACT, Metro has solicited information from each project applicant regarding their jurisdictions efforts to help implement the 2040 Growth Concept. This will be compiled and provided as supplementary information to consider in the final allocation process.

3. It is recommended that TPAC set a target range for the allocation of these funds by modal category and geographic area prior to finalizing a project specific allocation (June 16 on the attached schedule). This is treated as a technical step in the process to assist staff in developing a project specific funding recommendation. The final funding allocation to projects is subject to approval by JPACT and the Metro Council. As such, the final project allocation is not limited by the target ranges set by TPAC. Although the attached schedule is recommended by TPAC, an alternate schedule could have JPACT setting the target ranges recommended by TPAC, adding another month to the process. Another alternative would be to direct that TPAC not pre-establish ranges for modal categories and/or geographic areas.

4. It is recommended that there be a joint JPACT/Metro Council public hearing on the ODOT/Metro staff recommended funding allocations on June 28, prior to consideration of adoption by any of the appropriate committee's (ie. TPAC, JPACT, Metro Council Transportation Committee, Metro Council). This will allow for comments raised at the public hearing to be addressed prior to adoption.

Feedback on these matters is requested.

DRAFT

Region 2040 Reserve Allocation Process

May 25-June 8: Metro staff update technical ranking and phasing of short list projects

May 30: Metro staff request information from project sponsors regarding efforts to implement Region 2040 Growth Concept

May 31-June 8: Project sponsors respond to request for information regarding efforts to implement the Region 2040 Growth Concept

June 6: Status report to Metro Council Transportation Committee; review proposed process

June 8: Status report to JPACT; review proposed process

June 9: TPAC review and finalize technical ranking; review 2040 implementation efforts; Metro/ODOT staff submit conceptual framework for setting target ranges for consideration on June 16

June 16: TPAC set a target range for modal and geographic mix of funding allocations taking into consideration Region 2040 relationship, measures of geographic equity and jurisdictional responsibility and application of administrative criteria

June 21: Release ODOT/Metro Council staff recommendation for Public Hearing

June 28: Joint JPACT/Metro Council Public Hearing on staff recommendation

June 30: TPAC finalize allocation recommendation to JPACT

July 13: JPACT finalize allocation recommendation to Metro Council

July 27: Metro Council adopt final allocation Resolution

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF AMENDING THE FY 1995 METRO TRANSPORTATION IMPROVEMENT PROGRAM TO ALLOCATE $1.026 MILLION TO VARIOUS PLANNING ACTIVITIES AND TO SET PRIORITIES FOR THE REGION 2040 RESERVE	RESOLUTION NO. 95-2139A Introduced by Rod Monroe, Chair JPACT

WHEREAS, Metro and ODOT jointly agreed to creation of a $27.19 million Region 2040 and Alternative Mode Reserve account during the last update of the Metro and ODOT Transportation Improvement Programs (MTIP and STIP) funded with both regional and state STP reserve funds; and

WHEREAS, Metro and ODOT have identified $4.2 million of miscellaneous additional transportation funds, including some program funds never allocated to specific projects and some project funds never obligated; and

WHEREAS, Metro solicited its regional partners for bicycle, pedestrian, freight, transit, road expansion and preservation, transportation demand management, and transit-oriented development project nominations selected from previously approved local plans and programs that reflect support of the Region 2040 Land Use goals and objectives approved by Metro Council in December 1994; and

WHEREAS, Approximately $150 million of such project nominations were received; and

WHEREAS, Metro staff applied technical and administrative multi-modal ranking criteria to prioritize these nominated projects; and

WHEREAS, Metro sponsored a widely advertised Transportation

Fair in January and four widely advertised public meetings held throughout the region in April and has held numerous advertised meetings of TPAC, JPACT and the Metro Council inbetween during which these funds, the project nominations and the ranking process have been discussed and been the subject of public testimony; now, therefore,

BE IT RESOLVED:

1. That the FY 1995 Metro TIP be amended to allocate $1.026 million to the list of projects identified in Exhibit A.

2. That the list of projects totaling approximately $48.4 million dollars identified in Exhibit B be further considered as the basis of a final recommendation for allocation of the remaining $26.16 million of Region 2040 Implementation Program funds.

3. That the $3.2 million MACS Reserve is hereby committed to implement the Highway 43 MACS Corridor Study.

ADOPTED by the Metro Council this ____ day of _____, 1995.

_____
J. Ruth McFarland, Presiding Officer

95-2139A.RES
5-19-95
TW:lmk

EXHIBIT A

REGION 2040 RESERVE ALLOCATION

(Funds To Support Metro FY 96 Planning Program)

Planning	
Metro ISTEA/Rule 12 Planning	$525,000
Commodity Flow	$170,000
Local Technical Assistance	$75,000
Westside Station Area Planning	$209,000
I-5/Hwy 217 Study	$50,000
TOTAL 2040 RESERVE ALLOCATED	**$1,029,000**
REGION 2040 RESERVE	**$27,190,000**
BALANCE	**$26,161,000**

EXHIBIT

REGION 2040 RESERVE ALLOCATION - SHORT LIST
(Excludes funds allocated to Metro FY 96 Planning Program)

Rank of 48	PROJECTS		SUMMARY OF ADMINISTRATIVE CONSIDERATIONS
	Roadway Projects		
1	Sunnyside Rd.	$5,000,000	Phasing potential not yet assessed
2	Murray Signal Interconnect	$31,000	
3	238th/Halsey —	$376,531	
4	99W/Tualatin Rd.	$4,486,000	Phasing potential not yet assessed
6	Scholls Ferry Signal Interconnect	$31,000	
7	I-5 SB/Front Ramp Metering	$90,000	
8	Greenburg/Mapleleaf	$358,900	
9	Murray N. Signal Interconnect	$9,000	
10	Hwy. 43/Willamette Falls	$115,500	JPACT approved removal from 2040 allocation process; eligible for new $3.2 M earmark for OR 43 MACS projects.
11	***Johnson Crk. Blvd Phase II***	**$1,272,301**	Add-back by request; potential overmatch from FAU funds.
12	Sandy Blvd. Signal Interconnect	$167,000	ATMS arterial corridor priority; projects ranked as package of 5 @ $1 M.
12	Powell Signal Interconnect	$50,000	ATMS arterial corridor priority; projects ranked as package of 5 @ $1 M.
12	TV Highway Signal Interconnect —	$250,000	ATMS arterial corridor priority; projects ranked as package of 5 @ $1 M; multiple jurisdiction benefit
12	***Division Sig Interconnect (60th/SE 257th)*** —	**$186,000**	ATMS arterial corridor priority; projects ranked as package of 5 @ $1 M; multiple jurisdiction benefit
13	***I-5/I-84 Ramp Metering***	**$449,000**	ATMS Program priority; provides infill of existing I-5/I-84 ramp metering
17	**Foster Road: 162nd to Jenne**	**$600,000**	Added by JPACT; original lower ranking was in error; strong public support
24	Hwy. 43 Signal Interconnect	$1,122,000	JPACT approved removal from 2040 allocation process; eligible for new $3.2 M earmark for OR 43 MACS projects.
30	***Water Ave Extension***	**$1,600,000**	
38	Hwy. 43/A Avenue	$406,000	JPACT approved removal from 2040 allocation process; eligible for new $3.2 M earmark for OR 43 MACS projects.
na	Lovejoy Ramp Removal - PE	$1,054,000	Unranked "Planning" project
na	***McLoughlin-Harrison thru Milw. CBD***	**$833,000**	FAU-STP SUPPLEMENT: Unobligated funds currently allocated to hi ranked reg. FAU project.
	REGIONAL 2040 RESERVE TOTAL	$16,010,732	
	FAU-STP	$833,000	
	PROJECTS MOVED TO OR-43 EARMARK	$1,643,500	
	Reconstruction Projects		
1	***Hawthorne Brdg Deck Structure***	**$5,159,200**	Hawthorne Brdg subject to extensive structural weakening; phasing potential under analysis
2	***I-5/Kruse Way Reconstruct***	**$1,200,000**	
4	***SW Front Avenue***	**$2,368,720**	Phasing potential not yet assessed
	REGIONAL 2040 RESERVE TOTAL	$8,727,920	

Bold projects are add-backs to original $27 million staff recommendation

Exhibit B (Page 2)

Rank of 6	Freight Projects		
1	***COP/Port Columbia/N. Lombard OXing (PE***	**$987,000**	Port add-back due to logical relationship to Columbia/Burgard Intersection project planning
3	N. Columbia Blvd./N.Burgard Intersection	$886,000	
4	NE Columbia Blvd. Improvements	$250,000	
5	***Lower Albina OXing (PE)***	**$600,000**	Originally ranked as $4 M construction request
	REGIONAL 2040 RESERVE TOTAL	$2,723,000	

Rank of 6	TDM Projects		
1	Regional TDM Program	$718,000	
2&3	CentralCity/Regional TMA		
	a. CMAQ Unallocated*	$207,000	CMAQ SUPPLEMENT: Reallocated from former Cedar Hills bicycle project CMAQ priority.
	b. Candidate Project Total*	$580,000	Total of nominated Central City/Regional Center TMA projects competing for allocations.
5	Swan Island TMA	$150,000	
	REGIONAL 2040 RESERVE TOTAL	$1,448,000	
	CMAQ	$207,000	

Rank NA	Transit Projects		
	Transit Finance Task Force	$320,000	
5	***Gresham LRT Station***	**$1,500,000**	Tech. score from TOD criteria; 10-year ridership projection higher than all current Gresham stations combined
	REGIONAL 2040 RESERVE TOTAL	$1,820,000	

Rank of 19	Bike Projects		
1	Hawthorne Bridge Bike Lanes	$1,560,000	Cannot be added to super-structure until painting and deck restoration complete.
2	Barbur @ Front Bike Lanes	$1,440,000	Critical link between two completed system legs accessing Downtown to West Hills
3	***Walker Rd Bikeway Improvement***	***$296,000***	
4	***Gateway & Hollywood bike Access***	***$400,000***	Phasing potential not yet assessed
	REGIONAL 2040 RESERVE TOTAL	$3,696,000	

* Programming of any new TMA funds should be coordinated with DEQ's TMA Program currently authorized at $897,250 of CMAQ funding.

Exhibit (Page 3)

Rank of 24	Pedestrian Projects		
1	Pacific Ave. - Forest Grove	$91,000	
2	Hillsdale - Phase I	$520,000	Highest priority/cost of three phases; rank reflects all three phases as single project
3	***Woodstock Blvd***	**$200,000**	
9	A Avenue - Lake Oswego	$8,000	
11	***Cully Blvd Bike & Ped***	**$1,680,000**	
16	***Broadway/Weidler***	**$2,500,000**	
19	***Springwater Corridor (190th Phase)***	**$204,700**	Highest priority of 3 phases; rank reflects 3 phases as single project
	REGIONAL 2040 RESERVE TOTAL	$5,203,700	

Rank of 7	TOD Projects		
1	Metro TOD Program	$4,500,000	Land resale leverages program; agency land ownership leverages public/private development agreements
3	***Mill Ave./Henry St. Connection to LRT***	***$1,740,655***	Added by JPACT; originally ranked as Road Expansion, re-ranked as TOD
4	**Beaverton Creek Master Plan**	**$2,220,544**	Added by JPACT
5	Gresham N/S Collector	$1,844,000	Collector is essential to leverage initial TOD-oriented site development.
8	Hillsboro Ground Floor Retail	$1,000,000	Staff recommended priority reduced if garage retail elements can be phased to market demand
	REGIONAL 2040 RESERVE TOTAL	$11,305,199	

Rank NA	Planning		
	Metro ISTEA/Rule 12 Planning	$525,000	FY 97 program funding only
	Commodity Flow	$220,000	FY 97 program funding only
	Local Technical Assistance	$75,000	FY 97 program funding only
	Westside Station Area Planning	$209,000	FY 97 program funding only
	I-5/Hwy 217 Study	$60,000	
	Clackamette Cove Master Plan	$60,000	
	Cornelius Tualatin Valley Hwy Corridor Stu	**$60,000**	Added by JPACT; eligible for funding if legislature does not renew TGM Grant program
	REGIONAL 2040 RESERVE TOTAL	$1,209,000	

REGIONAL 2040 RESERVE GRAND TOTAL	**$52,143,551**
CMAQ/FAU	**$1,040,000**
GRAND TOTAL	**$53,183,551**

DRAFT

May 25, 1995

Susan Brody
VPACT Chair
Oregon Department of Transportation
405 Transportation Building
Salem, Oregon 97310

Dear Ms. Brody,

Thank you for the opportunity to serve as a member of VPACT, and incorporating many of Metro's comments in the draft Willamette Valley Transportation Strategy. We are pleased with the direction the study has established, and commend you on your effort. In particular, we support your two basic conclusions of, including (1) the need for a Valley Livability Council and (2) valley transportation development and coordination strategies.

Like your study, our Region 2040 project is similarly driven by concerns about the effect of growth on our quality of life. For this reason, we strongly support your project as one that complements what we are attempting to achieve in the Portland area.

In our previous comments, we have emphasized the importance of fully integrating transportation and land use in your study. Although time and resource constraints have limited the land use scope as presented in the draft, we feel it is essential for constituents in the valley to begin to plan for and accommodate the expected growth. We therefore urge you to more fully involve the Department of Land Conservation and Development (DLCD) as the valley planning work continues. In particular, we recommend that DLCD become the lead agency in developing a GIS-based data set that mirrors the land use information used in Region 2040. We would be interested in providing both data and expertise in such an effort.

In addition, we have several specific comments on the public review draft:

1. The last paragraph on page 7 should be expanded to state that the current percentage of urban (non-freeway) highways with bicycle and pedestrian improvements is low, and that much higher levels of bicycle and pedestrian improvements are needed;

2. The last bullet under "General Assumptions" on page 22 is reversed -- the mix of transportation projects and programs should be driven by population and employment growth, where planned;

3. The transit reference under "Mobility" on page 36 should be revised, with "densely populated areas like Portland" replaced with "In urban areas where transit options would improve mobility, such as Portland, Salem or Eugene, transit systems would be improved". This section should also include a reference to pedestrian and bicycle improvements, and specialized markets for van pools or bus pools.

4. The mobility paragraphs under the base, moderate and high commitment scenarios on pages 37-41 should include references to a full range of transportation demand management (TDM) strategies and transit improvements;

5. The mobility measures of cost effectiveness for local transit shown in tables 4 and 5 (pages 40 and 42) should be changed to "most cost effective", reflecting the savings that transit provides, such as reduced auto demand on the roadway system and air quality impacts;

6. The mobility paragraphs under moderate and high commitment scenarios on pages 39 and 41 should include a reference to transit;

7. The moderate and high commitment mobility sections in Table 6 (page 44) should be revised to include transit enhancements beyond those shown in the base case;

8. The mobility sections on page 45 (under the moderate and high scenarios) should discuss transit as more than simply an element of an educational program;

9. Add a bullet to the "Highways/Roadways" section on page 51 which addresses the need to coordinate land use policies and transportation improvements;

10. Add the following as a bullet in the "Freight" section on pages 52-53: "A network of collectors and arterials connected to intermodal freight facilities within MPOs is necessary to an effective, valley-wide freight system.";

11. Add the following bullet to the "Bike and Pedestrian" section on pages 53-54: "A network of bicycle and pedestrian routes serving intermodal passenger terminals within MPOs is necessary for enhancing effective valley-wide transit service.";

12. The discussion of future activities on page 69 should specifically call out the need for a TAC that meets more frequently than VPACT, and formally advises the policy group on technical issues;

13. Item 3e on page 69 should be revised to state that MPOs are the primary decision-making bodies within metropolitan areas, and that VPACT should focus on advising region managers on broader transportation issues that cross regional boundaries.

Finally, as the project moves forward, ODOT should ensure that adequate resources are provided for local jurisdictions to complete their components of the study.

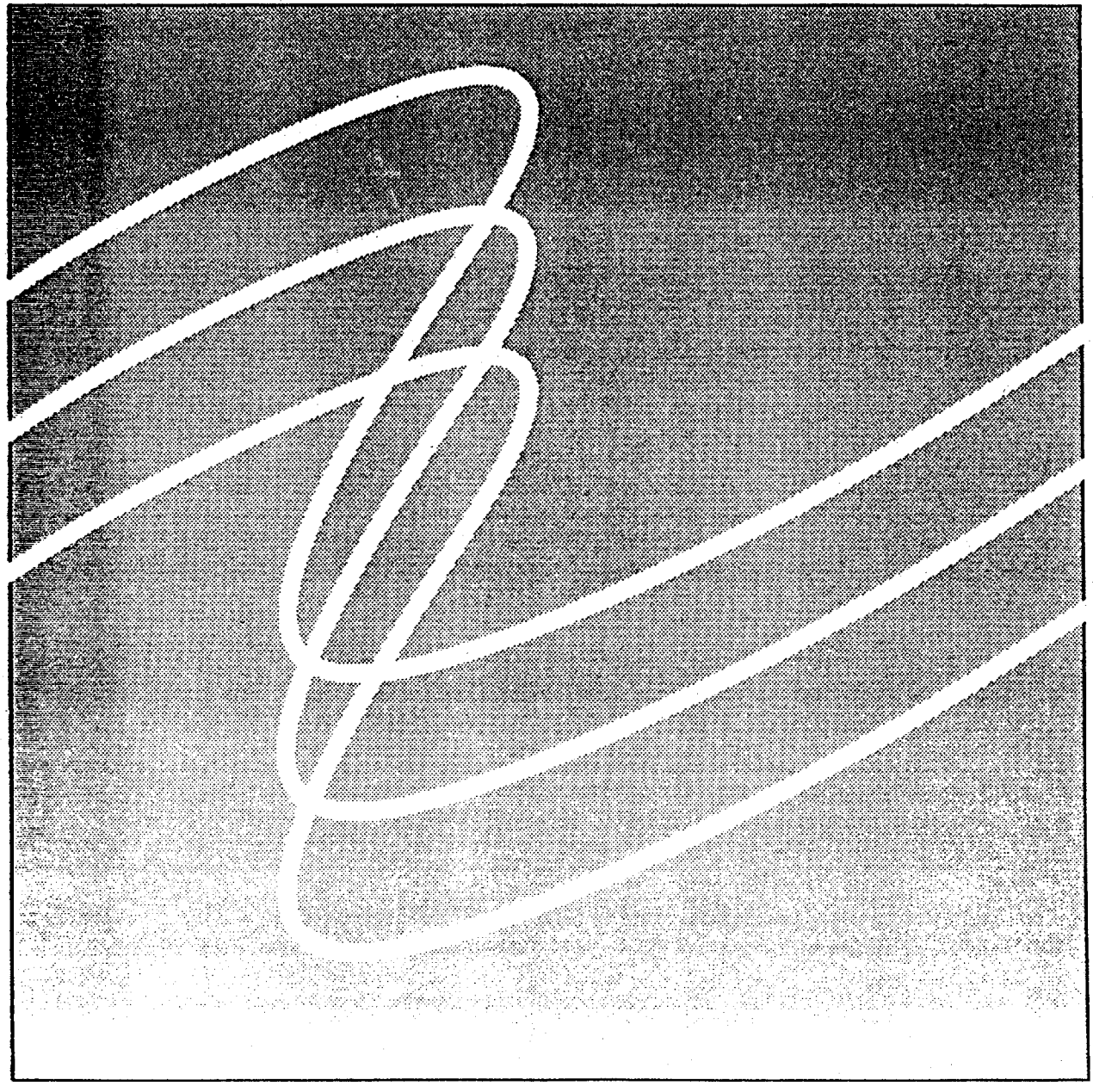
Thank you, again, for the opportunity to participate in this project and considering our comments. We look forward to working with you in the future as valley planning activities continue.

Sincerely,

Councilor Rod Monroe, JPACT Chair

PUBLIC REVIEW DRAFT

WILLAMETTE VALLEY TRANSPORTATION STRATEGY



PHASE ONE REPORT

May 5, 1995

OREGON DEPARTMENT OF TRANSPORTATION

EXECUTIVE SUMMARY

The Willamette Valley Policy Advisory Committee on Transportation (VPACT) was formed by the Oregon Transportation Commission in 1993 to develop a coordinated transportation strategy for the Willamette Valley consistent with the 20-year Oregon Transportation Plan (OTP). One of VPACT's key purposes is to promote an understanding of the extent and significance of the transportation interdependence among communities in the Valley. VPACT's 24 members represent state agencies, metropolitan planning organizations, councils of governments, cities, counties, transit districts, transportation industry, general business and citizens.

The Challenges of Growth

Population Growth - The Valley population is projected to grow by nearly 740,000 people by the year 2012 or the equivalent of six cities the size of Eugene. Population densities will grow from the current 153 people per square mile to 210 people per square mile. Suburban and urban areas will grow rapidly while some rural areas continue to lose population.

Transportation and Travel Patterns - The Willamette Valley region has the most extensively developed transportation network in Oregon, many elements of which are outlined in this report. These facilities include highways, ports, airports, railroads, bicycle and pedestrian ways and public transportation. Today, nearly 25 percent of Valley residents commute to work outside their home counties. The average commute time today is 21 minutes and will increase over the next 20 years. The number of vehicle miles traveled per day will also increase. Average daily traffic (ADT) and congestion on I-5 is growing fastest near Portland and Salem. Today, the vast majority of Valley trips are made using the single occupant automobile. Both the Oregon Benchmarks and the Transportation Planning Rule call for a reduction in vehicle miles of travel per capita (VMT) requiring a major emphasis on alternative modes of travel.

Quality of Life - Unprecedented population growth and its accompanying pressures will make it difficult to maintain the quality of life important to Valley residents. Air quality, water quality, uncongested roads and productive farm and forest lands are all potentially threatened by this growth. Small towns adjacent to larger urban centers will also be affected.

Governmental Structure - The Willamette Valley has 10 counties, three metropolitan areas, four councils of government and more than 100 cities. Better coordination among the various Valley jurisdictions is needed to address regional and Valley-wide transportation and land use issues as the Valley grows.

Recommended Strategies

In developing a transportation strategy for the Willamette Valley's future, VPACT identified three distinct, but related, goals for the transportation system (1) mobility, (2) industrial growth, and (3) livability. VPACT chose to place primary emphasis on the goal of livability, but included significant commitments to the other two goals as well.

The strategy attempts to assess broad impacts of actions and identify the most cost-effective investments in transportation facilities for the Valley. It recommends a moderate level of increased financial and political commitment to developing and coordinating transportation system improvements.

The strategy has two primary components:

1. A **Transportation Development Strategy** that recognizes highways as the backbone of the Valley's transportation system for people and freight movements, but places increasing emphasis over the next 20 years on:

   - Development of urban transit;
   - Intercity rail passenger systems and other alternatives to the single occupant automobile;
   - Improved intermodal domestic freight facilities and rail connections to the Port of Portland;
   - Travel demand management; and
   - User fees.

   The development strategy recognizes the current funding level for transportation development is inadequate to carry out the investments envisioned in the proposed strategy. In addition, one of the key steps to be taken as part of the strategy is the completion of a comprehensive review of transportation finance alternatives that reexamines the fundamental principles and considers innovative approaches to funding and transportation system pricing.

2. A **Transportation Coordination Strategy** that calls for the formation of a **Valley Livability Council** with public and private sector representation, appointed by the Governor to do research and educate Valley leaders and residents about the broad growth issues affecting transportation, land use and environmental quality.

   As part of the coordination strategy, it is also recommended that VPACT be continued as an advisory group of primarily local/regional elected officials to counsel ODOT Region 1 (Portland metro) and Region 2 (Willamette Valley) on Valley-wide transportation issues and projects.

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TABLE OF CONTENTS (Con't.)

I. THE CHALLENGES, THE PROCESS AND THE VISION

Impetus for the development of a Willamette Valley Strategy began when those developing the Oregon Transportation Plan (OTP) recognized the challenges and complexities of planning for transportation in the Willamette Valley. Their concerns resulted in an action in the OTP calling for the establishment of a Willamette Valley Transportation System Coordination Area.

In 1993, the Oregon Transportation Commission (OTC) established the Willamette Valley strategy project as one of its major initiatives to implement the Valley transportation coordination area concept in the OTP. OTC Commissioner Susan Brody convened the first meeting of the project's 24-member Willamette Valley Policy Committee on Transportation (VPACT) in September 1993.

VPACT's charge was to develop a comprehensive, coordinated, long-range transportation strategy consistent with the vision, goals, policies and system elements of the OTP, including the development of a high speed rail system within the Valley. The strategy would promote and better coordinate a transportation system in the Valley that would support increasing population, accommodate an expanding economy and improve livability.

The goals of the Willamette Valley Strategy are to:

1. *Develop a transportation strategy for the Willamette Valley that addresses the problems and opportunities of transportation interdependence among Valley communities, is consistent with the goals and objectives of the Oregon Transportation Plan, builds upon and is integrated with other related planning efforts, and identifies roles for both the public and private sectors in implementing the plan. The strategy will include an approach which will prioritize the transportation problems that should be addressed.*

2. *Promote an understanding of the extent and significance of the transportation interdependence among communities in the Willamette Valley.*

3. *Identify gaps in knowledge, geographic coverage, policy tools or consensus necessary for local transportation planning and coordination efforts in the Valley.*

4. *Investigate the market for intercity rail passenger service in the Valley.*

5. *Develop and evaluate alternative scenarios for the integration of Willamette Valley transportation programs and projects with land use policies in the Valley.*

6. *Design a framework and process to further the implementation of the Willamette Valley Transportation Strategy.*

This document is the report on progress in meeting these goals.

A. The Challenges of Growth

Rapid growth in population and changing employment patterns are challenging the transportation system in the Willamette Valley today.

The Willamette Valley is a distinct geographic district sharing air, watershed, an economy, a market and the public services to support them. It extends from the crest of the Coast Range to the crest of the Cascades, an area over 100 miles long and 40 miles wide defined by the Willamette River. As envisioned in the Willamette Valley Strategy, the Valley includes Columbia, Multnomah, Clackamas, Washington, Yamhill, Linn, Marion, Benton, Polk and eastern Lane Counties. In addition to ten counties, it contains three metropolitan areas and over a hundred cities. The Valley coordination area and existing transportation facilities are illustrated in the map on page 3.

Population

Growing at a rate faster than the national average, population in the Willamette Valley increased from about 1.5 million to 2.0 million from 1970 to 1990 and is forecast to be over 2.7 million in 2012. Population increased at an annual growth rate of about 1.5 percent from 1970 to 1990. The Oregon Department of Transportation (ODOT) predicts an increase of almost 740,000 residents in the Valley by 2012, at an annual growth rate of about 1.4 percent. This is equivalent to adding six new Eugenes to the Valley by 2012. The Portland metropolitan area and northern counties are expected to grow about 1.6 percent during this period.[1] (County figures used in this Strategy include the portions of counties outside the Valley.)

[1]Oregon Department of Transportation, Demographic and Economic Forecasts, 1990-2030, March, 1993.

WILLAMETTE VALLEY

MULTI-MODAL FACILITIES

JANUARY 1995

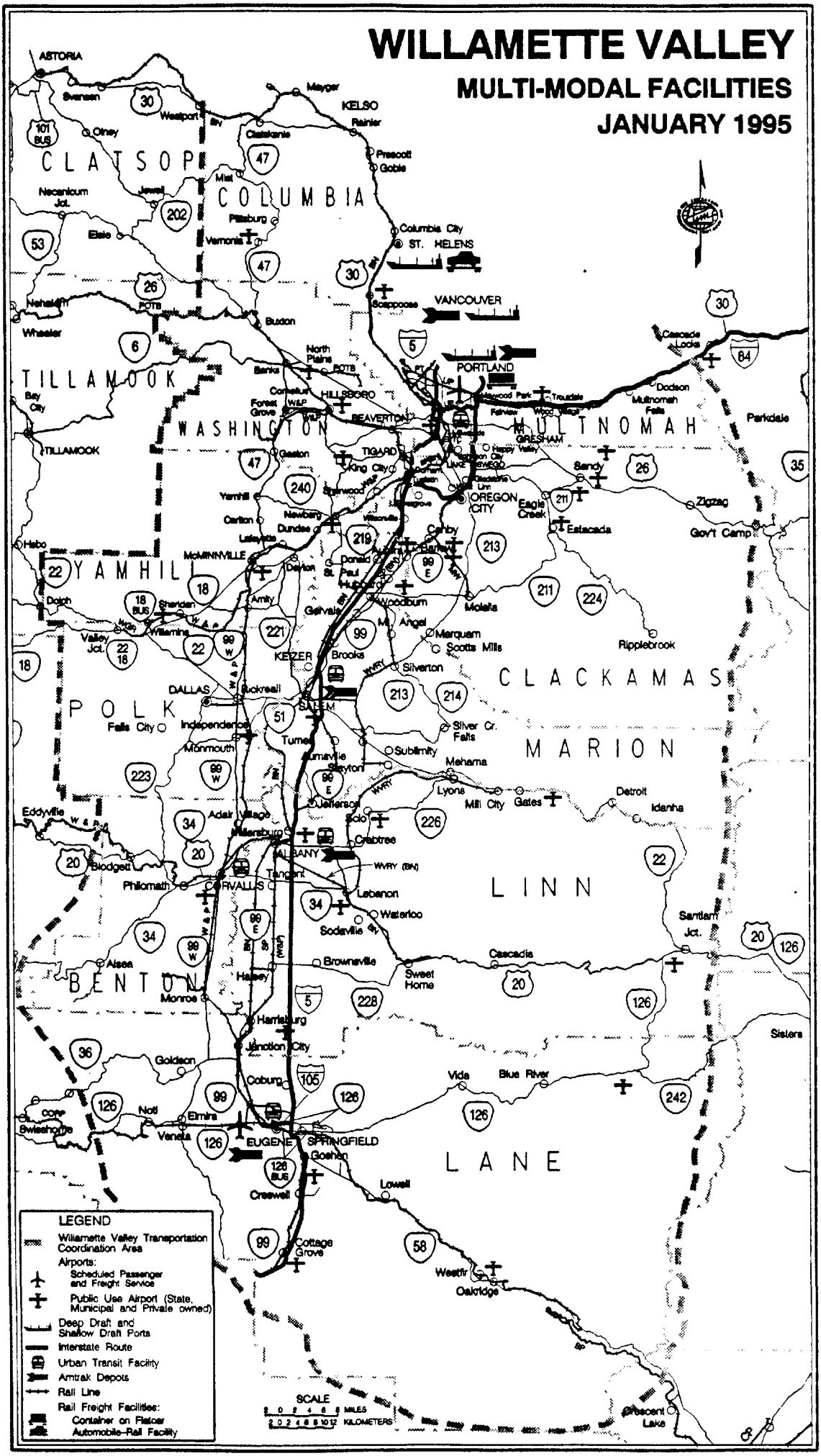

Table A
Valley Population Projections

Region	1970	US Census 1990	2012	Projected Increase 1990-2012
Portland PMSA (includes Yamhill County)	918,889	1,239,842	1,746,988	507,146
Columbia County	28,790	37,557	49,153	11,596
Salem MSA	186,658	278,024	367,793	89,769
Linn-Benton Counties	125,690	162,038	198,214	36,176
Eugene-Springfield MSA	215,401	282,912	375,239	92,327
Total Valley	1,475,428	2,000,373	2,737,387	737,014

As the number of people choosing the Willamette Valley as their home increases, so does the density of the Valley's population. The Valley as a whole is expected to grow from 153 people per square mile in 1990 to 210 people per square mile in 2012. Density varies from a low of 39 people per square mile in Linn County today to 1,255 people per square mile in Multnomah County. In 2012, the range of densities of these Valley counties will increase to 45 - 1,562 people per square mile.

Population will increasingly be attracted to urban areas. But suburban areas grew more rapidly than central cities between 1970 and 1990. The U.S. Census shows that the percentage of the Valley's population living in rural areas decreased from 22 percent in 1980 to 20 percent in 1990.[2] These changes raise several Valley-wide issues:

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[2]Livability indicators and most figures throughout this section are from "Willamette Valley Futures: Summary: an Examination of Factors Affecting Livability in the Willamette Valley," compiled by the Community Planning Workshop and the Institute for a Sustainable Environment, University of Oregon, December 1994, for the Oregon Progress Board. Figures used with permission from the Oregon Progress Board.

- How do we maintain the quality of life that is important to Willamette Valley residents in the face of the increasing numbers of people and increasing population densities?

- What is the role and future of small communities in the overall growth pattern in the Willamette Valley?

Economic Trends

Population growth is closely related to job growth. Economists predict that the number of jobs in Oregon will grow faster than the national average throughout the remainder of the decade. In a presentation before V-PACT , Randy Pozdena, an economist with ECO-Northwest, asserted that the Portland metro area is the key economic driver in the region, but that the spillover phenomena favors the Valley economy too.

Total non-agricultural employment increased by about 68 percent in the Valley from 1970 to 1990, growing from 560,130 workers in 1970 to 938,950 workers in 1990, an annual growth rate of about 2.6 percent. ODOT predicts that 425,000 jobs will be added in the Valley from 1990 to 2012, an average annual increase of 1.7 percent.

By 2012, the nearly 1.4 million workers in the Valley will account for 76 percent of the state's non-agricultural employment. These figures reflect continued growth in the high technology industry and diversified services and manufacturing, and a continued decline in timber-related jobs.

Described as "one of the best agricultural areas and climate in the world," the Valley receives about $1.22 billion in cash receipts from agriculture. Growing more than row crops, the Valley earns $143 million from nurseries and $5 million annually from the wine industry. Annual agricultural production increased by about $800 million in 1990 dollars from 1971 to 1993, an increase of about 60 percent. Agricultural sales are expected to continue to increase through 2012. Six of the counties in the Valley are leading agricultural producers in the state. Marion County is the top producer, Clackamas County is second highest and Washington County, with $200 million in receipts, is fifth in the state.

From 1970 to 1992 timber production (board feet) decreased at an annual rate of 1.6 percent and is expected to continue to decline slightly through 2012.

Per capita, Oregon has more small businesses of 100 or fewer employees than any other state; 90 percent of Oregon's businesses have fewer than 50 employees. Existing businesses are the state's top job creators with two out of three jobs created by existing businesses. Pozdena pointed out that the Valley

has been losing big firms and gaining small firms. The high service sector growth means an increased demand for diffuse tripmaking for sales and delivery, a demand which is truck and auto dependent.

Since 1980, Valley residents have seen their incomes fall relative to national averages. By 1990, the Valley's average per capita income was about 3 percent less than the national average. The 1990 Census showed that the number of individuals in the Valley below the federal poverty line increased over 70,000 between 1970 and 1990, a 45 percent increase during this period. About 12 percent of all Valley residents fell below the poverty level in 1990; the largest percentage was in the southern part of the Valley.

Regional and local governments surveyed for the Willamette Valley Strategy raised the following issues:

- What is the vision for the Willamette Valley's transition from a resource-based economy to a high tech and service economy?

- How will economic changes affect transportation needs?

Land Use

Local governments throughout the Valley adopted comprehensive land use plans to carry out statewide planning goals in the late 1970's and early 1980's. The plans establish urban growth boundaries (UGB's) for each of the valley's cities. Lands outside UGB's are zoned for agriculture, forestry and limited rural residential development.

Generally, urban growth boundaries were drawn to include a 20 year supply of land for projected industrial, commercial and residential growth in each community. UGB's have been largely unchanged since they were adopted, in part, because population and economic growth occurred at much lower rates than most communities projected. Only about 1,800 acres were added to Valley UGB's from 1987 to 1993. This represents about .39 percent of all acres within UGB's in the Valley.

Total housing units in the Valley increased at an annual rate of about 2.4 percent from 1970 to 1990, more than the growth in population during the same period (1.5 percent annually). It is likely that housing units will grow at a rate similar to projected population and employment growth in the future.

Comprehensive information about actual development of land in the Valley over the last twenty years is limited. A survey of several urban areas around the state in the late 1980's showed that land within UGB's was being developed at slightly lower densities than those called for in local plans. Although this is likely the case throughout the Valley, no detailed analysis has been done.

In 1994, the University of Oregon conducted a broad review of land use patterns in the Valley. Their report "WIllamette Valley Futures" reviewed remote sensing data to calculate changes in land use patterns between 1970 and 1990. They concluded the amount of urbanized land in the Valley has increased significantly over the last twenty years. However, some inconsistencies in the data set suggest that the conclusions may be overstated and that further study is needed.

Studies about the potential need to expand UGB's in the future are limited. Most cities and counties in the Valley are yet to complete periodic review of their plans. This includes evaluating the adequacy of UGB's. Portland Metro planners have completed a detailed estimate of land needs in the Portland area as part of the Metro 2040 study. They estimate that only about 8,000 acres of land will need to be added to the Metro UGB to accommodate an additional 500,000 people by 2015 at current comprehensive plan densities.

More study of land use trends in other cities in the Valley is needed to establish an accurate picture of possible UGB expansions. However, general trends suggest that land within UGB's is being used up more rapidly and at slightly lower densities than plans call for. If these trends continue, additional UGB expansions are inevitable in the Valley during the next 20 years especially for smaller cities within commuting distance of the Valley's major urban areas. These communities have a potential for very high rates of growth that could overwhelm the community, and create pressure for further UGB expansions.

Additions to UGBs raise important issues:

- How will changes to UGBs for major urban areas affect nearby communities and resource lands?

- What impacts will these UGB changes have on transportation system needs?

Transportation Infrastructure and Mobility

Transportation Infrastructure

There are about 30,000 miles of roads in the Willamette Valley; 1,894 miles are state highways. Interstate 5, the only north-south freeway, runs the length of the Valley.

About 27 percent of the state highways in the Portland metro area and 43 percent of the state highways in the other urban areas of the Valley are bicycle-friendly. The ODOT Bicycle/Pedestrian Program considers about 79 percent of the rural state highways in the Valley to be bicycle-friendly. Pedestrians can

use sidewalks on both sides of 26 percent of the urban state highways in the Portland metro area and 32 percent of highways in the other urban areas of the Valley.

Public transportation serves the metropolitan areas and many of the urban areas in the Valley. Tri-Met, Molalla Transportation District and the Wilsonville Area Rapid Transit serve residents in the Portland metro area. Salem area services are provided by the Salem Area Mass Transit District and Woodburn Transit. The Linn-Benton Loop serves the Albany-Corvallis area, and Lane Transit District, the Eugene/Springfield area.

Most urban areas in the Willamette Valley, except for the urban areas east of Salem including Stayton, Silverton and Mt. Angel, have intercity bus service although service is generally infrequent and carriers change often. Carriers include Greyhound Lines, Greenbelt/Amtrak Thruway Bus (experimental service), Northwestern Trailways, Valley Retriever, CAC Transportation and Porter Stage Lines. Service varies from two runs daily in outlying areas to multiple runs along Interstate-5.

Rail passengers can board Amtrak in Portland, Salem, Albany and Eugene. One new state-subsidized train service daily from Portland to Eugene supplements the once daily Coast Starlight train from Los Angeles to Seattle. The Amtrak Thruway Bus now connects riders from Eugene and the Valley four times daily with Amtrak trains in Portland; an additional bus connects Polk County with Portland on weekdays under an experimental program.

Rail freight service is provided throughout the Valley. Railway carriers are Southern Pacific (SP), Burlington Northern (BN), Willamette and Pacific Railroad, Willamina and Grande Ronde, Willamette Valley, Molalla Western, Port of Tillamook Bay, East Portland Traction Company, Central Oregon and Pacific, and Peninsula Terminal Company. SP and BN are the two long-haul railroads operating in the Valley. The amount of trackage ranges from the BN's approximately 280 miles to the Peninsula Terminal Company's three miles.

Portland International Airport and Mahlon Sweet Field in Eugene provide air carrier service; 30 public use airports are available for general aviation aircraft in the Valley. A privately-owned van connects Salem Airport with Portland International. Commuter air service is available from Corvallis to Portland.

Deep-draft ships can dock at the Port of St. Helens and the Port of Portland. Shallow-draft barges travel on the Columbia River above Portland and on the Willamette River in the Portland area. Tonnage travelling on the Columbia River has increased consistently.

Travel Patterns

Nearly 235,000, or 25 percent of the Valley resident workers work in a different Willamette Valley county than the one in which they reside. Still others work in locations outside of the Valley. If this trend continues, by 2012 approximately 350,000 Valley resident workers will be commuting to jobs outside their resident county.

The balance of workers and jobs within counties is also uneven. Only Multnomah and Marion Counties have more jobs than resident workers. Columbia, Clackamas, Washington, Yamhill and Polk Counties have fewer jobs than resident workers. Linn, Benton and Lane Counties have about the same number of jobs as resident workers.

Travel time to work also varies among counties. The 1990 Census data show that the mean travel time to work ranges from 16 minutes in Benton County to 24 minutes in Columbia County. The average for the Valley is 21 minutes. If VMT per capita and land use trends continue, commute times will increase over the next 20 years.

ODOT estimates daily vehicle miles traveled (VMT) in the Valley increased from 22.6 million in 1970 to about 42.5 million in 1990, an annual growth of about 3.8 percent. ODOT forecasts daily VMT to increase at an annual rate between 1.1 percent and 1.7 percent through 2012. These rates would increase daily VMT to 54-61 million in 2012.

Daily VMT per capita increased from 13 miles in 1970 to about 21 miles in 1990. The Oregon Benchmarks sets a VMT per capita standard of 21.2 for metropolitan areas in 1990 and 21.5 in 2010; ODOT forecasts daily VMT per capita to be 20.4 to 22.3 in 2012.

Daily VMT growth is apparent in the growth of highway traffic. On I-5, the average daily travel (ADT) varies greatly by location and growth rate. The examples shown below indicate that northern locations are growing faster than those in the southern part of the Valley:

Table B
Projections for Average Daily Travel on I-5

Location	1992 ADT	2012 ADT	Percent Total Growth Rate	Percent Annual Growth Rate
Just south of Wilsonville	60,000	99,000	65	2.5
Just south of Salem near Turner exit	48,000	74,800	56	2.2
Just south of Albany before Corvallis exit	32,000	47,700	49	2.0
Just north of Eugene/ Springfield	33,000	48,800	48	2.0

The amount of truck traffic on I-5 varies from 4 to 23 percent of total traffic, depending on location.

Although the road system expanded by 7,000 miles from 1970 to 1993, ODOT officials expect little expansion of state and interstate highways in the Valley in the future. Most of the expected increases in road mileage will result from urban development. A significant shortfall in revenues needed for road and bridge construction and maintenance is expected in the future. Congestion on major highways will increase. I-5 has capacity problems and conflicts between different kinds of traffic (commuter, freight, and recreational). Land uses at interchanges are affecting access to the freeway.

According to the 1990 Census, about 27 percent of Valley work trips are made using alternative modes. To attain the 2010 Oregon Benchmark of 38 percent would require Oregonians to make a significant shift to alternative modes between 1990 and 2012. Alternative modes also will need a significant amount of additional investment.

The transportation system and travel patterns raise many concerns:

- What is I-5's role in the future? What improvements are needed to I-5, to alternatives to its use and to its accessibility?
- What improvements need to be made to improve east/west connections to I-5 and across the Willamette River?
- How can an integrated intercity, urban and rural bus and rail system be developed as an alternative form of mobility?
- What is the role of high speed rail? What is the demand for this passenger service? How can the rail system be developed that is compatible with established land use planning?
- How can the movement of freight be made more efficient and reduce its conflicts with passenger movement?
- How can transportation facilities and services be interconnected so that they operate as a system?
- What are the roles of the airports? What changes are needed for a more efficient airport system?
- What impact will increased telecommuting and other technologies have on commuting patterns?
- How can metropolitan areas meet their VMT reduction requirements?
- How do efforts to reduce VMT per capita in metropolitan areas affect the Valley transportation system?

Air Quality

Maintaining air quality and increasing air pollution, especially from auto emissions, is a Valley-wide problem. The Valley generated about 60 percent of the state's major air pollutants in 1992. Air pollutants are difficult to predict; however, increases in the Valley's population and daily VMT will likely lead to increased air pollutants in the next 20 years. Technological changes in fuels and engines are and will continue to make major contributions to air quality improvement.

Federal regulations require each metropolitan area that is in non-attainment for air quality standards to develop a program for reducing specific pollutants. The Portland and Salem metro areas are currently non-attainment areas. The Eugene/Springfield area has regained attainment status and is implementing an adopted maintenance plan. The state Transportation Planning Rule requirements to reduce VMT per capita in each metro area are expected to partially address the air pollution problem. Each metro area is considering land use patterns and the use of public transit, bicycling, walking and ridesharing to reduce VMT.

- How can the air quality of the Valley be improved in view of increasing VMT?

- What role can intercity transportation systems play to improve air quality?

Governmental Structure

The Willamette Valley includes four regional councils of governments, three metropolitan planning organizations (MPOs), ten counties, over 100 cities, four transit districts and numerous other special districts for education, water, sewer, fire, and recreation--all do some kinds of planning and service delivery. A survey of community leaders before the Willamette Valley Futures forum found that political boundaries, service districts and program areas define regions in different ways, which could lead to confusion about how services are delivered, which jurisdictions are responsible and which constituencies are served. Most surveyed agreed that neighboring counties work together and that regional cooperation is improving as resources become more limited and common issues and solutions are identified.

One problem is that MPOs cover major urban areas in the Willamette Valley, but rural areas outside MPOs are often not represented in regional planning decisions. For example, the urban portion of Clackamas County is included in Metro's planning area, but the majority of the county is outside of Metro's boundary. Canby, Sandy other outlying cities are experiencing the effects of increased population and increased numbers of residents who commute to Portland. One of Metro's plan alternatives was to direct growth to "satellite" cities such as Canby and Sandy. Although these cities were consulted during the planning process, they had no official representation on the decisionmaking body.

Land use and transportation planning are coordinated on an MPO level and on a county level. Currently, Valley-wide and corridor transportation issues are handled through ODOT Region planning and special committees like the High Speed Rail Task Force. ODOT Regions are developing corridor plans for the major state highways in the Valley. But no formal mechanism exists for coordinating land use planning on a Valley-wide or cross-regional basis.

- How can planning be coordinated more effectively among various jurisdictions to address regional and Valley-wide issues?

Transportation Finance

A combination of federal, state and local taxes and fees fund the public costs of the Willamette Valley transportation system. No estimates of costs for Willamette Valley transportation improvements have been made in this study. However, the Oregon Transportation Plan can be used to estimate the magnitude of the funding needs for the Willamette Valley transportation since the OTP estimated the cost of implementing the statewide preferred plan over a 20-year period beginning in 1992 and approximately 65 to 75 percent of the proposed transportation improvements and projected costs could apply to the Willamette Valley.

The OTP estimates the cost of the improvements for highways, railroads, ports, aviation, intercity bus, and transit over a 20-year period to be $35.2 billion or about $12 billion more than a continuation of present program levels (in 1991 dollars). The highway estimates include a backlog of state, city and county roads, and bicycle and pedestrian facility needs. The figures do not include high speed rail.

The 1993 Legislature debated a finance package to fund the OTP preferred plan but did not pass it. Because of reduced federal funding and a shortfall in state gas tax revenues, ODOT reduced highway projects in its 1993-1998 State Transportation Improvement Program by $400 million. Finding sources for transit and capital and operating funding is and continues to be a major challenge. Another finance package is under consideration by the 1995 Legislature.

Improved passenger rail service leading to a high speed rail system has been funded through special federal allocations and state lottery funds. About $11 million in state and federal funds have been authorized during FY 1993-95, and requests for additional lottery funds have been submitted to the 1995 Legislature.

- How can the transportation financing system be changed to support a more balanced transportation system in the future?

- What new sources of transit operating funds are appropriate to strengthen transit systems?

B. The Planning Process

Willamette Valley Policy Advisory Committee on Transportation (VPACT)

To respond to these issues and challenges, the Oregon Transportation Commission charged VPACT with developing a Willamette Valley Transportation Strategy. The 24 members of VPACT include elected officials and staff members from the Department of Land Conservation and Development, metropolitan planning organizations and councils of government, cities, counties, and transit districts; representatives of the transportation industry and general business; and lay citizens. (See Appendix B for list of members.)

Assisting the Policy Committee is the Valley Technical Advisory Committee composed of representatives from ODOT, MPOs, cities and counties. (See Appendix B.)

VPACT members began their work on a strategy by listening to experts on demographic and economic trends in the Willamette Valley and trends in passenger and freight transportation--air, rail, truck, marine and intercity bus. Planners then described the regional plans being developed in the Portland, Salem, Albany/Corvallis and Eugene/Springfield metropolitan areas.

With the aid of consultants in 1994, VPACT members identified the key transportation issues facing the Valley as a whole and developed a vision for the Valley's transportation system in 2030 that addressed these issues. The vision incorporated the concepts in the Oregon Transportation Plan. Figure 1 illustrates their process in moving from the vision to the Recommended Strategy.

Guided by the vision, the committee developed three scenarios for transportation based on different levels of financial and political commitment. Since VPACT did not have authority to develop a vision of land uses in the Valley, some assumptions were made about future land uses. The committee used performance measures to evaluate these scenarios.

VPACT members then determined which elements would promote mobility, economic development and livability and which would give the greatest return for the investment. They evaluated each scenario element by goal and by cost effectiveness. The evaluation is documented in a consultant's technical memorandum. This evaluation was the basis for the Recommended Strategy.

VPACT members also examined institutional arrangements that would further cooperation and coordination among agencies, jurisdictions and transportation providers throughout the Valley and adopted a recommendation.

FIGURE 1

WILLAMETTE VALLEY TRANSPORTATION STRATEGY

CONCEPTUAL FRAMEWORK - PHASE ONE

VISION FOR WILLAMETTE VALLEY

(Oregon Transportation Plan and VPACT)

↓

ASSUMPTIONS ABOUT VALLEY LAND USE PATTERN

(Needed due to lack of consensus on a pattern)

- No significant UGB expansions
- Compact, mixed-use, transit friendly
- Rural development matches rural services

↓

THREE IMPLEMENTATION SCENARIOS

(Levels of financial and political commitment)

- Base (status quo)
- Moderate
- High

↓

PRIMARY GOALS AND PERFORMANCE MEASURES

- Mobility (short-term)
- Industrial Development (economic development)
- Livability (long-term, community, environment)

↓

INVESTMENT STRATEGIES (9)

(Based on evaluation of "cost effectiveness")

↓

RECOMMENDED STRATEGY BY VPACT

1. Transportation Strategy (including high speed rail)
2. Institutional Strategy for Coordination
3. Work Elements for Phase Two of Valley Strategy

To help assess high speed rail's role in the Valley, ODOT and the MPOs sponsored surveys of traveler origin and destinations and demand for intercity passenger and freight travel. Consultants analyzed the data. VPACT used the data to recommend steps in the development of high speed rail. In the future, this data will be helpful to develop plans for highways and other transportation facilities.

Public Involvement

From its beginning, the development of the Willamette Valley Strategy has involved a wide range of interests. VPACT members range from representatives of regional councils of government, county commissions, and local transit districts to representatives of the Chamber of Commerce, trucking firms, airlines, rail lines, intercity bus companies and the general public.

VPACT members have guided the strategy at all major decision points. They identified issues, developed a general vision, developed three scenarios and the performance standards for the scenarios, and chose the preferred strategy.

To obtain background for VPACT and the strategy, consultants interviewed the Valley metropolitan planning organizations, selected local jurisdictions and private sector transportation providers on the strategy process and on key issues.

Presentations to the Partnerships for Willamette Valley's Futures Forum held on October 21, 1994 in Corvallis extended the number of participants in the development of the strategy. Over 300 state and local officials, representatives of interest groups and citizens at the forum considered the three scenarios and voted for their choice. VPACT noted the results of the voting in its discussions.

Presentations of the issues, scenarios and possibilities for intergovernmental coordination were also made to nine county planning commissions in the Valley and to the Cities of Corvallis and Eugene. Attendees at the county planning commissions included local city council members, local staff and members of the general public. ODOT staff surveyed the attendees at each meeting on the Valley focus.

To achieve a wider public review, the draft of the Willamette Valley Strategy is being distributed to interested citizens throughout the Valley for comment for a 45-day period. At least four public meetings throughout the Valley are being held during the period.

VPACT members will consider the public comments before they adopt the strategy and send it to the Oregon Transportation Commission for its adoption. The strategy will then become part of Oregon's statewide plan.

C. The Vision

To respond to the challenges of growth and increasing transportation demands, VPACT formulated a vision of transportation for 2030. The vision drives the scenarios and recommended strategy. It is a description of where Oregonians want to be and what needs to be done to meet the transportation and land use challenges today and tomorrow.

2030, The VISION....

Drawn to the high quality of life in the Willamette Valley, three million residents enjoy unprecedented economic prosperity. Advanced technology industries yielding high value products and efficient resource industries form the core of a regional economy supporting an educated and affluent workforce.

Major centers -- accessible by multiple modes of transport -- act as magnets, attracting new businesses to the Valley and creating more jobs to sustain a healthy level of economic activity. Transportation policies, modal plans and projects have induced patterns of land development and use supporting Oregon's longstanding land use goals.

Integrated land use plans for the region are underpinned by a balanced mix of private and public transportation. An efficient road and rail system forms the surface transportation links between the Valley's vital and diverse cities, rural communities, ports and industrial centers to promote livability and economic prosperity for all residents of the valley.

The transportation system takes advantage of the efficiencies of each transportation mode. Planning decisions recognize the benefits of energy conservation in transportation and encourage the use of alternatives to fossil fuels. Interconnection between modes is extensive and supportive of efficient land uses and the needs of commerce, industry and the general community.

"The Willamette Valley of Oregon is one of the most beautiful valleys in the world.

Stretching from Eugene in the south to the Columbia River in the North, from the snowy summits of the Cascades to the blue heights of coastal range, the Willamette Valley is a verdant, fertile land, still largely untrampled by humanity."

Tom McCall
Governor of Oregon
September, 1972

Local and regional jurisdictions cooperate through the integration of plans within the Willamette Valley coordination Area. Integration supports an extensive, well coordinated transportation network. Local, regional and state agencies working together, are responsive to residents' needs and their ideas for solving issues in a comprehensive, long term manner.

Coalitions between airlines, airport owners and local jurisdictions have developed integrated tourism and business marketing strategies which sustain a viable demand for fast and frequent air linkages between major centers in the Valley and key locations interstate and abroad.

Quality of life and environmental sensitivity are core values shaping transportation system development. Extensive pedestrian and bike paths facilitate a large proportion of trips by walking and cycling, encouraging a healthier community, reducing pollution and improving the sociability and safety of public places and streets.

Enhanced and innovative transit systems, the introduction of new technologies such as high speed rail and intelligent Vehicle Highway Systems provide a high level of mobility to all citizens. The implementation of these technologies and efficient multimodal corridors support fast, economical, reliable and safe transport of freight.

Foresight and thoughtful planning has preserved "one of the most beautiful Valleys in the world." The efforts which began in the last decade of the 20th Century are credited with preserving this natural heritage and building the infrastructure to support the prosperity of future generations.

II. SCENARIO DEVELOPMENT AND EVALUATION

A. Context for Scenario Development

Relationship to Other Policy and Planning Efforts

The scenarios, performance measures and recommended strategy developed for the Willamette Valley Transportation Strategy process have built upon earlier state and regional planning efforts.

The three scenarios developed for the strategy are an elaboration and refinement of the preferred livability alternative of the Oregon Transportation Plan. They also incorporate the requirements of the LCDC Transportation Planning Rule and the federal Intermodal Surface Transportation Efficiency Act (ISTEA). The Base Case scenario reflects current planning efforts throughout the Valley, including the South/North light rail line in Portland, improvements to Portland International Airport and other Port of Portland facilities, and the Department of Environmental Quality's employee trip reduction rules for the Portland metropolitan area. However, the Base Case does not include the level of transportation development described as the "Livability Approach" recommended in the Oregon Transportation Plan.

The performance measures were developed from the OTP, Oregon Benchmarks, the Transportation Planning Rule and additional ideas suggested by VPACT members. Incorporation of these planning efforts means that the Valley Strategy reflects other Valley plans and projects. The strategy is a start toward integrating transportation planning on a Valley-wide basis. Implementation and further refinement of the strategy will be a necessary, ongoing process.

Outreach Efforts and Results

To elicit information about current transportation planning and implementation and to inform them about the project, the consultants discussed the Willamette Valley Transportation Strategy with the three MPOs, the Cascade West Council of Governments, two counties in the Portland metro area and four members of VPACT representing the private sector.

As a result of these interviews, VPACT identified ten key issues that tend to link valley residents together. Region-wide action may be necessary to adequately address these issues.

1. Impact of growth on quality of life

   At issue are declining air quality, increasing congestion, future land use patterns and the economic viability of the Valley.

2. The role and future of small communities in the Valley

   Small communities have been and continue to be attractive places to live, often with a lower cost of housing. Issues facing these small communities include commuting concerns, the effectiveness of conventional transit in rural areas and small cities, and the balance of jobs to housing.

3. The future of I-5

   I-5 faces congestion with few alternative north/south routes. The adequacy of road connections to I-5 and east/west connections across I-5 are also at question. Additionally, safety will continue to be a concern.

4. Improved east/west connections across the Willamette River

   The barrier effect of the Willamette River is an issue with respect to valley-wide travel.

5. The future of Valley airports

   Changes in the market place that will affect air passenger and freight services with the potential for increasing demand for such services as commuter flights is an issue especially for the future of small airports.

6. Expansion of public transit service in the Valley

   At question is the adequacy of coordinated intercity, urban and rural bus service, and transit links between adjacent counties and cities. The ability to fund transit improvements continues to be a serious concern.

7. Role of high speed rail

   High speed rail shows real promise, but there is uncertainty about it as an alternative to the private auto, and the ability to fund it versus other passenger alternatives. There is also concern for the impact of high speed rail service on towns without stops.

8. Interconnection of transportation modes

   Transportation facilities and services are often developed without adequate consideration for maximum service and efficiency.

9. Freight movement in the Valley

   At issue for freight movement are the effects of just in time manufacturing and traffic congestion, as well as the adequacy of access to businesses, terminal connections and intermodal facilities. The balance of freight movement among modes is also an issue.

10. The role of future technology

    The impact of Intelligent Vehicle Highway System (IVHS) networks on highway congestion, safety and freight movement is an issue. Additionally, the impact of advances in telecommunications on travel patterns will be important.

These issues are addressed in the scenarios.

B. Description of the Scenarios

Assumptions for Scenario Development

The three scenarios are descriptions of conditions in the year 2015. Each scenario responds in a different degree to the vision for the Willamette Valley for the year 2030 and to the issues identified above.

Each is an outcome of different assumptions concerning the level of commitment of public officials and citizens in the Willamette Valley to the achievement of Oregon's statewide transportation and land use policies. The term *commitment* is defined primarily in terms of the relative level of financial resources, but also takes into consideration the breadth and depth of program and regulatory activity and the diversity and adequacy of publicly created institutions available to address and implement public policies.

Each scenario builds on the prior one. Elements of the Preferred Alternative from the Oregon Transportation Plan are found in each scenario, especially the Moderate Commitment Scenario; but the Preferred Alternative is fully achieved only in the High Commitment Scenario.

General Assumptions

- All scenarios assume some implementation of the Transportation Planning Rule, Oregon Benchmarks, the OTP, and the federal Intermodal Surface Transportation Efficiency Act (ISTEA), but the degree of implementation will be affected by the level of commitment.

- Scenarios vary primarily in the level of funding, but are also influenced by the level of political commitment to policy implementation.

- The scenarios are cumulative. Higher level scenarios include the improvements of lower level scenarios.

- The rate and location of population and employment growth in the Valley will be affected by the mix of transportation projects and programs undertaken.

Land Use Assumptions

In the evaluation of the scenarios, V-PACT looked at the scenarios based on assumptions about land use patterns that are consistent with the OTP livability alternative since there is not a comprehensive vision of Valley development patterns. The following assumptions were made:

- Urban development occurs within established urban growth boundaries (UGBs). No significant expansions of UGB occur.

- Urban development is compact and mixed-use to preserve open space and support transit and other alternatives to the automobile.

- Rural residential development identified in county comprehensive plans is constrained by limited resources and services, including transportation services.

These assumptions would lead to significantly increased density within UGBs, possibilities for transit-oriented development, and restricted development on resource lands as guided by the existing state land use program.

If other land use assumptions were made, the scenarios would look quite different. For example, a second land use pattern would develop if UGBs were expanded significantly. Expansion would lead to some infill development, but relatively low densities within UGBs, limited transit-oriented development, and increased development on both resource and rural lands. Boundaries between Valley communities would become less distinct as low density development occurs in rural areas. Increased development at highway interchanges would compete with commercial development in established communities.

In both land use patterns, smaller communities such as Harrisburg, Philomath and Canby would attract increased residential development because of lower housing costs and the small-town atmosphere. Increased commercial development would follow. In the first pattern, the new development could be planned to support and enhance the existing community social and physical structure, including adequate infrastructure improvement, infill development, and design features that support walking and bicycling.

In the second land use pattern, increased development would overwhelm existing infrastructure capabilities, would push out existing UGBs onto resource lands, and would be designed in ways that encourage the use of the automobile.

In both land use patterns, more commuting between these smaller communities and the Valley's larger urban centers would occur. Road traffic would likely significantly increase. In the first pattern, however, there may be opportunities to attract employers or to encourage carpooling and intercity transit use.

The scenarios described below use the assumptions in the first land use pattern.

The Scenarios

Base Case Scenario

The Base Case scenario extends the pace and character of current transportation development and policies into the future for twenty years. It presumes implementation of the key state policies described above, but through a continuation of current levels of commitment to them.

Moderate Commitment Scenario

The Moderate Commitment Scenario represents a clear step forward from current levels of commitment to existing policies, programs and laws. It includes all of the transportation improvements of the base case plus a set of projects and programs designed to more fully achieve the Preferred ("Livability") Alternative of the OTP and the Transportation Planning Rule. It presumes significant cooperative efforts among local jurisdictions and state agencies to achieve the vision of the Oregon Transportation Plan.

High Commitment Scenario

The High Commitment Scenario represents the fullest commitment to livability for the Willamette Valley, to cooperative planning in pursuit of this vision, and to the state goals and policies in place to achieve these goals.

The High Commitment scenario includes all of the elements of the Base Case and the Moderate Commitment Scenario and further assumes an additional level of commitment beyond them.

The Transportation System

Highways/Roadways

Base Case -- Improvements along I-5 in the Salem area would be completed. There would be roadway improvement projects to a limited number of arterial streets in all jurisdictions, such as widenings or maintenance projects. Funding for the current system would remain the same, with new funding only for maintenance and safety improvements.

Moderate Commitment -- Additional funding would enable ODOT to increase capacity in some form on I-5 and/or other parallel highway facilities such as 99E and 99W. All capacity enhancements would be made in a manner consistent with ISTEA investment criteria and requirements. Enhanced east-west highway connectivity to I-5 would be implemented. State support for local facilities complementary or adjacent to state facilities would increase in conjunction with local jurisdictions' implementation of land use and access management plans.

High Commitment -- There would be better use of existing facilities through the extensive IVHS technology described below. Strategic capacity enhancements and new highway links would be developed where they are cost-effective and where their impacts are consistent with Valley goals, in the context of multimodal corridor plans. Parallel local facilities throughout the Valley would be improved as needed to meet local travel needs off of the state system.

Local Transit

Base Case -- Some planned transit improvements in the Portland metropolitan area would be completed. No other significant transit service improvements would occur. Lane Transit District would construct a downtown transit center. Additional park-and-ride facilities in the Salem and Eugene areas would be evaluated and preferred locations chosen, but most facilities would not be constructed.

Salem's transit system (Cherriots) would be unable to restore service cuts and the Linn-Benton Loop bus system would be eliminated. The already limited transit service in Albany would also be discontinued. No new local or intercity services would occur.

Moderate Commitment -- Local transit service and facilities would increase to levels recommended in the OTP, based on the increased flexibility to spend state transportation funds for other modes as well as increased overall revenues. Public/private partnerships for intermodal passenger facilities would be developed. Any gaps in the OTP recommended level of rural transit services would be filled.

High Commitment -- Both metropolitan areas and other cities would have frequent, high quality transit systems, well funded and fully integrated, including passenger intermodal connections to air and intercity rail.

Intercity Transit

Base Case -- Existing intercity bus services would continue. Intercity rail service to Salem, Albany and Eugene would include two trains a day and feeder bus routes. Operating speeds and reliability would stay at existing levels.

Moderate Commitment -- For intercity service, increased funding would allow an upgrade of the Willamette Valley mainline to higher minimum, average and maximum (79 mph) speeds and elimination of speed restrictions in selected locations. Service frequencies and additional feeder bus service would be increased. Levels of intercity bus services recommended for the Valley in the OTP would be achieved. There would be agreements between local transit systems for expanded intercity services, provided by public and/or private sectors in key corridors.

High Commitment -- High-speed rail would be upgraded to 125 mph standards with added service frequencies in the Valley. There would be a separate, dedicated right-of-way for passenger high speed rail facilities or sufficient dual tracking to preclude train delays. An extensive feeder bus service would support the rail service. Inter-urban passenger rail would be developed between Portland, Newberg, McMinnville, and Salem.

Freight

Base Case -- Maintenance and incremental improvement of the region's highway system, planned improvements to the Port of Portland, and limited rail improvements all would benefit freight and goods movement, but most investment in facilities would occur through private sector activity. Examples include investment in freight rail equipment, improved rail tunnel clearances,

track and rail yards, intermodal rail hubs and trucking terminals. Consolidations of trucking firms in an environment shaped by the de-regulation of intra-state trucking would continue.

Moderate Commitment --Public investment would deepen the Columbia River channel for use by larger vessels, as part of the OTP's statewide program for ports and marine facilities. Public improvements in highway/road access to public and private intermodal facilities would improve the efficiency of freight handling and decrease costs to consumers. Such improvements would include traffic signalization, road access improvements, better connections to the mainline elements of the freight systems, transportation system management (TSM) improvements to improve freight capacity and rail/road crossing enhancements. Mainline rail lines would increase capacity through improved traffic control and accelerated consolidation of grade crossings using a combination of public and private investment. Intermodal facilities would increase efficiencies through improved operations and some public private partnerships. Land use plans would be developed to support appropriate adjacent uses.

High Commitment -- Through public/private partnership a major new regional intermodal facility for containers and trailers on rail flat cars would be developed on a new site with appropriate land use designations, outside existing urban areas. Freight and goods movement would benefit from adequate investments in ground access. There would be public/private agreements for open access to intermodal facilities, rather than a continuation of current practice limiting access to the private owner-operators. Adequate land would be preserved to accommodate intermodal freight terminals. New incentives would increase efficiency, altering local and domestic truck shipment patterns, leading to increased deliveries at off-peak and night times. Development of high speed passenger rail would occur in a manner which minimizes conflicts between these two types of rail services. Satellite domestic intermodal facilities would be strategically located in Salem, Albany and Eugene.

Aviation

Base Case -- Current airport expansion and additional expansions consistent with current plans would be completed in Portland and runway expansion would occur in Eugene. Some federally funded improvement projects in Portland and Eugene would take place. At the Salem airport commercial service would not be re-established. There would be no major changes in levels of access to air freight.

The Albany Airport would close and the site redeveloped into business and tourism related facilities. Plans for a new Linn County Airport would be developed but not implemented. Ground access to commercial airports would benefit from improvements in signage and signalization, but no additional improvements would occur.

Moderate Commitment -- A consolidation of some general aviation facilities would be considered if this would result in more efficient use of public dollars. Investments would improve access to commercial airports for passengers and freight by highway, transit and rail. These would occur through public/private partnerships. Local governments would increase their protection of vacant lands in airport environs.

High Commitment -- Commercial aviation facilities would operate in Eugene, Salem and Portland, all current MPO areas in the Valley. Land uses adjacent to airports would be appropriately managed to support aviation and minimize conflicts with other activities. General aviation facilities would operate under the same principles of cost responsibility as all other modes.

Other Modes - Bicycle/Pedestrian

Base Case -- Some progress would be made in developing new pedestrian facilities or bike facilities. All new facilities or major construction would include these. Several communities would increase their allocation of state highway fund revenues toward these facilities within existing rights-of-way. Some passenger intermodal improvements would also be supported through existing state and federal programs.

Moderate Commitment -- Flexibility in funding would allow for increased right-of-way acquisitions for pedestrian facilities and for bicycle facilities, including paths, lanes and parking facilities. This would allow for a stronger, connected network of facilities that results in more use. "Bike Central" facilities would be constructed in metropolitan areas with facilities for parking and storing bikes and for showers and locker rooms for riders.

High Commitment -- The further development of new technology and state mandates would result in more use of zero-emission vehicles. Intermodal passenger hubs would exist in all major cities. Information on all modes and modal connections would be widely and easily available.

Bicycle facilities and pedestrian facilities would be implemented in a fully coordinated system. Auto garages or parking spaces would in some locations be converted to bike parking facilities.

ITS/IVHS

Base Case -- Ramp metering would be used in all major cities on I-5. Incident management and ATMS in the form of vehicle data stations, variable message signs and closed circuit television would occur in the Portland metropolitan area.

Moderate Commitment -- Additional funding would be available for ITS/IVHS technology which would be implemented along I-5. Incident management, in the form of Incident Response Vehicles and Incident Response Teams, and an Advanced Traffic Management System (ATMS) would be implemented through the Salem urban corridor and, to a more limited extent, through the Eugene urban corridor. Data stations and volume and vehicle classification would be installed in rural sections of the Portland to Eugene corridor.

High Commitment -- ITS/IVHS technology implemented under the moderate alternative would be expanded to include incident management and freeway surveillance in the rural sections of I-5 between Portland and Eugene. An Advanced Traveler Information System would be implemented providing users with real time traffic and roadway condition information as well as diversion route suggestions, as appropriate. Travelers Aid would be implemented in the form of environmental warning systems for ice, fog, smoke, excess rainfall, etc. In-vehicle information systems would include speed control, pricing meters and safety data.

Transportation Management

Design Standards

Base Case -- MPOs and local governments would minimally comply with the Transportation Planning Rule to allow transit-oriented development and facilitate bicycle and pedestrian trips. In some cases, such as along light rail transit lines and along major bus lines, regulations requiring transit-oriented development would be adopted.

Moderate Commitment -- Local governments would be relatively successful in working with the private sector to develop design standards which foster pedestrian-friendly environments along transit routes. These standards would be applied to all new development and redevelopment within MPOs and, to some extent, in the smaller outlying communities. Some funds would be available to retrofit older neighborhoods with improved pedestrian access; all new areas would be required to provide better pedestrian amenities in a master "specific" plan.

High Commitment -- Local governments would develop and implement design standards which foster pedestrian-friendly environments along transit routes. Adequate funding would be available to retrofit existing neighborhoods with

improved pedestrian access and assist the private sector in redeveloping neighborhood centers.

Access Management

Base Case -- Local governments would minimally comply with requirements of ODOT's Highway Plan and the Transportation Planning Rule. ODOT corridor planning would help address access management issues along state highways, though policies would be inconsistently applied.

Moderate Commitment -- Local governments and ODOT would work together to develop and enforce access management standards for state highways, including corridor plans and arterial streets, improving carrying capacity and safety.

High Commitment -- Adequate funding would be available to develop such alternatives as frontage roads or redevelop local street systems to handle local traffic. Existing facilities of regional and state significance would be retrofitted with better access controls.

Interchange Development

Base Case -- Existing local land use plans for development at state freeway interchanges would be fully built out. Older interchanges would begin to undergo private redevelopment into more intensive, auto-generating land uses allowed in local zoning codes.

Moderate Commitment -- Increased attention would be given to interchange development. A new LCDC rule would be adopted requiring local governments to review plans and zoning for interchanges and put more restrictions on the type and amount of uses which would be allowed. ODOT would refine its policy on new interchanges to address these land use issues.

High Commitment -- No new programs above the moderate level.

Local TDM Programs

Base Case -- Local Transportation Demand Management (TDM) programs would include Tri-Met's Regional Rideshare program which includes rideshare matching, employer outreach, administration of a parking incentives program, transit pass promotions and education. Similar programs would operate in Salem, Eugene, Corvallis and Albany. An employer transit pass program would be continued in Eugene. An employer trip reduction program would begin in Corvallis.

The City of Portland would continue the parking management program that limits the ratio of parking spaces to floor area allowed in the Central City Plan area. Restrictions on surface parking lots and non-accessory parking would continue in Portland. Other jurisdictions such as Eugene would institute similar parking management programs, especially in the downtowns.

Moderate Commitment -- New TDM programs would be instituted to provide information about telecommuting, the attractiveness of transit and ride-sharing. These programs would focus on employers, employees and youth.

High Commitment -- No additional changes from the Moderate Commitment.

Employer-based TDM Programs

Base Case -- In the Portland region the State Department of Environmental Quality would institute a mandatory employer trip reduction program (Employee Commute Options) for firms with 50 or more employees in the 1995-2006 period, though enforcement would be limited.

Moderate Commitment -- This type of program would be required of more employers in all metropolitan areas and would include a menu of choices for required trip reduction, such as incentives to use pedestrian/bike access to work with coupons for taxis/bus tickets for emergency use; a dial-a-ride van service; parking fees for single-occupancy vehicles driven to work; and transit passes for those who used transit to work. The DEQ trip reduction and parking management programs would be fully implemented in the Portland metropolitan area. There would be TDM Program Coordinators, on-site at the large employers, and through the MPOs for the smaller employers. The Legislature would support educational and informational programs through the public school system.

High Commitment -- The type of program described in the Moderate Scenario would expand to serve all employers regardless of size through information sharing, technical assistance and other services.

State TDM Programs

Base Case -- A Regional Parking Ratio program would also be instituted by DEQ as part of the ozone maintenance plan for the Portland region.

Moderate Commitment -- Some roadway improvements to increase the capacity of the existing facilities without new construction, such as HOV lanes, bike lanes, and queue jumping lanes for HOVs, as well as new HOV facilities in metro areas would be built.

High Commitment -- A parking management strategy for the Valley as a whole that used the techniques of the DEQ Portland program would be

instituted. This would include a parking ratio and a trip reduction program for all employers.

User Fees

Base Case -- The current commitment to cost responsibility for commercial and passenger vehicles for road improvements would continue. No new user fees would be instituted.

Moderate Commitment -- The current cost responsibility framework would be expanded. User prices that reflect better the costs of transportation choices for commercial vehicles and commuters would be implemented. These would include the following: user fees that more accurately reflect their impact costs, such as toll, fuel and weight-mile taxes; employee parking fees in metropolitan areas; rental car surcharges and an auto emissions charge based on VMT and relative vehicle emissions, such as a "cubic-inch charge" based on engine size.

High Commitment -- The cost responsibility framework would expand to include the full social, environmental and economic costs associated with the use of transportation facilities of all kinds. For example, in addition to the fees instituted in the Moderate Scenario, a passenger vehicle charge would be implemented with a variable rate based on time of use. This would result from a regionwide study of congestion-based charges. Other transportation "utility fees" would recover costs of service, based on site-specific trip generation rates. Consistent with these principles, funds could be used to cross-subsidize modes and projects to achieve Valley and state goals.

Financial and Institutional

Base Case -- State and local funding for transportation projects would be constrained for highway and other roadway improvements, continuing at the current levels and focusing on maintaining current conditions. Only those state-funded projects reflecting critical problems of statewide or regional significance, as identified in ODOT's STIP, would be addressed. Maintenance would decline. Other transportation projects would be downscoped or delayed. These same resource constraints affect programs. The current transportation funding restrictions on use of the highway fund would remain in place.

Federal funding through the Intermodal Transportation Efficiency Act (ISTEA) would continue at the current level throughout the planning period. However, cities would lose their state shared revenues (liquor and cigarette taxes), reallocated to other priorities.

The Base Case assumes continued support for Oregon's land use program without major changes in land use and transportation planning, and no new programs would be developed. Local governments would partially implement the TPR with available funds. Some grants, comparable to those experienced

in 1993-1994, would be available to local governments to carry out state-mandated changes to plans and ordinances and to undertake transportation planning.

The Base Case assumes few changes in the institutions or political framework in which land use and transportation planning occurs. The creation of a new MPO would occur in Albany/Corvallis. MPOs in Salem and Eugene would acquire more responsibility, as their regions grow to become TMAs (Transportation Management Areas) under ISTEA. However, most jurisdictions in the Valley would continue to plan and work separately or on a subregional basis.

Moderate Commitment -- Over the planning period, there would be a gradual improvement in the funds available to conduct land use and transportation planning at the local government and MPO level. DLCD also would have more funding to provide sustainable support for planning by local governments, support for resolution of regional issues and better coordination among agencies. The state would adopt new enabling legislation for state and local government to develop new funding sources to carry out public-private partnerships (e.g., toll facilities, intermodal facilities). There would be increased flexibility to spend new state transportation funds for other modes, for example, through a state constitutional amendment. All local transit systems would have equal revenue raising powers.

Increased funding would be allocated to fund local and regional TDM programs. Some of these funds would come from parking fees that would be used to fund transit passes and TDM program coordinators. Other user fees would be dedicated to funding facility improvements.

The increase in funding sources would enable DLCD, ODOT and other state agencies to develop better information on which to base state-mandated standards, rules and other directions. There would also be long-term planning grants from the state to local jurisdictions, similar to the grants of the 1970s, enabling them to implement the TPR and strengthening the land use program.

The focus in the Valley would be on coordination and cooperation. Planning for the Valley as a whole would be institutionalized.

High Commitment -- Local governments would have adequate funding to conduct transportation and land use planning and projects to meet growth requirements as well as funding for aggressive implementation of many programs, including public education and marketing, needed to achieve local, state and federal goals. This funding level would result from improved voter confidence as well as equitable funding from users and all levels of government.

With an improved funding picture, the state would be able to rely more on new incentive programs for local governments and the private sector than on developing new regulations. Thus, the state would provide funding for transportation improvements when local communities demonstrate their ability to develop effective tools to decrease reliance on the automobile.

The Valley Coordinating Council would work on behalf of the entire region to achieve transit and land use goals. It would have power to make decisions and implement projects which meet Valley-wide goals. New institutional responses would emerge to interstate and international issues, such as Portland-Vancouver, Washington growth issues and the Eugene-Vancouver, B.C., high speed rail service.

Local governments within MPOs would make major agreements to cooperate in transportation and land use matters. Some of this would be facilitated by funding programs which, for example, provide for tax base sharing, reducing competition for tax base and fostering teamwork in meeting regional goals.

A Valley Transit District would operate transit services regionwide. Local governments would implement and enforce the TDM programs, as well as collect and use the fees.

C. Evaluation of Scenarios

The evaluation of the scenarios focuses on the transportation and management elements. To do this, the consultants made some assumptions about the scenarios to reduce the number of dimensions that must be considered simultaneously. A new assumption was made about commitment: The scenarios will vary mainly in terms of their level of funding. Land use assumptions were held constant and those on page -- were applied to all scenarios.

Two methods of evaluating scenarios were developed. One is based on a list of performance criteria developed by V-PACT. A second evaluation based on cost-effectiveness at meeting various transportation goals was developed to clarify the trade-offs inherent in transportation policy-making.

Using V-PACT-Developed Performance Measures

The consultants applied V-PACT developed performance measures to each of the three scenarios. The results are summarized on Table 2 listed according to transportation goals from the OTP. Since the scenarios differ primarily in levels of commitment, a higher level scenario nearly always produces more benefits. The most significant deviance from this pattern is in funding. Several other performance measures do better at the moderate commitment level than the higher one.

Table 1
Summary of Final Scenarios Used In Evaluation: Willamette Valley Transportation Strategy

Scenario Elements	Base Case	Moderate Commitment	High Commitment
Transportation System			
Highways	Limited improvements; declining maintenance	North-south and east-west state and local improvements	Strategic capacity enhancements, added links
Local Transit	Planned projects in metropolitan Portland, little elsewhere	Enhanced urban and rural services; more new projects	Fully developed, integrated systems
Intercity Transit	Current passenger train and bus service	Upgraded speeds; increased level of service	High speed rail
Freight	No major public investments	Public intermodal facility investments	New, intermodal facilities with open access
Aviation	Portland and Eugene expansion; no expansion elsewhere	Improved airport/ground access; consolidation of general aviation	Commercial service in all major metropolitan areas
Other Modes	Incidental bicycle/ pedestrian projects	Bicycle and pedestrian networks	Intermodal passenger hubs; "zero-emission" vehicles
IVHS	Ramp metering on I-5 Valley wide, incident management in Portland	Valley wide incident management	In-vehicle systems
Transportation Management			
Design Standards	Develop standards to comply with Transportation Planning Rule; little implementation	Pedestrian-friendly development occurs along transit routes in cities	Existing neighborhoods redevelop to meet design standards
Access Management	Inconsistent policies and enforcement	Enforcement of statewide standards	Retrofitting of existing, substandard facilities
Interchange Development	No new initiatives	Coordinated state and local planning standards	Same as moderate commitment
Local Programs	Rideshare, transit promotion and parking management in major cities	Expanded educational programs	Same as moderate commitment
Employer-Based Programs	Employer-based trip reduction in metropolitan Portland	Metropolitan area employer-based trip reduction programs	Valley-wide programs and services
State Programs	Parking and trip reduction in metropolitan Portland	New HOV lanes and facilities	Valley-wide parking and trip reduction programs
User Fees	Current commitment	Expanded cost responsibility policies	Full cost responsibility; congestion pricing

Table 2

EVALUATION OF SCENARIOS USING VPACT DEVELOPED PERFORMANCE MEASURES

How well does the scenario do the following:	SCENARIOS		
	Base Case	Moderate Commitment	High Commitment
Goal 1: Characteristics of the system			
Provide for a wide range of mode choices for users, both passengers and freight	O	●	●
Enhance access to multi-modal facilities and improve connectivity between public and private modes for passengers and freight	O	⊙	●
Reduce the proportion of single-occupancy (SOV) work trips	O	⊙	●
Reduce vehicle miles traveled (VMT) within metropolitan areas	O	⊙	●
Meet established minimum levels of service on state highway facilities	O	⊙	●
Enhance east-west travel times within the Valley	O	⊙	●
Provide accessibility to mobility impaired individuals, for both intra and intercity trips	O	⊙	●
Reduce system accidents, injuries and fatalities	O	⊙	●
Goal 2: Livability			
Provide for land use densities that support local transit	O	O/⊙	⊙/●
Assure attainment of air quality standards for Valley residents	O	O/⊙	⊙/●
Reduce transportation energy consumption	O	O/⊙	⊙/●
Increase the percentage of residents living within UGBs	O	O/⊙	⊙/●
Maintain community identity by preserving undeveloped areas between urban areas	O	O/⊙	⊙/●
Goal 3: Economic Development			
Provide increased ability to export Valley commodities	O	●	●
Help stimulate growth in Valley employment and income	O	●	●
Improve the efficiency and decrease the costs of goods movement	O	⊙	●
Goal 4: System Implementation			
Foster consistency in state, regional, and local transportation plans	O	⊙	●
Protect corridors of statewide significance, specifically by improving access management	O	●	●
Fairly allocate costs of the system to the users and beneficiaries of the system	O	⊙	●
Provide for consistency in comparing costs and benefits	O	⊙	●
Fit with available or reasonably projected funding	●	O	O

Legend: ● Performs best on this criterion ⊙ Contributes to this criterion O Does not contribute substantially to this criterion

Using Cost-Effectiveness Measures

The consultants evaluated each scenario to determine the most cost effective actions to support three transportation goals--Mobility, Industrial Growth, and Livability. The evaluation points out the tradeoffs that are involved in transportation policy making. Cost effectiveness is a way of measuring benefits per unit of cost. It expresses how far any particular element or strategy goes toward a particular goal. Each goal seeks different results and has different ways of measuring benefits for each public dollar spent. Some elements will have diminishing returns, for in many elements there is a limit as to how much spending is effective. The highest level of spending on transportation demand management, for example, may be less cost effective than moderate levels.

Transportation Goals

The three transportation goals reflect different concerns and different results for the transportation system.

- **Mobility** focuses on improved travel times and reduced congestion in the short run. Generally for the Valley as a whole this means enhancing highway capacity to improve passenger movements. In densely populated areas like Portland, it also means improving public transit systems. Mobility allows a wide range of options about where to live and work.

  The cost of vehicle hours travel saved and the cost of vehicle hours of delay avoided are ways to measure the effectiveness of enhancing Mobility.

- **Industrial Growth** fosters the expansion and diversification of the Oregon economy as increased transportation efficiencies make Oregon industries more competitive. Industrial Growth means improvements in the movement of goods by truck, rail, ship and air and more efficient transfers in intermodal hubs.

  Industrial Growth cost effectiveness can be measured by the cost of commercial vehicle hours of travel saved, the cost of ship, air and rail shipment delays avoided, and the hours of modal transfer time saved.

- **Livability** depends on transportation investments and programs to support the economic and livability goals of the Oregon Transportation Plan in the long run. More travel choices are provided, dependence on the automobile is reduced, and resources are conserved.

  A measure of cost effectiveness for Livability is the savings from automobile trips avoided.

The consultants point out that pursuit of the three goals leads to the conclusion that the most cost-effective strategy to achieve any of the goals must involve changing the prices experienced by users of the Valley's transportation system. In the Moderate and High Commitment scenarios, user fees consistently rank as most cost-effective.

Evaluating Cost Effectiveness

Tables 3 through 5 summarize the cost effectiveness of the elements in each scenario for each transportation goal. The rows indicate the element of each scenario. The goals are identified along the columns (Mobility, Industrial Growth, Livability). The dark circles identify the most cost-effective actions, the circles with a dot the moderately cost-effective options in comparison to other choices, and the blank circles the least cost-effective options. All transportation elements were compared for each transportation goal. In other words, comparisons were made between the elements in each transportation goal column, not across the rows. The text summarizes the discussion.

How to read the tables:

1. The most cost-effective elements change depending on the level of funding available and the scenario elements. Use Table 3 for the base case to determine the most cost-effective actions for transportation.

2. If being able to get around without congestion is the most important transportation goal, the Mobility column will identify the "best buys." Reading down the column, identify the most, moderately, or least cost-effective actions at current funding levels.

3. If higher levels of funding were available, use Tables 4 and 5 for the moderate and high commitment scenarios.

Base Case Scenario

This scenario assumes that funding continues at current levels. With today's resources, the number of effective actions that can be taken is limited. (See Table 3)

Mobility -- Use the limited funds to improve highways, implement ramp metering on I-5 and incident management in the Portland area, and support rideshare and transit promotion programs and parking management in Portland, Salem, and Eugene. By targeting places where congestion problems are most severe, the greatest improvements will be made. Improving local and intercity transit and implementing the DEQ employer trip reduction program

Table 3

Base Case Scenario

Evaluation of Cost Effectiveness for Transportation Goals

Elements	Summary	Cost Effectiveness for Transportation Goals		
		Mobility	Industrial Growth	Livability
Transportation System				
Highway	Limited improvements; declining maintenance	●	●	○
Local Transit	South-North light rail in Portland; little elsewhere	⊙/●[1]	⊙	●
Intercity Transit	Current passenger trains service, current bus service	●	⊙	●
Freight	No major public investments	○	⊙	○
Aviation	Portland and Eugene expansion	○	●	○
Other Modes	Incidental bicycle/pedestrian projects	⊙	○	○
IVHS	Ramp metering on I-5 Valley wide, incident management in Portland	●	●	○
Transportation Management				
Design Standards	Develop standards to comply with Transportation Planning Rule, little implementation	⊙	○	●
Access Management	Inconsistent policies and enforcement	○	○	○
Interchange Development	No new initiatives	○	○	○
Local TDM Programs	Rideshare and transit promotion plus parking management in major cities	●	○	●
Employer Based TDM Programs	Trip reduction in metropolitan Portland	⊙	○	⊙/●
State TDM Programs	Parking and trip reduction in metropolitan Portland	⊙	⊙	⊙
User Fees	Current system	⊙	⊙	○

Legend: ● Most Cost Effective ⊙ Moderately Cost Effective ○ Least Cost Effective

Note: Cost-effectiveness comparisons were made between the elements in each transportation goal column.

1 Highest cost-effectiveness is in dense, transit-oriented metropolitan areas such as Portland.

in Portland would also support Mobility, but for the Valley would be less cost effective than the other programs.

Industrial Growth -- Use public funds to improve connections to intermodal and freight shipment facilities, implement ramp metering on I-5 and incident

management in the Portland area, and complete planned expansions at Portland International Airport. Selected highway investments will improve truck movements on interstates and other highways and airport expansions will assist the growing air freight sector. Improved local and intercity transit would also enhance truck movement, but would do so indirectly and with less benefit to freight, since most highway traffic consists of passenger vehicles. Private investments in intermodal freight facilities would also help reduce freight costs.

Livability -- Use the limited public funds to support the continuation of local and intercity transit service, develop design standards to comply with the Transportation Planning Rule, support rideshare and transit promotion programs and parking management in Portland, Salem, and Eugene and implement DEQ's Employee Commute Option program in the Portland metropolitan area. These programs provide and promote travel options within and between major cities and establish standards that can result in more pedestrian-friendly, transit-oriented development. Implementing the DEQ employee commute option and parking ratio rules in the Portland metropolitan area also encourages alternatives to auto use, but does not affect the entire Valley.

Moderate Commitment Scenario

More funds are available in this scenario, making a wider range of actions of feasible. For each goal, this scenario includes building on the cost-effective actions of the base case and adding new elements. (See Table 4)

Mobility -- Use additional public funds to improve the capacity of highways, implement incident management in all urban areas along I-5, enforce standards for access management on all highway projects, develop and implement a new DLCD rule on interchange development, expand educational programs regarding alternatives to automobile use, and develop and implement new user fee programs. New and expanded fee programs could provide additional funds and will provide motorists with appropriate information about the full cost of driving. These programs will improve traffic flow and reduce congestion throughout the Valley. Substantial investments in intermodal facilities and in employer-based trip reduction programs in all cities would also support congestion reduction but are less cost-effective than the previous measures, in terms of reducing vehicle hours of travel.

Table 4
Moderate Commitment Scenario
Evaluation of Cost Effectiveness for Transportation Goals

Elements	Summary	Cost Effectiveness for Transportation Goals		
		Mobility	Industrial Growth	Livability
Transportation System				
Highway	North-south and east-west state/local improvements	●	●	○
Local Transit	Enhanced urban and rural services; more new projects	⊙	○/⊙	●
Intercity Transit	Upgraded speeds; increased level of service	⊙	○[1]	●
Freight	Public intermodal facility investments	⊙	●	○
Aviation	Improved airport ground access; consolidation of general aviation	○	●	○
Other Modes	Bicycle and pedestrian networks	⊙	○	●
IVHS	Valley wide incident management	●	●	○
Transportation Management				
Design Standards	Pedestrian-friendly development along transit routes in cities	⊙	○	●
Access Management	Enforcement of statewide standards	●	●	○
Interchange Development	Coordinated state and local planning standards	●	●	○
Local TDM Programs	Expanded educational programs	⊙/●	○/⊙	●
Employer Based TDM Programs	Metropolitan area employer-based trip reduction programs	⊙	○/⊙	⊙/●
State TDM Programs	New HOV lanes and facilities	⊙	⊙	⊙
User Fees	Expanded cost responsibility policies	●	●	●

Legend: ● Most Cost Effective ⊙ Moderately Cost Effective ○ Least Cost Effective

Note: Cost-effectiveness comparisons were made between the elements in each transportation goal column.

1 Cost effective benefits will occur to business travelers, but not in the movement of goods.

Industrial Growth -- Use the additional public funds for all the most cost effective Mobility measures listed above, except expanded educational programs on alternatives to automobile use (since most of the benefits go to passenger vehicle occupants). This would enhance goods movement by truck throughout the Valley, provide additional funding for improvements, and encourage the use of the most efficient freight modes. In addition, use public and private funds to expand existing intermodal facilities and improve ground access by all modes to airports. This enhances connectivity between freight modes. Enhanced local transit and the more effective programs to promote alternatives to automobile use would also reduce congestion for truck traffic, but are not as cost effective in promoting the efficient movement of goods as the more direct measures.

Livability -- Use the additional public funds to meet the OTP standards for urban and rural transit, develop bicycle and pedestrian networks, work with the private sector to build transit-oriented development, expand educational programs on alternatives to automobile use, expand employee trip reduction programs to other major cities, and develop and implement new user fee programs. New and expanded fee programs could provide additional funds and provide individuals with appropriate information about the costs of different transportation modes. Together these programs will reduce reliance on the automobile and conserve resources. Employer-based trip reduction programs in all major cities would also support Livability, but are estimated to be less cost effective than the other actions, including changing user prices.

High Commitment Scenario

This scenario assumes a higher level of funding than the moderate commitment scenario. It is possible to carry out more transportation system or management activities, but with some activities there begin to be diminishing returns. (The additional dollars spent will not produce the same level of results as previous dollars spent.) At this level all of the cost-effective activities at the moderate commitment level should be continued and additional strategic actions should be taken. (See Table 5)

Mobility -- Add additional strategic highway capacity enhancements, new links in the highway system, and Valley-wide congestion pricing to the moderate commitment activities. The highway projects would reduce congestion in crucial locations. Congestion pricing would promote efficient use of highways as well as provide the additional funds necessary for the high commitment scenario. New in-vehicle IVHS systems and retrofitting of existing highways with access controls would also reduce congestion, but are less cost effective.

Table 5
High Commitment Scenario
Evaluation of Cost Effectiveness for Transportation goals

Elements	Summary	Cost Effectiveness for Transportation Goals		
		Mobility	Industrial Growth	Livability
Transportation System				
Highway	Strategic capacity enhancements, added links	⊙/●	⊙/●	○
Local Transit	Fully developed, integrated systems	⊙	○	⊙
Intercity Transit	High speed rail	⊙	○[1]	●
Freight	New, intermodal facilities with open access	⊙	⊙	○
Aviation	Commercial service in all major metro areas	○	●	○
Other Modes	Intermodal passenger hubs; "zero-emission" vehicles	⊙	○	⊙/●
IVHS	In-vehicle systems	⊙	⊙	○
Transportation Management				
Design Standards	Existing neighborhoods redeveloped to meet standards	⊙	○	⊙
Access Management	Retrofitting of existing, substandard facilities	⊙	⊙	○
Interchange Development	Coordinated state and local planning standards	●	●	○
Local TDM Programs	Expanded educational programs	⊙/●	○/⊙	●
Employer Based TDM Programs	Valley-wide programs and services	⊙	○/⊙	⊙
State TDM Programs	Valley-wide parking and trip reduction programs	○/⊙	○	⊙
User Fees	Full cost responsibility; congestion pricing	●	●	●

Legend: ● Most Cost Effective ⊙ Moderately Cost Effective ○ Least Cost Effective

Note: Cost-effectiveness comparison were made between the elements in each transportation goal column.

1 Cost effective benefits will occur to business travelers, but not in the movement of goods.

Industrial Growth -- Add strategic highway investments of importance to industry, commercial air service in all major cities, and Valley-wide congestion pricing to the moderate commitment activities. New in-vehicle IVHS systems, retrofitting of existing facilities to improve access and the construction of new, open access intermodal freight facility would also enhance efficiency but are relatively more costly.

Livability -- In addition to carrying out the moderate commitment cost effective activities, fully develop intermodal passenger hubs and bicycle and pedestrian networks, encourage the use of zero emission vehicles, and implement Valley-wide congestion pricing. This will add to the transportation options available to Valley residents. Full cost pricing will help individuals make wise decisions about travel behavior and modes. Further local transit improvements and redevelopment of existing neighborhoods to meet design standards would help meet Livability goals but are not as cost effective as the recommended activities.

Investment Strategies

Nine investment strategies emerged from the cost effective evaluation. Each strategy in Table 6 shows the most cost effective elements at each level of commitment for each of the transportation goal. Table 6 shows, for example, that at the base case level of funding, the most cost effective investments for Mobility are highways, IVHS and local TDM while for Livability the best investments are local and intercity transit, design standards and local and employer-based TDM. More elements are included in each investment strategy at the moderate commitment level than at the base case level because there are more resources available to invest. The list becomes shorter at the high commitment level because some elements have diminishing rates of return making the highest level of effort less cost effective than the moderate level. In all cases the high commitment investment strategies include the actions of the relevant moderate commitment strategy.

In order to implement cost-effective programs, a number of changes in funding, legislation, state and local regulations, and institutions may be needed. This section summarizes implementation actions needed for each investment strategy.

Base Case Scenario

The base case would use existing regulations, funding, and institutions for all transportation goals.

Table 6

WILLAMETTE VALLEY INVESTMENT STRATEGIES
Most Cost Effective Policies to Support Different Transportation Goals at Base Case, Moderate, and High Funding Levels

		SCENARIOS		
Transportation Goal	**Description**	**Base Case (Status Quo)**	**Moderate Commitment**	**High Commitment**
		Target limited resources to the most cost-effective actions for each goal.	*Add the listed activities to the base case actions.*	*Add the listed activities to the base case and moderate commitment actions.*
Mobility	Improve passenger vehicle mobility by reducing congestion and improving traffic flows and times. Performance Measure: Vehicle hours of travel time saved or vehicle hours of delay avoided.	Highways - Limited improvements Local Transit - Add planned projects in metro Portland Intercity Transit - Continue recently established service IVHS - I-5 ramp metering, incident management in Portland Local TDM - Rideshare, transit promotion and parking management in major cities	Highways - North-south and east-west state and local improvements IVHS - I-5 urban area incident management Access Management - Enforcement of statewide standards Interchange development - Coordinated state and local planning standards Local TDM - Expanded educational programs User Fees -Expanded cost responsibility policies, employee parking fees, auto emission fees	Highways - Strategic capacity enhancements, added links User Fees - Full cost responsibility, congestion pricing
Industrial Growth	Enhance the movement of goods and commercial vehicles. Performance Measure: Commercial vehicle hours of travel time and modal transfer time saved.	Highways - Limited improvements Aviation - Portland expansion IVHS - I-5 ramp metering, incident management in Portland	Highways - North-south and east-west state and local improvements Freight - Public intermodal facility investments Aviation - Improved ground access; consolidation of general aviation IVHS - Valley wide incident management Access Management - Enforcement of statewide standards Interchange development - Coordinated state and local planning standards User Fees -Expanded cost responsibility policies, employee parking fees, auto emission fees	Highways - Strategic capacity enhancements, added links Aviation - Commercial service in all metro areas User Fees - Full cost responsibility, congestion pricing
Livability	Reduce dependence on the automobile and conserve resources. Performance Measure: Cost of vehicle trips avoided.	Local Transit - Add planned projects in metro Portland Intercity Transit - Continue recently established service Design Standards - Develop standards to comply with Transportation Planning Rule Local TDM - Rideshare, transit promotion and parking management in major cities Employer Based TDM - Trip reduction in Portland metropolitan area	Local Transit - Enhanced urban and rural services Intercity Transit -Upgraded speeds; more service Other Modes - Bicycle and pedestrian networks Design Standards - Pedestrian-friendly development occurs along transit routes in cities Local TDM - Expanded educational programs Employer Based TDM - Trip reduction in all metropolitan areas User Fees - Expanded cost responsibility policies, employee parking fees, auto emission fees	Intercity Transit - High speed (110 mph) rail; further increase in service Other Modes - Intermodal passenger hubs; "zero-emission" vehicles User Fees - Full cost responsibility, congestion pricing

Moderate Commitment Scenario

Regardless of transportation goals, the moderate commitment requires more coordination of transportation plans and actions, possibly through the formation of a Valley Coordinating Council. The coordinating body would study and make recommendations on Valley-wide issues. More interagency agreements would be needed as well as more funding from some combination of new or higher fees and taxes or a constitutional amendment to allow greater flexibility in the use of highway funds.

Mobility -- More funding would be needed for highway projects. Intergovernmental agreements or local ordinances would be adopted for access management. A new DLCD rule and complying local standards would be developed for interchange development. Trip reduction ordinances would be adopted by local jurisdictions. Educational programs on telecommuting, ridesharing, and transit would be developed and funded.

Industrial Growth -- More funding would be needed for highway projects and for intermodal freight facilities. Intergovernmental agreements or local ordinances would be adopted for access management. A new DLCD rule and complying local standards would be developed for interchange development. Private buy-in and public-private agreements would be needed for intermodal facility expansion and improved access to airports.

Livability -- Higher levels of funding and coordinated planning would be needed for transit, bicycle and pedestrian modes and for TDM programs. New design standards would be adopted by local jurisdictions and the private sector would build transit-oriented development. Educational programs on telecommuting, ridesharing, and transit would be funded and developed.

High Commitment Scenario

All the changes made for each goal in the moderate commitment scenario are part of the implementation actions needed here. This section only list additional actions that are above and beyond the moderate level.

For all transportation goals, a Valley Coordinating Council with power to make decisions and implement projects would be formed, possibly through legislative action. Financial incentives to encourage local governments and the private sector to participate would be developed. More agreements would be needed between MPOs and local governments. Higher levels of funding would be authorized. A congestion pricing program would be created and implemented.

Mobility -- Additional funding would be needed for highway projects. Better information would be needed to determine the most cost-effective projects.

Industrial Growth -- Greater public-private cooperation and additional funding would be needed to develop an open access intermodal facility at a new location. The private sector would expand freight air service to all metropolitan areas. Some public incentives might be needed for expanded air service.

Livability -- Funding and public-private sector agreements would be needed for the development of intermodal passenger hubs. Local governments would need power to enforce design standards or funds to offer incentives for their use.

These investment strategies provided VPACT with a means for making choices beyond level of commitment in developing their recommended strategy. The strategies identify actions that can be used to meet individual goals as well as some that can serve multiple objectives. They are one way of identifying the best actions, but other information such as political will must also be brought to bear in making final choices for the Valley.

III. RECOMMENDED STRATEGY

A. Development of the Recommended Strategy

VPACT selected elements of the nine investment strategies that generally reflected a "moderate level of commitment" and emphasized the goal of Livability based on the following considerations:

- Although the Oregon Transportation Plan's preferred transportation development alternative (Livability Approach) is basically the High Commitment, the 1993 Legislature did not approve a funding package to implement this alternative. Also, the climate in the near future is cloudy for passage of a major funding package that would be necessary for the High Commitment Scenario.

- Public input from the Willamette Valley Futures Conference, surveys of county planning commission members, and comments made at other public meetings tend to favor Moderate to High Commitment Scenarios.

- Strategies to achieve the Livability goal also support aspects of the Mobility and Industrial Growth goals as well.

- The Project Consultant's evaluation revealed that several scenario elements tend to be more "cost-effective" than others.

- The High Speed Rail Demand Analysis commissioned as part of the Willamette Valley Transportation Strategy project identified new opportunities for developing and integrating the Valley's future transportation network.

B. Description of High Speed Rail Project and Summary of Key Findings from the Demand Analysis

The OTP and the Oregon Rail Passenger Policy and Plan call for development of high speed rail services with trains approaching speeds of 125 mph using improved track. As a result, the states of Oregon and Washington jointly applied for and received federal high speed rail corridor status in 1992. The northwest corridor, extending from Eugene to Vancouver, B.C., is one of five high speed rail corridors designated nationwide.

The High Speed Rail Task Force, chaired by OTC Commissioner Susan Brody, is guiding the Oregon high speed program. The 14 members represent state, county and city governments, the Southern Pacific Railroad and Amtrak. The Task Force's work has been coordinated with the work of the Willamette Valley

Transportation Strategy Policy and Technical Advisory Committees and the Washington Department of Transportation.

In July 1993, the Oregon Legislature appropriated $500,000 for necessary planning and up to $10 million for implementation. The Legislature directed ODOT to prepare an overall financial plan for spending the available state and federal funds needed for the effort. In August 1994, the Oregon High Speed Rail Business Plan was completed.

The improvements proposed in the business plan represent an incremental staging of system development. Recommendations include both track improvements and service improvements in a building-block fashion, leading to the ultimate goal of high speed rail operation. The plan also includes an implementation strategy and plan, demand for high speed rail, system performance and cost recovery information, and a marketing program.

In September 1994, the Legislative Emergency Board granted approval to ODOT to begin improvements to the track, signals and crossings, and further passenger service enhancements, including an advanced high-tech train and expanded bus service, using $9 million in video lottery funds.

The demand analysis conducted for high speed rail in the Willamette Valley clearly indicates the attractiveness and competitiveness of intercity rail as a means of travel between Eugene, Portland and cities to the north. A draft report on this analysis is being completed as part of the Willamette Valley Strategy study. Key preliminary findings from that report include:

- Oregonians will respond strongly and favorably to improved intercity passenger rail service. Ridership is forecast to grow by 61 percent in response to one new train per day between Eugene and Portland, in addition to the two now in service. The addition of a fourth train daily is forecast to result in a further increase of 82 percent in daily ridership.

- Trains are a far more desirable mode for intercity travel in the Valley than buses. Stages 1 and 2 of the Willamette Valley High Speed Rail Business Plan have the same number of round trips per day, but Stage 2 with its emphasis on rail over buses results in 195 percent increase in ridership over current (Stage 1A) levels of two trains and five buses daily.

- Oregonians value the amenities associated with the new high quality train sets, whose attractiveness has already been demonstrated for short periods of time in the Willamette Valley. An important proportion of the forecast increase in ridership associated with later stages of the intercity rail plan is the result of the attractiveness of these train sets.

- Rail passengers in Oregon will respond favorably to the decreased travel times associated with improvement in each stage of the rail plan. They

respond more favorably to travel time savings than to reducing fares. The forecasts have assumed willingness of passengers to pay a premium fare for the higher quality service associated with later stages of the plan; ridership is forecast to increase substantially as a result of the premium service.

- The proportion of operating costs recovered from the farebox is forecast to improve at each stage of implementation of the rail passenger plan. As the frequency, speed and quality of service increases, the proportion of operating costs recovered at the farebox is forecast to increase as well. With the implementation of the third stage of service operating revenues are forecast to exceed operating costs, even under conservative assumptions for recovering costs of interstate trips made between Oregon and Washington.

- As the frequency, travel time and quality of travel service increases, the proportion of all passengers who use the trains for trips solely within Oregon also increases. While approximately 38 percent of current rail passengers make trips both with an origin and destination in Oregon, this proportion will increase from 42 to 45 percent in later stages. This is yet another indication of the attractiveness of intercity rail service to residents and businesses in the Willamette Valley.

- The proposed high speed rail passenger service will slow the growth of automobile travel on I-5. The analysis of the extent of its impact on I-5 travel will be completed by June 30, 1995.

Additional information on the demand analysis is found in Appendix D.

C. Recommended Willamette Valley Transportation Strategy

In developing a transportation strategy for the Willamette Valley's future, VPACT identified three distinct, but related, goals for the transportation system (1) mobility, (2) industrial growth, and (3) livability. VPACT chose to place primary emphasis on the goal of livability, but included significant commitments to the other two goals as well.

The strategy attempts to assess broad impacts of actions and identify the most cost-effective investments in transportation facilities for the Valley. It recommends a moderate level of increased financial and political commitment to developing and coordinating transportation system improvements.

The strategy has two primary components as follows:

1. VPACT recommends a **transportation development strategy** that gives top priority to improvements in the Valley's transportation system over the next 20 years. These investments are expected to produce the greatest

overall benefit to the Valley's economy and general livability in anticipation of an overall "moderate" increase in funding over current levels. They are selected and intended to work in combination to provide the most effective connected and balanced transportation system for the Valley.

The strategy for transportation development is summarized as follows:

- Recognize highways as the backbone of the Valley's transportation system for people and freight movement, but increase use of urban transit, intercity rail passenger systems and alternatives to the single occupant automobile, improve intermodal domestic freight facilities and rail connections to the Port of Portland and expand travel demand management.

- Phase transportation improvements over 20 years and tie the phases to the Statewide Transportation Improvement Program cycles.

- Recognize that the current funding level for transportation development is inadequate to carry out the investments envisioned in the proposed strategy. In addition, one of the key steps to be taken as part of the strategy is the completion of a comprehensive review of transportation finance alternatives that reexamines the fundamental principles and considers innovative approaches to funding and transportation system pricing.

2. VPACT recommends a **strategy for transportation coordination** described in Section IV. In summary, this strategy is as follows:

   - Form a Valley Livability Council with local/regional elected officials and private sector representation, appointed by the Governor of the Oregon Progress Board, to research and educate Valley leaders and residents about the impact of growth on transportation, land use and environmental quality.

   - Continue VPACT as an advisory group of primarily local/regional elected officials to counsel ODOT Region 1 (Portland metro) and Region 2 (Willamette Valley) on regional transportation issues and projects for the Statewide Transportation Improvement Program.

The strategy is provided as a guide for local, regional and state government decisionmakers and private and public sector transportation providers. It is not intended to limit actions by jurisdictions to only those listed, especially if other equally effective approaches can be found.

Description of Transportation Development Strategy Elements

Highways/Roadways

Highways are and will continue to be the primary facilities for the movement of intercity freight and passengers by a variety of modes. Therefore, continued maintenance and improvement of highways is necessary and will require the following actions:

- Develop methodology and decisionmaking process for selecting future highway projects that are based on consideration of full economic costs and benefits and rate-of-return.
- Select highway projects that maximize the net full benefits of the Valley's transportation system as a whole.
- Make strategic capacity enhancements to controlled access highways.
- Make strategic capacity enhancements to nonaccess-controlled intercity highways in the state network and to key local facilities such as urban arterials.
- Maintain regional highway linkages upon which rural communities are dependent to build viable communities.
- Improve north-south and east-west links to the existing state highway system.

Local/Regional Transit

Transit services are a necessary element for the success of the Valley Transportation Strategy. Transit will be a major contributor to the fulfillment of the strategy when it serves a significant portion of the Valley population and is convenient and affordable. It will help reduce vehicle miles of travel per capita, and support high speed rail development. Without increased capital and operational funding, existing transit service in various parts of the Valley may actually be reduced rather than expanded. Legislative authorization may be needed to enable transit districts to extend service beyond their boundaries. A commitment to at least minimum levels of transit service as outlined in the Oregon Transportation Plan requires the following actions:

- Expand existing urban transit services and systems to serve all parts of their regions.
- Provide transit service from metropolitan centers to neighboring cities with populations of 2,500 or more.

- Increase operational funding to support expanded local transit service.

- Develop urban transit systems in all cities of 25,000 or more.

Intercity Transit

The OTC selected the development of a high speed rail system in the Willamette Valley as one of its strategic initiatives considered critical to the state's transportation future. As part of the Pacific Northwest High Speed Rail Corridor, the Willamette Valley has much to gain economically by fast, reliable and frequent rail passenger connections. In addition to enhancing mobility, rail passenger service has inherent advantages for improving air quality, conserving energy and supporting the development of compact urban centers. This element of the strategy requires the incremental upgrading of intercity rail passenger services to the third of four stages identified in Oregon High Speed Rail Business Plan (August, 1994) and expansion of intercity bus services as recommended for the Valley in the Oregon Transportation Plan as follows:

High Speed Rail:

- Stage 1 -- Upgrade existing track and signals in order to achieve a 79 mph railroad speed over an optimum amount of the line. Add additional trains and feeder bus services.

- Stage 2 -- Upgrade the Willamette Valley mainline to speeds of 90 to 110 mph. Eliminate speed restrictions in selected track locations.

- Stage 3 -- Continue upgrading the Willamette Valley mainline to 110 mph standards. Add additional trains.

Intercity Bus:

- Daily round-trip bus service between major cities and neighboring small cities.

Freight

The expansion and diversification of Oregon's economy relies heavily on increased transportation efficiencies that make its industries more competitive. Industrial growth needs improvements in the movement of goods by truck, rail, ship and air in and through the Valley. Expansion of the Valley's intermodal hubs and the development of more efficient connections to them are key to better using the natural economic advantages of each form of freight transport. The following actions are required.

- Improve local and state highway networks that provide important connections to industrial areas, and intermodal facilities such as rail/truck reload centers and air and marine ports.

- Deepen Columbia River channel.

- Coordinate investments in high speed rail passenger trackage to improve speed and safety of rail freight service.

- Improve rail connections to Port of Portland.

- Preserve existing rail rights of way for future transportation needs.

- Develop domestic intermodal freight facilities in Salem, Albany and Eugene.

Aviation

Aviation supports roadway mobility by providing an alternative to driving for some intercity trips. Air freight is especially important to high value product industries, thus access to airports is important for industrial growth. Yet, the role and interrelationships of airports in the Valley is an ongoing question. Airport development and coordination in the Valley requires the following actions:

- Consider consolidation of some general aviation facilities where necessary to reduce operational costs and improve efficiency (e.g., Linn County).

- Through public-private partnerships, improve freight and passenger access to commercial airports by highway, transit and rail.

- Expand Portland and Eugene airports consistent with current plans.

- Manage land uses adjacent to airports to minimize conflicts with airport operations and public safety.

Bicycle and Pedestrian

Easy access to bicycle and pedestrian networks will encourage greater travel in urban areas by means other than the automobile. The Oregon Transportation Plan envisions walking and bicycle trips at double the present rate by 2012. Since most of Oregon's population resides within Willamette Valley cities, investment in urban bicycle and pedestrian systems will do the most to achieve this objective. Currently ODOT is preparing a statewide bicycle and pedestrian plan scheduled for adoption in June, 1995. The plan will emphasize improved

facilities for pedestrian and bicycle travel within urban areas. Bicycle/pedestrian improvements require the following actions:

- Include provisions for bicycle and pedestrian use in all new facilities and major construction.

- Build a stronger connected network of bicycle and pedestrian facilities, including routes off highway rights of way.

Intelligent Transportation System/Intelligent Vehicle Highway Systems (ITS/IVHS)

The application of new technologies provides new and cost-effective means of improving traffic flow and making existing modes of transportation safer and more efficient. Some technologies effectively add capacity to existing transportation facilities. The following actions are required to improve the utility of the transportation system.

- Extend incident management systems throughout the I-5 corridor and the Willamette Valley.

- Expand traffic control systems in the metropolitan areas including ramp metering and other means of managing vehicle flow.

Land Use and Design Standards for Urban Areas

Land development and transportation services are so interdependent that coordination is essential if Valley goals are to be achieved. Transportation investments designed to improve mobility, economic growth and livability need supportive land use measures. A moderate level of commitment for using land use and design standards in combination with transportation development elements of the strategy include the following actions:

- Adopt regulations requiring transit-oriented development along light rail transit lines and major bus lines, including minimum density requirements near transit services.

- Increase housing densities; redevelop and infill existing residential areas within urban areas.

- In cooperation with the private sector, develop design standards which foster pedestrian-friendly environments. Apply these new standards to all new and redevelopments within metropolitan areas and to some extent in smaller neighboring communities with transit service.

Access Management

The primary function of the state highway system within the Valley is to efficiently carry traffic between and through urban centers. However, the effectiveness of the system is eroding due to intense development along some corridors. The Transportation Commission adopted an access management policy as part of the Oregon Highway Plan. Protecting and enhancing state highway functions in the Valley requires the following action:

- In consultation with local governments, develop administrative rules on access management.

- In consultation with local governments, introduce Valley-wide access management standards in all state highway corridors in accordance with the access management policy of the Oregon Highway Plan, June, 1991.

Interchange Development

I-5, I-405, and I-205 are free-flowing interstate highway that provide primary access to the Valley's developing urban cores. Land developments along these corridors are increasing pressure for redesigned and additional interchanges which call into question the future role of the interstate system. Too many interchanges can reduce a freeway's efficiency for interstate and Valley-wide travel. Local land use decisions need to be coordinated with intercity policies so that existing and future interchanges can continue to serve primarily regional and interstate needs. The following actions are needed to address interchange issues:

- Develop administrative rules and standards for interchange development that limit nearby development to the capacity of existing interchanges.

- Refine ODOT's policy on new interchanges to address land use and regional issues.

- Integrate interchange plans with land use plans.

Transportation Demand Management Programs (TDM)

Managing the demand for highway transportation can be a cost-effective means of enhancing or extending the capacity of an existing roadway, thus avoiding the high costs of expanding the highway facility. Concurrent TDM programs will be necessary at the local, state and employer levels for the greatest impact. The following actions are necessary:

- In cooperation with the state, develop transportation demand management programs which educate and inform the public about motor vehicle use.

- Institute or expand programs on ridesharing, park-and-ride, transit promotion and parking management especially in metropolitan areas.

- In partnerships between public and private sectors, expand programs such as trip reduction (commute options), flex time and parking "cashout" programs in all metropolitan areas for both private and public employers.

- Coordinate employer-based programs with community transportation plan objectives.

- Expand state government employee regional ridesharing and carpool matching programs or flex time programs.

- Expand prepaid group transit pass programs in local communities.

User Fees

Prices charged for the use of transportation facilities and services greatly affect how they are used. To make more efficient use of the Valley's highway system and other forms of transportation, user fees will need to increasingly reflect the full cost of providing the facility. The following actions reflect a commitment to using prices to achieve increased mobility and livability in the Valley:

- Increase parking prices in urban areas of the Valley through a variety of means.

- Introduce peak period pricing techniques on key transportation facilities.

- Develop congestion pricing pilot project in Portland metropolitan region.

- Initiate/develop a toll facility and at least one additional congestion pricing project in the Valley.

Phasing of the Strategy

A key concept in the implementation of the Willamette Valley Transportation Strategy is the phased implementation of the recommended system improvements. VPACT recommends the strategy by carried out in phases that correspond to the State Transportation Improvement Program (STIP) update cycles. The first two phases are presented in four-year increments with the third phase extending 12 years to reflect the fact that the timing of later actions is less certain than earlier actions.

Phase One (4 Years: 1995-1998)

The first phase consists of a heavy emphasis on managing the demand for highway use by aggressively implementing demand management programs identified under the strategy's local, employer-based and state TDM programs and including promotion of telecommuting programs. The emphasis on livability and the fiscal constraints in the public sector in the next few years suggest that demand management is the most prudent and cost-effective approach to transportation project implementation. Although this phase also includes the implementation of some capacity improvements on a few key highways, the emphasis is on those improvements proven to be the most cost effective in terms of bringing livability benefits to the region and its motorists.

Phase One work also includes expansion of the local/regional and intercity transit system, especially an emphasis on seeking additional sources of funding for transit and focusing on those improvements that expand existing urban transit service to all parts of their urban areas. Additional work will be identified upon completion of the Oregon Public Transportation Plan. Intercity transit development is focused on implementing Stage 1 of the High Speed Rail Business Plan.

Local, regional and state governments should continue to plan and implement land use and design standards needed to meet the requirements of the LCDC Transportation Planning Rule. The Valley Livability Council is formed in this phase to initiate a Willamette Valley visioning project which would provide a framework for Valley-wide land use and transportation coordination.

During Phase One, the Transportation Commission initiates and completes a comprehensive transportation finance study to identify new approaches to funding transportation consistent with the Oregon Transportation Plan goals.

Phase Two (4 Years: 1999-2002)

After the aggressive implementation of a variety of demand management, land use and transit strategies, an evaluation of the extent to which these strategies have affected travel demand and patterns should be completed. The evaluation could focus on those corridors where traffic volumes are forecasted to grow most dramatically. Thus in the second phase of the strategy, policy makers would evaluate the benefits of either pricing strategies, such as congestion pricing or tolls needed to manage travel demand or the prioritization of new highway investments for which demand cannot be met by altering mode choice or reducing travel demand.

Phase Two includes continued expansion of transit systems with emphasis on improving service between metropolitan centers and neighboring cities. High speed rail development continues into Stage Two as outlined in the business plan. Aviation and bicycle/pedestrian facilities are steadily improved.

Phase Three (12 years: 2003-2015)

Phase Three strategy would emphasize management of transportation demand more through pricing mechanisms than in the previous phases. The Transportation Finance Study recommendations would be fully implemented in this phase which might include concepts such as congestion pricing and intercity tolls. Revenues from the more aggressive pricing strategies would furnish the funds necessary for transportation capital improvements to build a system characterized by the Oregon Transportation Plan. Specific infrastructure improvements could include increasing capacity on I-5 and other highway projects identified through the ODOT corridor plans, continued transit expansion and the development of transit systems in cities reaching 25,000 population, and implementation of Phase 3 of the high speed rail project.

The various elements of the recommended strategy are summarized in the following table. For each element, a suggested beginning and completion time is indicated (x or x -- x) as well as the lead agency primarily responsible for carrying out the action.

PHASING OF THE WILLAMETTE VALLEY TRANSPORTATION STRATEGY

Transportation Development	Phase I 1995-1998	Phase II 1999-2002	Phase III 2003-2015	Lead Agency
Highways/Roadways				
1. Develop methodology and decision making process for selecting future highway projects that is based on consideration of full economic costs and benefits and rate of return.	X			ODOT
2. Select highway projects that maximize the net benefits to the Valley's transportation system as a whole.	X	X	X	ODOT/Local
3. Make strategic capacity enhancements to controlled access highways.	I-5 in Salem Area		Other Areas	ODOT
4. Make strategic capacity enhancements to nonaccess-controlled intercity highways in the state network and to key local facilities such as urban arterials.		X	X	ODOT/Local
5. Maintain regional highway linkages upon which rural communities depend to build viable communities.	X	X	X	ODOT
6. Add north-south and east-west links to the existing state highway system.			X	ODOT
Local/Regional Transit				
1. Expand existing urban transit services and systems to serve all parts of their regions cost-effectively.	X	X		Transit Districts and Local Governments
2. Provide transit service from metropolitan centers to neighboring cities with populations of 2,500 or more.		X	X	

Transportation Development	Phase I 1995-1998	Phase II 1999-2002	Phase III 2003-2015	Lead Agency
Local/Regional Transit (Con't.) 3. Increase operational funding to support expanded local transit service.	X———	———	———X	Transit Districts and Local Governments
4. Develop urban transit systems in all cities of 25,000 or more.			X	
Intercity 1. High-Speed Rail: Stage 1 - Upgrade existing track and signals in order to achieve a 79 mph railroad speed over 80 percent amount of the line. Add additional trains and feeder bus services.	X———	———X		ODOT
Stage 2 - Upgrade the Willamette Valley mainline to speeds of 90 to 100 mph. Eliminate speed restrictions in selected track locations.		X		
Stage 3 - Continue upgrading the Willamette Valley mainline to 110 mph standards. Add additional trains.			X	ODOT
2. Intercity Bus: Daily round-trip bus service between major cities and neighboring smaller cities.			X	
Freight 1. Improve local and state highway networks that provide direct connections to industrial areas and intermodal facilities such as rail/truck reload centers and air and marine ports.	X———	———	———X	ODOT/Local
2. Deepen Columbia River channel.	Initiate study	Complete Study	Construction	Port of Portland

Transportation Development	Phase I 1995-1998	Phase II 1999-2002	Phase III 2003-2015	Lead Agency
Freight (Con't)				
3. Coordinate investments in high-speed rail passenger trackage to improve speed and safety of rail freight service.	X	X		ODOT
4. Improved rail connections to Port of Portland.	X	X		Port of Portland/ Railroads
5. Preserve existing rail rights of way for future transportation needs	X		X	ODOT/Railroads
6. Develop domestic intermodal freight facilities in Salem, Albany and Eugene.	X		X	Private Sector
Aviation				
1. Consider consolidation of some general aviation facilities where necessary to reduce operational costs and improve efficiency (e.g., Linn County)	X			ODOT/Local
2. Through public-private partnerships, improve freight and passenger access to commercial airports by highway, transit and rail.	X		X	Port of Portland/ Cities/Private
3. Expand Portland and Eugene airports consistent with current plans.	X		X	Portland/Eugene
4. Manage land uses adjacent to airports to minimize conflicts with airport operations and public safety.	X		X	Local
Bicycle and Pedestrian				
1. Include provisions for bicycle and pedestrian use in all new facilities and major construction.	X		X	ODOT/Local
2. Build a stronger connected network of bicycle and pedestrian facilities, including routes off highway rights of way.	X		X	

Transportation Development	Phase I 1995-1998	Phase II 1999-2002	Phase III 2003-2015	Lead Agency
Intelligent Transportation System/Intelligent Vehicle Highway Systems (ITS/IVHS)				
1. Extend incident management systems throughout the I-5 corridor and the Willamette Valley.		X		ODOT/Local
2. Expand traffic control systems in the metropolitan areas such as ramp metering and other means of managing vehicle flow.	Portland Area	I-5 Corridor Salem-Portland	Eugene Area	ODOT/Local
Land Use and Design Standards for Urban Areas				
1. Adopt regulations requiring transit-oriented development along light rail transit lines and major bus lines, including minimum density requirements near transit services.	X			Local
2. Increase urban housing densities; redevelop and infill existing residential areas. within urban areas.	X———	———	———X	Local
3. In cooperation with the private sector, develop design standards which foster pedestrian-friendly environments. Apply these new standards to all new and redevelopments within metropolitan areas and to some extent in smaller neighboring communities with transit service.	X———	———	———X	Local
Access Management				
1. In consultation with local governments, develop administrative rules on access management.	X			ODOT
2. In consultation with local governments, introduce Valley-wide access management standards in all state highway corridors in accordance with the access management policy of the Oregon Highway Plan, June, 1991.	X———	——— X		ODOT

Transportation Development	Phase I 1995-1998	Phase II 1999-2002	Phase III 2003-2015	Lead Agency
Interchange Development				
1. Develop administrative rules and set standards for interchange development that limit nearby development to the capacity of existing interchanges.	X			ODOT/Local
2. Refine ODOT's policy on new interchanges to address land use and regional issues.	X			ODOT
3. Integrate interchange plans with land use plans.	X		X	ODOT/Local
Transportation Demand Management Programs (TDM)				
1. In cooperation with the state, local jurisdictions develop transportation demand management programs which educate and inform the public about motor vehicle use.	X	Evaluate		Local
2. Institute or expand programs such as ridesharing, park-and-ride, transit promotion and parking management, especially in metropolitan areas.	X	Evaluate		Local
3. In partnerships between public and private sectors, expand programs such as trip reduction (commute options), flex time, telecommuting and parking "cashout" programs, especially in metropolitan areas for both public and private employees.	X	Evaluate		Private Sector
4. Expand state government employee regional ridesharing and carpool matching programs or flex-time programs.	X	Evaluate		ODOT
5. Expand prepaid group transit pass programs in local communities.	X	Evaluate		Local

Transportation Development	Phase I 1995-1998	Phase II 1999-2002	Phase III 2003-2015	Lead Agency
User Fees				
1. Initiate and complete a comprehensive transportation finance study.	X			ODOT
2. Increase parking prices in urban areas of the Valley through a variety of means.	X	X		Local
3. Develop congestion pricing pilot project in Portland Metro Region.	Pilot Project	Evaluation of Pilot		Local
4. Initiate/develop a toll facility and at least one additional congestion pricing project in the Valley.		X	X	ODOT/Local
5. Introduce peak period pricing techniques on key transportation facilities.			X	ODOT/Local

Institutional Arrangements	Phase I 1995-1998	Phase II 1999-2002	Phase III 2003-2015	Lead Agency
1. Establish a Willamette Valley Livability Council by January 1, 1996.	1995			Governor
2. Initiate and complete a Valley visioning project through a variety of means.	X			Valley Livability Council
3. Reorganize VPACT as an advisory committee to ODOT on Valley transportation development coordination.	1995			OTC

IV. INSTITUTIONAL ARRANGEMENTS FOR VALLEY COORDINATION

A. Description of Current System and the Challenges to Coordination

Coordinating Valley-wide transportation development is crucial to maintaining mobility and livability. Currently, no institution exists for this specific purpose. Transportation and land use decisions today are made by 128 different jurisdictions (cities, counties, councils of governments, metropolitan planning organizations in the three metro areas, federal and state agencies and a tribal government).

The LCDC Transportation Planning Rule provides a partial framework for transportation coordination. The rule requires the state to develop a statewide transportation system plan (the Oregon Transportation Plan and its modal plans), and region/county plans to be consistent with it. Local plans are to be consistent with the region/county plans. LCDC also requires affected state agency plans and programs to be consistent with acknowledged city and county land use plans.

ODOT divides its transportation responsibilities into two regions in the Willamette Valley, Region 1 for the Portland metro area, and Region 2 for all the Valley south of Wilsonville. The regions are increasing efforts to coordinate transportation planning through corridor planning, project selection and development review.

To improve coordination, the Oregon Transportation Plan called for the formation of a Willamette Valley Transportation Coordination Area. In response, the Transportation Commission instituted VPACT. Since September, 1993 VPACT has been discussing the status of the Valley's transportation and land use planning and coordination and has concluded that Valley-wide transportation problems are not being adequately addressed by present organizational arrangements. Also, transportation problems are closely related to land use decisions. An example is the capacity problem on I-5. Traffic on I-5 is increasing 2-3 percent per year and the interstate already has capacity problems. Should Interstate-5 be widened and more interchanges built? Should traffic be diverted to higher speed rail or alternative highways? Would transportation demand management, including increased public transit and ridesharing, take care of the problem? Each option can have major impacts on land use patterns and travel behavior, but no single institution is charged with the responsibility to resolve these issues on a Valley-wide level.

B. Description of Alternative Models

VPACT members were concerned about the need for improved coordination and considered six institutional alternatives:

1. New VPACT A -- A "blue ribbon" group of five to seven members appointed by OTC, LCDC, and the Progress Board to provide independent and objective evaluation of progress in implementing Valley land use and transportation plans.

2. New VPACT B -- An advisory group with authority granted by the OTC to recommend which Valley projects should be included in the Statewide Transportation Improvement Program (STIP).

3. Expanded Metro and Councils of Governments (COGs) -- These existing regional institutions would expand their authority over transportation coordination to their entire region, with formal agreements among member governments to set transportation priorities. The OTC would require recommendations from Metro/COGs before projects could be included in the STIP.

4. Both VPACT A and VPACT B -- Create an institution that includes some combination of the first two alternatives with the purpose of providing objective evaluations and recommendations.

5. Willamette Valley Dialogue -- Create a Valley-wide learning network to research and help community leaders and citizens better understand their common agendas.

6. Willamette Valley Livability Council -- An organization developed under the sponsorship of the Progress Board, OTC, LCDC, Economic Development Commission (EDC) and Environmental Quality Commission (EQC) to advise on Valley-wide land use, transportation and environmental quality issues.

C. Recommended Strategy for Transportation Coordination

The notion of creating a new institution designed to address livability issues affecting the whole Willamette Valley was a thought developed early in the Valley strategy project. It later became one of the main themes in the Willamette Valley Futures Conference co-sponsored by the Progress Board and ODOT in October, 1994.

As a result of VPACT discussions, response from the Valley Futures Conference, and feedback from meetings with county planning commissions around the Valley, VPACT concludes that (1) another layer of government in

the Valley is undesirable at this time, (2) Valley leaders need better ways to communicate with each other and share information, and (3) a shared vision of the Valley is necessary to adequately address regional livability issues.

With these principles in mind, VPACT recommends the formation of a Willamette Valley Livability Council as follows:

Willamette Valley Livability Council

1. The council should be established to educate Valley residents, local and regional governments, and state agencies including the OTC, LCDC, EDC and EQC on issues relating to the physical environment and infrastructure of the Valley such as land use, community development, transportation and the natural environment. Specifically, the Council should be established for the following purposes:

   - To conduct research and provide information on trends and impacts of population and employment growth in the Valley.

   - To develop and coordinate a Valley-wide database, including information on land use, transportation and air and water quality.

   - To analyze emerging issues from a Valley perspective and inform Valley leaders and residents about their implications for local, regional and state government plans

2. The Council should be created by the Governor or the Oregon Progress Board.

3. Local jurisdictions should help determine the composition of the Council, but its membership should be comprised primarily of local and regional elected officials broadly representative of the geographic and political entities of the Valley. Other members should be members of key state commissions (i.e. OTC, EQC, LCDC, OEDC), with some consideration given to private sector (e.g. utilities) and lay citizen membership.

4. The Council should be provided a small staff loaned by participating state agencies.

5. The Council should determine the types of educational, research and advisory activities it needs to address based on issues of local and region-wide concern. For example, the Council should initially:

   a. Sponsor a Valley-wide visioning project.

   b. Conduct an extensive public education program about Valley land use and transportation development options by sponsoring educational seminars and conferences.

c. Collect and coordinate data of Valley-wide significance, such as population and employment forecasts and land use inventories.

d. Produce periodic reports on the state of the Valley and its interdependent future.

e. Conduct cooperative activities with the Cascadia Corridor organization.

f. Collaborate with research universities on Valley data collection and analysis including the Institute for Sustainable Environment (UO), Community Planning Workshop (UO), Center for Analysis for Environmental Change (OSU), and the Institute for Portland Metropolitan Studies (PSU).

g. Participate in the Transatlantic Collaboration program of the National Center for Clean Air Policy.

6. Council activities should be financed by participating state and federal agencies through grants for research projects. The Council should also be empowered to seek funding from private foundations and non-profit organizations.

7. Future roles for the Council should be determined only after the Council has gained experience in addressing Valley-wide issues successfully. As the inevitable pressures of population expansion grow, the council may become an appropriate forum for resolving some regional issues.

8. The Willamette Valley Livability Council should be created as part of a statewide program encouraging regions faced with rapid growth to take local initiative to identify, research, and discuss livability issues of regional concern. For the Willamette Valley, the Council should be formed and in operation no later than January 1, 1996.

VPACT intends that the Valley Livability Council address the broad issues involving the interrelationships of land use, community development, transportation and environmental quality. Therefore, a specific focus on the coordination of valley-wide transportation system development remains an ongoing need. Consequently, VPACT further recommends that VPACT continue as an institution of the Transportation Commission but that its purpose and structure be reshaped to function as follows:

Continuation of VPACT

1. The Transportation Commission should continue VPACT, but change its purpose to advise and assist ODOT Region 1 and Region 2 on transportation issues affecting the refinement and implementation of the phased action plan for the Willamette Valley Strategy.

2. Revise the structure of VPACT so that membership is primarily elected officials. These officials should be broadly representative of Valley jurisdictions. Other members should include representatives of state agencies, JPACT (Metro), general business, transportation providers, and lay citizens. ODOT region managers should be added as ex-officio members. The size of the committee should be reduced from 24 members to 15 to 18 members.

3. VPACT should initially engage in activities such as those described below.

   a. Refine a phased action plan for the Valley Transportation Strategy with at least the following elements:

      - Improvements to the I-5 corridor considering all modes of travel.
      - Improvements to I-5 that address levels of service, numbers and locations of interchanges, and management of demand.
      - Improvements to east-west and north-south connections to the I-5 corridor.

   b. Review corridor plans as they are developed and advise how they can be incorporated into an overall Valley transportation strategy.

   c. Study Valley-wide commute travel patterns and identify service gaps.

   d. Participate in the Transatlantic Collaboration project of the national Center for Clean Air Policy.

   e. Advise region managers on matters such as best regional transportation investments, funding priorities, regional funding mechanisms, data coordination, corridor-wide projects (I-5 and others) and high speed rail development.

4. The Transportation Commission should recognize that local staff resources will be needed to facilitate effective participation in VPACT activities by local/regional elected officials.

V. Action Plan

A. Sharing Information on the Willamette Valley Transportation Strategy

The Willamette Valley Transportation Strategy project brought together in the form of VPACT public and private sector leaders from around the Willamette Valley to discuss the future development of the Valley. An effort of this type had not occurred since Governor Tom McCall's Project "Foresight" 23 years ago.

Although the primary focus of the discussion was on transportation and the need for the establishment of a "Valley Transportation Coordination Area," VPACT realized early in the process that transportation planning on a Valley-wide basis is complicated by the current lack of understanding about the Valley as a region. For example, VPACT concluded that (1) there is insufficient recognition by the public and governmental institutions of the Willamette Valley as a distinct region, (2) there is no consensus on an overall land development pattern for the Valley, and (3) no institution exists designed to specifically address the broad issues of growth on a Valley-wide basis.

Therefore, VPACT recommends that the following actions be taken to help foster greater understanding of the interdependence among communities in the Valley by sharing the observations and recommendations of the strategy with Valley leaders and the general public.

- Prepare a 30 minute "civic club" presentation that provides an overview of the strategy. The presentation should include the key trends and transportation issues in the Willamette Valley and illustrate the need for improved coordination of decisionmaking. Develop a video as part of the presentation. Establish a speakers bureau to make the presentation widely available to the general public, but especially to Valley leaders.

- Seek opportunities to present the strategy at governmental conferences and private sector trade association meetings.

- Widely distribute copies of the strategy, especially to local and regional elected officials and their staffs, for consideration as they prepare transportation system plans and develop local projects for inclusion in ODOT's Statewide Transportation Improvement Program (STIP) updates.

- Encourage ODOT regions within the Valley to use the strategy in the development of corridor plans and project priorities for STIP updates.

B. Strategies for Phase Two

Although VPACT has made significant progress toward achievement of the strategy project goals, additional work remains to be accomplished. VPACT recommends that the next phase of the strategy include the actions in the following table.

ACTION PLAN
TRANSPORTATION STRATEGY

Strategies for Transportation	Time Period	Lead Agency
1. Refine a phased action plan for the Valley transportation strategy with at least the following elements: Improvements to the I-5 corridor considering all modes of travel Improvements to I-5 that address levels of service, numbers and locations of interchanges and management of demand Improvements to east-west and north-south connections to the I-5 corridor.	1995-97	VPACT
2. Identify tradeoffs between strategy elements as they affect land use patterns and resource availability and determine if unintended consequences of different actions or non-actions could occur.	1995-97	VPACT
3. Improve knowledge of freight movements within and through the Valley.	Ongoing	VPACT
4. Incorporate corridor plans into the strategy as they are developed.	Ongoing	VPACT
5. Conduct a study of Valley-wide commute travel patterns and identify service gaps.	1995-97	VPACT
6. Advise ODOT Region 1 and Region 2 managers on matters such as the best regional transportation investments, funding priorities, regional funding mechanisms, data coordination, corridor-wide projects (I-5 and other state routes) and high speed rail development.	Ongoing	VPACT

Strategies for Addressing Institutional Changes	Time Period	Lead Agency
1. Establish the Willamette Valley Liability Council in collaboration with the Governor's office, Oregon Progress Board, related state commissions and representatives of local and regional governments.	1995	Governor
2. Initiate a Valley visioning process to construct a general framework for land use, transportation and environmental quality governments.	1995-97	Livability Council
3. Implement the redesign of VPACT to be advisory to ODOT Region 1 and Region 2 as recommended in the strategy.	1995	OTC
4. Actively participate in the Transatlantic Collaboration program of the National Center for Clean Air Policy to gain new insights and improve transportation, land use and environmental policy making within the Valley.	1995-98	VPACT/ Livability Council

Strategies for Addressing Funding Requirements	Time Period	Lead Agency
1. Initiate and complete a comprehensive transportation finance study sponsored by the Oregon Transportation Commission.	1995-96	OTC
2. Develop cost estimates per element of the recommended strategy and consider their relationship to expected revenues and future funding needs.	1995-97	VPACT

APPENDICES

APPENDIX A

DEFINITIONS

This document uses key words and phrases as having the following definitions:

Access Management	Measures regulating access to streets, roads and highways from public roads and private driveways. Measures may include but are not limited to restrictions on the siting of interchanges and restrictions on the type and amount of access to roadways to reduce impacts of approach road traffic on main facility.
Alternative Modes	Modes such as rail, transit systems, bicycles and walking that provide transportation alternatives to the use of single occupant automobiles.
Balanced Transportation System	A system that provides appropriate transportation options and takes advantage of the inherent efficiencies of each mode.
Commitment	Willingness to finance transportation services and facilities and to use political institutions to coordinate and implement effective transportation policies. Commitment is expressed in levels as base case (status quo), moderate and high.
Demand Management	Actions which are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods may include but are not limited to the use of alternative modes, ridesharing and vanpool programs and trip reduction ordinances.
Efficient	An activity is efficient if a desired amount of an output is produced using the least cost combination of resources. A transportation system is efficient when (1) it is fast and economic for the user; (2) users face price that reflect the full costs of their transportation choices; and (3) transportation investment decisions maximize the net full benefits of the system.
Full Costs	Costs that include social and environmental impacts as well as construction, operations and maintenance costs.
Intermodal	Connecting individual modes of transportation and/or accommodating transfers between such modes.

Intermodal Hub	A facility where two or more modes of transportation interact so that people and/or goods can be transferred from one mode to another, for example, from a bus to an airplane or from a truck to a train. Intermodal hubs include commercial airports and marine ports.
ISTEA	The federal Intermodal Surface Transportation Efficiency Act of 1991 which funds the national highway system and gives state and local governments more flexibility in determining transportation solutions. It requires states and MPOs to cooperate in long-range transportation planning.
LCDC	Land Conservation and Development Commission
Metropolitan Planning Organization (MPO)	An organization located within the State of Oregon and designated by the Governor to coordinate transportation planning in an urbanized area of the state. MPOs exist in the Portland, Salem, Eugene-Springfield and Medford areas. (The Longview-Kelso-Rainier MPO is not considered an MPO for the purposes of the OTP).
Mixed Use Development	A development of center having a mix of uses which may include office space, commercial activity, residential uses, parks and public places, and supporting public facilities and services. The development is designed so that the need to travel from one activity to another is minimized.
Mobility	Being able to move easily from place to place. MObility focuses on improved travel times and reduced congestion in the short run.
Mode of Transportation	A means of moving people and/or goods. In this plan, transportation modes include motor vehicles, public transit, railroads, airplanes, ships/barges, water transit, pipelines, bicycles and pedestrian walkways.
Multimodal	Involving several modes of transportation.
ODOT	Oregon Department of Transportation
Public Transit	Bus, van, light rail and other surface transportation systems open to the general public which operate frequently and on predetermined routes and schedules. Public transit does not include carpools of senior van services, but may include intercity bus and rail services if the service is frequent.
Rural Areas	Unincorporated areas, unincorporated communities and incorporated cities, characterized by both low levels of population and remoteness from metropolitan areas and other central cities.

Transportation Corridors	Major or high volume routes for moving people, goods and services from one point to another. They may be multimodal or single modal such as air corridor.
Transportation Needs	Means estimates of the movement of people and goods consistent with an acknowledged comprehensive plan and the requirements of the Transportation Rule (OAR 660-12). Needs are typically based on projections of future travel demand resulting from a continuation of current trends as modified by policy objectives, including those expressed in Statewide Planning Goal 12 (Transportation) and the Transportation Rule, especially those for avoiding principal reliance on any one mode of transportation.
Transportation Needs (State)	Needs for movement of people and goods between and through regions of the state and between the state and other states and other countries.
Transportation Planning Rule	Administrative Rule (OAR 660-12) adopted in April 1991 by the Land Conservation and Development Commission in cooperation with ODOT to implement Statewide Planning Goal 12: Transportation.
Transportation System	A network of facilities and services for moving people, goods and services from one place to another; it includes roads, streets and highways, public transit, demand-response transportation airports, railroads, waterway and marine transportation facilities, bicycle paths and pedestrian walkways.
Transportation System Management Measures	Techniques for increasing the efficiency, safety, capacity or level of service of a transportation facility without increasing its size. Examples include traffic signal improvements, traffic control devices including installing medians and parking removal, channelization, access management, ramp metering and restriping for high occupancy vehicle (HOV) lanes.
Transportation System Plan (TSP)	A plan for one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes and within and between geographic and jurisdictional areas.
Urban	Those areas within urban growth boundaries acknowledged under the Land Conservation and Development Commission's land use planning compliance process.

APPENDIX B

WILLAMETTE VALLEY TRANSPORTATION STRATEGY

VALLEY POLICY ADVISORY COMMITTEE ON TRANSPORTATION (VPACT)

State
Susan Brody, Member, Oregon Transportation Commission (VPACT Chair)
Dick Benner, Director, Department of Land Conservation and Development

City
Craig Lomnicki, Mayor, City of Milwaukie
Charles Vars, former Mayor, City of Corvallis, League of Oregon Cities Board
Jacqueline Zimmer, Salem City Councilor

County
Randall Franke, Marion County Commissioner
Bonnie Hays, Washington County Commission, September 1993 to January 1995
Ed Lindquist, Clackamas County Commissioner
Linda Peters, Washington County Commissioner, January 1995 to present

Regional/MPO
Ralph Blanchard, Polk County Commissioner
Steve Bryant, Albany City Manager
Shawn Boles, Eugene City Councilor
George Van Bergen, Councilor, Metro, Portland, September 1993 to January 1995
Rod Monroe, Councilor, Metro, Portland, January 1995 to present

Transit District
Greg Cook, General Manager Cherriots, Salem
Pat Hocken , Board Member, Lane Transit District
Tom Walsh, General Manager, Tri-Met, Portland

Intercity Transportation
William S. Ayer, Vice-President, Horizon Air Industries, Seattle
Billy Sue Etchison, President/CEO, Vail NW (trucking firm), Eugene
Kim L. Gann, Customer Service Manager, Greyhound Lines, Inc., Portland
Bob Melbo, Manager, Willamette & Pacific Railroad, Inc., Albany
David Lohman, Director of Policy and Planning, Port of Portland

General Business
Gerry Gaydos, Past-President, Eugene Chamber of Commerce
Ray Topping, Regional Manager, CH2M-Hill, Corvallis

Lay Citizen
Dave Hagueberg, Yamhill County Parkway Committee, McMinnville
Robert Lowry, Linn-Benton Loop Committee, Corvallis

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Consultant
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WILLAMETTE VALLEY TRANSPORTATION STRATEGY
TECHNICAL ADVISORY COMMITTEE
V-TAC MEMBERS

Metropolitan Planning Organization/COG
Richard Schmid, Mid-Willamette Valley COG, Salem
Tom Schwetz/Lee Schoemaker, Metropolitan Policy Committee, Lane COG, Eugene
Cynthia Solie/Scott Wilson, Cascades West COG, Albany,
Tom Kloster/Bill Barber, Metro, Portland

City
Lew Garrison, Salem Public Works
Dave Reinhart, City of Eugene
Gary McKenney, City of Springfield
Steve Iwata, City of Portland

Transit District
Stefano Viggiano, Lane Transit District
John Whittington, Salem Area Transit District
Ross Roberts/Young Park, TRI-MET

State

Public Utility Commission
Claudia Howells

Land Conservation and Development Dept.
Bob Cortright

Department of Transportation
Dave Williams, Region 1
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Erik East, High Speed Rail Project Manager
John deTar, Region 2
Ed Lee, Corridor Planning Manager
Gary Viehdorfer, Aviation Planner
Michael Ronkin, Bikeway Specialist

Department of Environmental Quality
Brian Finneran

APPENDIX C

Table 1: Linkages between performance measures for the Valley Scenarios and other policies and plans

Performance Measure	Linkages to other policies
Goal 1: Characteristics of The System	
Provide for a wide range of mode choices for users, both passengers and freight	WVTS and OTP Policy 1A
Enhance access to multi-modal facilities and improve connectivity between public and private modes for passengers and freight	WVTS and OTP Policies 3D and 1F
Reduce the proportion of single-occupancy (SOV) work trips	Benchmarks and OTP Policy 1B
Reduce vehicle miles traveled (VMT) within metropolitan areas	Transportation Planning Rule
Meet established minimum levels of service on state highway facilities	OTP Policy 2E and Benchmarks
Enhance east-west travel times within the Valley	WVTS
Provide accessibility to mobility impaired individuals, for both intra and intercity trips	OTP Policy 1C
Reduce system accidents, injuries and fatalities	OTP Policy 1G
Goal 2: Livability	
Provide for land use densities that support local transit	WVTS and OTP Policy 2B
Assure attainment of air quality standards for Valley residents	Benchmarks
Reduce transportation energy consumption	WVTS
Increase the percentage of residents living within UGBs	Benchmarks
Maintain community identity by preserving undeveloped areas between urban areas	WVTS
Goal 3: Economic Development	
Provide increased ability to export Valley commodities	WVTS and OTP Policy 3B
Help stimulate growth in Valley employment and income	WVTS
Improve the efficiency and decrease the costs of goods movement	WVTS and OTP Policy 3A and 3C
Goal 4: System Implementation	
Foster consistency in state, regional, and local transportation plans	Transportation Planning Rule and OTP Policy 2G
Protect corridors of statewide significance, specifically by improving access management	OTP Policy 4G
Fairly allocate costs of the system to the users and beneficiaries of the system	OTP Policies 1B, 4C and 4F
Provide for consistency in comparing costs and benefits	WVTS
Fit with available or reasonably projected funding	WVTS

Legend: OTP = Oregon Transportation Plan, 1992
Benchmarks = Oregon Benchmarks, 1991
WVTS = developed for Willamette Valley Transportation Strategy

Table 2: Elements from the OTP Preferred Plan Included in Willamette Valley Transportation Scenarios

	WILLAMETTE VALLEY SCENARIOS		
OTP Preferred Plan Element	Base Case	Moderate Commitment	High Commitment
Minimum Levels of Service			
Statewide Intercity Passenger			
hourly intercity passenger service on I-5		X	X
regions over 50,000 have three round trips to Portland		X	X
integrated transit systems (local, intercity, elderly/disadvantaged)		X	X
publicly controlled intercity passenger terminals			X
direct passenger intermodal connections	X	X	X
intermodal facilities comply with ADA standards	X	X	X
intercity services for cities over 2500 (same day round trip)		X	X
frequent, reliable, well promoted service		X	X
extend Mt. Rainier passenger rail service to Eugene	X	X	X
establish 110-125 MPH passenger rail service as need is demonstrated			X
cooperate with adjacent states for passenger rail service	X	X	X
coordinate bus and rail services	X	X	X
expanded commercial air services wherever commercially viable	X	X	X
Statewide Freight			
open access to port terminals for rail and truck carriers where feasible			X
truck/rail facilities in Portland and Eugene to the extent possible	X	X	X
intermodal reload facilities as the market demands	X	X	X
international ports should have multimodal connections	X	X	X

OTP Preferred Plan Element	Base Case	Moderate Commitment	High Commitment
sufficient port facilities should exist to support international shipping	X	X	X
minimum highway level of service C for freight at off peak hours	X	X	X
designate "primary freight Corridors" in addition to Access Oregon Highways	X	X	X
branch rail line minimum speeds of 25 MPH where feasible	X	X	X
preserve rail rights of way when abandoned	X	X	X
consider supporting rail reload facilities where appropriate	X	X	X
provide open access to reload facilities			X
Interstate and State Highways			
meet State highway minimum levels of service			X
meet State's regional and local street levels of service			X
establish IVHS on I-5, I-84 and within metropolitan areas		X	X
give TSM and TDM a "substantial role" in meeting TPR		X	X
establish and manage a system of scenic corridors	X	X	X
Regional/Local Services			
develop and promote bicycle/pedestrian networks to double person trips		X	X
bicycle storage at multiple destinations		X	X
integrate statewide and regional bike systems with other modes		X	X
increase transit to "assure substantial role" in meeting TPR		X	X
transit service in all parts of urbanized metropolitan areas over 50,000		X	X
urban transit services in cities over 25,000		X	X

OTP Preferred Plan Element	Base Case	Moderate Commitment	High Commitment
HCT in congested interstate and statewide significance corridors in Portland		X	X
high quality transit in comparable areas in other metropolitan areas		X	X
half hour peak period transit headways		X	X
Portland one hour off peak headways, or guaranteed ride home program		X	X
off peak services on all other metro area routes or guaranteed ride home			X
park and ride facilities to meet "reasonable demand"		X	X
sufficient service to Portland area transit-oriented developments	X	X	X
peak hour transit to major city for smaller area cities over 2500		X	X
Additional Projects			
deepen the Columbia Channel		X	X
in-vehicle IVHS systems			X
expanding urban transit in metropolitan areas			X
Long Range Possibilities			
Willamette Valley High Speed Rail			X
Willamette Valley/ Columbia Gorge interurban rail			
new international airport in the Willamette Valley			
System Management and Pricing			
maintenance and operation funds		X	X
demand management	X	X	X
pricing facilities to manage system			X
Land Use Coordination			
maintaining current Urban Growth Boundaries transportation investments to support alternative modes to automobiles		X	X X
access management to minimize conflicts		X	X

APPENDIX D

WILLAMETTE VALLEY TRANSPORTATION STRATEGY:

SUMMARY OF HIGH SPEED RAIL DEMAND ANALYSIS

DRAFT

MAY 3, 1995

Prepared for:

Oregon Department of Transportation

Submitted by:

Parsons Brinckerhoff Quade & Douglas, Inc.
KPMG Peat Marwick

Appendix D

Summary of High Speed Rail Demand Analysis

This Appendix contains a summary of key assumptions and findings from an analysis of demand for intercity passenger rail service in the Willamette Valley. The data in this Appendix are taken from a lengthier report, copies of which are available from the Oregon Department of Transportation.

Service Characteristics

Exhibit 1 contains a summary of the characteristics of intercity service which is the basis for the demand forecast. Stage 1A continues service currently available in the Willamette Valley (1995). Stage 1B includes an additional train trip replacing a bus trip. Stage 2 service involves an additional train trip, for a total of two conventional and two new technology equipment runs daily in the Willamette Valley. In addition, four bus round trips will continue to be offered. Further, there is a decrease of 20 minutes in the one way travel time between Portland and Eugene, in addition to the 15 minute decrease in travel time afforded by improvements associated with Stage 1B.

Stage 3 service offers a total of 8 round trips daily between Portland and Eugene, all with new train technology. A further improvement of travel times of 15 minutes is assumed, bringing the round trip travel time between Portland and Eugene down to one hour and 45 minutes. A 50 percent increase in average round trip fares is also assumed, noted by the faster travel times and higher level of amenities associated with the newer train sets. Stage 4 service includes 17 round trips daily in the Willamette Valley, all with new train sets. Travel times of one hour and 20 minutes will be possible between Portland and Eugene and fares would increase by 100 percent, to rates approximately three times that prevailing for the service today (See Exhibit 2). Nevertheless, these rates would be highly competitive with airfares, which are anticipated to be approximately 50 percent higher than the assumed rail fares at that time.

Summary of Ridership Forecasts

The full demand analysis includes ridership forecasts for the years 2000, 2010 and 2030. Your 2010 figures are presented here. Exhibit 3 shows that an additional round trip daily between Portland and Eugene in Stage 1B will lead to an increase in 61 percent in total ridership despite the reduction of total bus trips. A further increase of one train in a Stage 2, to four round trips daily, combined with the introduction of premium service and still more rapid travel times, should yield an additional increase of 82 percent in total passenger ridership. The proportion of all trips made within Oregon at that time will be 45 percent, compared to 38 percent for Stage 1A (Current Service). An additional doubling of riders will occur with the introduction of four more round trips daily within the Valley in Stage 3. At that time, a total of 8 trains, all new technology, will operate, with overall travel times between Portland and Eugene reduced to one hour 45 minutes.

Further increases in travel speed will make possible a one hour 20 minute round trip between Portland and Eugene in Stage 4. Seventeen trains are assumed to be operating at that time, offering premium service which will be highly competitive with all other forms of transportation.

Ridership in Stage 4 is assumed to increase to over 800,000 riders daily at a fare approximately two-thirds that of competing air services and approximately twice that assumed in Stage 3. Thus, despite the dramatic increase in assumed fairs, a growth of 17 percent in passenger demand is forecast to occur with the implementation of high speed rail service.

Exhibit 4 presents a summary of ridership at each stage for each of the cities served by the system. Demand grows proportionally in Eugene, Albany, Salem and Portland in response to faster, more frequent and more attractive train service. A stop in Clackamas County is assumed to be introduced in Stage 2; this station is successful in attracting a significant number of riders making an important contribution to the overall attractiveness of the service within the Willamette Valley. In excess of 10 percent of all patronage on the Willamette Valley service will occur at the Clackamas County station.

Trip Diversion From I-5

The Demand Analysis includes an assessment of the overall levels of trip diversion from Interstate 5 to rail at each stage of service. Estimates were developed for three different locations, one between Eugene and Albany, one between Albany and Salem and one between Salem and I-205. Reductions of over three percent in intercity passenger vehicle trips on I-5 are forecast to result from a Stage 4 service with proportionally smaller reductions in earlier stages. The greatest proportional impacts are between Eugene and Albany. The greatest numeric reductions are between Salem and I-205 (see Exhibit 5). This forecast does not take into account any alternative assumptions about auto costs, or congestion. (No assumptions were made about I-5 congestion in Seattle, for example.)

Analysis of Alternative Assumptions

The Demand Analysis report includes an assessment of the results of changes in several key assumptions associated with improved service in the Willamette Valley. Exhibit 6 indicates in summary fashion the results of those forecasts.

The first forecast assumed that the cost of operating an automobile in the Willamette Valley would increase by 50 percent over current levels. This would correspond (for illustrative purposes) to an increase in out-of-pocket costs of approximately $5.00 to $7.00 for a one way trip between Portland and Eugene. Such an increase might be the result either of higher fuel costs or road user charges.

A 50 percent increase in auto costs is forecast to result in a 16 percent increase in overall system ridership at Stage 2 levels in the year 2010. The effects on system revenues are greater than those on ridership. In other words, the system would gain both numerically and financially from this change in the relative cost in transportation modes for intercity trips in the Willamette Valley.

A second forecast test was conducted to simulate the affects of an increase in congestion in the urbanized portions of I-5 between Portland and Eugene. A 10 percent increase in auto travel time for all intercity trip fares is forecast to result in a nearly 16 percent increase in rail passenger ridership in Stage 2. This increase in auto travel time would be in excess of that already forecast to occur in the Portland region, as a result of anticipated growth in vehicle demand on I-5. The baseline forecast for each stage of the plan already incorporates declines

in average travel speed as forecast by Metro for the affected years. (No forecasts are available for other Metro areas.) In other words, one of the factors contributing to the growth in rail passenger demand in the each of the forecast years is I-5 congestion as well as the improved travel times, frequency of service and quality of service available on rail. This simulation also shows that passenger demand is highly sensitive to changes in relative travel times between auto and rail. The effect on ridership of a 10 percent increase in auto travel time (congestion) is essentially the same as that of a 50 percent increase in automobile operating costs.

The forecast estimated the effect of a 25 percent increase in rail fares on demand in Stage 2 in 2010. The increase would result in a decline of approximately seven percent in passenger demand, suggesting that, as is the case with automobile costs, the Willamette Valley passenger demand is relatively inelastic with respect to out-of-pocket costs in comparison to its responsiveness to changes in travel times. In other words, the capital investment required to improve travel speed on the Willamette Valley Passenger Rail Corridor is a very critical element in the overall liability and success of intercity passenger rail.

Further, the forecast indicates that a 25 percent increase in rail fares would produce a 16 percent increase in overall system revenue. In comparison to the decline of only seven percent in passenger demand, this indicates that the fares assumed for these demand forecasts are not the fares one would charge if profit maximization were the primary goal of the operation of an intercity passenger rail service in the Willamette Valley.

Lastly, the analysis included an assessment of the effects of improved local transit access on system demand. This was not done within the demand forecasting model; an independent assessment was made of the effects of station boardings in other Amtrak cities where high quality local transit service is integrated at an intermodal rail passenger facility. The researchers concluded that an increase of approximately seven percent in overall system ridership can be associated with an efficient local transit service serving a variety of destinations from an intermodal facility integrated with the intercity passenger system.

Operating Costs and Revenues

The proportion of the system operation and maintenance costs which can be recovered by passenger revenues steadily increases with the implementation of each stage of the rail passenger plan in the Willamette Valley. As indicated in Exhibit 7 the revenue to cost ratio increases from approximately 29 percent in Stage 1 to 43 percent in Stage 2 and in excess of 100 percent in Stages 3 and 4. This forecast of revenues and costs is based on conservative assumptions. First, only a very small fraction of fares collected for trips originating in Oregon and destined for Washington State are actually attributed to the revenue stream. Under other assumptions fare box recovery would be greater than those indicated here. Secondly, the actual fares charged for the service are below those which could be charged, with profit maximization as a principle goal of system operations. The sensitivity test on fare elasticities previously described gives evidence of this. The figures shown on this exhibit include only operations and maintenance costs, however.

Additional Information

Additional information on the methods used for the passenger rail demand forecast and on the results of forecasts themselves can be found in the full report, from which these tables have been excerpted.

Exhibit 1

Summary Characteristics of Future System Stages

Station	Travel Time (Frequency)				
	Stage 1-A	**Stage 1-B**	**Stage 2**	**Stage 3**	**Stage 4**
	Rail / Bus	**Rail / Bus**	**Rail / Bus**	**Rail / Bus**	**Rail / Bus**
Eugene					
	0:50 (2) / 0:50 (5)	0:40 (3) / 0:50 (4)	0:35 (4) / 0:50 (3)	0:30 (8) /	0:23 (17) /
Albany					
	0:30 (2) / 0:30 (5)	0:30 (3) / 0:30 (4)	0:25 (4) / 0:30 (3)	0:22 (8) /	0:17 (17) /
Salem					
	|	|	0:40 (4) / 0:40 (3)	0:35 (8) /	0:26 (17) /
Clackamas Co.	1:15 (2) / 1:05 (5)	1:10 (3) / 1:05 (4)			
	V	V	0:20 (4) / 0:25 (3)	0:18 (8) /	0:14 (17) /
Portland					
	3:55 (3) /	3:40 (4) /	3:25 (5) /	3:00 (9) /	2:15 (17) /
Seattle*					
	/ 4:00 (2)	/ 4:00 (3)	4:00 (3) /	3:00 (4) /	2:15 (8) /
Vancouver, BC*					

* trains make several stops between Portland and Seattle and between Seattle and Vancouver, BC, which are not shown on this exhibit

Source: KPMG Peat Marwick

Exhibit 2

Median Round Trip System Fares

Eugene						
$13.00	Albany					
$17.00	$10.00	Salem				
$21.00	$17.00	$13.00	Clackamas Co.			
$23.00	$19.00	$15.00	$8.00	Portland		
$45.00	$39.00	$35.00	$29.00	$27.00	Seattle*	
$70.00	$64.00	$60.00	$54.00	$52.00	$25.00	Vancouver. BC

* trains also make several stops between Portland and Seattle and between Seattle and
Vancouver BC

Round trip fares in this table apply only to Stages 1-A, 1-B,
and 2
Stage 3 fares are about 50 percent greater (Portland-Seattle = $40.00)
Stage 4 fares are about 175 percent greater (Portland-Seattle = $75.00)

Source: KPMG Peat Marwick

Exhibit 3

Summary of Forecasted System Ridership and Revenue
by Stage & Major Market
Forecast Year 2010

Alternative	Market	Annual Rail Riders	Annual Bus Riders	Annual Bus+Rail Riders	Annual Bus+Rail Revenue
Stage 1-A	within Oregon	43,280	5,070	48,350	$491,700
	Oregon-Washington *	71,190	6,560	77,750	$763,200
	TOTAL	114,470	11,630	126,100	$1,254,900
Stage 1-B	within Oregon	70,310	1,800	72,110	$737,800
	Oregon-Washington *	114,060	4,640	118,700	$1,174,200
	TOTAL	184,370	6,440	190,810	$1,912,000
Stage 2	within Oregon	150,910	2,430	153,340	$1,583,800
	Oregon-Washington *	179,490	27,400	206,890	$2,075,200
	TOTAL	336,390	29,830	366,220	$3,697,900
Stage 3	within Oregon	289,480	0	289,480	$4,442,700
	Oregon-Washington *	384,250	0	384,250	$5,716,300
	TOTAL	686,580	0	686,580	$10,281,100
Stage 4	within Oregon	330,180	0	330,180	$9,560,100
	Oregon-Washington *	463,900	0	463,900	$13,008,200
	TOTAL	808,690	0	808,690	$22,831,300

* bus trip includes transfer to/from rail in Portland;
rail & bus revenue for within Oregon portion of trip only
(may result in a conservative forecast of revenue)

Exhibit 4

Summary of Forecasted System Ridership
Total Annual Station Boardings and Alightings by Stage
Forecast Year 2010

Total Ons & Offs * Station	Mode	Stage 1-A	Stage 1-B	Stage 2	Stage 3	Stage 4
Eugene	Rail	63,889	106,638	215,430	449,323	528,750
	Bus	5,513	2,842	13,599	0	0
	Total	69,402	109,480	229,029	449,323	528,750
Albany	Rail	20,090	29,341	44,278	75,808	83,623
	Bus	1,885	1,179	5,842	0	0
	Total	21,975	30,520	50,120	75,808	83,623
Salem	Rail	33,619	53,577	86,555	179,185	215,329
	Bus	4,758	2,652	10,621	0	0
	Total	38,377	56,229	97,176	179,185	215,329
Clackamas County	Rail	0	0	31,954	72,190	84,319
	Bus	0	0	0	0	0
	Total	0	0	31,954	72,190	84,319
Portland **	Rail	40,161	65,085	115,061	212,370	241,466
	Bus	11,088	6,199	29,602	0	0
	Total	51,249	71,284	144,663	212,370	241,466

* Does not include boardings to/from Starlight for trips between the Willamette Valley and points south (e.g., California)

** Does not include boardings/alightings for trips between Portland and points north and east (e.g., Washington State)

Source: KPMG Peat Marwick

Exhibit 5

Summary of Forecasted Travel Demand
I-5 Average Daily Intercity Passenger Vehicles
by Stage and I-5 Location
Forecast Year 2010

Alternative/ Stage		I-5 Location		
		Between Eugene & Albany	Between Albany & Salem	Between Salem & I-205
Base Case	total intercity vehicles *	21,417	37,754	54,350
Stage 1-A	total intercity vehicles *	21,364	37,689	54,262
	net change (diverted)	(53)	(65)	(88)
Stage 1-B	total intercity vehicles *	21,314	37,628	54,184
	net change (diverted)	(103)	(126)	(166)
Stage 2	total intercity vehicles *	21,157	37,449	53,968
	net change (diverted)	(260)	(305)	(382)
Stage 3	total intercity vehicles *	20,821	37,071	53,480
	net change (diverted)	(596)	(683)	(870)
Stage 4	total intercity vehicles *	20,710	36,947	53,304
	net change (diverted)	(707)	(807)	(1,046)

* Intercity passenger vehicle traffic only; totals do not include commercial vehicles or local traffic

Source: KPMG Peat Marwick

Exhibit 6

Summary of Forecasted System Ridership
Stage 2 Alternative Sensitivity Analyses
Forecast Year 2010

Stage 2 Condition	System Ridership		System Revenue	
	Annual	Change	Annual	Change
Baseline Forecast	366,220	0.0%	$3,697,900	0.0%
50% Increase in Auto Costs	425,350	16.1%	$4,322,500	16.9%
10% Increase in Auto Travel Time	422,860	15.5%	$4,284,000	15.8%
25% Increase in Rail Fares	340,990	-6.9%	$4,297,000	16.2%
Improved Transit Access	393,130	7.3%	$3,968,400	7.3%

Source: KPMG Peat Marwick

Exhibit 7

Summary of System Operating Costs, Revenue & Deficit by Stage Forecast Year 2010

Major Market	Annual Bus+Rail O/M Cost *	Annual Bus+Rail Revenue	Annual Revenue/ Cost	Annual Surplus (Deficit)
Stage 1-A	$4,345,000	$1,254,900	28.9%	($3,090,100)
Stage 1-B	$6,517,400	$1,912,000	29.3%	($4,605,400)
Stage 2	$8,689,900	$3,697,900	42.6%	($4,992,000)
Stage 3	$17,379,800	$18,081,700	104.0%	$701,900
Stage 4	$36,932,200	$40,287,400	109.1%	$3,355,200

* based on $24 per train-mile

** Cost and revenue for Portland-Eugene segment only; revenue includes portion of trips between Oregon and Washington

Source: KMPG Peat Marwick

M E M O R A N D U M

METRO

Date: May 2, 1995

To: JPACT Finance Committee

From: Andrew C. Cotugno, Planning Director

Re: JPACT Finance Committee Meetings

The May 1, 1995 JPACT Finance Committee meeting was canceled and is being rescheduled as we were unable to prepare all of the materials for the meeting.

The first agenda item (as mailed to you previously) was a proposal on how to proceed on development of the Arterial Fund. What I propose is to have a series of JPACT Finance Committee meetings, one to two weeks apart, to review a targeted list of projects and costs for the various elements of the Arterial Fund we discussed at the last meeting (see attached matrix). The series of meetings have preliminarily been scheduled on the following dates and will be confirmed at the meeting on May 8:

Meeting 1: Fastlink Roads (Tri-Met)
Regional Bike Network (Metro)
Willamette River Bridges Rehabilitation
Monday, May 8, 1995 - 3:00 p.m.
Conf. Rm. 370A, Metro Regional Center

Meeting 2: Truck Access Routes
ODOT-Owned District Highways (50/50)
City/County-Owned Regional Arterials
Friday, May 26, 12:00 p.m.
Conf. Rm. 370A-B, Metro Regional Center

Meeting 3: Multi-modal Road Projects Targeted to Region 2040
Monday, June 5, 1995, 3:00 p.m.
Conf. Rm. 370A-B, Metro Regional Center
seismic

Following these meetings, we will have a good sense of what the needs are and we can begin focusing on how big the ballot measure should be and what is the appropriate mix of projects. It will be at this point that we discuss the proper geographic and modal mix of projects relative to the size of measure that we are interested in. It will also be at this point when we may want to

field some additional survey work. In addition, there are two additional "project categories" listed on the attached matrix: Local Operations and Maintenance (if there is no state gas tax increase) and Arterial Major Rehabilitation and Redesign. After these three JPACT Finance Committee meetings, we will know whether or not a state gas tax is pending and our list will tell us whether we need to include Local Operations and Maintenance and Arterial Major Rehabilitation and Redesign in order to balance the package of transportation projects.

In order to proceed with this work plan, the JPACT Finance Committee will need to adopt a rather aggressive schedule which we will discuss at the meeting on May 8.

ACC:lmk

Attachment

Table A

The Regional Arterial Group recommends the following types of projects be included as part of the Regional Arterial Fund, relative to funding them and other types of projects with other strategies.

JPACT	Regional	Responsibility	Local	Responsibility	State	Responsibility
Finance Meeting #	*Regional Arterial Fund*	*Future Packages (maybe exotics)*	*Gas Taxes*	*SDC's, TIF's, LIP*	*Gas Taxes, Weight Mile, etc.*	*Tolls*
	Top priority projects					
2	City/County owned Regional Arterials	City/County owned Regional Arterials	Willamette River Br. Rehab.		ODOT owned Dist. Hwys. (50/50)	
2	ODOT owned Dist. Hwys. (50/50)		Local Operations & Maintenance		ODOT Freeways	ODOT Freeways
1	Willamette River Br. Rehab.		Arterial Major Rehab.		Willamette River Br. Rehab.	
1	Regional Bike Network					
1	Fastlink roads					
2	Truck access routes					
3	Multi-modal road projects targeted to Region 2040					
	Projects to balance					
	Local Operations & Maint. (if no State $)		Local Bike & Pedestrian	Local Bike & Pedestrian	Local Operations & Maintenance	
	Arterial Major Rehab. & Redesign		Collectors/Local Roads	Collectors/Local Roads	Arterial Major Rehab.	
					Truck access routes	

Regional Arterial Fund

City / County / ODOT Arterials Capacity Improvement	*250 million
2040 Target Areas - Road, Bike, Ped, local streets	*100 million
Freight Target Areas	*50 m.
Regional Bike	*30 m.
Fastlink	*50 m
Willamette R. Bridge	*50 - 100 m.
	*530 - 580 m

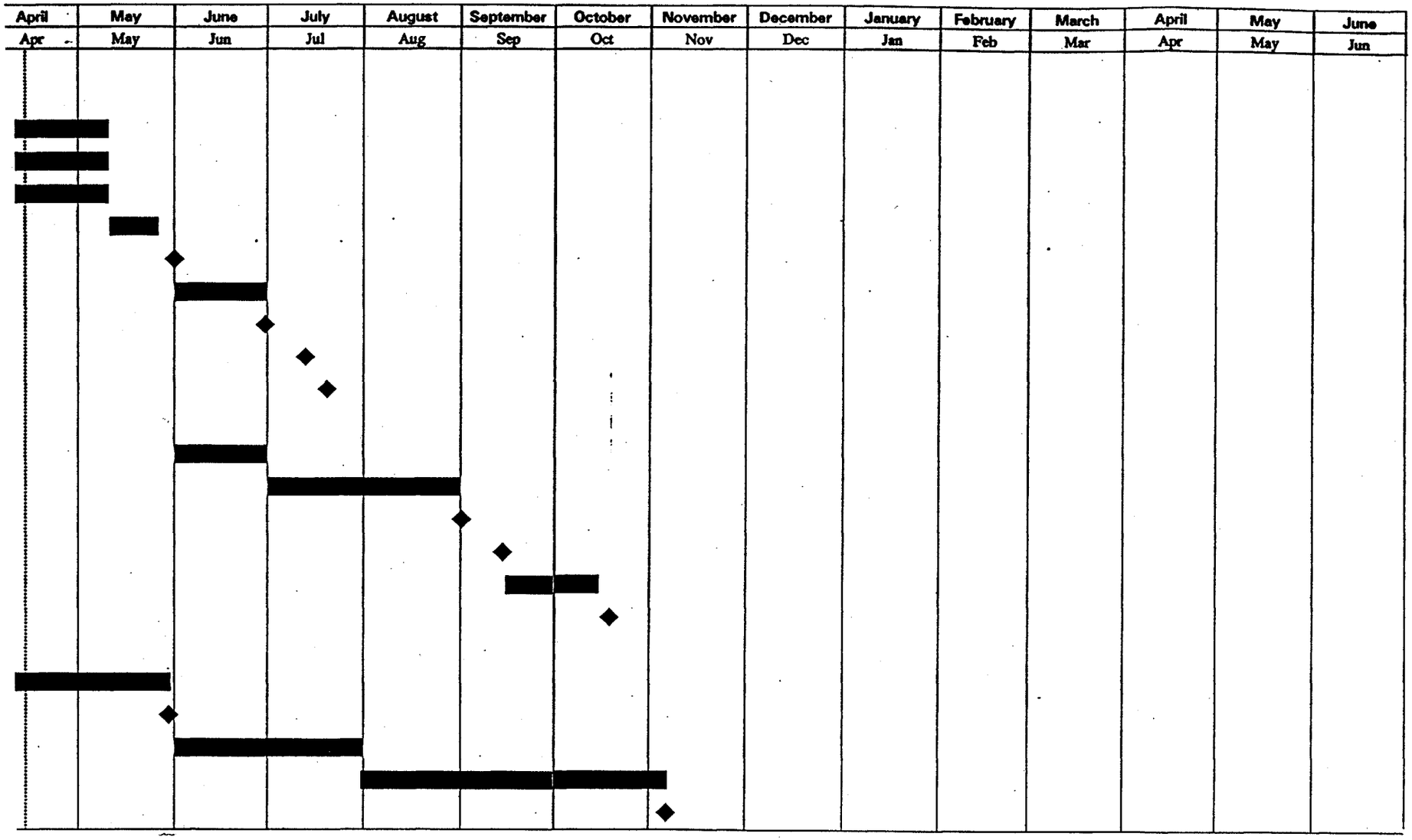
$250 million Capacity Improvement

	1990 Arterial VMT		1990 POP	
Portland	38%	$95 million	37%	$93 million
E. of I-205	12%	30	17%	43
E. Clackamas	19%	48	11%	28
W. Clackamas	3.4%	9	7%	18
Tigard/Tualatin	8%	20	6%	15
Beaverton/Hills.	20%	50	21%	53

$100 million 2040 Target Areas

	1990 Arterial VMT		1990 POP	
Portland	38%	$38 million	37%	$37 million
E. of I-205	12%	12	17%	17
E. Clackamas	19%	19	11%	11
W. Clackamas	3.4%	3	7%	7
Tigard / Tualatin	8%	8	6%	6
Beaverton / Hills.	20%	20	21%	21

- Regional Arterial Fu. lovember '95 Election



n 2 - Regional Arterial Fund - May '96 Election