

## STAFF REPORT

### CONSIDERATION OF RESOLUTION NO. 97-2546A FOR THE PURPOSE OF ENDORSING THE TRAFFIC RELIEF OPTIONS TASK FORCE RECOMMENDATION TO FURTHER EVALUATE PEAK PERIOD PRICING OPTIONS

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Date: July 25, 1997

Presented by: Andrew Cotugno

#### PROPOSED ACTION

Resolution No. 97-2546A endorses the recommendation of the Traffic Relief Options Task Force to further evaluate the options described in Exhibit A to the resolution.

#### FACTUAL BACKGROUND AND ANALYSIS

##### **History**

In 1991, as part of the Intermodal Surface Transportation Efficiency Act, Congress approved the funding of a series of demonstration projects and related studies to promote the implementation of congestion pricing. Metro and ODOT submitted a joint application and in 1994 received approval to undertake a two year pre-project study of congestion pricing, also known as peak period or variable pricing, in the region. The federal portion of the \$1.2 million project cost is 80%.

The goals of the study are to evaluate the desirability of peak period pricing as a traffic management tool within the Portland Metropolitan region and to increase public understanding of the concept. The study approach is to develop and evaluate possible demonstration project proposals in order to evaluate the concept in terms of specific locations and implementation strategies. This approach allows the evaluation to analyze very concrete costs, benefits and other effects rather than remaining an abstract debate based on assumptions and principles. If, at the end of the study, the Task Force determines that peak period pricing has merit for the region, it may recommend implementation of a demonstration project to further test the concept.

Peak period pricing is a transportation management tool which applies market pricing principles to roadway use. It is a fairly new and controversial concept in the transportation field but has been used successfully for years by the utility industry to better manage peak period usage. It involves the application of user surcharges or tolls on congested facilities during peak traffic periods. It is the only fee system that is aimed specifically at managing peak period travel demand.

Peak period pricing represents a departure from traditional approaches to highway financing. It is more akin to tolling, where users pay a fee for service at the time of use.

Interest in peak period pricing has increased in recent years due to continuing increases in demand for roadways at a time of decreasing financial resources for maintenance and expansion of the transportation network.

### **Task Force**

Due to the relative newness of the concept and the potential for significant public concern, in June 1996, the Metro Council and ODOT approved a study advisory Task Force of business and community leaders. The Task Force is responsible for providing direction to the technical work and public outreach efforts throughout the study. At the end of the study, the Task Force is charged with making a recommendation to the JPACT, the Metro Council, and the Oregon Transportation Commission as to whether an appropriate congestion pricing demonstration pilot should be developed and tested within the Portland metropolitan area. The Task Force has held open meetings once a month since June, 1996.

### **Study Status**

The study commenced work during the Summer of 1996. Since then, the following major activities have taken place:

- research conducted on other study efforts
- focus groups held to assess public attitudes towards the concept
- outreach materials, including newsletters and fact sheets, developed and distributed
- pricing types identified for inclusion in the study
- congested locations reviewed for suitability for each pricing type
- a comprehensive list of approximately 40 possible pricing options developed
- evaluation criteria established

These initial actions were reviewed by representatives of a broad spectrum of interest areas through a series of workshops as well as by TPAC, JPACT and the Metro Council. Comments were reviewed by the Task Force and incorporated, where appropriate.

Since that time, a series of successive screenings have taken place which have resulted in the recommended list of options. The evaluation process is described in detail in Working Paper #6, a summary of which is contained in Attachment A, a June 18, 1997 memorandum to the Traffic Relief Options Task Force. The 40 options were first reviewed for projected transportation performance. About 20 that failed to meet minimum thresholds for cost effectiveness and congestion relief were set aside.

The remaining 20 options were assessed for their projected costs and benefits on the transportation system, availability of travel alternatives, effects on traffic in residential neighborhoods, financial feasibility and public acceptance. The public acceptance measure was developed based on results from public outreach efforts. It considers both the quality of available alternatives (including new capacity and transit) and the comprehensiveness of

the congestion pricing option (since public reaction has consistently favored those options that allow more alternatives to the priced facility).

At its May 1996 meeting, the study Task Force preliminarily identified 11 options for detailed study. That selection process and group of options were reviewed by representatives of a broad range of interest areas through a series of workshops. At its June 26 meeting, the Task Force reviewed the results of the public outreach effort and recommendations of the study Project Management Group (PMG) and recommended nine options for further study. Those options are described in Exhibit A to the attached resolution.

### **Recommended Traffic Relief Options For Further Study**

Exhibit A to the resolution contains those options recommended for further evaluation. These options represent a range of pricing types and locations. The next phase of evaluation will include, for each option, a review of engineering feasibility, full travel forecasts on an upgraded travel forecasting model to assess effects on travel time throughout the network and consideration of the criteria listed on Exhibit B to the resolution.

Public outreach efforts will be expanded to include a speakers bureau and public workshops during the Fall of 1997. Public input into the criteria and options will be assessed as part of the evaluation. It is anticipated that the Task Force, based on the results of the technical and public involvement efforts, will make a recommendation of three options for more detailed study during the Winter of 1998.

### **TPAC**

TPAC reviewed the report and resolution and approved it with changes that have been incorporated. Comments included adding language to the Resolve section of the resolution in order to:

- highlight that the primary goal of the study, and one that precedes any determination on a pilot project, is to determine whether or not peak period pricing makes sense for the region, and;
- clarify that a regional alternative will be developed based on findings about the different types and locations of options. It will be studied to help evaluate the merits of congestion pricing and will not be proposed for implementation as a pilot project.
- describe future study milestones

In addition, TPAC requested that the staff report and resolution elaborate on the study context and approach. Further, an introductory sentence was added to Exhibit A to clarify that only one of the nine options for further study might be chosen for a possible

demonstration project. Finally, the description of the proposed location of tolling on the option on Highway 43 was corrected.

Specific concerns raised by individual members are as follows:

Christopher Kopca, of the Downtown Development Group, submitted a letter expressing support of the study with the conditions that the route not adversely impact Central City job growth, that funds raised through tolls be prioritized for maintenance or improvement to that portion of the network, that existing travel lanes not be priced.

Keith Bartholomew, of 1000 Friends of Oregon, indicated concern about adding capacity as part of a possible peak period pricing demonstration project, particularly if the new capacity is not priced. He also commented that options which turn an existing lane into a reversible lane should be considered to add capacity.

Susie Lahsene, of the Port of Portland, stressed that future modeling should account for freight and any related traffic diversion. These comments will be forwarded to the Study Task Force for their review and will be addressed in the next phase of the study.

June 18, 1997

**TO: Traffic Relief Options Task Force**  
**FROM: Terry Moore**  
**SUBJECT: WORKING PAPER 6: EVALUATION OF 40 PRICING OPTIONS**  
**SUMMARY**

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## **BACKGROUND**

This report is a summary of Working Paper 6, which evaluates approximately 40 different pricing options to identify the 10 options that will be the focus of a more detailed evaluation that will occur in the Summer and Fall of 1997.

The 40 original options, and the methods used to identify them, are described in Working Paper 3. The criteria to be used to evaluate the options are described in Working Paper 4. The details of the methods used to conduct the evaluation (including how the criteria in Working Paper 4 would be applied) are summarized in Working Paper 6.

This summary is organized as follows:

- *Overview of the Pricing Options and Methods.* Summarizes what the options are, and how they will be evaluated.
- *Evaluation by Criterion.* Presents, for each category and sub-category of criteria that Working Paper 6 recommends be used at this level of evaluation, (a) the likely impacts of road pricing in general, and (b) what those general impacts suggest about the relative performance of the 40 pricing options on those criteria.
- *Summary Evaluation by Pricing Option.* Consolidates the results of the previous section to show impacts by pricing option.
- *The Next Steps.* Guidelines for the Task Force for using measures to identify 10 options for detailed review. What happens over the next year as 10 options get narrowed to a preferred option for the demonstration project.

## **OVERVIEW OF THE PRICING OPTIONS AND METHODS**

Table 1 summarizes the pricing options that made it to this level of evaluation. An attached chart prepared by Metro staff describes the characteristics of the options that were selected for more detailed analysis.

**Table 1: Summary of Pricing Options**

Location	Spot		Partial Facility, Express Lane		Whole Facility		Corridor		Area		Subtotal Selected	TOTAL
	No	Yes	No	Yes	New Capacity?		No	Yes	No	Yes		
					No	Yes						
I-5 S			X + O2	X	O	O	O	O			5	7
I-5 Own Twn N				X			O	X			1	3
I 205	O			X	X		X	X			1	5
I 84							O				2	3
I 26	O	X		O			X	X			2	5
I 217				X	O	X	X				1	4
Sunrise						O					1	1
Hood Pky						X					0	1
McLoughlin				O	O						2	2
Sellwood	O										1	1
Hwy 43	O				X						1	2
Tual/Sherwood						X + O2					1	2
TV Hwy					O						1	1
Beaverton Sml									O		1	1
Beaverton Lrg									X		0	1
WillRvr Brdgs									X		0	1
<b>TOTAL</b>	<b>4</b>	<b>1</b>	<b>2</b>	<b>7</b>	<b>6</b>	<b>6</b>	<b>6</b>	<b>5</b>	<b>3</b>	<b>0</b>	<b>20</b>	<b>40</b>

O = Made it through preliminary screening based on modeling

X = Eliminated based on modeling of travel performance

O2 = New variations added

As originally conceived, going from approximately 40 to approximately 10 pricing options was to be accomplished by reference to the professional literature, the results of related studies, and limited model runs on the existing model. The goal was to demonstrate the logic for eliminating options, and to support that logic by reference to accepted theory and empirical work. For travel performance, some modeling was required to be able to estimate changes in travel performance, by mode, that a pricing option would induce.

The key assumptions underlying the final evaluation methods, and the methods themselves, are:

- Among the 10 options must be a base case and a hypothetical regionwide pricing option which will be developed later in the analysis. Thus, we are really talking about picking a maximum of 8 or 9 other pricing options from the list in Table 1.
- In addition to the technical evaluation criteria, the evaluation should maintain a diversity of options (type and location) among the 10 recommended so that detailed modeling does not focus exclusively on one type or location.
- Because of the large number of pricing options (about 40) and criteria (about 25 separate sub-categories under six general headings), a score for each option on each criterion is not practical, nor is it necessary at this stage of the evaluation.
- The evaluation strategy was to first remove any pricing option whose performance on any criterion was unlikely to be acceptable in both an absolute sense and relative to other pricing options. Travel Performance was a key criterion here because of the importance of

this criterion as determined by the Task Force and the data that were available. Then, for the remaining options, their performance on all remaining criteria was estimated.

As Table 1 illustrates, several of the pricing options were eliminated prior to the evaluation presented in this working paper. Twelve were eliminated in March. In general, they were eliminated for one or more of the following reasons: (1) they are located in relatively uncongested corridors, and so likely to perform less well than other options, (2) better versions (i.e., likely better performance or lower cost) of the same type of option (e.g., without new capacity), or better versions of a similar type in the same corridor, were already being modeled, or (3) a lack of modeled diversion for a spot or partial facility on that route suggested no added benefit of analyzing a corridor option. An additional 5 were eliminated in April for similar reasons. The Willamette River bridges is a regional option. Since regional options will be developed later, it has been set aside for this evaluation. Some new variations were also added. The result is that there are 20 pricing options shown in Table 1 that are evaluated in more detail in the rest of this working paper.

## EVALUATION BY CRITERION

Table 2 lists the criteria this section addresses. The highlighted criteria are those used at this level of screening.<sup>1</sup> The rest of this summary focuses only on those criteria for which measurement was attempted at this level of evaluation. The reasons that other criteria were not evaluated are described in Working Paper 6.

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<sup>1</sup> The Task Force discussed and approved this subset of criteria, based on a presentation by Terry Moore of ECO, at its meeting in April.

**Table 2: Evaluation Criteria and How They Are Used at This Stage of the Evaluation**

Category	Sub-category	Likely to Affect Choices This Screening?
<b>Implementation</b>	Legality	N
	Technology	N
	Privacy	N
	Institutional Impacts	N
	Finance	Y
	Use of Revenues	N
	Demonstration Value	Y
<b>Transportation System Performance</b>	Costs: Facility Capital and Operation	Y
	Travel-time Savings	Y
	Safety	N
<b>Equity</b>	Availability of Transportation Options	Y
	Impacts by Population Group	N
	Impacts by Area	N
	Fairness of Cost Assignment to Businesses and Commuters	N
<b>Conformity With Land Use And Transportation Plans And Policies</b>	Land Use	N
	Transportation	N
<b>Societal And Market Effects</b>	Air Quality	N
	Other Environmental Impacts	N
	Energy	N
	Employment and Freight	N
	Community/Neighborhood Effects (Diverted Traffic)	Y
<b>Public Acceptance</b>	By Public, Interest Groups, Decisionmakers	Y

**IMPLEMENTATION****Finance (amount of revenues from tolls)**

More important for selecting among alternative pricing options than the *use* of the revenue is the *amount* of revenue that a toll project will generate, both in absolute terms and as a percentage of project costs or benefits. Here the 40 options will differ from one another.

Working Paper 4 explained why this criterion can be tricky to evaluate, despite its apparent specificity. We are trying to evaluate the full cost of one alternative against the full cost of another. From that perspective, the revenues from pricing are not really a gain in real resources. Rather, the pricing, by causing consumers to face the full costs of their choices, has led to gains in efficiency that are captured generally by savings in travel time. However, the fact that the pricing



results in revenues may be important from a political and administrative perspective because the revenues provide cash to pay for the pricing option or other transportation projects.<sup>2</sup>

For the purposes of this evaluation, we define the criterion *Finance* to mean "For what proportion of the costs of the demonstration project can we identify funding sources at this point in time?" Then net revenue (toll revenue—amortized annual cost) shows what portion of project cost the option can finance via tolls. Table 3, at the end of this summary, reports the results for each option. Toll revenues are derived from modeling done for this level of evaluation; costs include construction, equipment (including computers and transponders, and operations and maintenance (see *Transportation Performance*, following).

### **Demonstration value**

This subcriterion becomes more important toward the end of this project: other things equal, we want to select a demonstration project that has some broader application and we will know a lot more about what those regional implications might be as the study progresses. For this level, demonstration value is defined as having a diversity of option types and locations among the final 10. That diversity is subject to a few constraints:

- The possible number of combinations of project types and locations is greater than the 10 options (actually 8 or 9, since others may include a base case and a regional pricing option) that the Task Force must select for further review.
- There is probably a tradeoff between a diversity of locations and a diversity of types.

For this level of evaluation we recommend using demonstration value as a final screening criterion that checks to see whether there is an adequate mix of pricing types and locations among the options that are rated highest on other criteria. Since it is a criterion that can only be applied once a short list of projects has been selected based on other criteria, there is no further evaluation to present at this point: the Task Force will do that analysis at its May meeting.

### **TRANSPORTATION SYSTEM PERFORMANCE**

The most quantifiable criterion is Travel Performance. Its main sub-category of benefits is travel time savings. Its main costs are the direct costs of implementing transportation improvements: new capacity and access, new technology, and new operations.

#### **Facility Costs: Construction and Operation**

To get the benefits that a pricing option provides, it must be constructed and operated. No additional literature review is needed to prove this point in theory: construction and operation are clearly costs that must be netted out from any estimate of benefits.

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<sup>2</sup> Exactly how much any individual paid toward equivalent capacity improvements would be different under the pricing and no-pricing cases, however, because there is not a match between a charge based primarily on mileage (e.g., a gasoline tax) and one based on route, time, and congestion.

Working Paper 6 and an accompanying memorandum from Kittelson and Associates provide details on how costs were estimated. In sum, it looks to other studies for specifications and estimates of the cost of installing pricing technology, and adjusts estimates provided by Metro and ODOT where capacity expansion is included as part of the option. The purpose is to get order-of-magnitude estimates that allow comparisons across options to get a *rough* idea of costs.

Capital costs include civil work, toll collection facility construction and equipment, communication plant, and a central computer system and software development. Toll equipment costs include automatic vehicle identification (AVI), electronic toll collection (ETC) antennas and roadside readers, and enforcement equipment. We estimated total cost for transponders based on existing travel on the different corridors where the options are located, adjusting average daily traffic to get an estimate of peak period users. The analysis estimated low, medium, and high cost ranges. Capital costs used in this analysis were the low ones, whereas the O&M costs were high. The O&M costs are being revised and new tables will be presented at the meeting. That is not likely to change the rank order of the options on cost, but could change a few rankings on performance (e.g., net revenues and preliminary net benefits).

O&M costs should be correlated to use of facilities, which should be correlated to number of transponders. Methods used for estimating O&M costs make the estimates more likely to be high than low.

The cost estimates shown in Table 3 are order-of-magnitude planning estimates. As such, they are internally consistent and useful for the relative comparisons across options being done in this analysis, but should not be interpreted as firm estimates of project costs.

### **Travel Time, Vehicle Operating Cost Savings, and Net Benefits**

The primary motivation for congestion pricing is to reduce the inefficiencies in roadway use that result from the absence of proper pricing of the roadway. By responding to prices that are usually too low in peak periods on metropolitan arterials, drivers choose to drive more than they would otherwise. The result is inefficient levels of roadway congestion (and delay), and secondarily, distortions in mode choice (toward driving in SOV). Hence, the primary benefit of congestion pricing is in the *reduction of delay* (i.e., travel time savings to auto and transit users) it induces through changes in the performance of the roadway. These factors, in turn, affect a variety of other aspects of transportation system cost elements, such as noise and air pollutant emissions, accident costs, and vehicle operating costs. Ideally, assessment of transportation system performance accommodates all of these factors, so that all costs and benefits associated with the system effects of congestion pricing can be accounted for.

For the purpose of the rough screening of a large number of alternatives, however, it is neither possible nor necessary to analyze all of these effects in detail. It is not possible because the currently available models do not accommodate congestion pricing and mode choice modeling in a conceptually acceptable way. In any case, such detailed modeling would have been prohibitively costly to apply to the large number of alternatives that needed to be screened. Fortunately, for reasons described in Working Paper 6, detailed modeling is not necessary to appraise the likely, relative attractiveness of congestion pricing options.

The modeling process used for this level of evaluation produces the information necessary to estimate the benefits from route diversion directly (i.e., it measures the reduction in delay), and also provides information on the level of congestion pricing as well as the revenue potential of that price. The level of congestion pricing, along with qualitative information on the transit-susceptibility of the affected corridor, can then be used to qualitatively assess the extent to which additional benefits from diversion to transit are likely, in addition to the route diversion benefits (we make some estimates in the next section). Although this approach is rough (because of the lack of formal trip generation, trip distribution, and mode split analysis), it permits a relatively good differentiation of project alternatives.

Working Paper 6 describes several measures of travel performance that the modeling generated. In this summary we report only two. *Revenue* is the annual revenue from tolls, calculated by converting the optimal toll back to the price/VMT and multiplying by the estimated VMT. *Time(Delay) Savings* are estimated time savings multiplied by an average value of time. The estimates from the model are increased by different factors depending on judgments about the quality of transit service and feasibility of carpooling in the area affected by the option. When we annualize these measures and subtract from them the annualized cost (above), we get the performance measures reported below in Table 3.

## EQUITY

Any change in the pricing of highway services will have a mixture of good and bad impacts on certain types of travelers, and on businesses and residents in subareas of the region. Congestion pricing may provide net benefits for the region as a whole, while, at the same time, leaving some groups worse off. Sub-categories of interest typically include auto tripmakers compared to other tripmakers by other modes (particularly transit and trucking); low-income households; central cities compared to suburban areas; and impacts in general on businesses.

Working Paper 6 describes the literature as it relates to these issues.<sup>3</sup> Most of it can only be addressed at a more detailed level of analysis, not appropriate for this phase of the evaluation. It is clear that equity impacts are complex and cannot be dealt with very well with general statements like "congestion pricing hurts low-income households" or "congestion pricing helps business."

To analyze specific equity impacts, a detailed description of travel patterns (origin, destination, mode, route, and time of day) by income and household type is needed. The model refinements occurring now will attempt to forecast these characteristics.

For this level of evaluation, therefore, we limit equity to simple proxy measure: to what extent do people have other transportation options that they could shift to in response to congestion prices? The Technical Advisory Committee (TAC) members looked at several measures of existing and planned transit service and travel characteristics to make a qualitative judgment about the ability of transit and car pooling to serve the different corridors in which pricing options are being considered. Table 3 shows that assessment.

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<sup>3</sup> Including, as the Task Force requested, an evaluation of the impacts of pricing on trucking.

## Community and Neighborhood Effects

For this evaluation we define this criterion as the negative impacts of spillover traffic into neighborhoods. Theory predicts some spillover; intuitively it seems likely to occur; and the modeling that we are doing at this round of evaluation forecasts that it will occur. Thus, we are relatively confident in saying that spillover traffic will occur, to varying degrees by option.

How that spillover will affect neighborhoods, however, is more difficult to predict. Spillover could be cut-through traffic on residential collectors, or it could be on to existing arterials. In the latter case, the impacts on the neighborhood character and cohesion could be relatively small.

We found no empirical work in the professional literature that attempted to evaluate the impacts of spillover traffic on neighborhoods. We can, however, predict what it would say: (1) the impacts of some traffic increases are positive to the extent that they are simply correlates of improved access; (2) the impacts of too much traffic in residential neighborhoods increase are negative; and (3) the impacts are difficult to quantify. The best estimates will come from studies that try to estimate the capitalized affects on land values, but those who take a sociological perspective on the value of neighborhood will find the economic analyses inadequate.

The TAC members considered several measures of traffic diversion through existing neighborhoods, some of which were generated by the modeling done for the evaluation: the change in congested lane miles, the amount of VMT diverted off of the priced facility during peak hours, the relative amount of time savings that occurs off the priced facility, traffic volume changes on all network streets, and Volume-to-Capacity ratios. They combined these measures with their own knowledge about local traffic patterns to make the qualitative estimate of the relative impacts of diversion in the different options, which are reported in Table 3. The focus was on identifying traffic impacts on collector and local streets not intended to carry large volumes, on increasing congestion on both collectors and arterials, and on increasing congestion at freeway ramps. Smaller diversions or diversions to major arterials without major increases in congestion were considered acceptable at this level.

## PUBLIC ACCEPTANCE AND POLITICAL FEASIBILITY

### Overview of the issue and evidence

Public Acceptance and political feasibility is always a qualitative assessment. There is little we can add from a technical perspective that has not already been said under other criteria. The consultant's principal task, as technical analysts, is to describe the impacts of the pricing options in terms of performance, secondary effects, and equity. The policymakers (primarily the Task Force) and their advisors (TAC, the Project Management Group, and Metro staff) have more ability than we to interpret how the performance on those variables and others is likely to influence public acceptance.

Table 3 shows a preliminary assessment of public acceptance made by the study team based on public involvement work to date (focus groups, stakeholder interviews and targeted workshops). Research to date has indicated that public acceptance is likely to vary by pricing type and the quality of alternatives available. Generally public acceptance is likely to be higher with the less

comprehensive types of pricing (partial facility and some spots) where drivers have an on the road choice and lower as the alternative becomes more comprehensive (the least acceptable being the corridor and area). The quality of alternatives being provided will also influence public acceptance: new, more, and better alternatives, both for auto and transit travel, can increase public acceptance.<sup>4</sup> As we noted in the sections on Technology and Privacy, it is possible that area licensing implementations might be more acceptable to some people than AVI technology.

## SUMMARY EVALUATION BY PRICING OPTION

### RELATIVE PERFORMANCE

Table 3 summarizes the results of the above analysis. It shows the subset of options that made it through the initial screening (the row headings in the left column); the subset of criteria that are germane to that choice (the column headings in the top row); and a summary of the performance of each option on each criterion (the remaining cells in the matrix).

The left part of each cell of Table 3 summarizes the *relative impacts* of each option on each criterion. For criteria that can be quantified with interval or ordinal data, the impacts can be shown by simple arithmetic; for nominal data, they are based on judgments about better or worse.

The shading at the right of each estimate of impact indicates the relative performance of each option on each criterion. We use three colors of shading. The three colors divide the options roughly into thirds on each criterion: the top third (those with the highest relative advantages on that criterion) in dark gray, the middle third in light gray, and the lower third left white. Though the colors allow a quick visual inspection of performance, note that in many cases top performers may be numerically only slightly different than inferior ones. Thus, one must always consider the magnitude of the estimated relative advantages.

Table 3 shows *relative performance* only. It does not make a decision about the importance of the differences in performance either within or across criteria. Whether formally (through weights and scores) or informally (through discussion and consensus) the importance of the differences must be addressed. *Comparisons among options can be made only within a given criterion (i.e., within a column) because the different units of measurement for each criterion do not allow comparisons across criteria without some additional assumptions.*

### GUIDELINES FOR TASK FORCE DELIBERATION AND DECISIONS

The Task Force discussed the pros and cons of having the consultant prepare illustrative scores based on the assumptions listed above, and concluded that this working paper should go no farther than summarizing relative performance as we have in Table 3. The chief reasons were (1) a feeling that the weighting was ultimately a policy judgment that they should make, not the consultant; and (2) concerns about whether any set of scores could ultimately be agreed upon. It

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<sup>4</sup> Note that this definition of the criterion probably conflicts with the travel performance criterion: supplying new capacity will decrease the effectiveness of the tolling. Here, as elsewhere, the Task Force will have to decide how to balance competing objectives.

decided that the results reported in Table 3 would inform its discussion in May at which point it would select the 10 alternatives by consensus and voting, without formal scoring.

Without weighting and scoring, there are many ways Table 3 could be interpreted. Here are some guidelines that the Task Force should consider in its deliberation.

- *Focus on Travel Performance first.* It is the relative performance that provides an estimate of whether a pricing option does the main thing it is supposed to do: improve transportation performance in a particular area. In previous discussion and exercises, the Task Force has consistently ranked this criterion at the top (along with Public Acceptance), as have other projects like this one with which we are familiar. The measurement in Table 3 is a subset, but an important one, of benefits and costs. It includes an estimate of the main benefits (time savings) and the main costs (construction and operation of the pricing option). In the opinion of the consultants, there would have to be political or methodological reasons (or doubts about the validity of the time savings or cost estimates) to carry forward options in the bottom third or eliminate options in the top third. Such reasons may exist: our guidance is simply that the Task Force should be explicit about those reasons.
- *Look for fatal flaws second.* The Task Force also rated *Public Acceptance* as a top criterion. We interpret this to mean, no matter how good its travel performance, an option may not survive if it has other characteristics that make it unacceptable to the public and their representatives. In that sense, all the other criteria in Table 3 address this question. An ability to self-finance (with toll revenue), more transit options, and less diversion of traffic into neighborhoods all should increase public acceptance. Public acceptance is also measured separately in the final column. It is these criteria that give information to allow the Task Force to make a judgment about whether there are sufficiently strong reasons to choose options other than those that appear likely to have the best impacts on travel performance.
- *Remember that there are overlaps among criteria.* For example, traffic diversion, evaluated as a neighborhood effect under the heading of *Societal and Market Effects*. From a travel performance perspective, diversion can be desirable if people move off the congested facility on to only slightly less desirable parallel routes with excess capacity. From a neighborhood perspective (or the perspective of a traveler who already uses the parallel routes as a primary route), diversion is clearly negative.
- *Make sure your ratings are internally consistent.* Meeting this guideline can be tricky without scoring, since it requires trying to balance by eye the relative advantages in Table 10. At the extremes the decisions are not difficult. An option that performs in the upper third on all criteria should probably be selected; one that performs in the lower third on all criteria probably should not. The problem is that no options are that clear cut. In the absence of weighting and scoring, the best guidance we can give about this problem is to make sure that if two options perform roughly the same on three or even two of the top criteria, that they are both chosen unless their differences are significant (a value judgment) on less important criteria.
- *Do not add up the right hand column of each criterion to get a score for each option.* Such addition is tempting but wrong. First, the numbers 1, 2, and 3 are only there to

divide the options into three categories on each criterion. In the jargon of policy evaluation and statistics, they are *ordinal* numbers and should probably not be added. More importantly, the only way that they might legitimately be added would be if all the criteria were of equal weight. Then one could add the rankings across criteria, divide by the number of criteria, and have an interpretable and defensible "average ranking" for each option. But by all accounts (other studies, our professional opinion, and previous discussion by the Task Force) *the criteria do not have equal weights* so such averaging is inappropriate.

- *Use Demonstration Value (i.e., a diversity of types and locations) as a final screen only after you have more or less rank-ordered the options based on the preceding criteria.*
- *Remember that the estimates in Table 3 are just that: estimates.* Working Paper 6 describes in detail the methods, assumptions, data, and limitations of the analysis. It describes why several measures are uncertain, and could change. The fact that Table 3 shows negative revenues or travel performance is not too important at this point. What is important is to pick the projects that have the best chances of showing positive values for those measures when more detailed analysis is completed (subject to constraints imposed by other criteria of concern).
- *The Sunrise Corridor has not been modeled.* The modeling done for this evaluation by Metro staff and consultants was extensive and complicated. It had the types of problems one would expect in an undertaking of this size, but ultimately all but one of the options were modeled, and the models provided intuitively plausible results. For the Sunrise Corridor, however, despite numerous attempts to find the errors that were keeping the model from processing correctly, we could not get a solid analysis before the deadline for this Working Paper. Moreover, given the level of checking we have already put into the model, it is not likely that a model for this corridor will run correctly if we decide to try again.

With that in mind, the Task Force should consider whether it has enough information to make a decision about whether to eliminate or include Sunrise. The arguments to eliminate it are that it is one of the most expensive options, is more at the urban fringe (with less congestion and less consistency with 2040 planning), and was rated low on transit alternatives. In fact, it shares most of these characteristics with the Tualatin-Sherwood option, so one might expect travel performance to be similar (which for Tualatin-Sherwood was always in the bottom third of the alternatives). Everything seems to argue for eliminating it.

## THE NEXT STEPS

A draft of this working paper was reviewed by the Task Force at its meeting on 15 May, 1997. The Task Force discussed the working paper, focusing on the summary matrix contained in Table 3, and preliminarily identified 11 options for consideration. Eight of the options were selected more definitively and these are option #s: 1, 3, 6, 8, 10, 11, 14, and 20. Three others, options 12b, 16 and 17 were still under discussion.

At the meeting the Task Force requested that we consider altering options 1 and 12. As a result of the Task Force discussion, option #1 was shortened to terminate at 99W rather than continuing

to Wilsonville in order to mitigate serious diversion issues on the southern end. In the process of analyzing the modified alternative, an error in the original model was corrected and this resulted in a lower ranking on the transportation performance criteria. In addition, also at the Task Force's request, option 12 became 12a and a new option, 12b, was created which includes added capacity on 217. 12b ranked higher than anticipated on transportation performance due to the low cost of the tolling equipment for partial facilities, the time delay savings benefits of the new capacity and the fact that the construction costs at this point (for comparison purposes) are based on typical per lane mile numbers and are low. The toll price continues to be below the minimum standard of 3 cents per mile.

Other changes to Table 3 based on further analysis since the May 15 meeting include slight worsening of the diversion rankings for options #8 and #10 and a slight improvement in option #20 on the same criterion. Finally, the model results for #18 were obtained and the option performed as anticipated. Combining the pricing of 99W with the Tualatin Sherwood Connector improved the toll levels but it does not appear to justify the high cost of the proposed new four lane roadway.

The options the Task Force identified in May were carried forward to targeted workshops in June. At its June 26 meeting, the Task Force will review the results of those workshops and make a final decision on 9 options which, along with a regional options to be developed later, will be carried forward for detailed evaluation.

That evaluation will commence in the Summer of 1997. Results will be reviewed by the Task Force and the public in the Fall of 1997.



**Table 3: Summary of Performance**

Criterion	Type of facility	New Capacity?	IMPLEMENTATION	TRAVEL PERFORMANCE	EQUITY	NEIGHBORHOOD EFFECTS	PUBLIC ACCEPTANCE
			Relative Finance	Relative Performance	Travel Alternatives	Diverted Traffic	
			Toll Rev - Cost/yr (\$million) (1)	Time Savings - Cost/yr (\$million)	Based on multiple measures of transit avail (2)	Based on multiple measures of diversion (3)	Based on multiple measures (4)
1 I-5 S: I-405 to 99W	P	N	.19 - 1.73 = -1.54 2	-.29 - 1.73 = -2.02 2	Good 1	Moderate 2	1
2 I-5 S: Tigard to Wilsonville	W	N	3.92 - 4.90 = -.98 2	1.65 - 4.90 = -3.25 2	Good 1	Limited 1	2
3 I-5 S: Terwilliger to Wilsonville	W	Y	4.87 - 5.31 = -.44 1	2.61 - 5.31 = -2.70 2	Good 1	Limited 1	1
4 I-5 S: I-405 to Wilsonville	C	N	11.71 - 10.47 = 1.24 1	4.69 - 10.47 = -5.78 3	Good 1	Signfct 3	3
5 I-5 S: I-405 to Wilsonville	C	Y	11.48 - 10.75 = .73 1	5.11 - 10.75 = -5.64 3	Good 1	Signfct 3	2
6 I-5 N: I-405 to Delta Park	C	N	1.60 - 6.07 = -4.47 3	-.10 - 6.07 = -6.17 3	Good 1	Moderate 2	3
7 I-205 S: Willamette Bridge	S	N	.31 - 1.20 = -.90 2	.11 - 1.20 = -1.09 2	Limited 3	Signfct 3	3
8 I-84: Grand to 207th	P	Y	.66 - 1.41 = -.75 2	3.05 - 1.41 = 1.64 1	Good 1	Moderate 2	1
9 I-84: NE Grand to NE 207th	C	N	3.71 - 6.10 = -2.39 3	-.29 - 6.10 = -6.39 3	Good 1	Moderate 2	3
10 Hwy 26: Tunnel	S	N	1.96 -.73 = 1.23 1	.61 -.73 = -0.12 1	Good 1	Moderate 2	2
11 Hwy 26: Tunnel to 185th	P	Y	.68 - 1.09 = -.40 1	3.65 - 1.09 = 2.57 3	Good 1	Limited 1	1
12a Hwy 217: Hwy 26 to I-5	W	N	2.55 - 4.86 = -2.32 3	1.32 - 4.86 = -3.54 3	Limited 3	Limited 1	3
12b Hwy 217: US 26 to I-5	P	Y	.22 - 3.15 = -2.93 3	2.80 - 3.15 = -.35 1	Limited 3	Limited 1	1
13 Sunrise Corridor	W	Y	MNR MNR	MNR MNR	Limited 3	Moderate 2	1
14 McLoughlin: Ross Is. Br.-Hwy 224	P	Y	.23 - 1.06 = -.83 2	.61 - 1.06 = -.44 1	Good 1	Limited 1	1
15 McLoughlin: Ross Is. Br to I-205	W	N	2.18 - 1.24 = .94 1	.85 - 1.24 = -.40 1	Good 1	Limited 1	2
16 Sellwood bridge	S	N	1.15 - 4.28 = -3.13 3	-.26 - 4.28 = -4.54 3	Limited 3	Moderate 2	2
17 Hwy 43: north of Sellwood bridge	S	N	.76 -.68 = .08 1	-.17 -.68 = -.85 1	Moderate 2	Signfct 3	2
18 Tualatin-Sherwood Connector	W	Y	0.87 - 12.28 = -11.41 3	1.26 - 12.28 = -11.02 3	Limited 3	Limited 1	1
19 TV Highway: Bvrton to Hillsboro	W	N	1.87 - 2.57 = -.70 2	.32 - 2.57 = -2.25 2	Moderate 2	Signfct 3	3
20 Bvrton: Cedar Hills/217; Cntr/5th	A	N	.77 - 2.62 = -1.84 3	.35 - 2.62 = -2.27 2	Moderate 2	Limited 1	3

Type: S = Spot, P = Partial Facility, W = Whole Facility, C = Corridor, A = Area

1,2,3 divide the pricing options in roughly thirds based on performance for each criteria.

MNR = Model Not Run

(1) Toll Rev based on tolls during four peak hours/day; 250 days/yr

(2) Including current and planned transit service and ability to serve

(3) Including congested lane miles, VMT diverted, value of time savings off priced link, measures of congestion

(4) Including quality of available alternatives (especially new capacity) and comprehensiveness of type

## Traffic Relief Options

Road and Option Name	New Lanes	Description
1 I-5 S Partial - Reversible Lanes* - I-405 to 99W	N	Tolls one express lane on I-5 south of I-405 (without widening) by taking a lane from the non-peak direction.
2 I-5 S Whole - Tigard to Wilsonville	N	Tolls the whole facility of I-5 from Highway 217 to Wilsonville.
3 I-5 S Whole with part new climbing lane- Terwilliger to Wilsonville	Y	Constructs a new southbound climbing lane from I-405 to Terwilliger exit; tolls all lanes of I-5 from Terwilliger to Wilsonville.
4 I-5 S Corridor - I-405 to Wilsonville	N	Tolls all lanes of I-5 from Highway 217 to Wilsonville and parallel facilities of 99W, Highway 43, Corbett, Terwilliger, 65th, 72nd, Carmen, Stafford, and Boones Ferry.
5 I-5 S Corridor with part new lane - I-405 to Wilsonville	Y	Same as #4 with the construction of an added southbound climbing lane from I-405 to Terwilliger exit.
6 I-5 N Corridor - I-405 to Delta Park	N	Tolls all lanes of I-5 from Fremont Bridge to Delta Park exit, plus spots on Portland Road, Denver, Vancouver, and Martin Luther King at the Columbia Slough.
7 I-205 S Spot - Willamette Bridge	N	Tolls the I-205 Bridge at the Willamette River.
8 I-84 Partial with improvements at I-205 - Reversible Lanes* - Grand to 207th	Y	Tolls one express lane on I-84 from Grand to 207th by taking a lane from the non-peak direction; includes construction of a third lane around I-205 entrances.
9 I-84 Corridor - NE Grand to NE 207th	N	Tolls I-84 from Grand to 207th, plus spots on Sandy, Glisan, Halsey, Burnside, and Stark where they cross I-205.
10 US 26 (Sunset Hwy) Spot - West of Tunnel	N	Tolls all lanes at a single point on the Sunset Highway west of the Vista tunnel.
11 US 26 (Sunset Hwy) Partial with part new lane - Tunnel to 185th	Y	Tolls one lane on US 26 from Vista tunnel to 185th; adds new lane between Sylvan & Hwy 217, and Murray & 185th.
12a Hwy 217 Whole - US 26 to I-5	N	Tolls all lanes of Highway 217 from US 26 to I-5.
12b Hwy 217 Partial with new lanes - US 26 to I-5	Y	Tolls one express lane on Highway 217 from US 26 to I-5; includes construction of new lanes.
13 Sunrise Highway Whole	Y	Builds and tolls a new facility from I-205 to US 26.
14 McLoughlin Partial with part new lane - Ross Island Bridge to Hwy 224	Y	Tolls one express lane on 99E; includes construction of a new lane from the Ross Island Bridge to Tacoma.
15 McLoughlin Whole - Ross Island Bridge to I-205	N	Tolls all lanes of Hwy 99E from Ross Island Bridge to I-205.
16 Sellwood Bridge Spot (with reconstruction)	N	Tolls a reconstructed Sellwood Bridge.
17 Hwy 43 Spot - north of Sellwood Bridge	N	Tolls all lanes at a single point on Highway 43 just north of the Sellwood Bridge
18 Tualatin-Sherwood Connector Whole with 99W Pricing	Y	Builds and tolls a new highway from Highway 99W to I-5 and prices trips on 99W from 217 to Tualatin-Sherwood.
19 TV Highway Whole - Beaverton to Hillsboro	N	Tolls all lanes of Tualatin Valley Highway from Highway 217 to 10th in Hillsboro.
20 Beaverton Regional Center Area - Cedar Hills Blvd./Hwy 217; Center/5th	N	Tolls roads that access or cross through the Beaverton Regional Center (west of Hwy 217, east of Cedar Hills Blvd., north of 5th, and south of Center).

\* Reversible lanes = During peak, lane is taken from non-peak direction and tolled. The lane reverts to its original direction and is not tolled at other times.

BEFORE THE METRO COUNCIL

FOR THE PURPOSE OF ENDORSING THE	)	RESOLUTION NO. 97-2546A
TRAFFIC RELIEF OPTIONS TASK FORCE	)	
RECOMMENDATION TO FURTHER	)	Introduced by Mike Burton,
EVALUATE PEAK PERIOD PRICING	)	Executive Officer
OPTIONS		

WHEREAS, Section 1012(b) of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 authorized the Secretary of Transportation to create a Congestion Pricing Pilot Program to fund a series of demonstration projects and related studies to promote the implementation of congestion pricing; and

WHEREAS, Metro and the Oregon Department of Transportation (ODOT) submitted a joint application to determine whether or not congestion pricing is a desirable traffic management tool in the Portland metropolitan region and to increase public understanding of the concept; and

WHEREAS, the study methodology involved the assessment of public attitudes to the concept, development and evaluation of a number of congestion pricing alternatives, and a recommendation at the end of the study as to whether an appropriate demonstration project should be established in the Portland metropolitan area; and

WHEREAS, Resolution No. 93-1743A endorsed the region's application for a congestion pricing pilot study and directed Metro and ODOT staff to pursue ISTEA funds for this purpose; and

WHEREAS, Metro and ODOT have received approval and \$1.2 million in funding to undertake a Congestion Pricing Pre-Project Study (the study); and

WHEREAS, Ordinance No. 96-628 amended the FY 1995-96 budget and appropriations schedule for the purpose of conducting the study; and

WHEREAS, Due to the relative newness of the concept and the potential for significant public concern, Metro and ODOT have agreed to establish a Task Force of business and community leaders to provide advice and direction on the study; and

WHEREAS, Metro Council on April 25, 1996 passed Resolution No. 96-2333 endorsing the composition and mission of the Congestion Pricing Task Force for the purpose of providing direction to the Congestion Pricing Pre-Pilot Study and making a recommendation to the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council as to whether a demonstration project of congestion pricing should be undertaken in the Portland metropolitan area and, if so, what its parameters should be; and

WHEREAS, the Task Force began meeting and work commenced on the Congestion Pricing Pre-Pilot study, renamed the Traffic Relief Options study, in June 1996; and

WHEREAS, The study process involved technical and senior management staff from jurisdictions in the region in a Technical Advisory Committee and a Project Management Group; and

WHEREAS, Metro established an extensive public involvement program that included research on public attitudes, workshops, newsletters and fact sheets, a speakers bureau and involved civic, environmental, social service, business and transportation organizations; and

WHEREAS, A comprehensive group of approximately 40 possible options were identified that covered the range of pricing types under consideration and congested locations within the region in the Fall of 1996; and

WHEREAS, Preliminary evaluation criteria were established in the Fall of 1996; and

WHEREAS, The initial group of locations and evaluation criteria were reviewed by the public at workshops as well as by the JPACT and the Metro Council and feedback was reviewed by the Task Force and incorporated, where appropriate; and

WHEREAS, The final evaluation criteria are attached as Exhibit B; and

WHEREAS, A screening process considered the potential for options to improve transportation performance, financial feasibility, the availability of transportation options, impacts on neighborhood traffic and public acceptance; and

WHEREAS, the results of the analysis are contained in Working Paper #6 and summarized in a June 18, 1996 memorandum to the Traffic Relief Options Task Force; and

WHEREAS, based on Working Paper #6 and the results of workshops with the public, the Task Force has recommended that the options described in Exhibit A be carried forward for further study; and

WHEREAS, Further evaluation will consider the criteria listed in Exhibit B; and

WHEREAS, Further evaluation of the options in this study will include public review, including public workshops and a speakers bureau; now, therefore,

WHEREAS, The selection of the options for further study identified on Exhibit A is not intended to preclude consideration of peak period pricing or tolling elsewhere within the region.

BE IT RESOLVED:

1. That the primary goal of the Traffic Relief Options Study is to determine whether or not the concept of peak period pricing is a desirable traffic management tool within this region.
2. That the Traffic Relief Options Study evaluate the options recommended by the study Task Force and shown on Exhibit A, including a regional alternative to be developed and studied for analytic purposes.
3. That the evaluation consider the criteria listed on Exhibit B.
4. That the evaluation continue to seek public review at key milestones including narrowing of options under study to approximately three and the final recommendation as to whether or not peak period pricing is a desirable tool and any associated demonstration project proposal.

ADOPTED by the Metro Council on this \_\_\_\_\_ day of \_\_\_\_\_, 1997.

---

Jon Kvistad, Presiding Officer

Approved as to Form:

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Daniel B. Cooper, Legal Counsel

## Exhibit A

### Traffic Relief Options Recommended for Further Study






The following options are recommended for further study in order to evaluate the concept of peak period pricing. At the end of the study, a determination will be made as to whether or not peak period pricing has merit for further consideration. At that time, if appropriate, one or more of these options may be recommended for implementation as a demonstration project in order to further test the concept.

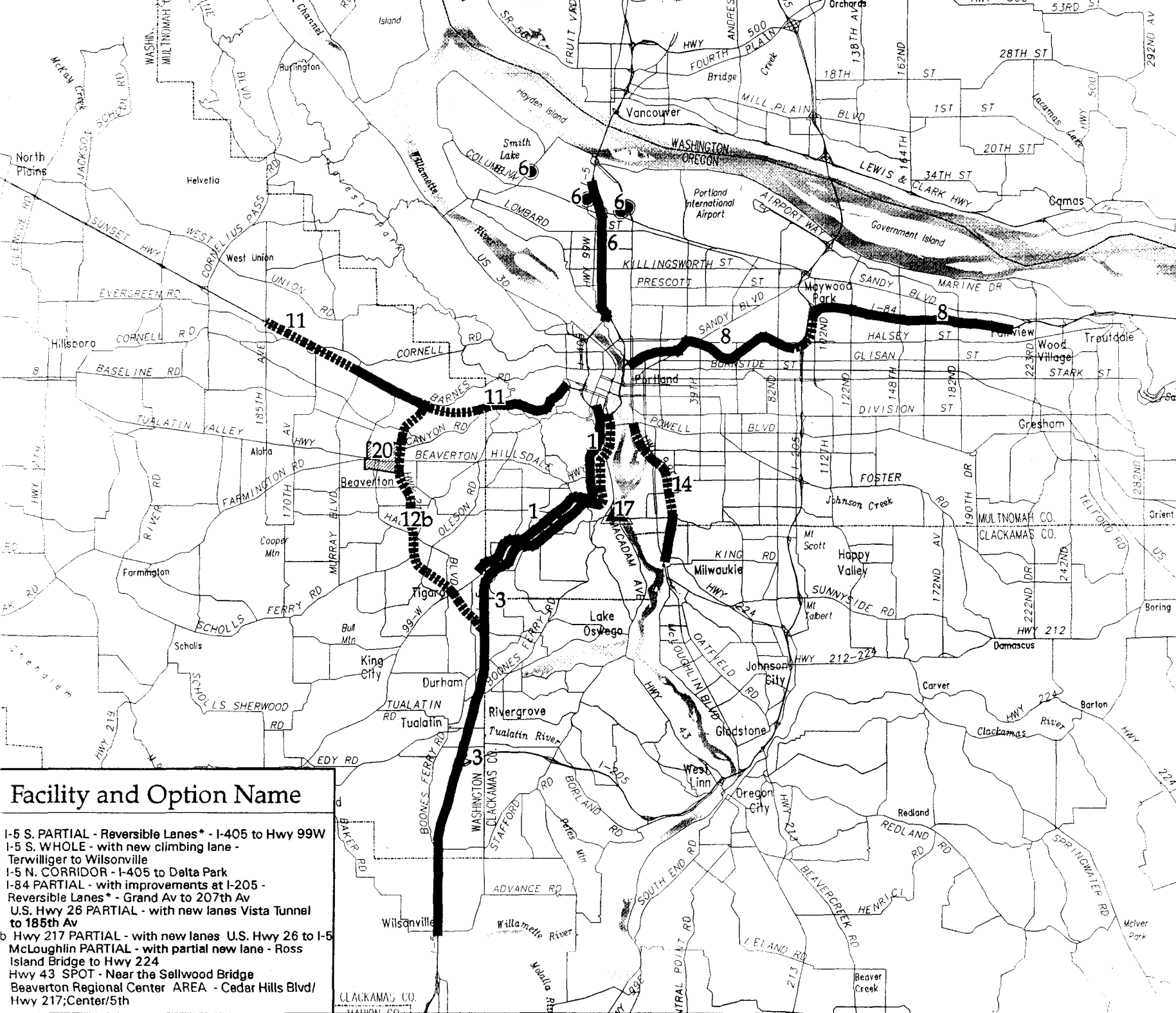
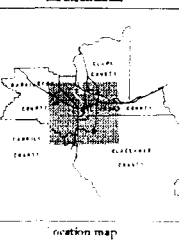
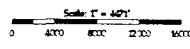
Road and Option Name	New Lanes	Description
1 I-5 S Partial - Reversible Lanes* - I-405 to 99W	N	Tolls one express lane on I-5 south of I-405 (without widening) by taking a lane from the non-peak direction.
3 I-5 S Whole with part new climbing lane- Terwilliger to : Wilsonville	Y	Constructs a new southbound climbing lane from I-405 to Terwilliger exit; tolls all lanes of I-5 from Terwilliger to Wilsonville.
6 I-5 N Corridor - I-405 to Delta Park	N	Tolls all lanes of I-5 from Fremont Bridge to Delta Park exit, plus spots on Portland Road, Denver, Vancouver, and Martin Luther King at the Columbia Slough.
8 I-84 Partial with improvements at I-205 - Reversible Lanes* - Grand to 207 <sup>th</sup>	Y	Tolls one express lane on I-84 from Grand to 207th by taking a lane from the non-peak direction; includes construction of a third lane around I-205 entrances.
11 US 26 (Sunset Hwy) Partial with part new lane - Tunnel to 185 <sup>th</sup>	Y	Tolls one lane on US 26 from Vista tunnel to 185th; adds new lane between Sylvan & Hwy 217, and Murray & 185th.
12b Hwy 217 Partial with new lanes - US 26 to I-5	Y	Tolls one express lane on Highway 217 from US 26 to I-5; includes construction of new lanes.
14 McLoughlin Partial with part new lane - Ross Island Bridge to Hwy 224	Y	Tolls one express lane on 99E; includes construction of a new lane from the Ross Island Bridge to Tacoma.
17 Hwy 43 Spot - near Sellwood Bridge	N	Tolls all lanes at a single point (or points) on Highway 43 in the vicinity of the Sellwood Bridge.
20 Beaverton Regional Center Area - Cedar Hills Blvd./Hwy 217; Center/5 <sup>th</sup>	N	Tolls roads that access or cross through the Beaverton Regional Center (west of Hwy 217, east of Cedar Hills Blvd., north of 5 <sup>th</sup> , and south of Center).

Note: In addition to the above, a regional option will be defined based on preliminary findings as to the performance of various types and locations of pricing. This regional option will be studied in order to help analyze the merits of peak period pricing and will not be proposed for implementation as part of this study.

\* Reversible lanes = During peak, lane is taken from non-peak direction and tolled. The lane reverts to its original direction and is not tolled at other times.

# Legend

- Facilities**
-  Existing facility
  -  New capacity
  -  Spot facilities
  -  Corridor crossing facilities
  -  Beaverton Regional Center Area #20



Facility and Option Name
1-5 S. PARTIAL - Reversible Lanes* - I-405 to Hwy 99W
1-5 S. WHOLE - with new climbing lane - Terwilliger to Wilsonville
1-5 N. CORRIDOR - I-405 to Delta Park
1-84 PARTIAL - with improvements at I-205 - Reversible Lanes* - Grand Av to 207th Av
U.S. Hwy 26 PARTIAL - with new lanes Vista Tunnel to 185th Av
b Hwy 217 PARTIAL - with new lanes U.S. Hwy 26 to I-5
McLaughlin PARTIAL - with partial new lane - Ross Island Bridge to Hwy 224
Hwy 43 SPOT - Near the Sellwood Bridge
Beaverton Regional Center AREA - Cedar Hills Blvd/ Hwy 217/Center/5th



## Exhibit B

# Traffic Relief Options Study EVALUATION CRITERIA

### **IMPLEMENTATION**

**Issues related to the feasibility of implementation. In some cases, they apply across the board to all alternatives.**

- Legal issues
- Technological issues
- Privacy issues
- Impacts on local governments/institutions/jurisdictional coordination (including management issues of the proposed alternative and responsibility for costs of local road maintenance and improvements)
- Finance issues
- Use of revenues
- Demonstration value

### **TRANSPORTATION SYSTEM**

**Covers the overall effects on the performance of the transportation system through a comparison of the aggregate costs and benefits of a “base case” system with the system under the proposed pricing alternative. It includes the effects of improvements to the system and the costs of new road construction and any improvements to alternative modes. The evaluation here is on the aggregate effect, but information on distribution of costs and benefits will be provided for trip type (business, commuters, etc.), mode (HOV, SOV, etc.) and population segment (income and geographic location).**

- Direct costs to develop and maintain, including equipment and road construction
- Costs to users - The evaluation here is on the total, system-wide user cost. Cost information will also be reported by segment of the population and the distribution of cost savings will be evaluated under “Equity” below.
- Benefits to users - Travel time savings (congestion reduction). The evaluation here is on the aggregate time savings. Distribution of effects by population segment will also be reported and evaluated under “Equity” (below).
- Safety

## **EQUITY**

**Examines the distribution of costs and benefits among various demographic, geographic and mode user groups to determine if disproportionate affects are borne by a particular population segment.**

- Ability to pay for individuals and fairness to population groups
- Availability of transportation options and choices for individuals
- Fairness to various areas
- Fairness of cost assignment to businesses and commuters

## **CONFORMITY WITH LAND USE AND TRANSPORTATION PLANS AND POLICIES**

**Measures all land use and transportation effects including impacts on development patterns, compatibility with projected land uses and conformity with regional transportation goals.**

- Regional growth and land use plans including Region 2040 Growth Concept and local Comprehensive Plans.
- Regional Transportation Plan measures such as use of alternative modes, vehicle miles traveled per capita, congested lane miles and average speeds.

## **SOCIETAL AND MARKET EFFECTS**

**Encompasses effects of an alternative outside of changes to the transportation system performance and includes effects on the environment, the economy and the neighborhood.**

- Air quality
- Noise
- Energy
- Comprehensive economic impacts on employment, freight and commerce
- Effects on community/neighborhood/household consisting of traffic on local streets and visual impacts

## **PUBLIC ACCEPTANCE/POLITICAL FEASIBILITY**

**Final screen for each alternative at each stage of the evaluation. Covers the range of public acceptance issues.**

- Public/Political acceptability, including general public, interest groups and decision makers.

M E M O R A N D U M

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736  
TEL 503 797 1700 | FAX 503 797 1794



METRO

Date: August 6, 1997  
To: JPACT  
From: Michael Hoglund, <sup>MLH</sup>Transportation Planning Manager  
Subject: 1997-1999 TGM Grant Program

The 1997 Oregon Legislature approved funding for the joint ODOT/DLCD Transportation Growth Management (TGM) grant program. ODOT and DLCD have initiated the grant process and a list of the Portland metropolitan area grant proposals are submitted for your information. The purpose of the program remains unchanged from previous years and is broken into three transportation and growth management categories:

- 1. Category 1, Transportation Planning Rule Implementation. These are grants to help local governments implement the Transportation Planning Rule.
- 2. Category 2, Land Use Alternatives. These grants are intended to help local governments develop plans or tools which will help alter land uses in order to meet transportation needs.
- 3. Category 3, Urban Growth Management. Grants in this category are intended to help local governments develop, use, and implement growth management tools such as annexation plans, urban service agreements, development standards, infill strategies, and other general plans and agreements.

The following table summarizes the attachment and includes the preliminary program allocations for the ODOT Region 1 area. The amounts requested do not include the local match and are therefore reflect the direct impact on the TGM program. As can be seen, the program is about \$3.6 million short of fully funding all the Region 1 proposals.

**Region 1 TGM Grant Requests and Preliminary Allocation**

	<b>Total Requested</b>	<b>Preliminary Allocation</b>
Category 1	\$1,857,970	\$1,292,460
Category 2	1,193,324	822,510
Category 3	2,668,979 <sup>1</sup>	646,230
<b>Totals</b>	<b>\$6,382,063</b>	<b>\$2,761,201</b>

<sup>1</sup> Includes two combined Category 2 and 3 proposals

As established by the TGM program guidelines, the state's metropolitan planning organizations are invited to comment on the program. For the Portland area this has traditionally been done through JPACT, MPAC, and the Metro Council. Based on the recommendation of the TPAC, it is proposed that the Metro Executive Officer forward recommendations on priority grant proposals which best help implement the Region 2040 Growth Concept and/or the Urban Growth Management Functional Plan. Metro staff will work with MTAC and TPAC to determine the priority 2040 grants. Recommendations will be forwarded for action by JPACT, MPAC, and the Metro Council in September.

App. Code	Ante Amount	Consultant Amount	Total Amount Requested	Match	Total Project	Jurisdiction	Project Title
1.1.1	\$7,600	\$12,000	\$19,600	\$2,013	\$21,613	City of Wood Vi	Local TPR Amendments
1.1.2	\$0	\$120,000	\$120,000	\$287,500	\$407,500	Tri-Met	Transit Choices for Livability
1.1.3	\$5,438	\$49,500	\$54,938	\$5,842	\$60,781	City of Tigard	Safe Routes to Schools
1.1.4	\$17,005	\$41,580	\$58,585	\$5,662	\$64,247	City of Tigard	Highway 99W Access Management Plan Implementation
1.1.5	\$31,400	\$58,000	\$89,400	\$10,300	\$99,700	Multnomah Cou	201st Ave./202nd Ave Corridor Feasibility Study
1.1.6	\$400	\$39,600	\$40,000	\$11,208	\$51,208	Metro	Regional Goods Movement Study
1.1.7	\$2,000	\$28,000	\$30,000	\$6,600	\$36,600	City of Fairview	Transportation System Plan
1.1.8	\$0	\$65,803	\$65,803	\$6,764	\$72,567	City of Oregon	2040 TSP Revision
1.1.9	\$500	\$49,890	\$50,390	\$6,351	\$56,741	City of Forest Gr	Transportation System Plan
1.1.10	\$0	\$50,000	\$50,000	\$39,288	\$89,288	Multnomah Cou	Street Design Standards Revision Administrative Rules
1.1.11	\$23,248	\$96,752	\$120,000	\$13,770	\$133,770	Multnomah Cou	Urban Unincorporated Multnomah County Transportation System Plan
1.1.12	\$18,978	\$75,589	\$94,567	\$10,823	\$105,390	Metro	Street Connectivity and Access Management
1.1.13	\$25,200	\$49,000	\$74,200	\$8,500	\$82,700	Metro	Bicycle Travel Demand Forecasting Improvements
1.1.14	\$143,000	\$38,000	\$181,000	\$21,070	\$202,070	City of Portland	Centers Transportation Strategy and Mode Split Target Project
1.1.15	\$13,600	\$28,700	\$42,300	\$4,841	\$47,141	City of Portland	Pedestrian Design Guidelines Implementation
1.1.16	\$9,620	\$36,000	\$45,620	\$4,700	\$50,320	City of Portland	Alberta Street Corridor Streetscape Improvement Plan & Demonstration Project
1.1.17	\$2,243	\$55,453	\$57,696	\$6,604	\$64,300	City of Portland	SE Hawthorne Main Street Implementation
1.1.18	\$6,000	\$59,900	\$65,900	\$7,900	\$73,800	City of Vernonia	Transportation System Plan
1.1.19	\$42,000	\$29,700	\$71,700	\$8,300	\$80,000	Washington Cou	Transportation Financing Plan
1.1.20	\$39,100	\$57,800	\$96,900	\$11,200	\$108,100	Washington Cou	Functional Classification System Development
1.1.21	\$42,137	\$134,595	\$176,732	\$20,228	\$196,960	Clackamas Coun	Transportation System Plan
1.1.22	\$69,000	\$0	\$69,000	\$7,500	\$76,500	City of Gresham	Division Street Arterial Boulevard Plan
1.1.23	\$41,500	\$0	\$41,500	\$30,500	\$72,000	City of Gresham	Transportation System Plan Implementation Program
1.1.24	\$6,500	\$52,200	\$58,700	\$10,700	\$69,400	City of Gresham	Gresham Regional Center and Rockwood Town Center: Public Parking Management and
1.1.25	\$7,287	\$72,713	\$80,000	\$21,323	\$101,323	Multnomah Cou	West of Sandy River Rural Area Transportation System Plan
1.1.26	\$3,438	\$0	\$3,438	\$394	\$3,832	City of Rainier	Code Amendments to Implement Rainier TSP
Region 1 Category 1 Totals							
	\$557,195	\$1,300,775	\$1,857,970	\$569,881	\$2,427,851		
1.12.1	\$11,900	\$63,000	\$74,900	\$8,600	\$83,500	City of Beaverto	Regional Center Parking Strategy and Downtown Street Design Study
1.12.2	\$18,269	\$51,236	\$69,505	\$7,955	\$77,460	Clackamas Coun	Government Camp Transportation Study
1.12.3	\$81,202	\$99,412	\$180,614	\$20,672	\$201,286	Clackamas Coun	McLoughlin Corridor Land Use and Transportation
Region 1 Categories 1 & 2 Totals							
	\$111,371	\$213,648	\$325,019	\$37,227	\$362,246		
1.13.1	\$81,400	\$49,500	\$130,900	\$15,000	\$145,900	Washington Cou	Raleigh Hills/Garden Home Community Plan Update and Raleigh Hills Town Center
1.13.2	\$120,872	\$85,000	\$205,872	\$35,000	\$240,872	City of Portland	Lents Town Center Revitalization
Region 1 Categories 1 & 3 Totals							
	\$202,272	\$134,500	\$336,772	\$50,000	\$386,772		
1.2.1	\$4,000	\$152,575	\$156,575	\$18,162	\$174,737	City of Beaverto	Murray Scholls Town Center Master Plan

App. Code	Grant Amount	Consultant Amount	Total Amount Requested	Match	Total Project Cost	Jurisdiction	Project Title
1.2.2	\$24,266	\$139,140	\$163,406	\$16,382	\$179,788	City of Tigard	Washington Square Regional Center
1.2.3	\$1,000	\$49,770	\$50,770	\$10,598	\$61,368	City of Forest Gr	Town Center Plan Implementation
1.2.4	\$142,840	\$70,600	\$213,440	\$54,880	\$268,320	City of Portland	St. Johns Town Center and Lombard Main Street
1.2.5	\$137,700	\$58,800	\$196,500	\$58,000	\$254,500	City of Portland	Hollywood Town Center and Central Sandy Main Street
1.2.6	\$20,600	\$51,800	\$72,400	\$7,450	\$79,850	City of West Lin	Activity Centers Plan
1.2.7	\$0	\$62,740	\$62,740	\$8,571	\$71,311	City of Sandy	Bornstedt Village Specific Area Plan
1.2.8	\$25,900	\$9,300	\$35,200	\$4,000	\$39,200	Washington Cou	Cedar Mill Town Center Plan Implementation
1.2.9	\$26,500	\$0	\$26,500	\$3,100	\$29,600	Washington Cou	Local Street Connectivity Plan
1.2.10	\$49,433	\$120,644	\$170,077	\$21,021	\$191,098	Clackamas Coun	Sunnyside Corridor Plan
1.2.11	\$7,016	\$38,700	\$45,716	\$5,233	\$50,949	City of Rainier	Specific Development Plan for Waterfront Mixed Use Area
Region 1 Category 2 Totals							
	\$439,255	\$754,069	\$1,193,324	\$207,397	\$1,400,721		
1.23.1	\$226,350	\$122,100	\$348,450	\$39,900	\$388,350	City of Portland	Pleasant Valley Urban Reserve Plan
1.23.2	\$26,970	\$123,030	\$150,000	\$23,000	\$173,000	City of Sherwoo	Town Center & Urban Reserve Plan
Region 1 Categories 2 & 3 Totals							
	\$253,320	\$245,130	\$498,450	\$62,900	\$561,350		
1.3.1	\$8,000	\$63,000	\$71,000	\$10,155	\$81,155	City of Happy V	Urban Growth Management Functional Plan Implementation
1.3.2	\$48,890	\$22,500	\$71,390	\$7,353	\$78,743	City of Beaverto	Buildable Lands Analysis
1.3.3	\$6,300	\$32,000	\$38,300	\$5,800	\$44,100	City of Gresham	Columbia Brickworks Mixed-Use Master Plan
1.3.4	\$2,200	\$57,060	\$59,260	\$9,963	\$69,223	City of Gresham	Capital Improvements Plan for Central Rockwood and Downtown
1.3.5	\$500	\$36,140	\$36,640	\$4,622	\$41,262	City of Forest Gr	Good Neighborhood Design Ordinance
1.3.6	\$4,266	\$42,000	\$46,266	\$5,295	\$51,561	City of Rainier	Land Suitability Assessment and Zoning Text Amendments
1.3.7	\$69,500	\$100,000	\$169,500	\$113,865	\$283,365	City of Portland	2040 Growth Fiscal/Service Analysis for the City of Portland
1.3.8	\$175,000	\$25,000	\$200,000	\$500,000	\$700,000	City of Portland	North Macadam District Development Strategy
1.3.9	\$12,288	\$43,350	\$55,638	\$7,852	\$63,490	City of Portland	Central Eastside Mixed Use Infill Redevelopment & Rehabilitation Strategy
1.3.10	\$12,465	\$44,970	\$57,435	\$2,600	\$60,035	City of Portland	Southern Triangle Redevelopment Strategy
1.3.11	\$197,240	\$0	\$197,240	\$185,030	\$382,270	City of Oregon	Oregon City 2040
1.3.12	\$55,800	\$125,260	\$181,060	\$31,515	\$212,575	City of Portland	Gateway Regional Center Implementation Strategy
1.3.13	\$12,700	\$44,500	\$57,200	\$6,800	\$64,000	City of Portland	Vancouver/Williams Corridor Development Plan
1.3.14	\$0	\$36,800	\$36,800	\$4,950	\$41,750	City of Hillsboro	Hillsboro Housing Needs
1.3.15	\$0	\$60,000	\$60,000	\$70,250	\$130,250	City of Hillsboro	Visioning Project: Phases 3-4
1.3.16	\$5,000	\$90,615	\$95,615	\$35,556	\$131,171	City of Hillsboro	Implementation of Metro Urban Growth Management Functional Plan
1.3.17	\$9,449	\$13,140	\$22,589	\$8,000	\$30,589	Clackamas Coun	Fire Protection Costs of Infill - Built-in Fire Protection Ordinance
1.3.18	\$13,800	\$40,500	\$54,300	\$6,300	\$60,600	City of Canby	Public Education & Involvement Dealing with Adding Buildable Capacity without UGB E
1.3.19	\$15,600	\$18,000	\$33,600	\$3,900	\$37,500	City of Canby	Residential Needs Analysis and Growth Scenario Development
1.3.20	\$40,200	\$20,000	\$60,200	\$6,900	\$67,100	Washington Cou	'Buildable Lands Inventory', 'Growth Capacity Analysis', and 'Housing Needs Analysis'
1.3.21	\$111,200	\$56,600	\$167,800	\$50,700	\$218,500	Washington Cou	Urban Service Agreements for the Beaverton Hillsboro Vicinity
1.3.22	\$3,800	\$60,000	\$63,800	\$6,553	\$70,353	City of Banks	Growth Management Plan
1.3.23	\$0	\$19,100	\$19,100	\$2,940	\$22,040	City of St. Helen	Managing St. Helens' Urban Growth Area
1.3.24	\$48,157	\$28,585	\$76,742	\$8,787	\$85,529	Clackamas Coun	Tier 1 Urban Reserves, Sunnyside/147th
1.3.25	\$29,822	\$28,032	\$57,853	\$6,622	\$64,475	Clackamas Coun	Affordable Housing Strategies
1.3.26	\$50,000	\$0	\$50,000	\$51,800	\$101,800	City of Gresham	UGM Functional Plan Implementation
1.3.27	\$131,200	\$0	\$131,200	\$22,200	\$153,400	Metro	Metro 2040/STake Task force implementation action project
Region 1 Category 3 Totals							
	\$1,063,377	1,107,152	2,170,529	1,176,308	3,346,836		
Region 1 Totals							
	\$2,626,790	\$3,755,274	\$6,382,063	\$2,103,713	\$8,485,776		

MEETING REPORT  
JPACT/MPAC/TRANSPORTATION PLANNING COMMITTEE WORKSESSION  
JULY 16, 1997

The joint meeting of JPACT/MPAC and the Transportation Planning Committee was called to order by JPACT Chair Jon Kvistad for the purpose of reviewing the issues and components of the Regional Transportation Plan Update.

Committee members present included: Chair Kvistad and Susan McLain, Metro Councilors; Jill Thorn, Mayor of West Linn; Dick Benner and Jim Sitzman, DLCD; Bob Baker, Vancouver City Councilor; Royce Pollard, Mayor of Vancouver; Judie Stanton and Mel Gordon, Clark County Commissioners; Charlie Hales, City of Portland Commissioner; Jim Zehren, Citizen; Linda Peters, Washington County Commissioner; Rob Drake, Mayor of Beaverton; Craig Lomnicki, Mayor of Milwaukie; John Hartsock, Multnomah County Special Districts; Chuck Petersen, Clackamas County Special Districts; Bud Farm, Multnomah County Special Districts; Peggy Lunch, Washington County Citizen; David Widmark, City of Gresham Councilor; Jim Kight, City of Troutdale Councilor; Dave Yaden, Tri-Met; and Karl Rohde, Lake Oswego Councilor

Guests present included: Rose Besserman, City of Vancouver Commissioner; Jim Peterson, Multnomah Neighborhood Association; Jim Howell, AORTA; Scott Rice, Cornelius City Councilor; Dave Williams, ODOT; Steve Dotterer and John Gillam, City of Portland; Sandra Doubleday, City of Gresham; Ken Zatarain, Tri-Met; Kristin Greene, Cogan Owen Cogan; Art Lewellan, LOTI; and Bruce Fukuji and Jim Daisa, Consultants

Staff present included: Mike Burton, Metro Executive Officer; Andy Cotugno; John Fregonese; Larry Shaw; Mike Hogle; Tom Kloster; Mark Turpel; Rich Ledbetter; Pamela Peck; Lynn Peterson; Bill Barber; Allison Dobbins; Kim White; John Houser; Pat Emmerson; and Lois Kaplan, Recording Secretary

Media representation included: Gordon Oliver, The Oregonian

#### REGIONAL TRANSPORTATION FUNDING

Chair Kvistad announced that a meeting of the Portland area Regional Advisory Committee of the Oregon Transportation Initiative was being convened on Friday, July 18, at noon at ODOT's Region 1 office. Mayor Drake suggested there be a brief discussion at this meeting on the direction the region should follow after having experienced failure by the Legislature to enact a needed transportation funding measure. He noted that the broad funding package that was defeated was crafted to address many of the region's multi-modal transportation needs. He asked for discussion.

Chair Kvistad spoke of the potential of seeking a replacement measure for the regional funding program that failed to pass the

Legislature. He reported that, at its July 10 meeting, JPACT members had been asked to meet with their respective boards/councils to seek consensus on whether to pursue a regional measure.

Commissioner Peters indicated she has been working with the Legislature on the counties' objectives. She reported that at the recent National Association of Counties meeting in Baltimore, the Oregon AOC members voiced strong agreement in support of a statewide effort for a county-by-county measure that would encompass a gas tax or vehicle registration fee increase. She noted that a follow-up conference call was scheduled for July 17.

Peggy Lynch, an MPAC member, cautioned members not to overlook the needs of the elderly and disabled community, hoping that a regional package would include such needs. The AOC focus was on road needs as opposed to use of flexible funds.

#### RTP UPDATE STATUS AND SCHEDULE

Andy Cotugno explained the interrelationships between the *Regional Transportation Plan* (RTP), the 2040 Growth Concept, and the *Framework Plan*. He noted that staff is midpoint in the process of developing an update of the RTP. The policy framework was adopted by resolution to serve as the guide in development of the rest of the RTP along with any Chapter 1 modifications. The RTP policy section serves as the transportation component of the *Framework Plan*.

Andy elaborated on the gaps relating to level-of-service between the RTP and the *Functional Plan*. He noted the local option in the *Functional Plan* of using something other than defined in the *State Highway Plan* or the *Regional Transportation Plan*. JPACT/MPAC direction is also requested on how transit should perform and how big a transit system should be planned for. Highway and transit system scenarios dealing with level-of-service will be provided. Decisions will then be made to establish short and long-term priority projects for funding based on the available data.

Handouts included a 1997 RTP Update review schedule; a schedule of special RTP workshops; a summary sheet of key issues; system maps relating to motor vehicle classification, public transit, bicycle, pedestrian, freight and street design; the draft Alternatives Analysis findings, inclusive of an errata sheet; the *Creating Livable Streets* document prepared by Fehr & Peers Associates, Inc.; and *Transit Trends Over Time*, published by Metro.

In review of the system maps, it was emphasized that the first step has been taken with regard to geography; that there is more specificity in the regional street design guidelines (the kinds



of design characteristics that account for land use and function); and that street connectivity guidelines have been established for 8-20 street connections/mile.

The proposed system maps were reviewed and illustrated by Tom Kloster, RTP Project Manager, through means of a slide presentation. He noted that the purpose of the maps was to translate them into an RTP policy statement. The maps reflect the 2040 Growth Concept, set a long-range transportation vision, and provide the context for RTP projects. He emphasized the components of the various system maps, which included public transit, bicycle, pedestrian, freight, motor vehicle and street design.

In highlighting the maps, Tom noted that the pedestrian map illustrates where pedestrian travel is a large part of the potential mode split and focuses on areas that have high levels of pedestrian activity. The 2040 analysis map was used as the beginning point. When the local Transportation System Plans are updated, that information will also be reflected on the maps. The freight system map is focused on serving industrial and intermodal facilities via the main routes through the region and connector routes that tie them to that facility. The street design map focuses on linking land use and transportation and integrates all of the RTP system maps. Street design will be used to tie together all the different modes.

Commissioner Hales noted some omissions on the regional street design map relating to the River District (southeast of the Fremont Bridge) and south of Marquam (North Macadam) where the Portland City Council has adopted future street design plans. On the public transportation system map, he also noted the omission of the Central City streetcar project, which he felt should have been included. He also indicated that the regional bike system map should be the same as the citywide bikeways plan that has been adopted. Commissioner Hales felt that if a jurisdiction has advanced its agenda, it should be reflected on the regional system maps, deferring to the jurisdiction's initiative. In addition, he cited consideration of modes other than buses and light rail that could otherwise lead to potential confusion if the maps differ from that of the jurisdiction. Presiding Officer Kvistad responded that the maps are considered "drafts" and that any jurisdictional plans will be incorporated. He asked that City of Portland staff submit its plans to Metro staff.

Questions and issues raised during discussion included whether the projects identified on the maps are indicators of future investments; whether the system maps will be available for neighborhood meetings; whether or not commuter rail will be reflected on the maps in view of the fact that there are several such studies underway in the region; whether the needed funds for

alternative modes will be identified and tied to the goals of the region; the need to demonstrate good public involvement in this effort; and the lack of mention of whether there would be significant street design impacts on the infrastructure. Committee members asked whether a good quantity of maps would be available for presentations and discussions at neighborhood meetings.

Andy Cotugno indicated that there have been a number of rounds of local review with the jurisdictions and that Metro was seeking a broader comment/review period with the general public during the fall.

Tom Kloster responded that a few hundred maps will be printed but that computerized versions will also be available. He felt that the larger version maps were more useful. Approximately 300 plots were initially sent out to the jurisdictions. Tom suggested putting together a large version for jurisdictional presentations.

For the next agenda item, Bruce Fukuji, consultant and land use planner, graphically provided a slide overview of the *Creating Livable Streets* document. The document represents a set of guidelines to help local jurisdictions implement the street design policies in support of the 2040 Growth Concept and the *Regional Transportation Plan*. It is not adopted and is intended only to serve as a tool for improvement of existing streets and design of new ones. Bruce explained that the guidelines were organized into four areas: the street realm, the travelway realm, the pedestrian realm and adjacent land use. He noted that the handbook focuses on how to create a balance in providing multi-modal street design while maintaining the economic viability and livability of the region.

Jim Daisa, engineer and project manager, noted that the street design handbook represents guidelines, not standards, which will serve as a tool for street designers and engineers. The question was raised, and affirmed, as to whether local jurisdictions could choose 11 feet as opposed to 14 feet for design guidelines. Mayor Drake felt that policy-makers and staff need to break out of the mold and be creative, citing the expense of an 11-foot road compared to a wider one. Councilor McLain felt that attention should be paid to level-of-service and what is reasonable in terms of street design. She felt that it is not just a matter of prioritizing but making a commitment to the types of facilities that will carry out the land use goals. She felt it is Metro's role to facilitate and bring that information to the jurisdictions. Chair Kvistad felt the region needs to be sensitive in a positive way.

Commissioner Hales complimented the consultants on the *Creating Livable Streets* document and asked whether Metro's guidelines

would challenge the American Association of State Highway and Transportation Officials (AASHTO) guidelines. Jim Daisa stated that, from a traffic engineering standpoint, the guidelines are acceptable. Bruce Fukuji explained that the difference is the way in which the streets are being classified. Andy Cotugno clarified that individual designs vary and this handbook provides the flexibility for those ranges. A discussion followed on the different treatment for boulevards.

Andy Cotugno noted one of staff's concerns is that some of the direction staff hopes to pursue is not allowed by local standards. There is a disclaimer in the *Creating Livable Streets* document indicating that it does not represent a challenge to AASHTO guidelines. Andy noted that staff is trying to introduce the policy issues on how modes interrelate with land use.

Chapter 1 of the RTP describes the concepts and design classifications and the emphasis of pedestrians, motor vehicles and highways. Andy explained that priority criteria as opposed to standards could be another approach considered. Commissioner Hales felt it would be a healthy step to communicate that projects that improve mode split will get funded. In further discussion on AASHTO guidelines, it was noted that it may be necessary to reach out to the engineering community to determine what is appropriate for each respective area.

Conclusions from the Street Connectivity Study included:

- . Congestion at arterial intersections reduced by 18 percent overall;
- . Less local traffic occurred on arterials - short trips served by local system;
- . Greater percentage of regional traffic on arterials;
- . The greatest motor vehicle benefits occurred at 10-16 connections/mile;
- . Effect on pedestrian/transit use; and
- . Neighborhood livability.

Five case studies were selected with physical and operational constraints provided.

Tom Kloster indicated that staff has applied for a TGM grant for further study on design implications. Committee members cited the importance of follow-up study on impacts on individual neighborhood streets. It would involve comprehensive planning into existing urban areas. It was noted that if you provide

enough connections, you also disperse that traffic onto as many connections as you can.

Commissioner Peters asked that additional information be provided on case studies of real streets and real neighborhoods where connections were made, traffic calming was used, and the impacts of disbursement of that traffic. She felt it would be pertinent information for the neighborhoods.

Staff was asked whether the study looked at impact of street connectivity on mode split, and the response was negative. That issue, however, would be addressed in the proposed follow-up TGM study.

The draft Alternatives Analysis Findings document comprises a summary of the findings from the RTP Alternatives Analysis and is intended to be used to develop regional level-of-service policies and guide development of the RTP Preferred System. The general issues and the detailed issues are for current year conditions and what it will be for 2015 for potential highway/transit improvements.

Andy Cotugno referred committee members to Page 4 of the draft Alternatives Findings document to a matrix summarizing RTP AA modeling principles. The 2015 projections of growth reflect numbers from the 2040 Growth Concept. The traffic was scaled down to get to a 10 percent reduction in vehicle miles traveled per capita. The current RTP standard of LOS D results in a significantly congested system. The question of what is recognized as "significantly congested" requires further discussion. Andy asked for input on what committee members regard as the appropriate level-of-service for design of the system. Questions relating to cost and benefits are at issue. Value judgments need to be made on the service to be provided, whether the project is needed in the first place, whether better coverage is needed, and whether the cost is justified to get to a higher level-of-service. The question was also raised as to whether there could be two different levels-of-service in different circumstances. The high level-of-service option is called for by the current RTP. Andy illustrated the implications evolving from trying to get to certain levels-of-service (referencing Page 21 of the Draft Alternatives Analysis Findings report). He noted that, as you provide better service across the region, people drive farther and the non-SOV mode share goes down somewhat. There would be more VMT/capita than otherwise.

With regard to Issue 4 (Congestion and Auto Travel Time), different origin-and-destination locations were selected. Growth and interstate travel were taken into consideration in the I-205 corridor and freight traffic was included in the peak hour.

Andy also reviewed the issues related to transit. He spoke of a high level of transit usage (56-57 annual rides/capita) compared to similar transit districts nationwide. He spoke of higher usage over the last five years, noting that we have had an Urban Growth Boundary for 20 years. Portland is listed in the top one-third of its peer group in terms of efficiency of the transit system and it gets more productive over time. There is a major link between the 2040 land use pattern and the efficiency and use of the transit system. Andy noted that the non-SOV share is an aggregate number for all non-SOV modes.

Commissioner Hales asked what the effect would be on the transportation system as we continue to add capacity to the existing freeways rather than improving the pedestrian environment. He hoped that the information will graphically portray to people what those choices are.

Commissioner Peters acknowledged that one of the most significant findings is that, as you strive for the less congestion, you create additional capacity, drawing more traffic, which brings you back to the same level-of-service. She hoped the information would be used in a useful way -- other than assuming a 10 percent reduction. Commissioner Hales suggested illustrating a livability scenario, citing examples, to see how it would work.

Andy Cotugno suggested that the joint JPACT/MPAC/Transportation Planning Committee continue to meet at several milestones in the RTP Update planning process. He noted that the final chapter of the RTP is in progress and financial implications will be addressed. A final staff report is expected by the end of July.

Andy thanked everyone who generated the information for the RTP Update.

#### ADJOURNMENT

There being no further business, the worksession was adjourned.

REPORT WRITTEN BY: Lois Kaplan

COPIES TO: JPACT Members  
MPAC Members  
Transportation Planning Committee Members

COMMITTEE MEETING TITLE JPACT

DATE 8-14-97

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Susan McLean	Metro
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N. Kay Walker	City of Cornelius
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COMMITTEE MEETING TITLE JFACT

DATE 8-14-97

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