EXHIBIT A GROWTH CONCEPT
ERRATA
12/8/94

Open Spaces and Trail Corridors

The areas designated open space on the Concept map are parks, stream and trail corridors, wetlands and floodplains, largely undeveloped upland areas, ~~or~~ and areas of compatible very low density residential development. Many of these natural features already have significant land set aside as open space. The Tualatin Mountains, for example, contain major parks such as Forest Park and Tryon Creek State Park and numerous smaller parks such as Gabriel Park in Portland and Wilderness Park in West Linn. Other areas are oriented toward wetlands and streams, with Fanno Creek in Washington County having one of

the best systems of parks and open space in the region.

Local jurisdictions are encouraged to establish acres of open space per capita goals based on rates at least as great as current rates, in order to keep up with current conditions.

Designating these areas as open spaces would have several effects. First, it would remove these land from the category of urban land that is available for development. The capacity of the urban growth boundary would have to be calculated without these, and plans to accommodate housing and employment would have to be made without them. Secondly, these natural areas, along with key rural reserve areas, would receive a high priority for purchase as parks and open space, such as Metro's Greenspaces program. Finally, regulations could be developed to protect these critical natural areas that would not conflict with housing and economic goals, thereby having the benefit of regulatory protection of critical creek areas, compatible low-density development, and transfer of development rights to other lands better suited for development.

About 35,000 acres of land and water inside today's urban growth boundary are included as open spaces in the Growth Concept Map. Preservation of these Open Spaces could be achieved by a combination of ways. Some areas could be purchased by public entities, such as Metro's Greenspaces program or local park departments. Others may be donated by private citizens or by developers of adjacent properties to reduce the impact of development. ~~Still others~~ Some could be protected by environmental zoning which allows very low-density residential ~~zoning~~ development through the clustering of housing on portions of the land while leaving important features as common open space.

Centers

Creating higher density centers of employment and housing is advantageous for several reasons. These centers provide access to a variety of goods and services in a relatively small geographic area, creating a intense business climate. Having centers also makes sense from a transportation perspective, since most centers have an accessibility level that is conducive to transit, bicycling and walking. Centers also act as social gathering places and community centers, where people would find the "small town atmosphere" they cherish.

Main Streets and Neighorhood Centers

During the early decades of this century, main streets served by transit and characterized by a strong business and civic community were a major land-use pattern throughout the region. Examples remain in Hillsboro, Milwaukie, Oregon City and Gresham, as well as the Westmoreland neighborhood and Hawthorne Boulevard. Today, these areas are undergoing a revival and provide an efficient and effective land-use and transportation alternative. The Growth Concept calls for main streets to grow from 1990 levels of 36 people per acre to 39 per acre. Main streets would accommodate nearly two percent of housing growth.

Main streets typically will serve neighborhoods and may develop a regional specialization -- such as antiques, fine dining, entertainment, or specialty clothing -- that draws people from other parts of the region. Main Streets form neighborhood centers as areas that provide the retail and service development at other intersections at the focus of a neighborhood areas and around MAX light rail stations. When several main streets occur within a few blocks of one another, they may also serve as a dispersed town center, such as the main street areas of Belmont, Hawthorne, and Division that form a town center for inner southeast Portland.

Employment areas

The Portland metropolitan area economy is heavily dependant upon wholesale trade and the flow of commodities to national and international markets. The high quality of our freight transportation system, and in particular our intermodal freight facilities are essential to continued growth in trade. The intermodal facilities (air and marine terminals, freight rail yards and common carrier truck terminals) are an area of regional concern, and the regional framework plan will identify and protect lands needed to meet their current and

projected space requirements.

Industrial areas would be set aside primarily ~~exclusively~~ for industrial activities. Other supporting uses, including some retail uses, may be allowed if limited to sizes and locations intended to serve the primary industrial uses. They include land-intensive employers, such as those around the Portland International Airport, the Hillsboro Airport and some areas along Highway 212/224. Industrial areas are expected to accommodate ten percent of regional employment and no households. Retail uses whose market area is substantially larger than the employment area shall not be considered supporting uses.

Other employment centers would be designated as mixed-use employment areas, mixing various types of employment and including some residential development as well. These mixed-use employment areas would provide for about five percent of new households and 14 percent of new employment within the region. Densities would rise substantially from 1990 levels of about 11 people per acre to 20 people per acre.

The siting and development of new industrial areasa would consider the proximity of housing for all income ranges provided by employment in the projedted industrial center, as well as accessibility to convenient and inexpensive non-auto transportation. The continued development of existing industrial areas would include attention to these two issues as well.

Transportation Facilities

In undertaking the Region 2040 process, the region has shown a strong commitment to developing a regional plan that is based on greater land use efficiencies and a truly multi-modal transportation system. However, the transportation system defined in the Growth Concept Analysis serves as a theoretical definition (construct) of the transportation system needed to serve the land uses in the Growth Concept (Recommended Alternative urban form). The modeled system reflects only one of many possible configurations that might be used to serve future needs, consistent with the policy direction called for in the Growth Concept (amendment to RUGGO).

As such, the Growth Concept (Recommended Alternative) transportation map provides only general direction for development of an updated Regional Transportation Plan (RTP) and does not prescribe or limit what the RTP will ultimately include in the regional system. Instead, the RTP will build upon the broader land use and transportation directions that are defined in the Growth Concept (Recommended Alternative).

The transportation elements needed to create a successful growth management policy are those that support the Growth Concept. Traditionally, streets have been defined by their traffic-carrying potential, and transit service according to it's ability to draw commuters. Other travel modes have not been viewed as important elements of the transportation system. The Growth Concept establishes a new framework for planning in the region by linking urban form to transportation. In this new relationship, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals.

Within the framework of the Growth Concept is a network of multi-modal corridors and regional through-routes that connect major urban centers and destinations. Through-routes provide for high-volume auto and transit travel at a regional scale, and ensure efficient movement of freight. Within multi-modal corridors, the transportation system will provide a broader range of travel mode options, including auto, transit, bicycle and pedestrian networks, that allow choices of how to travel in the region. These travel options will encourage the use of alternative modes to the auto, a shift that has clear benefits for the environment and the quality of neighborhoods and urban centers and address the

needs of those without access to automobiles.

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METROPOLITAN EXPOSITION-RECREATION COMMISSION

December 8, 1994

TO: Sandi Hansen, Metro Councilor

FROM: Pat LaCrosse, MERC General Manager

RE: Notice For Public Meetings

This memo follows up on the meeting MERC Commissioners and I had with you and Casey Short on 10/31/94 regarding notice for public meetings.

This meeting resulted from certain complaints that had been made in the context of our efforts to update the concession facilities in the OCC.

By way of background, as you know, we at MERC have dramatically increased the number and kind of public meetings in the last year and a half. With the Business Plan, we had over 20 public meetings of all kinds in all of our facilities. In addition, the MERC itself increased its public meetings twofold on average due to the general increase in workload. Finally, our review of our ticketing and concessions operation have been done in 4 public sessions so far, and chaired by MERC Commissioners and attended on average by 40 or more people. We have done this without any increase in staff resources.

We have not always given notice in precisely the manner that I might have wanted. We have not always been consistent, and in some cases have adjusted the agenda at the last minute due to slight changes in subject matter. While Oregon law allows this flexibility, it can sometimes confuse the interested public. We believe that we have met the legal requirements in every case as a minimum.

We want to do better, however, and have made attempts to do so already.

With respect to commission meetings, we will attempt to get the agenda out earlier. We are including more of the agenda items on the notice; all of them when possible.

In addition, we are now including a standard phrase that notes that adjustments in the agenda may take place and giving a phone number to call to clarify any final details.

Attached you will find copies of two recent agendas; the October one before our changes, and the November one after. You can see that we have substantially increased our effort to inform the public.

The other two issues we discussed, the monthly lunch and our liaison commissioner structure will be addressed in the first quarter of next year.

Sincerely,

cc: MERC Commissioners
MERC Facility Directors

October 10, 1994

Regular Meeting

The ***Regular Meeting*** of the Metropolitan Exposition-Recreation Commission will be held on ***Wednesday, October 19, 1994*** at 12:30 p.m., in Room B110-112 of the Oregon Convention Center, 777 N.E. Martin Luther King Jr. Blvd., Portland, Oregon.

****

Agenda

A. Approval of Baseball Contract at Civic Stadium

B. Election of MERC Officers

C. Approval of Ticketing Proposals

November 3, 1994

Regular Meeting

The Metropolitan Exposition-Recreation Commission will hold a regular meeting at 12:30 p.m. at the Oregon Convention Center in room B111-112, 777 N.E. Martin Luther King Jr. Blvd., Portland, Oregon on Wednesday, November 9, 1994.

****

Preliminary Agenda

A. Approval of Request For Proposals for Automated Ticket Services at the Oregon Convention Center & Expo
B. Approval of a Draft of Joint City Council/Metro Resolution Updating the MERC Facilities Consolidation Agreement
C. Approval of a Draft of Joint City Council/Metro Resolution on the Future of Civic Stadium
D. Approval of Fiscal Year 95-96 Proposed Budget
E. Approval of "Friends of the PCPA" 2nd Year Contract
F. Approval of MERC Public Records Request, Procedures and Fees
G. Staff Progress Reports: Facilities Concession Contract Status Expo Center

This agenda may change before the time of meeting. Please call Denise Peterson at 731-7836 for further information.

7 December 1994

Metro Council
600 N. E. Grand
Portland, Oregon 97232

Dear Councilors:

I write to you as a public servant - a Metro employee. Currently I am employed at Metro Washington Park Zoo as the assistant curator which is a non-represented position. I started my career as a public servant in 1971, as an animal keeper. I was a labor union shop steward and animal keeper in 1979, when zoo management asked employees to accept their offer of an employer pension pick-up. Due to several years of high inflation, the zoo was hard pressed to try and match the inflation rate - something they were unable to do for several of the prior years as well. In any event, I was one of several who were trying to sell this idea to employees. We really didn't believe we could get any better of a monetary offer. Zoo management was looking at this offer as a cost saver for them more in the long-term sense than short term. Many of us felt we were helping the zoo in a sense by accepting this offer. Many of us were - and still are- loyal to the zoo.

So now Measure 8 comes along under the false pretense that this will save taxpayers money. We are all aware now that there will be no tax money refunded to the taxpayer, therefore no savings. The savings to the taxpayer has been the many years savings in employer payroll taxes due to the employer pension pick-up. That savings will now disappear due to the provisions of Measure 8.

I have been a loyal employee for over 20 years. I do not work with slakers. My coworkers are all committed to sound work ethics. The taxpayer is getting more than their money's worth from us and we're proud to say so! You, as Metro councilors, should be proud of your zoo workforce. They have made Metro Washington Park Zoo one of the best zoos in the world.

Measure 8 is mean-spirited and punitive. It will not accomplish what it promised. If Executive Officer, Rena Cusma, proposes offsetting the effects of Measure 8 on Metro employees, I would hope you will join in her efforts. I feel I was one of many who helped, at your request, many years ago when you told us it was important. It meant a great savings to the zoo over the years. As you are aware, non-represented employees no longer receive automatic cost-of-living adjustments and haven't for the past two years. Please be reciprocal now and at least prevent us from taking a pay reduction.

Thank you for your consideration of this issue.

Respectfully,

Michael N. Keele

Michael N. Keele - Assistant Curator
Metro Washington Park Zoo

Monday, Dec. 5 1994

Dear Metro,

Our names are Amanda Szeto, Jennifer French, and Courtney Burkholder. We are seventh graders at Damascus Middle School. We are writing because we have some concerns about the highway that may be built. While it's solving problems, it is also causing many more.

This highway will be built less than 100 feet from our school. That is very dangerous. Also, the pollution and noise level is not good. It would be different if we could benefit from it, but we don't. There are no ramps that we can get on to to take us any where. If this highway is built, it will cause houses to be knocked down.

We are worried about future Damascus students. The playground won't be safe and, again, there will be too much noise. The people that live near won't be able to walk any more.

Thanks for hearing us out.

From

Jennifer French
Amanda Szeto
Courtney Burkholder

Today, about 20 percent of all employment in the region is in downtown Portland. Under the Growth Concept, downtown Portland would grow at the same rate as the rest of the region, and would remain the location of 20 percent of regional employment. To do this, downtown Portland's 1990 density of 150 people per acre would increase to 250 people per acre. Improvements to the transit system network, development of a multi-modal street system and maintenance of regional through routes (the highway system) would provide additional mobility to and from the city center.

Regional centers

There are ~~six~~ eight regional centers, serving four market areas (outside of the Central City market area). Hillsboro serves that western portion of the region, and Gresham the eastern. The Central city and Gateway serves most of the Portland area as a regional center. Downtown Beaverton and Washington Square serve the and Or. Washington County area, and Clackamas Town Center and Milwaukie together serve Clackamas County and portions of outer south east Portland.

These Regional Centers would become the focus of compact development, redevelopment, and high-quality transit service, multi-modal street networks and act as major nodes along regional through routes ~~highway improvements~~. The Growth Concept accommodates three percent of new household growth and 11 percent of new employment growth in these regional centers. From the current 24 people per acre, the Growth Concept would allow up to 60 people per acre.

Transit improvements would include light-rail connecting all regional centers to the Central City. A dense network of multi-modal arterial and collector streets would tie regional centers to surrounding neighborhoods and other centers. Regional through-routes would be designed to serve connect regional centers an ~~Highway improvements also would focus on~~ ensure that these centers are attractive places to conduct business. The relatively small number of centers reflects not only the limited market for new development at this density but also the limited transportation funding for the high-quality transit and roadway improvements envisioned in these areas. As such the nine regional centers should be considered candidates and ultimately the number should be reduced o

REGIONAL SERVICES

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METRO

December 8, 1994

To the Citizens of the Portland Metropolitan Region:

After having spent the last three years in discussion with you, we are pleased to present the Region 2040 Growth Concept and accompanying map. These establish the proposed form for growth and land development for our region over the next 50 years. The adopted Resolution 94-2040C, including the proposed Region 2040 Growth Concept and map, provides the strong policy statement we need to guide how the region intends to manage its projected long-term growth and begins to address the many issues associated with that growth.

The regional policy direction and growth management philosophy couched in the concept proposal have as their primary objective the one pre-eminent value we've heard over and over from you: We must preserve our access to nature while we work to build better communities. That value is central to the 2040 Growth Concept and its implementation over time.

This work outlines a general approach to three important issues related to growth: the ranges of density that could accommodate projected growth within our urban growth boundary; the areas that should be protected as open space within and outside that boundary; and the description of where and how much that boundary may need to be expanded. This important regional decision to establish the 2040 Growth Concept proposal will not, however, decide whether or by how much to expand the urban growth boundary. Rather, it locates urban reserve study areas that will be examined over the next six months and evaluated in conjunction with other refinements to the growth concept.

The concept proposal does not delineate the specifics of exactly when, how, or where growth may occur in our region and the areas surrounding it. That planning work will occur later, as the growth concept is first refined over the next six months and then is implemented through a Regional Framework Plan and the comprehensive plans of cities and counties.

In July of 1995, urban reserve areas will be designated as needed to implement the 2040 Growth Concept incorporated into RUGGO based on the refined land use designations and growth allocation for areas currently within the urban growth boundary. Land for urban reserve areas will, at that time, be set aside for long-term urbanization needs as our region grows. Also by July of 1995, Metro will adopt a Future Vision. This vision statement will guide future planning by adding further consideration of the needs of children, housing choices, education, the economy, the natural and built environments, arts and culture, civic life, rural lands and urban communities. It will also acknowledge our place in the larger developing region of the Willamette Valley and north into the State of Washington.

The 2040 Growth Concept will continue the policy groundwork laid out in the Regional Urban Growth Goals and Objectives that were developed in collaboration with the cities and counties of the region and adopted by the Metro Council in 1991. Building on those goals and objectives, the extensive technical analysis and public involvement undertaken as part of the Region 2040 planning process led to the concept proposal established in Resolution 94-2040C. We are committed to continuing to work closely with you and with the leaders of the cities and counties of our region, as well as with the State of Oregon, to refine and implement this growth concept. We are also committed to working with our neighbor cities of Canby, Sandy, Newberg, and North Plains to plan a future in which the changes we will all certainly experience with growth are managed for the benefit of those cities and our own metropolitan area.

The prevailing theme in what we have heard from citizens and our regional partners in this Region 2040 planning process is a broad consensus as to how we can enhance our region's livability and provide a framework for change and healthy growth. We believe that consensus was reached because of our commitment to public involvement and to working with our partner cities and counties.

The established Region 2040 Growth Concept proposal is another of the landmark steps this region has taken in order to help guide the future of the Metro area. It will serve as the foundation for developing a Regional Framework Plan, an updated Regional Transportation Plan, and for eventual changes to local comprehensive plans. This work represents the best expression of today's desired urban form for the year 2040, yet it is not designed to be a stagnant or inflexible concept for growth management. Instead, it is the

prototype for integrating land use and transportation to guide the more specific decisions that will be made in future implementing activities.

As we work together over the next two years to implement the Region 2040 Growth Concept, the assumptions underlying this growth concept proposal will continue to be refined. We will measure and test the established concept against the several policy considerations we set forth in Resolution 94-2040C. We believe the Region 2040 Growth Concept, when complemented by the Future Vision and implemented in the Regional Framework Plan, will help us create the highly desirable future we all want for our region.

Sincerely,
Metro Council

Judy Wyers Presiding Officer District 8	Ed Washington Deputy Presiding Officer District 11	Susan McLain District 1
Jon Kvistad District 2	Jim Gardner District 3	Richard Devlin District 4
Mike Gates District 5	George Van Bergen District 6	Ruth McFarland District 7
Rod Monroe District 9	Roger Buchanan District 10	Sandi Hansen District 12
Terry Moore District 13		

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METRO

Development of Regional Open Space Policy

Regional Urban Growth Goals and Objectives (RUGGO) 1991

Metro is required by ORS 268.380 to adopt regional goals and objectives, structurally similar to and in compliance with statewide goals and objectives. After two years of development with local governments and citizens, Metro's first such goals and objectives were adopted in 1991. They include Objective 9 on protection of open space and planning for interconnected corridors:

> "Sufficient open space in the urban region shall be acquired, or otherwise protected, and managed to provide reasonable and convenient access to sites for passive and active recreation. An open space system capable sustaining or enchanting native wildlife and plant populations should be established. . .
>
> 9.2. Corridor Systems. The regional planning process shall be used to coordinate the development of interconnected recreational and wildlife corridors within the metropolitan region.
>
> > 9.2.1. A region-wide system of trails should be developed to link public and private open space resources within and between jurisdictions."

Metropolitan Greenspaces Master Plan 1992

Growth Management includes open spaces like natural areas, parks and wildlife habitat. The Master Plan describes and maps interconnected regionally significant greenspaces on an ecosystem basis. The resulting network of interconnecting corridors is viewed as "green infrastructure" for growth management planning.

Metro Charter 1992

The 1992 Metro Charter changed a conditional Metro authority for a regional parks and open spaces system to unconditional authority to operate one.

Metro 2040 Growth Concept 1994

The 50 year preferred form of growth and development was established December 8, 1994 for further refinement and July 1995 adoption into RUGGO. In addition to integrating land

use and transportation, this 50 year desired end state shows parks, stream corridors, wetlands and floodplains, and undeveloped upland areas as open spaces:

> "Open spaces, including important natural features and parks, are important to the capacity of the urban growth boundary and the ability of the region to accommodate housing and employment."

The Metropolitan Greenspaces Master Plan map was used. These areas are intended for low density development, if any. They are not to be included in the buildable lands inventory for housing and transportation planning.

Regional Framework Plan 1996

The Metro Charter mandates adoption of a regional framework plan by December 1997. It is subject to LCDC acknowledgment and applicable to local comprehensive plans. The Charter requires the plan to address "parks, open spaces and recreational facilities." Since this plan may be adopted in components, it is anticipated that several components, including open spaces will be completed in 1996. Some components, like the Metro UGB and the Regional Transportation Plan will be effective immediately upon adoption. The open spaces component could include regulations that could be immediately effective if it were adopted as a functional plan under ORS 268.390.

rpj1878

TESTIMONY BEFORE LCDC SUBCOMMITTEE ON GOAL 5

Thank you for this opportunity to address the Subcommittee.

As you know, Metro has followed your discussions on Goal 5 revision, with interest. In fact, you received a letter from Metro, in October, which presented Metro's support of ecosystem based resource planning. The letter also outlined Metro's years of work in open space planning, its responsibilities under the 1992 Metro Charter and the new concept of "rural reserve" in the regional 2040 process. Since October, Metro referred to the voters a greenspaces bond measure of $135.6 million, and the Region 2040 resolution was adopted last Thursday.

Today, I'd like to emphasize the importance Metro places on open space planning. Between January 1989 and July 1992, Metro worked with the three counties and 24 cities within its boundaries to develop the Metropolitan Greenspaces Master Plan. This is an extraordinary achievement in consensus building and the 20 pages of appendix listing the public meetings and presentations illustrate the effort this took.

I have a copy of the executive summary of the plan for each of you and I'd like to direct your attention to a few specific items. Page 5 outlines the ecosystem approach. Page 12 points out the importance of trails as connecting significant greenspaces. The map in the back shows that only 8 percent of regionally significant greenspaces in 1989 were in public ownership. To protect the other 92 percent of the regionally significant greenspaces, a bond measure was referred in 1992. It failed, and a smaller version is referred to the March 1995 ballot.

In the summary of the Greenspaces Master Plan, regulation is not discussed. However, pages 9 through 11 of the full plan describe in great detail the relationship of the Master Plan to Metro's regional goals and objectives - known as RUGGO - adopted in 1991. Metro purposefully avoided inserting regulations into the Master Plan because those would require that Metro adopt a functional plan. Instead, specific deference is given to local comprehensive plans. This was based on the recognition that local governments have responsibility, under Goal 5, to inventory and protect natural resources in their comprehensive plans.

Metro compliments the Subcommittee on its efforts toward needed revisions of Goal 5 and Metro agrees with the 10 ideas summarized in the Concept Paper. Planning in advance of development, rather than at the time of development, is necessary. Streamlining the Goal 5 process is an important step. However, there may be easier means to do so than the complicated five tracks described in the Concept Paper.

There are important urban and rural differences that could - and should - be reflected in Goal 5. Advance decisions about resource protection are critical to growth management and successful accommodation of growth inside the UGB. Metro concurs that it is critical to the success of Goal 5 to develop an effective mechanism for "interim protection" of resource lands during the long evaluation process.

Metro's concern is that Subcommittee discussions have included making open spaces and scenic view resource protections optional for local comprehensive plans. While this may reduce costs of implementing Goal 5 and help streamline the process, it may also reduce needed protection of significant resources and fail to protect Goal 5 work already completed. Metro's five specific concerns are as follows:

1. Incremental acquisition programs, such as Metro's Bond Measure, cannot hope to be successful without some regulatory protection of resource lands from development prior to acquisition. Without such regulations there may not be resource land available for future acquisition.

2. Without a Goal 5 based requirement for protection of open space and scenic views, local governments may not expend the resources necessary to provide protection.

3. Inventory, and other Goal 5 work in the Portland metropolitan area, which seems to be more complete than elsewhere in the state, may not be carried forward to effective regulation.

4. Metro's Greenspaces Master Plan uses an ecosystem approach and has identified some regionally significant greenspaces that are just outside the Urban Growth Boundary and outside Metro's authority.

5. Regional trails are important in the Metro region as connections between significant greenspaces. Therefore, regional trails should be recognized in Goal 5.

Based on these concerns, open space planning in - and around - Urban Growth Boundaries should remain a priority for Goal 5 work, not an option. Metro's experience indicates that conflicts arise when Goal 5 differences are based on UGBs because entire ecosystems and watersheds do not always fit neatly within UGBs. And, as your Concept Paper points out, the difficult issues of interim protection have not yet been resolved.

Metro would like to offer assistance in seeking effective protections for natural resources in the Portland metropolitan region. Much like state agencies, Metro can provide in-depth work, particularly planning for open spaces and trails. Perhaps the Metro Greenspaces Master Plan could be used as a beginning point for local government inventory of open space, similar to the proposed use of the National Wetlands Inventory. Existing state, federal, and regional programs, should be relied on to avoid duplication of local effort.

In conclusion, Metro requests that open space protection under Goal 5 be continued for the Metro region, even if it becomes optional in the rest of the state. Metro also urges the Subcommittee and LCDC to continue its search for effective interim protections of identified resources. A significant amount of work, over many years, has already been done to identify regional open spaces that will be an important part of Metro's Regional Framework Plan. And, although Metro has the authority inside its boundaries to require protection in local comprehensive plans, it cannot effectively apply the ecosystem approach as recommended by the Subcommittee unless areas adjoining its jurisdiction have interim protection.

Publications List - Region 2040

Technical Reports

Region 2040 Recommended Alternative Decision Kit, September 1994. Metro.
Region 2040 Technical Appendix, September 1994, Metro.
Transportation Analysis of the Growth Concepts, July 1994, Metro.
Region 2040 Concept Document - Land Use Appendix. July 1994. Metro.
Concepts for Growth, Report to the Council, (Concept Report) June 1994. Metro.
Portland Metro 2040 Commodity Flow and Requirements Study, Phase III Report, June 1994. DRI/McGraw-Hill et al
The Region 2040 Study, (Regional Design Images project) May 1994. Calthorpe and Associates. ***(*$20 report)***
Profiles of the Portland-Vancouver Economy, May 1994. Metro. ***(*$10 report - 797-1742)***
Water Descriptive Indicators: Final Report, April 1994. ECO Northwest and CH_2MHill
2040 Indicators: Housing and Employment, April 1994. ECO Northwest
Carrying Capacity and Its Application to the Portland Metropolitan Region, April 1994. Wim Aspeslaugh, University of Oregon for the Future Vision Commission.
Evaluation of No-Growth and Slow-Growth Policies for the Portland Region, March 1994. ECO Northwest.
Workstyles Study, March 1994. Steve Schriver, Institute of Portland Metropolitan Studies for the Future Vision Commission.
Creating and Using Descriptive Indicators: Non-Quantifiable Issues, February 1994. Pacific Rim Resources.
Region 2040 Interim Report, January 1994, Metro.
Settlement Patterns in the Portland Region: A Historical Overview, January 1994. Carl Abbott, Portland State University for the Future Vision Commission.
The Regional Forecast, Portland-Vancouver Metropolitan Area Forecast 1990 - 2040, November 1993. Metro.
Existing Conditions: The Natural and Built Environment, June 1993. ECO Northwest.
Mixed-Use Urban Centers: Economic and Transportation Characteristics, February 1993. Cambridge Sytematics and Parsons Brinckerhoff Quade & Douglas, Inc.
Region 2040 - Phase 1 Final Report, June 1993, ECO Northwest and Metro.

Region 2040 Public Involvement Summaries/Results

Region 2040 Public Involvement Report, August 1994. Metro, Cogan Owens Cogan, and Pacific Rim Resources.
Summary of Round 2 of Public Involvement, January 1993. Cogan Sharpe Cogan and Pacific Rim Resources.
Summary of Round 1 of Public Invovlement: Implications for Defining Alternatives, August 1992. ECO Northwest.
Telephone Survey for the Region 2040 Project, April 1992. Decision Sciences.

Surveys

Citispeak Survey, April 1994. Western Attitudes.
Citispeak Survey, April 1993. Western Attitudes.
Citispeak Survey, September 1993. Western Attitudes.
Oregon Values and Beliefs Survey, Summary Report, 1993. Oregon Business Council.

Region 2040 brochures/tabloids

Region 2040 Decisions for Tomorrow "You Said It" Update, Fall 1994. Metro.
"It's Your Turn" tabloid mailier, June 1994. Metro.
Decisions for Tomorrow: Region 2040 Update, Fall/Winter 1993. Metro.
Decisions for Tomorrow: Region 2040 Update, Spring 1993. Metro.
Region 2040: Shaping the Choices for Growth, September 1992 (newsprint). Metro

Supporting Documents

Transportation Planning Rule Implementation Regional Guidelines: Report on a Regional Discussion, February 1994, Cogan, Owens, Cogan.
Oregon's Statewide Land Use Planning Goals, 1993 Edition. Department of Land Conservation and Development.
Picture This...The Results of a Visual Preference Survey, June 1993. A. Nelesen Associates, Inc.
1992 Metro Charter, November 1992. Metro.
Oregon Benchmarks, December 1992. Oregon Progress Board.
Ten Essentials for a Quality Regional Landscape, 1992. Metro.
Regional Transportation Plan, January 1992 Revision of the 1989 Update. Metro.
Regional Urban Growth Goals and Objectives, September 1991, Metro.
Historical Development of the Metropolitan Service District, May 1991 by Carl Abbott for the Metro Charter Committee.

For copies of the above documents, please contact Metro at 797-1562.

BD h:2040bib.lio
12/94

REGIONAL SERVICES

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METRO

December 8, 1994

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This work outlines a general approach to three important issues related to growth: the ranges of density that could accommodate projected growth within our urban growth boundary; the areas that should be protected as open space within and outside that boundary; and the description of where and how much that boundary may need to be expanded. This important regional decision to establish the 2040 Growth Concept proposal will not, however, decide whether or by how much to expand the urban growth boundary. Rather, it locates urban reserve study areas that will be examined over the next six months and evaluated in conjunction with other refinements to the growth concept.

The concept proposal does not delineate the specifics of exactly when, how, or where growth may occur in our region and the areas surrounding it. That planning work will occur later, as the growth concept is first refined over the next six months and then is implemented through a Regional Framework Plan and the comprehensive plans of cities and counties.

In July of 1995, urban reserve areas will be designated as needed to implement the 2040 Growth Concept incorporated into RUGGO based on the refined land use designations and growth allocation for areas currently within the urban growth boundary. Land for urban reserve areas will, at that time, be set aside for long-term urbanization needs as our region grows. Also by July of 1995, Metro will adopt a Future Vision. This vision statement will guide future planning by adding further consideration of the needs of children, housing choices, education, the economy, the natural and built environments, arts and culture, civic life, rural lands and urban communities. It will also acknowledge our place in the larger developing region of the Willamette Valley and north into the State of Washington.

The 2040 Growth Concept will continue the policy groundwork laid out in the Regional Urban Growth Goals and Objectives that were developed in collaboration with the cities and counties of the region and adopted by the Metro Council in 1991. Building on those goals and objectives, the extensive technical analysis and public involvement undertaken as part of the Region 2040 planning process led to the concept proposal established in Resolution 94-2040C. We are committed to continuing to work closely with you and with the leaders of the cities and counties of our region, as well as with the State of Oregon, to refine and implement this growth concept. We are also committed to working with our neighbor cities of Canby, Sandy, Newberg, and North Plains to plan a future in which the changes we will all certainly experience with growth are managed for the benefit of those cities and our own metropolitan area.

The prevailing theme in what we have heard from citizens and our regional partners in this Region 2040 planning process is a broad consensus as to how we can enhance our region's livability and provide a framework for change and healthy growth. We believe that consensus was reached because of our commitment to public involvement and to working with our partner cities and counties.

The established Region 2040 Growth Concept proposal is another of the landmark steps this region has taken in order to help guide the future of the Metro area. It will serve as the foundation for developing a Regional Framework Plan, an updated Regional Transportation Plan, and for eventual changes to local comprehensive plans. This work represents the best expression of today's desired urban form for the year 2040, yet it is not designed to be a stagnant or inflexible concept for growth management. Instead, it is the

prototype for integrating land use and transportation to guide the more specific decisions that will be made in future implementing activities.

As we work together over the next two years to implement the Region 2040 Growth Concept, the assumptions underlying this growth concept proposal will continue to be refined. We will measure and test the established concept against the several policy considerations we set forth in Resolution 94-2040C. We believe the Region 2040 Growth Concept, when complemented by the Future Vision and implemented in the Regional Framework Plan, will help us create the highly desirable future we all want for our region.

Sincerely,
Metro Council

Judy Wyers Presiding Officer District 8	Ed Washington Deputy Presiding Officer District 11	Susan McLain District 1
Jon Kvistad District 2	Jim Gardner District 3	Richard Devlin District 4
Mike Gates District 5	George Van Bergen District 6	Ruth McFarland District 7
Rod Monroe District 9	Roger Buchanan District 10	Sandi Hansen District 12
Terry Moore District 13		

M E M O R A N D U M

METRO

DATE: December 8, 1994

TO: Metro Councilors

FROM: Councilor Hansen

RE: MERC Procedures and Resolution 94-48

I received correspondence from Pat LaCrosse today regarding MERC's procedures for public notice and public involvement. I want to share with you the information I received, in a shortened form from what I received.

- I met with MERC Commissioners and Mr. LaCrosse in October to discuss ways they could improve their public notice procedures. They are working to implement my suggestions.

- Recent major initiatives of MERC have enjoyed significant public participation and notice. These include over 20 meetings on the Business Plan, and a series of meetings with interested parties and the public on both their ticketing procedures and the upcoming RFP for food service.

- MERC has always met the requirements of the public meetings law.

- Additional procedures are being added, including the printing of agenda items on their notices of Commission meetings, and the listing of a phone number on those agendas for people to call if they have questions.

It is my belief that MERC could continue to do more to involve the public in its decision-making and to provide more information to the public than is required. I also believe, however, that MERC is making significant strides to provide better notice and opportunity for public involvement, and that changes made in recent weeks and months will continue.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING A 2040 GROWTH MANAGEMENT STRATEGY	)))))	RESOLUTION NO. 94-2040-C Introduced by Metro Council Planning Committee, Chairman Jon Kvistad

WHEREAS, Metro adopted land use regional goals and objectives called Regional Urban Growth Goals and Objectives (RUGGO) in September 1991 which are required by state law; and

WHEREAS, During the development of RUGGO, there was widespread interest in a long-range, 50-year view of how to accommodate regional growth which led to Metro's Region 2040 planning program; and

WHEREAS, State law requires several significant 20-year regional land use decisions in 1995 that will be affected by identifying the region's long-term planning direction; and

WHEREAS, On April 28, 1994, the Metro Council adopted Resolution No. 94-1930B describing its intent concerning the process and products of the Region 2040 planning program; and

WHEREAS, The Region 2040 planning process included analysis of the Base Case and Concepts A, B, and C by Metro staff together with local government staff and public representatives; and

WHEREAS, The Metro Council has received the considered advice of its Metro Policy Advisory Committee, Joint Policy Advisory Committee on Transportation, and the Future Vision Commission, and all the concepts have been the subject of extensive public review; and

WHEREAS, This Resolution accepts the work products of the Region 2040 process for Metro's continued planning, establishes the 2040 Growth Concept scheduled to be added to RUGGO by July 1995 and states the process for refinement and implementation of the 2040 Growth Concept; now, therefore,

BE IT RESOLVED,

1. That the description of the Growth Concept, proposed as an addition to RUGGO text, and the 2040 Growth Concept Map attached and incorporated herein as Exhibit "A" are hereby established as the 2040 Growth Concept proposal which shall be

scheduled for adoption and implementation at the first regular Metro Council meeting in July 1995. Any proposed refinements developed by the process herein shall be considered concurrent with the adoption and implementation of this 2040 Growth Concept proposal in July 1995.

2. That a refinement process of additional technical analysis and public review shall be carried out between December 1994 and June 1995 to determine the required policies necessary to assure that the Growth Concept proposal will be achievable. This refinement shall be guided by the following policy considerations:

a. A focus on centers and corridors to seek greater land use efficiencies in development and redevelopment.

b. Relatively few additions to the urban land supply such as the 14,500 acres or fewer estimated to be needed under the example 2040 Concept Analysis.

c. Development of a true multimodal transportation system which serves land use patterns, densities and community designs that allow for and enhance transit, bike, pedestrian travel and freight movement.

d. An improved transportation modal share for transit, bike and pedestrian travel.

e. Creation of a jobs-housing balance at the regional, central city, centers and community levels.

f. Preservation of both local and regional green spaces within and near the Metro boundary.

g. Enhanced redevelopment and reinvestment opportunities in areas of substandard incomes and housing.

3. That the refinement process of additional technical analysis and public review to be carried out between December 1994 and June 1995 will also provide the opportunity for the following:

a. Further local government analysis and discussion of the 2040 Growth Concept with its constituents as requested by Metro's local government partners.

b. Analysis of the study areas identified in the public process leading to this 2040 Growth Concept.

c. Consideration of Concept Map revisions based on the policy considerations, local comment and analysis.

d. Development of 2015 population and employment forecasts.

e. Identification of site specific urban reserve areas for designation by July 1995.

f. Receipt of the Future Vision Commission recommendation and adoption of a 50-year Future Vision by July 1, 1995, as required by the 1992 Metro Charter.

g. Development of an interim Regional Transportation Plan Update.

h. Consideration of amendments to RUGGO Goal II, Urban Form, consistent with the refined 2040 Growth Concept.

i. Formulation and adoption of a Work Plan for the Regional Framework Plan required by the 1992 Metro Charter.

j. Periodic review of the Urban Growth Boundary.

k. Development of an improved modal share forecast for achievable levels of transit, bike, and pedestrian travel.

l. Continued examination and analysis of industrial lands and access to them.

m. Further analysis of achievable infill and development.

4. That the proposals to the Metro Council for amendments to RUGGO Goal II approved by MPAC and the Metro Council are attached as Exhibit "B." Further amendments to Goal II that go beyond the scope of MPAC's review of the Recommended Alternative Concept attached as Exhibit "E," are hereby referred to MPAC as proposed refinements.

5. That all additional proposed refinements to the 2040 Growth Concept and Concept Map, adopted on December 8, 1994, such as, urban reserve designations, concept definitions, density targets, and jobs-housing balance policies will be referred to MPAC for review and recommendation prior to adoption by the Metro Council.

6. That MPAC should consider the established 2040 Concept and the referred amendments received by the Metro Council along with other refinements and make a rcommendation back to Council by April 15, 1995.

7. That implementation of the 2040 Growth Concept shall include:

a. Adoption of 2040 Growth Concept RUGGO text and 2040 Concept Map with designated urban reserve areas in July 1995.

b. Adoption amendments to RUGGO Goal II, Urban Form consistent with the refined 2040 Growth Concept in July 1995.

c. Define and adopt rural reserves protection inside Metro jurisdictional boundaries as part of the Regional Framework Plan by June 1996.

d. Adopt intergovernmental agreements with cooperative neighbor cities, counties and state agencies to protect "green" transportation corridors and rural reserves outside Metro jurisdictional boundaries by June 1996.

e. Adoption of transportation, green spaces, water quantity and quality, urban design, urban growth boundary and urban reserve components of the regional framework plan by December 1996.

8. That the urban reserve study areas indicated on the 2040 Growth Concept Map shall be the lands analyzed for designation as urban reserve areas by the first Metro Council meeting in July 1995.

9. That the 2040 Growth Concept, including urban reserve study areas, shall be submitted to the Land Conservation and Development Commission for technical review and coordination of adopted RUGGO 15.3 on Urban Reserves and LCDC's Urban Reserve Rule prior to designation of urban reserves.

10. That the Region 2040 Recommended Alternative Analysis, the Technical Analysis, the Appendix, and the Analysis Map attached as Exhibit "C" are hereby accepted as an example of one possible implementation of the 2040 Growth Concept.

11. That the 1995 Work Plan components directed by the Metro Council for staff submission by January 15, 1995, are attached as Exhibit "D."

ADOPTED by the Metro Council this _____ day of _____, 1994.

_____
Judy Wyers, Presiding Officer

gl
1903b

REGION 2040
Decisions for Tomorrow

Region 2040 Growth Concept

Council Decision Package

December 6, 1994

METRO

TABLE OF CONTENTS

RESOLUTION

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ADOPTING A 2040 GROWTH MANAGEMENT STRATEGY	)))))	RESOLUTION NO. 94-2040-C Introduced by Metro Council Planning Committee, Chairman Jon Kvistad

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BE IT RESOLVED,

1. That the description of the Growth Concept, proposed as an addition to RUGGO text, and the 2040 Growth Concept Map attached and incorporated herein as Exhibit "A" are hereby established as the 2040 Growth Concept proposal which shall be

scheduled for adoption and implementation at the first regular Metro Council meeting in July 1995. Any proposed refinements developed by the process herein shall be considered concurrent with the adoption and implementation of this 2040 Growth Concept proposal in July 1995.

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11. That the 1995 Work Plan components directed by the Metro Council for staff submission by January 15, 1995, are attached as Exhibit "D."

ADOPTED by the Metro Council this _____ day of _____, 1994.

_____
Judy Wyers, Presiding Officer

gl
1903b

Exhibit A Growth Concept and Map

II.4 Growth Concept

This Growth Concept states the preferred form of regional growth and development adopted in the Region 2040 planning process including the 2040 Growth Concept Map. This Concept is adopted for the long term growth management of the region including a general approach to approximately where and how much the urban growth boundary should be ultimately expanded, what ranges of density are estimated to accommodate projected growth within the boundary, and which areas should be protected as open space.

This Growth Concept is designed to accommodate 720,000 additional residents and 350,000 additional jobs. The total population served within this plan is 1.8 million residents within the Metro boundary.

The basic philosophy of the Growth Concept is: preserve our access to nature and build better communities. It combines the goals of RUGGO with the analysis of the Region 2040 project to guide growth for the next 50 years.

The conceptual description of the preferred urban form of region in 2040 is in the Concept Map and this text. This Growth Concept sets the direction for development of implementing policies in Metro's existing functional plans and the Charter-required regional framework plan. This direction will be refined, as well as implemented, in subsequent functional plan amendments and framework plan components. Additional planning will be done to test the Growth Concept and to determine implementation actions. Amendments to the Growth Concept and some RUGGO Objectives may be needed to reflect the results of additional planning to maintain the consistency of implementation actions with RUGGO.

Fundamental to the Growth Concept is a multi-modal transportation system which assures mobility of people and goods throughout the region. By coordinating land uses and this transportation system, the region embraces its existing locational advantage as a relatively uncongested hub for trade.

The basic principles of the Growth Concept apply Growth Management Goals

and Objectives in RUGGO. An urban to rural transition to reduce sprawl, keep a clear distinction between urban and rural lands and balance re-development is needed. For its long term urban land supply, the Growth Concept estimates that about 14,500 acres will be needed to accommodate projected growth. These lands will be selected from about 22,000 acres of Urban Reserve Study Area shown on the Concept Map. This assumes cooperative agreements with neighboring cities to coordinate planning for the proportion of projected growth in the Metro region expected to locate within their urban growth boundaries and urban reserve areas.

The Metro UGB would only expand into urban reserves when need for additional urban land is demonstrated. Rural reserves are intended to assure that Metro and neighboring cities remain separate. The result is intended to be a compact urban form for the region coordinated with nearby cities to retain the region's sense of place.

Mixed use urban centers inside the urban growth boundary are one key to the Growth Concept. Creating higher density centers of employment and housing and transit service with compact development in a walkable environment is intended to provide efficient access to goods and services and enhances multi modal transportation. The Growth Concept uses interrelated types of centers. The Central City is the largest market area, the region's employment and cultural hub. Regional Centers serve large market areas outside the central city, connected to it by high capacity transit and highways. Connected to each Regional Center, by road and transit, are smaller Town Centers with local shopping and employment opportunities within a local market area. Planning for all of these centers will seek a balance between jobs and housing so that more transportation trips are likely to remain local and become more multi modal.

In keeping with the jobs housing balance in centers, a jobs housing balance by regional sub-areas can and should also be a goal. This would account for the housing and employment outside centers, and direct policy to adjust for better jobs housing ratios around the region.

Recognition and protection of open spaces both inside the UGB and in rural reserves outside urban reserves are reflected in the Growth Concept. Open spaces, including important natural features and parks, are important to the

capacity of the urban growth boundary and the ability of the region to accommodate housing and employment. Green areas on the Concept Map may be designated as regional open space. That would remove these lands from the inventory of urban land available for development. Rural reserves, already designated for farms, forestry, natural areas or rural-residential use, would remain and be further protected from development pressures.

The Concept Map shows some transportation facilities to illustrate new concepts, like "green corridors," and how land use areas, such as centers, may be served. Neither the current regional system nor final alignment choices for future facilities are intended to be represented on the Concept Map.

The percentages and density targets used in the Growth Concept to describe the relationship between centers and areas are estimates based on modeling analysis of one possible configuration of the Growth Concept. Implementation actions that vary from these estimates indicate a need to balance other parts of the Growth Concept to retain the compact urban form contained in the Growth Concept. Land use definitions and numerical targets as mapped, are intended as targets and will be refined in the Regional Framework Plan. Each jurisdiction will certainly adopt a unique mix of characteristics consistent with each locailty and the overall Growth Concept.

Neighbor Cities:

The Growth Concept recognizes that neighboring cities surrounding the region's metropolitan area are likely to grow rapidly. Communities such as Sandy, Canby, and Newberg will be affected by the Metro Council's decisions about managing the region's growth. A significant number of people would be accommodated in these neighboring cities, and cooperation between Metro and these communities is necessary to address common transportation and land-use issues.

There are three key concepts for cooperative agreements with neighbor cities:

1) There shall be a separation of rural land between each neighboring city and the metropolitan area. If the region grows together, the transportation system would suffer and the cities would lose their sense of community

identity.

2) There shall be a strong balance between jobs and housing in the neighbor cities. The more a city retains a balance of jobs and households, the more trips will remain local.

3) The "green corridor," transportation facility ~~highway~~ through a rural reserve that serves as a link between the metropolitan area and a neighbor city without access to the farms and forests of the rural reserve. This would keep accessibility high, which encourages employment growth but limits the adverse affect on the surrounding rural areas. Metro will seek limitations in access to these facilities and will seek intergovernmental agreements with ODOT, the appropriate counties and neighbor cities to establish mutually acceptable growth management strategies. Metro will link transportation improvements to neighbor cities to successful implementation of these intergovernmental agreements.

Green Corridors
These transportation corridors connect the region's UGB to the neighborhing cities' UGB's. Facilities should be designed to reduce urban influence and to avoid increasing access to the farms and forests of the rural reserves they pass through. The intent is to keep urban to urban accessibility high to encourage employment growth, but limit any adverse effect on the surrounding rural areas. Cooperative agreements among Metro, neighbor cities, affected counties and state agencies will be needed.

Rural Reserves

These are rural areas that keep adjacent urban areas separate. These rural lands are not needed or planned for development but are more likely to experience development pressures than are areas farther away.

These lands will not be developed in the foreseeable future, an idea that requires agreement among local, regional and state agencies. They are areas outside the present urban growth boundary and along highways that connect the region to neighboring cities.

New rural commercial or industrial development would be restricted. Some areas would receive priority status as potential areas for park and open space acquisition. Road improvements would specifically exclude interchanges or other highway access to the rural road system, as would any nearby extensions of urban services. Zoning would be for resource protection on farm and forestry land, and very low density residential (less than one unit for five acres) for exception land.

These rural reserves would support and protect farm and forestry operations. The reserves also would include some purchase of natural areas adjacent to rivers, streams and lakes to make sure the water quality is protected and wildlife habitat enhanced. Large natural features, such as hills and buttes, also would be included as rural reserves because they buffer developed areas and are poor candidates for compact urban development.

Rural reserves are designated in areas that are most threatened by new development, that separate communities, or exist as special resource areas.

Rural reserves also would be retained to separate cities within the Metro boundary. Cornelius, Hillsboro, Tualatin, Sherwood and Wilsonville all have existing areas of rural land that provide a break in urban patterns. New areas of urban reserves, that are indicated on the Concept Map are also separated by rural reserves, such as the Damascus-Pleasant Valley areas from Happy Valley.

The primary means of achieving rural reserves would be through the regional framework plan for areas within the Metro boundary, and voluntary agreements among Metro, the counties, neighboring cities, and the state for those areas outside the Metro boundary. These agreements would prohibit extending urban growth into the rural reserves and require that state agency actions are consistent with the rural reserve designation.

Open Spaces

The areas designated open space on the Concept map are parks, stream corridors, wetlands and floodplains, largely undeveloped upland areas, or areas of very low density residential development. Many of these natural features

already have significant land set aside as open space. The Tualatin Mountains, for example, contain major parks such as Forest Park and Tryon Creek State Park and numerous smaller parks such as Gabriel Park in Portland and Wilderness Park in West Linn. Other areas are oriented toward wetlands and streams, with Fanno Creek in Washington County having one of the best systems of parks and open space in the region.

Local jurisdictions are encouraged to establish acres of open space per capita goals based on rates at least as great as current rates, in order to keep up with current conditions.

Designating these areas as open spaces would have several effects. First, it would remove these land from the category of urban land that is available for development. The capacity of the urban growth boundary would have to be calculated without these, and plans to accommodate housing and employment would have to be made without them. Secondly, these natural areas, along with key rural reserve areas, would receive a high priority for purchase as parks and open space, such as Metro's Greenspaces program. Finally, regulations could be developed to protect these critical natural areas that would not conflict with housing and economic goals, thereby having the benefit of regulatory protection of critical creek areas, low-density development, and transfer of development rights to other lands better suited for development.

About 35,000 acres of land and water inside today's urban growth boundary are included as open spaces in the Growth Concept Map. Preservation of these Open Spaces could be achieved by a combination of ways. Some areas could be purchased by public entities, such as Metro's Greenspaces program or local park departments. Others may be donated by private citizens or by developers of adjacent properties to reduce the impact of development. Still others could be protected by very low-density residential zoning, clustering housing on portions of the land while leaving important features as common open space.

Centers

Creating higher density centers of employment and housing is advantageous for several reasons. These centers provide access to a variety of goods and services

in a relatively small geographic area, creating a intense business climate. Having centers also makes sense from a transportation perspective, since most centers have an accessibility level that is conducive to transit, bicycling and walking. Centers also act as social gathering places and community centers, where people would find the "small town atmosphere" they cherish.

The major benefits of centers in the marketplace are accessibility and the ability to concentrate goods and services in a relatively small area. The problem in developing centers, however, is that most of the existing centers are already developed and any increase in the density must be made through redeveloping existing land and buildings. Emphasizing redevelopment in centers over development of new areas of undeveloped land is a key strategy in the Growth Concept. Areas of high unemployment and low property values should be specially considered to encourage reinvestment and redevelopment. Incentives and tools to facilitate redevelopment in centers should be identified.

There are three types of centers, distinguished by size and accessibility. The central city is downtown Portland and is accessible to millions of people. Regional centers are accessible to hundreds of thousands of people, and town centers are accessible to tens of thousands.

The Central City

Downtown Portland serves as our major regional center and functions quite well as an employment and cultural hub for the metropolitan area. It provides accessibility to the many businesses that require access to a large market area and also serves as the location for cultural and social functions that draw the region together. It is the center for local, regional, state, and federal governments, financial institutions, commerce, the center for arts and culture, and for visitors to the region.

In addition, downtown Portland has a high percentage of travel other than by car -- three times higher than the next most successful area. Jobs and housing are be readily available there, without the need for a car. Maintaining and improving upon the strengths of our regional downtown shall remain a high priority.

Today, about 20 percent of all employment in the region is in downtown Portland. Under the Growth Concept, downtown Portland would grow at the same rate as the rest of the region, and would remain the location of 20 percent of regional employment. To do this, downtown Portland's 1990 density of 150 people per acre would increase to 250 people per acre. Improvements to the transit system network, development of a multi-modal street system and maintenance of regional through routes (the highway system) would provide additional mobility to and from the city center.

Regional centers

There are six regional centers, serving four market areas (outside of the Central City market area). Hillsboro serves that western portion of the region, and Gresham the eastern. The Central city serves most of the Portland area as a regional center. Downtown Beaverton and Washington Square serve the Washington County area, and Clackamas Town Center and Milwaukie together serve Clackamas County and portions of outer south east Portland.

These Regional Centers would become the focus of compact development, redevelopment, and high-quality transit service, multi-modal street networks and act as major nodes along regional through routes ~~highway improvements~~. The Growth Concept accommodates three percent of new household growth and 11 percent of new employment growth in these regional centers. From the current 24 people per acre, the Growth Concept would allow up to 60 people per acre.

Transit improvements would include light-rail connecting all regional centers to the Central City. A dense network of multi-modal arterial and collector streets would tie regional centers to surrounding neighborhoods and other centers. Regional through-routes would be designed to serve connect regional centers and ~~Highway improvements also would focus on~~ ensure that these centers are attractive places to conduct business. The relatively small number of centers reflects not only the limited market for new development at this density but also the limited transportation funding for the high-quality transit and roadway improvements envisioned in these areas. As such the nine regional centers should be considered candidates and ultimately the number should be reduced or

policies established to phase-in certain regional centers earlier than others. ~~Eventually, these centers would grow to the density of downtown Vancouver, Washington -- about one-third of downtown Portland's density, but three times denser than these areas today.~~

Town centers

Smaller than regional centers and serving populations of tens of thousands of people, town centers are the third type of center with compact development and transit service. Town centers would accommodate about 3 percent of new households and more than 7 percent of new employment. The 1990 density of an average of 23 people per acre would nearly double -- to about 40 persons per acre, the current densities of development along Hawthorne Boulevard and in downtown Hillsboro.

Town centers would provide local shopping and employment opportunities within a local market area. They are designed to provide local retail and services, at a minimum. They also would vary greatly in character. Some would become traditional town centers, such as Lake Oswego, Oregon City, and Forest Grove, while others would change from an auto-oriented development into a more complete community, such as Hillsdale. Many would also have regional specialties, such as office centers envisioned for the Ceder Mill town center. Several new town centers are designated, such as in Happy Valley and Damascus, to accommodate the retail and service needs of a growing population while reducing auto travel. Others would combine a town center within a regional center, offering the amenities and advantages of each type of center.

Corridors

Corridors are not as dense as centers but also are located along good quality transit lines. ~~An example of a present-day corridor are Beaverton-Hillsdale Highway or Macadam Boulevard.~~ They provide a place for densities that are somewhat higher than today and feature a high-quality pedestrian environment and convenient access to transit. Typical new developments would include rowhouses, duplexes, and one to three story office and retail buildings, and

average 25 persons per acre.

Station Communities

Station communities are nodes of development centered around a light rail or high capacity transit station which feature a high-quality pedestrian environment. They provide for the highest density outside centers. The station communities would encompass an area approximately one half mile from a station stop. The densities of new development would average 45 persons per acre. Zoning ordinances now set minimum densities for most Eastside and Westside MAX station communities. An extensive station community planning program is now under way for each of the Westside station communities, and similar work is envisioned for the proposed South/North line. It is expected that the station community planning process will result in specific strategies and plan changes to implement the station communities concept.

Because the Growth Concept calls for many corridors and station communities throughout the region, they would together accommodate 27 percent of the new households of the region and nearly 15 percent of new employment.

Main streets

During the early decades of this century, main streets served by transit and characterized by a strong business and civic community were a major land-use pattern throughout the region. Examples remain in Hillsboro, Milwaukie, Oregon City and Gresham, as well as the Westmoreland neighborhood and Hawthorne Boulevard. Today, these areas are undergoing a revival and provide an efficient and effective land-use and transportation alternative. The Growth Concept calls for main streets to grow from 1990 levels of 36 people per acre to 39 per acre. Main streets would accommodate nearly two percent of housing growth.

Main streets typically will serve neighborhoods and may develop a regional specialization -- such as antiques, fine dining, entertainment, or specialty clothing -- that draws people from other parts of the region. When several main streets occur within a few blocks of one another, they serve as a dispersed town center,

such as the main street areas of Belmont, Hawthorne, and Division that form a town center for inner southeast Portland.

Neighborhoods

Residential neighborhoods would remain a key component of the Growth Concept and would fall into two basic categories. Inner neighborhoods are Portland and the older suburbs of Beaverton, Milwaukie and Lake Oswego, and would include primarily residential areas that are accessible to employment. Lot sizes would be smaller to accommodate densities increasing from 1990 levels of about 11 people per acre to about 14 per acre. Inner neighborhoods would trade smaller lot sizes for better access to jobs and shopping. They would accommodate 28 percent of new households and 15 percent of new employment (some of the employment would be home occupations and the balance would be neighborhood- based employment such as schools, daycare and some neighborhood businesses).

Outer neighborhoods would be farther away from large employment centers and would have larger lot sizes and lower densities. Examples include outer suburbs such as Forest Grove, Sherwood, and Oregon City, and any additions to the urban growth boundary. From 1990 levels of nearly 10 people per acre, outer neighborhoods would increase to 13 per acre. These areas would accommodate 28 percent of new households and 10 percent of new employment.

One of the most significant problems in some newer neighborhoods is the lack of through street connections, a recent phenomenon that has occurred in the last 25 years. It is one of the primary causes of increased congestion in new suburbs. Traditional neighborhoods contained a grid pattern with up to 20 through streets per mile. But in new areas, one to two through streets per mile is the norm. Combined with large scale single-use zoning and low densities, it is the major cause of increasing auto dependency in neighborhoods. ~~While existing neighborhoods probably will not change, areas of largely vacant land~~ To improve local connectivity throughout the region, all areas shall develop master street plans ~~to including at least ten through~~ that include from 8 to 20 local streets connections per mile, which would improve access for all modes of travel. ~~allow for better access and still allow some albeit short, cul-de-sacs.~~

Employment areas

The Portland metropolitan area economy is heavily dependant upon wholesale trade and the flow of commodities to national and international markets. The high quality of our freight transportation system, and in particular our intermodal freight facilities are essential to continued growth in trade. The intermodal facilities (air and marine terminals, freight rail yards and common carrier truck terminals) are an area of regional concern, and the regional framework plan will identify and protect lands needed to meet their current and projected space requirements.

Industrial areas would be set aside primarily ~~exclusively~~ for industrial activities. Other supporting uses, including some retail uses, may be allowed if limited to sizes and locations intended to serve the primary industrial uses. They include land-intensive employers, such as those around the Portland International Airport, the Hillsboro Airport and some areas along Highway 212/224. Industrial areas are expected to accommodate ten percent of regional employment and no households. Retail uses whose market area is substantially larger than the employment area shall not be considered supporting uses.

Other employment centers would be designated as mixed-use employment areas, mixing various types of employment and including some residential development as well. These mixed-use employment areas would provide for about five percent of new households and 14 percent of new employment within the region. Densities would rise substantially from 1990 levels of about 11 people per acre to 20 people per acre.

Urban Reserves

One important feature of the Growth Concept is that it would accommodate all 50 years of forecasted growth through a relatively small amount of urban reserves. Urban reserves consist of land set aside outside the present urban growth boundary for future growth. The Growth Concept contains approximately 22,000 acres of Urban Reserve Study Areas shown on the Concept Map. Less than 15,000 of these are needed for growth if the other density goals of the Growth Concept are met. Over 75 percent of these lands are currently zoned for rural

housing and the remainder are zoned for farm or forestry uses. These areas shall be refined to the 14,500 acres required by the Growth Concept for designation of urban reserves areas under the LCDC Urban Reserve Rule and inclusion in the regional framework plan.

Transportation Facilities

In undertaking the Region 2040 process, the region has shown a strong commitment to developing a regional plan that is based on greater land use efficiencies and a truly multi-modal transportation system. However, the transportation system defined in the Growth Concept Analysis serves as a theoretical definition (construct) of the transportation system needed to serve the land uses in the Growth Concept (Recommended Alternative urban form). The modeled system reflects only one of many possible configurations that might be used to serve future needs, consistent with the policy direction called for in the Growth Concept (amendment to RUGGO).

As such, the Growth Concept (Recommended Alternative) transportation map provides only general direction for development of an updated Regional Transportation Plan (RTP) and does not prescribe or limit what the RTP will ultimately include in the regional system. Instead, the RTP will build upon the broader land use and transportation directions that are defined in the Growth Concept (Recommended Alternative).

The transportation elements needed to create a successful growth management policy are those that support the Growth Concept. Traditionally, streets have been defined by their traffic-carrying potential, and transit service according to it's ability to draw commuters. Other travel modes have not been viewed as important elements of the transportation system. The Growth Concept establishes a new framework for planning in the region by linking urban form to transportation. In this new relationship, transportation is viewed as a range of travel modes and options that reinforce the region's growth management goals.

Within the framework of the Growth Concept is a network of multi-modal corridors and regional through-routes that connect major urban centers and destinations. Through-routes provide for high-volume auto and transit travel at a

regional scale, and ensure efficient movement of freight. Within multi-modal corridors, the transportation system will provide a broader range of travel mode options, including auto, transit, bicycle and pedestrian networks, that allow choices of how to travel in the region. These travel options will encourage the use of alternative modes to the auto, a shift that has clear benefits for the environment and the quality of neighborhoods and urban centers.

In addition to the traditional emphasis on road and transit facilities, the development of networks for freight travel and intermodal facilities, for bicycle and pedestrian travel and the efficient use of capacity on all streets through access management and congestion management and/or pricing will be part of a successful transportation system.

While the Concept Map shows only major transit facilities and corridors, all areas within the UGB have transit access. Transit service in the Growth Concept included both fixed-route and demand responsive systems. The RTP shall further define the type and extent of transit service available throughout the region.

Intermodal Facilities

The region's continued strength as a national and international distribution center is dependent upon adequate intermodal facilities and access to them. Intermodal facilities include marine terminals, railroad intermodal points, such as the Union Pacific's Albina Yard, the airports and the Union Station/inter-city bus station area. The Regional Transportation Plan will identify these areas and their transportation requirements and will identify programs to provide adequate freight capacity.

Regional through-routes

These are the routes that move people and goods through and around the region, connect regional centers to each other and to the Central City, and connect the region to the statewide and interstate transportation system. They include freeways, limited access highways, and heavily traveled arterials, and usually

function as through-routes. As such, they are important not only because of the movement of people, but as one of the region's major freight systems. Since much of our regional economy depends on the movement of goods and services, it is essential to keep congestion on these roads at manageable levels. These major routes frequently serve as transit corridors but are seldom conducive to bicycles or pedestrians because of the volume of auto and freight traffic that they carry.

With their heavy traffic, and high visibility, these routes are attractive to business. However, when they serve as a location for auto-oriented businesses, the primary function of these routes, to move regional and statewide traffic, can be eroded. While they serve as an appropriate location for auto-oriented businesses, they are poor locations for businesses that are designed to serve neighborhoods or sub-regions. These are better located on multi-modal arterials. They need the highest levels of access control. In addition, it is important that they not become barriers to movements across them by other forms of travel, auto, pedestrian, transit, or bicycle. They shall focus on providing access to centers and neighbor cities, rather than access to the lands that front them.

Multi-modal arterials

These represent most of the region's arterials. They include a variety of design styles and speeds, and are the backbone for a system of multi-modal travel options. Older sections of the region are better designed for multi-modal travel than new areas. Although these streets often smaller than suburban arterials, they carry a great deal of traffic (up to 30,000 vehicles a day), experience heavy bus ridership along their routes and are constructed in dense networks that encourage bicycle and pedestrian travel. The Regional Transportation Plan (RTP) shall identify these multi-modal streets and develop a plan to further encourage alternative travel modes within these corridors.

Many new streets, however, are designed to accommodate heavy auto and freight traffic at the expense of other travel modes. Multiple, wide lanes, dedicated turning lanes, narrow sidewalks exposed to moving traffic, and widely-spaced intersections and street crossings create an environment that is difficult and

dangerous to negotiate without a car. The RTP shall identify these potential multi-modal corridors and establish design standards that encourage other modes of travel along these routes.

Some multi-modal arterials also carry significant volumes of freight. The RTP will ensure that freight mobility on these routes is adequately protected by considering freight needs
when identifying multi-modal routes, and in establishing design standards intended to encourage alternative modes of passenger travel.

Collectors and local streets

These streets become a regional priority when a lack of adequate connections forces neighborhood traffic onto arterials. New suburban development increasingly depends on arterial streets to carry trips to local destinations, since most new local streets systems a specifically designed with curves and cul-de-sacs to discourage local through travel by any mode. The RTP should consider a minimum standard of eight to ten 20 through streets per mile, applied to both developed and developing ~~or undeveloped~~ areas to reduce local travel on arterials. There should also be established standard bicycle and pedestrian through-routes (via easements, greenways, fire lanes, etc.) in existing neighborhoods where changes to the street system are not a reasonable alternative.

Light rail

Light rail transit (LRT) daily travel capacity measures in tens of thousands of riders, and provides a critical travel option to major destinations. The primary function of light rail (LRT) in the Growth Concept is to link regional centers and the Central City, where concentrations of housing and employment reach a level that can justify the cost of developing a fixed transit system. In addition to their role in developing regional centers, LRT lines can also support significant concentrations of housing and employment at individual station areas along their routes.

In addition, neighbor cities of sufficient size should also include a transit connection to the metropolitan area to provide a full range of transportation alternatives.

"Planned and Existing Light Rail Lines" on the Concept Map represent some locations shown on the current Regional Transportation Plan (RTP) which were selected for initial analysis. "Proposed Light Rail Alignments" show some appropriate new light rail locations consistent with serving the Growth Concept. "Potential HCT lines" highlight locations for some concentrated form of transit, possibly including light rail. These facilities demonstrate the general direction for development of an updated RTP which will be based on further study. The Concept Map transportation facilities do not prescribe or limit the exisiting of updated RTP.

Bicycle and Pedestrian Networks

Bicycling and walking should play an important part in the regional transportation system especially within neighborhoods and centers and for other shorter trips. They are also essential to the success of an effective transit system. In addition to the arrangement of land uses and site design, route continuity and the design of rights-of-way in a manner friendly to bicyclists and pedestrians are necessary. The Regional Transportation Plan will establish targets which substantially increase the share on these modes.

Demand Management/Pricing

The land uses and facilities in the Growth Concept cannot, by themselves, meet the region's transportation objectives. Demand Management (carpooling, parking management and pricing strategies) and system management will be necessary to achieve the transportation system operation described in the Growth Concept. Additional actions will be need to resolve the significant remaining areas of congestion and the high VMT/capita which it causes. The Regional Transportation Plan will identify explicit targets for these programs in various

areas of the region.

About Metro

Executive Officer

Rena Cusma

Metro Councilors

District 1	Susan McLain
District 2	Jon Kvistad
District 3	Jim Gardner
District 4	Richard Devlin
District 5	Mike Gates
District 6	George Van Bergen
District 7	Ruth McFarland
District 8	Judy Wyers, presiding officer
District 9	Rod Monroe
District10	Roger Buchanan
District 11	Ed Washington, deputy presiding officer
District 12	Sandi Hansen
District 13	Terry Moore

The preparation of this report has been financed in part by funds from the U.S. Department of Transportation, under the Mass Transportation Act of 1964, as amended.

Metro

Metro is the directly elected regional government that serves the 1.1 million residents in the urban and suburban portions of Clackamas, Multnomah and Washington counties, as well as those in the 24 cities of the region including: Beaverton, Cornelius, Durham, Fairview, Forest Grove, Gladstone, Gresham, Happy Valley, Hillsboro, Johnson City, King City, Lake Oswego, Maywood Park, Milwaukie, Oregon City, Portland, Rivergrove, Sherwood, Tigard, Troutdale, Tualatin, West Linn, Wilsonville and Wood Village.

Metro is responsible for the regional aspects of transportation and land use planning; regional parks and greenspaces; solid waste management; operation of the Metro Washington Park Zoo; and technical services to local governments of the region. Through the Metropolitan Exposition-Recreation Commission, Metro manages the Oregon Convention Center, Civic Stadium, the Portland Center for the Performing Arts and the Expo Center.

Metro is authorized by Chapter 268 of the Oregon Revised Statutes and the Metro Charter adopted by the citizens of the region in November 1992. Metro is currently governed by a 13-member council and an executive officer. Councilors are elected from districts and the executive officer is elected regionwide.

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METRO

December 8, 1994

The Region 2040 Growth Concept and accompanying map are the preferred form of growth and development for the region. Together, this established concept and the map provide a strong policy statement for how the region intends to manage its long-term growth and the issues associated with growth.

The regional policy direction, growth management philosophy and long-term decisions within the Growth Concept are derived from one basic objective: to preserve our access to nature while building better communities. That value, which we've heard from the public during the past three years, is central to the Growth Concept.

The Growth Concept outlines a general approach to issues such as where and how much the urban growth boundary should be expanded, what ranges of density could accommodate projected growth within the urban growth boundary, and which areas should be protected as open space.

The Growth Concept does not delineate specifics about how and where growth will occur. That work will occur later, as the Growth Concept is put into place. This important regional decision does not, for example, decide where or by how much to expand the urban growth boundary; instead, it names urban reserves that will be studied in the next few months for possible inclusion in the boundary.

The Growth Concept carries out the goals laid out in the Regional Urban Growth Goals and Objectives -- combining those goals with the considerable technical analysis and public involvement undertaken in the Region 2040 process. We have heard from citizens who range from wanting to shrink the urban growth boundary to those who would abolish it. Some people say we should wait to make a policy decision until we know more, and others think we should have made a decision long ago.

The prevailing theme in what we have heard from citizens and our regional partners is that the Region 2040 process has created broad areas of consensus about how to keep our region livable. Much of that consensus was reached because of our commitment to public involvement and to working with our regional partners.

The established Region 2040 Growth Concept is only one step, albeit an important one, and it will serve as the foundation for developing the Regional Framework Plan. The Growth Concept represents the best expression of today's desired urban form for the year 2040. But it is not a stagnant, inflexible policy decision; rather, it is a prototype for integrating land use and transportation that must be flexible and accommodating as we move toward implementation.

During that implementation, via the Regional Framework Plan, the assumptions that serve as the basis of the Growth Concept will be further refined and tested. It is our belief and expectation that together, the Region 2040 Growth Concept and the Regional Framework Plan will mesh to create a highly desirable future for this region.

The Metro Council and
Executive Officer

2040 Growth Concept Implementation Process

Adoption: Resolution 94-2040 - December 8, 1994

- Growth Concept and Concept Map in proposed RUGGO amendment language
- Describe Growth Concept refinement process
- Sets Urban Reserve Study Areas
- Emphasizes policy considerations for Growth Concept refinement
- Initiates coordination with LCDC

Refinement: December 1994 - June 1995

- Adopt Future Vision
- Consider additional local government and public comments and suggestions
- Test the Growth Concept with further analysis
- Develop improved transit, bike, pedestrian forecasts
- Review redevelopment and infill projections
- Determine urban reserves needs
- Urban Reserve Rule interpretation from LCDC
- Select urban reserves for designation from Urban Reserve Study Areas

Implementation: July 1995 - December 1996

- Adopt urban reserve area designations
- Incorporate refined Growth Concept into RUGGO
- Adopt updated Regional Transportation Plan (amend functional plan)
- Adopt Rural Reserves protection inside Metro jurisdictional boundary (new functional plan)
- Regional Framework Plan draft
- (additional work program products)

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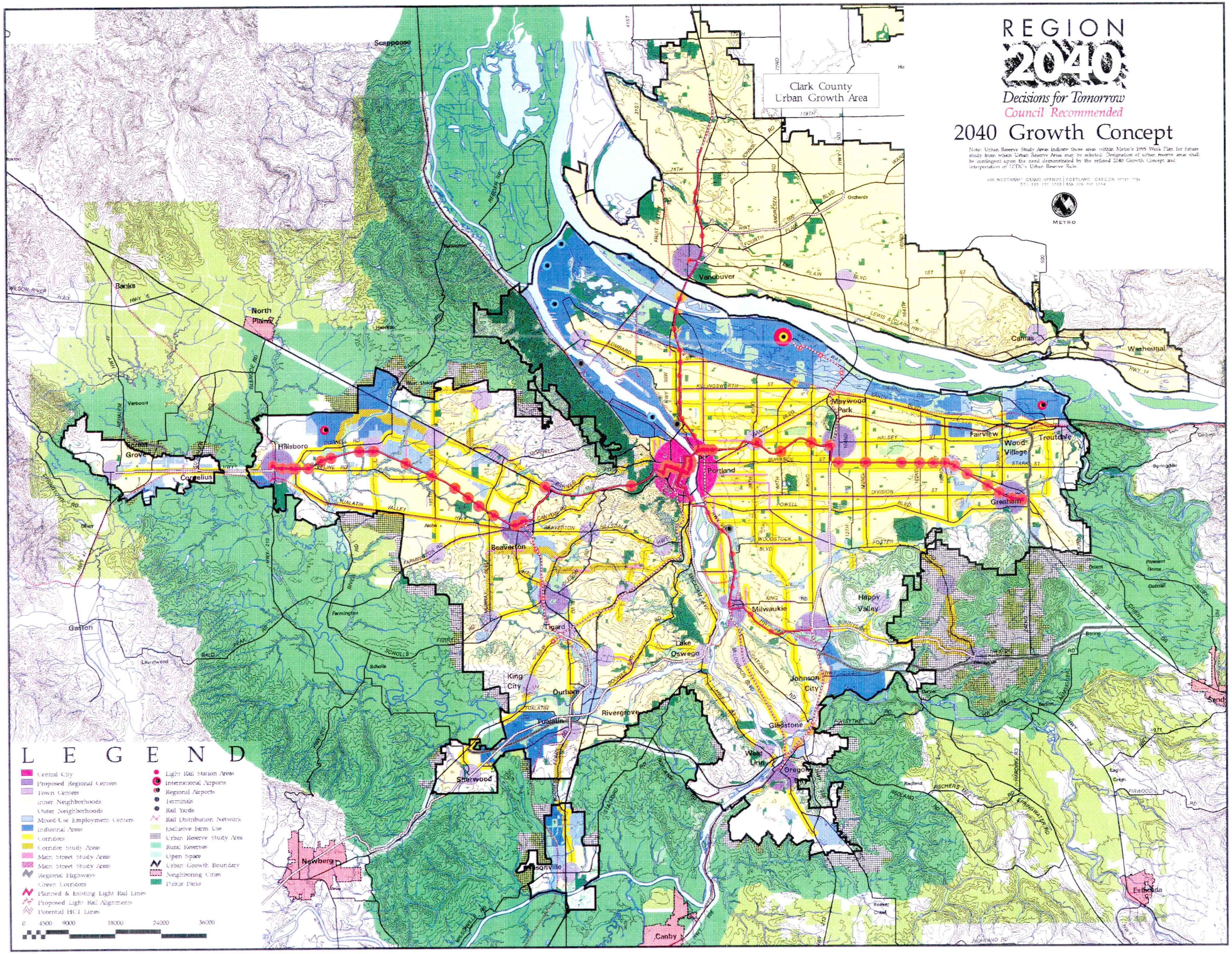

REGION
2040
Decisions for Tomorrow
Council Recommended
2040 Growth Concept
Note: Urban Reserve Study Areas indicate those areas within Metro's 1995 Work Plan for future study from which Urban Reserve Areas may be selected. Designation of urban reserve areas shall be contingent upon the need demonstrated by the refined 2040 Growth Concept and interpretation of LCDC's Urban Reserve Rule.
METRO
Clark County
Urban Growth Area
LEGEND
Central City
Proposed Regional Centers
Town Centers
Inner Neighborhoods
Outer Neighborhoods
Mixed-Use Employment Centers
Industrial Areas
Corridors
Corridor Study Areas
Main Street Study Areas
Main Street Study Areas
Regional Highways
Green Corridors
Planned & Existing Light Rail Lines
Proposed Light Rail Alignments
Potential HCT Lines
Light Rail Station Areas
International Airports
Regional Airports
Terminals
Rail Yards
Rail Distribution Network
Exclusive Farm Use
Urban Reserve Study Area
Rural Reserves
Open Space
Urban Growth Boundary
Neighboring Cities
Public Parks
0
4500
9000
18000
24000
36000
Scappoose
Vancouver
Camas
Washougal
North Plains
Banks
Hillsboro
Forest Grove
Cornelius
Portland
Maywood Park
Fairview
Wood Village
Troutdale
Gresham
Beaverton
Tigard
Milwaukie
Happy Valley
Lake Oswego
King City
Durham
Tualatin
Rivergrove
Johnson City
Gladstone
West Linn
Oregon City
Sherwood
Wilsonville
Newberg
Canby
Estacada
Sandy
Gaston

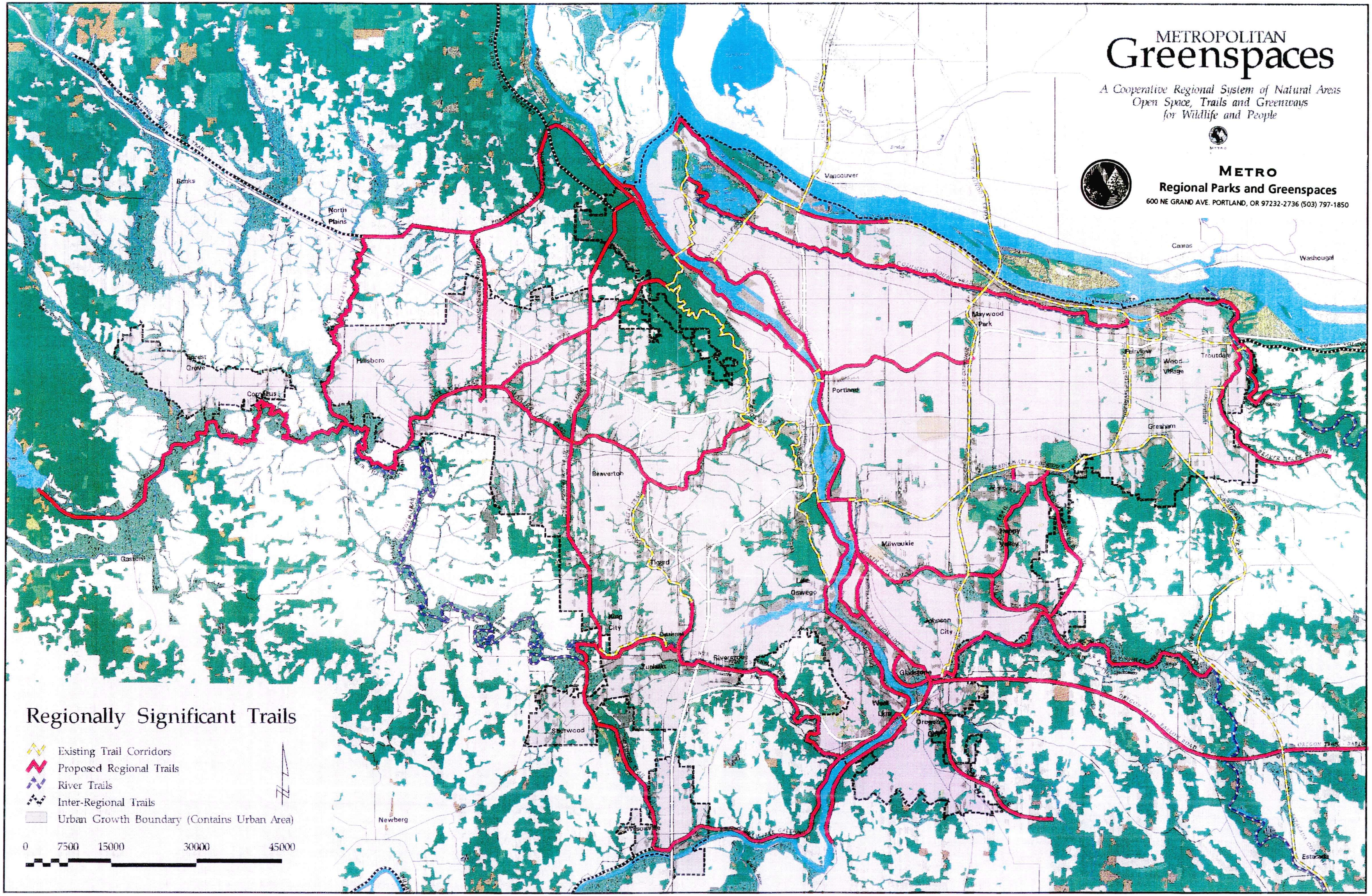

METROPOLITAN
Greenspaces
A Cooperative Regional System of Natural Areas
Open Space, Trails and Greenways
for Wildlife and People
METRO
Regional Parks and Greenspaces
600 NE GRAND AVE. PORTLAND, OR 97232-2736 (503) 797-1850
Regionally Significant Trails
Existing Trail Corridors
Proposed Regional Trails
River Trails
Inter-Regional Trails
Urban Growth Boundary (Contains Urban Area)
0
7500
15000
30000
45000
Vancouver
Camas
Washougal
Banks
North Plains
Forest Grove
Cornelius
Hillsboro
Beaverton
Portland
Maywood Park
Fairview
Wood Village
Troutdale
Gresham
Gaston
Tigard
Milwaukie
Lake Oswego
King City
Tualatin
Johnson City
Gladstone
West Linn
Sherwood
Newberg
Estacada

Exhibit B Proposed Regional Urban Growth Goals and Objectives (RUGGO)

Table of Contents

Introduction

The Regional Urban Growth Goals and Objectives (RUGGO) have been developed to:

1. respond to the direction given to Metro by the legislature through ORS ch 268.380 to develop land use goals and objectives for the region which would replace those adopted by the Columbia Region Association of Governments;

2. provide a policy framework for guiding Metro's regional planning program, principally its development of functional plans and management of the region's urban growth boundary; and

3. provide a process for coordinating planning in the metropolitan area to maintain metropolitan livability.

The RUGGO's are envisioned not as a final plan for the region, but as a starting point for developing a more focused vision for the future growth and development of the Portland area. Hence, the RUGGO's are the building blocks with which the local governments, citizens, and other interests can begin to develop a shared view of the future.

This document begins with the broad outlines of that vision. There are two principal goals, the first dealing with the planning process and the second outlining substantive concerns related to urban form. The "subgoals" (in Goal II) and objectives clarify the goals. The planning activities reflect priority actions that need to be taken at a later date to refine and clarify the goals and objectives further.

Metro's regional goals and objectives required by ORS 268.380(1) are in RUGGO Goals I and II and Objectives 1-18 and the Growth Concept only. RUGGO planning activities contain implementation ideas for future study in various stages of development that may or may not lead to RUGGO amendments, new functional plans or functional plan amendments. Functional plans and functional plan amendments shall be consistent with Metro's regional goals and objectives and the Growth Concept, not RUGGO planning activities.

Background Statement

Planning for and managing the effects of urban growth in this metropolitan region involves 24 cities, three counties, and more than 130 special service districts and school districts, including Metro. In addition, the State of Oregon, Tri-Met, the Port of Portland, and the Boundary Commission all make decisions which affect and respond to regional urban growth. Each of these jurisdictions and agencies has specific duties and powers which apply directly to the tasks of urban growth management.

However, the issues of metropolitan growth are complex and inter-related. Consequently, the planning and growth management activities of many jurisdictions are both affected by and directly affect the actions of other jurisdictions in the region. In this region, as in others throughout the country, coordination of planning and management activities is a central issue for urban growth management.

Nonetheless, few models exist for coordinating growth management efforts in a metropolitan region. Further, although the legislature charged Metro with certain coordinating responsibilities, and gave it powers to accomplish that coordination, a participatory and cooperative structure for responding to that charge has never been stated.

As urban growth in the region generates issues requiring a multi-jurisdictional response, a "blueprint" for regional planning and coordination is critically needed. Although most would agree that there is a need for coordination, there is a wide range of opinion regarding how regional planning to address issues of regional significance should occur, and under what circumstances Metro should exercise its coordination powers.

Goal I addresses this coordination issue in the region for the first time by providing the process that Metro will use to address areas and activities of metropolitan significance. The process is intended to be responsive to the challenges of urban growth while respecting the powers and responsibilities of a wide range of interests, jurisdictions, and agencies.

Goal II recognizes that this region is changing as growth occurs, and that change is challenging our assumptions about how urban growth will affect quality of life. For example:

- overall, the number of vehicle miles travelled in the region has been increasing at a rate far in excess of the rate of population and employment growth;

- the greatest growth in traffic and movement is within suburban areas, rather than between

suburban areas and the central downtown district;

- in the year 2010 Metro projects that 70% of all "trips" made daily in the region will occur within suburban areas;
- currently transit moves about 3% of the travellers in the region on an average workday;
- to this point the region has accommodated most forecasted growth on vacant land within the urban growth boundary, with redevelopment expected to accommodate very little of this growth;
- single family residential construction is occurring at less than maximum planned density;
- rural residential development in rural exception areas is occurring in a manner and at a rate that may result in forcing the expansion of the urban growth boundary on important agricultural and forest resource lands in the future;
- a recent study of urban infrastructure needs in the state has found that only about half of the funding needed in the future to build needed facilities can be identified.

Add to this list growing citizen concern about rising housing costs, vanishing open space, and increasing frustration with traffic congestion, and the issues associated with the growth of this region are not at all different from those encountered in other west coast metropolitan areas such as the Puget Sound region or cities in California. The lesson in these observations is that the "quilt" of 27 separate comprehensive plans together with the region's urban growth boundary is not enough to effectively deal with the dynamics of regional growth and maintain quality of life.

The challenge is clear: if the Portland metropolitan area is going to be different than other places, and if it is to preserve its vaunted quality of life as an additional 485,000 people move into the urban area in the next 20 years, then a cooperative and participatory effort to address the issues of growth must begin now. Further, that effort needs to deal with the issues accompanying growth -- increasing traffic congestion, vanishing open space, speculative pressure on rural farm lands, rising housing costs, diminishing environmental quality -- in a common framework. Ignoring vital links between these issues will limit the scope and effectiveness of our approach to managing urban growth.

Goal II provides that broad framework needed to address the issues accompanying urban growth.

Planning for a Vision of Growth in the Portland Metropolitan Area

As the metropolitan area changes, the importance of coordinated and balanced planning programs to protect the environment and guide development becomes increasingly evident.

By encouraging efficient placement of jobs and housing near each other, along with supportive commercial, cultural and recreational uses, a more efficient development pattern will result.

An important step toward achieving this planned pattern of regional growth is the integration of land uses with transportation planning, including mass transit, which will link together mixed use urban centers of higher density residential and commercial development.

The region must strive to protect and enhance its natural environment and significant natural resources. This can best be achieved by integrating the important aspects of the natural environment into a regional system of natural areas, open space and trails for wildlife and people. Special attention should be given to the development of infrastructure and public services in a manner that complements the natural environment.

A clear distinction must be created between the urbanizing areas and rural lands. Emphasis should be placed upon the balance between new development and infill within the region's urban growth boundary and the need for future urban growth boundary expansion. This regional vision recognizes the pivotal role played by a healthy and active central city, while at the same time providing for the growth of other communities of the region.

Finally, the regional planning program must be one that is based on a cooperative process that involves the residents of the metropolitan area, as well as the many public and private interests. Particular attention must be given to the need for effective partnerships with local governments because they will have a major responsibility in implementing the vision. It is important to consider the diversity of the region's communities when integrating local comprehensive plans into the pattern of regional growth.

GOAL I: REGIONAL PLANNING PROCESS

Regional planning in the metropolitan area shall:

I.i Fully implement the regional planning functions of the 1992 Metro Charter;

I.ii identify and designate other areas and activities of metropolitan concern through a participatory process involving the Metro Policy Advisory Committee, cities, counties, special districts, school districts, and state and regional agencies such as Tri-Met, the Metropolitan Arts Commission and the Port of Portland;

I.iii. occur in a cooperative manner in order to avoid creating duplicative processes, standards, and/or governmental roles.

These goals and objectives shall only apply to acknowledged comprehensive plans of cities and counties when implemented through the regional framework plan, functional plans, or the acknowledged urban growth boundary plan.

Objective 1. Citizen Participation

Metro shall develop and implement an ongoing program for citizen participation in all aspects of the regional planning program. Such a program shall be coordinated with local programs for supporting citizen involvement in planning processes, and shall not duplicate those programs.

1.1. **Metro Committee for Citizen Involvement** (Metro CCI)
Metro shall establish a Metro Committee for Citizen Involvement to assist with the development, implementation and evaluation of its citizen involvement program and to advise the Metro Policy Advisory Committee regarding ways to best involve citizens in regional planning activities.

1.2. **Notification.** Metro shall develop programs for public notification, especially for (but not limited to) proposed legislative actions, that ensure a high level of awareness of potential consequences as well as opportunities for involvement on the part of affected citizens, both inside and outside of its district boundaries.

Objective 2. Metro Policy Advisory Committee

The 1992 Metro Charter has established the Metro Policy Advisory Committee to:

2.i assist with the development and review of Metro's regional planning activities pertaining to land use and growth management, including review and implementation of these goals and objectives, development and implementation of the regional framework plan, present and prospective functional planning, and management and review of the region's urban growth boundary;

2.ii. serve as a forum for identifying and discussing areas and activities of metropolitan or subregional significance; and

2.iii. provide an avenue for involving all cities and counties and other interests in the development and implementation of growth management strategies.

2.1. **Metro Policy Advisory Committee Composition.** The initial Metro Policy Advisory Committee (MPAC) shall be chosen according to the Metro Charter and, thereafter, according to any changes approved by majorities of MPAC and the Metro Council. The composition of the Committee shall reflect the partnership that must exist among implementing jurisdictions in

order to effectively address areas and activities of metropolitan ~~significance~~ concern. The voting membership shall include elected and appointed officials and citizens of Metro, cities, counties and states consistent with section 27 of the 1992 Metro Charter.

2.2. **Advisory Committees.** The Metro Council, or the Metro Policy Advisory Committee consistent with the MPAC by-laws, shall appoint technical advisory committees as the Council or the Metro Policy Advisory Committee determine a need for such bodies.

2.3. **Joint Policy Advisory Committee on Transportation (JPACT).** JPACT with the Metro Council shall continue to perform the functions of the designated Metropolitan Planning Organization as required by federal transportation planning regulations. JPACT and the Metro Policy Advisory Committee shall develop a coordinated process, to be approved by the Metro Council, to assure that regional land use and transportation planning remains consistent with these goals and objectives and with each other.

Objective 3. Applicability of Regional Urban Growth Goals and Objectives

These Regional Urban Growth Goals and Objectives have been developed pursuant to ORS 268.380(1). Therefore, they comprise neither a comprehensive plan under ORS 197.015(5) nor a functional plan under ORS 268.390(2). The regional framework plan and all functional plans prepared by Metro shall be consistent with these goals and objectives. Metro's management of the Urban Growth Boundary shall be guided by standards and procedures which must be consistent with these goals and objectives. These goals and objectives shall not apply directly to site-specific land use actions, including amendments of the urban growth boundary.

These Regional Urban Growth Goals and Objectives shall apply to adopted and acknowledged comprehensive land use plans as follows:

3.i. Components of the regional framework plan that are adopted as functional plans, or other functional plans, shall be consistent with these goals and objectives, and they

may recommend or require amendments to adopted and acknowledged comprehensive land use plans; or

3.ii. The management and periodic review of Metro's acknowledged Urban Growth Boundary Plan, itself consistent with these goals and objectives, may require changes in

adopted and acknowledged land use plans; or

3.iii. The Metro Policy Advisory Committee may identify and propose issues of regional concern, related to or derived from these goals and objectives, for consideration by cities and counties at the time of periodic review of their adopted and acknowledged comprehensive plans.

3.1. **Urban Growth Boundary Plan.** The Urban Growth Boundary Plan has two components:

3.1.1. The acknowledged urban growth boundary line; and

3.1.2. Acknowledged procedures and standards for amending the urban growth boundary line. Metro's Urban Growth Boundary is not a regional comprehensive plan but a provision of the comprehensive plans of the local governments within its boundaries. The location of the urban growth boundary line shall be in compliance with applicable statewide planning goals and consistent with these goals and objectives. Amendments to the urban growth boundary line shall demonstrate consistency only with the acknowledged procedures and standards.

3.2. **Functional Plans.** Metro functional plans containing recommendations for comprehensive planning by cities and counties may or may not involve land use decisions. Functional plans are not required by the enabling statute to include findings of consistency with statewide land use planning goals. If provisions in a functional plan, or actions implementing a functional plan require changes in an adopted and acknowledged comprehensive land use plan, then that action may be a land use action required to be consistent with the statewide planning goals.

3.3 **Regional Framework Plan.** The regional framework plan adopted by Metro shall be consistent with these goals and objectives. Provisions of the regional framework plan that establish performance standards, and that may require changes in local comprehensive plans shall be adopted as functional plans, and shall meet all requirements for functional plans contained in these goals and objectives.

3.4. **Periodic Review of Comprehensive Land Use Plans.** At the time of periodic review for comprehensive land use plans in the region the Metro Policy Advisory Committee:

3.4.1. Shall assist Metro with the identification of regional framework plan elements, functional plan provisions or changes in functional plans adopted since the last periodic

review for inclusion in periodic review notices as changes in law; and

———3.4.2. May provide comments during the periodic review of adopted and acknowledged comprehensive plans on issues of regional concern.

3.5. **Periodic Review of the Regional Urban Growth Goals and Objectives.** The Metro Policy Advisory Committee shall consider the periodic review notice for these goals and objectives and recommend a periodic review process for adoption by the Metro Council.

Objective 4. Implementation Roles

Regional planning and the implementation of these Regional Urban Growth Goals and Objectives shall recognize the inter-relationships between cities, counties, special districts, Metro, regional agencies, and the State, and their unique capabilities and roles.

4.1. **Metro Role.** Metro shall:

4.1.1. Identify and designate areas and activities of metropolitan concern ~~significance~~;

4.1.2. Provide staff and technical resources to support the activities of the Metro Policy Advisory Committee;

4.1.3. Serve as a technical resource for cities, counties, and other jurisdictions and agencies;

4.1.4. Facilitate a broad-based regional discussion to identify appropriate strategies for responding to those issues of metropolitan concern ~~significance~~; and

4.1.5. Adopt functional plans necessary and appropriate for the implementation of these regional urban growth goals and objectives, and the regional framework plan;

4.1.6. Coordinate the efforts of cities, counties, special districts, and the state to implement adopted strategies.

4.2. **Role of Cities.**

4.2.1. Adopt and amend comprehensive plans to conform to and functional plans adopted by Metro;

4.2.2. Identify potential areas and activities of metropolitan concern ~~significance~~;

4.2.3. Cooperatively develop strategies for responding to designated areas and activities of metropolitan concern ~~significance~~;

4.2.4. Participate in the review and refinement of these goals and objectives.

4.3. **Role of Counties.**

4.3.1. Adopt and amend comprehensive plans to conform functional plans adopted by Metro;

4.3.2. Identify potential areas and activities of metropolitan concern ~~significance~~;

4.3.3. Cooperatively develop strategies for responding to designated areas and activities of metropolitan concern significance;

4.3.4. Participate in the review and refinement of these goals and objectives.

4.4. **Role of Special Service Districts.** Assist Metro with the identification of areas and activities of metropolitan concern significance and the development of strategies to address them, and participate in the review and refinement of these goals and objectives.

4.5. **Role of the State of Oregon.**

4.5.1. Advise Metro regarding the identification of areas and activities of metropolitan concern significance;

4.5.2. Cooperatively develop strategies for responding to designated areas and activities of metropolitan concern significance;

4.5.3. Modify state plans, regulations, activities ~~and related funding to enhance~~ to ~~insure coordination~~ implementation of the regional framework plan and functional plans adopted by Metro, and employ state agencies and programs and regulatory bodies to promote and implementation ~~of~~ these goals and objectives and the regional framework plan;

4.5.4 Participate in the review and refinement of these goals and objectives.

Objective 5. Functional Planning Process

Functional plans are limited purpose plans, consistent with these goals and objectives, which address designated areas and activities of metropolitan concern. These shall include all sections of the regional framework plan that establish performance standards for local plans.

5.1. **Existing Functional Plans.** Metro shall continue to develop, amend, and implement, with the assistance of cities, counties, special districts, and the state, statutorily required functional plans for air, water, and transportation, as directed by ORS 268.390(1), and for solid waste as mandated by ORS ch 459.

5.2. **New Functional Plans.** New functional plans shall be proposed from one of two sources:

5.2.1. The Metro Policy Advisory Committee may recommend that the Metro Council designate an area or activity of metropolitan concern ~~significance~~ for which a functional plan should be prepared; or

5.2.2. The Metro Council may propose the preparation of a functional plan to designate an area or activity of metropolitan concern ~~significance~~, and refer that proposal to the Metro Policy Advisory Committee.

The matters required by the Charter to be addressed in the regional framework plan shall constitute sufficient factual reasons for the development of a functional plan under ORS 268.390.

Upon the Metro Council adopting factual reasons for the development of a new functional plan, the Metro Policy Advisory Committee shall participate in the preparation of the plan, consistent with these goals and objectives and the reasons cited by the Metro Council. After preparation of the plan and seeking broad public and local government consensus, using existing citizen involvement processes established by cities, counties, and Metro, the Metro Policy Advisory Committee shall review the plan and make a recommendation to the Metro Council. The Metro Council may act to resolve conflicts or problems impeding the development of a new functional plan and may complete the plan the Metro Policy Advisory Committee is unable to complete its review in a timely manner.

The Metro Council shall hold a public hearing on the proposed plan and afterwards shall:

5.2.A. Adopt the proposed functional plan; or

5.2.B. Refer the proposed functional plan to the Metro Policy Advisory Committee in order to consider amendments to the proposed plan prior to adoption; or

5.2.C. Amend and adopt the proposed functional plan; or

5.2.D. Reject the proposed functional plan.

The proposed functional plan shall be adopted by ordinance, and shall include findings of consistency with these goals and objectives.

5.3. **Functional Plan Implementation and Conflict Resolution.** Adopted functional plans shall be regionally coordinated policies, facilities, and/or approaches to addressing a designated area or activity of metropolitan concern ~~significance~~, to be considered by cities and counties for incorporation in their comprehensive land use plans. If a city or county determines that a functional plan recommendation should not or cannot be incorporated into its comprehensive plan, then Metro shall review any apparent inconsistencies by the following process:

5.3.1. Metro and affected local governments shall notify each other of apparent or potential comprehensive plan inconsistencies.

5.3.2. After Metro staff review, the Metro Policy Advisory Committee shall consult the affected jurisdictions and attempt to resolve any apparent or potential inconsistencies.

5.3.3. The Metro Policy Advisory Committee shall conduct a public hearing and make a report to the Metro Council regarding instances and reasons why a city or county has not adopted changes consistent with recommendations in a regional functional plan.

5.3.4. The Metro Council shall review the Metro Policy Advisory Committee report and hold a public hearing on any unresolved issues. The Council may decide to:

5.3.4.a. Amend the adopted regional functional plan; or

5.3.4.b. Initiate proceedings to require a comprehensive plan change; or

5.3.4.c. Find there is no inconsistency between the comprehensive plan(s) and

the functional plan.

Objective 6. Future Vision and the Future Vision Commission

By Charter, approved by the voters in 1992, Metro must adopt a Future Vision for the metropolitan area. The Future Vision is:

> "a conceptual statement that indicates population levels and settlement patterns that the region can accommodate within the carrying capacity of the land, water, and air resources of the region, and its educational and economic resources, and that achieves a desired quality of life. The Future Vision is a long-term, visionary outlook for at least a 50-year period...The matters addressed by the Future Vision include but are not limited to: (1) use, restoration, and preservation of regional land and natural resources for the benefit of present and future generations, (2) how and where to accommodate the population growth for the region while maintaining a desired quality of life for its residents, and (3) how to develop new communities and additions to the existing urban areas in well-planned ways...The Future Vision is not a regulatory document. It is the intent of this charter that the Future Vision have no effect that would allow court or agency review of it.

The Future Vision will be prepared by a broadly representative commission, appointed by the Metro council, and will be reviewed and amended as needed, and comprehensively reviewed and, if need be, revised every 15 years.
Metro will describe the relationship of components of the Regional Framework Plan, and the Regional Framework Plan as a whole, to the Future Vision.

Objective 7. Amendments to the Regional Urban Growth Goals and Objectives

The Regional Urban Growth Goals and Objectives shall be reviewed at regular intervals or at other times determined by the Metro Council after consultation with or upon the suggestion of the Metro Policy Advisory Committee. Any review and amendment process shall involve a broad cross-section of citizen and jurisdictional interests, and shall involve the Metro Policy Advisory Committee consistent with Goal 1: Regional Planning Process. Proposals for amendments shall receive broad public and local government review prior to final Metro Council action.

7.1. **Impact of Amendments.** At the time of adoption of amendments to these goals and objectives, the Metro Council shall determine whether amendments to adopted regional framework plan, functional plans or the acknowledged regional urban growth boundary are

necessary. If amendments to the above are necessary, the Metro Council shall act on amendments to applicable functional plans. The Council shall request recommendations from the Metro Policy Advisory Committee before taking action. All amendment proposals will include the date and method through which they may become effective, should they be adopted. Amendments to the acknowledged regional urban growth boundary will be considered under acknowledged urban growth boundary amendment procedures incorporated in the Metro Code.

If changes to the regional framework plan or functional plans are adopted, affected cities and counties shall be informed in writing of those changes which are advisory in nature, those which recommend changes in comprehensive land use plans, and those which require changes in comprehensive plans. This notice shall specify the effective date of particular amendment provisions.

GOAL II: URBAN FORM

The livability of the urban region should be maintained and enhanced through initiatives which:

II.i. preserve environmental quality;

II.ii. coordinate the development of jobs, housing, and public services and facilities; and

II.iii. inter-relate the benefits and consequences of growth in one part of the region with the benefits and consequences of growth in another. Urban form, therefore, describes an overall framework within which regional urban growth management can occur. Clearly stating objectives for urban form, and pursuing them comprehensively provides the focal strategy for rising to the challenges posed by the growth trends present in the region today.

II.1: NATURAL ENVIRONMENT

Preservation, use, and modification of the natural environment of the region should maintain and enhance environmental quality while striving for the wise use and preservation of a broad range of natural resources.

Objective 8. Water Resources

Planning and management of water resources should be coordinated in order to improve the quality and ensure sufficient quantity of surface water and groundwater available to the region.

8.1 **Formulate Strategy.** A long-term strategy, coordinated by the jurisdictions and agencies charged with planning and managing water resources, shall be developed to comply with state and federal requirements for drinking water, to sustain beneficial water uses, and to accommodate growth.

Planning Activities:

Planning programs for water resources management shall be evaluated to determine the ability of current efforts to accomplish the following, and recommendations for changes in these programs will be made if they are found to be inadequate:

- Identify the future resource needs and carrying capacities of the region for municipal and industrial water supply, irrigation, fisheries, recreation, wildlife, environmental standards and aesthetic amenities;

- Monitor water quality and quantity trends vis-a-vis beneficial use standards adopted by federal, state, regional, and local governments for specific water resources important to the region;

- Evaluate the cost-effectiveness of alternative water resource management scenarios, and the use of conservation for both cost containment and resource management; and

- Preserve, create, or enhance natural water features for use as elements in nonstructural approaches to managing stormwater and water quality.

Objective 9. Air Quality

Air quality shall be protected and enhanced so that as growth occurs, human health is unimpaired. Visibility of the Cascades and the Coast Range from within the region should be maintained.

9.1. Strategies for planning and managing air quality in the regional airshed shall be included in the State Implementation Plan for the Portland-Vancouver air quality maintenance area as required by the Federal Clean Air Act.

9.2. New regional strategies shall be developed to comply with Federal Clean Air Act requirements and provide capacity for future growth.

9.3. The region, working with the state, shall pursue close collaboration ~~the consolidation~~ of the Oregon and Clark County Air Quality Management Areas.

9.4. All functional plans, when taken in the aggregate, shall be consistent with the State Implementation Plan (SIP) for air quality.

Planning Activities:

An air quality management plan should be developed for the regional airshed which:

- Outlines existing and forecast air quality problems; identifies prudent and equitable market based and regulatory strategies for addressing present and probable air quality problems throughout the region; evaluates standards for visibility; and implements an air quality monitoring program to assess compliance with local, state, and federal air quality requirements.

Objective 10. Natural Areas, Parks and Wildlife Habitat

Sufficient open space in the urban region shall be acquired, or otherwise protected, and managed to provide reasonable and convenient access to sites for passive and active recreation. An open space system capable of sustaining or enhancing native wildlife and plant populations should be established.

10.1. Quantifiable targets for setting aside certain amounts and types of open space shall be

identified.

10.2. Corridor Systems - The regional planning process shall be used to coordinate the development of interconnected recreational and wildlife corridors within the metropolitan region.

10.2.1. A region-wide system of trails should be developed to link public and private open space resources within and between jurisdictions.

10.2.2. A region-wide system of linked significant wildlife habitats should be developed.

10.2.3. A Willamette River Greenway Plan for the region should be implemented by the turn of the century.

Planning Activities:

1. Inventory existing open space and open space opportunities to determine areas within the region where open space deficiencies exist now, or will in the future, given adopted land use plans and growth trends.

2. Assess current and future active recreational land needs. Target acreage should be developed for neighborhood, community, and regional parks, as well as for other types of open space in order to meet local needs while sharing responsibility for meeting metropolitan open space demands.

3. Develop multi-jurisdictional tools for planning and financing the protection and maintenance of open space resources. Particular attention will be paid to using the land use planning and permitting process and to the possible development of a land-banking program.

4. Conduct a detailed biological field inventory of the region to establish an accurate baseline of native wildlife and plant populations. Target population goals for native species will be established through a public process which will include an analysis of amounts of habitat necessary to sustain native populations at target levels.

Objective 11. Protection of Agriculture and Forest Resource Lands

Agricultural and forest resource land outside the urban growth boundary shall be protected

from urbanization, and accounted for in regional economic and development plans.

11.1. **Rural Resource Lands.** Rural resource lands outside the urban growth boundary which have significant resource value should actively be protected from urbanization.

11.2. **Urban Expansion.** Expansion of the urban growth boundary shall occur in urban reserves, established consistent with Objective 15.3.

Planning Activities:

A regional economic opportunities analysis shall include consideration of the agricultural and forest products economy associated with lands adjacent to or near the urban area.

II.2. BUILT ENVIRONMENT

Development in the region should occur in a coordinated and balanced fashion as evidenced by:

II.2.i. a regional "fair-share" approach to meeting the housing needs of the urban population;

II.2.ii. the provision of infrastructure and critical public services concurrent with the pace of urban growth;

II.2.iii. the integration of land use planning and economic development programs;

II.2.iv. the coordination of public investment with local comprehensive and regional functional plans;

II.2.v. the continued evolution of regional economic opportunity; and

II.2.vi. the creation of a balanced transportation system, less dependent on the private automobile, supported by both the use of emerging technology and the collocation of jobs, housing, commercial activity, parks and open space.

Objective 12. Housing

There shall be a diverse range of housing types available inside the urban growth boundary (UGB) for rent or purchase at costs in balance with the range of household incomes in the region. Low and moderate income housing needs should be addressed throughout the region. Housing densities should be supportive of adopted public policy for the development of the regional transportation system and designated mixed use urban centers.

Planning Activities:

The Metropolitan Housing Rule (OAR 660, Division 7) has effectively resulted in the preparation of local comprehensive plans in the urban region that:

- provide for the sharing of regional housing supply responsibilities by ensuring the presence of single and multiple family zoning in every jurisdiction; and

- plan for local residential housing densities that support net residential housing density assumptions underlying the regional urban growth boundary.

However, it is now time to develop a new regional housing policy that directly addresses the requirements of Statewide Planning Goal 10, in particular:

1. Strategies should be developed to preserve the region's supply of special needs and existing low and moderate income housing.

2. **Diverse Housing Needs.** the diverse housing needs of the present and projected population of the region shall be correlated with the available and prospective housing supply. Upon identification of unmet housing needs, a region wide strategy shall be developed which takes into account subregional opportunities and constraints, and the relationship of market dynamics to the management of the overall supply of housing. In addition, that strategy shall address the "fair-share" distribution of housing responsibilities among the jurisdictions of the region, including the provision of supporting social services.

3. **Housing Affordability.** Multnomah, Clackamas and Washington Counties have completed Comprehensive Housing Affordability Strategies (CHAS) which have demonstrated the lack of affordable housing for certain income groups throughout the metropolitan area. They also demonstrate the regional nature of the housing market. Therefore, the Regional Framework Plan shall include an element on housing affordability which includes development density, housing mix, and a menu of alternative actions (zoning tools, programs, financial incentives, etc.) for use by local jurisdictions. Each jurisdiction should participate in providing affordable housing including but not limiting to housing that is affordable to people who work in that jurisdiction.

4. The uses of public policy and investment to encourage the development of housing in locations near employment that is affordable to employees in those enterprises shall be evaluated and, where feasible, implemented. The transportation system's ability to provide accessibility shall also be evaluated.

Objective 13. Public Services and Facilities

Public services and facilities including but not limited to public safety, water and sewerage systems, parks, libraries, the solid waste management system, stormwater management facilities, and transportation should be planned and developed to:

13.i. minimize cost;

13.ii. maximize service efficiencies and coordination;

13.iii. result in net improvements in environmental quality and the conservation of natural resources;

13.iv. keep pace with growth while preventing any loss of existing service levels and achieving planned service levels;

13.v. use energy efficiently; and

13.vi. shape and direct growth to meet local and regional objectives.

13.1. **Planning Area.** The long-term geographical planning area for the provision of urban services shall be the area described by the adopted and acknowledged urban growth boundary and the designated urban reserves.

13.2. **Forecast Need.** Public service and facility development shall be planned to accommodate the rate of urban growth forecast in the adopted regional growth forecast, including anticipated expansions into urban reserve areas.

13.3. **Timing.** The region should seek the provision of public facilities and services at the time of new urban growth.

Planning Activities:

Inventory current and projected public facilities and services needs throughout the region, as described in adopted and acknowledged public facilities plans. Identify opportunities for and barriers to achieving concurrency in the region. Develop financial tools and techniques to enable cities, counties, school districts, special districts, Metro and the State to secure the funds necessary to achieve concurrency. Develop tools and strategies for better linking planning for school, library, and park facilities to the land use planning process.

Objective 14. Transportation

A regional transportation system shall be developed which:

14.i. reduces reliance on a single mode of transportation through development of a balanced transportation system which employs highways, transit, bicycle and pedestrian improvements, and system and demand management.

14.ii. provides adequate levels of mobility consistent with local comprehensive plans and state and regional policies and plans;

14.iii. encourages energy efficiency;

14.iv. recognizes financial constraints; and

14.v. minimizes the environmental impacts of system development, operations, and maintenance.

14.1. **System Priorities.** In developing new regional transportation system infrastructure, the highest priority should be meeting the mobility needs of mixed use urban centers, when designated. Such needs, associated with ensuring access to jobs, housing, and shopping within and among those centers, should be assessed and met through a combination of intensifying land uses and increasing transportation system capacity so as to minimize negative impacts on environmental quality, urban form, and urban design.

14.2. **Environmental Considerations.** Planning for the regional transportation system should seek to:

14.2.1. reduce the region's transportation-related energy consumption through increased use of transit, carpools, vanpools, bicycles and walking;

14.2.2. maintain the region's air quality (see Objective 8: Air Quality); and

14.2.3. reduce negative impacts on parks, public open space, wetlands, and negative effects on communities and neighborhoods arising from noise, visual impacts, and physical segmentation.

14.3. **Transportation Balance.** Although the predominant form of transportation is the private automobile, planning for and development of the regional transportation system should seek to:

14.3.1. reduce automobile dependency, especially the use of single-occupancy vehicles;

14.3.2. increase the use of transit through both expanding transit service and addressing a broad range of requirements for making transit competitive with the private automobile; and

14.3.3. encourage bicycle and pedestrian movement through the location and design of land uses.

Planning Activities:

1. Build on existing mechanisms for coordinating transportation planning in the region by:

- identifying the role for local transportation system improvements and relationship between local, regional, and state transportation system improvements in regional transportation plans;

- clarifying institutional roles, especially for plan implementation, in local, regional, and state transportation plans; and

- including plans and policies for the inter-regional movement of people and goods by rail, ship, barge, and air in regional transportation plans.

2. Structural barriers to mobility for transportation disadvantaged populations should be assessed in the current and planned regional transportation system and addressed through a comprehensive program of transportation and non-transportation system based actions.

3. The needs for movement of goods via freight trucks, rail, and barge should be assessed and addressed through a coordinated program of transportation system improvements and actions to affect the location of trip generating activities.

4. Transportation-related guidelines and standards for designating mixed use urban centers shall be developed.

Objective 15. Economic Opportunity

Public policy should encourage the development of a diverse and sufficient supply of jobs, especially family wage jobs, in appropriate locations throughout the region. Expansions of the urban growth boundary for industrial or commercial purposes shall occur in locations

consistent with these regional urban growth goals and objectives and assess the type, mix and wages of existing and anticipated jobs within subregions. The number and wage level of jobs within each subregion should be balanced with housing cost and availability within that subregion. Strategies should be developed to coordinate the planning and implementation activities of this element with Objective 12: Housing.

Planning Activities:

1. Regional and subregional economic opportunities analyses, as described in OAR 660 Division 9, should be conducted to:

- assess the adequacy and, if necessary, propose modifications to the supply of vacant and redevelopable land inventories designated for a broad range of employment activities;

- identify regional and subregional target industries. Economic subregions will be developed which reflect a functional relationship between locational characteristics and the locational requirements of target industries. Enterprises identified for recruitment, retention, and expansion should be basic industries that broaden and diversify the region's economic base while providing jobs that pay at family wage levels or better; and

- link job development efforts with an active and comprehensive program of training and education to improve the overall quality of the region's labor force. In particular, new strategies to provide labor training and education should focus on the needs of economically disadvantaged, minority, and elderly populations.

2. An assessment should be made of the potential for redevelopment and/or intensification of use of existing commercial and industrial land resources in the region.

II.3: GROWTH MANAGEMENT

The management of the urban land supply shall occur in a manner which encourages:

II.3.i. the evolution of an efficient urban growth form which reduces sprawl;

II.3.ii. a clear distinction between urban and rural lands; and

II.3.iii. recognition of the inter-relationship between development of vacant land and redevelopment objectives in all parts of the urban region.

Objective 16. Urban/rural transition

There should be a clear transition between urban and rural land that makes best use of natural and built landscape features and which recognizes the likely long-term prospects for regional urban growth.

16.1. **Boundary Features.** The Metro urban growth boundary should be located using natural and built features, including roads, drainage divides, floodplains, powerlines, major topographic features, and historic patterns of land use or settlement.

16.2. **Sense of Place.** Historic, cultural, topographic, and biological features of the regional landscape which contribute significantly to this region's identity and "sense of place", shall be identified. Management of the total urban land supply should occur in a manner that supports the preservation of those features, when designated, as growth occurs.

16.3. **Urban Reserves.** Thirty-year "urban reserves", adopted for purposes of coordinating planning and estimating areas for future urban expansion, should be identified consistent with these goals and objectives, and reviewed by Metro every 15 years.

16.3.1. Establishment of urban reserves will take into account:

16.3.1.a. The efficiency with which the proposed reserve can be provided with urban services in the future;

16.3.1.b. The unique land needs of specific urban activities assessed from a regional perspective;

16.3.1.c. The provision of green spaces between communities;

16.3.1.d. The efficiencies with which the proposed reserve can be urbanized;

16.3.1.e. The proximity of jobs and housing to each other;

16.3.1.f. The balance of growth opportunities throughout the region so that the costs and benefits can be shared;

16.3.1.g. The impact on the regional transportation system; and

16.3.1.h. The protection of farm and forest resource lands from urbanization. Inclusion of land in an urban reserve shall be preceded by consideration of all of the above factors.

16.3.2 In addressing 16.3.1(h), the following hierarchy should be used for identifying priority sites for urban reserves:

16.3.2.a. First, propose such reserves on rural lands excepted from Statewide Planning goals 3 and 4 in adopted and acknowledged county comprehensive plans. This recognizes that small amounts of rural resource land adjacent to or surrounded by those "exception lands" may be necessary for inclusion in the proposal to improve the efficiency of the future urban growth boundary amendment.

16.3.2.b. Second, consider secondary forest resource lands, or equivalent, as defined by the state.

16.3.2.c. Third, consider secondary agricultural resource lands, or equivalent, as defined by the state.

16.3.2.d. Fourth, consider primary forest resource lands, or equivalent, as defined by the state.

16.3.2.e. Finally, when all other options are exhausted, consider primary agricultural lands, or equivalent, as defined by the state.

16.3.3. Expansion of the urban growth boundary shall occur consistent with Objectives 17 and 18. Where urban land is adjacent to rural lands outside of an urban reserve, Metro will work with affected cities and counties to ensure that urban uses do not significantly

affect the use or condition of the rural land. Where urban land is adjacent to lands within an urban reserve that may someday be included within the urban growth boundary, Metro will work with affected cities and counties to ensure that rural development does not create obstacles to efficient urbanization in the future.

Planning Activities:

1. Identification of urban reserves adjacent to the urban growth boundary shall be accompanied by the development of a generalized future land use plan. The planning effort will primarily be concerned with identifying and protecting future open space resources and the development of short-term strategies needed to preserve future urbanization potential. Ultimate providers of urban services within those areas should be designated and charged with incorporating the reserve area(s) in their public facility plans in conjunction with the next periodic review. Changes in the location of the urban growth boundary should occur so as to ensure that plans exist for key public facilities and services.

2. The prospect of creating transportation and other links between the urban economy within the Metro Urban Growth Boundary and other urban areas in the state should be investigated as a means for better utilizing Oregon's urban land and human resources.

3. The use of greenbelts for creating a clear distinction between urban and rural lands, and for creating linkages between communities, should be explored.

4. The region, working with the state and other urban communities in the northern Willamette Valley, should evaluate the opportunities for accommodating forecasted urban growth in urban areas outside of and not adjacent to the present urban growth boundary.

Objective 17. Developed Urban Land

Opportunities for and obstacles to the continued development and redevelopment of existing urban land shall be identified and actively addressed. A combination of regulations and incentives shall be employed to ensure that the prospect of living, working, and doing business in those locations remains attractive to a wide range of households and employers.

17.1. **Redevelopment & Infill.** The potential for redevelopment and infill on existing urban land will be included as an element when calculating the buildable land supply in the region,

where it can be demonstrated that the infill and redevelopment can be reasonably expected to occur during the next 20 years. When Metro examines whether additional urban land is needed within the urban growth boundary, it shall assess redevelopment and infill potential in the region.

Metro will work with jurisdictions in the region to determine the extent to which redevelopment and infill can be relied on to meet the identified need for additional urban land. After this analysis and review, Metro will initiate an amendment of the urban growth boundary to meet that portion of the identified need for land not met through commitments for redevelopment and infill.

17.2. **Portland Central City.** The Central City area of Portland is an area of regional and state concern ~~significance~~ for commercial, economic, cultural, tourism, government, and transportation functions. State and regional policy and public investment should continue to recognize this special significance.

17.3. **Mixed Use Urban Centers.** The region shall evaluate and designate mixed use urban centers. A "mixed use urban center" is a mixed use node of relatively high density, supportive of non-auto based transportation modes, and supported by sufficient public facilities and services, parks, open space, and other urban amenities. Upon identification of mixed use urban centers, state, regional, and local policy and investment shall be coordinated to achieve development objectives for those places. Minimum targets for transit:highway mode split, jobs:housing balance, and minimum housing density may be associated with those public investments.
New mixed use urban centers shall be sited with respect to a system of such centers in the region, and shall not significantly affect regional goals for existing centers, the transportation system, and other public services and facilities.

Planning Activities:

1. Metro's assessment of redevelopment and infill potential in the region shall include but not be limited to:

   a. An inventory of parcels where the assessed value of improvements is less than the assessed value of the land.

   b. An analysis of the difference between comprehensive plan development densities and actual development densities for all parcels as a first step towards determining the efficiency with which urban land is being used. In this case, efficiency is a function of

land development densities incorporated in local comprehensive plans.

c. An assessment of the impacts on the cost of housing of redevelopment versus expansion of the urban growth boundary.

d. An assessment of the impediments to redevelopment and infill posed by existing urban land uses or conditions.

2. Financial incentives to encourage redevelopment and infill consistent with adopted and acknowledged comprehensive plans should be pursued to make redevelopment and infill attractive alternatives to raw land conversion for investors and buyers.

3. Cities and their neighborhoods should be recognized as the focal points for this region's urban diversity. Actions should be identified to reinforce the role of existing downtowns in maintaining the strength of urban communities.

4. Tools will be developed to address regional economic equity issues stemming from the fact that not all jurisdictions will serve as a site for an economic activity center. Such tools may include off-site linkage programs to meet housing or other needs or a program of fiscal tax equity.

5. Criteria shall be developed to guide the potential designation of mixed use urban centers. The development and application of such criteria will address the specific area to be included in the center, the type and amount of uses it is to eventually contain, the steps to be taken to encourage public and private investment. Existing and possible future mixed use urban centers will be evaluated as to their current functions, potentials, and need for future public and private investment. Strategies to meet the needs of the individual centers will be developed. The implications of both limiting and not limiting the location of large scale office and retail development in mixed use urban centers shall be evaluated.

Objective 18. Urban Growth Boundary

The regional urban growth boundary, a long-term planning tool, shall separate urbanizable from rural land, be based in aggregate on the region's 20-year projected need for urban land, and be located consistent with statewide planning goals and these Regional Urban Growth Goals and Objectives. In the location, amendment, and management of the regional urban growth boundary, Metro shall seek to improve the functional value of the boundary.

18.1. **Expansion into Urban Reserves.** Upon demonstrating a need for additional urban land, major and legislative urban growth boundary amendments shall only occur within urban reserves unless it can be demonstrated that Statewide Planning Goal 14 cannot be met for the urban region through use of urban reserve lands.

18.2. **Urban Growth Boundary Amendment Process.** Criteria for amending the urban growth boundary shall be derived from statewide planning goals 2 and 14 and relevant portions of the Regional Urban Growth Goals and Objectives.

18.2.1. **Major Amendments.** Proposals for major amendment of the UGB shall be made primarily through a legislative process in conjunction with the development and adoption of regional forecasts for population and employment growth. The amendment process will be initiated by a Metro finding of need, and involve local governments, special districts, citizens, and other interests.

18.2.2. **Locational Adjustments.** Locational adjustments of the UGB shall be brought to Metro by cities, counties, and/or property owners based on public facility plans in adopted and acknowledged comprehensive plans.

Objective 19. Urban Design

The identity and functioning of communities in the region shall be supported through:

19.i. the recognition and protection of critical open space features in the region;

19.ii. public policies which encourage diversity and excellence in the design and development of settlement patterns, landscapes, and structures; and

19.iii. ensuring that incentives and regulations guiding the development and redevelopment of the urban area promote a settlement pattern which:

19.iii.a. is pedestrian "friendly" and reduces auto dependence;

19.iii.b. encourages transit use;

19.iii.c. reinforces nodal, mixed use, neighborhood oriented design;

19.iii.d. includes concentrated, high density, mixed use urban centers developed in relation

to the region's transit system; and

19.iii.e. is responsive to needs for privacy, community, and personal safety in an urban setting.

19.1. Pedestrian and transit supportive building patterns will be encouraged in order to minimize the need for auto trips and to create a development pattern conducive to face-to-face community interaction.

Planning Activities:

1. A regional landscape analysis shall be undertaken to inventory and analyze the relationship between the built and natural environments and to identify key open space, topographic, natural resource, cultural, and architectural features which should be protected or provided as urban growth occurs.

2. Model guidelines and standards shall be developed which expand the range of tools available to jurisdictions for accommodating change in ways compatible with neighborhoods and communities while addressing this objective.

3. Light rail transit stops, bus stops, transit routes, and transit centers leading to and within mixed use urban centers shall be planned to encourage pedestrian use and the creation of mixed use, high density residential development.

GLOSSARY

Areas and Activities of Metropolitan Concern. A program, area or activity, having significant impact upon the orderly and responsible development of the metropolitan area that can benefit from a coordinated multi-jurisdictional response under ORS 268.390.

Beneficial Use Standards. Under Oregon law, specific uses of water within a drainage basin deemed to be important to the ecology of that basin as well as to the needs of local communities are designated as "beneficial uses". Hence, "beneficial use standards" are adopted to preserve water quality or quantity necessary to sustain the identified beneficial uses.

Economic Opportunities Analysis. An "economic opportunities analysis" is a strategic assessment of the likely trends for growth of local economies in the state consistent with OAR 660-09-015. Such an analysis is critical for economic planning and for ensuring that the land supply in an urban area will meet long-term employment growth needs.

Exception. An "exception" is taken for land when either commitments for use, current uses, or other reasons make it impossible to meet the requirements of one or a number of the statewide planning goals. Hence, lands "excepted" from statewide planning goals 3 (Agricultural Lands) and 4 (Forest Lands) have been determined to be unable to comply with the strict resource protection requirements of those goals, and are thereby able to be used for other than rural resource production purposes. Lands not excepted from statewide planning goals 3 and 4 are to be used for agricultural or forest product purposes, and other, adjacent uses must support their continued resource productivity.

Exclusive farm use. Land zoned primarily for farming, and restricting many uses that are incompatible with farming , such as rural housing. Some portions of rural reserves also may be zoned as exclusive farm use.

Family Wage Job. A permanent job with an annual income greater than or equal to the average annual covered wage in the region. The most current average annual covered wage information from the Oregon Employment Division shall be used to determine the family wage job rate for the region or for counties within the region.

Fiscal Tax Equity. The process by which inter-jurisdictional fiscal disparities can be addressed through a partial redistribution of the revenue gained from economic wealth, particularly the increment gained through economic growth.

Freight Mobility. The efficient movement of goods from point of origin to destination.

Functional Plan. A limited purpose multi-jurisdictional plan for an area or activity having significant district-wide impact upon the orderly and responsible development of the metropolitan area that serves as a guideline for local comprehensive plans consistent with ORS 268.390.

Growth Concept. A concept for the long-term growth management of our region, stating the preferred form of the regional growth and development, including where and how much the urban growth boundary should be expanded, what densities should characterize different areas, and which areas should be protected as open space.

High capacity transit. Transit routes that may be either a road designated for frequent bus service or for a light-rail line.

Housing Affordability. The availability of housing such that no more than 30% (an index derived from federal, state, and local housing agencies) of the monthly income of the household need be spent on shelter.

Industrial areas. Large tracts of land set aside for industrial use.

Infill. New development on a parcel or parcels of less than one contiguous acre located within the urban growth boundary.

Infrastructure. Roads, water systems, sewage systems, systems for storm drainage, bridges, transportation facilities, parks and public facilities developed to support the functioning of the developed portions of the environment.

Inner neighborhoods. Areas in Portland and the older suburbs that are primarily residential, close to employment and shopping areas, and have slightly smaller lot sizes and higher population densities than in outer neighborhoods

Intermodal Facility. A transportation element that accommodates and interconnects different modes of transportation and serves the statewide, interstate and international movement of people and goods.

Jobs Housing Balance. The relationship between the number, type, mix and wages of existing and anticipated jobs balanced with housing costs and availability so that non-auto trips are optimized in every part of the region.

Key or Critical Public Facilities and Services. Basic facilities that are primarily planned for by local government but which also may be provided by private enterprise and are essential to the support of more intensive development, including transportation, water supply, sewage, parks, and solid waste disposal.

Local Comprehensive Plan. A generalized, coordinated land use map and policy statement of the governing body of a city or county that inter-relates all functional and natural systems and activities related to the use of land, consistent with state law.

Metropolitan Housing Rule. A rule (OAR 660, Division 7) adopted by the Land Conservation and Development Commission to assure opportunity for the provision of adequate numbers of needed housing units and the efficient use of land within the Metro Urban Growth Boundary. This rule establishes minimum overall net residential densities for all cities and counties within the urban growth boundary, and specifies that 50% of the land set aside for new residential development be zoned for multifamily housing.

Main streets. Neighborhood shopping areas along a main street or at an intersection, sometimes having a unique character that draws people from outside the area. NW 23rd Avenue and SE Hawthorne Boulevard are current examples of main streets.

Mixed-use employment areas. Areas that include various types of commercial and retail development as well as some residences.

Neighborhood centers. Retail and service development that surrounds major MAX stations and other major intersections, extending out for one-quarter to one-half mile.

Neighboring cities. Cities such as Sandy, Canby, and Newberg that are outside Metro's jurisdiction but will be affected by the growth policies adopted by the Metro Council.

Open space. Publicly and privately -owned areas of land, including parks, natural areas, and areas of very low density development inside the urban growth boundary.

Outer neighborhoods. Areas in the outlying suburbs that are primarily residential, farther from employment and shopping areas, and have slightly larger lot sizes and lower population densities than inner neighborhoods.

Regional centers. Areas of mixed residential and commercial use that serve hundreds of thousands of people and are easily accessible by different types of transit. Examples include traditional centers such as downtown Gresham and new centers such as Clackamas Town

Center.

Rural reserves. Areas that are a combination of public and private lands outside the urban growth boundary, used primarily for farms and forestry. They are protected from development by very low-density zoning and serve as buffers between urban areas.

State Implementation Plan. A plan for ensuring that all parts of Oregon remain in compliance with Federal air quality standards.

Town centers. Areas of mixed residential and commercial use that serve tens of thousands of people. Examples include the downtowns of Forest Grove and Lake Oswego.

Transit Station Community. That area generally within a 1/4 to 1/2 mile radius of light rail stations which is planned as a multi-modal community of mixed uses and substantial pedestrian accessibility improvements.

Transportation corridors. Residential and retail development concentrated along major arterials and bus lines.

Urban Form. The net result of efforts to preserve environmental quality, coordinate the development of jobs, housing, and public services and facilities, and inter-relate the benefits and consequences of growth in one part of the region with the benefits and consequences of growth in another. Urban form, therefore, describes an overall framework within which regional urban growth management can occur. Clearly stating objectives for urban form, and pursuing them comprehensively provides the focal strategy for rising to the challenges posed by the growth trends present in the region today.

Urban Growth Boundary. A boundary which identifies urban and urbanizable lands needed during the 20-year planning period to be planned and serviced to support urban development densities, and which separates urban and urbanizable lands from rural land.

Urban Reserve Area. An area adjacent to the present urban growth boundary defined to be a priority location for any future urban growth boundary amendments when needed. Urban reserves are intended to provide cities, counties, other service providers, and both urban and rural land owners with a greater degree of certainty regarding future regional urban form. Whereas the urban growth boundary describes an area needed to accommodate the urban growth forecasted over a twenty year period, the urban reserves plus the area inside the urban growth boundary estimate the area capable of accommodating the growth expected for 50 years.

Exhibit C Analysis, Appendices and Analysis Map

Recommended Alternative Analysis

Preface

The Recommended Alternative, a result of the Region 2040 study, was the recommendation brought to the Metro Council by the Executive. This Growth Concept grew from the previous 2040 alternative scenarios: Base Case, Concepts A, B, and C (see Concepts for Growth, June 1994).

The Recommended Alternative Analysis is a record of the background work completed as part of the Region 2040 study. The Analysis documents the issues considered, the assumptions made, and the results used in describing and quantifying the Alternative. The Analysis includes a description of the Recommended Alternative, a map, modeling results, and a technical appendix. This should not be confused with the Growth Concept description or the Growth Concept map being adopted, which are more generalized or conceptual in nature.

This attachment to Resolution No. 94-2040-B is intended to provide a record of the analysis done in support of the Metro 2040 Growth Concept. Therefore, no amendments have been made to this material.

METRO

To the Metro Council:

The 2040 growth concept that I am recommending is an historic first in several important ways. It accommodates a 70 percent population increase with an addition of only 7 percent to our urban land supply. Second, it integrates land use, transportation and greenspaces more closely than ever done anywhere. Third, and most important, this is a **REGIONAL** decision. It was developed along with almost every government in the region and with the input of thousands of citizens – more than have ever been involved in any planning effort.

This decision will have the most far-reaching effects of any decision to come before this government since its inception 16 years ago. And yet it is a relatively easy one because it builds upon the success of the Oregon land-use experience and the experience of this region. It is also easy because the 2040 process, in its effort to find a consensus, has reached out to and involved all regional interests. Certainly not every person will be happy with every aspect of this growth concept, but we can all live with it and understand both its rationale and the consequences of not coming together on a common approach.

This recommended alternative includes much of what we heard from the public – hold the urban growth boundary, establish rural reserves, encourage development close to transit, retain and acquire open spaces, and encourage alternative transportation options.

The 2040 growth concept puts a premium on our precious land supply. While allocating 34,000 acres for natural and open space within the urban growth boundary, it proposes the initiation of a new land designation of rural reserve to protect land that separates communities from each other. Rural reserves would keep 300,000 acres in farm, forest and rural residential uses. Implementation of this new category of land use will require the active cooperation of six counties and the support of affected state agencies.

While this is a very big and very long-range decision, it allows for future flexibility. No one can say how long it will actually take to grow to 2.4 million people. Part of the answer will depend on how well we succeed in the development this growth concept proposes for land use, transportation design and community building. The growth concept identifies 22,000 acres from which we need to select 14,500 acres of urban reserves. The specifics are not yet drawn in the 2040 growth concept. That task awaits more detailed work by staff and local governments, public hearings and decisions by a new Metro Council.

Through a collaborative regional process, most of the final differences can be worked out, but there will still be some people with very legitimate concerns about the effects of growth. There is no question in my mind that growth inevitably reduces some aspects of our quality of life. I am equally convinced that as long as this is an attractive region with jobs, security and a much better than average environment, our present residents will stay and newcomers will continue to be attracted. We should continue to be concerned about how growth affects our overall quality of life. We should not attempt to fix an absolute number beyond which we would eject our own or reject the next newcomer. Oregon's land-use tradition calls upon us to accommodate growth where it is designated and to preserve the rest. This 2040 growth concept is in that tradition.

Let us move forward to develop implementation of this set of policy directions. No set of initiatives as ambitious as this can be accomplished by any one government. A truly regional agenda must be moved by the region as a whole. I am confident this can happen because of the way this 2040 growth concept was developed. The Metropolitan Policy Advisory Committee has been a vital partner in the process. Its chair, Mayor Gussie McRobert, has been especially helpful in obtaining consensus. The entire region owes Mayor McRobert and MPAC a debt of gratitude. We also owe special thanks to John Fregonese, who led the staff effort.

The package you are receiving includes a resolution for adoption of the 2040 growth concept including maps, a description of the concept itself and appendices. Regional Urban Growth Goals and Objectives (RUGGOs) amendments are also included. These are necessary to bring the RUGGOs into compliance with the 1992 Metro Charter and to incorporate the 2040 growth concept into the RUGGOs.

These elements all depend upon a decision on the 2040 growth concept occurring in the next few months. This council is well informed about the issues and the process that has brought this decision to the fore. It should adopt the 2040 growth concept, amendments to the RUGGOs and the work plan. Adoption of the Future Vision and the other elements mentioned will be a full plate for a new set of elected officials. Even though some elected officials will continue, new ones will have to get up to speed quickly to accomplish the tasks remaining. The region is ready, the time is now!

We are still analyzing input from citizens of the region. You, the Metro Council, have scheduled hearings that will provide even more opportunities for citizens to provide input on this proposal. I am confident that the 2040 growth concept embodies what most of our residents want for their future and that of their children and grandchildren. I know it is what I want for my children and grandchildren.

Rena Cusma
Executive Officer

Recommended Alternative Analysis

2040 Recommended Alternative

Overview

This document describes the recommended alternative for the Region 2040 project. For background information, refer to *Concepts for Growth*, dated June 1994. (This report assumes familiarity with the ideas and terminology used in the June effort). The recommended alternative is the Metro executive officer's recommendation to the Metro Council and its advisory committees, the Metro Policy Advisory Committee (MPAC), the Joint Policy Advisory Committee on Transportation (JPACT) and the Future Vision Commission.

The recommended alternative considers the technical findings documented in the *Concepts for Growth* report, as well as nearly 17,000 responses received from the *It's Your Turn* survey mailer. The recommended alternative is Metro staff's attempt to blend all this information into one "best" alternative. It's a common point to begin discussion of the major issues confronting our region to be refined through the Regional Framework Plan and Future Vision. The alternative will be discussed at public hearings and is likely to change in response to public comments received.

The recommended alternative would allow the expansion of the urban growth boundary by 14,500 acres over 50 years. This is less expansion than other concepts, except Concept B. It preserves substantial amounts of rural resource lands that surround the metropolitan region. The recommended alternative also would accommodate growth inside the present urban growth boundary by using land more efficiently and utilizing smaller average lot sizes. Higher density would be encouraged where good quality transit service is planned. Finally, 8 percent of new regional growth would occur in neighboring cities, less than the 30 percent assumed in Concept C.

The recommended alternative is illustrated by two maps. The growth concept map is intended to be considered for adoption by the Metro Council. This map and descriptions of its components will become the basis for overall regional policy setting through the Regional Urban Growth Goals and Objectives (RUGGOs). The analysis map provides a detailed picture of one way that the recommended alternative could be implemented and allows for computer modeling and technical analysis. Much of this report describes the results of this modeling and technical analysis. The distinction between the ideas represented in the two maps are worth calling out. The concept map provides the basis for a decision that will embody general principles while the analysis map is only an example allowing a greater level of detail.

In the course of integrating feedback from citizens and local governments, we changed some category names from those described in *Concepts for Growth* because of concerns expressed and to more accurately reflect the meaning and intent of the terms. "Preferred alternative" is replaced with " recommended alternative". "Rural reserves" has been substituted for "greenbelts" and "open space" for "greenspaces" to avoid confusion with Metro's Greenspaces program. "Node" has been changed to "station communities." "Employment area" has been divided into two categories, "industrial area" and "employment area," just as "neighborhoods" have been divided into "inner neighborhoods" and "outer neighborhoods." (Explanations of these categories are included below.)

Highlights of the analysis version

- The urban growth boundary (UGB) would be expanded by 14,500 acres during the 50-year period. Lands subject to future UGB expansion would be designated as urban reserves until the UGB expansion is warranted.

- The average lot size for new single-family homes regionwide would be 6,650 square feet, or 6.5 units per net acre.
- The ratio of single-family and multi-family in new development would be 62 percent to 38 percent (The current ratio is 70 percent single-family, 30 percent multi-family.)
- 20 percent of the single-family market would be accommodated by rowhouses, duplexes or small-lot development. This housing type would mostly occur along transit corridors.
- The majority of housing would be in neighborhoods (52 percent), followed by corridors and station communities (33 percent), and city, regional and town centers (8 percent).
- About 19,300 acres of currently developed land in the urban area would redevelop for more intensive uses.
- Open space would represent 34,000 of the 248,500 acres in the expanded UGB, or 14 percent of the urban land area.
- One-third of the buildable acres would allow mixed uses and two-thirds would remain in single-use categories such as residential or industrial.
- The majority of new jobs (two-thirds) would be accommodated in centers or along corridors and main streets, which would be well served by transit. The industrial areas would provide land for about 10 percent of new jobs and employment areas would provide space for 14 percent of new jobs. Significantly, residential neighborhoods account for 15 percent of total jobs (this includes people working at home, child care, schools and small-scale commercial within neighborhoods), up from 11 percent currently.
- Land extensive and heavily auto-dependent commercial or industrial uses would be limited to employment areas and industrial areas rather than on corridors, centers or neighborhoods.

Recommended alternative Elements

This recommended alternative is designed to accommodate 720,000 additional residents and 350,000 additional jobs. The total population served within this plan is 1.8 million residents within the Metro boundary.

The basic philosophy of the recommended alternative is to preserve our access to nature and build better communities. It combines the goals of RUGGO, the values of the region and the analysis of the Region 2040 project to guide growth for the next 50 years. Key components of the recommend alternative are described for land use and for transportation.

Land Use and Urban Form:

The following are categories of land use as defined and used in this growth concept.

Neighbor cities

The recommended alternative recognizes that neighboring cities surrounding the region's metropolitan area are likely to grow rapidly. Communities such as Sandy, Canby and Newberg will be affected by the Metro Council's decisions about managing the region's growth. A significant number of people would be accommodated in these neighboring cities, and cooperation between Metro and these communities is necessary to address common transportation and land-use issues.

There are three key concepts for cooperative agreements with neighbor cities:

- There should be a separation of rural land between each neighboring city and the metropolitan area. If the region grows together, the transportation system would suffer and the cities would lose their sense of community identity.
- There should be a strong balance between jobs and housing in the neighbor cities. The more a city retains a balance of jobs and households, the more trips will remain local.
- The "green corridor" highway through a rural reserve serves as a link between the metropolitan area and a neighbor city without access to the farms and forests of the rural reserve. This would keep accessibility high, which encourages employment growth but limits the adverse affect on the surrounding rural areas.

Rural reserves

Rural reserves are rural areas that keep adjacent urban areas separate. These rural lands are not needed or planned for development but are more likely to experience development pressures than are areas farther away.

These lands will not be developed in the foreseeable future, an idea that requires agreement among local, regional and state agencies. They are areas outside the present urban growth boundary primarily that connect the region to neighboring cities.

New rural commercial or industrial development would be restricted. Some areas would receive priority status as potential areas for park and open space acquisition. Road improvements would specifically exclude interchanges or other highway access to the rural road system. Similarly, there would be no extensions of urban services. Zoning would be for resource protection on farm and forestry land, and very low density residential (less than one unit for five acres) for exception land.

These rural reserves would support and protect farm and forestry operations. The reserves also would include some purchase of natural areas adjacent to rivers, streams and lakes to make sure the water quality is protected and wildlife habitat enhanced. Large natural features, such as hills and buttes, also would be included as rural reserves because they buffer developed areas and are poor candidates for compact urban development.

Rural reserves also would be retained to separate cities within the Metro boundary. Cornelius, Hillsboro, Tualatin, Sherwood and Wilsonville have existing areas of rural land that provides a break in urban patterns. New areas of urban reserves, that are indicated on the concept map are also separated by rural reserves, such as the Damascus-Pleasant Valley areas from Happy Valley.

The primary means of achieving rural reserves would be through the regional framework plan for areas within the Metro boundary, and voluntary agreements among Metro, the counties, neighboring cities and the state for those areas outside the Metro boundary. These agreements would prohibit extending urban growth into the rural reserves and require that state agency actions are consistent with the rural reserve designation.

Open spaces

The areas designated open space on the concept map are parks, stream corridors, wetlands and floodplains, largely undeveloped upland areas, or areas of very low density residential development. (These areas of residential development retain a highly open pattern and are generally unfenced.) Many of these natural features already have significant land set aside as open space. The Tualatin Mountains, for example, contain major parks such as Forest Park and Tryon Creek State Park and numerous smaller parks such as Gabriel Park in Southwest Portland and Wilderness Park in West Linn. Other areas are oriented toward wetlands and streams, with Fanno Creek in Washington County having one of the best systems of parks and open space in the region.

Designating these areas as open spaces would have several effects. First, it would remove these land from the category of urban land that is available for development. The capacity of the urban growth boundary would have to be calculated without these, and plans to accommodate housing and employment would have to be made without them: Second, these natural areas, along with key rural reserve areas, would receive a high priority for purchase as parks and open space, such as Metro's Greenspaces program. Finally, regulations could be developed to protect these critical natural areas that would not conflict with housing and economic goals.

About 34,000 acres of land and water inside today's urban growth boundary are included as open spaces in the recommended alternative map. Preservation of these open spaces could be achieved by a combination of ways. Some areas could be purchased by public entities, such as Metro's Greenspaces program or local park departments. Others may be donated by private citizens or by developers of adjacent properties to reduce the impact of development. Still others could be protected by very low-density residential zoning, clustering housing on portions of the land while leaving important features as common open space.

Centers

Creating higher density centers of employment and housing is advantageous for several reasons. These centers provide access to a variety of goods and services in a relatively small geographic area, creating a intense business climate. Having centers also makes sense from a transportation perspective, since most centers have an accessibility

level that is conducive to transit, bicycling and walking. Centers also act as social gathering places and community centers, where people would find the "small-town atmosphere" they cherish.

The major advantages of centers in the marketplace are accessibility and the ability to concentrate goods and services in a relatively small area. The challenge, however, is that most of the existing centers are already developed and any increase in the density must be made through redeveloping existing land and buildings. Emphasizing redevelopment in centers over development of new areas of undeveloped land is a key strategy in the recommended alternative and favored by many citizens.

The growth concept recognizes three types of centers, distinguished by size and accessibility. The "central city" is downtown Portland and is accessible to millions of people. "Regional centers" are accessible to hundreds of thousands of people, and "town centers" are accessible to tens of thousands.

The central city

Downtown Portland serves as our major regional center and functions quite well as an employment and cultural hub for the metropolitan area. It provides accessibility to the many businesses that require access to a large market area and also serves as the location for cultural and social functions that draw the region together. It is the center for local, regional, state and federal governments, financial institutions, commerce, the center for arts and culture, and for visitors to the region.

In addition, downtown Portland has a high percentage of travel other than by car – three times higher than any other part of the region. Jobs and housing are readily available, without the need for a car. Maintaining and improving upon the strengths of our regional downtown should remain a high priority.

Today, about 20 percent of all employment in the region is in downtown Portland. Under the recommended alternative, downtown Portland would grow at the same rate as the rest of the region, and would remain the location of 20 percent of regional employment. To do this, downtown Portland's 1990 density of 150 people per acre would increase to 250 people per acre. Improvements to the transit system network and maintenance of the highway system would provide additional access to and from the city center.

Regional centers

There are seven regional centers, serving five market areas (outside of the central city market area). Hillsboro serves that western portion of the region, and Gresham the eastern. Downtown Beaverton and Washington Square serve the Washington County area, and Clackamas Town Center and Milwaukie together serve Clackamas County and portions of outer southeast Portland. Vancouver serves Clark County. The central city serves most of the Portland area as a regional center.

These regional centers would become the focus of compact development, redevelopment, and transit and highway

Figure 1 Developable Lands by Design Type - Recommended Alternative

Design Type	Total*	Vacant	Redeveloped
Central city	1,146	115	321
Regional centers	1,719	154	447
Town centers	2,156	514	346
Main streets	2,758	186	352
Corridors/station communities	35,519	6,099	4,024
Employment areas	7,763	3,591	1,121
Industrial areas	15,045	5,930	3,376
Inner neighborhoods	52,481	10,224	0**
Outer neighborhoods	29,537	14,588	2,079***

* This is total net acres (built and vacant) within the design type.
** No redevelopment was assumed to occur in these areas.
***Assumes redevelopment would occur only outside the present urban growth boundary.

Figure 2: Redevelopment Assumptions for the Recommended Alternative

Design Type	Maximum Building Valuation per Acre
Central city	$480,000
Regional centers	$360,000
Town centers	$280,000
Main streets	$240,000
Corridors/commercial centers	$160,000
Employment areas	$40,000
Industrial areas	$40,000
Inner neighborhoods	-0-
Outer neighborhoods (within urban reserves)	$120,000

improvements. The recommended alternative accommodates three percent of new household growth and 11 percent of new employment growth in these regional centers. From the current 24 people per acre, the recommended alternative would accommodate about 60 people per acre.

Transit improvements for regional centers would include light-rail connecting all regional centers to the central city. Highway improvements also would focus on ensuring that these centers are accessible as places to conduct business. Eventually, these centers would grow to the density of downtown Vancouver, Wash. – about one-third of downtown Portland's density, but three times denser than these areas today.

Town centers

Smaller than regional centers and serving populations of tens of thousands of people, town centers are the third type of center with compact development and transit service. Town centers would accommodate about 3 percent of new households and more than 7 percent of new employment. The 1990 density of an average of 23 people per acre would nearly double – to about 40 persons per acre, the current densities of development along Hawthorne Boulevard and in downtown Hillsboro.

Town centers would provide local shopping and employment opportunities within a local market area. They are designed to provide local retail and services, at a minimum. They also would vary greatly in character. Some would become traditional town centers, such as Lake Oswego, Oregon City and Forest Grove, while others would change from an auto-oriented development into a more complete community, such as Hillsdale. Many would also have regional specialties, such as office centers envisioned for the Ceder Mill town center. Several new town centers are designated, for example, in Happy Valley and Damascus, to accommodate the retail and service needs of a growing population while reducing auto travel. Others would combine a town center within a regional center, offering the amenities and advantages of each type of center.

Corridors

Corridors are not as dense as centers, but also are located along good quality transit lines. An example of a present-day corridor are Beaverton-Hillsdale Highway or Macadam Avenue. They provide a place for densities that are somewhat higher than today and that are convenient to transit. Typical new developments would include rowhouses, duplexes and one- to three-story office and retail buildings, and average 25 persons per acre.

Station communities

Station communities are nodes of development centered around a light rail or high capacity transit station. They provide for the highest density other than that found in regional centers. The station communities would encompass an area approximately one-half mile from a station stop. The densities of new development would average 45 persons per acre. Zoning ordinances now set minimum densities for most eastside and westside MAX station communities. An extensive station community planning program is now under way for each of the westside station communities, and similar work is envisioned for the proposed south/north line. It is expected that the station community planning process will result in specific strategies and plan changes to implement the station communities concept.

Because the recommended alternative calls for many corridors and station communities throughout the region, they would together accommodate 27 percent of the new households of the region and nearly 15 percent of new employment.

Figure 3. Distribution of Households and Employment in 2040

Design Type	Households	Employment
Central city	3.3%	20.7%
Regional centers	2.0	6.3
Town centers	2.4	5.3
Main streets	2.7	5.3
Corridors/station communities	32.7	24.8
Employment areas	2.9	9.5
Industrial areas	0.6	11.2
Inner neighborhoods	33.5	10.1
Outer neighborhoods	18.3	4.9
Open spaces	1.6	1.8

Main streets

During the early decades of this century, main streets served by transit and characterized by a strong business and civic community were a major land-use pattern throughout the region. Examples remain in Hillsboro, Milwaukie, Oregon City and Gresham, as well as the Westmoreland neighborhood and Hawthorne Boulevard. Today, these areas are undergoing a revival and provide an efficient and effective land-use and transportation alternative. The recommended alternative calls for main streets to grow from 1990 levels of 36 people per acre to 39 per acre. Main streets would accommodate nearly two percent of housing growth.

Main streets typically will serve neighborhoods and may develop a regional specialization – such as antiques, fine dining, entertainment or specialty clothing – that draws people from other parts of the region. When several main streets occur within a few blocks of one another, they serve as a dispersed town center, such as the main street areas of Belmont, Hawthorne and Division that form a town center for inner Southeast Portland.

Neighborhoods

Residential neighborhoods would remain a key component of the recommended alternative and would fall into two basic categories. Examples of inner neighborhoods are Portland and the older suburbs of Beaverton, Milwaukie and Lake Oswego, and would include primarily residential areas that are accessible to employment. Lot sizes would be smaller to accommodate densities increasing from 1990 levels of about 11 people per acre to about 14 per acre. Inner neighborhoods have smaller lot sizes and better access to jobs and shopping. They would accommodate 28 percent of new households and 15 percent of new employment (some of the employment would be home occupations and the balance would be neighborhood- based employment such as schools, child care and some neighborhood businesses).

Outer neighborhoods would be farther away from large employment centers and would have larger lot sizes and lower densities. Examples include outer suburbs such as Forest Grove, Sherwood and Oregon City, and any additions to the urban growth boundary. From 1990 levels of nearly 10 people per acre, outer neighborhoods would increase to 13 per acre. These areas would accommodate 28 percent of new households and 10 percent of new employment.

One of the most significant problems in some newer neighborhoods is the lack of through streets, a recent phenomenon that has occurred in the last 25 years. It is one of the primary causes of increased congestion in the region. Traditional neighborhoods contained a grid pattern with up to 20 through streets per mile. But in new areas, one to two through streets per mile is the norm. Combined with large-scale single-use zoning and low densities, it is the major cause of increasing auto dependency in neighborhoods. While existing neighborhoods probably will not change, areas of largely vacant land should develop master street plans to including at least 10 through local streets per mile, which would allow for better access and still allow some albeit short, cul-de-sacs.

Employment areas

Industrial areas would be set aside exclusively for industrial activities. They include land-intensive employers, such as those around the Portland International Airport, the Hillsboro Airport and some areas along Highway 212/224. Industrial areas are expected to accommodate ten percent of regional employment and no households.

Other employment centers would be designated as mixed-use employment areas, mixing various types of employment and including some residential development as well. These mixed-use employment areas would provide for

about 5 percent of new households and 14 percent of new employment within the region. Densities would rise substantially from 1990 levels of about 11 people per acre to 20 people per acre.

Urban reserves

One important feature of the recommended alternative is that it would accommodate all 50 years of forecasted growth through a relatively small amount of urban reserves. Urban reserves consist of land set aside outside the present urban growth boundary for future growth. The recommended alternative proposes approximately 14,500 acres of urban reserves to be chosen from a study area of about 22,000 acres. In the example reflected in the analysis map, more than 75 percent of these lands are currently zoned for rural housing and the remainder are zoned for farm or forestry uses.

Transportation Facilities

Transportation elements are needed to create a successful growth management policy that supports the recommended alternative. Traditionally, streets have been defined by their traffic-carrying potential, and transit service according to its ability to draw commuters. Other travel modes have not been viewed as important elements of the transportation system. The recommended alternative establishes a new framework for planning in the region by linking urban form to transportation. In this new relationship, transportation is viewed as a range of travel modes and options that should reinforce the region's growth management goals.

Within the framework of the recommended alternative is a network of multi-modal corridors and regional through-routes that connect major urban centers and destinations. Through routes provide for high-volume auto and transit travel at a regional scale, and ensure efficient movement of freight. Within multi-modal corridors, the transportation system will provide a broader range of travel mode options, including auto, transit, bicycle and pedestrian networks, that allow choices of how to travel in the region. These travel options will encourage the use of alternative modes to the auto, a shift that has clear benefits for the environment and the quality of neighborhoods and urban centers.

Regional through-routes

These are the routes that move people and goods around the region and connect regional centers and the central city. They include freeways, limited access highways and heavily traveled arterials, and usually function as through-routes. As such, they are important not only because of the movement of people, but as one of the region's major freight systems. Since much of our regional economy depends on the movement of goods and services, it is essential to keep congestion on these roads at manageable levels. These major routes frequently serve as transit corridors but are seldom conducive to bicycles or pedestrians because of the volume of auto and freight traffic they carry.

With their heavy traffic, and high visibility, these routes are attractive to business. While they serve as an appropriate location for auto-oriented businesses, they are poor locations for businesses that are designed to serve neighborhoods or sub-regions. Neighborhood uses are better located on multi-modal arterials. Through routes need the highest levels of access control, but it is important that they not become barriers to movements across them by other forms of travel, auto, pedestrian, transit, or bicycle. Through routes should focus on providing access to centers, rather than access to the lands that front them.

Multi-modal arterials

These represent most of the region's arterials. They include a variety of design styles and speeds, and are the backbone for a system of multi-modal travel options. Older sections of the region are better designed for multi-modal travel than new areas. Although these streets are often smaller than suburban arterials, they carry a great deal of traffic (up to 30,000 vehicles a day), experience heavy bus ridership along their routes and are constructed in dense networks that encourage bicycle and pedestrian travel. The Regional Transportation Plan (RTP) should identify these multi-modal streets and develop a plan to further encourage alternative travel modes within these corridors.

Many new streets, however, are designed to accommodate heavy auto and freight traffic at the expense of other travel modes. Multiple wide lanes, dedicated turning lanes, narrow sidewalks exposed to moving traffic and widely spaced intersections and street crossings create an envi-

ronment that is difficult and dangerous to negotiate without a car. The RTP should identify these potential multi-modal corridors and establish design standards that encourage other modes of travel along these routes.

Collectors and local streets

These streets become a regional priority when a lack of adequate connections forces neighborhood traffic onto arterials. New suburban development increasingly depends on arterial streets to carry trips to local destinations, because most new local streets systems are specifically designed with curves and cul-de-sacs to discourage local through travel by any mode. The RTP should consider a minimum standard of 8 to 10 through streets per mile, applied to developing or undeveloped areas to reduce local travel on arterials. There should also be established standard bicycle and pedestrian through-routes (via easements, greenways, fire lanes, etc.) in existing neighborhoods where changes to the street system are not a reasonable alternative.

Light rail

Light rail transit (LRT) daily travel capacity measures in tens of thousands of riders and provides a critical travel option to major destinations. The primary function of light rail in the recommended alternative is to link regional centers and the central city, where concentrations of housing and employment reach a level that can justify the cost of developing a fixed transit system. In addition to their role in developing regional centers, LRT lines can also support significant concentrations of housing and employment at individual station areas along their routes. LRT also supports land use, especially in anchoring downtown Portland.

Regional design images

In *Concepts for Growth*, we included designs of specific areas of the region that illustrated what kinds of land-use changes could be undertaken to accommodate growth in the area. We did not complete such site specific designs for the recommended alternative, although we do have a way to illustrate the kinds of development types that would have to be built to achieve the recommended alternative.

Residential development, particularly single-family detached housing, uses the largest amount of land within the urban growth boundary. For this reason, changes to residential density have the greatest effect on the amount of urban land needed. In the recommended alternative, 62 percent of new residential development would be single-family homes, this compares with 70 percent single family development in 1990.

Outer Neighborhoods

Following is an example illustration representing single-family homes at 6.6 net homes per acre. The recommended alternative assumes 5.7 houses per net acre, or 11 persons were acre. Assuming 25 percent of the land is used for streets, utilities, etc., the average lot size would be approximately 7,560 square feet. If streets are built more narrowly, average lot size could be larger. In the recommended alternative, the lowest density urban residential areas are called "outer neighborhoods." These outer neighborhoods are away from the center of the region along the outer edge of the UGB and in the urban reserves. They represent people trading larger lot size for greater distances to most jobs.

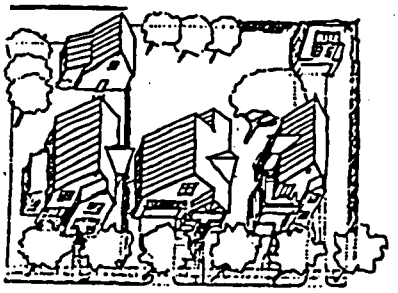
(*Note:* The diagrams are to scale, in this and the succeeding diagrams the outside box represents the size of land area necessary to accommodate 100 dwelling units. The subheading lists the acres needed to fit 100 of the units. For example, for the standard-lot, single-family home you would need 15 net acres for 100 homes.)

In the outer neighborhoods, the average lot size would be somewhat smaller than the current regionwide average of 8,500 square feet. However, the current average includes lots as large as a half acre, about 20,000 square feet. A small number of lots this size can substantially increase the average. The most common new lot size being developed in the region is about 7,500 square feet, in line with what the recommended alternative is suggesting. Outer neighborhoods would account for approximately 28 percent of the new households of the region.

Inner Neighborhoods

Inner neighborhoods are closer-in residential areas with an average lot size of 5,700 square feet, 7.6 units per net acre. This would be 13 person per acre. These neighborhoods

Standard-Lot Single-Family
1.5ac/10Odu

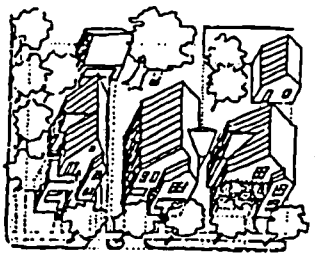


Standard-lot single-family
1-2-story buildings
Parking in recessed or alley accessed garages
6.6 dwelling units per acre
Ownership

would accommodate about 21 percent of new households. It should be noted that most of the pre-World War II single-family homes in the region are on 5,000-square-foot lots, so the recommended alternative is suggesting a residential pattern slightly less dense than many existing neighborhoods. The inner neighborhood, however, is denser than many existing suburban neighborhoods, particularly those built in the 1960s and 1970s

Both inner and outer neighborhoods are expressed in average number of homes per net buildable acre. As with all averages, different mixes of smaller and larger lots could be used to achieve the average. A type of smaller lot development is illustrated and accommodates 10 net homes per acre.

Small-Lot Single-Family
9.4ac/10Odu



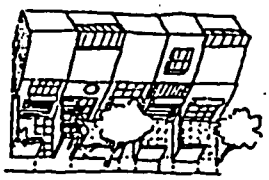
Small-lot single-family
1-2-story buildings
Parking in recessed or alley accessed garages
10.6 dwelling units/acre
Ownership

Corridors and Station Communities

Corridors are not as dense as centers but are also located along good quality transit lines. Examples of present day corridors are the Beaverton-Hillsdale Highway and Macadam Boulevards. They would provide a place for densities that are somewhat higher than today, should have a quality pedestrian environment and are convenient to transit. Corridors would grow from 1990 densities averaging approximately 18 people per acre to an average of approximately 22 people per acre. This would be on average 12.5 units per net acre. Typical development along corridors would include rowhouses, duplexes and one to three-story office and retail buildings.

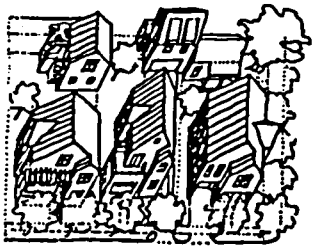
Station communities are nodes of development organized around a light rail or high-capacity transit station. They provide for the highest density outside of centers. The station communities would grow from 1990 densities averaging approximately 22 persons per acre to an average of 45 persons per acre, or 23 housing units per net acre.

Townhomes
4.5ac/100du



Townhomes
1-2-story buildings
Parking in alley accessed garages
22 dwelling units/acre
Ownership

Carriage Units (w/In-Law)
6ac/100du



Carriage Units (with In-Law)
1-2-story buildings
Ancillary (in-law) unit placed over detached garage
Parking in alley accessed garages
16.6 dwelling units/acre
Ownership

Minimum densities have been established for most eastside and westside MAX station communities. An extensive station community planning program is now under way for each of the westside light rail station community areas. Similar work is envisioned for the proposed south/north line. It is expected that the station community planning process will result in specific strategies and plan changes to implement the station communities concept.

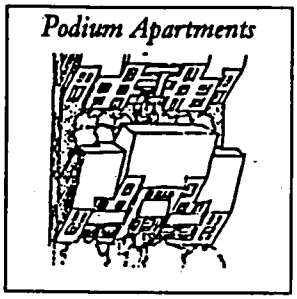
The illustrations show carriage homes and townhouses (rowhouses) that provide home ownership, but are able to accommodate many more households. For example, the carriage homes (with an "in-law" unit) accommodate 16 net homes per acre, while townhouses accommodate 20-22 homes per net acre. Twenty percent of the single-family homes in the recommended alternative would be small-lot or townhouse types.

In summary, there are three important points about these residential housing types. First, many people will continue to live in larger lot single family homes. Second, our demographic forecasts indicate that the population of the region will be changing. The portion of the population age 65 or older will increase from 13 percent (1990) to about 24 percent (2040). Household size is also expected to decrease. These trends could support smaller, more compact residential patterns. Finally, small decreases in average lot size greatly reduce the amount UGB expansion needed. A reduction from the current average lot size of 8,500 square feet to 7,000 square foot will save about 15,000 acres of land that otherwise would need to be added to the UGB, an area about the size of Gresham. Most of the increased density needed in order to minimize expansions of the UGB can be accommodated by no more than two story homes on their own lot. Keep in mind that the illustrations are to scale and show a way for 100 households to be accommodated. Compare the size of the overall square (which represents the space needed to fit 100 dwelling units) with the others; with more density, less land is used.

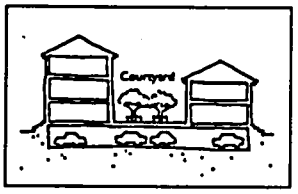
Neighborhood, Town and Regional Centers

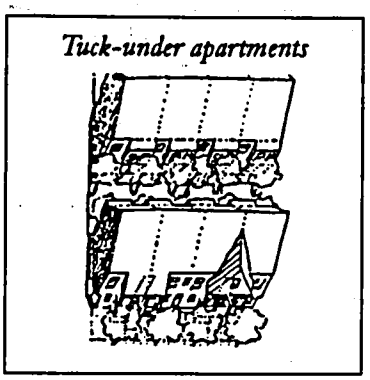
Multi-family development in 1990 provided 32 percent of total housing units. Under the recommended alternative, 38 percent of new housing units would be multi-family housing. This would include apartments (both rental and ownership possible) as illustrated. The podium apartments represent the type of residential development in regional centers, the "tuck-under" units are similar to the densities in town centers and main streets, while the garden apartments represent building types in neighborhood centers.

However, some of the multi-family homes would be a part of mixed-use developments adjacent to transit stops either along corridors or in commercial, town, regional or city centers. These multi-family types are illustrated on the

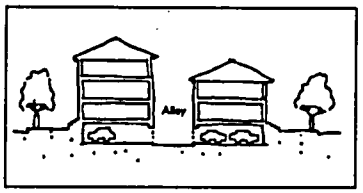


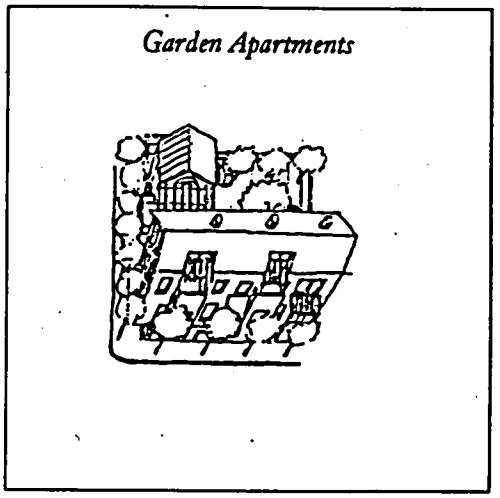
Podium Apartments
3-4-story buildings
Structured parking is placed below grade and interior to the building
66 dwelling units/acre
Rental or condominiums



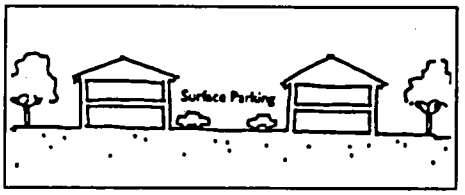


Tuck-under Apartments
2-3-story buildings
At grade parking is placed in parking garages that are tucked under the building
40 dwelling units/acre
Rental or condominiums





Garden Apartments
2-3-story buildings
Surface parking is placed in central parking courts or behind buildings
26 units per acre
Rental or condominiums



next page. The major difference between them is how parking is accommodated. In the "retail-office-residential mixed-use," the buildings are four to five stories in height with structured parking. The "retail-residential mixed-use" is two to three stories with surface parking.

As noted earlier, more than 60 percent of all new jobs would be accommodated in the centers or corridors designated in the recommended alternative. These areas are intended to be compactly built and well served with transit. Office structures are a way to accommodate much of the employment in centers and corridors. Of course, the mixed-use structures included would also provide places for employment in the centers and corridors.

Employment Areas and Industrial Areas

In the employment areas, a mix of land uses would be encouraged. The primary use would be employment, but residential uses would also be allowed. Employment areas would mix commercial, light industrial and residential uses in a compact way, providing affordable and convenient housing while reducing auto dependence. The uses in employment areas would not necessarily be within one building, but would be relatively close to each other.

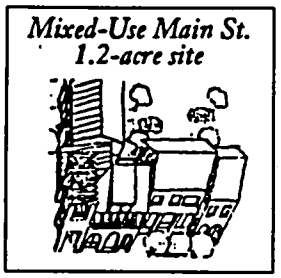
Industrial areas are reserved for employment, residential uses would not be allowed and many retail and commercial uses would be discouraged. Traditional uses, building types and employment are assumed to continue in these areas.

Recommended Alternative Analysis

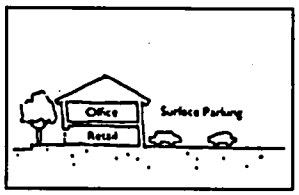
As indicated above, we prepared an example of how the growth concept could be construed. This enables us to show at least one way in which the growth concept could work. It is consistent with the analysis map and the results are described below.

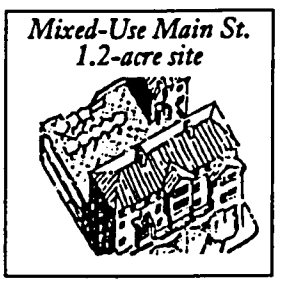
Land use

In order to better understand what the recommended alternative would require to be implemented, Figure 1 shows the total acres and buildable land (vacant and redevelopable) assumed for each design type. The vacant lands are actual numbers of acres inventoried as buildable,

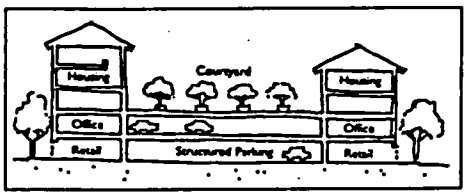


Retail Office Mixed Use
2-3 Story Buildings (ground floor retail with office space above)
Surface parking is placed behind the building
137 jobs/acre





Retail-Office-Residential Mixed Use
4-5 story buildings (ground floor retail, 1-2 levels of office and 2-3 levels of retail)
Structured Parking is placed below grade or interior to the building
125 jobs/acre
62.5 swelling units/acre



while the redeveloped acres are assumed to redevelop during the next 50 years.

The biggest vacant land supply is in the neighborhood categories where almost 23,000 vacant acres exist. The other large supply is in the employment areas and industrial areas, where 9,500 acres of vacant land exist and about 4,500 acres of redevelopable land were assumed.

The larger centers – town, regional and city – have small amounts of vacant buildable land – in total less than 800 net acres. These vacant lands are supplemented by redevelopable lands totaling an additional 1,100 net acres. Accordingly, 37 percent of the total developable land in these centers would need to be intensified in order to implement the recommended alternative.

While main streets also show very little available land when compared with some design types, redevelopment would allow these areas to capture almost twice the development potential available through the vacant land supply. Corridors and commercial centers with more than 6,000 acres of vacant land and 4,000 acres of redevelopment land use 27 percent of the buildable land within the design type for accommodating growth.

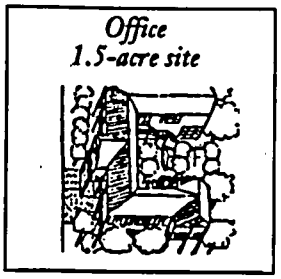
Redevelopment plays a key role in of the recommended alternative. Current building valuations were used to establish long term redevelopment potential. The following table shows the maximum building valuation used for choosing redevelopment according to the design categories used.

Figure 4 Maximum building valuation

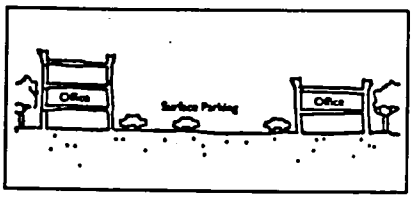
Design Coverage Area	Building Valuation (per quarter acre grid cell)
Central city	$120,000
Regional centers	90,000
Town centers	70,000
Transit corridors and station communities	40,000
Main streets	60,000
Employment area	10,000
Industrial area	10,000
Inner neighborhoods	0
Outer neighborhoods	0

In 50 years, buildings with relatively low valuations were assumed to redevelop in the centers, main streets and corridors. No redevelopment was assumed in neighborhoods except those in potential urban reserves even though a modest level of redevelopment will occur of very low-value buildings. Only low value buildings (less than $40,000/acre) were assumed to redevelop on industrial or mixed use employment land. These redevelopment criteria allowed 21 percent of new households and 18 percent of new employment to be accommodated through redevelopment. Redevelopment of higher value properties in the central city and regional centers would occur over time as more development takes place and land values rise.

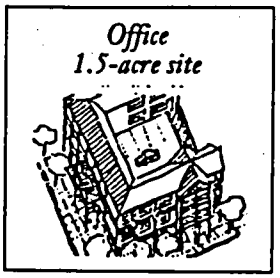
It is important to understand that redevelopment includes intensification of a site, and it does not necessarily destroy the existing buildings on the site. For example, new buildings in the parking lot of an existing complex is one common type of redevelopment. Conversion of a single-family home to an office or restaurant is another common



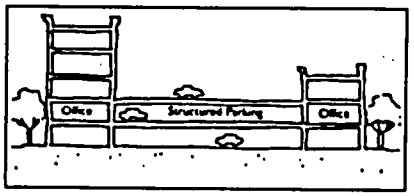
Office (Low intensityu)
2-3 story buildings
Surface parking is placed behind the building
All buildings orient to streets of public plazas and parks
80% floor area ratio assumed



Office jobs are calculated at 440 gross sq ft./employee or 95 jobs/acre.
1 parking space/office employee on site



Office (high intensity)
4-5 story buildings
Structured parking is placed below grade or interioir to the building
All buildings orient to streets or public plaza and parks
200% floor are ratio assumed
Office jobs are calculated at 340 gross sq. ft./ employee or 300 jobs/acre
1 parking space/office employee on-site.



example of redevelopment that conserves existing structures. Redevelopment thorough additions to existing structures would be more common outside the central city area, where existing densities are low.

Eleven thousand acres or 57 percent of the redevelopment land occurs in mixed use areas. These 11,000 acres represents only 6 percent of the gross developable acres in the region. The redevelopment land in the central city would accommodate 70 percent more employees (80,000) as it did in 1990. Regional centers would use redevelopment land at almost three times the existing density. Town centers would double the capacity on redevelopment land, as did main streets. Similarly, redevelopment along corridors create a threefold increase of the housing units there – a net increase of 30,500 households. The centers' housing density would increase on redevelopment land by more than five-fold, from 1,000 - 1,500 units in 1992 to 5,000 - 10,000 units in 2040. This growth is the result of the greater density called for in these areas. Designations in the recommended alternative would allow higher density condominiums and apartments (30 - 150 units/acre, 2-8 stories). Redevelopment in centers and corridors reinforces transit and provides the opportunity for more non-auto trips and concentrates redevelopment and higher density in relatively small portions of the region – as compared with increasing densities throughout the region.

The overall distribution of households and employees by design type in 2040 can be seen in Figure 3.

The central city would maintain its current share of 20 percent of regional employment by adding 80,000 jobs. The regional centers would double their share of employment (to 6 percent) adding 40,000 employees. The town centers would increase their employment share from 3 percent to 5 percent with 27,000 jobs. Corridors and station communities would lose a small percentage of their regional share mostly due to the effects of new growth on vacant land in new urban reserves and elsewhere, but they still receive 64,000 jobs. Employment Areas would still add a sizeable amount – 50,000 jobs. The industrial areas would maintain approximately 12 percent of the region's employment by adding 35,000 jobs. Employment in neighborhoods (home occupations or jobs located in schools, child care centers or very small commercial sites) would remain approximately constant with today's share (15 percent), locating 37,000 new jobs there.

The large household increases occur in corridors and commercial centers (100,000 new households), and in neighborhoods (175,000 new households). The corridors' share of the region's households would drop slightly as expansion and new growth dilute corridor concentrations. The household share drops for closer-in neighborhoods, but rises for those further out in the new urban reserve areas, where the regional share rises markedly as 59,000 households locate beyond the current UGB (16 percent of the new residents). The corridors and centers add almost 41,000 households increasing their share of residents by 50 percent. Employment Areas also receive about 20,000 households – a six-fold increase in what was almost exclusively employment land before.

To the extent that the area inside the current UGB can't accommodate additional growth, Urban Reserves would be needed. These are areas designated to be converted to urban uses if and when a need for additional urban land is found. The recommended alternative would require potential urban reserves of 14,500 gross acres.

The potential urban reserves designation considered state and regional criteria. The ability to serve areas with sanitary sewer and water, access to jobs, potential health hazards and avoidance of exclusive farm use zones were weighed. In rural reserve areas, the desire to keep communities separate and efficient provision of facilities and services were considered. The potential urban reserves map is intended to provide an overall direction for decision-makers. Property specific designations of urban reserves will occur after the Metro Council concludes its decision about the recommended alternative.

In contrast to urban reserves, rural reserves have been included as a category in the recommended alternative to protect rural areas. The rural reserves are areas into which no expansion of urban reserves or the UGB will be allowed. They are intended to protect commercial, agricultural and forest activities, providing separation between urban areas. Existing large-lot rural residential uses would be allowed to continue, as would development of existing lots of record, 5 acres or larger. However, no expansion of large-lot residential zoning would be permitted.

Neighboring cities, or those cities directly connected to the Metro region by a major highway or road, are also addressed in the recommended alternative. About 40,000 residents and 49,000 jobs are planned to be accommodated in neighboring cities, primarily Sandy, Canby and Newberg. These cities administer their own urban growth boundaries, independent of Metro urban growth boundary decisions. These communities, either within their present UGB or urban reserves adopted or under review, could accommodate these jobs and households. However, the issue of maintaining separation between urban areas is of mutual interest to Metro and the neighboring cities as are issues of access and job creation.

Transportation

The Region 2040 recommended alternative establishes a land-use context for future transportation planning efforts. We modeled transportation networks for the three concepts and the recommended alternative. The results allow us to examine the viability of the recommended alternative urban form and our ability to serve a growing population with a balanced transportation system. As we refine the regional framework plan, the interplay between transportation and land-use needs will continue to shape both urban growth and regional transportation policies.

Though detailed, our modeling does not address cost effectiveness of the networks or potential land-use impacts, and is not intended to be a comprehensive study of specific transportation needs. Instead, actual transportation needs, corridors and modes will be established in an updated Regional Transportation Plan. The updated RTP will serve as the transportation element of the Regional Framework Plan, and will address transportation planning requirements of the Metro charter, state Transportation Planning Rule and Federal ISTEA.

Once the updated RTP is complete, detailed transportation alignments may need to be developed to implement specific corridors within the region. We will also work closely with local planners to further coordinate regional transportation goals with the development of local transportation plans.

Connecting land use and transportation

Two principles guided the development of the transportation system in the recommended alternative – coordination of land-use pattern and transportation decisions and a balanced transportation system. This was done by creating a network where the recommended alternative land uses and urban form were fully complemented by a range of transportation options. In general, urban centers are connected by a set of multi-modal corridors that accommodate auto, transit, bicycle and pedestrian travel to varying degrees.

Regional centers and the central city would have the most intensive package of transportation improvements and services, reflecting their central role. They would be easily accessible by multi-modal corridors and would have efficient pedestrian and bicycle circulation within the centers. Town centers would be similarly served with a multi-modal range of travel options, but the magnitude of transportation infrastructure would be generally less than the regional centers. Corridors, station communities and main streets would be characterized by high-quality transit service, bicycle and pedestrian amenities along the roadways, and less auto traffic than other arterial streets.

Employment areas and industrial areas would have more roadway connections, especially truck routes and better access to the regional highway network and would have specialized transit service to major destinations.

The recommended alternative also focused on connectivity and the development of regional centers. Our primary

objective in designing the preferred roadway network was to create a dense, connected system that dispersed travel demand and reinforced the regional centers. Using the current RTP as a starting point, local planners helped us determine where collector and arterial streets could be connected and where new streets could be extended. These new connections were designed to enhance auto, transit, bicycle and pedestrian travel options throughout the region, and particularly in the vicinity of the regional centers.

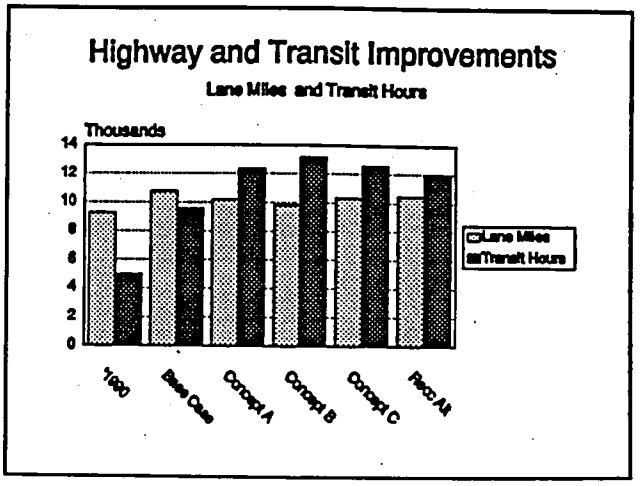
Another feature of the transportation system was keeping arterials livable. While peak-hour congestion at street intersections is to be expected, local planners helped us define parallel routes that might improve local circulation, while avoiding the development of massive arterial streets whose scale discourages the use of non-auto modes and undermines livability. In some cases, proposed highway-type facilities were dropped in favor of a series of smaller-scale arterial and collector street connections.

Major highway through-routes to connect regional centers and neighboring cities

New highways have the potential to enhance the development of regional centers and the movement of goods throughout the region. However, new highways can also encourage urban sprawl, and undermine the viability of regional centers.

The Mt. Hood Parkway is included in the recommended network to reinforce the Gresham regional center, provide a freight route from I-84 to Highway 26 and better connect Sandy – a Neighboring City in the recommended alternative – to the urban area. The parkway is modeled with limited access, an I-84 interchange, split access to the Gresham regional center, and an interchange at Highway 26.

The southern alignment of the Sunrise Highway is similarly modeled as a second route to Sandy, a freight connection from I-205 to Highway 26, and to support development of the Clackamas and Milwaukie regional centers. The Sunrise Highway modeling assumes limited access, with interchanges at I-205, the Clackamas industrial area, Rock Creek, Damascus and Highway 26. The southern alignment is used because it best supports the development of the Damascus town center. Although the actual model contains a "build-out" of the highway, the inclusion of the Sunrise route assumes a phased-in approach, with the portion west of Damascus improved first, along with the acquisition of right-of-way and construction of the segment extending east of the proposed urban reserve boundary. The remaining sections would be improved over time, reflecting gradual development of the Damascus town center.



Finally, a new highway link from I-5 to 99W, is included as a freight connection, and as a primary route to Newberg – one of the two neighboring cities included in the recommended alternative. This connection is also intended to divert through-traffic from Highway 99W and Tualatin-Sherwood Road that might otherwise undermine the development of town centers in Tualatin and Tigard. To improve circulation and access in Washington County, new arterials and collector streets were modeled in the area between US 26 and Tualatin Valley Highway. New freeway capacity was added to Highway 217. To address freight movements from Washington County to the I-5 corridor, capacity was added to Highway 217 in the model. North/South from Tualatin Valley Highway to Highway 26, was not included as a freeway, but a package of north/south arterial and collector street improvements was modeled to improve mobility in this area for all modes of travel.

Although not included in our modeling, the growth of neighboring cities, such as Sandy and Newberg, along major freight routes will ultimately affect through-travel, and could create a need for bypass routes. Such impacts should be considered as part of implementing the Regional Framework Plan and each of these local comprehensive plans.

Light rail connections

Tri-Met staff led the effort to design a recommended alternative transit system. The backbone of the transit network is a series of radial light rail transit corridors that connect the regional centers to the central city. These radial routes include the Banfield and Westside LRT lines, and LRT routes south to Milwaukie and Clackamas Town Center, north to Clark County, and a westside spur to Washington Square. Several alignments are conceptual; actual alignments of planned connections will be determined in later, more detailed studies.

In addition to an extensive network of local bus lines, we have included a new level of service, called FastLink, that offers streamlined, express-type service to regional centers and along major corridors. Although still under development, FastLink service is envisioned to be a bridge between light rail and traditional bus service, with amenity-oriented buses that serve more widely-spaced "stations."

Critical aspects of the transit system are improvements made to the road network and pedestrian improvements. The road improvements discussed above increase connectivity for autos, transit, bikes and pedestrians. In addition to improved street connectivity in the vicinity of regional centers, bicycle and pedestrian travel is encouraged in the recommended alternative through improved amenities (modeled as pedestrian environmental factors, or PEFs) within the regional centers, and parking cost factors applied to auto travel to the centers. As the Regional Framework Plan is developed, these modelling considerations will be translated into bicycle and pedestrian system improvements and parking management programs tailored to each of the six regional centers.

The recommended alternative assumes a series of "green corridor" transportation links to neighboring cities that span rural reserves. In the cases of Sandy and Newberg, the green corridors feature high performance, limited access highways, high-quality transit, and bicycle and pedestrian facilities that give easy access to the neighboring cities while minimizing urban development pressure on the intervening rural landscape.

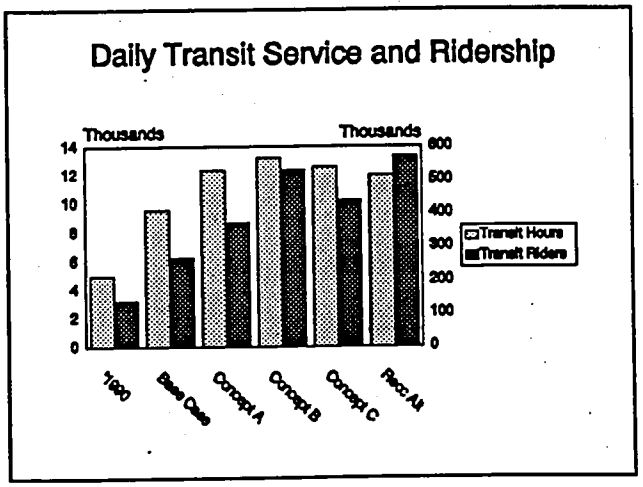
Although other outlying towns are not planned to absorb a significant share of growth in the recommended alternative, many are already experiencing growth today. Though major transportation improvements to these towns are not included in the recommended alternative, existing highway links to these cities that travel through rural areas are still designed as green corridor facilities in the recommended network.

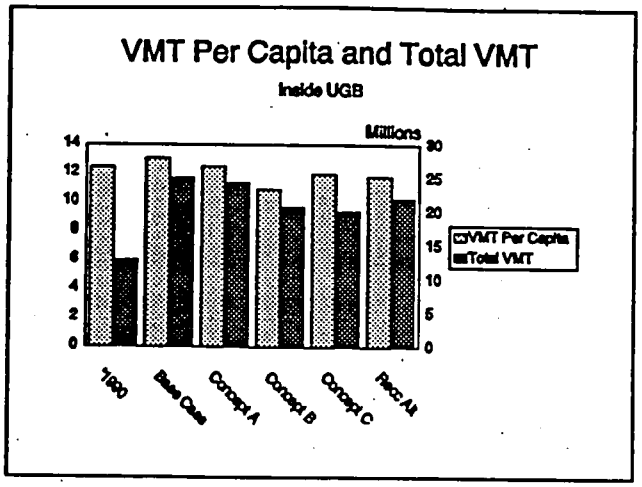
As with the previous growth concepts, we modeled a possible transportation system for the recommended alternative. The results are heartening.

With a road network somewhat larger than the other growth concepts, but a compact form, the recommended alternative is projected to have less congestion than both Concepts A and B. Only Concept C, which assumes that one-third of future growth will be in neighboring cities, would have slightly less congestion. However, overall congestion in the recommended concept would still be double today's levels.

Our analysis of the model results also shows that areas of the region with dense networks of through streets would have less p.m. peak-hour congestion, including close-in neighborhoods near the central city. In contrast, areas with a more dispersed, less connected roadway system are projected to have significant peak-hour congestion – despite a number of modeled roadway additions to these more dispersed networks.

Though transit service in the recommended alternative was less extensive than any other growth scenario, the close coordination of land use and transit helped to produce had the best transit ridership of any concept. Transit ridership was also encouraged in the recommended alternative by modeled parking factors and pedestrian amenities in urban centers and transit-supportive corridors. Despite a less extensive light-rail system than other growth concepts and the addition of more land to the





urban area in this scenario, the percentage of jobs and households served by transit in the recommended alternative would be nearly the same as current levels.

With regard to the state Transportation Rule requirement of a 20 percent reduction in vehicle miles traveled (VMT) over the next thirty years, the recommended alternative would achieve a drop of about 11 percent during the 50-year planning period. Though less than Concept B, this VMT per capita reduction is better than the other scenarios.

These modelling conclusions show the feasibility of serving the recommended alternative urban form with a balanced, attainable transportation system. Such a system provides for continued mobility via the automobile, ensures freight efficient movement on the regional highway system and offers attractive passenger travel options to the automobile via transit, bicycle and pedestrian modes.

What can we improve?

The lessons learned from developing the recommended alternative will provide a valuable starting point for updating the RTP. While individual road and transit links were modeled in a conceptual manner, the recommended alternative will still help us address key policy issues about the mix transportation modes, the need to complement transit routes with supporting land uses, and the need to limit the impact of urban travel routes on rural land uses.

The recommended alternative also gives us valuable data with which to establish specific objectives and indicators for transportation service and performance. These may include roadway density vs. capacity ratios, transit service thresholds, bicycle and pedestrian accessibility targets, freight movement considerations and levels of tolerable peak-hour congestion in specific urban environments and situations.

Parks and open space

The primary objective is to preserve natural areas and open spaces within an intensifying metropolitan area so that the region has active and passive recreational opportunities and is not exclusively urban from one end of the UGB to the other. The recommended alternative specifically accounts for open space on its map and in its capacity analysis. Within the definition of open space is included public and private land that cannot be built on because it is in floodplains, wetlands and parks (15,300 acres). Additional land would be added that buffers stream corridors and significant topographic features as well as significant habitat areas from the Greenspaces Master Plan. These additions would bring the total open spaces to 34,000 acres. Much of the open spaces are vacant and privately owned (12,350 acres). Of the vacant land, only 5,000 net acres is considered buildable when environmental constraints and gross to net reductions are taken into account.

A portion of the total open space (6,400 acres) is already developed, but at very low densities. While development within areas designated as open space would not be expected to be removed, additional development would be discouraged. In addition, while some areas of privately owned, undeveloped land may be designated as open space, the intent is to encourage the local jurisdictions to conserve these open spaces by clustering any permitted density, leaving the bulk of the remaining land undeveloped.

Air quality

Air quality concerns carbon monoxide (CO) in the winter and ground level ozone (O3) in the summer. Forecasts show potential problems with the ground level ozone, beginning in 2007. These problems will be exacerbated by all pollution sources, not only transportation related sources.

Nonetheless, air quality modeling results for transportation sources were encouraging. When the recommended alternative is compared with the other growth concepts, relatively low levels of transportation generated air pollutants are projected. For a seven-county region (Clackamas, Clark, Columbia, Marion, Multnomah, Yamhill and Washington counties) the recommended alternative would have the lowest forecast levels of CO. On a four-county basis, the recommended alternative would generate slightly more CO than Concept C, but less than any of the other growth concepts.

The recommended alternative, on a seven-county basis, would have the second lowest level of projected transportation generated hydrocarbons, while on a four-county basis, concepts B and C would generate somewhat less. It should be kept in mind that because of fleet emission improvements, the projections for hydrocarbon and CO levels from transportation sources are less than existing (1990) levels. That is, for two important air pollutants, transportation will generate less pollutants than today.

However, for the third key pollutant, oxides of nitrogen, all growth concepts would show an increase from transportation sources. For the seven-county area, concept B would generate less oxides of nitrogen than any other, while the recommended alternative would be second best. For the four county area, the recommended alternative again is projected to have slightly more air pollution that concept B, but would have better predicted performance than all other growth concepts.

Employment

As indicated in *Concepts for Growth*, given our population and employment forecasts it appears that in aggregate there is sufficient land for employment uses. The recommended alternative, although different than the other analyzed concepts, includes very similar amounts of employment land. If the same analysis method is used, we would conclude that some areas, particularly in Hillsboro and along the Columbia south shore, appear to have more land than is likely to be needed during the 50-year time horizon of the study.

Having a surplus of such land may provide flexibility in locational decisions, although some land owners may question the designation if development is not feasible because of lack of market demand. Regardless, a more public concern is the balance between jobs and housing in the region. The jobs housing table below shows each of the regional centers and the areas for which a jobs/housing ratio was calculated under the recommended alternative.

Portland would continue to be a jobs rich area, while other areas such as Clackamas Town Center would become more housing rich than they currently are. The overall trend is towards more housing and less jobs. This is in line with national trends for the time period due to the aging of the population. The need for housing remains, but the percentage of the population participating in the workforce will decline as greater numbers of people are retired.

Housing

As noted earlier, the largest amount of land in the region is devoted to residential uses. Of this, by far the most land is used for single family development. With the recommended alternative, the new development, which would be at a ratio of 62 percent single-family to 38 percent multi-family, is more compact than existing development, with a ratio of 70 percent single-family to 30 percent multi-family. However, the recommended alternative includes as single-family about 78,000 new homes that would be built at 10.5 dwelling units per gross acre – average lot sizes of 3,000 square feet or less. These units comprise about 20 percent of the total new single-family units assumed to be built during 50 years. These higher densities could be met by combinations of single-family and multi-family, accessory units (or "granny flats") or developments such as rowhouses, duplexes, and small-lot single-family along corridors and in station communities.

New housing in the centers is almost exclusively multi-family, while the neighborhood categories are predominantly single-family. This difference between centers and neighborhoods reflects the strategy in the recommended alternative to locate higher density housing only in very accessible locations. The corridors and station communities show a mix of housing (35 percent single-family to 65 percent multi-family) that often borders both transit and neighborhoods.

The Metro Housing Rule was set both to contain the UGB and ensure affordable housing. If we move away from jurisdictional goals to the target areas in the recommended alternative we need to revisit each jurisdiction's

Figure 5 Region 2040 - Comparison of Alternatives - Summary

	1990	Base Case	Concept A	Concept B	Concept C	Recommended Alternative
Demography						
Population	1,032,471	1,917,284	1,943,895	1,904,799	1,678,720	1,862,182
Households	410,853	827,843	839,333	822,452	724,836	804,051
Jobs	723,982	1,284,210	1,305,193	1,293,427	1,169,913	1,257,365
Single-family/ multi-family	70/30	70/30	74/26	60/40	69/31	65/35
Location of Growth						
% of growth in existing Metro UGB	—	83%	71%	100%	63%	87%
% of growth accommodated by redevelopment	—	0%	6%	18%	8%	19%
EFU conversion	—	63,900	17,200	0	11,400	3,545
% of employment on industrial land	32%	43%	53%	33%	54%	25%
Transportation						
Vehicle miles traveled per capita	12.40	13.04	12.48	10.86	11.92	11.06
Mode Split (Auto/transit/walk-bike)	92/3/5	92/3/5	91/4/5	88/6/6	89/5/6	88/6/6
Congested road miles	151	506	682	643	404	454
Transit riders	136,800	338,323*	372,400	527,800	437,200	570,000
Average PM speed (mph)	30	28	24	24	27	26
Transit service hours	4,983	9,600	12,300	13,200	12,600	12,000
Air Quality						
CO winter (Kg/day)	835,115	614,451	613,537	579,579	569,091	574,749
CO summer	574,708	528,601	525,133	496,017	487,188	491,995
HC summer	177,857	70,700	69,810	66,375	65,745	66,391
NOx summer	80,452	94,024	90,987	83,817	86,988	86,230
Water						
Drinking water costs	—	—	Moderate	Low	Moderate	Lower
Wastewater costs	—	—	Moderate	Moderate	High	Moderate
Stormwater costs	—	—	Moderate	Moderate	Moderate	Moderate

** The base case did not have parking factors and pedestrian factors modeled consistent with the other growth concepts.*

responsibility for affordable housing. Metro's primary responsibility is to ensure an adequate land supply to accommodate housing demand. The Recommended Alternative would accomplish this by moderate expansions of the urban growth boundary, higher densities, and some redevelopment.

In our discussions with affordable housing providers and advocates, they indicated that unless specific policies address the issue, little progress is likely. Policies and incentives to the private sector in particular, but also to nonprofit agencies, to encourage affordable housing would be needed.

Social stability

For the earlier growth concepts we asked law enforcement, fire fighting and emergency medical response officials which concept might be most easily served. Their answers considered response times and design elements that foster a strong sense of community. Applying those criteria to the recommended alternative, we conclude that it would likely have response times better than Concept A, because the total urban land area is less. Additionally, the recommended alternative is similar in response times to Concepts B or C and much better than the base case. The recommended alternative is likely to do as well or better than the concepts previously analyzed when considering crime and safety issues.

Water facilities

In analyzing the growth concepts, sewer and water professionals of the region considered a myriad of criteria. They concluded that the potential cost differences between concepts for stormwater were too small to predict differences and a similar conclusion with regard to stormwater costs and the recommended alternative can be reached. However, service providers did find differences in water and sanitary sewer costs. Consistent with their findings, it seems likely that the recommended alternative would have slightly higher costs than Concept B, but lower than A or C for water and sanitary sewer services.

A regional water supply study is currently being completed by the water providers of the region and Metro. This analysis is using the Region 2040 growth assumptions and data to evaluate alternative approaches and reach conclusions about the most effective solutions to address water supply issues in the region. These conclusions should prove useful in preparing the Regional Framework Plan.

Summary

We have studied, analyzed, modeled, talked, changed, amended, defined and redefined. It is now time for a regional decision on how we want this area to grow in the next 50 years.

The recommended alternative is intended as a focal point of discussion as to how the citizens of this region believe we should best meet the challenges of the future. It attempts to blend technical analysis and the concerns heard so far from the public. It balances the concerns about expansion of the urban growth boundary with concerns about higher densities and providing housing choice. It provides mobility and mode choice by planning for more light rail and bus service, while considering the cost-effectiveness of such services. It models expansions of the road and highway network, with improvements linked to serving critical land uses.

The recommended alternative will be scrutinized by the public, interested parties, Metro advisory committees and the Metro Council. Changes to the recommended alternative will undoubtably be made prior to adoption. The Metro Council, once satisfied with the revisions they direct, will adopt a map and text that will be incorporated into the Regional Urban Growth Goals and Objectives (RUGGO). The recommended alternative through this process will be distilled into basic principles and a map and become the formally adopted Region 2040 Growth Concept. The directions set by this decision will become the foundation for the charter-mandated regional framework plan.

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REGION 2040

Recommended Alternative

Technical Appendix

September 15, 1994

METRO

Recommended Alternative
Technical Appendix - Land Use and Transportation

Table of Contents

Introduction

The Technical Appendix provides background data for the interested reader on the Recommended Alternative analysis and conclusions (see Region 2040 Recommended Alternative). The Recommended Alternative was modeled for its land use and transportation components. The objective was to estimate the capacity and density of the region as designed, and to estimate transportation characteristics associated with this design.

The land use modeling involved Metro's Regional Land Information System (RLIS) - a computer database with geographic display and analysis capabilities. Specifically the model uses the Arc-Info Grid software. Metro's Data Resource Center operates and manages the RLIS system. The transportation modeling involved the use of the EMME/2 transportation planning software package as well as the survey-based travel demand forecasting model. Metro's Travel Forecasting Section leads this technical travel forecasting analysis.

This appendix provides summary data. The land use tables are preceded by explanatory notes useful for understanding the tables. The land use tables are divided into those detailing assumptions or inputs, and those that detail the results or outputs. The transportation data features modeling outputs, as well as some of the variables or input assumptions. The transportation information is contained in memo form.

Land Use Assumptions for Capacity Analysis See Tables 1 - 4

Table 1 - Regional Allocation

Population and employment growth totals used in the 2040 modeling process are based on a middle range forecast adopted at the beginning of the 2040 process. A portion of the growth is attributable to the Oregon urban area (approximately 2/3's of the 4 county growth). Most of the analysis in this document concentrates on the impact of this Oregon urban growth component.

1. The four county total is comprised of the allocation to Clark Co. as originally established in the 2040 Base Case II allocation, plus the allocation to the urban areas in three Oregon counties: Clackamas, Multnomah and Washington. The Metro Area total is new growth within the Metro urban growth boundary and the urban reserve areas.

2. The Neighboring cities allocation is their base growth plus a share of the metro urban growth. 30,000 households and jobs are assumed to go to the three largest neighboring cities: Sandy, Canby and Newberg. These three neighboring cities received in total an allocation they estimated to be able to accommodate in their urban growth boundaries or urban reserves. Other neighboring cities such as Estacada, Scappoose and North Plains retain a base allocation projection, but no additional allocation from the metro urban area.

3. The rural allocation is for those rural residential parcels in the three Oregon counties which lie outside of small towns or cities.

4. The Grid Model is the RLIS computer application used for calculating the potential capacity of the Recommended Alternative design. It breaks the region up into quarter acre cells or grids which become a common unit of measurement.

5. The Grid model distinguishes between developed, vacant, and redeveloped land. It accounts for existing households and employment on developed land, as well as existing households and employment on "redevelopable" land. It calculates the capacity of vacant and redevelopable land based on the plan designation and zoning or density assumptions. The allocation in Grid is the new growth, plus existing households and employment on redeveloped land (which can be considered to either remain in the same location or relocate elsewhere in the region). The difference between the capacity and the allocation yields the extra capacity as designed and zoned.

6. There is a breakout of 1992 households and employment on developed and redevelopable land. This is followed by the derivation of the Metro urban total, which subtracts for an allocation to neighboring cities. Urban totals are given, which includes

all urban development for the Oregon side of the metropolitan area.

7. Urban Reserve totals are given for just that area analyzed in the Recommended Alternative design, which included 14,500 gross acres.

8. A capacity estimate for 1990 plans is listed. It used existing plan designations and their associated zoning densities. The shortfall noted is the difference between the projected current capacity and the estimate of new growth.

Table 2 - Growth Capacity Zoning Input Menu

1. This menu is a representation of the menu system used in the GIS Grid application for estimating capacity in the Recommended Alternative. Across the top are the regional zoning codes in letter and numeric form. FF is farm forest and is represented by the number 1, MUC-1 is mixed use center 1 and is represented by the number 18. (See complete Abbreviations listed on following pages.) Down the left side are the regional design types used in the Recommended Alternative. The design types have a geographic coverage. This coverage overlays existing zoning designation as established in local comprehensive plans.

2. The Input Menu is used to change the underlying zoning as it exists so that it will reflect the design or intent of the Recommended Alternative. The matrix allows one to change the underlying zoning by design type. For the Central City, all existing zoning (whether or not it even existed there to begin with) was changed to a number 20 - representing MUC-3, the highest mixed use center zoning. The new zoning designations established (#'s 18, 19, 20, 21, 22) were created to allow for flexibility and more varied zoning categories than presently exist.

3. In general, the centers changed the full range of zones (FF to MFR to CC to IH) from their existing designation to the MUC designation. The Transit Corridors and Nodes, and Main Streets changed to higher density residential and commercial zones, replacing the single use designations with mixed use designations. The Mixed Use Employment Areas assumed the new MUEA (#21) designation which allows some residential, and the Industrial Sanctuaries assumed a lower density exclusive employment designation. Neighborhood 1 became residential SFR-3 zoning, with some mixed use zoning, Neighborhood 2 became residential SFR-2 zoning, with some mixed uses. The neighborhoods downzoned the multi-family component presumably away from primary transit service (minimum 10 min. peak headways). The design types in urban reserves follow much the same re-zoning pattern as those inside the current UGB, in concert with the design. (See a Recommended Alternative analysis map for a graphic representation of the design type coverage.)

4. The actual densities assigned (and used in Grid) to any zoning type are listed next to "Net Zoning Densities". These show the number of dwelling units and employees associated with any zoning category. There are Floor Area Ratios (FARs) also listed to show relevant size or height of the zoning in mixed use and commercial/industrial categories. For instance, the MFR-1 zoning used in the Input Matrix is assumed to house 23 households and 3 employees on a net acre of land; MUC-2 is assumed to house 22 households and 90 employees on a net acre of land, with a FAR of 1.5 (anywhere from 2-4 stories depending on the parking configuration and assumptions).

Table 3 - Acreage Calculation Assumptions

Environmental constraints, gross to net reductions, and redevelopment all affect the net buildable acreage used by Grid to calculate the capacity in the Recommended Alternative.

1. Before environmental constraints are applied to the gross buildable acreage available in the region, a no-build calculation was completed. The no-build calculation removed all streets, parks and open space, wetlands, and rivers. Environmental constraints applied to the gross vacant and redevelopable land included two criteria - 100 year floodplains, and steep slopes greater than 30%. The percentages listed indicate the amount of buildable land allowed to remain in the inventory when in floodplains or on steep slopes. For example, in Transit Corridors and Nodes, 50% of the floodplain land and 40% of the steep slope land was considered buildable.

2. Gross to net reductions were applied to all gross buildable land after environmental constraints were accounted for. The gross to net sets aside a portion of the gross acre for street, utility and other public facilities. The larger parcels or acreages reviewed by GIS have a greater reduction than do the smaller parcels, with a slight variation according to residential or commercial use.

3. A vacancy rate is applied in the Grid application when calculating the household capacity. Five percent of the available land is assumed to remain vacant at all times for reasons of construction, repair, etc.

4. Redevelopment assumptions used were based on building value per quarter acre tract of land. The Grid application samples quarter acre cells of developed land in the region. If the building value is less than the amount listed by design type, then that cell or parcel is considered redevelopable. Where multiple parcels overlap a quarter acre cell, the parcel with the greatest percentage of coverage in the cell is used for the determination. For example, in the Main Streets design areas, where a $60,000/quarter acre valuation ceiling exists, if a parcel sampled was valued at $100,000 it was not considered redevelopable, if a different cell had a value of $30,000 it was considered redevelopable. The redevelopment ceilings were highest

in the centers, main streets and corridors. A zero value ($0) means no redevelopment was intended, and the redevelopment criteria used in the model for this design type was a building valuation of zero.

Table 4 - Zoning and Design Abbreviations

The regional zoning codes are listed for reference, as are the design type abbreviations. The abbreviations are not used regularly but do appear in some tables and sometimes in the text.

1. The zoning codes come from Metro's Regional Land Information System directory, a directory that standardizes zoning for regional applications.

2. The design types refer to the geographic coverages in the Recommended Alternative.

Table 1 - Regional Control Totals, Households and Employment Recommended Alternative Analysis

'2040 new growth, plus sub-categories and modeling results

	Households	Employment
Clark Co.	133317	108295
Metro Area (Urban growth boundary/urban reserves)	359563	358072
Neighborhing Cities	47000	46000
Rural	7225	9793
2040 Total Growth, Four County	547105	522160

Grid model capacity (based on assumptions)	405086	575145
Allocation:		
New Growth (to vacant and redeveloped land)	359563	358072
Accounting for Existing Persons on Redeveloped Land	36424	189501
Total Grid Allocation	395987	547573
Extra Capacity	9099	27572

Developed Land	402823	543621
Redevelopable land in 1992	36424	189501
Total in 1992	439247	733122

2040 New Growth Metro Area	389563	388072
Neighboring cities allocation (assumption)	30000	30000
2040 Targets inside Metro UGB/UR	359563	358072

Oregon Urban Total - Existing + New	798810	1091194
- with neighboring cities	828810	1121194

Urban Reserves, Existing	1614	1396
Urban Reserves, Capacity	59772	19093

Capacity estimate using 1990 plans		
- for inside existing UGB	168120	324635
- shortfall for accomodating new growth	-191443	-33437

Note: Total employment is consistent with the original Base Case projections, and does not reflect Bureau of Economic Analysis update (701,628).

Comp Plan Designation

Recommended Alternative (Test 18, 8/16/94)

Zoning	FF	RRFU	SFR-1	SFR-2	SFR-3	MFR-1	MFR-2	PUD	CN	CG	CC	CO	IL	IH	IMU	POS	PF	New Zoning Designations MUC-1*	MUC-2*	MUC-3*	MUEA	IS
Zoning Code #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Design Coverage Area																						
Central City	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	16	17					
Regional Centers	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	16	17					
Town Centers	18	18	18	18	18	18	18	18	18	18	19	19	18	18	18	16	17					
Transit Corridors & Nodes	8	8	8	8	8	6	7	8	9	9	18	18	9	9	9	16	17					
Main Streets	18	18	18	18	18	18	18	18	18	18	19	19	18	18	18	16	17					
Mix Use Employment Areas	21	21	21	21	21	6	7	21	21	21	21	21	21	21	21	16	17					
Industrial Sanctuary	22	22	22	22	22	22	22	22	22	22	22	22	22	22	15	16	22					
Neighborhood I	5	5	5	5	5	8	6	8	9	9	9	9	21	21	21	16	17					
Neighborhood II	4	4	4	4	5	8	8	8	9	9	9	9	21	21	21	16	17					
UR Town Centers	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	18	18					
UR Corridors & Nodes	6	6	6	6	6	6	7	9	9	9	9	9	6	6	6	16	17					
UR Main Streets	9	9	9	9	9	6	7	9	9	9	9	9	9	9	6	16	9					
UR Mix Use Employment Areas	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	16	17					
UR Industrial Sanctuary	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	16	17					
UR Neighborhood 1	5	5	5	5	5	8	8	9	9	10	9	9	21	21	21	16	17					
UR Neighborhood 2	4	4	4	4	5	8	8	8	9	10	9	9	21	21	21	16	17					
Greenspaces	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1					

Net Zoning Densities:

	FF	RRFU	SFR-1	SFR-2	SFR-3	MFR-1	MFR-2	PUD	CN	CG	CC	CO	IL	IH	IMU	POS	PF	MUC-1*	MUC-2*	MUC-3*	MUEA	IS
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Dwelling Units	0	0.2	4	6.2	8.2	23	40	15	8			16			6	0		16	22	50	5	
Employees	0	0	1.25	1.8	2.4	3	6	4	17	22	100	85	15	20	11	0	10	30	90	300	15	8
FAR									0.5	0.3	1.5	1.75	0.5	0.5	0.5		0.5	1	1.5	6	0.5	0.3

These assumptions are used in the Grid application, the RLIS process by which the regional capacity is estimated based on the Recommended Alternative design.
The Menu serves as a rezoning matrix using existing comprehensive plan designations plus new zoning designations (using numbers to represent the changes).
The Zoning Densities show the assumed density of any given zone code used in the above menu.

Environmental Constraints
Buildable Land calculated as a Percent of Available Land (Vacant and Redevelopable gross acres)

Design Coverage Area	Floodplains	Steep Slopes
Central City	100%	100%
Regional Centers	80%	100%
Town Centers	80%	100%
Transit Corridors & Nodes	50%	40%
Main Streets	70%	50%
Mix Use Employment Areas	80%	0%
Industrial Sanctuary	80%	0%
Neighborhood I	0%	40%
Neighborhood II	0%	40%
UR Town Center	80%	75%
UR Corridors & Nodes	50%	40%
UR Main Streets	60%	50%
UR Mix Use Employment Areas	80%	0%
UR Industrial Sanctuary	80%	0%
UR Neighborhood 1	0%	0%
UR Neighborhood 2	0%	0%

Gross to Net Reduction (for future streets, schools, utilities, etc.)

	Factor (applied to gross buildable acres to yield net acres)
Less than 1 acre	90%
Residential greater than 1 acre	75%
Non-Residential greater than 1 acre	80%

Vacancy Rate: 95%
Vacancy rate applied to households per net acre

Redevelopment
Redevelopment Valuation Ceiling expressed as $/quarter acre
Quarter acre properties with building values less than amount listed are assumed to redevelop.

Design Coverage Area	Building Valuation (per quarter acre grid cell)
Central City	$120,000
Regional Centers	$90,000
Town Centers	$70,000
Transit Corridors & Nodes	$40,000
Main Streets	$60,000
Mix Use Employment Areas	$10,000
Industrial Sanctuary	$10,000
Neighborhood I	$0
Neighborhood II	$0
UR Town Center	$60,000
UR Corridors & Nodes	$40,000
UR Main Streets	$50,000
UR Mix Use Employment Areas	$20,000
UR Industrial Sanctuary	$20,000
UR Neighbhorhood 1	$0
UR Neighborhood 2	$30,000

Zoning Codes

FF - Farm and Forest
RRFU - Rural or Future Urban
SFR-1 - Single Family (10,000 to 40,000)
SFR-2 - Single Family (7,000 to 10,000)
SFR-3 - Single Family (5,000 to 7,000)
MFR-1 - Multi-family 8 to 25 units per acre
MFR-2 - Multi-family 25 or more units per acre
PUD - Planned unit development/mixed use (used as an intermediate residential zone - neo-traditional design averaging 2500 square foot lots)
CN - Neighborhood Commercial, floor space 5,000 to 10,000
CG - General Commercial - large scale commercial districts
CC - Central Commercial, central business districts
CO - Office Commercial - Office uses and mixed uses
IL - Light Industrial (wharehousing and light processing/fabrication)
IH - Heavy Industrial (light processing and heavy manufacturing)
IMU - Mixed Use Industrial (mix of light manufacturing, office and retail uses)
POS - Parks and Open Space
PF - Public Facilities
MUC-1 - Mixed Use Center 1 (least intense center - Floor Area Ratio of 1)
MUC-2 - Mixed Use Center 2 (moderate intensity center FAR 1.5+)
MUC-3 - Mixed Use Center 3 (highest intensity center FAR 4+)
MUEA - Mixed Use Employment Area (mix of light industrial, office and residential)
IS - Industrial Sanctuary (low intensity industrial employment areas)

Design Type Codes

CC - Central City
RC - Regional Center
TC - Town Center
MS - Main Street
CN - Transit Corridors and Nodes
GR - Greenspaces
N1 - Neighborhood One or Inner Neighborhood
N2 - Neighborhood Two or Outer Neighborhood
EA - Mixed Use Employment Area
IS - Industrial Sanctuary or Industrial Area
UR - prefix for Urban Reserves - used with all of the above design types to indicate areas in Urban Reserves

Land Use Summary Output Tables See Tables 5 - 12

Table 5 - Households and Employment by Design Type, Persons per Acre

The land use data is summarized by design type, zoning, and jurisdiction. Table 5 is a regional summary for all land (developed, vacant and redevelopable) inside the different *design type* coverage areas. Table 5 displays households (HH) and employees (EMP), acres, persons per acre, as well as the net acres either developed or available. A jobs/housing ratio is also listed (number of jobs per household).

1. 1992 Existing, is the developed acres, households and employment for each design area.

2. 2040 New Growth is the increment of new development on vacant and redeveloped land. The household and employment numbers here included the existing persons on redeveloped land; when estimating densities (persons per acre) for the Recommended Alternative all persons located on newly developed or redeveloped land must be counted, including those existing persons reconfigured through redevelopment or renovations.

3. 1992 Comp Plan build out refers to the existing comprehensive plans and the total number of households and employees estimated to be accommodated on developed and vacant land inside the current UGB.

4. 2040 End State refers to the total household and employment accommodated in the design areas on developed, vacant and redeveloped land. This mixes existing and future distributions.

Table 6 - Households and Employment by Zoning Type, Persons per Acre

Table 6 follows the same format as Table 5 but substitutes zoning categories for design types. This gives numbers for each zoning category regionwide.

Table 7 - Jurisdiction Households and Employment, Existing, New and Total

Table 7 gives the households and employees by jurisdiction. The three listings are for 1992 existing, the net new growth for each jurisdiction between 1992 and 2040, and the total 2040 allocation. The population figures are not directly attributable to the modeling work, which used households and employment (see notation). Counties are listed twice, first for the unincorporated areas, then for the total county within the Urban Reserves/UGB area.

Table 8 - Net Densities by Design Type, Existing and New

Table 8 illustrates net densities. It shows net acres, HH, EMP, and the density per acre, as well as the mix of households to employment. The table shows two sets of numbers, one representing *existing* developed densities, the second showing the potential densities of *new* development under the Recommended Alternative.

1. "Developed Acres" are the existing developed acres (including the redeveloped acres at their 1992 densities). "Available acres" are the net buildable vacant and redevelopable acres, or the available acres for the period 1990 - 2040.

2. "DU per Acre" is dwelling units (households) per acre. "EMP per Acre" is employees per acre. The same total acres in a design type are used for estimating both the average dwelling unit and employee densities. Anytime there are both du/acre and emp/acre in a design type, both uses exist, although they may not be on the same exact acre. *Different land use configurations are possible, and different assumptions can be made about how these uses are arrayed.* The "Ratio of HH/EMP" gives additional information useful in considering the relative share of households to employees in the design types.

Table 9 - Net Densities by Zoning, Existing and New

Table 9 follows the same format as Table 8, substituting zoning for design type. In the residential zones, the household densities are most useful, since one can assume that the employment will be at home (examples being SFR-2, and -3, and MFR-1 and -2). Again there are numerous potential configurations for how the mixed uses would be accommodated in the future. Examples would be in categories such as MUC-2 with 20.4 DU and 85.7 EMP per acre, or CN with 7.4 DU and 16.2 EMP per acre.

Table 10 - Jobs Housing Balance by Town Center and Regional Center market areas, Existing and Total

Jobs housing balance was estimated using the approximate market areas for the town centers and the regional centers in the Recommended Alternative. The town centers nest inside the regional centers. A map is attached to Table 10 to show the location of town centers and their aggregation to regional centers. Jobs, households, the actual ratio and an indexed ratio are all listed.

1. Town center market areas were approximated using equal distances, and they encompass all land inside the current UGB and the urban reserves. See map.

2. Regional center market areas are aggregations of town center market areas. There are five regional center market areas identified: Hillsboro, Gresham, Beaverton/WA. Square, Milwaukie/Clackamas Town Center, and Portland.

3. The ratio is jobs to housing. A positive number indicates jobs in excess of households. The regional balance in 1992 is 1.66 jobs per household on average. In 2040 there are less persons per household working and the jobs per household drops to 1.38.

4. The Indexed ratio subtracts the regional average to give a simpler positive or negative number indexed to the true regional "balance". This column shows the Town Centers or Regional Centers with positive numbers being jobs rich and those with negative numbers being housing rich. This number allows one to compare 1992 with the 2040, since the indexed ratio compensates for the variation in the regional ratio over time.

Table 11 - Residential: Single Family Multi-family and Lot Size

Table 11 shows the single family/multi-family split. It also includes the percentage estimated to fall inbetween these two categories, or attached single family. The lot sizes are also given.

1. Single family/Multi-family split is shown for existing and new development. The split is also broken down for new development on vacant and redevelopable land. The 1990 split is not derived directly from Grid, since grid allocates existing households back to single family and multi-family at regional plan densities, rather than at the built densities. This has the effect of overestimating the multi-family component. The SF/MF split in 1990 is derived from census data separately. Similarly, the lot size data in 1990 from Grid does not equate with what local experts have quoted as the actual typical lot size currently: 7,000 - 8,000 square feet vs. the Grid numbers of 8,000 to 10,000 square feet. As a result 1990 lot size numbers are not listed here.

2. The attached SF represents a moderate residential density associated with the PUD zoning category. It is equivalent to 16 units per net acre or 2500 square foot lots. It could also be reconfigured as a mix of other residential types. Nevertheless, it does not fall neatly into either the single family or multi-family categories and is highlighted separately. The SF split now includes this housing type, since it is considered single family attached.

3. The SF/MF split is also shown for the major design categories, characterizing the new residential development in these areas.

4. Average lot sizes are given for new development. As noted above the 1992 data in the Grid model is inconclusive about existing lot size and more exact data must be gathered. The neighborhood design type is listed along with its primary zoning type. The weighted average lot size is dependent on the regional split of available acreage in these two zoning categories (approximately 50/50 in the Recommended Alternative). The lot sizes here do not consider the impact of the PUD zoning category which is considered single family. The PUD category is assumed to be a variable housing type that could be 2500 square foot lots, or attached single family or a mix of either of the former with multi-family.

Table 12 - Comparing the Recommended Alternative with no UGB Expansion and 40,000 acres of Urban Reserves Designation

A different version of the Recommended Alternative was run to estimate the impact of differing sizes of the urban reserve areas on density in the region. One model run used no urban reserves, one used approximately 40,000 acres (or what were originally identified as the three tiers of potential urban reserves - the first being immediately serviceable, the second potentially serviceable, the third the most difficult and costly to provide with urban services).

1. Shown are the densities, persons per acre in the design types. 1992 is existing, the rest are new development densities (the increment of new growth including redevelopment impacts).

2. The lot size changes show the average lot sizes of the variations on the Recommended Alternative, as well as the weighted lot average lot size for the two single family residential zones. The 1992 figures show the range of existing lot sizes available under current zoning. The percentages of available land (vacant and redevelopable) in SFR-3 compared to acreage in SFR-2 are listed.

3. Percentages of attached single family (households in PUD zoning category) are listed. As mentioned above, this could be a variety of housing types, attached, detached, or a mix of multi-family and single family, where the average lot size is approximately 2500 square feet.

Table 13 - Households and Employment for Actual Centers (Not Market Area)

This table is an alternative to Table 10. Household and employment numbers are shown for the actual geographic area covered by the centers, as oppossed to their market areas. Shown are town centers, regional centers, and the central city.

TABLE 5 - Households and Employees By Design Type on Net Acres

1992: EXISTING HH/EMP ON DEV. ACRES

DESIGN TYPE	DEV. AC.	HH	EMP	J/H RATIO	PERS. /AC.
Central City	1097	8143	146073	17.94	151.85
Reg. Centers	1661	5391	28416	5.27	25.26
Town Centers	1685	6574	28168	4.28	26.53
Main Streets	2632	15168	47410	3.13	32.49
Corridors/Nodes	30059	145787	215662	1.48	19.36
Neighborhood 1	44853	192932	82565	0.43	12.65
Neighborhood 2	13198	43365	19972	0.46	9.77
Employment Areas	4459	3665	52152	14.23	13.76
Indust. Sanct.	10024	2171	87152	40.14	9.24
Greenspaces	6223	14437	24156	1.67	9.71
UR Town Centers	36	10	775	77.50	22.38
UR Main Sts.	0	0	0	-	-
UR Corr/Nodes	408	302	28	0.09	1.93
UR Neigh. 1	217	194	0	0.00	2.25
UR Neigh. 2	2471	975	220	0.23	1.08
UR Emp. Area	45	11	343	31.18	8.19
UR Indust. Sanct.	0	0	0	-	-
UR Greensp.	253	122	30	0.25	1.33
Totals	119066.5	439125	733092		

2040: NEW GROWTH ON VACANT AND REDEVELOPED ACRES*

DESIGN TYPE	VAC. AC.	REDEV. AC.	HH	EMP	J/H RATIO	PERS./AC.
Central City	115	322	19756	121523	6.15	369.18
Reg. Centers	154	448	11914	50133	4.21	122.96
Town Centers	495	336	12899	34171	2.65	72.17
Main Streets	186	352	7927	17605	2.22	62.13
Corridors/Nodes	5508	3879	113348	101942	0.90	35.01
Neighborhood 1	7557	2132	79000	39969	0.51	20.43
Neighborhood 2	8807	1097	67715	27668	0.41	16.47
Employment Areas	3523	1108	20284	64312	3.17	22.65
Indust. Sanct.	5931	3377	3373	71155	21.10	8.37
Greenspaces	4703	386	0	2	-	0.00
UR Town Centers	19	11	620	2598	4.19	126.55
UR Main Sts.	0	0	0	0	-	-
UR Corr/Nodes	592	147	15700	2195	0.14	45.45
UR Neigh. 1	522	14	4079	1245	0.31	17.55
UR Neigh. 2	5782	982	38989	11873	0.30	13.28
UR Emp. Area	68	15	385	1183	3.08	23.57
UR Indust. Sanct.	0	0	0	0	-	-
UR Greensp.	343	31	0	0	-	0.00
Totals	43961.738	14605.43344	395987	547573		

* New growth includes HH and EMP on redeveloped land in '92.

1992: COMP PLAN BUILD OUT WITHIN EXISTING UGB

DESIGN TYPE	TOT NET. AC.	HH	EMP	J/H RATIO	PERS. /AC.
Central City	1277	7903	147089	18.61	128.96
Reg. Centers	1860	7488	37813	5.05	29.28
Town Centers	2124	8977	37201	4.14	26.91
Main Streets	1892	11947	41363	3.46	35.90
Corridors/Nodes	36581	184289	298726	1.62	19.37
Neighborhood 1	55588	253138	147337	0.58	12.77
Neighborhood 2	23678	100343	65944	0.66	12.21
Employment Areas	11533	12674	140761	11.11	14.65
Indust. Sanct.	8119	3391	86230	25.43	11.55
Greenspaces	10810	14919	33344	2.23	6.15
UR Town Centers					
UR Main Sts.					
UR Corr/Nodes					
UR Neigh. 1					
UR Neigh. 2					
UR Emp. Area					
UR Indust. Sanct.					
UR Greensp.					
Totals	146308.74209	568754.8	772342		

2040: END STATE - TOTAL GROWTH ON ALL DEVELOPABLE ACRES

DESIGN TYPE	DEV. AC	AVAIL. AC.	HH	EMP	J/H RATIO	PERS./AC.
Central City	710	436	26306	226202	8.60	243.25
Reg. Centers	1118	602	15886	68738	4.33	58.45
Town Centers	1274	831	18699	54979	2.94	43.88
Main Streets	2220	539	21613	58091	2.69	36.73
Corridors/Nodes	25180	9386	244952	268036	1.09	21.93
Neighborhood 1	42058	9690	263005	109426	0.42	12.28
Neighborhood 2	11734	9904	106757	41756	0.39	11.80
Employment Areas	3023	4630	22917	102046	4.45	19.32
Indust. Sanct.	5738	9308	4976	122501	24.62	8.80
Greenspaces	5162	5089	12903	19476	1.51	4.42
UR Town Centers	22	30	623	3162	5.08	84.23
UR Main Sts.	0	0	0	0	-	-
UR Corr/Nodes	214	739	15877	2212	0.14	35.64
UR Neigh. 1	199	536	4262	1245	0.29	13.30
UR Neigh. 2	1135	6765	39529	11944	0.30	11.52
UR Emp. Area	27	83	396	1381	3.49	19.78
UR Indust. Sanct.	0	0	0	0	-	-
UR Greensp.	209	374	111	0	0.00	0.38
Totals	99814	58567	798699	1091194		

TABLE 6 - Households and Employees By Zoning Type on Net Acres

1992: EXISTING HH/EMP ON DEV. ACRES

ZONING	DEV. AC.	HH	EMP	J/H RATIO	PERS. /AC.
Farm Forest	1309	7	0	0	0.01
Rural or Future Urban	2264	1596	1	0.00	1.77
Single Family 1	1150	1759	514	0.29	4.29
Single Family 2	26755	72418	19123	0.26	7.52
Single Family 3	41459	186000	37044	0.20	12.17
Multi-family 1	10464	120517	8378	0.07	29.74
Mutli-family 2	1681	43414	1760	0.04	65.96
Planned Unit Dev.	2001	720	150	0.21	0.98
Commercial Neighborhood	2399	0	14808	-	6.17
Commercial General	4082	0	116438	-	28.52
Central Commercial	1720	462	209677	453.85	122.58
Office Commercial	923	5374	67740	12.61	88.02
Light Industrial	4152	0	86817	-	20.91
Heavy Industrial	6122	11	107805	9800.45	17.61
Mixed Use Industrial	1685	6962	29219	4.20	27.72
Parks and Open Space	1114	0	0	-	0.00
Public Facilities	2379	0	33648	-	14.14
Mixed Use Center 1	922	0	0	-	0.00
Mixed Use Center 2	667	0	0	-	0.00
Mixed Use Center 3	373	0	0	-	0.00
Mixed Use Employ. Area	1381	0	0	-	0.00
Industrial Area	4290	7	0	0.00	0.00
Totals	119290	439247	733122		

1992: COMP PLAN BUILD OUT WITHIN EXISTING UGB

ZONING	TOT NET. AC.	HH	EMP	J/H RATIO	PERS. /AC.
Farm Forest	5397	68	16	0.24	0.03
Rural or Future Urban	3388	2167	521	0.24	1.58
Single Family 1	1720	3261	872	0.27	4.72
Single Family 2	35421	110113	29437	0.27	7.74
Single Family 3	48786	222416	59789	0.27	11.36
Multi-family 1	14614	183550	24978	0.14	29.63
Mutli-family 2	2125	50165	7183	0.14	55.86
Planned Unit Dev.	74	759	159	0.21	24.83
Commercial Neighborhood	624	914	13959	15.27	25.62
Commercial General	6200	2282	126516	55.44	21.22
Central Commercial	2695	778	242507	311.71	90.62
Office Commercial	1811	14443	111517	7.72	79.30
Light Industrial	11045	724	155271	214.46	14.20
Heavy Industrial	14028	185	173191	936.17	12.37
Mixed Use Industrial	3364	14131	42797	3.03	22.06
Parks and Open Space	11411	728	1125	1.55	0.24
Public Facilities	3480	12	45180	3765.03	12.99
Mixed Use Center 1	0	0	0	-	-
Mixed Use Center 2	0	0	0	-	-
Mixed Use Center 3	0	0	0	-	-
Mixed Use Employ. Area	0	0	0	-	-
Industrial Area	300	8	1519	189.91	5.12
Totals	166485	606704	1036538		

2040: PREFERRED ALTERNATIVE NEW GROWTH ON VACANT AND REDEVELOPED ACRES

ZONING	VAC. AC.	REDEV. AC.	HH	EMP	J/H RATIO	PERS./AC.
Farm Forest	5046	417	0	0	-	0.00
Rural or Future Urban	0	0	0	0	-	-
Single Family 1	0	0	0	0	-	-
Single Family 2	10793	1516	70872	21094	0.30	13.23
Single Family 3	8269	1318	73003	21905	0.30	17.51
Multi-family 1	1601	706	49275	6589	0.13	45.57
Mutli-family 2	77	99	6526	1004	0.15	80.01
Planned Unit Dev.	4134	1502	78501	32192	0.41	33.57
Commercial Neighborhood	2764	1557	32096	69922	2.18	31.04
Commercial General	0	0	0	0	-	-
Central Commercial	0	0	0	0	-	-
Office Commercial	0	0	0	0	-	-
Light Industrial	0	0	0	0	-	-
Heavy Industrial	0	0	0	0	-	-
Mixed Use Industrial	469	137	3373	6339	1.88	21.62
Parks and Open Space	511	191	0	0	-	0.00
Public Facilities	515	1246	0	16765	-	9.52
Mixed Use Center 1	834	773	23888	45918	1.92	58.28
Mixed Use Center 2	310	549	17540	73563	4.19	126.55
Mixed Use Center 3	115	311	19756	121523	6.15	378.48
Mixed Use Employ. Area	3477	1078	21153	65057	3.08	23.57
Industrial Area	5389	3237	0	65698	-	7.62
Totals	44303	14635	395983	547569		

2040: END STATE - TOTAL GROWTH ON ALL DEVELOPABLE ACRES

ZONING	DEV. AC	AVAIL. AC.	HH	EMP	J/H RATIO	PERS./AC.
Farm Forest	205	5463	1	0	0.00	0.00
Rural or Future Urban	2264	0	1083	1	0.00	1.06
Single Family 1	1150	0	1643	476	0.29	3.59
Single Family 2	24688	12309	138271	38865	0.28	9.36
Single Family 3	39746	9587	250623	57251	0.23	12.45
Multi-family 1	9562	2307	155749	14317	0.09	30.38
Mutli-family 2	1560	176	44720	2570	0.06	58.76
Planned Unit Dev.	63	5635	79180	32335	0.41	36.56
Commercial Neighborhood	461	4320	32096	83058	2.59	32.29
Commercial General	4082	0	0	93341	-	22.87
Central Commercial	1720	0	322	159544	495.48	93.17
Office Commercial	923	0	4267	54698	12.82	69.54
Light Industrial	4152	0	0	60508	-	14.57
Heavy Industrial	6122	0	9	66412	7379.11	10.85
Mixed Use Industrial	1514	605	8498	28026	3.30	22.14
Parks and Open Space	801	701	0	0	-	0.00
Public Facilities	820	1761	0	28029	-	10.86
Mixed Use Center 1	0	1608	23888	45918	1.92	61.59
Mixed Use Center 2	0	859	17540	73563	4.19	131.10
Mixed Use Center 3	0	425	19756	121523	6.15	388.84
Mixed Use Employ. Area	0	4556	21153	65057	3.08	24.60
Industrial Area	182	8626	7	65698	9385.44	7.46
Totals	100015	58938	798806	1091190		

TABLE 7 - Jurisdiction Households and Employees

	Existing			1992 to 2040			Total in 2040		
Jurisdiction	92 HH	92 Pop*	92 EMP	New HH	New Pop*	New EMP	Tot HH	Tot Pop*	Tot EMP
Beaverton	22089	58785	46178	13183	19623	11228	35271	78408	57406
Cornelius	2472	6425	2563	2306	4196	2492	4778	10621	5055
Durham	417	800	763	217	611	195	635	1411	958
Fairview	1208	2975	1476	5379	11669	6753	6587	14644	8229
Forest Grove	5500	14010	5791	3945	6986	4889	9445	20996	10680
Gladstone	3680	10930	3181	1006	363	517	4686	11293	3698
Gresham	27518	72210	28390	26691	48297	37572	54209	120507	65962
Happy Valley	745	1910	346	2599	5523	1197	3344	7433	1543
Hillsboro	12648	40425	25104	21069	34528	36828	33717	74953	61932
Johnson City	567	1260	538	2	4	1	569	1265	539
King City	450	2065	1256	213	256	158	663	2321	1414
Lake Oswego	13126	31545	15565	6115	11227	4407	19241	42772	19971
Maywood Park	221	491	46	13	30	4	234	521	50
Milwaukie	8190	19450	11150	2494	4300	2137	10684	23750	13287
Oregon City	6832	16760	17370	5780	11278	4348	12613	28038	21718
Portland	210154	459300	420583	57954	136703	101029	268108	596003	521611
Rivergrove	140	295	36	55	138	17	195	433	53
Sherwood	1385	3635	2622	6574	14059	5765	7960	17694	8387
Tigard	12053	31350	29442	10327	18401	11489	22380	49751	40931
Troutdale	3048	8790	5539	6789	13079	8461	9837	21869	14000
Tualatin	6777	16300	13075	5864	11801	11634	12641	28101	24710
West Linn	6342	17160	2570	3371	4432	2338	9713	21592	4908
Wilsonville	4165	8755	12491	6762	15535	12220	10927	24290	24712
Wood Village	1300	2920	790	868	1900	1029	2168	4820	1820
Clack. Co. unincorp. **	33679	80830	45010	58273	123579	35038	91952	204410	80048
Multn. Co. unincorp.**	1859	4461	2935	14884	32758	7072	16743	37219	10007
Wash. Co. unincorp.**	56254	135010	41277	96828	205292	49254	153082	340302	90531
Urban Total	442819	1048849	736089	359563	736569	358072	802382	1785418	1094161

County Totals**	92 HH	92 Pop*	92 EMP	New HH	New Pop*	New EMP	Tot HH	Tot Pop*	Tot EMP
Clack. Co.	77566	183659	105920	86268	180544	61565	163834	364203	167486
Multn. Co.	245913	582266	460474	112577	214657	161589	358490	796924	622063
Wash. Co.	119341	282572	169695	160717	339997	134918	280058	622569	304613
Urban Total	442819	1048497	736089	359563	735199	358072	802382	1783696	1094161

* Population: These numbers are generated secondarily, Region 2040 modeling uses households rather than population.
- 1992 Pop is census data for cities (PSU Pop Center); county unincorporated areas are estimates using 2.4 persons/household.
- New Pop is 2040 Total Pop minus 1992 Pop
- The 2040 Total Population is derived from households, using 2.223 persons/household

** County Totals for areas inside Urban Reserves and UGB, and do not include the full extent of the counties.

TABLE 8 - Net Densities by Design Type

EXISTING DEVELOPMENT IN 1992

DESIGN TYPE	DEV. ACRES	HH	DU PER ACRE	EMP	EMP PER ACRE	RATIO HH/EMP
Central City	1096.8	8143	7.4	146073	133.2	0.1
Reg. Centers	1661.0	5391	3.2	28416	17.1	0.2
Town Centers	1684.8	6574	3.9	28168	16.7	0.2
Main Streets	2632.3	15168	5.8	47410	18.0	0.3
Corridors/Nodes	30058.8	145787	4.9	215662	7.2	0.7
Neighborhood 1	44853.0	192932	4.3	82565	1.8	2.3
Neighborhood 2	13198.3	43365	3.3	19972	1.5	2.2
Employment Areas	4459.0	3665	0.8	52152	11.7	0.1
Indust. Sanct.	10023.5	2171	0.2	87152	8.7	0.0
Greenspaces	6222.5	14437	2.3	24156	3.9	0.6
UR Town Centers	407.5	302	0.7	28	0.1	10.8
UR Main Sts.	35.8	10	0.3	775	21.7	0.0
UR Corr/Nodes	0.0	0	-	0	-	-
UR Neigh. 1	253.3	122	0.5	30	0.1	4.1
UR Neigh. 2	217.0	194	0.9	0	0.0	-
UR Emp. Area	2471.3	975	0.4	220	0.1	4.4
UR Indust. Sanct.	45.3	11	0.2	343	7.6	0.0
UR Greensp.	0.0	0	-	0	-	-
TOTALS	112245.0	439247		733122		

NEW DEVELOPMENT 1992-2040

DESIGN TYPE	AVAIL. ACRES*	HH	DU PER ACRE	EMP	EMP PER ACRE	RATIO HH/EMP
Central City	436.2	19756	45.3	121523	278.6	0.2
Reg. Centers	601.5	11914	19.8	50133	83.3	0.2
Town Centers	831.0	12899	15.5	34171	41.1	0.4
Main Streets	538.5	7927	14.7	17605	32.7	0.5
Corridors/Nodes	9386.3	113348	12.1	101942	10.9	1.1
Neighborhood 1	9689.7	79000	8.2	39969	4.1	2.0
Neighborhood 2	9904.3	67715	6.8	27668	2.8	2.4
Employment Areas	4630.5	20284	4.4	64312	13.9	0.3
Indust. Sanct.	9307.7	3373	0.4	71155	7.6	0.0
Greenspaces	5089.0	0	0.0	2	0.0	0.0
UR Town Centers	30.3	620	20.4	2598	85.7	0.2
UR Main Sts.	0.0	0	0.0	0	-	-
UR Corr/Nodes	739.2	15700	21.2	2195	3.0	7.2
UR Neigh. 1	535.7	4079	7.6	1245	2.3	3.3
UR Neigh. 2	6764.5	38989	5.8	11873	1.8	3.3
UR Emp. Area	82.8	385	4.6	1183	14.3	0.3
UR Indust. Sanct.	0.0	0	0.0	0	-	-
UR Greensp.	374.2	0	0.0	0	0.0	-
TOTALS	58567.2	395987		547573		

* AVAIL. ACRES = Vacant and Redevelopable Acres

DU= dwelling units

TABLE 9 - Net Densities by Zoning

EXISTING DEVELOPMENT IN 1992

ZONING	DEV. ACRES*	HH	DU PER ACRES	EMP	EMP PER GRS. AC.	RATIO HH/EMP
Farm Forest	1308.5	7	0.0	0	0.0	-
Rural or Future Urban	2264.0	1596	0.7	1	0.0	1596.0
Single Family 1	1150.0	1759	1.5	514	0.4	3.4
Single Family 2	26754.8	72418	2.7	19123	0.7	3.8
Single Family 3	41458.8	186000	4.5	37044	0.9	5.0
Multi-family 1	10463.8	120517	11.5	8378	0.8	14.4
Mutli-family 2	1680.8	43414	25.8	1760	1.0	24.7
Planned Unit Dev.	2001.3	720	0.4	150	0.1	4.8
Commercial Neighborhood	2399.3	0	0.0	14808	6.2	0.0
Commercial General	4082.0	0	0.0	116438	28.5	0.0
Central Commercial	1720.0	462	0.3	209677	121.9	0.0
Office Commercial	923.0	5374	5.8	67740	73.4	0.1
Light Industrial	4152.0	0	0.0	86817	20.9	0.0
Heavy Industrial	6122.0	11	0.0	107805	17.6	0.0
Mixed Use Industrial	1685.3	6962	4.1	29219	17.3	0.2
Parks and Open Space	1114.0	0	0.0	0	0.0	-
Public Facilities	2379.0	0	0.0	33648	14.1	0.0
Mixed Use Center 1	922.3	0	0.0	0	0.0	-
Mixed Use Center 2	666.5	0	0.0	0	0.0	-
Mixed Use Center 3	372.8	0	0.0	0	0.0	-
Mixed Use Employ. Area	1380.5	0	0.0	0	0.0	-
Industrial Area	4289.5	7	0.0	0	0.0	-
TOTALS	119289.8	439247		733122		

NEW DEVELOPMENT 1992-2040

ZONING	AVAIL. ACRES*	HH	DU PER ACRE	EMP	EMP PER ACRE	RATIO HH/EMP
Farm Forest	5463.0	0	0.0	0	0.0	-
Rural or Future Urban	0.0	0	-	0	-	-
Single Family 1	0.0	0	-	0	-	-
Single Family 2	12309.1	70872	5.8	21094	1.7	3.4
Single Family 3	9586.7	73003	7.6	21905	2.3	3.3
Multi-family 1	2307.0	49275	21.4	6589	2.9	7.5
Mutli-family 2	175.7	6526	37.1	1004	5.7	6.5
Planned Unit Dev.	5635.5	78501	13.9	32192	5.7	2.4
Commercial Neighborhood	4320.2	32096	7.4	69922	16.2	0.5
Commercial General	0.0	0	-	0	-	-
Central Commercial	0.0	0	-	0	-	-
Office Commercial	0.0	0	-	0	-	-
Light Industrial	0.0	0	-	0	-	-
Heavy Industrial	0.0	0	-	0	-	-
Mixed Use Industrial	605.3	3373	5.6	6339	10.5	0.5
Parks and Open Space	701.3	0	0.0	0	0.0	-
Public Facilities	1760.9	0	0.0	16765	9.5	0.0
Mixed Use Center 1	1607.7	23888	14.9	45918	28.6	0.5
Mixed Use Center 2	858.5	17540	20.4	73563	85.7	0.2
Mixed Use Center 3	425.5	19756	46.4	121523	285.6	0.2
Mixed Use Employ. Area	4555.5	21153	4.6	65057	14.3	0.3
Industrial Area	8625.8	0	0.0	65698	7.6	0.0
TOTALS	58937.6	395983		547569		

* AVAIL. ACRES = Vacant and Redevelopable Acres

DU= dwelling units

TABLE 10 - Jobs Housing Balance

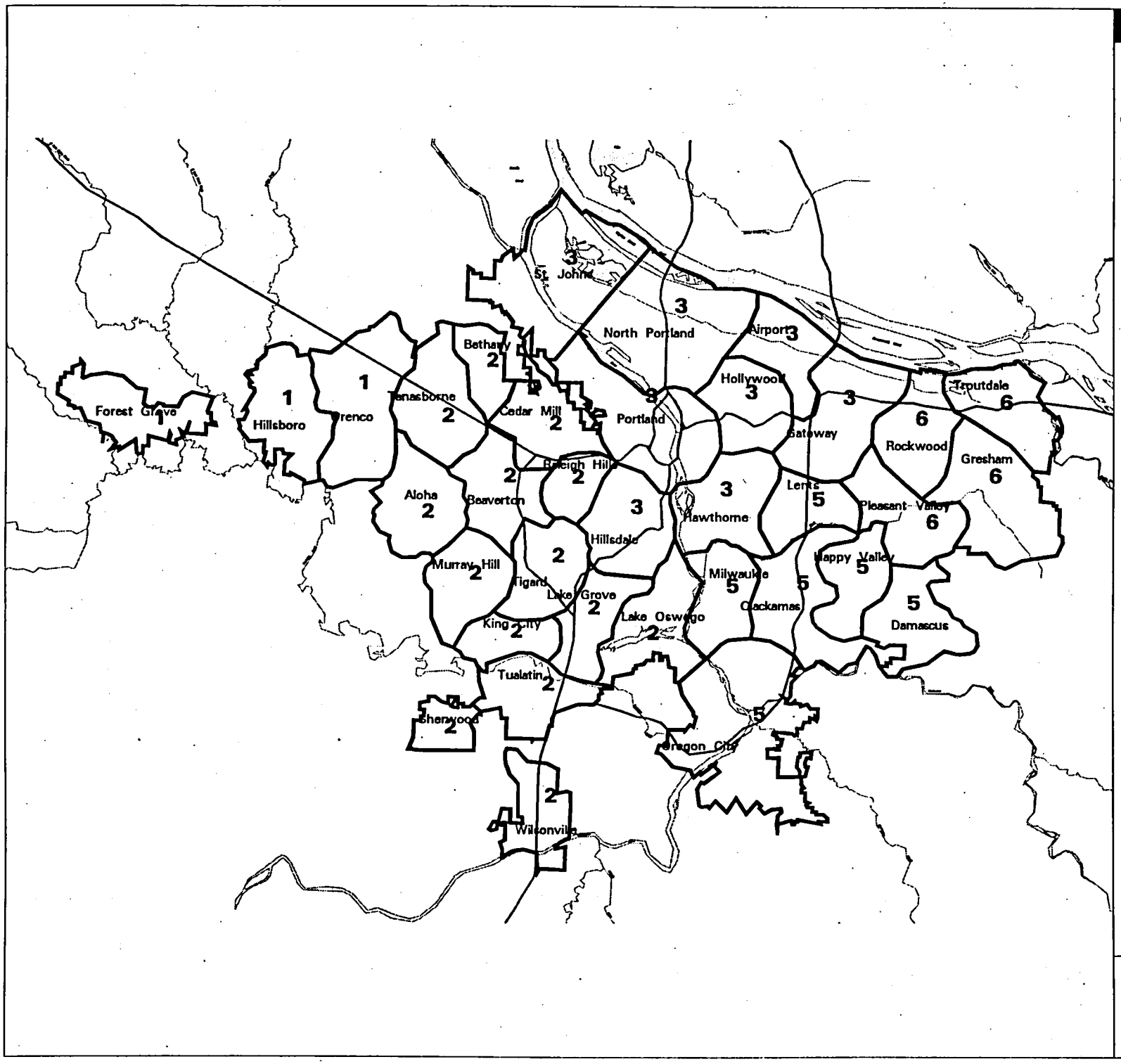
JOBS HOUSING BALANCE BY TOWN CENTERS AND REGIONAL CENTERS IN RECOMMENDED ALTERNATIVE

	1992 EXISTING				2040 - TOTAL			
TOWN CENTERS	JOBS	HOUSING	J/H RATIO	INDEXED*	JOBS	HOUSING	J/H RATIO	INDEXED*
AIRPORT	21782	5806	3.75	2.09	27086	9162	2.96	1.58
ALOHA	7681	14594	0.53	-1.14	13154	27818	0.47	-0.90
BEAVERTON	38803	18622	2.08	0.42	47638	25978	1.83	0.46
BETHANY	1322	2002	0.66	-1.00	5864	11028	0.53	-0.84
CEDAR MILL	9898	6990	1.42	-0.25	16893	19586	0.86	-0.51
CLACKAMAS	31629	13891	2.28	0.62	49625	25987	1.91	0.53
DAMASCUS	1224	1670	0.73	-0.93	8445	22527	0.37	-1.00
FOREST GROVE	8409	8077	1.04	-0.62	18234	21079	0.87	-0.51
GATEWAY	31787	23746	1.34	-0.32	37112	31586	1.17	-0.20
GRESHAM	16248	15249	1.07	-0.60	44297	37048	1.20	-0.18
HAPPY VALLEY	841	2945	0.29	-1.38	3347	8823	0.38	-1.00
HAWTHORNE	28653	29580	0.97	-0.69	26428	31639	0.84	-0.54
HILLSBORO	16518	11353	1.45	-0.21	23007	20214	1.14	-0.24
HILLSDALE	18899	18196	1.04	-0.62	19548	22559	0.87	-0.51
HOLLYWOOD	25610	29680	0.86	-0.80	24710	30904	0.80	-0.58
KING CITY	4332	7443	0.58	-1.08	7141	13919	0.51	-0.86
LAKE GROVE	21207	9611	2.21	0.54	26710	16934	1.58	0.20
LAKE OSWEGO	6047	9418	0.64	-1.02	9644	15570	0.62	-0.76
LENTS	9633	15145	0.64	-1.03	11642	18428	0.63	-0.74
MILWAUKIE	15516	13523	1.15	-0.51	17562	17242	1.02	-0.36
MURRAY HILL	3354	10008	0.34	-1.33	10534	25721	0.41	-0.97
NORTH PORTLAND	41639	26518	1.57	-0.09	46080	29746	1.55	0.17
OREGON CITY	29297	26371	1.11	-0.55	40998	45566	0.90	-0.48
ORENCO	8861	6246	1.42	-0.24	40655	33302	1.22	-0.15
PLEASANT VALLEY	2926	9428	0.31	-1.35	7596	23780	0.32	-1.06
PORTLAND	218362	36543	5.98	4.31	291949	56768	5.14	3.77
RALEIGH HILLS	8283	6633	1.25	-0.41	9283	10566	0.88	-0.50
ROCKWOOD	13486	15761	0.86	-0.81	24850	24987	0.99	-0.38
SHERWOOD	2580	1540	1.68	0.01	9451	10861	0.87	-0.50
ST. JOHNS	15065	5587	2.70	1.03	25599	6435	3.98	2.60
TANASBOURNE	12431	10233	1.21	-0.45	29672	30747	0.97	-0.41
TIGARD	30100	12871	2.34	0.68	40530	20657	1.96	0.59
TROUTDALE	9436	5909	1.60	-0.06	27025	19281	1.40	0.03
TUALATIN	11580	7595	1.52	-0.14	24875	15611	1.59	0.22
WILSONVILLE	12708	4202	3.02	1.36	26436	13254	1.99	0.62
Totals	736147	442986	1.66	0.00	1093620	795313	1.38	0.00

	1992 EXISTING				2040 - TOTAL			
REGIONAL CENTER	JOBS	HOUSING	J/H RATIO	INDEXED*	JOBS	HOUSING	J/H RATIO	INDEXED*
BEAVERTON/WA SQ.	170332	121768	1.40	-0.26	277781	258224	1.08	-0.30
HILLSBORO	33789	25676	1.32	-0.35	81894	74594	1.10	-0.28
GRESHAM	42098	46348	0.91	-0.75	103745	105087	0.99	-0.39
MILWAUKIE/CTC	88143	73547	1.20	-0.46	131603	138559	0.95	-0.43
PORTLAND	401800	175659	2.29	0.63	498481	218797	2.28	0.90
REGIONAL TOTAL	736162	442998	1.66	0.00	1093504	795261	1.38	0.00

* INDEXED: This is the ratio minus the regional jobs/housing ratio or balance (1.66 in 1992, 1.38 in 2040).
- A positive number is a jobs rich area, a negative number is households rich area.

NOTE: See map next page for location of Town Center and Regional Center market areas.



Town and Regional Centers

Township Boundary

REGIONAL CENTERS

1 Hillsboro

2 Beaverton/Washington Sq.

3 Portland

5 Milwaukie/CTC

6 Gresham

600 NE Grand Ave
Portland, OR 97232-2736
(503) 797-1700

94299/plttowns, plot date: September 14, 1994

TABLE 11 - Residential: Single family Multi-family, and Lot Sizes

	Existing 1992	All New REC. ALT.	Vac. Land REC. ALT	Redev. Land REC. ALT.
Single Family	68.0%	61.5%	70.24%	39.59%
Multi-Family	32.0%	38.5%	29.76%	60.41%
Attached SF	0.0%	20.0%	20.3%	18.5%

SF/MF By Major Design Types	
Centers	100% MF
Corridors	35%SF / 65%MF
Main Streets	100% MF
Neighborhoods	95% SF
Employment Areas	100% SF

Average Lot Size	NEW
Neigh. 1 (SFR-3)	5720
Neigh. 2 (SFR-2)	7566
Weighted Avg.	6657

TABLE 12 - Impacts of Different Urban Reserve Expansion

DENSITY, Persons/net acre by Design Type - 1992 existing, alternatives show density for new development

DESIGN TYPE	1992	REC. ALT.	NO EXPAND.	40,000 AC UR. RES.
Central City	168.01	379.59	397.20	361.89
Reg. Centers	24.56	127.51	137.40	120.90
Town Centers	26.49	75.74	84.45	58.53
Main Streets	31.98	65.52	72.96	54.98
Corridors/Nodes	19.36	37.79	43.47	30.64
Neighborhood 1	11.41	22.31	25.51	21.41
Neighborhood 2	8.62	18.04	20.44	14.25
Employment Areas	14.42	23.66	26.84	24.37
Indust. Sanct.	9.57	8.45	8.63	8.67
Greenspaces	9.35	0.00	0.00	0.00
UR Town Centers	1.92	50.34		43.92
UR Main Sts.	25.94	131.25		60.99
UR Corr/Nodes	-	-		-
UR Neigh. 1	2.05	19.30		16.67
UR Neigh. 2	1.12	14.61		11.66
UR Emp. Area	8.24	24.64		24.96
UR Indust. Sanct.	-	-		-
UR Greensp.	1.18	0.00		-

LOT SIZE CHANGES	1990 PLANS Range	REC. ALT. Average	NO EXPAND. Average	40,000 AC UR. RES. Average
SFR-3 (Neigh. 1)	5,000-7,000	5720	5259	6755
SFR-2 (Neigh. 2)	7,000-10,000	7566	6907	9457
% SFR3/SFR2	47% / 53%	51% / 49%	68% / 32%	35% / 65%
Weighted Average Lot Size	N/A	6657	6380	7697
% Attached SF (2500 sq.' lot)	N/A	20.00%	26.98%	8.83%

TABLE 13 HOUSEHOLDS AND EMPLOYMENT FOR ACTUAL CENTERS (NOT MARKET AREA)

TOWN AND REGIONAL CENTERS TOWN CENTERS	HH '92	EMP '92	HH 2040	EMP2040	HH delta	EMP delta
'ST. JOHNS'	110	235	197	373	88	138
'BETHANY'	25	9	919	1773	894	1765
'TANASBOURNE'	336	727	1363	2373	1027	1646
'ORENCO'	35	42	770	1466	735	1424
'HOLLYWOOD'	725	2505	813	2401	88	-104
'TROUTDALE'	38	246	218	482	180	236
'FOREST GROVE'	93	725	279	1165	186	440
'GATEWAY'	745	1410	969	1780	224	370
'CEDAR HILL'	59	1751	1487	5857	1428	4105
'ROCKWOOD'	71	972	164	1210	93	239
'RALEIGH HILLS'	292	1742	472	2224	180	482
'ALOHA'	315	127	471	588	156	461
'LENTS'	486	221	592	452	106	231
'HILLSDALE'	236	419	283	471	47	52
'HAPPY VALLEY'	16	38	170	349	154	311
'MURRAY HILL'	192	102	751	1174	559	1072
'TIGARD'	129	4451	642	5067	513	617
'LAKE GROVE'	365	1432	1287	2978	923	1546
'LAKE OSWEGO'	426	1246	702	1570	276	324
'DAMASCUS'	12	776	626	3169	614	2393
'KING CITY'	84	611	441	1206	357	594
'TUALATIN'	1270	3962	3215	9228	1945	5267
'GLADSTONE'	173	426	241	545	68	119
'WEST LINN'	116	244	183	371	67	126
'OREGON CITY'	202	1148	377	1226	175	78
'SHERWOOD'	58	235	214	602	156	367
'WILSONVILLE'	75	3277	1558	8161	1484	4884
TC TOTALS	6684	29079	19406	58260	12722	29181
REGIONAL CENTERS						
'HILLSBORO'	545	3217	1664	6953	1120	3736
'GRESHAM'	981	6754	4600	20534	3618	13780
'BEAVERTON'	1141	7261	2245	11308	1105	4046
'TIGARD'	537	6003	2377	12287	1840	6284
'MILWAUKIE'	815	774	1060	2363	245	1589
'CLACKAMAS'	1424	4472	4008	15440	2584	10968
RC TOTALS	5442	28481	15955	68884	10512	40403
CENTRAL CITY	8186	146113	26400	226495	18214	80382

Transportation Data

Selected Performance Measures

Additional Evaluation Measures

LRT Boardings

Roadway Network Update

September 2, 1994

TO: John Fregonese

FROM: Cindy L. Pederson

RE: Region 2040 Preferred Alternative

Attached are the Total Region and Intra-UGB Performance Measures reports which include the results from the Preferred Alternative model run.

Please keep in mind that in addition to landuse revisions, the following have also changed:

Highway Network	- used Concept C as a base with edits as per Tom Kloster's memos
Transit Network	- (completely revised) based on the 2015 South/North system with revisions as per Martin Hull of Tri-Met
Parking Factors	- based on Concept B -- see attached
PEFs	- based on Concept B -- see attached

If you have any questions, please feel free to contact me at x1772.

CC: Bill Barber
Richard Brandman
Andy Cotugno
Scott Higgins
Mike Hoglund
Jennifer John
Tom Kloster
Keith Lawton
Rich Ledbetter
Leon Skiles
Stuart Todd
Mark Turpel
Dick Walker

Region 2040 - Concept Runs WITH Parking Factors and Revised PEFs
(includes network revisions and resulting redistribution of trips)

TOTAL REGION

Selected Performance Measures

1-Sep-94

	1990	2040 Concept A	2040 Concept B	2040 Concept C	2040 Preferred Alt
Landuse Data					
Population	1,511,237	2,674,355	2,674,355	2,674,355	2,674,355
Households	585,075	1,166,656	1,166,656	1,166,311	1,166,638
Employment	867,812	1,634,507	1,634,823	1,633,734	1,634,813
Trip Data					
Total Person Trips	6,264,314	11,564,323	11,533,237	11,542,950	11,518,039
Walk Bike Number of Total Trips	299,779	567,295	629,898	589,965	608,324
Walk Bike as % of Total Trips	4.79%	4.91%	5.46%	5.11%	5.28%
Person Trips per Household	10.71	9.91	9.89	9.90	9.87
Person Trips per Capita	4.15	4.32	4.31	4.32	4.31
Home Based Work Occupancy	1.103	1.103	1.113	1.110	1.117
Transit Data					
Transit Riders	136,821	372,390	527,758	437,178	570,007
as % of Total Person Trips	2.18%	3.22%	4.58%	3.79%	4.95%
Home-Based Work Transit Riders	64,517	200,860	299,054	245,837	335,614
as % of Total HBW Person Trips	5.41%	8.95%	13.32%	10.96%	14.95%
% households covered by transit	55.12%	44.93%	53.09%	51.14%	57.38%
% employment covered by transit	76.72%	75.96%	78.58%	74.65%	77.86%
Total Transit Service (Hours)	4,983	12,322	13,192	12,553	11,966
Trip Length Data					
AWD VMT					
with Comm & Ext	26,708,898	47,973,269	44,737,495	46,910,375	46,139,880
without Comm & Ext	20,445,781	36,135,146	33,027,691	35,093,168	34,211,048
AWDVMT per Capita					
with Comm & Ext	17.67	17.94	16.73	17.54	17.25
without Comm & Ext	13.53	13.51	12.35	13.12	12.79
AWD Average Trip Length (miles)					
with Comm & Ext	5.25	5.20	4.97	5.14	5.15
without Comm & Ext	4.43	4.32	4.06	4.25	4.22
Network Data					
PM 1-hr Average Speed (mph)	33	26	27	29	29
PM 1-hr Average Travel Time (mins)	10.87	13.30	12.46	11.85	12.08
Lane Miles **	9,279	10,190	9,820	10,327	10,483
Congested Roadway Miles*	162.47	817.18	783.95	568.13	620.49
as a % of total	2.45%	11.91%	11.57%	8.29%	8.89%

* Roadway miles with v/c > .9 for the PM 1-hr period
** miles for freeways and arterials regionwide

REVISED

Region 2040 - Concept Runs WITH Parking Factors and Revised PEFs
(Includes network revisions and resulting redistribution of trips)

INTRA-UGB

Selected Performance Measures

17-Oct-94

	1990	2040 Concept A	2040 Concept B	2040 Concept C	2040 Preferred Alternative
Landuse Data (within UGB)					
Population	1,032,471	1,943,895	1,904,799	1,678,720	1,862,182
Households	410,853	839,333	822,452	724,836	804,051
Employment	723,982	1,305,193	1,293,427	1,169,913	1,257,365
Trip Data (Intra-UGB Trips Only)					
Total Person Trips	4,484,900	8,371,842	8,161,761	7,188,750	7,921,282
Walk Bike Number of Total Trips	231,830	432,601	486,392	404,698	461,561
Walk Bike as % of Total Trips	5.17%	5.17%	5.96%	5.63%	5.83%
Person Trips per Household	10.92	9.97	9.92	9.92	9.85
Person Trips per Capita	4.34	4.31	4.28	4.28	4.25
Transit Data (Intra-UGB Trips Only)					
Transit Riders	124,770	338,323	487,642	372,047	505,317
as % of Total Person Trips	2.78%	4.04%	5.97%	5.18%	6.38%
Home-Based Work Transit Riders	58,080	183,763	277,462	211,763	298,762
as % of Total HBW Person Trips	6.87%	11.11%	17.15%	14.83%	19.45%
% households covered by transit	64.75%	48.71%	61.19%	58.10%	63.16%
% employment covered by transit	81.55%	82.50%	86.47%	83.00%	82.61%
Trip Length Data (Intra-UGB Trips Only)					
AWD VMT without Comm & Ext	12,802,346	24,262,884	20,693,270	20,010,741	20,602,595
AWDVMT per Capita without Comm & Ext	12.40	12.48	10.86	11.92	11.06
AWD Average Trip Length (miles) without Comm & Ext	3.89	4.05	3.66	3.96	3.78
Network Data (within UGB)					
PM 1-hr Average Speed (mph)	30	24	24	27	26
PM 1-hr Average Travel Time (mins)	9.64	12.55	11.41	10.84	12.22
Lane Miles **	5,304	6,377	5,557	6,116	6,038
Congested Roadway Miles*	150.49	682.04	642.65	403.94	454.05
as a % of total	5.18%	19.16%	21.29%	12.22%	13.88%

* Roadway miles with v/c > .9 for the PM 1-hr period
** miles for freeways and arterials

Region 2040 - Air Quality Analysis

(in kg/day)

2-Sep-94

Region-wide emissions - including Columbia, Yamhill and Marion Counties

	Winter CO	Summer CO	Summer HC	Summer NOx
1990	881,365	608,182	188,618	86,096
2040 BCFRWY	650,950	559,844	75,118	100,434
2040 A	656,258	561,689	75,046	97,578
2040 A w/pkg factors	649,822	556,196	74,426	97,376
2040 B	640,164	547,752	73,201	92,209
2040 B w/pkg factors	615,772	527,002	70,985	90,182
2040 C	631,703	540,721	72,991	95,974
2040 C w/pkg factors	616,801	528,045	71,576	94,627
2040 Preferred Alt	614,930	526,385	71,191	93,205

Region-wide emissions - NOT including Columbia, Yamhill and Marion Counties

	Winter CO	Summer CO	Summer HC	Summer NOx
1990	835,115	574,708	177,857	80,452
2040 BCFRWY	614,451	528,601	70,700	94,024
2040 A	618,887	529,702	70,547	91,102
2040 A w/pkg factors	613,537	525,133	69,810	90,987
2040 B	603,276	516,177	68,739	85,737
2040 B w/pkg factors	579,579	496,017	66,375	83,817
2040 C	584,414	500,215	67,187	88,356
2040 C w/pkg factors	569,091	487,188	65,745	86,988
2040 Preferred Alt	574,749	491,995	66,391	86,230

Region 2040 - Parking Factor Guidelines

13-Sep-94

WORK Purpose

	CBD Center	Regional Center	Sub-Regional Center	Residential Center	Main Streets	Ten Minute Corridors	Other High Density Den >= 10 Min Corr	Other Low Density (Den < 10 Min Corr)
Base Case								
1985 dollars	$4.32	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
1993 dollars	$5.81	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Concept A	(Base + 13%)	(33% of CBD)	(13% of CBD)	(10% of CBD)	(5.5% of CBD)	(4.5% of CBD)		
1985 dollars	$4.88	$1.61	$0.63	$0.49	$0.27	$0.22	$0.22	$0.15
1993 dollars	$6.56	$2.16	$0.85	$0.66	$0.36	$0.30	$0.30	$0.20
Concept B	(Base + 38%)	(33% of CBD)	(13% of CBD)	(8% of CBD)	(8% of CBD)	(6% of CBD)		
1985 dollars	$5.96	$1.97	$0.78	$0.48	$0.48	$0.36	$0.36	$0.15
1993 dollars	$8.01	$2.64	$1.04	$0.64	$0.64	$0.48	$0.48	$0.20
Concept C	(Base + 13%)	(78% of CBD)	(33% of CBD)	(11% of CBD)	(5% of CBD)	(4% of CBD)		
1985 dollars	$4.88	$3.81	$1.61	$0.54	$0.24	$0.20	$0.20	$0.15
1993 dollars	$6.56	$5.12	$2.16	$0.72	$0.33	$0.26	$0.27	$0.20

	Central City (CC)	Regional Center	Town Center	Main Streets	Mixed Use & Commercial Nodes	Indust. Sanct. & Neighborhoods 1 & 2
Preferred Alternative	(CBD Concept B)	(25% of CC)	(18.5% of CC)	(15.5% of CC)	(8.8% of CC)	
1985 dollars	$5.96	$1.49	$1.10	$0.92	$0.52	$0.15
1993 dollars	$8.01	$2.00	$1.48	$1.24	$0.70	$0.20

Notes:

1. Cost increases reflect the relative changes in employment density between concepts and locations
2. A dollar equivalent ($0.20 in 1993 dollars) has been included in the factor to reflect the implementation of the ECO and Parking Ratio Rules.
3. For the non-work purposes, the factor in the "Other Low Density" location is removed. The factors in all other areas are reduced by approximately 55% to reflect a shorter duration (i.e. a smaller parking cost) and the removal of the ECO Rule.

Region 2040 - Pedestrian Environmental Factor Guidelines

24-Aug-94

Pedestrian Environmental Factor Guidelines for Concepts A, B, C

	CBD Center	Regional Center	Sub-Regional Center	Residential Center	Main Streets	Ten Minute Corridors	Other High Density (Den >= 10 Min Corr)	Other Low Density (Den < 10 Min Corr)
Ease of Street Crossing	3	3	3	3	3	2-3	1-3	1-3
Street Pattern	3	3	2-3	2-3	2-3	2-3	1-3	1-3
Sidewalk Availability	3	3	3	3	3	2-3	1-3	1-3
Topography Value (TV)								
Total Range Value	9 + TV	9 + TV	8-9 + TV	8-9 + TV	8-9 + TV	6-9 + TV	3-9 + TV	3-9 + TV

Region 2040 Preferred Alternative Methodology

	Central City	Regional Center	Town Center	Main Streets	Commercial Nodes	Mixed Use Employment Area	Neighborhood 1	Indust. Sanct. & Neighborhood 2
MINIMUM Total Value	10	10	10	10	9	8	8	4

Note:

Rating of 1 is poor, 2 is average, 3 is good.

September 12, 1994

TO: John Fregonese

FROM: Cindy L. Pederson

RE: Additional Preferred Alternative Evaluation Measures

To better understand and quantify the effects of different model inputs on final results, we performed some additional evaluation measures. We thought that you would be interested in the following summaries:

1) In order to get an idea of the influence of **parking factors** on mode split results, the Mode Split Model was rerun using all of the Preferred Alternative inputs EXCEPT for parking factors (for which the Base Case parking factors were substituted). The Base Case only had parking factors for the CBD, Lloyd Center and OHSU, while the Preferred Alternative parking factors were spaced throughout the tri-county region.

Results:

	HBW Transit Trips
Preferred Alternative Model Run	335,614
Pref. Alt. w/ Base Case Parking Factors	196,121

139,493 fewer HBW transit trips (42% less)

	Total Transit Trips
Preferred Alternative Model Run	570,007
Pref. Alt. w/ Base Case Parking Factors	409,704

160,303 fewer total transit trips (28% less)

This illustrates how much of an effect parking factors alone have on transit ridership.

However, when comparing the Preferred Alternative using Base Case parking factors with the Base Case Model Run, the results do indicate that landuse design (in conjunction with highway and transit design) does affect transit ridership as well:

	Total Transit Trips
Pref. Alt. w/ Base Case Parking Factors	409,704
Base Case Model Run	266,920

142,784 more total transit trips (35% more)

2) We also thought it would be interesting to compute a weighted average parking factor for each 2040 model run. In essence, this would provide the average parking "cost" per trip. This value was obtained for both HBW and HBO trips by taking the sum of (total attractions in each zone times the parking factor for that zone) and then dividing that sum by the total region-wide attractions:

Long-Term

Weighted Avg Parking "Cost" per trip = $\frac{\text{sum(HBW attractions per zone * long-term pkg factor for that zone)}}{\text{Total HBW attractions}}$

Short-Term

Weighted Avg Parking "Cost" per trip = $\frac{\text{sum(HBO attractions per zone * short-term pkg factor for that zone)}}{\text{Total HBO attractions}}$

Results:

Model Run	Long-Term Avg	Short-Term Avg
1990*	$0.46	$0.08
Base Case - Freeway*	$0.41	$0.07
Concept A	$0.78	$0.19
Concept B	$1.15	$0.30
Concept C	$1.00	$0.30
Preferred Alternative	$1.35	$0.38

These results show that the Preferred Alternative has the overall highest average parking factor of all the alternatives.

3) Similarly, we calculated a weighted PEF value for each model run by taking the sum of (productions in each zone times the PEF value for that zone) and then dividing that sum by the total productions:

Weighted Avg PEF value = $\frac{\text{sum(productions per zone * PEF value for that zone)}}{\text{total productions}}$

Results:

Model Run	Weighted PEF Value
1990*	6.91
Base Case - Freeway*	6.18
Concept A	6.67
Concept B	6.99
Concept C	6.86
Preferred Alternative	7.99

* runs that did not have revised parking factors or PEFs

These numbers also reveal that the Preferred Alternative has the highest PEF values.

If you have any questions or need any further information, please feel free to contact me at x1772.

CC: Bill Barber
Richard Brandman
Andy Cotugno
Scott Higgins
Mike Hoglund
Jennifer John
Tom Kloster
Keith Lawton
Rich Ledbetter
Leon Skiles
Stuart Todd
Mark Turpel
Dick Walker

Region 2040 LRT Boardings Stratified by Segments

09-12-94

Preferred Alternative

	Total Boardings
Eastside MAX (Portland CBD to Gresham)	81,896
Westside LRT (Portland CDB to Hillsboro)	72,431
North Radial Corridor (Portland CBD to I-5/134th in Clark Co.)	31,198
South Radial Corridor (Portland CBD to Kaiser Sunnyside)	57,146
Southwest "Barbur" Radial Corridor (Portland CBD to Tigard)	22,356
North I-205 Extension (Gateway TC to Airport)	11,439
Vancouver Mall Extension (I-5 to I-205)	8,544
South I-205 Circumferential Corridor (Gateway to CTC)	9,067
Hwy. 217 Circumferential Corridor (Beaverton to Tigard)	13,632

Preferred Alternative- Commuter Rail

	Total Boardings
Portland to McMinnville	11,187

Concept A

	Total Boardings
Eastside MAX (Portland CBD to Gresham/MHCC)	38,945
Westside LRT (Portland CDB to Hillsboro/Forest Grove)	46,794
North Radial Corridor (Portland CBD to I-5/179th in Clark Co.)	27,795
South Radial Corridor (Portland CBD to CTC/Damascus)	25,175
Southwest "Barbur" Radial Corridor (Portland CBD to Tigard)	18,884
Southeast "Powell" Radial Corridor (Portland CBD to I-205/Foster)	21,114
Hwy 99E Extension (Milwaukie to Oregon City)	7,844
North I-205 Extension (Gateway TC to Airport)	7,466
Vancouver Mall Extension (I-5 to I-205)	7,380
Tigard to Tualatin Extension	3,168

Concept B

	Total Boardings
Eastside MAX (Portland CBD to Gresham)	67,703
Westside LRT (Portland CDB to Hillsboro)	81,301
North Radial Corridor (Portland CBD to I-5/179th in Clark Co.)	37,371
South Radial Corridor (Powell to CTC)	21,654
Southwest "Barbur" Radial Corridor (Portland CBD to Tigard)	29,625
Southeast "Powell" Radial Corridor (Portland CBD to I-205/Foster)	33,355
North I-205 Extension (Gateway TC to Airport)	11,942
Vancouver Mall Extension (I-5 to I-205)	8,034
South I-205 Circumferential Corridor (Gateway to CTC/Oregon City)	23,123
Hwy. 217 Circumferential Corridor (Beaverton to Tualatin)	13,268
NW Portland Radial Corridor (Portland CBD to Montgomery Park)	8,327
Shoreline "Macadam" Radial Corridor (Portland CBD to Lake Oswego)	9,012
Lake Oswego to Tualatin Circumferential Corridor	6,399
Lake Oswego to Milwaukie Circumferential Corridor (LRT Brige Connection)	1,933
Eastside - Powell to Coliseum	6,889
CTC to Damascus Extension	4,007

Region 2040 LRT Boardings Stratified by Segments

09-12-94

Concept C

	Total Boardings
Eastside MAX (Portland CBD to Gresham)	45,567
Westside LRT (Portland CDB to Hillsboro)	56,442
North Radial Corridor (Portland CBD to I-5/179th in Clark Co.)	27,942
South Radial Corridor (Portland CBD to CTC/Damascus)	41,316
Southwest "Barbur" Radial Corridor (Portland CBD to Tigard)	21,420
Hwy. 99E Extension (Milwaukie to Oregon City)	9,526
North I-205 Extension (Gateway TC to Airport)	6,907
Vancouver Mall Extension (I-5 to I-205)	6,900
South I-205 Circumferential Corridor (Gateway to CTC)	12,688
Hwy. 217 Circumferential Corridor (Beaverton to Tualatin/Wilsonville)	11,825
Forest Grove to Hillsboro Extension	2,608

Concept C - Commuter Rail

	Total Boardings
Ridgefield to Canby	6,381
McMinnville Extension	9,876
Scappoose Extension	1,489
Washougal Extension	1,550

Base Case Freeway

	Total Boardings
Eastside MAX (Portland CBD to Gresham)	30,333
Westside LRT (Portland CDB to Hillsboro)	31,808
North Radial Corridor (Portland CBD to I-5/179th in Clark Co.)	20,790
South Radial Corridor (Portland CBD to Sunnyside)	13,982
Southwest "Barbur" Radial Corridor (Portland CBD to Tigard)	14,559
Hwy 99E Extension (Milwaukie to Oregon City)	4,320
North I-205 Extension (Gateway TC to Airport)	3,641
Vancouver Mall Extension (I-5 to I-205)	4,689

METRO

August 18, 1994

To: Dick Walker

From: Tom Kloster

Subject: Roadway Network for Region 2040 Preferred Alternative - First Draft

The following is an updated listing of projects for modeling the Region 2040 Preferred Alternative roadway network, reflecting the changes detailed in my August 17th memo to you. Each project may include new links, improvements to a combination of several existing links, or both. Capacity indicates the new one-way capacity of the links affected by a given proejct.

* * * * * * *

REGION 2040
PREFERRED ALTERNATIVE

WASHINGTON COUNTY GROUP

No.	Description	Capacity
1	Extension of Bethany Blvd north from West Union to Kaiser Road	700
2	New link from NW 174th across West Union to Laidlaw at Kaiser Rd.	700
3	Add capacity to West Union/Thompson from Jacobson to Saltzman	1200
4	Realign NW Kaiser Rd. to meet 143rd; add capacity north to Laidlaw	900
5	Add new freeway crossing connecting NW 173rd/174th	700
6	Extend Evergreen Parkway to meet Cornell Road	1800
7	Add capacity to 143rd/Cornell from NW Burton to NW 97th	1800
8	New link from NW 119th/Cornell to NW Barnes	900
9	NW 112th extension to Cedar Hills; add capacity north to Cornell	1200
10	Connect Evergreen Rd. to Glencoe; add capacity west from Jackson School	1800
11	Realign Jackson School/Evergreen Road; add capacity north to #12	1200
12	New link from NE Jackson School Rd. to Glencoe Rd.	1200

13	Connect Glencoe and Hornecker roads	700
14	Realign Brookwood/Cornell intersection	1200
15	Extend NW Brogden to Brookwood	500
16	**Delete Western Bypass (incl. interchanges) from US 26 to Hwy 99W**	**n/a**
17	Connect 231st at Baseline to 229th at TV Highway	1200
18	Extend 229th north of Evergreen to Shute Road	1200
19	Connect 229th extension to Cornelius Pass Road	1200
20	Realign Cornell Road/Cornelius Pass Road intersection	2400
21a	Add capacity to Cornelius Pass Road from Quatama to US 26	2400
21b	Add capacity to Cornelius Pass Road from US 26 to West Union	2400
22	NW Comption extension south to SW 205th	1400
23	NW Kehrli Road/Holly Street connection; Cornelius Pass to 185th	2400
24	SW 198th/205th connection	1400
25	Add capacity to SW 206th; Rock Road to NW Kehrli	1800
26	Compton extension; Walker/Cornell intersection to Evergreen Parkway	2100
27	Johnson Street connection; 170th to 185th	700
28	New connection from Baseline/170th to Jenkins	1200
29	SW Beaverdam Road/Alexander Street connection	900
30	Blanton/160th connection from 170th to Farmington	700
31	Realign 160th/Division intersection; extend Division to 6th at Murray	500
32	Realign Davis to meet Allen at Murray	800
33	Extend Western/103rd from B-H Hwy. to Canyon	1800
34	Extend Jamieson north of B-H Hwy. to 91st at Fir Grove	700
35	Increase capacity on Jamieson south of B-H Hwy.	900
36	Extend SW 5th from Western to Jamieson	700
37	Extend Vermont, Oleson to Nicol; improve Nicol/Laurelwood to B-H	900
38	Extend NE 28th from Main to Cypress	1200

39	Increase capacity on NE 28th/25th & Cypress adjacent to project #38	1200
40	Extend SW Teal Blvd. to network from 155th to Old Scholls Ferry	700
41	Extend SW 65th from Nyberg to Childs	1800
42	Realign 99W/Tualatin intersection; extend 124th to Tualatin/Sherwood	1200
43	Extend Lower Boones Ferry to Tualatin Road at Chinook Street	900
44	Increase capacity on 170th from Hart to Farmington	900
45	Increase capacity on West Union from Helvetia to Groveland	900
46	Add capacity to 185th/Springville from West Union to PCC	900
47	Connect NW John Olson to Rock Creek Blvd. over US 26	1200
48	Increase capacity on Cornell from Stucki to John Olson	1050
49	Add capacity to Baseline from Brookwood to 219th	1200
50	Increase capacity on 185th from TV Hwy. to Farmington Road	1200
51	Increase capacity on Jenkins from Murray to Ecole	1400
52	Extend Canyon from to Barnes/Burnside; Increase Burnside capacity	900
53	Realign Scholls to meet Old Schools at SW Davies	900
54	Add capacity to Herman/Tualatin from Cipole to Boones Ferry	900
55	Extend Herman from Cipole to NE Pacific at Roy	900
56	**Restore access at intersections along 99W from Hwy 217 to Bypass**	n/a
57	Add capacity to 99W from Bypass interchange to Cipole Road	3500
58	Add capacity to SW 65th from Childs to Lower Boones Ferry	1800
59	Connect Bangy/Lower Boones Ferry via SW 65th/Roosevelt	1200
60	Add capacity to Bangy from Kruse to Burma	1200
61	Extend Willamina Ave. from Gales Cr. to Susbauer	900
62	Improve Cor.-Schefflin/Kerman/Dersham to US 26	1200
63	Model Susbauer Road from Hwy. 8 to Cor.-Schefflin	700
64	Add Forest Grove Bypass from Hwy. 47 Martin Road	900
65	Add capacity to Hwy. 217 from US26 to Walker	8000

66	Drop capacity on Hwy. 217 from Walker to Canyon	6750
67	Add capacity to Hwy. 217 from Canyon to I-5	6250

CLACKAMAS COUNTY GROUP

No.	Description	Capacity
1	**Add capacity to Foster Road south to Sunrise interchange**	**2100**
2	Extend Johnson Creek Boulevard to SE Idleman	700
3	New connection; Idleman to 129th/Mountain Gate; to 147th/Monner	700
4	Improve Hillcrest to connect to project #3 west of 129th	700
5	Add capacity to Monterey; cross I-205 to connect with new frontage road	1200
6a	[deleted]	
6b	Add capacity to Hwy. 43 from 212/224 crossing to Sellwood Bridge	2400
7	Improve/connect Spring Mountain/Isabels from 122nd to Foster	700
8	Realign 147th/Sunnyside intersection to 142nd	700
9	Extend Mather Road from 122nd to 142nd	700
10	Improve Giese/McKinley from Jenne to 190th	900
11	Improve Butler from Regner to Hogan Road	700
12	Extend Hagen from 172nd to Tillstrom/Bohna Park intersection	700
13	Realign Sunshine Valley/Borges to intersect at 242nd	700
14a	Improve/extend Cheldelin from 190th to Borges west of 222nd	900
14b	Improve Borges from Tillstrom to 242nd	900
15	Improve Towle from Binford to 190th/Tillstrom; realign 190th	900
16	Extend Clatsop from 162nd to Cheldelin at Foster; terminate 172nd	900
17	Extend SE King from 145th to 190th/Tillstrom	900
18	**Delete Concept C Sunrise route; add modified EIS "southern" route***	**4000**

**modified route includes access points at I-205, Rock Creek, 222nd south of Damascus and US 26; new route is in addition to Hwy. 212/224 route, which will function as a parallel route (as modelled in Concept C).*

19	82nd Avenue connection from SE Herbert to Sunnybrook	1800

4	**Add capacity to Mt. Hood Parkway exit from I-84; remove most access***	2400

**Mt. Hood Parkway should be modeled with a single Gresham access point located between Powell and Burnside; other interchanges will be located at the I-84 terminus and the US26 intersection. East of the parkway interchange, US26 will have access at the Sunrise interchange and in Sandy.*

5	Re-connect Sandy Blvd. over I-84; increase capacity east of freeway	900
6	Add capacity to 181st Avenue from I-84 to Stark	2000
7	Add capacity to Binford Parkway from 190th to Towle	900
8	[deleted]	
9	Add Birdsdale Bypass route from 190th/Powell to Glisan	1200
9a	Realign 201st/Bypass/Glisan intersection	1800
9b	Terminate 201st north/south of current intersection w/ Glisan	n/a
10	Extend Binford Parkway from Towle Road to Hogan	900
11	Add capacity to Eastman/Towle from Powell to Binford Parkway	1200
12	Add capacity to Roberts/Regner from Powell to Binford extension	1200
13	Add capacity to 99E from Grand/MLK split to Milwaukie Blvd.	4500
14	Improve to full I-5 interchange at 99W/Tigard	n/a
15	Delete partial interchange at Capitol Hwy	n/a
16	Delete partial interchange at Multnomah Blvd.	n/a
17	Add full I-5 interchange at Terwilliger	n/a
18	Add capacity to Barbur Blvd. from Terwilliger to B-H Hwy. ramps	2400
19	[deleted]	
20	Improve SW Hamilton/6th Drive connection from Barbur to OHSU	700
21	Create full interchange on I-84 at 122nd Avenue	n/a
22	Remove capacity from Hwy. 30 north of Yeon	2400
23	Remove capacity on St. Helens Rd. from 23rd to Yeon	1800
24	Add capacity to Yeon from Nicolai to St. Helens Rd.	2400

cc: *Andy Cotugno*
Richard Brandman
Mike Hoglund
John Fregonese

20	Add capacity to Hogan from Springwater to Hwy. 212	1800
21	Improve/extend Swan Avenue from Holcomb to 82nd at Edgewater	900
22	New link from Meadowview/Redland via Highland to 82nd/Evelyn	900
23	Extend S. Holly from Redland to Swan Ave./Holcomb	900
24	Improve/connect Hilltop /Beaton from Holcomb to Clackamas River Dr.	700
25	Increase capacity on Hwy. 224	2400
26	Increase capacity on Carver Bridge	1800
27	Extend S. Morton from Division to Redland Road at Meadow View	900
28	Add capacity to Hwy. 213 south of Molalla Ave. junction	1200
29	[deleted]	
30	[deleted]	
31	[deleted]	
32	[deleted]	
33	[deleted]	
34	[deleted]	
35	[deleted]	
36	[deleted]	
37	Add capacity to Tillstrom from Foster to 242nd	1200
38	[deleted]	
39	**South Willamette Crossing at 99E/Harrison to Highway 43**	**1300**
40	Add capacity to Highway 43; S. Crossing to Sellwood Br.	2400

MULTNOMAH COUNTY GROUP

No.	Description	Capacity
1	Create full interchange on I-5 at Columbia Boulevard	n/a
2	Create new zone connection; west Airport area to NE 33rd	n/a
3	Create full interchange at 82nd/Airport Way	n/a

Publications List - Region 2040

Technical Reports

Region 2040 Recommended Alternative Decision Kit, September 1994. Metro.
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Water Descriptive Indicators: Final Report, April 1994. ECO Northwest and CH_2MHill
2040 Indicators: Housing and Employment, April 1994. ECO Northwest
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Region 2040 Interim Report, January 1994, Metro.
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Mixed-Use Urban Centers: Economic and Transportation Characteristics, February 1993. Cambridge Sytematics and Parsons Brinckerhoff Quade & Douglas, Inc.

Region 2040 Public Involvement Summaries/Results

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Summary of Round 2 of Public Involvement, January 1993. Cogan Sharpe Cogan and Pacific Rim Resources.
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Surveys

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Region 2040 brochures/tabloids

Region 2040 Decisions for Tomorrow "You Said It" Update, Fall 1994. Metro.
"It's Your Turn" tabloid mailier, June 1994. Metro.
Decisions for Tomorrow: Region 2040 Update, Fall/Winter 1993. Metro.
Decisions for Tomorrow: Region 2040 Update, Spring 1993. Metro.
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Policy and Other

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Oregon's Statewide Land Use Planning Goals, 1993 Edition. Department of Land Conservation and Development.
Picture This...The Results of a Visual Preference Survey, June 1993. A. Nelesen Associates, Inc.
1992 Metro Charter, November 1992. Metro.
Oregon Benchmarks, December 1992. Oregon Progress Board.
Ten Essentials for a Quality Regional Landscape, 1992. Metro.
Regional Transportation Plan, January 1992 Revision of the 1989 Update. Metro.
Regional Urban Growth Goals and Objectives, September 1991, Metro.
Historical Development of the Metropolitan Service District, May 1991 by Carl Abbott for the Metro Charter Committee.

For copies of the above documents, please contact Barbara Duncan at 797-1562.

BD h:thelist
11/94

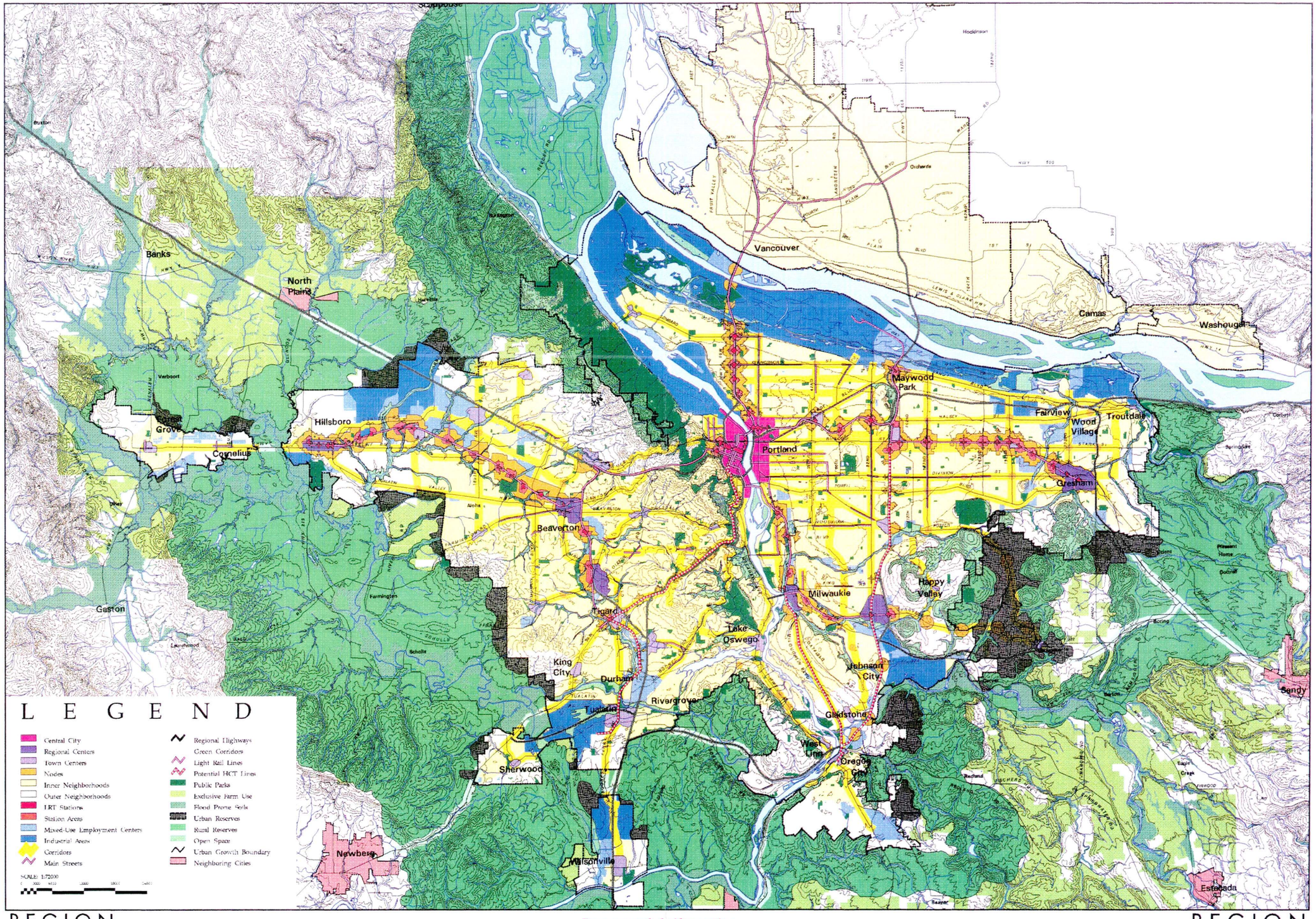
Metro Council Meetings on Executive Officer Recommendation on Region 2040 Growth Concept

Metro Council	
Executive Officer Recommendation	September 22, 1994
Metro Planning Committee	
Background Briefing	September 29, 1994
Background Briefing	October 6, 1994
Metro Planning Committee Public Listening Posts	
Milwaukie	October 18, 1994
Portland	October 19, 1994
Hillsboro	October 20, 1994
Beaverton	October 25, 1994
Gresham	October 26, 1994
Metro Council	
Advisory Committee Presentations	November 10, 1994
Metro Planning Committee Work Sessions	November 17, 1994
	November 21, 1994
Metro Council Public Hearing	November 28, 1994
Metro Council Work Session	December 1, 1994
Metro Council Meeting	December 8, 1994

Metro Region 2040
Summary of Public Involvement Activities

Random Sample Telephone Survey (405 residents of region)	April, 1992
Metro Regional Growth Conference (704 participants)	April, 1992
Stakeholder Interviews (52 interviews)	April - May, 1992
Local Government Workshops (80 participants)	May, 1992
Regional Public Workshops (67 participants)	June, 1992
Local Government Conference on Alternatives (50 participants)	August, 1992
Public Open Houses (130 participants)	October, 1992
Interest Group Briefings (13 briefings)	October - November, 1992
Citizen Involvement Committee Presentations (14 presentations)	October - November, 1992
Cable Call-In Show	November, 1992
Focus Group Survey (50 participants)	December, 1992
Spring, 1993 Newsletter Mailed (12,572 mailed)	June, 1993
Community/Special Events Begins (24 events)	July, 1993 (July, 1993 - October, 1994)
Speaker Bureau Begins (more than 100 speaking engagements)	July, 1993 (July, 1993 - October, 1994)

Citi-Speak II Telephone Survey (399 respondents)	September, 1993
Fall, 1993 Newsletter Mailed (20,812 mailed)	October, 1993
Metro Regional Growth Conference & Public Forum (584 attendees)	October, 1993
Regional Design Images Open Houses (333 participants)	November - December, 1993
Student Congress (32 students)	January, 1994
Local Government Briefings (29 jurisdictions briefed)	March - May, 1994
Youth Involvement Project (600 students submitted projects)	March - June, 1994
Region 2040 Phone Hotline Begins (More than 700 comments or requests)	May (June - July, 1994)
Tabloid with Questionnaire Mailed (mailed to each household in region; more than 17,000 returned)	June, 1994
Video Distributed (About 4,000 checked out at Blockbuster Video stores; also available at public libraries and broadcast on cable television)	June, 1994
Public Open Houses (600 attendees)	June, 1994
Stakeholder Interviews (45 interviews)	June - July, 1994
Local/Regional Government Briefings (28 jurisdictions)	September - October, 1994
Fall Newsletter Mailed (43,106 mailed)	October, 1994



REGION 2040
Decisions for Tomorrow

Recommended Alternative

ANALYSIS OF GROWTH CONCEPT

REGION 2040
Decisions for Tomorrow

Exhibit D Work Plan Directions

Work Plan Directions for 1995

The Metro Council directed staff to include the following in a Growth Management work program for 1994-1995 as the Growth Concept is reviewed, and as the Regional Framework Plan is developed during the ensuing years. These are specific issues generated from the amendment requests as well as broader Metro Council concerns.

. Review with Portland the Bridgton and East Columbia neighborhoods in refinement of Growth Concept map.

. Study greenspace designations in Columbia Corridor for conflict with industrial zoning.

. Study proposal for replacing Murray Hill Town Center with a main street.

. Analyze rural reserves for enforcement or implementation.

. Study whether UGB expansion in urban reserves can be linked to minimum density goals within adjacent areas of the UGB.

. Refine Cedar Mill Town Center designation, considering desire for both main street designation and town center designation.

. Study Wilsonville Town Center designation and the definition with respect to the Wilsonville town center definition.

. Study Wilsonville employment area, north of Boeckman, east of I-5 for residential compatibility.

. Study North Plains as a neighbor city.

. Study park deficiencies in the region as a whole.

. Study open space designations along small stream corridors in the region.

. Add business community to advisory committees.

. Provide 2015/2020 forecasts.

. Consider potential for growth on the edge of the region, for use of industrial lands, and land use requirements in employment areas provided these are consistent with Growth Concept performance measures; complete in first six months.

. Study the need for industrial land/employment land in Clackamas County, considering sub-regional jobs housing balance.

. Study the guidelines for retail in Employment Areas as opposed to corridors and centers.

. Include Greenspaces Masterplan Trail System and private electric utility easements in the Regional Framework Plan open space component.

. Study Raleigh Hills town center as a main street designation.

. Study all potential regional centers for regional need and feasibility, as well as potential phasing.

. UGB amendment proposals submitted to Council by Bollam, Tsugawa, Land Development Consultants, and Byer, need to be considered as part of any future legislative amendments - including Periodic Review and expansion into urban reserves.

. Study the alternative corridors and main street designations in the Growth Concept, including deletions. Also, consider the relationship of the primary transit network to corridors/main streets and vice versa.

. Study how to meet the Transportation Planning Rule mandates.

. RTP note: do not model the SW Vermont St. extension in Washington County during the RTP update since it is unrealistic because of environmental constraints.

. Consider targets for non-auto mode splits, such as walk, bike and transit.

. Study the alternative corridors and main street designations in the Growth Concept, including deletions.

. Study an east-west corridor designation from Happy Valley to Sellwood in northern Clackamas County.

. Analyze ways to monitor progress with regard to redevelopment, infill, underbuilding and other critical factors relating to the implementation of the Growth Concept.

. Analyze the uses of public policy and investments could be used to encourage the development of housing in locations near employment that is affordable to employees. Where transportation policies can be used to encourage affordable housing, this should be analyzed as well.

. Study Metro policies which would facilitate, encourage and where necessary mandate affordable housing opportunities.

. Consider the economic impacts of the Growth Concept, including housing choice, affordability, and regionai competitiveness.

. Analyze the detailed City of Sherwood proposais and incorporate them in the refined Growth Concept Map.

. Examine the use of a watershed management approach in refining the Growth Concept and preparing the Regional Framework Plan.

Exhibit E Referrals to MPAC

Issues Referred to MPAC

The following list of issues are referred to the Metro Policy Advisory Committee for their review and comment. These issues are primarily proposals to change the Regional Urban Growth Goals and Objectives (RUGGO). As these proposed changes were received after MPAC consideration of the Growth Concept, the Metro Council would like to consider MPAC recommendations before taking action on these proposals.

The issues for MPAC consideration should include those mentioned in Resolution 94-2040 Item #3 and Exhibit "D" (refinement and work program activities like - analysis of infill and redevelopment, urban reserves, 2015 forecasts, Future Vision recommendations, urban form, etc.), as well as the following:

1. Consider new RUGGO policy on investment in existing neighborhoods, establishing a new RUGGO objective "Maintaining Urban Liveability". (CL562-565 Coalition for a Livable Future, CL193 1000 Friends[1])

2. Consider adding six principles for guiding urban growth to the RUGGO introduction/preamble (summarized as: tight UGB, mixed use regional centers, greenspaces, emphasize non-auto modes, social equity and housing, and a partnership process). (CL704 STOP)

3. Amend RUGGO with regard to watershed management, critical natural areas, water quality, water resources, air quality, natural areas, parks and wildlife habitat. (CL691-694 Audubon, F4-5 #2 Future Vision Commission, CL 276 Leeper, CL322 Adamson, CL 465 and CL 636 Oregon Environmental Council, CL 493 Bureau of Environmental Services, CL 571 Coalition for a Livable Future, CL 585 Weaver)

4. Amend RUGGO Objective 18, Urban Growth Boundary, limiting urban reserve designation to rural exception lands and resource lands surrounded by exception lands, and amending the UGB expansion criteria. (CL185 1000 Friends, F7 #1 Future Vision Commission)

5. Consider stronger housing affordability language in amending RUGGO Objective 12, including mandates, specific goals for low and moderate income housing for each jurisdiction, and fair share requirements. (CL191 1000 Friends, F4 #1 Future Vision Commission)

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[1]Reference to proposed Council amendments are noted in parentheses.

6. Consider adding "sustainability" language to RUGGO. Includes issues of: ecological integrity, economic viability, social equity, efficient materials and energy use, sustainable industries and practices supporting local communities, recovering infrastructure and service costs, and decision making that is a full integration of social, ecological and environmental issues. (CL521 Sustainable Oregon, CL566 Coalition for a Livable Future, CL585 Weaver)

7. Consider a new RUGGO objective, "Cultural Programs and Facilities". (CL531 Metropolitan Arts Commission)

8. Consider adding the business community to MPAC membership. (CL55 FutureFocus L.C.C., CL681 Orchard)

9. Consider changing the RUGGO to change the review period for the RUGGO, the Concept Map, the Regional Framework Plan and any functional plans to between 5 and 7 years.

10. Consider amending the RUGGO to specifically include the Greenspace Masterplan Trail System.

Acknowledgements

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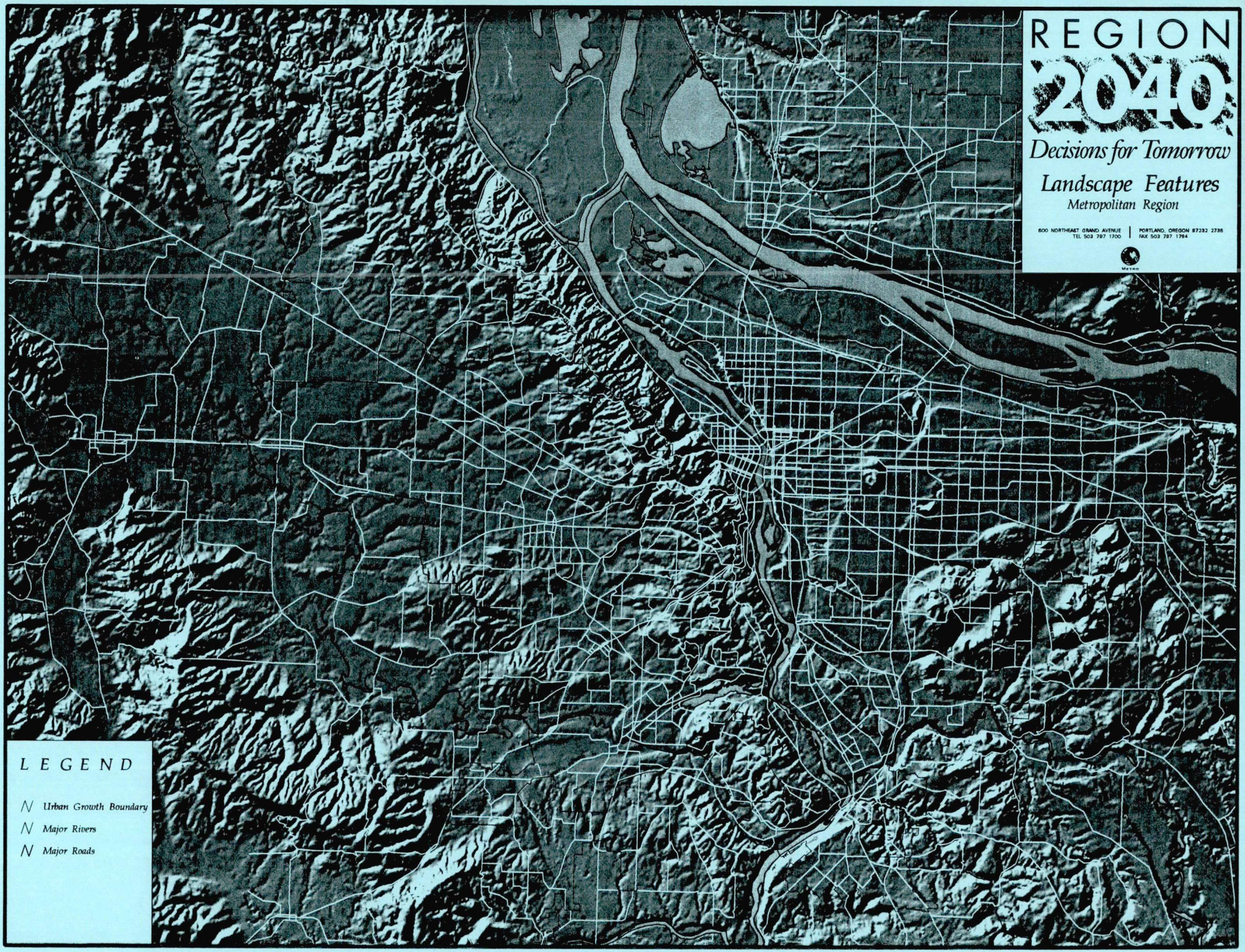
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