A G E N D A

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SHERRIE BLACKLEDGE
PLANNING DEPARTMENT
METRO
FULL PACKET

METRO

JOINT MEETING: **METRO POLICY ADVISORY COMMITTEE, JOINT POLICY ADVISORY COMMITTEE ON TRANSPORTATION and FUTURE VISION COMMISSION**

Date: July 27, 1994

Day: Wednesday

Time: 5:00 p.m. - 7:00 p.m.

Place: Oregon State Building,
800 NE Oregon Street (1 block from Metro), Room 120 C, 1st floor.
** ***Please note location*** **

AGENDA

I.	Process and timeline, overview	5 minutes
II.	Region 2040 Concept Report	10 minutes
III.	Region 2040 Public Involvement · survey response	20 minutes
IV.	Descriptive Indicators	15 minutes
V.	Preferred Alternative	60 minutes
VI.	Slideshow by the "Transformers" group on the Preferred Alternative	10 minutes

Call 797-1562 if you have any questions or to correct our mailing list.

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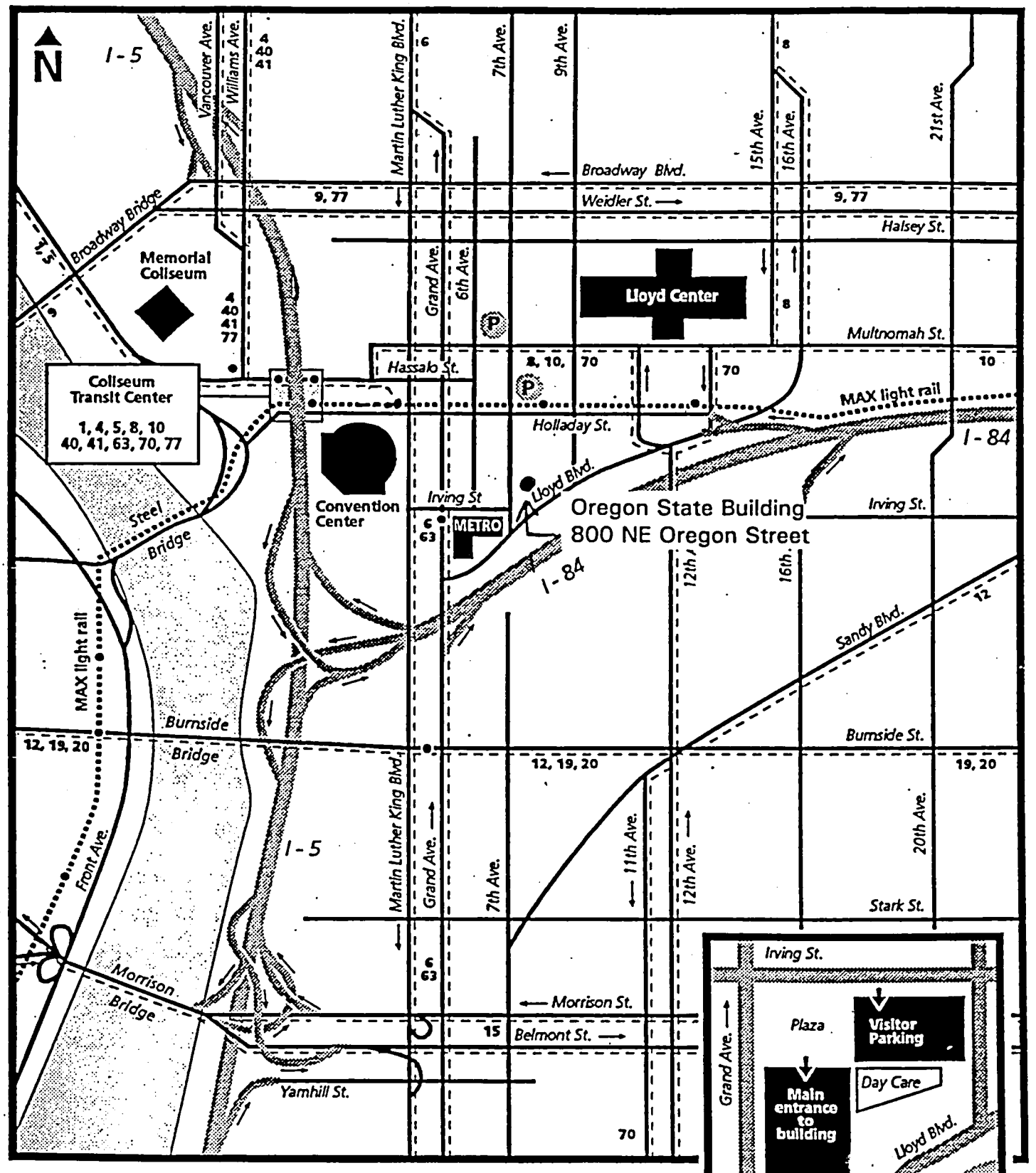

Legend

- = bus route
- = freeway
- 70 = bus number
- = max
- = street
- = bus/max stop
- (P) = public parking; $2 half day, $4 full day

METRO

Enter Metro visitor parking from Irving Street (time limit 4 hours per visit). Enter Metro Regional Headquarters from the plaza.

M E M O R A N D U M

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METRO

To: Metro Policy Advisory Committee, Joint Policy Advisory Committee on Transportation and Future Vision Commission Members and Interested Parties

From: John Fregonese, Growth Management Manager

Date: July 19, 1994

Re: Region 2040 Concept Report

Due to printing delays the final Concept Report was not available in time for this mailing, copies will be available at the meeting on the 27th. We apologize for this inconvenience.

M E M O R A N D U M

METRO

Date: July 20, 1994

To: John Fregonese, Growth Management Manager

From: Sherry Oeser, Senior Public Involvement Specialist

Re: Preliminary Results of Region 2040 Public Involvement Effort

The following is a summary of our recent Region 2040 public involvement efforts and their preliminary results.

Tabloid Questionnaire:

Of the 503,000 tabloids sent to each household in zip codes wholly or partially within the Metro boundary 16,771 questionnaires were returned, a 3.33 percent response rate. In other governmental planning program direct mail efforts that I am aware of the response rate has been lower, with an average 1.9 percent response rate. Of all of the questionnaires returned 1,781 (10.6%) were sent by fax and over 100 came in on the telephone hotline. Not only did people respond to the four questions listed in the questionnaire, but a significant portion, close to two-thirds, included comments and suggested other actions to consider.

Preliminary numbers on the four questions are attached (note that about 200 surveys must still be processed). Pacific Rim Resources is in the process of analyzing these responses by zip code and I hope to have more detailed information next week about the results. In addition, we are in the process of coding all of the comments. Once the coding is completed, an analysis of the responses will be made. To date, and this is very preliminary, the most frequently mentioned comments include 1) more bike paths; 2) more, better, or safer transit; 3) hold the urban growth boundary; 4) more parks/open spaces; 5) save farms; and 6) consider parking structures.

Hotline Calls:

Nearly 700 people called the hotline telephone number (797-1888) to request information or to make comments. A transcription of those comments is available to anyone who requests it and will be provided to the Metro Council and other policymakers. The hotline will remain operational for at least the next two months and the script will be updated as necessary.

Open Houses:

About 600 people attended the eight open houses held throughout the region. The feedback we received from those attending was very positive. People appreciated the informal nature of the open houses, the opportunity to write comments on a variety of issues, and the chance to talk to staff and decision-makers. Cogan Owens Cogan is preparing an analysis of the small group discussions and the written comments received.

Video:

The video is being broadcast on area cable stations. It will run six times on Portland Cable Access and five times on Tualatin Valley Community Access as well as on Multnomah Community Television and Willamette Falls Television. In addition to the scheduled showings, these cable access stations will use the video as "fill" programming.

Information from the 12 Blockbuster Video stores and public libraries is sketchy at best. Some Blockbuster stores are aggressively marketing the Region 2040 video and keeping track of the number of people who borrow it, while other stores are not. I do know that at one Blockbuster store, over 120 people borrowed the video. I will continue to be in contact with both Blockbuster and public libraries to try to get a better count.

Stakeholder Interviews:

Another part of our public involvement effort was to identify 50 people from throughout the region from business, civic, community, and professional groups to discuss in more detail Region 2040 and to obtain their input. The interviews have now been completed. Pacific Rim Resources is analyzing the responses and will be submitting results in the next week.

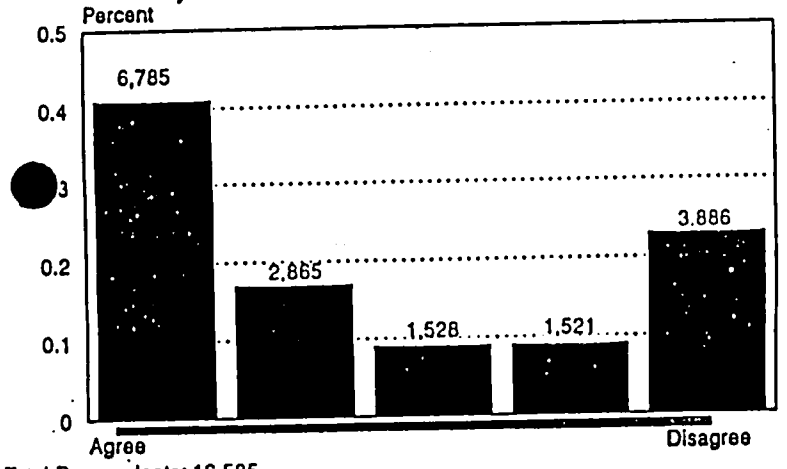
Youth Involvement:

In March, all public, private and home schools in the tri-county area received information packets including multi-disciplinary classroom project ideas in an attempt to involve the youth of the region in Region 2040. More than 600 elementary, middle, and high school students submitted projects ranging from a rap song, to essays, maps, models, plays, drawings, and diaries. For their effort, each student received a "Metro Futurist" frisbee paid for through the generosity of Cellular One, the Naito family, Northwest Natural Gas, and Portland General Electric.

Region 2040 Questionnaire
Preliminary Results

Question 1:

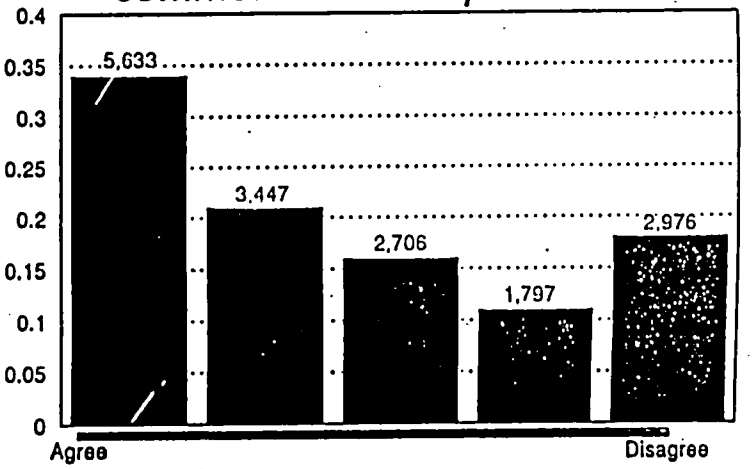
Should we reduce the average new residential lot size from the current 8,500 down to 7,000 sq ft?



Total Respondents: 16,585

Question 2:

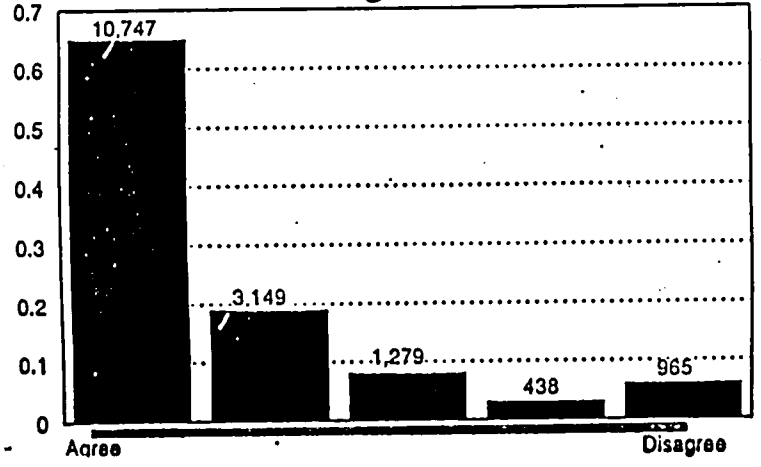
Should we decrease the number of parking space allowed for retail and commercial developments?



Total Respondents: 16,550

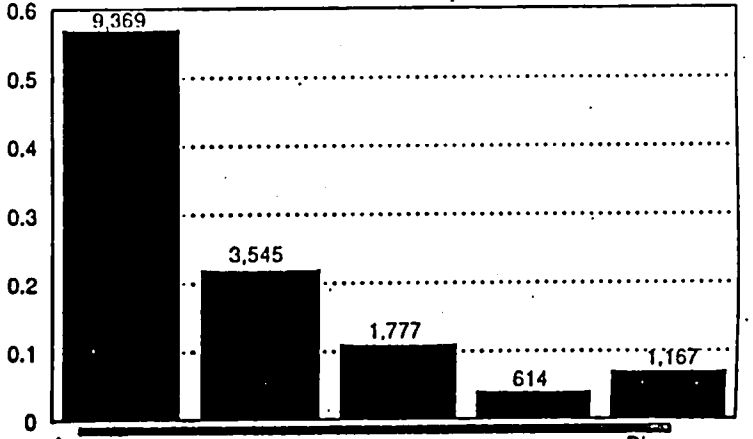
Question 3:

Should we increase the amount of residential and retail development along bus lines and light rail stations?



Question 4:

Should we encourage more growth in city centers and the redevelopment of land for more compact use?



Total Respondents: 16,472

MEMORANDUM

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METRO

To: MPAC Members and Interested Parties

From: John Fregonese, Senior Manager

Date: July 20, 1994

Subject: How We Measure Regional Growth Alternatives

As you may recall, at the January 12, 1994 MPAC meeting, a review was completed of a matrix showing the methods that MPAC preferred to use when evaluating the growth concepts (attached).

Also attached is a matrix filled out by Metro staff. Many of the methods/approaches were able to be used. However, there were some that could not be completed because of technical difficulties. Following is an accounting of the data we were able to collect and a comparison to the MPAC list.

1. Air Quality

Attached are two charts which show projections of air quality for Volatile Organic Compounds (VOC) and Oxides of Nitrogen (NOx). These are pollutants for which future likely pollution levels can be forecast and which have regional implications (CO, carbon monoxide, can also be forecast but it affects very small portions of the region and has local solutions). Emission sources are separated into four categories, point sources (like smokestacks from industries), area sources (such as emissions from house painting), non-road sources (from off-road vehicles, boats, etc.) and road vehicles. For the year 2040, the Base Case is the last bar on the chart and the difference between the Base Case and Concepts A, B and C from road generated sources are shown as lines and percentages. The horizontal line is the Federal Air Quality standard.

From these charts, we can deduce the following about VOC's: 1) air quality will get better for the next few years as air quality improvement strategies are implemented; 2) car emission performance will have a dramatic effect in reducing VOC emissions out to the years 2004-2005; 3) after 2005, total VOC's are likely to exceed Federal Air Quality standards and; 4) the differences between the Base Case emissions and the other growth concepts is very small even when considering road generated sources only. Perhaps the overall differences between concepts is not significant when it is considered that we are projecting out 50 years.

For NOx, it can be concluded that: 1) improvements in auto emissions will improve air quality from present conditions until the year 2004; 2) Federal standards for NOx are likely

to be exceeded again by the year 2005 and; 3) there are some differences between the Base Case and growth Concepts A, B and C, but given the length of the projection, dramatic differences between the concepts is not clearly demonstrated.

2. Employment

MPAC 's matrix included two measures for employment consideration. One was acres of land available and zoned for employment. This is a difficult factor to measure for several reasons. First, a substantial amount of employment was assumed to be accommodated in areas allowing mixed use development. The measure of acres exclusively devoted to employment is less than the total number of acres which could develop some employment uses. For example, in some areas where transit service is good, buildings could have retail commercial on the ground floor, office uses above and residential above that. The second complication is that in order to provide for open spaces, between 3,000 and 5,500 acres were subtracted from all employment land inventories. Nevertheless, the Concepts assumed the following acres for development of new employment:

	Concept A	Concept B	Concept C
Industrial (Light and Heavy)	26,104	16,532	25,656
Industrial (mixed use)	3,371	2,304	3,828.5
Commercial	8,228	7,013	8,925

As all concepts accommodated the same number of jobs, the difference in employment accommodated by Concept B is the employment allowed in mixed use centers and planned unit developments. A graphical representation of this data is provided in the attached chart as well.

As a result, we concluded that Concept B would have more land intensive employment uses than either Concept A or C. This is reflected in the MPAC Most Important Measures matrix.

3. Social Stability

The MPAC matrix lists "percent of population that lives in areas of high employment and low crime". Although we met with law enforcement officials of the region and did a literature search about crime, there was no reliable method of estimating where areas of high

crime might be in the future. However, law enforcement officials did have several observations about the growth concepts. First, they indicated that the Base Case was much too dispersed a land use pattern to allow cost effective and timely life/safety response times. In addition, they concluded that density alone was not a factor in considering crime, although employment, income, age and similar characteristics were relevant. They indicated that Concepts A, B and C could probably be accommodated, but that Concepts B and C, where response times were likely to be lower, could be best accommodated. They also indicated that areas with a sense of community and good urban design that allowed for public surveillance of streets were likely to have lower crime rates. All of this data is available in greater detail in the report "Creating and Using Descriptive Indicators: Non Quantifiable Issues" prepared by Pacific Rim Resources.

4. Housing

An econometric model of the region's housing market was constructed by Eco Northwest. The results of this work effort to assess the impact of the regional growth alternatives on housing is documented in the document "Region 2040 Indicators: Housing and Employment". However, the basic thrust of the analysis indicates areas within the region where demand for housing is greater or less than assumed supply. However, as the regional supply was designed to accommodate the regional forecast for demand, there is no overall housing problem that can be identified. Although forecasts of income for the region suggest that incomes will rise when compared with today's income (even when adjusting for forecasts of inflation), there is no reliable means of linking income forecasts with housing costs on a long-term (50 year) basis. A similar problem exists with forecasting the "percent of households that can afford the median priced home" (purchase or rental).

However, there are readily available data about the percentage of single family and multi-family homes that could be provided. These data are calculated from the amount of land made available for various residential densities and there is a rough approximation between lower densities and single family homes. However, single family detached homes can be built at densities approaching 12 to 16 units per acre, which are categorized for the purposes of this analysis as multi-family densities.

5. Transportation

Average vehicle miles travelled per capita, mode split and congested roadways were calculated by Metro's transportation model using the assumptions developed for the growth concepts. However, facility costs were not calculated at this time for two reasons. First, construction techniques and costs are likely to change substantially over the project time horizon. In addition, we have found that some of the facilities that were modeled are not likely to be needed and could give a false impression of costs. Accordingly, local share/obligation forecasts were not able to be calculated.

6. Density

All requested density calculations were completed with the exception of the density and crime considerations. See social stability section, above.

7. Parks and Open Space

The number of acres of open spaces assumed to be set aside within the present UGB were part of the assumptions that were developed for the growth concepts and reflected in the matrix. However, an estimate of open spaces outside the present UGB was not prepared, as land use designations were not done for any of the future urban lands. Per capita data were therefore not calculated.

8. Sense of Place

Sense of place and community is a factor that has been named in many different forums as an important consideration for building and keeping a livable region. Measures have been suggested which include consideration of the proximity of people to such things as parks, schools, transit service, community meeting facilities and bike paths. However, there are some of these elements for which location specific predictions are not possible. For example, if the measure of sense of place/community were to include counting all residential units within 1/2 mile of a school, we could only count those schools presently built - or for which land had been purchased. New areas which will develop and for which school sites will be located are not possible to predict at this detailed level. So consideration of this factor is limited to those portions for which we can not only predict where residential development is likely to occur, but also where the public facility or service is likely to be provided. The one component of this measure for which we have predicted both is transit service. The transportation model in conjunction with our RLIS geographic mapping capabilities allows estimation of the number of people served by transit and this factor is included within the description of each growth concept.

Accordingly, the availability of transit to homes and work places in the year 2040 is estimated to be as follows:

Homes and Jobs Close to Transit Service

	1990	Concept A	Concept B	Concept C
Percent of Households within 1/4 mile of busline or 1/2 mile of LRT	65%	49%	62%	58%
Percent of Employment within 1/4 mile of busline or 1/2 mile of LRT	65%	83%	86%	83%

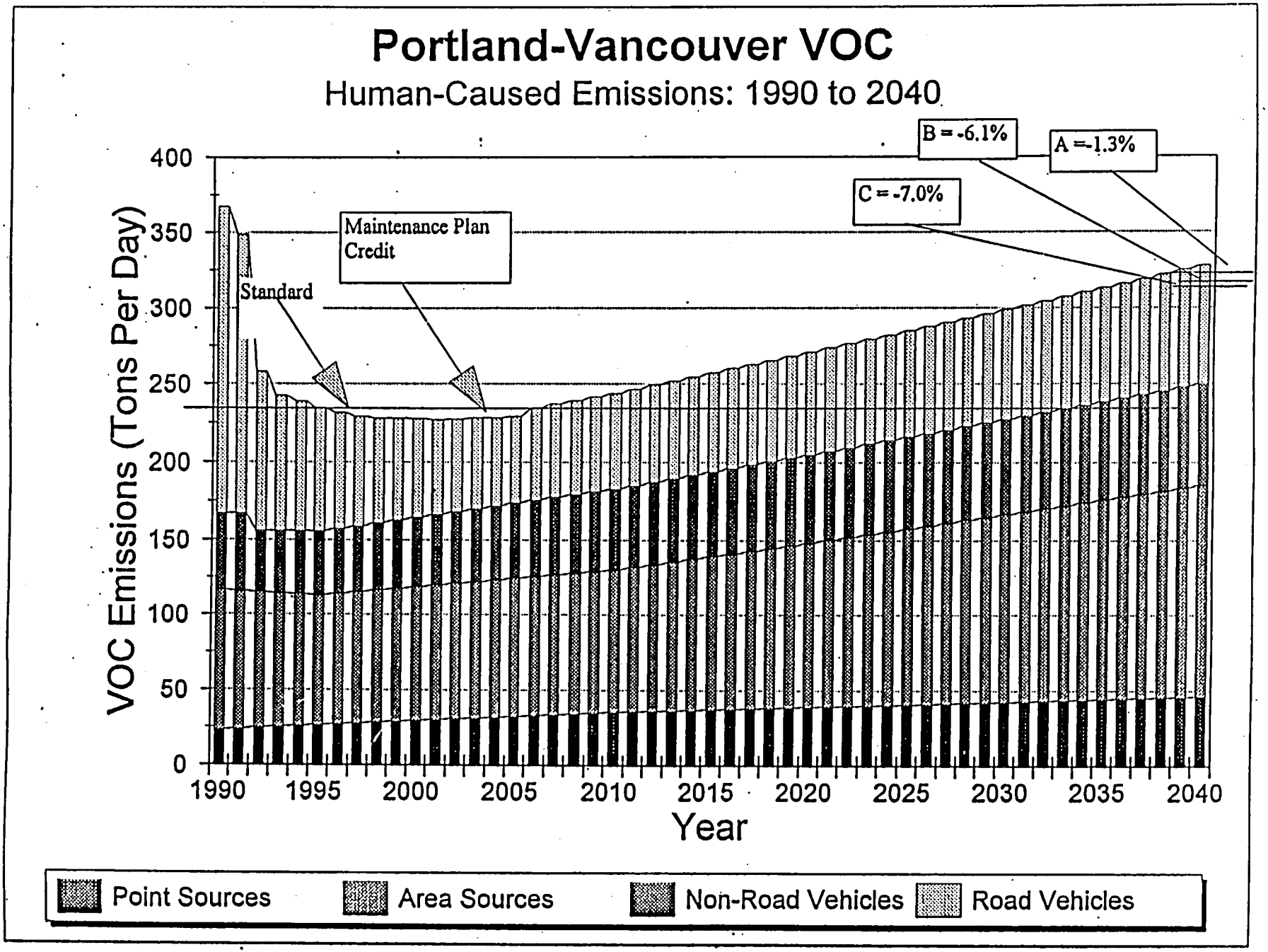
9. Location of Growth

All of the statistics for this category were able to be forecast with the exception of the percent of growth accommodated by infill. Although it is commonly understood what infill means, it is difficult to distinguish between vacant land development that may be adjacent to developed areas and infill projects.

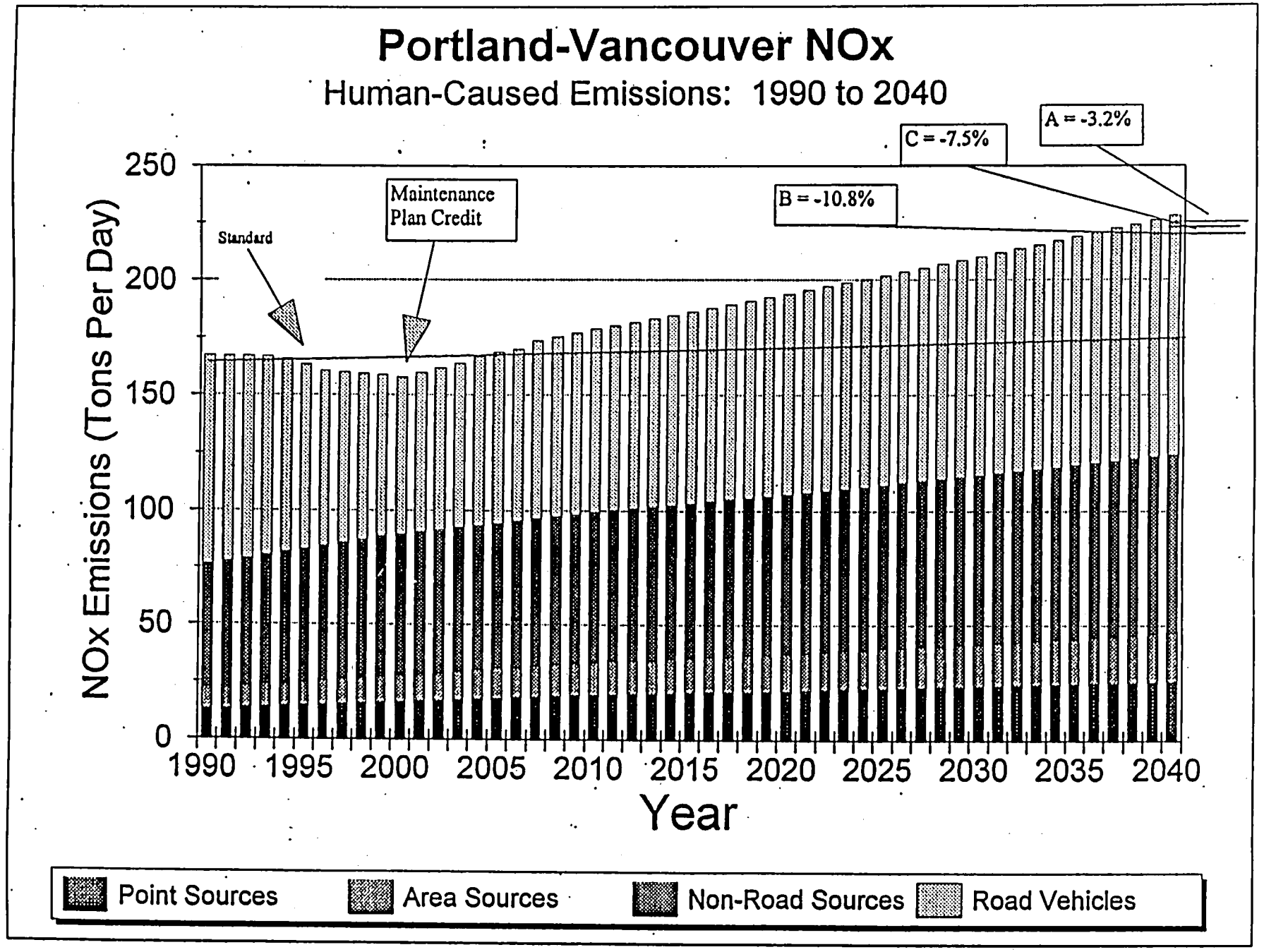
10. Public Facility Costs

The figures for sanitary sewer, drinking water and stormwater costs are documented in "Water Descriptive Indicators" prepared by CH2M Hill and is the result of work done by the sanitary sewer, water and stormwater sewer providers of the region. Actual costs for the year 1993 were provided and relative costs for the year 2040 were determined. Sanitary and stormwater costs are not separated out as the agencies do not separate costs by function.

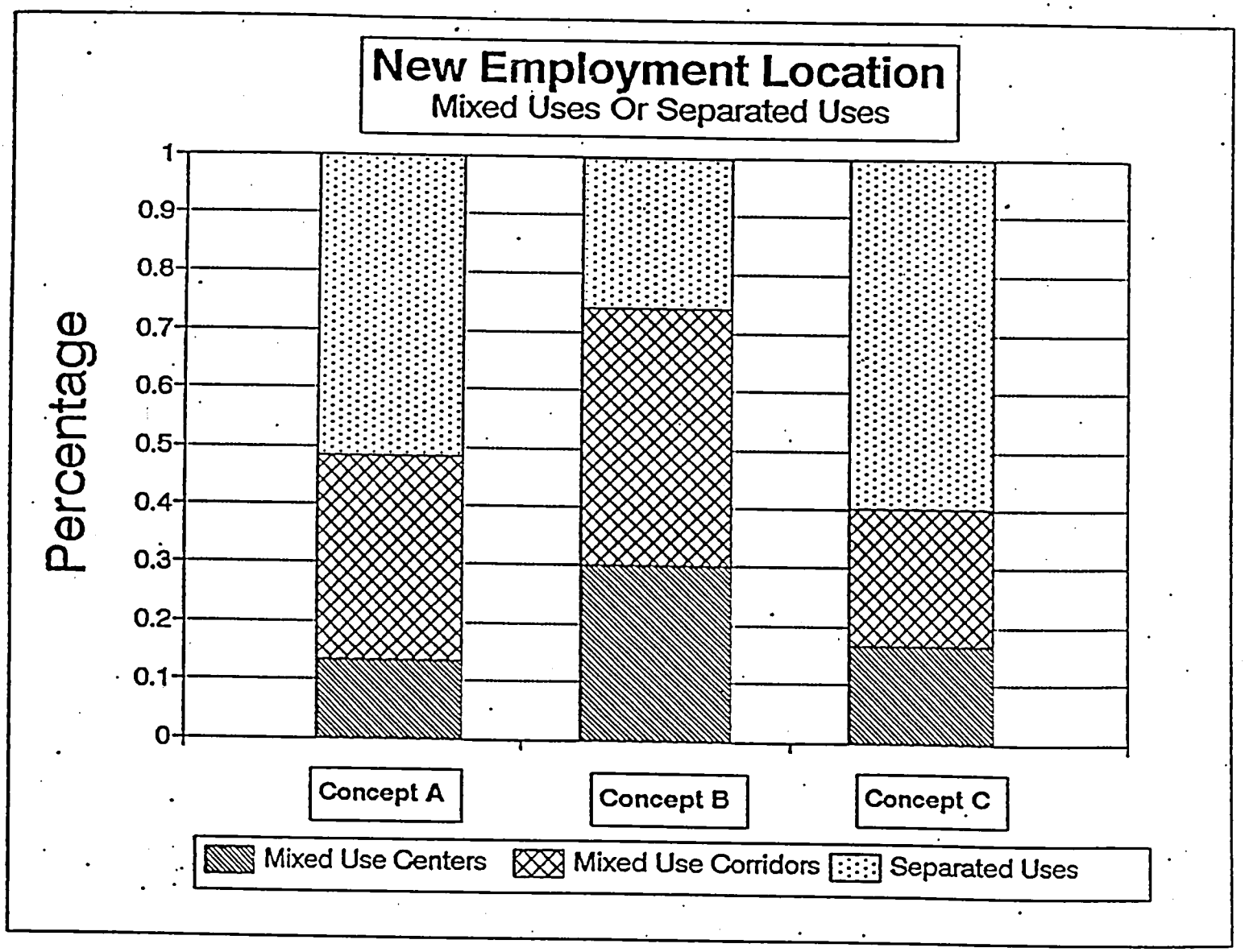
I hope that this explains how we evaluated the concepts. We should note that while it was difficult to evaluate some of these factors in a comparison of concepts, many are very appropriate to establish as goals to reach. The establishment of benchmarks at this point is a very important step, where we are establishing measures of performance, rather than measuring forecasted models.



A = -1.3%; B = -6.1%; C = -7.0% under the 2040 On-Road Base Emissions.



A = -3.2%; B = -10.8%; C = -7.5% under the 2040 Base


New Employment Location
Mixed Uses Or Separated Uses
Percentage
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Concept A
Concept B
Concept C
Mixed Use Centers
Mixed Use Corridors
Separated Uses

Redevelopment Assumptions Used In RLIS

Concept A and Concept C

Redevelopment Criteria:	Improvement Value	Parcel Size (Acres)	Neighborhood Income
Residential	$20,000 or less	.10 acre or greater	$20,000 or greater
Employment	$30,000 or less	.25 acre or greater	(no income criteria)

Concept B

Redevelopment Criteria:	Improvement Value	Parcel Size (Acres)	Neighborhood Income
Residential	$30,000 or less	.10 acre or greater	$20,000 or greater
Employment	$40,000 or less	.10 acre or greater	(no income criteria)

RLIS (Regional Land Information System) applies criteria to tax assesor's data and adds this land to developable land supply.

b:\Table111

Most Important Measures - Region 2040

Quality	Measure(s)	1990	Base Case	Concept A	Concept B	Concept C
1. Air Quality	- Auto emissions (compared with latest Fed. std.). - Non auto emissions (compared with latest Fed. std.).					
2. Employment	- Acres of land available & zoned for employment. - Likely employment emphasis (land extensive, like warehousing, or land intensive, like office, etc.).					
3. Social Stability	- Percent of population that lives in areas of high employment and low crime rate					
4. Housing	- Percent of households below median income spending less than 30% of household income on housing. - Percent of households that can afford the median priced homes (sf & mf). - Single Family/ Multi-family split.					
5.Transportation	- Average vehicle miles traveled per capita. - Mode split. - Auto/transit/other - Percent of roadways congested at peak hour - Road costs/ Transit costs - Pedestrian/bike costs - Local share/obligation					
6. Density	- Average number of people per square mile. - Density and crime considerations. - Acres of land consumed. (ag/exception)					
7. Parks & Open Space	- Acres of parks/open space publicly protected/owned inside existing UGB. - Acres of parks/open space publicly protected/owned outside existing UGB. - Acres of parks/open space per capita.					
8. Sense of place/ Community	- Percent of population within 1/2 mile walk of: parks/open space, transit service, elementary school, neighborhood commercial, community meeting facility and bike path. - Downtowns of the region viability as measured by job & hh growth					
9. Location of Growth	- Percent of growth accommodated within existing Urban Growth Boundary. - Percent of growth accommodated by redevelopment (land recycling). - Percent of growth accommodated by infill.					
10. Public Facility Costs	- Sanitary sewer costs. - Drinking water system costs. - Stormwater drainage costs. - Solid waste facility lands					

Matrix as approved by MPAC

Most Important Measures - Region 2040

Quality	Measure(s)	1990	Base Case	Concept A	Concept B	Concept C
1. Air Quality	- Auto emissions (compared with latest Fed. std.).		] See			
	- Non auto emissions (compared with latest Fed. std.).		] Chart			
2. Employment	- Acres of land available & zoned for employment.		see memo			
	- Likely employment emphasis (land extensive, like warehousing, or land intensive, like office, etc.). (see chart)	Land Extensive	Land Extensive	Land Extensive	Land Intensive	Land Exten:
3. Social Stability	- Percent of population that lives in areas of high employment and low crime rate		see memo			
4. Housing	- Percent of households below median income spending less than 30% of household income on housing.		see memo			
	- Percent of households that can afford the median priced homes (sf & mf).		see memo			
	- Single Family/ Multi-family split.	69/31	70/30	74/26	60/40	64/36
5.Transportation	- Average vehicle miles traveled per capita.	12.4	13.0	12.5	10.9	11.9
	- Mode split. - Auto/transit/other (walk/bike)	92/3/5	92/3/5	91/4/5	88/6/6	89/5/6
	- Percent of roadways congested at peak hour	5%		19%	21%	12%
	- Road costs/ Transit costs	see memo				
	- Pedestrian/bike costs	see memo				
	- Local share/obligation	see memo				
Density	- Average number of people per square mile.	5700	5,100	6,300	7,900	5,900
	- Density and crime considerations.	see memo				
	- Acres of land consumed. (ag/exception)	n/a	64,000/38,000	17,000/35,000	0/0	11,000/12,0
7. Parks & Open Space	- Acres of parks/open space publicly protected/owned inside existing UGB.			4,500	7,000	4,500
	- Acres of parks/open space publicly protected/owned outside existing UGB.	n/a	n/a	n/a	n/a	
	- Acres of parks/open space per capita.	n/a	n/a	n/a	n/a	
8. Sense of place/ Community	- Percent of population within 1/2 mile walk of: parks/open space, transit service, elementary school, neighborhood commercial, community meeting facility and bike path.	n/a	n/a	n/a	n/a	n/a
	- Downtowns of the region viability as measured by job & hh growth	n/a	lowest	moderate	high	high
9. Location of Growth	- Percent of growth accommodated within existing Urban Growth Boundary.	100%		87%	100%	82%
	- Percent of growth accommodated by redevelopment (land recycling).	n/a	0%	6%	18%	8%
	- Percent of growth accommodated by infill.	n/a	n/a	n/a	n/a	n/a
10. Public Facility Costs	- Sanitary sewer costs.		$162 million / $184 per capita*	Moderate	Moderate	High
	- Drinking water system costs.		$ 97 million / $104 per capita	Moderate	Low	Moderate
	- Stormwater drainage costs.		*combined with sanitary sewer costs	Moderate	Moderate	Moderate
	- Solid waste facility lands		see memo			

M E M O R A N D U M

METRO

Date: July 20, 1994

To: Metro Council, MPAC, JPACT, Future Vision Commission

From: John Fregonese, Manager, Growth Management

RE: Current Status of the Preferred Alternative

This memo is to inform you of the current status of the preferred alternative. Since the completion of the Concept Report, we have been applying the lessons we learned to refining the concept we will analyze as the recommendation to Council due in September. We have been working with local staffs to lay out a concept that would allow us to estimate the performance of a concept for urban growth.

However, before we discuss the preferred alternative it is important to restate what the Council will decide this fall, and what will be left for further refinement in the Future Vision Commission and Regional Framework Plan.

Because of this you will see two proposed maps in the packet. One is for analysis. It is quite specific as to where various urban forms would occur. This is for the purpose of analysis, and to help decide large scale questions. However, this is only one of several versions that may work equally well on a regional scale but have very different impacts at a local scale. This map will need significant fine tuning over the next two years to fit local situations. The issue of just how specific the Regional Framework Plan also needs to be evaluated.

The second map is proposed for adoption. It shows the conceptual form of the region, but does not define the exact borders of the subregional areas. It would be adopted as part of the RUGGOs, but would not have a direct affect on local comprehensive plans. This map would be used, along with the Future Vision, to develop the Regional Framework Plan. As a part of RUGGO, all Metro actions would be required to be in compliance, including the urban reserves and regional transportation plan.

The Council adopted a resolution that laid out six specific areas that would be decided:

1) A resolution defining the preferred urban form of the region, including the conceptual urban reserves. This would be the analysis map, a description of how it was modeled, and how it performed.

2) A work plan to achieve a site specific UGB, Urban Reserves, and Regional Transportation Plan.

3) Preliminary 2015 and 2040 population estimates, based on the concept.

4) A Regional Framework Plan implementation strategy.

5) RUGGO amendments that will contain the preferred urban form, updating and expanding the current document including a map. This would be the concept map, and be subject to DLCD review.

6) Any amendments to functional plans necessary to preserve opportunities to implement the preferred urban form.

The Draft Preferred Alternative (In Progress)

We have begun by limiting ourselves to only the category 1 and 2 urban reserve areas that are best served. This is only 18,000 acres (includes 7,000 acres of EFU) yielding about 10,000 net acres of developable land. About 65% is in Clackamas County, but it does not include the Stafford area. It does include the Damascus area, and we have designated Damascus a town center, as will be explained below.

We have assumed that the neighboring cities of Estacada, North Plains, and Scappoose will grow according to our base projection, but that Sandy, Newberg, and Canby will together grow by 40,000 additional households above what was projected. This is much less than the 120,000 households sent to the satellites in Concept C, and allows for the neighboring cities urban reserves programs to be accommodated.

We have assumed that 15% of employment would occur in residential areas, as 11% does today.

We are building a 15% buffer into the capacity. Therefore, the densities we will discuss below are 15% higher than absolutely necessary to achieve our goals. This allows for a more comfortable margin of error. Overall, there is a 42% multi family, 58% single family housing type split in the intial run.

Central City The Central City refers to downtown Portland, which is intended to serve as the major center of the region. It is a unique place in the region, approximately at the geographic center of the region, serving as the largest and busiest hub of the transit system and as the cultural center of the region. Institutions and services with regional clientele and one-of-a kind land intensive land uses should be located within the Central City. This area is intended to have the highest floor-to-area ratio of any place in the region, the tallest buildings and the largest transit and walk and bike rates. As such, it also has the greatest requirements with regard to parking, pedestrian and biking facilities in the region. Almost all streets in the

central city are multi-modal streets.

Under the current draft, the Central City would grow from 110,000 employees to 160,000 employees. It would continue to capture the same as today, 18% of regional employment. The total number of households would grow from 6,000 to over 25,000. Almost all the growth occurs from redevelopment. The average density would rise from 160 persons per acre to 240 persons per acre.

Regional Centers Regional centers are, or are intended to be, the commercial, civic and cultural hubs of the southern, western and eastern portions of the region. They provide a focus for the individual characteristics of that portion of the region in which they are located. As many trip purposes as can be accommodated in these centers should be encouraged, with the exception of one-of-a kind, regional facilities. At completion, these areas are intended to have a grid street pattern of primarily multi-modal streets, are designed to have walking and biking rates second only to the central city, have as much as 40 % of land area devoted to public right-of-ways, have floor area ratios which encourage compact form and have a mix of commercial retail, commercial office, residential and public uses. Places designated as regional centers are limited to Clackamas Town Center and the downtowns of Gresham, Beaverton and Hillsboro, as well as Milwaukie in Clackamas County, and Washington Square in Washington County.

Regional centers would need to grow dramatically, mostly by redevelopment. The current total employment of 25,000 would rise to 80,000, and the number of households would rise from 5,000 to 28,000. Density would more than triple, from 25 persons per acre currently to 85 persons per acre. While this appears large, these areas would be less than one half the density of downtown today. Also, their current low densities and advantageous locations allow for more potential growth. This projection is consistent with the central city plans of Beaverton and Gresham.

Town Centers Town centers are the traditional centers of local government and which include small businesses including retail and office commercial, city halls, post offices, some two story buildings, grid street patterns and primarily on-street parking. Every effort should be made to encourage town centers to express the unique characteristics and values of that community and to enhance that community's sense of place. The main street of town centers are or should become multi-modal streets.

Town Centers would grow from 25,000 employees to 33,000, and from 6,000 to 15,000 households. Densities would rise from 23 to 33 persons per acre.

Transit Corridors Transit corridors are variety land uses, including residential and commercial, which are located along high quality bus lines in a continuous, linear fashion. Transit corridors are less intensively developed than main streets, but include mixed use development. Both transit corridors and nodes depend on adjacent residential areas for market areas to support retail and service commercial within the corridor or node.

Nodes Nodes are small centers of mixed used development within 1/2 mile of a LRT station

or fast link bus stop. Nodes are less intensively developed than town centers or regional centers, but include some mixed use development.

Corridors and nodes together would grow from 215,000 employees to 270,000, and from 145,000 households to 260,000. Densities would rise from 18 to 25 persons per acre.

Main Streets Main streets are primarily ground floor retail and some second floor office and residential development along a single multi-modal streets. Commonly, these are streets built up along streetcar lines prior to the year 1930 and recently restored or being restored. Common examples include NW 23rd Avenue and Hawthorne Boulevard. However, more modern streets which have no more than 4 travel lanes (60 feet curb-to-curb), no more than 30,000 vehicles per day, on-street parking, zero building setbacks, 8 - 12 foot wide sidewalks, continuous pedestrian environment along the street, off-street parking only in the rear, some two story buildings, blocks no longer than 400 feet would also fit into this category.

Main streets would rise from 35,000 to 40,000 employees, and from 10,000 to 15,000 households. Densities would rise from 38 to 42 persons per acre.

Mixed Use Employment Areas Mixed Use Employment Areas are portions of the region that allow for a variety of land use types, but are not served by light rail. These areas may mix uses vertically or horizontally, be served by a substantial number of auto-oriented streets.

These areas would rise from 65,000 employees to 150,000, and 5,000 households to 28,000. Densities would be low, rising from 10 to 20 persons per acre.

Industrial Sanctuaries Industrial Sanctuaries are areas of developed or undeveloped lands which are exclusively reserved for selected industrial only uses. These uses are those which either: 1) have existing uses or may have uses in the future which are so substantially noisy, odorous, cause vibrations or are otherwise incompatible with residential development; or 2) are uses which provide moderate or higher wage jobs and if they are to continue with their present uses, can't allow competing residential or commercial uses. Transportation for these areas is by auto, truck, railroad, ship and air and they are served primarily by auto-oriented arterials.

These areas would rise from 47,000 to 80,000 employees. Densities are low, currently 8 per acre, rising to 10 per acre.

Together mixed use employment areas and industrial sanctuaries would accommodate about 35% of regional employment. This compares with today's 30% of development on industrial zoned lands.

Neighborhood One These are areas of predominantly residential development with the highest average residential densities and which are located where access to employment in the region is greatest. Incidental employment within these residential neighborhoods (home

occupations) is the higher than in neighborhood two.

These areas would grow from 190,000 households to 270,000. Average new lot sizes would be approximately 6,000 square feet.

Neighborhood Two These are areas of predominantly residential development with lower average densities residential densities and less accessibility to jobs in the region. All urban reserves were added into this category. Average lot sizes would be 8,000 square feet. With the urban reserves, this areas would grow from 50,000 households to 155,000 households.

Urban Reserves Urban Reserves are those areas outside the present urban growth boundary which are designated to provide land for additional growth of the region, when sufficient land for the next 20 years of development is not available inside the present urban growth boundary. If additional capacity for growth inside the current UGB beyond the 20 year need is determined, Urban Reserves may be less than a 30 year supply, but the total of the capacity to accommodate growth inside the present urban growth boundary and the urban reserves shall be a 50 year supply. Urban reserves will be located based on the state administrative rules, (Division 21, sections 660-21-000 through 660-21-100, as revised) and specifically include consideration of the following: 1) ease of providing sanitary sewer by gravity as has been defined by sewer providers of the region; 2) within 7 miles of Hillsboro, Beaverton and Gresham regional centers and within 5 miles of Clackamas Town Center, Sherwood, Wilsonville, Tigard, Forest Grove and Oregon City; 3) outside of flood prone soils as defined by the Soil Conservation Service, US Department of Agriculture.; 4) outside of slopes greater than 30%; 5) use predominantly exception lands and avoid EFU lands; 6) comprised of as many large, contiguous parcels as possible and 7) exclude substantial hills such as the Boring Lava Domes.

We currently are using 18,000 acres of urban reserves, mostly in the Neighborhood Two designation, with a town center at Damascus, and some corridors and nodes. There are approximately 55,000 households and 20,000 jobs in the urban reserves.

Open Space Open space refers to areas of public or privately owned land which are devoted to uses which provide relief from urban residential, commercial or industrial development. Open space lands can include parks, private open spaces, natural areas, stream corridors, or areas of very low density development, typically less than one unit per acre.

We have designated 28,000 acres as open space, and allocated no growth to it. Of the 28,000 acres, 12,000 are unbuildable, 6000 are developed and 10,000 are vacant (subject to environmental constraints amd gross to net reduction. There are 15,000 households currently located in the open space areas. We have allocated no additional growth to these areas.

Challenges and decisions

We would very much appreciate feedback on the current design of the preferred alternative. We will need to make final adjustments to the urban form next week, and then analyze the

resulting transportation performance. However, there would be a significant number of challenges to the implementation of the preferred urban form, if this draft were to be adopted. Some of them are:

1) The amount of growth in centers. While our economic modeling suggested that there is potential for this type of growth, the current market practice is to build at relatively low densities on vacant land. While it is clear that a ready supply of cheap vacant land is not available, development at these densities areas outside the downtown is not common. While the Central City has a track record, the growth in town centers is relatively modest, and the region will be banking on major growth in the regional centers under this scenario.

2) Shifting about 12% of the housing market from single family to a higher density housing type, such as row houses, small lot single family will take some effort. This would require about 500 row house type units a year. Most of these would be constructed in corridors, nodes, and centers. It is not known how many of these would be adsorbed in the Metro area.

3) Development of smaller lot single family. To meet the goals of this alternative, over 1,000 units a year would have to be built on lots of less than 5,000 square feet, and almost none on lots over 12,000. Again, we do not know how the market would react to this kind of supply, but the current zoning laws in many of the areas require larger lots.

We will have additional analytical data to present at the joint meeting. Please call 797-1562 if you would like to have additional questions researched before the meeting. We will do our best to respond.

Glossary of Terms

Multi-Modal Arterials Multi-modal arterials are those streets which are designed to accommodate a variety of transportation modes including auto, bus, pedestrian and bike. Auto speeds are approximately 30 miles per hour or less, and streets characterized by carry 30,000 vehicles per day or less, are typically 60 foot from curb-to curb, have tight turning radii, frequent cross streets (up to 20 per mile), significant green time for cross traffic (including pedestrians and bicyclists), on-street parking, encouragement of zero front yard building setbacks, parking at the rear or side of buildings and 8 - 12 foot wide sidewalks. A street designation may change along its length changing from multi-modal to auto-oriented and back to multi-modal.

Auto-Oriented Arterials Auto-oriented arterials are those streets and highways which are designed for high speed, high capacity auto and truck through traffic. These streets have blocks of 600-1,000 feet or longer, speeds of 40 miles per hour or greater, wide travel lanes, generous turning radii, little or no on-street parking, substantial building setbacks along the street, and parking primarily between the building and the street.

Acres/Market population This refers to the size of the design type and the market population that it is intended to serve.

Quantity This refers to limitations, if any, on the number of places which can have a particular design type. For example, there is only one central city permitted.

Hours This refers to the hours of operation that would normally be expected to be observed within a design type. Design types with fewer hours are more residential in character and more noise sensitive, while design types with more hours are intended to be less noise sensitive.

Floor Area Ratio This refers to the target development intensity for a design type.

Height This refers to the target maximum height of buildings within the design type.

Residential Density This refers to the target average density of residential development within a design type. In design types which encourage mixed use, a combination of residential density (multiplied by an average of 2.223 persons per household) and employment density yields a people per acre measure.

Employment Density This refers to the target average employment density within a design type. (see attached research concerning actual employment densities).

Jobs/Housing Balance This refers to the balance of jobs to housing in a design type. Jobs rich alludes to areas with more jobs than households, housing rich means that the target is for more dwellings than jobs.

Open Space This refers to parks or greenspaces in public ownership within the design type.

Public Civic Plaza This refers to a publicly owned area open to the public for cultural and civic activities. Examples include the Tualatin Commons and Pioneer Square.

Public Investment Priority Generally, public investments should support areas already inside the urban growth boundary and already developed. Public investment for revitalization of existing areas should be encouraged when it can be shown that more compact development and higher non-auto modes are likely to be achieved in these areas than other areas. Public investments in transportation should primarily support additional development in the central city, regional centers and town centers.

Road Features This refers to the road access provided to the design type.

Transit Features This refers to the level of transit service provided to the design type.

Pedestrian Facilities This refers to improvements made to the pedestrian environment including: (1)improvement of the all PEF factors (except topography) to a rating of 9; (2) requiring ground level retail and (3) 8-12 foot wide sidewalks.

Bike Facilities This refers to the publicly available bike facilities that should be provided and include: (1) on street bike paths; (2) bike racks; (3) lockers; (4) exclusive bike right of way paths, plus (5) public showers.

Parking This refers to the type of parking that is intended to be provided in the design type. In all cases where parking is to be provided, the goal will be to have shared parking the most common type of parking. Shared parking is defined as private or public parking that is available to the motorists regardless of specific destination. Structured parking refers to multi-level parking facilities, either stand alone or integrated with a multi-use building.

Preferred Alternative - Design Types and Targets

Design Type/ Target	Acres/ Market Population	Quantity	Hours	Floor Area Ratio	Height Limits	Residential Density	Employment Density	Job/Housing Balance	Open Space	Public Civic Plaza	Road Features	Transit Features	Pedestrian Facilities	Bike Facilities	Parking Facilities
Central City	2,500 acres 1,000,000's	1	24	up to 10:1	20 stories, plus	400 people per acre		jobs rich	25 acres	1 acre minimum	mult-modal	Hub of LRT system	1-3	1-3 +5	Structured Shared
Regional Centers	4-800 acres 100,000's	4	24	up to 2:1	up to 4 stories	100 - 150 people per acre		jobs rich	5 acre	.5 acre minimum	mult-modal	on LRT	1-3	1-3	Structured Shared
Town Centers	1-300 acres 10,000's	no limit	18	up to 1:1	up to 4 stories	70 people per acre		jobs rich	1 acre	.25 acre minimum	multi-modal	quality bus	1-3	1-3	Structured Shared
Transit Corridors	n/a	no limit	18	up to .5:1	up to 3 stories	40 - 70 people per acre		balance	none	none	multi-modal	quality bus	1	1+2	Shared
Nodes	50-150 acres	no limit	18	up to .5:1	up to 3 stories	40 - 70 people per acre		jobs rich	none	none	multi-modal	fast link	1	1+2	Shared
Main Streets	up to 10 blocks	no limit	18	up to .5:1	up to 3 stories	40 - 70 people per acre		jobs rich	none	none	multi-modal	fast link	1-3	1+2	Shared
Mixed Use Employment Areas	n/a	no limit	18	up to .5:1	up to 4 stories	40 - 70 people per acre		jobs rich	none	none	multi-modal	quality bus	1	1+4	Shared
Industrial Sanctuaries	n/a	limited areas protected	24	n/a	n/a	0 Dwelling units per acre	5-20 employees per acre	jobs only	none	none	auto arterials	bus	none	1	n/a
Neighborhood One	n/a	n/a	18	up to .2:1	up to 2 stories	up to 14 Dwelling units per acre	up to 15% employment	housing rich	see map	none	local streets	bus	1	1+4	n/a
Neighborhood Two	n/a	n/a	18	up to .2:1	up to 2 stories	up to 8 Dwelling units per acre	up to 10% employment	housing rich	see map	none	local streets	bus	1	1+4	n/a
Urban Reserves	up to 40,000 acres	n/a	n/a	n/a	n/a	n/a	n/a	n/a	master plan	none	n/a	n/a	n/a	n/a	n/a
Open Space		n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	none	n/a	n/a	trails	4	n/a