BEFORE THE COUNCIL OF THE METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ELIMINATING A "TRANSIT-INTENSIVE STRATEGY" FROM FURTHER CONSIDERATION IN THE WESTERN BYPASS STUDY WITHOUT PRECLUDING FUTURE LIGHT RAIL RAIL TRANSIT IN THE HIGHWAY 217 CORRIDOR

RESOLUTION NO. 92-1620A
Introduced by

Councilor Richard Devlin

WHEREAS, The Metropolitan Service District is a signatory to the Western Bypass Study Planning Coordination Agreement to seek solutions to north-south and circumferential travel congestion in southeast Washington County; and

WHEREAS, The Coordination Agreement, as amended by Resolution No. 92-1550 commits the Joint Policy Advisory Committee on Transportation (JPACT) and Metro to consider the Oregon Department of Transportation (ODOT) recommendation of the elimination of any strategies from further detailed consideration prior to the refinement of detailed alternatives; and

WHEREAS, The Western Bypass Study has analyzed six general transportation strategies which were reconfigured into four revised strategies; and

WHEREAS, One strategy was a revised Transit-Intensive
Strategy using fixed guideway light rail lines along Highway 217
and Barbur Boulevard as its high-capacity transit element; and

WHEREAS, Analysis of projected travel under current land use plans indicated that fixed guideway light rail along the Highway 217 corridor does not meet the Western Bypass Study Purpose and Need Statement; and

WHEREAS, ODOT study committees have recommended elimination of a transit-intensive strategy from further study as not a reasonable option to meet ODOT's Purpose and Need Statement; and

WHEREAS, The proposed Arterial Expansion/High Occupancy
Vehicle Express Alternative will include a high-capacity transit
element along the Highway 217 Corridor that works as well or
better than light rail transit; and

WHEREAS, ODOT has recommended that the alternatives to be considered further will not preclude light rail transit implementation along the Highway 217 corridor in the future; and

WHEREAS, ODOT has committed to including in the EIS any viable land use/transportation alternative emerging from the 1000 Friends of Oregon Land Use, Transportation and Air Quality (LUTRAQ) study; and

WHEREAS, No Regional Transportation Plan amendment is needed because the Barbur Boulevard light rail lies outside the Western Bypass Study Area and none of the alternatives will preclude long-range implementation of light rail along Highway 217; now, therefore,

BE IT RESOLVED,

- 1. That the revised Transit-Intensive Strategy with fixed guideway light rail along Highway 217 and Barbur Boulevard and no highway expansion beyond common improvements shall not be considered further in that form as an alternative for the Draft Environmental Impact Statement (DEIS) for the Western Bypass Study because it does not meet the Western Bypass Purpose and Need Statement.
- 2. That alternatives which include combinations of highway expansion and transit expansion will be considered for Draft Environmental Impact Statement evaluation in the Western Bypass Study. In addition, when the alterna-

tives are approved for inclusion in the Environmental Impact Statement, specific consideration will be given to whether LRT should be the transit element of one of these alternatives.

- 3. That alternatives considered for Draft Environmental
 Impact Statement evaluation shall not preclude implementation of fixed guideway light rail transit along
 Highway 217 in the future.
- 4. That the following circumstances will cause further consideration of light rail in the Highway 217 corridor:
 - a. If a land use/transportation alternative is identified by the LUTRAQ study which is a viable land use/transportation strategy, it shall be evaluated in the Draft Environmental Impact Statement.
 - b. If the preferred alternative selected at the conclusion of the Western Bypass Study includes a fixed guideway element, the subsequent Alternatives Analysis required in the Federal Transit Administration process will examine appropriate fixed guideway options including light rail.
 - c. If future studies produce new information which significantly change the projected travel analysis, light rail will be reconsidered.
- 5. That the reasons for the Transit-Intensive Strategy failing to meet the Purpose and Need Statement are explained in the staff reports, the matrix summary of projected utilization, and the data ODOT has presented

in the record.

6. That remaining alternatives and strategies considered for DEIS inclusion address the Transportation Planning Rule, the federal Clean Air Act of 1990, relevant Regional Urban Growth Goals and Objectives (RUGGO), and funding programs and policies.

ADOPTED by the Council of the Metropolitan Service District this 10th day of September, 1992.

Jim Fardner, Presiding Officer

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 92-1620A FOR THE PURPOSE OF ELIMINATING A "TRANSIT-INTENSIVE STRATEGY" FROM FURTHER CONSIDERATION IN THE WESTERN BYPASS STUDY WITHOUT PRECLUDING FUTURE LIGHT RAIL TRANSIT IN THE HIGHWAY 217 CORRIDOR

DATE: May 14, 1992 Presented by: Andrew Cotugno

PROPOSED ACTION

To drop further consideration of an alternative which is transitintensive without additional highway investment beyond the "common roadway improvements" called "Transit-Intensive (LRT)" strategy in the strategies evaluation.

This action does not remove consideration of a high-capacity transit alternative combined with roadway improvements as, for example, in the "Transit (HOV)/Arterial Expansion" alternative which is not being recommended for deletion.

TPAC and JPACT have reviewed this strategy and recommend approval as reflected in Resolution No. 92-1620A.

FACTUAL BACKGROUND AND ANALYSIS

The Oregon Department of Transportation, in carrying out the study of the Western Bypass recommended in Metro's Southwest Corridor Study, has evaluated six strategies and is seeking to drop those that do not address the objectives of the study to adequately serve circumferential or north-south travel in eastern Washington County. A full description of the ODOT study process is included as Attachment A.

The study team has made two attempts to define a transit-intensive (only), (with no road improvements beyond the "common improvements"), solution to the travel demands generated by the current land use plans for the study area and region. The second attempt replaced fixed feeder bus with demand-responsive feeder service and through-routing of LRT lines along 217 to the CBD and Hillsboro for more direct service. Neither showed the ability to address the purpose and needs stated for this study.

One of the alternatives remaining, the "Transit (HOV) / Arterial Expansion" has a high-capacity transit element modeled as express bus on the transitway in conjunction with arterial improvements. From the point of view of patronage, this would give similar results to a light rail alternative (perhaps better).

From a practical viewpoint, a study such as this can address the effect of an intensive transit alternative on road needs but, in fact, cannot make a mode-within-transit decision. Both the Federal Transit Administration procedure and common sense require an Alternatives Analysis to determine the most appropriate

transit service in a corridor such as this. This choice of transit-intensive service and setting of priorities will be addressed in Metro's High-Capacity Transit System Study over the next year or so. These system considerations will be known before any possible project(s) emerging from the Western Bypass Study get to the design stage.

In terms of addressing a transit-intensive alternative along with an alternative land use plan to better utilize transit potential, ODOT has committed to include in the DEIS an evaluation of any viable alternative emerging from the 1000 Friends of Oregon LUTRAQ study.

Following presentation of the evaluation data to the Technical Advisory Committee, the Citizens Advisory Committee and the Steering Committee for the project, recommended dropping this alternative.

RECOMMENDATIONS

That this Transit-Intensive Strategy with fixed guideway light rail along Highway 217 and Barbur Boulevard and no highway expansion beyond common improvements not be considered further.

That further consideration of alternatives that have combinations of highway and transit expansion be considered.

That alternatives chosen for the DEIS evaluation shall not preclude implementation of fixed guideway rail transit along Highway 217 in the future.

That the following circumstances will cause further consideration of light rail in the Highway 217 corridor:

- If a viable alternative is identified by the 1000 Friends of Oregon LUTRAQ study, it shall be included in this DEIS evaluation.
- If the preferred alternative selected includes a fixed guideway element, the subsequent Alternatives Analysis required in the federal process will examine all such options including light rail.
- If future studies produce new information significantly changing the current travel projections used in the analysis, light rail will be considered.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 92-1620A.

ACC: lmk 92-1620A.RES 7-14-92

ATTACHMENT A

WESTERN BYPASS STUDY: ELIMINATION OF STRATEGIES FROM FURTHER CONSIDERATION

A. Introduction

As amended earlier this year, the Western Bypass Study Planning Coordination Agreement adopted by Metro, ODOT, and affected Washington County jurisdictions provides for ODOT to recommend, and JPACT and Metro to consider, the elimination of strategies from further detailed study as alternatives. The intergovernmental agreement provides in pertinent part:

"Based on the strategies recommended for elimination by ODOT's staff, JPACT and Metro shall consider recommending or requiring elimination of strategies considered unreasonable to meet the purposes and needs identified in the [Purpose and Need] Statement. As part of this process, JPACT and Metro shall consider any appropriate amendments to the RTP to eliminate strategies from further study. The adoption of any RTP amendments eliminating strategies from further study shall be accompanied by findings demonstrating compliance with applicable statewide planning goals and regional goals and objectives, if necessary. For each strategy eliminated, Metro shall demonstrate the reasons why the eliminated strategy cannot meet the identified statewide and regional transportation system needs."

Following review and action by its Technical Advisory Committee (TAC), Citizen Advisory Committee (CAC) and Steering Committee, ODOT is now before you to request elimination of two strategies from further detailed consideration as alternatives: Bypass Option B, which considered a new limited access facility essentially along or west of Highway 219 outside the Urban Growth Boundary, and a transit-intensive strategy which considered the ability to meet the identified purposes and needs through an approach relying primarily on transit.

Elimination of these strategies would not require an RTP amendment. Eliminating Bypass Option B does not require an RTP amendment because ODOT intends to carry forward Bypass Option A for further study as an alternative. Bypass Option A is located in an area similar to that identified in the RTP. ODOT's committees found that Bypass Option A would be more effective at meeting the identified purpose and need.

Bypass Option B is located well to the west of Bypass Option A, along and west of Highway 219 and is outside the corridor identified in the Regional Transportation Plan.

Regarding elimination of a transit-intensive strategy, ODOT considered whether a strategy relying primarily on transit, rather than a combination of transit and roadway improvements, could meet the purposes and needs identified for the Study. To develop the transit-intensive strategy, ODOT considered high-capacity transit corridors in the form of light rail transit along Highway 217 and Barbur Boulevard in addition to the Westside LRT to Hillsboro. ODOT supported these high-capacity transit corridors with park-and-ride lots, transit stations, and an expanded feeder bus network, and called this strategy the "Transit-Intensive (LRT) Strategy."

Eliminating the Transit-Intensive (LRT) Strategy would not require an RTP amendment because (1) the Barbur corridor lies outside the Western Bypass study area and is not affected by ODOT's proposal, (2) the RTP identifies the Highway 217 corridor as a possible future extension of light rail; and (3) none of the alternatives recommended for further study will preclude light rail transit along Highway 217. ODOT's position is that a strategy relying primarily on transit rather than a combination of transit and roadway expansion cannot meet the purposes and needs identified in this Study and does not merit further consideration.

While the purposes and needs identified in this Study cannot be met only through transit, ODOT recognizes that circumferential high-capacity transit (bus or light rail) combined with roadway improvements and demand reduction measures does merit further consideration in this Study.

Although RTP amendments are not required to eliminate either strategy, the intergovernmental agreement still requires Metro to demonstrate reasons why each strategy eliminated cannot meet the identified statewide and regional Westside circumferential travel needs identified in the Purpose and Need Statement. This staff report provides those reasons.

B. Background

Section III of the intergovernmental agreement requires ODOT to "study, develop and refine strategies to meet the state-wide and regional Westside circumferential travel needs identified in the Purpose and Need Statement." Those needs include the need to adequately provide for north-south and circumferential travel in the study area.

According to ODOT's Purpose and Need Statement, because of the lack of circumferential routes and expected growth projected for the study area, transportation problems will be significant by the year 2010 without major reduction or alleviation of traffic congestion. More traffic will likely use roads not designed for high traffic volumes. Through an extensive public involvement effort, ODOT has identified needs to reduce traffic congestion and reduce reliance on the private automobile. Options to satisfy those needs include increasing road capacity and transit service and implementing demand management programs.

In the spring of 1991, ODOT and its consulting team began to develop and study a number of strategies. These strategies focused on particular solutions to address the demand for north-south or circumferential travel, as the purpose of the study is not to solve every traffic congestion problem in the study area. The strategies included:

- a "no build" strategy;
- 2. a "common improvements" strategy (including transportation projects and transit service expansions under active development for the study area but without committed funding);
- an "arterial expansion" strategy, focusing on roadway improvements beyond those listed in the "common improvements" and including extension of a major discontinuous north-south route;
- 4. a "transit-intensive (LRT)" strategy, focusing on transit improvements adding two light rail corridors (Barbur and Highway 217) together with supporting "feeder" bus routes, park-and-ride lots and transit stations;
- 5. a "transit (HOV)/arterial expansion" strategy, combining transit facilities and service improvements with roadway improvements, and including express bus service and high occupancy vehicle lanes in the Highway 217 corridor as a high-capacity transit element; and
- 6. a "bypass" strategy, looking at two broad corridor options for a bypass facility in addition to other roadway and transit improvements.

Thereafter, following review by ODOT's advisory committees and public open houses, ODOT revised, refined and analyzed those strategies and returned them to its committees.

In October, 1991, ODOT's CAC, TAC and Steering Committee voted to recommend elimination of Bypass Option B from further detailed study as an alternative. The CAC also voted to recommend elimination of the "transit-intensive (LRT)" strategy from further study as an alternative, because this strategy did not perform better than the "common improvements" strategy which did not contain highcapacity transit elements or other transit service beyond the Westside LRT. However, the TAC and Steering Committee were not yet prepared to take that step, although they recognized its limited performance. Instead, following comments from Tri-Met's representative that the transit intensive strategy was not combined in a way that most intensively supported high capacity transit, they adopted a motion directing ODOT to remodel Highway 217 light rail, expanding on its components to consider through connection to the Central Business District, a transportation demand management program, and dial-a-ride service.

That fall and winter, Metro modeled a "revised Transit-Intensive (LRT) Strategy" containing the features suggested by the TAC. The revised strategy was developed by a group representing Tri-Met, ODOT's study team, and Metro. Like the original "transit-intensive (LRT)" strategy, the revised strategy focused on transit, relying on light rail along Highway 217 and Barbur Boulevard for its high-capacity element. However, the strategy added (1) through routing of Highway 217 LRT to Hillsboro and downtown Portland via the Westside and Barbur LRT corridors; (2) demand-responsive transit (DRT); and (3) transportation demand management (TDM) measures intended to see how TDM would work at the alternatives level.

Following completion of modeling, ODOT brought the revised Transit-Intensive (LRT) Strategy before its committees in March and April, 1992. Based on discussion and on the information generated by the modeling, the TAC voted (1) to recommend elimination from further study of a transitintensive strategy using light rail along the Highway 217 corridor as its high-capacity transit element; (2) to combine DRT, TDM and high-capacity transit into an alternative identified for further study; and (3) that no alternative "preclude long-range implementation of LRT along the Highway 217 corridor." Tri-Met's representative to the TAC concurred with these motions. In subsequent meetings, the CAC and Steering Committee followed with similar motions.

C. <u>Discussion</u>

1. Bypass Option B

Metro staff concurs with ODOT's recommendation to eliminate Bypass Option B from further detailed consideration as an alternative. ODOT's committees recommended elimination of this strategy based on information showing that Bypass Option B would be underutilized and does not substantially reduce congestion compared to the No-Build strategy. Elimination of Bypass Option B does not eliminate a Bypass alternative. Bypass Option A will be taken forward for further study, consistent with the RTP.

2. Transit-Intensive (LRT) Strategy

Metro staff also concurs with ODOT's recommendation to eliminate a transit-intensive strategy ("transit only") from further consideration as an alternative.

ODOT's advisory committees recommended elimination of a transit-intensive strategy for the following reasons:

- Transit-intensive strategies as originally developed and as revised do not address the transportation problems identified in the Western Bypass Study.
- Additional circumferential LRT service in the Highway 217 corridor connecting to the Westside LRT, to a Barbur LRT, or to the CBD does not notably improve transit ridership in the year 2010 compared to the original Transit-Intensive (LRT) Strategy or compared to the No-Build strategy.
- The LUTRAQ study is considering LRT elements as part of the 1000 Friends of Oregon alternative. Changes in planned land use designations could change the ability of LRT service in the Highway 217 corridor to address the transportation problems identified in this Study and will be folded into this Study if viable.
- High-Capacity Transit through express bus service in the Highway 217 corridor will still be included as elements of the Arterial Expansion/HOV Express and Bypass alternatives. If implemented, it would provide similar service levels to light rail transit, and would provide an opportunity to build

the transit ridership demand needed for supporting light rail transit.

Although the strategy was revised in a manner that better supported light rail, the high-capacity transit component did not result in the strategy performing significantly better than the original transit-intensive strategy. Like the original transit-intensive strategy, the revised strategy did not (1) substantially reduce north-south or circumferential traffic congestion; (2) increase study area accessibility; (3) reduce traffic diversion to minor roads and neighborhoods; or (4) reduce reliance on the single occupancy automobile.

Indeed, due to the addition of "demand-responsive transit" (dial-a-ride), the revised Transit-Intensive (LRT) Strategy actually resulted in a decrease in work person trips by fixed route (bus and light rail) transit. This is caused by a shift in ridership from fixed route transit to demand-responsive transit. Based on the modeling, ODOT concluded that demand-responsive transit may help meet the identified purpose and need in reducing reliance on the private auto-mobile and providing greater coverage in the study area by transit and should be carried forward as part of an alternative, but that high-capacity transit by itself does not contribute to meeting this purpose and need and therefore warrants no further detailed review in this Study as a separate (stand-alone) alternative.

Apart from demand-responsive transit, Metro has modeled transportation demand management (TDM) measures to determine their effect on reducing reliance on the single occupancy automobile. Metro found that TDM has a significant positive effect on reducing reliance on the automobile. Like DRT, ODOT will carry TDM forward into the alternatives stage supported by transit and roadway components. ODOT does not propose the elimination of DRT or TDM from further consideration.

At this point, clarification is needed. Before its committees, ODOT provided information showing how the revised Transit-Intensive (LRT) Strategy performed (1) with DRT and (2) with DRT and TDM. As earlier described, with just DRT, this strategy did not perform substantially better than the original transit-intensive strategy and, indeed, resulted in a lowering of combined bus and light rail ridership. However, with TDM, the strategy performed better, due to the impact of TDM measures.

Metro's modeling of the revised Transit-Intensive (LRT) Strategy with TDM raised questions among some ODOT committee members who compared these results with those of other strategies recommended by ODOT for further study. They questioned why ODOT would eliminate the Transit-Intensive (LRT) Strategy, when it appeared to perform as well as those other strategies in meeting some of the identified purposes and needs. The answer is that the committee members were comparing this strategy with TDM to the other strategies without TDM. This was like comparing apples with oranges. While TDM substantially improved transit ridership for the Transit-Intensive (LRT) Strategy, it also substantially improves transit ridership in each of the alternatives ODOT is recommending for further study. Those proposed alternatives, with TDM, perform much better than a transit-intensive strategy with TDM at reducing congestion. Even with TDM, a transit-intensive strategy does not assist in meeting this need. ODOT is proposing to include TDM in all the alternatives recommended for further study.

MG: lmk/92-1620A.ATT

26793-00.001\5ZMFNDGS.STR.0LD

Sensible Transportation Options for People

July 29, 1992

Dear JPACT Member.

On August 13, you will be asked to approve ODOT's recommendation to drop two Strategies from the Western Bypass Study:

- * Bypass Option B, which runs essentially along, or west of, Hwy #219 outside the Urban Growth Boundary.
- * Transit-Intensive (LRT) Strategy, which provides for light rail transit along Hwy #217, connecting Westside Light Rail with a light rail line along Barbur Blvd.

ODOT's rationale is that neither of these strategies meets the needs identified in the Western Bypass Study's Statement of Purpose and Need.

STOP has several serious objections to ODOT's recommendation -- as well as to the overall direction of the Western Bypass Study.

- 1. The top three Goals and Objectives of the Western Bypass Study are:
 - * To reduce congestion on major roads and highways
 - * To improve transit and other methods to reduce reliance on cars and prolong the life of highways.
 - * To protect the Urban Growth Boundary, in order to maximize development within the UGB.

(The designation "top three" is based on the combined rankings of public input at ODOT's Public Workshops and of Western Bypass Study Committee members. Attachment A lists all of the study's Goals and Objectives.)

These goals and objectives reflect growing public support for decreased automobile use, the creation of better transportation options, and the protection of the Urban Growth Boundary.

Granted, neither Bypass Option B nor the LRT Strategy does much to accomplish the study's top three goals. However, neither do any of the other Strategies. (See Attachment B, "Notes On Evaluation Results From the Western Bypass Study" (STOP, 1991)).

2. ODOT concludes that neither the Bypass B Strategy nor the LRT Strategy addresses the study's Statement of Purpose and Need. Again, neither do any of the other strategies.

ODOT's summary of the Statement of Purpose and Need (Attachment C) concludes that strategies must:

- * Address major North/South or circumferential travel needs.
- * Recognize various trip lengths and modes.
- * Consider the opportunity to reduce traffic as well as the opportunity to increase road capacity and transit service.
- Consider geographic, environmental, and land use factors.
- * Recognize traffic in Northeast and Southeast portions, as well as travel demand between North and South areas, and through the Study area.

Believing that ODOT's Summary missed some critical information contained in the Statement of Purpose and Need, STOP published its own analysis of this document, "Transportation Needs in the Western Bypass Study Area", included as Attachment D. Our analysis highlighted these statistics from ODOT's Statement of Purpose and Need:

In 1988, less than 4% of all Western Bypass Study area trips were long distance, circumferential trips (i.e., between the Southern and Northern areas of Washington Co.)

In 2010:

- * 68% of all study area trips will be less than 6 miles in length.
- * 92% of all study area trips will be short trips within the urbanized area. More than half of these will be within the same district (i.e., Tigard, Beaverton, Aloha, etc.). The remainder will be between adjacent districts.
- * Less than 4% of all study area trips will be long distance, circumferential.
- * 85% of all study area trips will begin and end in the study area.

* Less than 5% of all trips that begin and end in the study area would be likely to use a Western Bypass.

Based on ODOT's extensive research, we can only conclude that there is no significant demand for long-distance, circumferential trips in Washington County -- now, or in the year 2010.

3. ODOT's more detailed analysis of Alternatives indicates that none of them significantly reduce automobile reliance or congestion -- two of the top-ranked study objectives.

(See Attachment E for a graphic comparison of these Alternatives and Strategies.)

The failure of ODOT's Alternatives to address these critical factors demonstrates that we're looking at the wrong problem. As long as we continue to develop strategies that address long-distance, circumferential travel, we won't be solving the real problem: short, local, urban trips.

- 4. The cost of any of ODOT's Alternatives will be high.
 - * The "TSM/Planned Projects Alternative" includes 54 separate construction projects, 11 of which are new roads.
 - * The "Arterial Expansion/HOV Alternative" includes all of the TSM/Planned Projects plus 5 additional large construction projects: a new, limited-access expressway between I-5 and 99W, a new 4-lane road through established residential sections of Beaverton and Tigard, and significant widening projects on 99W, 217, and SW 216/219th Ave.
 - * The "Bypass Alternative" includes not only a \$300 Million limited access 4-lane freeway, but also all 54 of the TSM/PP Alternative projects, plus 4 additional widening projects.

The only funding source identified for these alternatives is the Access Oregon Program, which is currently available only for a Bypass facility. (Presumably, Access Oregon funds would not pay for the 58 additional construction projects included in the Bypass Alternative.) None of the other "build" Alternatives is currently funded.

Based on these concerns, we have some questions for JPACT:

- * Is solving North/South circumferential travel in Washington County still a regional priority?
- * If so, where are we going to find the \$300 Million -- and more -- to do it?
- * What happens if we decide to invest in any of these solutions? What other regional priorities will have to be bumped in order to address 4% of Washington County's traffic problems?
- * How is the region going to address the remaining 96% of Washington County's traffic problems? With what money?
- * All of the proposed Alternatives project a significant increase in VMT over the next 20 years. If we select one of these Alternatives, how will the region meet the Transportation Planning Rule requirement to decrease regional VMT over the next 20 years? Who will have to bear the burden of balancing out Washington County's sharp VMT increase: Clackamas County? the City of Portland? Multnomah County?
- * What measures will the region have to take to offset the air quality problems caused by increased VMT in Washington County? What impact will this have on the region's ability to attract new industry and development?

We have posed these questions to ODOT and elected officials in Washington County. Their response has been to point to Metro's jurisdiction for regional transportation planning. Indeed, ODOT is conducting the Western Bypass Study at Metro's request; local jurisdictions serve on the committees in an advisory capacity. As the regional transportation decision-making body, JPACT has ultimate responsibility for the Western Bypass Study and its results.

We urge you to consider whether or not the Western Bypass Study, as currently defined, has any chance of producing effective solutions to Washington County's -- and the region's -- pressing transportation needs.

pave Stewart and I will be at the August 13 JPACT meeting to present these concerns in person. Please feel free to call either one of us at the STOP Office (624-6083) if you have any comments or questions.

Sincerely,

Mucky Blizzard

Meeky Blizzard

Executive Coordinator

Attachments

GOALS AND OBJECTIVES

The advisory committees used issues identified in the initial public involvement effort as the basis for developing the Goals and Objectives of the Study. These Goals and Objectives will guide development of strategies to solve current and projected travel needs in the study area. They represent public values and agency priorities identified through staff consultations and public involvement activities.

● GOAL 1:

Conduct the Western Bypass Study in an open, objective and expeditious process allowing input from all sectors of the community and considering all reasonable alternative solutions to transportation problems that comply with local, regional, state and federal plans and regulations.

Objectives:

- 1.1 Keep citizens, local, regional and state agencies and officials, as well as other interest groups, involved in the study process through public forums and workshops and through newsletters and other media.
- 1.2 Identify and assess major existing and future state, regional and intra-county travel needs, primarily as they relate to north/south or circumferential access within and through the study area.
- 1.3 Identify and evaluate the widest range of reasonable alternative solutions to transportation problems, including, but not limited to, transit/HOV, street, and highway improvements, and transportation demand management measures, regardless of current funding availability.
- 1.4 Maintain the study schedule in order to move forward towards the implementation of a feasible and effective solution in a timely manner.

• GOAL 2:

Develop a solution to transportation problems related to accommodating major existing and future (year 2010) state, regional, and intra-county travel needs primarily north/south or circumferential within the project study area.

Objectives:

- 2.1 Reduce congestion on existing streets and highways, as compared to a no-action alternative [what traffic would be like in the future if nothing were cone].
- 2.2 Improve access through, to/from, and within the study area.
- 2.3 Reduce through-traffic diversion to rural roads and residential streets.

- 2.4 Improve safety for both motorized and non-motorized traffic.
- 2.5 Reduce reliance on the private automobile and reduce or delay the need for additional vehicular capacity through support of transit, ride sharing (carpools/vanpools), and other demand management strategies.
- 2.6 Develop alternatives that have flexibility to be improved to meet longer term, future needs (beyond the year 2010 and looking toward anticipated growth within the urban area).

● GOAL 3:

Develop a solution to transportation problems that is sensitive to local and regional environmental issues and community needs, consistent with local, regional, state and federal plans and regulations.

Objectives:

- 3.1 Avoid or minimize negative impacts on the natural environment, e.g., wetlands, water, air, energy, noise, visual, agricultural and forest land.
- 3.2 Avoid or minimize negative impacts on the built environment, e.g., on existing urban and rural land uses and cultural, historical, and recreational resources.
- 3.3 Support an urban development pattern that provides for the efficient delivery of urban services, including public transportation, in a manner consistent with statewide planning goals and with local and regional planning.
- 3.4 Minimize negative impacts or pressures on the Urban Growth Boundary and identify how various alternatives might affect the rate, type or form of urbanization.

GOAL 4:

Consider economic and social factors in the identification and development of a solution to transportation problems for the study area, consistent with local, regional and state plans.

Objectives:

- 4.1 Consider the construction, operation and maintenance costs of each alternative.
- 4.2 Avoid or minimize negative impacts on the integrity and social fabric of the diverse neighborhoods and business communities in the study area (urban and rural).
- 4.3 Support the economic health of the study area and communities that depend on access through the study area.



Sensible Transportation Options for People Notes On Evaluation Results From The Western Bypass Study

November 1991

Prepared By

Dave Stewart, Member, Western Bypass Study Citizens Advisory Committee

SYNOPSIS

None of the strategies evaluated by the Western Bypass Study adequately addresses the study objectives of providing congestion relief, reducing automobile dependency, minimizing impacts on the natural environment, and supporting efficient urban development patterns. These results are detailed in the study documents titled "Final Western Bypass Study Evaluation Of Strategies" dated October 1991, available from ODOT.

STRATEGY DESCRIPTIONS

The Western Bypass Study has evaluated six strategies for the bypass study area, which includes most of Washington County from Hillsboro eastward. The strategies include:

- No Build: Includes currently planned and funded projects, plus Westside Light Rail.
- Arterial Expansion: A package of improvements and extensions based on existing arterial streets.
- Transit Intensive: Light Rail in the 217 and Barbur corridors plus greatly expanded bus service.
- Arterial/HOV: Arterial improvements similar to the Arterial Expansion package plus new transit/ HOV lanes on Highway 217
- Bypass: A rural bypass freeway in either of two corridors plus additional lanes on Highway 217.
- Common: Consists of elements common to the other "build" strategies. Includes roadway improvements throughout the study area. This strategy was created to provide a baseline against which the incremental value of each "build" strategy's unique components could be estimated.

CONGESTION RELIEF

Congestion relief is a stated objective of the study and has been consistently raised by the public as a major concern. ODOT's congestion projections show that surprisingly little relief is given in the year 2010 by any strategy (Table 1). The bypass itself offers no congestion relief beyond the "common elements". The only arterial for which relief beyond that provided by the "common strategy" is projected is Highway 217, but because the bypass strategy includes additional lanes on 217 there is no reason to conclude that the bypass itself offers any benefit (Table 2).

The study made PM peak-hour congestion projections for ten study area arterials in the year 2010. Results were described using "Level of Service" (LOS) indices:

LOS A: Free flow conditions

LOS B: Stable flow conditions, relatively high speeds attainable

LOS C: Stable flow conditions, lower speeds prevalent

LOS D: Approaching unstable flow, traffic showing signs of restriction

LOS E: Unstable flow, traffic volume equal or greater than capacity

LOS F: Roadway failure, "parking lot conditions"

Most of the arterials would experience "parking lot" conditions on a daily basis under the Bypass strategy. Results for the Bypass strategy predict that in the PM peak hour:

- Murray Boulevard will experience LOS F at several locations
- Most of TV Highway in the study area will experience LOS F
- Highway 99W will experience LOS F at several locations
- Interstate 5 will experience LOS D, E, and F throughout its length south of Portland
- Farmington Road will experience LOS F on some urban sections
- US 26 will have some LOS E west of 217, some LOS F east of 217
- Durham Road will experience LOS F along most of its length
- Tualatin Road will experience LOS F along most of its length
- Some segments of Oregon 217 will operate at LOS D or E
- Tualatin-Sherwood/Edy Road will operate mostly at LOS C or better

Source: Final Western Bypass Study Evaluation of Strategies - Descriptive Matrix October 1991

AUTOMOBILE DEPENDENCY

Reducing reliance on the single occupant automobile is a study objective and has consistently been identified by the public as a primary concern. None of the strategies would reduce auto dependency relative to the extremely auto-dependent no-build projections (Table 3). Vehicle miles traveled (VMT) would increase dramatically under any strategy, relative to the most recently available baseline year (Table 4).

IMPACTS ON THE NATURAL ENVIRONMENT

All of the strategies would cause long term impacts on the natural environment, though study goals state that these should be avoided. Public input has expressed great concern about impacts on wetlands and agricultural lands. The bypass strategies have the greatest impact overall (Table 5).

SUPPORT FOR EFFICIENT URBAN GROWTH

The study's objectives include supporting efficient urban development patterns and minimizing presssures on the Urban Growth Boundary (UGB). Public input strongly supports protecting the UGB and avoiding sprawl. The bypass strategy would encourage automobile-based development near the urban fringe and intensify pressure on the Urban Growth Boundary (Table 6).

	Common	Arterial	Transit/LRT	Arterial/IIOV	Bypass A	Bypass B
Oregon 217		2		1	1	1
Murray Blvd		. 1		1		
Tualatin-Sherwood/Edy Rd						
TV Highway						
Highway 99W		1		1		
Interstate 5						
Farmington Road	1	1	1	1	1	1
Sunset Highway	1	1	1	1	1	1
Durham Road		1		1		
Tualatin Road		1		1		
·						
Column Totals	2	8	2	7	3	3

Table 1 Congestion Relief Relative to No-Build In 2010

"1" = Significantly Better Than No-Build Strategy

"2" = Significantly Better Than Other Build Strategies
Stipple pattern indicates no significant difference relative to no -build

Source: Final Western Bypass Study Evaluation of Strategies - Evaluation Matrix October 1991

	Arterial	Transit/LRT	Arterial/HOV	Byp2ss A	Bypass B
Oregon 217	2		1	1	1
Murray Blvd	1		. 1		
Tualatin-Sherwood/Edy Rd					
TV Highway					
Highway 99W	1		1 .		
Interstate 5					
Farmington Road					
Sunset Highway					
Durham Road	1		1		
Tualatin Road	1		1		
Column Totals	6	0	5	1	1

Table 2 Incremental Congestion Relief Beyond Common Strategy

Values from Table 1 Normalized Relative To Common Strategy Stipple pattern indicates no significant difference relative to common strategy

Source: Final Western Bypass Study Evaluation of Strategies - Evaluation Matrix October 1991

Work Trips Only

1	No-Build	Common	Arterial	Transit	HOV	Bypass A	Bypass I
Transit	3.2	3.5	3.5	3.5	3.5	3.5	3.5
HOV	13.3	13.3	13.3	13.3	13.3	13.3	13.3
sov	83.5	83.2	83.2	83.2	83.2	83.2	83.2

Other Trips Only

Transit	0.7	0.7	0.6	0.7	0.7	0.6	0.6
Automobile	99.3	99.3	99.4	99.3	99.3	99.4	99.4

Mode Split As Percent of Total Weekday Person Trips Within The Study Area Table 3

HOV = High Occupancy Vehicle SOV = Single Occupant Vehicle

Source: Final Western Bypass Study Evaluation of Strategies - Evaluation Matrix October 1991

	1988 Actual	No-Build	Common	Arterial	Transit	ноч	Bypass A	Bypass B
. Peak Hour VMT	460,655	683,184	687,678	707,000	688,038	704,598	719,668	708,635
(% change from 1988)	0%	48%	49%	53%	49%	53%	56%	54%

Projected PM Peak Hour VMT Relative To Recent Actual Conditions Table 4

Source: Shapiro and Associates, Inc. 1991

	Common	Arterial	Transit	HOV	Bypass A	Bypass B
Hydrology/Water Quality	1	-1	-1	-1	-1	-1
Ecosystems/Wetlands	-1	-1	-1	-1	-2	-2
Air Quality						
Agricultural & Forest Land					·1	-2
Energy						
Visual Resources	subsections in the good	·1	·1	-1	-1	-1
Geological Resources		-1		-1	·1	-1
Column Totals		4	-3	-4	-6	-7

Long Term Impacts On The Natural Environment Relative to No-Build Table 5

Stipple pattern indicates no significant difference relative to no -build

Source: Final Western Bypass Study Evaluation of Strategies - Evaluation Matrix October 1991

[&]quot;-1" = Significantly Worse Than No-Build Strategy
"-2" = Significantly Worse Than Other Build Strategies

Provides for Efficient Delivery of Urban Services	Common	Arterial	Transit	ноч	Bypass A	Bypass B
Provides Access To Transportation	1	2	1	- 2	2	1
Facilitates Use Of Transit/HOV			1	1		
Proximity of Improvements To Urbanizable Land		1	1	1	-2	-1
Proximity of Interchanges To Urbanizable Land					-2	· •1
Consistency With State And Regional Plans		-1	-1	-1	-1	-1
Consistency With Adopted Local Plans		-1	-1	-1	-1	-1
		-	-			
Location of Improvements Relative to Fringe Of UGB		1	1	1	-2	-1
Ability to Mitigate Potential Negative Impacts						
Proximity of Improvement(s) to Vacant Urban Land		1	1	1	-1	-1
Proximity of Improvement(s) to Vacant Urbanizable Land		1	1	1	-1	-1
1		· · ·	 -			. =
. Column Totals	1	4	4	5	-8	6

Table 6 Impacts On Urban Form Relative to No-Build

Source: Final Western Bypass Study Evaluation of Strategies - Evaluation Matrix October 1991

[&]quot;-2" = Significantly Worse Than Other Build Strategies
"-1" = Significantly Worse Than No-Build Strategy
"1" = Significantly Better Than No-Build Strategy
"2" = Significantly Better Than Other Build Strategies
Stipple pattern indicates no significant difference relative to no-build

Western Bypass Study Statement of Purpose and Need Summary

The Statement of Purpose and Need for the Western Bypass Study summarizes one year of reviewing local plans, collecting data, mapping and working with three advisory committees to develop goals, objectives, and criteria for evaluating potential solutions to north-south and circumferential travel problems. The major findings of the Statement of Purpose and Need are outlined below.

THE REGION AND STUDY AREA - MAJOR FINDINGS

Analysis of existing traffic information tells us what many residents have been saying all along: traffic, especially during the peak hours (morning and evening rush hours), has exceeded the capacity of our roadways, producing backups and delays. The congestion is also causing traffic to divert onto rural and residential roads that were not designed to safely handle this level of traffic. Over the next 20 years, travel conditions will get much worse, given the study's "No-Build" assumptions: 1) development will occur within the guidelines of existing land use plans, and 2) only road/transit improvements with committed funding plus the Westside Light Rail, will be built.

OVERALL TRAVEL PATTERNS

Population and employment growth by 2010 will increase overall congestion, but congestion is also affected by travel patterns - where people go, their mode of travel (their own car, carpool, bus), and the distance they will travel. These are the major findings of the study to date.

- Population and employment will grow substantially, much more than the entire Portland metropolitan region, bringing more people to both live and work within the study area.
- ♦ study area population will grow by 60% (region by 35%).
- ♦ study area employment will grow by 73% (region by 38%).
- Because of the increase in housing and employment, people will be able to both live and work in the study area and a larger proportion of trips will stay within the area, will be shorter, and will be non-work trips.

- the number of study area vehicle trips will increase 66% (region 36%).
- there will be over 1.1 million daily study area vehicle trips in 2010 (690,000 in 1988).
- ♦ close to 68% of the trips will be less than six miles in length (61% in 1988).
- Under the "No-Build" assumptions, people will still use automobiles as their main method of travel in 2010, and the percentage of commuters carpooling or using transit will remain low until time, cost savings, incentives or disincentives outweigh the advantages of driving one's own car.
 - ♦ 95% of trips in the study area will be by automobile.
 - ♦ small increases in transit use will occur with light rail, mostly for travel to and from Portland.
 - the percentage of trips made by carpool will remain about the same (less then 3%).
- Geography and land use patterns (where and how the area has developed) are constraints to both transit and roadway service.
 - ♦ steep slopes (e.g. Bull Mountain), irregular street patterns, single-family subdivisions, and low-density employment centers make regular bus service and continuous north-south through streets difficult to provide.

Those are the major findings relating to traffic in general - now and projected to the year 2010. But the focus of the Western Bypass Study is more specific to circumferential travel needs.

NORTH-SOUTH/CIRCUMFERENTIAL TRAVEL

As overall traffic within the study area will grow over the next 20 years, so will north-south and circumferential traffic. Key findings include:

- Highway 217 is the only major continuous route in the study area that connects Highway 26 in the north with Interstate 5 in the south.
- By 2010, circumferential traffic alone will grow to equal the capacity of one full tane of traffic on Highway 217 during the afternoon peak hour.



Sensible Transportation Options for People

Transportation Needs in the Western Bypass Study Area

Prepared by Sensible Transportation Options for People, Inc.

SYNOPSIS

The proposed Western Bypass freeway has been promoted as a solution to transportation problems in Washington County. The Western Bypass Study's *Statement of Purpose and Need* shows that traffic in the bypass study area is mostly short local trips taken within the urbanized area. Only about 3% of trips beginning and ending within the study area are long distance trips between the southern and north-northwestern districts. Less than 5% of such trips might use a new rural bypass freeway. Traffic that might use a rural bypass is a small fraction of traffic on critically congested arterials. We conclude that constructing a bypass freeway would not relieve existing congestion. Given the projected funding shortfalls for highway and arterial construction in the Metropolitan region and the state, highway dollars would be better spent solving local congestion problems.

Sensible Transportation Options for People (STOP) is a nonprofit grassroots organization dedicated to promoting a wide range transportation options to meet the needs of Washington County and the Metropolitan region. Originally incorporated in response to the proposed Western Bypass freeway, STOP has grown to view transportation issues as inseparable from land use, growth management, urban form, and a host of related issues. STOP is a participant in the Oregon Department of Transportation (ODOT) Western Bypass Study ("Study").

This analysis examines two documents from the Study to determine the nature of traffic problems in the bypass Study area and the effect a new bypass freeway would have in solving those problems. The bypass Study area includes most of Washington County from Hillsboro eastward and contains most of the county's urbanized area and population. For trip analysis purposes the Study area is broken into eight districts: Tualatin/Wilsonville, Scholls, Tigard, Beaverton, North Sunset, Aloha, Hillsboro, and Helvetia.

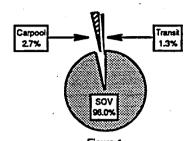
The Study document 1988 Existing and 2010 No-Build Forecasting Analysis Results ("2010") uses demographic projections and existing land use designations to forecast traffic conditions in the bypass Study area in the year 2010.

The Study document entitled Statement of Purpose and Need ("SOPAN") interprets the 2010 numbers to highlight demand for additional circumferential transportation capacity in the Study area. Circumferential travel is defined as "any person trip which is directed between or across radial routes, and is not limited by trip length or purpose" (SOPAN, p. 15). A trip from Wilsonville to Hillsboro, for example, would be circumferential. "Radial" is relative to the Portland CBD. A trip from Scholls to downtown Portland, for example, would be radial.

WASHINGTON COUNTY TRAFFIC IN 2010

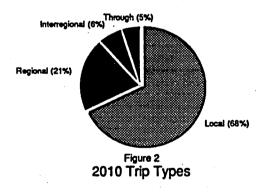
Data from the SOPAN show unequivocally that...

The county will remain extremely auto-dependent entering the 21st century. The greatest concern expressed at Study public workshops held in Washington County was reducing automobile dependency. Single-occupancy-vehicle (SOV) trips will comprise 96% of all person-trips in the Study area, exactly as in 1988 (fig. 1). The proportion of trips using transit will remain essentially unchanged at 1.3% (2010, Major Findings and Conclusions, p. 1).



Bypass Study Area Mode Split In 2010

Over two-thirds of all vehicle trips will be local trips less than 6 miles in length in 2010 (fig. 2). Other kinds of trips will be a smaller proportion of all trips in 2010 than they are today (2010, fig. 8).



Most trips within the study area will be trips within urbanized areas. Trips within each of the six substantially urbanized districts (Hillsboro, Aloha, North Sunset, Beaverton, Tigard, and Tualatin-Wilsonville), e.g. a trip from Aloha to Aloha or from Beaverton to Beaverton, account for over half of all trips within the study area. Trips between geographically adjacent urbanized districts (e.g. Aloha to Beaverton or Beaverton to North Sunset) account for over a third of all trips within the study area. Together these shorter urban-to-urban trips comprise over 92% of all trips within the study area (fig. 3).

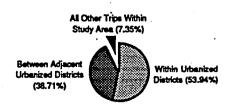


Figure 3
Urban Trips Within the Study Area

Trips entering and/or leaving the Study area will increase only slightly from 1988 to 2010, in contrast to trips beginning and ending within the Study area, which increase greatly. Numbers from the SOPAN (fig. 4) demonstrate this disparity in relative increase.

•	1988	2010
All vehicle trips (SOPAN Fig. 8)	834,600	1,362,600
Change 1988 to 2010		63.26%
Auto trips beginning and ending within		-
the study area (SOPAN Table 4)	643,173	1,160,225
Change 1988 to 2010		80.39%
Auto trips not beginning and ending -		
within the study area (difference)	191,427	202,375
Change 1988 to 2010		5.72%

Figure 4
Relative Increase Of Trips

Demand for long distance "circumferential" travel is a small fraction of travel demand within the Study area. Data from the Study (SOPAN, Table 4) is analyzed in Table 1 (attached) to demonstrate this fact. Trips between the southern end of the Study area and the north-northwestern end comprise about 3.3% of trips beginning and ending within the Study area (fig 5).

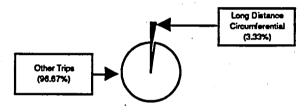
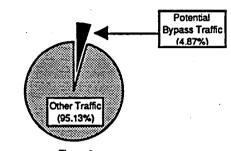


Figure 5
Long Distance Circumferential Trips

Conclusions: Entering the 21st century Washington County will be extremely reliant on the single-occupant private automobile. Most trips will be short single-occupant automobile trips within the urbanized areas. Other kinds of trips will be relatively less important. Long distance "circumferential" trips (from the southern districts to the north-northwest districts) will be a small fraction of trips within the Study area.

HOW MUCH TRAFFIC WOULD USE A RURAL BYPASS FACILITY?

No more than 4.9% of trips beginning and ending within the Study area might use a bypass freeway through the rural area south of Cooper Mountain, between US 99W and TV Highway (fig. 6). Table 2 (attached) uses data from the SOPAN to identify trips that would use a bypass, based on origin and destination. All long distance circumferential trips are assumed to use the bypass, as are shorter circumferential trips and local trips near the rural bypass segment. This assignment of trips to the rural bypass is extremely generous. Note that Aloha/Tigard and Tigard/North Sunset trips are assumed to use the rural bypass, though for most of these trips use of the bypass would require a great deal of out-of-direction travel. If these trips are not included in the bypass category the percentage of trips using the rural bypass drops to 2.44%.



Proportion of Potential Bypass Traffic
Within the Study Area

Potential bypass traffic is not a rapidly growing component of traffic within the Study area. The proportion of person trips within the Study area that would use a rural bypass is approximately constant from 1988 to 2010 (Table 2). In absolute numbers, potential bypass trips will increase by about 25,000 while other trips will increase by about half a million - a twentyfold difference (Fig. 7).

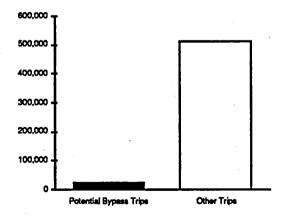


Figure 7
Absolute Growth of Person Trips Within the Study Area - 1988 to 2010

Conclusions: A small fraction of trips beginning and ending within the Study area would use a rural bypass freeway. In absolute terms potential bypass traffic will increase relatively little by 2010, while other traffic will increase dramatically.

OBSERVED CONGESTION IS NOT DUE TO POTENTIAL BYPASS TRAFFIC

Congestion between I-5 and US 99W near Tualatin is not caused by potential bypass traffic. In 2010 during the PM peak hour less than 3% of trips on Tualatin and Tualatin-Sherwood Roads will be traveling to the northern part of the Study area along the Sunset Corridor, and less than three percent will be destined south of the I-5 corridor. Over 66% of such trips will be local traffic beginning or ending in Tigard, Scholls, Sherwood, King City, or Wilsonville (SOPAN, Appendix D).

Congestion on 99W near Tualatin Road is not caused by potential bypass traffic. In 1988 about 2 to 3 percent of trips there were generated along the Sunset Corridor. The biggest category of trips was those local to the southern end of the Study area. Local trips will be an even larger percentage of trips in 2010 (SOPAN, Appendix D).

Congestion on US 26 near 185th is not caused by potential bypass traffic. In 2010 traffic on this highway will remain strongly oriented towards the northern portion of the Study area. Only 9.0 percent of the traffic in the PM peak hour will be destined for the southern portion of the Study area and Beaverton (SOPAN, Appendix D). The Beaverton portion of this 9% would not use a rural bypass.

Congestion on TV Highway is not caused by potential bypass traffic. In 1988 only 4% of PM peak hour trips on TV Highway between 219th Avenue and OR 217 was generated in the southern part of the Study area. Trips on this highway were primarily generated by or destined for districts in the northern portion of the Study area. This situation will remain unchanged in 2010 (SOPAN, Appendix D).

Congestion on Farmington Road is not caused by potential bypass traffic. In 1988 only 4% of PM peak hour trips on Farmington Road between 209th Avenue and OR 217 were generated in the southern part of the Study area. Trips on this highway were primarily generated by or destined for districts in the northern portion of the Study area, and will be so in 2010 (SOPAN, Appendix D).

Congestion on Oregon 217 is not caused by potential bypass traffic. Although data in the SOPAN show a significant fraction of PM peak hour traffic on Oregon 217 in 2010 will be "long distance circumferential trips", much of this traffic would not use a rural bypass. Detailed PM peak traffic data obtained at STOP's request (Table 3) show the SOPAN breakout of "long distance circumferential trips" and STOP's breakout of potential bypass trips using Oregon 217 in 2010. The SOPAN "long distance circumferential" grouping includes trips for which the rural bypass would be an extremely long out-of-direction detour (e.g. trips between Beaverton and I-5 South). STOP's generous estimate of bypass traffic on 217 at evening rush hour is about 15% of traffic volume, equivalent to much less than one lane of traffic, in contrast to the SOPAN's two full lanes of long distance circumferential traffic.

PM peak hour congestion on 217 (SOPAN, fig. 11) is discontinuous and segmented, suggesting that much is due to local and radial traffic. The segment between 99W and Greenburg Road will be extremely congested in both directions in 2010, while the segment between Denny and Allen will be less congested southbound and uncongested northbound. STOP has requested a more detailed data set from ODOT.

Conclusions: The implied promise of relief from congestion when a rural bypass is constructed is an unfortunate misrepresentation. Chronic congestion on the Study area's arterials can not be attributed to traffic that would use a new rural bypass. Even on highway 217, which currently carries nearly all the long distance circumferential traffic, trips that could use a rural bypass are a small component of rush hour traffic. Shorter trips within the existing urbanized area are by far the greatest contributors to rush hour congestion.

SUMMARY

- Traffic in Washington County is dominated by short urban trips in single occupant automobiles
- Traffic that might use a rural bypass is a small fraction of all Washington Country traffic
- A rural bypass would have little effect on existing congestion problems

Long Distance Circumferential Trips							
TRIP	1988	2010	PERCENT	PERCENT OF ALL			
ENDPOINTS	TRIPS	TRIPS	CHANGE	TRIPS_IN 2010			
Aloha / Tigard	11,986	22,478	87.54%	1.94			
Nigard / North Sunset	4,590	5,640	22.88%	0.49			
Aloha / Tualatin	2,008	5,624	180.08%	0.4			
Hillsboro / Tigard	1,616	2,198	36.01%	0.1			
Nualatin / North Sunset	856	1,468	71.50%	0.1			
Hillsboro / Tualatin	500	1,006	101.20%	0.0			
igard / Helvetia	90	122	35.56%	0.0			
ualatin / Helvetia	22	44	100.00%	0.0			
Subtotals ->	21,668	38,580	78.05	3.3			
Percent of All Trips->	3.37%	3.334					
	Other	r Trips					
Aloha / Aloha	64,040	175,647	174.28%	15.1			
Seaverton / Beaverton	118,338	138,221	16.80%	11.9			
Hillsboro / Hillsboro	57,062	122,506	114.69%	10.5			
Beaverton / Aloha	76,718	118,816	54.87%	10.2			
ualatin / Tualatin	30,106	79,530	164.17%	6.8			
loha / North Sunset	28,048	77,880	177.67%	6.7			
loha / Hillsboro	30,294	72,000	137.67%	6.2			
eaverton / Tigard	55,202	70,432	27.59%	6.0			
igard / Tigard	45,830	66, 897	45.97%	5.7			
eaverton / North Sunset	36,520	47,248	29.38%	4.0			
North Sunset / North Sunset	19,517	43,048	120.57%	3.7			
hualatin / Tigard	16,882	40,298	138.70%	3.4			
illsboro / North Sunset	9,538	20,020	109.90%	1.7			
eaverton / Tualatin	7,548	12,406	64.36%	1.0			
eaverton / Hillsboro	9, 978	11,764	17.90%	1.0			
ualatin / Scholls	1,922	4,394	128.62%	0.3			
loha / Helvetia	1,536	3,360	118.75%	0.2			
loha / Scholls	1,472	3,242	120.24%	0.2			
illsboro / Helvetia	2,030	2,742	35.07%	0.2			
orth Sunset / Helvetia	2,034	2,450	20.45%	0.2			
illsboro / Scholls	828	2,244	171.01%	0.1			
igard / Scholls	1,700	2,036	19.76	0.1			
cholls / Scholls	1,544	1,586	2.72%	. 0.1			
eaverton / Scholls	1,574	1,546	-1.78%	0.1			
eaverton / Helvetia	612	730	19.28%	0.0			
orth Sunset / Scholls	· 244	300	22.95%	0.0			
elvetia / Helvetia	372	283	-23.92%	0.0			
cholls / Helvetia	14	· 20	42.86%	0.0			
Subtotals ->	621,503	1,121,646	80.471	96.6			
Percent of All Trips->	96.63%	96.67%					
ALL TRIPS ->	643,171	1,160,226	80.39%	10			

Table 1
Long Distance Circumferential Trips Within The Study Area

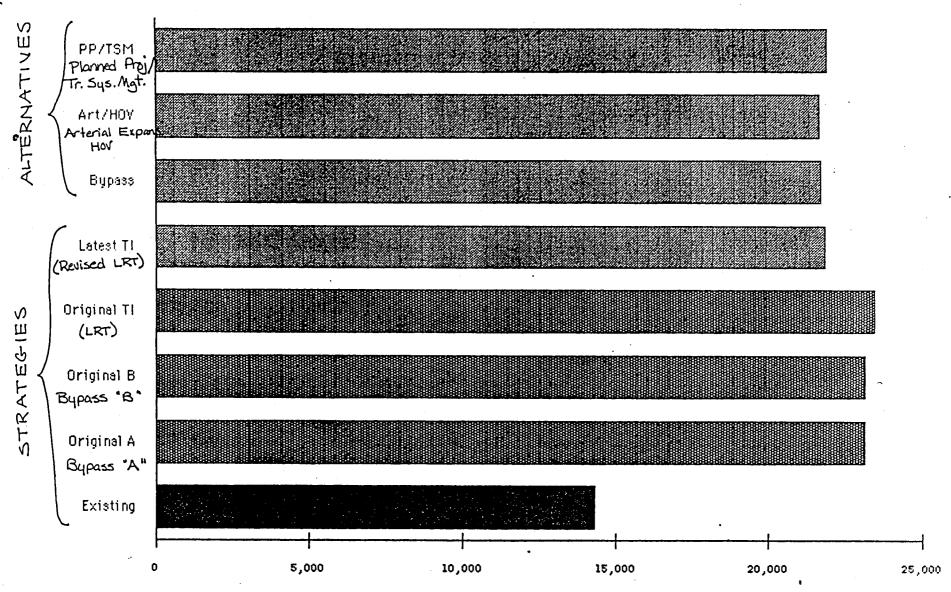
Rural Bypass Trips							
TRIP	1988	2010	PERCENT	PERCENT OF ALL			
ENDPOINTS	TRIPS	TRIPS	CHANGE	TRIPS IN 2010			
Aloha / Tigard	11,986	22,478	87.54%	1.94%			
Tigard / North Sunset	4,590	5,640	22.88%	0.498			
Aloha / Tualatin	2,008	5,624	180.08%	0.48%			
Tualatin / Scholls	1,922	4,394	128.62%	0.38%			
Aloha / Helvetia	1,536	3,360	118.75%	0.29			
Aloha / Scholls	1,472	3,242	120.24%	0.28%			
Hillsboro / Helvetia	2,030	2,742	35.07%	0.24%			
Hillsboro / Scholls	828	2,244	171.01%	0.19%			
Hillsboro / Tigard	1,616	2,198	36.01%	0.19%			
Scholls / Scholls	1,544	1,586	2.72%	0.14%			
Tualatin / North Sunset	856	1,468	71.50%	0.13%			
Hillsboro / Tualatin	500	1,006	101.20%	0.09%			
North Sunset / Scholls	244	300	22.95%	0.03%			
Tigard / Helvetia	90	122	35.56%	0.01%			
Tualatin / Helvetia	22	44	100.00%	0.00%			
Scholls / Helvetia	14	20	42.86%	0.00%			
Subtotals ->	31,258	56,468	80.65%	4.87%			
Percent of All Trips->	4.86%	4.87%					
		r Trips	171 221	15.140			
Aloha / Aloha	64,040	175,647	174.28%	15.14%			
Beaverton / Beaverton	118,338	138,221	16.80%	11.91			
Hillsboro / Hillsboro	57,062	122,506	114.69%				
Beaverton / Aloha	76,718	118,816	54.87%	10.24%			
Tualatin / Tualatin	30,106	79,530	164.17%	6.859			
Aloha / North Sunset	28,048	77,880	177.67%	6.71%			
Aloha / Hillsboro	30,294	72,000	137.67%	6.219			
Beaverton / Tigard	55,202	70,432	27.59%	6.079			
Tigard / Tigard	45,830	66,897	45.97%	5.779			
Beaverton / North Sunset	36,520	47,248	29.38%	Approximation and the second s			
North Sunset / North Sunset	19,517	43,048	120.57%	3.719			
Tualatin / Tigard	16,882	40,298	138.70%	55 SAATONS			
Hillsboro / North Sunset	9,538	20,020	109.90%				
Beaverton / Tualatin	7,548	12,406	64.36%	Section 1			
Beaverton / Hillsboro	9,978	11,764	17.90%	110 111 (011-001			
North Sunset / Helvetia	2,034	2,450	20.45%				
Tigard / Scholls	1, 700	2,036	19.76%	0.189			
Beaverton / Scholls	1,574	1,546	-1.78%	0.139			
Beaverton / Helvetia	-12	730	19.28%	0.069			
Helvetia / Helvetia	372	283	-23.92%	0.029			
Subtotals ->	611,913	1,103,758	80.38%	95.139			
Percent of All Trips->	95.14%	95.13%					
ALL TRIPS ->	643,171	1,160,226	80.39%	1009			

Table 2
Rural Bypass Trips Within The Study Area

		SOPAN "Long Distance	POTENTIAL
ENDPOINT	<> ENDPOINT	Circumferential"	BYPASS TRIPS
West Linn (4)	Beaverton (6)	- 534	
Tigard (7)	North Sunset (13)	450	
Aloha (11)	I-5 South (32)	436	43
West Linn (4)	Aloha (11)	373	
Beaverton (6)	Tual/Wils (8)	369	
Beaverton (6)	I-5 South (32)	262	
Tual/Wils (8)	Aloha (11)	206	20
West Linn (4)	North Sunset (13)	184	
Tual/Wils (8)	North Sunset (13)	142	14
North Sunset (13)	I-5 South (32)	127	12
Tigard (7)	Hillsboro (12)	101	10
West Linn (4)	Hillsboro (12)	82	
Hillsboro (12)	I-5 South (32)	74	
North Sunset (13)	99W South (31)	43	
Aloha (11)	99E South (33)	32	
Tual/Wils (8)	Hillsboro (12)	29	
Beaverton (6)	99E South (33)	24	
Tigard (7)	W Wash Co. (19)	24	2
Tigard (7)	US 26 West (26)	20	
Aloha (11)	Oregon 211 (34)	16	
Aloha (11)	Oregon 213 (35)	14	
Beaverton (6)	Oregon 211 (34)	12	
Tigard (7)	Helvetia (14)	11	
Stafford (5)	Beaverton (6)	10	
Beaverton (6)	Oregon 213 (35)	10	
Tual/Wils (8)	W Wash Co. (19)	10	
North Sunset (13)	99E South (33)	9	
Beaverton (6)	Helvetia (14)	8	
Tigard (7)	Wilson River (27)	8	
West Linn (4)	Helvetia (14)	7	
Helvetia (14)	I-5 South (32)	7	
Stafford (5)	Aloha (11)	6	
Tual/Wils (8)	US 26 West (26)	6	
Tigard (7)	I-5 North (24)	5	
Stafford (5)	North Sunset (13)	4	
Tigard (7)	US 30 North (25)	4	
Tual/Wils (8)	Helvetia (14)	4	
Scholls (9)	North Sunset (13)	4	
Hillsboro (12)	99E South (33)	4	
North Sunset (13)	Oregon 211 (34)	4	
North Sunset (13)	Oregon 213 (35)	4	
Tual/Wils (8)	Wilson River (27)	3	
Hillsboro (12)	Oregon 211 (34)	2	
Hillsboro (12)	Oregon 213 (35)	2	
North Sunset (13)	Oregon 219 South (30)	2	
Stafford (5)	Hillsboro (12)	1	
TOTAL TRIP COUNT ON 217 =	8666		8
	COLUMN TOTALS ->	3689	132
	PERCENT OF TOTAL TRIP COUNT ->	42.57%	15.2

Table 3
Traffic Breakout for Oregon 217
At PM Peak Hour

Vehicle Hours of Travel (PM Peak)



The Oregonian

Founded Dec. 4, 1850. Established as a daily Feb. 4, 1861. The Sunday Oregonian established Dec. 4, 1881. Published daily and Sunday by the Oregonian Publishing Co., 1320 S.W. Broadway, Portland, Oregon 97201

FRED A. STICKEL, President and Publisher

WILLIAM A. HILLIARD, Editor

PATRICK F. STICKEL, General Manager

PETER THOMPSON, Managing Editor

ROBERT M. LANDAUER, Editorial Page Editor

PATRICK L. MARLTON, Circulation Director

SATURDAY, APRIL 4, 1992

Keep light-rail study

Proposal would stack the deck against light rail as an alternative to a westside-bypass highway

he solution to Washington County's congested roads may be to build a westside-bypass highway. Or it may be to improve existing roads. Or it may be to develop enhanced transit, including light rail.

All of those options deserve careful consideration. That is why the recent proposal by a state transportation consultant to drop study of building light rail along Oregon 217 is so distressing. The proposal stacks the deck against light rail.

The justifications given for dropping that light rail line from the Western Bypass Study are as snarled as Beaverton traffic.

Here's the argument: Building light rail in the Oregon 217 corridor is so far down on the list of regional light-rail priorities that it is unlikely it would be built in the 20-year period encompassed by the study. In addition, the westside-bypass study being conducted by 1,000 Friends of Oregon will look at light rail along Oregon 217 and will provide a better picture of its merits because the 1,000 Friends' study will factor in land-use changes.

What a perverse piece of circular reasoning!

Regional light-rail priorities are not set in stone. If light rail emerged as a better solution than building a bypass highway, then in all likelihood that project would move higher on the regional agenda. Besides, there is no way to predict how many light-rail projects might be possible in the next 20 years because the new federal transportation act for the first time makes fully 50 percent of highway funds available for mass transit.

The argument that the state should turn over all study of a major bypass option to an independent group also strains credulity. The failure of state staff to study the light-rail option would make it virtually certain that light rail wouldn't be chosen. Besides, if 1,000 Friends' approach to the study is so much better than the state's, then why doesn't the state adopt the approach being used by 1,000 Friends?

The metropolitan area is under orders by the state to reduce the number of vehicle miles traveled in the region. At the same time the region must figure out how to accommodate 500,000 more people without damaging an already fragile airshed. Transit likely will play a vital role in reaching those two goals.

The bypass study's steering committee will make an important choice next week. It should turn down this proposal and ensure that light rail gets the consideration it deserves in the bypass study.



Portland Office

June 29, 1992

PDX32425.A0

Steve Clark, Chairman 99W Task Force City of Tigard 13125 S.W. Hall Boulevard Tigard, Oregon 97223

Subject:

Dartmouth Extension/Highway 217 Improvements

Dear Mr. Clark:

The task force has been reviewing and discussing ways of improving traffic circulation in and through the Tigard area. One of the plans submitted to you was prepared by Kittelson & Associates. This plan presents an alternative way of handling traffic through Tigard, and in particular it improves the capacity of Highway 99W by providing a parallel route.

The Kittelson plan proposes to construct an overcrossing, over Highway 217 midway between the 72nd Avenue interchange and the 99W interchange, by extending Dartmouth. The Dartmouth extension would then continue south and tie into Hall Boulevard. The Kittelson plan also proposes construction of an interface with Highway 217 via a collector/distributor (C/D) and interchange ramps at the new Dartmouth overcrossing. This does not connect directly to Highway 217 but rather to the C/D system.

On behalf of our client, we request that this alternative be given serious consideration, and that accommodations be made in the Oregon Department of Transportation (ODOT) design for the Phase I I-5/Highway 217 improvements, to allow its construction in the future. If accommodations are not made, the option of developing the C/D system later may be lost or become quite expensive.

We have prepared a preliminary cost comparison between the ODOT proposed improvements for 99W and Highway 217 and the alternative improvements presented in the Kittelson plan. The costs presented here are the relative costs of constructing the alternatives at a conceptual level (the actual costs of construction will vary).

Steve Clark, Chairman Page 2 June 29, 1992 PDX32425.A0

The costs prepared for this comparison include three major areas requiring improvements: (1) Highway 99W corridor from I-5 south to Commercial Street, (2) Highway 217 from the 72nd Avenue overcrossing north to the Greenburg interchange, and (3) the Dartmouth extension from I-5 south to Hall Boulevard.

Highway 99W Improvements

Improvements proposed by ODOT include the Pfaffel Street to Commercial Street project (construction estimated by ODOT to be in the range of \$4.53 million). To handle the traffic projected for 99W, the section of 99W from I-5 to Pfaffel Street should also be improved. This would provide the missing link between the Pfaffel and I-5 improvements. We did not prepare a preliminary construction cost estimate for this section of the highway, but the cost will probably be in the same category as the Pfaffel to Commercial section. For comparison purposes, the cost of this section of the highway is assumed to be approximately \$4 million.

Highway 217 Improvements

ODOT Plan

ODOT is anticipating that Highway 217 will eventually be widened to six lanes, three in each direction. Auxiliary lanes will also be required between the on and off ramps, so there will be four lanes in each direction for certain portions of the highway. For estimation purposes, we assumed auxiliary lanes between:

72nd northbound on ramp and 99W off ramp 99W northbound on ramp and Greenburg Road off ramp Greenburg Road southbound on ramp and 99W off ramp 99W southbound on ramp and 72nd Avenue off ramp

We estimated that the cost to widen Highway 217 from 72nd Avenue north to Greenburg Road to a six-lane facility with auxiliary lanes would be in the range of \$7.6 million. This estimate included the assumption that the ramps and the 99W and Hall Boulevard overcrossings would be improved.

Steve Clark, Chairman Page 3 June 29, 1992 PDX32425.A0

Hunziker St. Overcrossing

One of the improvements proposed for the Kruse Way interchange included an overcrossing of Highway 217 for Hunziker Street. We estimate the cost to construct this overcrossing to be in the range of \$4.6 million. The Kittelson plan eliminated this connection because of impacts on the school and the proximity of the intersections along 72nd Avenue.

Kittelson Plan

The Kittelson plan proposes construction of a C/D system rather than widening of the existing two-lane facility.

We estimated the cost to add a C/D system to Highway 217 from 72nd Avenue north to Greenburg Road to be in the range of \$10 million; we assumed that the 99W interchange ramps would be reconstructed as shown in the alternative presented in the Kittelson plan and that accommodations would be made for the I-5/Kruse Way improvements at 72nd Avenue. This cost does not include the interface ramps from Dartmouth to the C/D. This cost is included in the Dartmouth section.

Dartmouth Improvements

Dartmouth Extension

A local improvement district (LID) is currently being prepared to widen Dartmouth to three lanes. The cost presented here does not include the LID project, but money has been included to widen Dartmouth to five lanes. The Dartmouth cost also includes the structure over Highway 217 and the extension south to Hall Boulevard. We estimated the cost to construct the Dartmouth extension to be in the range of \$8.4 million.

Dartmouth Interface Ramps

These improvements include the on and off ramps from Dartmouth to the C/D system being proposed in the Kittelson plan for Highway 217. The estimated cost to construct these ramps is in the range of \$2.5 million.

The costs presented herein do not include such items as right-of-way acquisition or wetland mitigation. These costs will affect the overall cost of the projects and should be included

Steve Clark, Chairman Page 4 June 29, 1992 PDX32425.A0

before funding strategies are developed. However, because current information to estimate these costs is insufficient, the comparison will focus on the construction cost only.

Costs for ODOT's proposed improvements:

99W - Pfaffel to Commercial		\$4,530,000
99W - I-5 to Pfaffel		4,000,000
Highway 217	••	7,600,000
Hunziker		4,600,000
Total		\$20,730,000

Costs for Kittelson's proposed plan:

Highway 217 Dartmouth extension Dartmouth interchange		\$10,000,000 8,400,000 2,600,000				
Total	-	\$21,000,000				

This comparison shows that construction of the Dartmouth extension and the Highway 217 interface is in the same cost range as construction of the improvements proposed by ODOT.

One factor not shown is a comparison of the impacts on businesses and traffic during and after construction. ODOT's proposed improvements along the 99W corridor will have a significant impact on the businesses and the traffic. With the Kittelson plan there will be little disruption of the existing traffic, and the impacts on businesses will be reduced. Eliminating the overcrossing from Hunziker to 72nd Avenue can reduce the impacts on the school adjacent to Highway 217.

Steve Clark, Chairman Page 5 June 29, 1992 PDX32425.A0

This information is presented to assist you when reviewing alternatives and deciding on the best transportation system for the Tigard area. If you have any questions or concerns, please call me at 235-5000.

Sincerely,

CH2M HILL

Neil Handyside Project Manager



July 8, 1992

DEPARTMENT OF TRANSPORTATION

HIGHWAY DIVISION

Region 1

FILE CODE:

Meeky Blizzard
Executive Coordinator
STOP
15405 S.W. 116th Avenue #202B
Tigard, Oregon 97224-2600

Please refer to your letter of June 19, 1992, regarding the STOP modeling request presented at the May Western Bypass Study Advisory Committee meetings.

You asked for a response to several statements that may have been taken out of context. I also hope I can clear up the confusion you expressed with the study process.

First, you stated that I feel STOP's request at the committee meetings was "irrelevant" and "impossible to honor". I felt I responded in a very positive manner and, in fact, agreed to evaluate STOP's request and present it to the project committees for discussion. The study team met to review ways to respond to the request shortly after the May meeting and requested data from Metro on June 5, 1992. As I stated at the May CAC meeting, this data and analysis will be presented at the August committee meetings.

I understand that STOP has been working with a private individual to acquire additional information from Metro. If your request was that data be provided for STOP's use and analysis and not for purposes of the study, you can make this request directly to Metro as has occurred. If your request was to develop data that will be analyzed and used in the ODOT study, that information will be provided at the August meeting.

In response to my request to discuss STOP's proposals with ODOT staff prior to presenting them at the committee meetings, you indicate that this was done. In fact, Dave Stewart called Bill Ciz on May 18 to request that additional modeling be done and presented at the June open houses. Bill pointed out the similarity to the arterial expansion



alternative and suggested that Dave present the request at the CAC meeting for discussion by the committee May 20, 1992. The correct procedure would be for STOP's CAC member to present the request and the committee to discuss and make a recommendation. This did, in fact, happen at the CAC meeting and the CAC members expanded STOP's request to address other concerns as well. Although we try to be as responsive as possible to requests from the public, two day's notice is not sufficient to respond, especially considering the heavy work load of my staff in preparing for committee meetings and the open houses.

Your "eye-opening" discussion with Bill on June 17 related to the fact that there may need to be some highway improvements, such as curve reduction, shoulder widening and minor realignments, added in the rural area in the Arterial Expansion and TSM alternatives to handle the increased use of these roadways. This was raised by Mary Tobias at the CAC meeting and is something the study team has not looked at but will, based on the discussions of the TAC and CAC.

Lastly, you express confusion on how STOP can effectively be involved in the study. STOP has a representative on the Citizens Advisory Committee specifically to bring STOP's ideas and concerns formally into the study. We have tried to rely on STOP's representative Dave Stewart, to present ideas and requests from you and other STOP members to the CAC and the study team for discussions and action. We have also offered to meet with you at any time if you have questions or suggestions that you do not feel can be adequately addressed through Dave's involvement.

I hope this letter addresses your concerns. If you have any additional questions, please call me or Bill Ciz.

Michal Wert

Project Development Manager

Nike West

MW:BC:po

CC: Western Bypass Study Committee Members
Don Forbes, Director, ODOT
Michael Hollern, Chair, Oregon Transportation Commission
Steve Korson, Governor's Office
Metro Council
TPAC Members
JPACT Members
Washington County Board of Commissioners
CPO Chairs, Washington County
Senator Bob Shoemaker
Senator Dick Springer
STOP Board Members

July 14, 1992

Metropolitan Service District Transportation Policy Alternatives Committee 2000 S W First Av, Portland, Oregon 97201

Attention Andy Cotugno, Chairperson

This statement pertains to your committee's July 13 session which rubber stamped recommendation to drop two alternatives for meeting circumferential transport needs in S E Washington County, and ostensibly, for curtailing dependence on single-occupant automobiles. More specifically,

it concerns the only alternative contemplating use of railway technology.

If Ted Spence recommended that TPAC ought instead to ponder *more* alternatives, as I understood him to say, he's to be commended. He did mention the until-now-ignored proposal of which the Oregon Association of Railway Passengers submitted copies many months ago.

Auditing sessions of your committee and of other public bodies, and reading their handouts create a strong impression. Impression is that administrators of agencies involved set up an expendable road-only plan, so that when they/you discard the only plan using railway technology, as ordained from the outset, you can profess impartiality by pointing to the shelved road plan.

The woman from OrDOT argued that retained alternatives provide for transit by citing busses. That is a sophistry: Busses are commercial vehicles on roads, just as trucks are. To my knowledge, no one ever has excluded commercial vehicles from Oregon highways. The alternatives you retain will do nothing to curtail excessive dependence on private automobiles. When road agencies propose high-occupancy vehicle lanes, they're always additional pavement—which they can, and sooner or later likely will devote to unrestricted roadway purposes.

Purported "study" of the viability of railway passenger service parallelling highway 217 loaded it down with cost by predicating an entirely new electric railway. As you ought to know, electrification alone costs about as much as the earthwork, tracklaying, and other costs of building a non-electrified railway.

Not even that lesser cost need be encountered to link Hillsboro, Beaverton, Tigard, Tualatin, and Sherwood with railway passenger service. As also you must know from information made thoroughly available to you, track useful for the purpose already exists, and can be acquired for far less than the cost to replicate it. On that track, with little modification, cars with self-contained propulsion can satisfactorily handle traffic.

Implication that in the future ODOT might favor a railway along highway 217 is a mockery. As long as ODOT remains an agency to promote roads (and the sale and use of automotive vehicles) and other traditional proteges of public works programs, it will remain antagonistic to railway construction and to railway use.

By using busses instead of cars, a passenger transport entity almost entirely avoids paying for the infrastructure it requires. Public agencies such as Tri-Met completely avoid payment. Willingness of your Tri-Met participant to drop the rail alternative is for that reason understandable. That vote should be discounted.

We would welcome a good-faith study.

Kenneth McFarling

7417 S E 20th Av. 97202 6213

TRANSPORTATION_AND PLANNING COMMITTEE REPORT

CONSIDERATION OF RESOLUTION NO. 92-1620A FOR THE PURPOSE OF ELIMINATING A "TRANSIT-INTENSIVE STRATEGY" FROM FURTHER CONSIDERATION IN THE WESTERN BYPASS STUDY WITHOUT PRECLUDING FUTURE LIGHT RAIL TRANSIT IN THE HIGHWAY 217 CORRIDOR

Date: September 3, 1992 Presented by: Councilor Devlin

Committee Recommendation: At the August 25 meeting, the Transportation and Planning Committee voted unanimously to recommend Council adoption of Resolution No. 92-1620A. Voting in favor: Councilors Devlin, McLain, Buchanan, and Washington. Absent: Councilor Bauer.

Committee Issues/Discussion: Andy Cotugno, Planning Director, presented the staff report. He said that the Western Bypass Study has evolved to the point of eliminating strategies from further study. This allows for a narrowing of the field to those strategies that should proceed to evaluation in the Environmental Impact Statement, and, finally, the selection of a preferred alternative. This resolution is one of two, each recommending elimination of an individual strategy from further consideration.

Michal Wert, Oregon Department of Transportation, suggested that the committee, in recommending approval of the resolution, base their recommendation on the information contained in two documents she presented as supporting documentation. This was generally agreed upon.

Bob Brandman, with Parsons Brinkerhoff and Project Manager for the Western Bypass Study, gave the committee an overview of the different options that have been considered to date. He explained the rationale behind eliminating the "transit intensive" option. He discussed how each option was evaluated by the following: 1) congestion relief; 2) improving accessibility within study area; 3) ability to divert traffic to rural and neighborhood streets; and 4) reducing reliance on single occupancy vehicles.

There was considerable discussion regarding the difference between a "strategy" as opposed to an "alternative". What is being eliminated here is a "strategy" and not an "alternative". The "strategies" are more extreme in condition (i.e. transit solution only), whereas the "alternatives" will be developed by the blending of different conditions within different "strategies" (i.e. transit and highway mixed solution).

Concerns were raised by committee members regarding whether elements of transit as a solution will be lost by eliminating this strategy. The Land Use Transportation and Air Quality (LUTRAQ) study, which has transit elements, is still being considered.

BEFORE THE COUNCIL OF THE METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ELIMINATING)	RESOLUTION NO	92-1620A
A "TRANSIT-INTENSIVE STRATEGY"	j		
FROM FURTHER CONSIDERATION IN	j	Introduced by	
THE WESTERN BYPASS STUDY WITHOUT	. j	Councilor Rich	nard Devlin
PRECLUDING FUTURE LIGHT RAIL	j		
RAIL TRANSIT IN THE HIGHWAY 217	j		
CORRIDOR	j		

WHEREAS, The Metropolitan Service District is a signatory to the Western Bypass Study Planning Coordination Agreement to seek solutions to north-south and circumferential travel congestion in southeast Washington County; and

WHEREAS, The Coordination Agreement, as amended by Resolution No. 92-1550 commits the Joint Policy Advisory Committee on Transportation (JPACT) and Metro to consider the Oregon Department of Transportation (ODOT) recommendation of the elimination of any strategies from further detailed consideration prior to the refinement of detailed alternatives; and

WHEREAS, The Western Bypass Study has analyzed six general transportation strategies which were reconfigured into four revised strategies; and

WHEREAS, One strategy was a revised Transit-Intensive
Strategy using fixed guideway light rail lines along Highway 217
and Barbur Boulevard as its high-capacity transit element; and

WHEREAS, Analysis of projected travel under current land use plans indicated that fixed guideway light rail along the Highway 217 corridor does not meet the Western Bypass Study Purpose and Need Statement; and

WHEREAS, ODOT study committees have recommended elimination of a transit-intensive strategy from further study as not a reasonable option to meet ODOT's Purpose and Need Statement; and

WHEREAS, The proposed Arterial Expansion/High Occupancy
Vehicle Express Alternative will include a high-capacity transit
element along the Highway 217 Corridor that works as well or
better than light rail transit; and

WHEREAS, ODOT has recommended that the alternatives to be considered further will not preclude light rail transit implementation along the Highway 217 corridor in the future; and

WHEREAS, ODOT has committed to including in the EIS any viable land use/transportation alternative emerging from the 1000 Friends of Oregon Land Use, Transportation and Air Quality (LUTRAQ) study; and

WHEREAS, No Regional Transportation Plan amendment is needed because the Barbur Boulevard light rail lies outside the Western Bypass Study Area and none of the alternatives will preclude long-range implementation of light rail along Highway 217; now, therefore,

BE IT RESOLVED,

- 1. That the revised Transit-Intensive Strategy with fixed guideway light rail along Highway 217 and Barbur Boulevard and no highway expansion beyond common improvements shall not be considered further in that form as an alternative for the Draft Environmental Impact Statement (DEIS) for the Western Bypass Study because it does not meet the Western Bypass Purpose and Need Statement.
- 2. That alternatives which include combinations of highway expansion and transit expansion, not excluding the possibility of rail transit, will be considered for Draft Environmental Impact Statement evaluation in the

Western Bypass Study. In addition, when the alternatives are approved for inclusion in the Environmental Impact Statement, specific consideration will be given to whether LRT should be the transit element of one of these alternatives.

- 3. That alternatives considered for Draft Environmental
 Impact Statement evaluation shall not preclude implementation of fixed guideway light rail transit along
 Highway 217 in the future.
- 4. That the following circumstances will cause further consideration of light rail in the Highway 217 corridor:
 - a. If a land use/transportation alternative is identified by the LUTRAQ study which is a viable land use/transportation strategy, it shall be evaluated in the Draft Environmental Impact Statement.
 - b. If the preferred alternative selected at the conclusion of the Western Bypass Study includes a fixed guideway element, the subsequent Alternatives Analysis required in the Federal Transit Administration process will examine appropriate fixed guideway options including light rail.
 - c. If future studies produce new information which significantly change the projected travel analysis, light rail will be reconsidered.
- 5. That the reasons for the Transit-Intensive Strategy failing to meet the Purpose and Need Statement are explained in the staff reports, the matrix summary of

projected utilization, and the data ODOT has presented in the record.

6. That remaining alternatives and strategies considered for DEIS inclusion address the Transportation Planning Rule, the federal Clean Air Act of 1990, relevant Regional Urban Growth Goals and Objectives (RUGGO), and funding programs and policies.

	ADOPTED	by	the	Council	of the	Metropol	litan Ser	vice
District	this		day	of		_, 1992.		
			٠					
ACC: lmk					Jim	Gardner,	Presidin	g Officer

92-1620A.RES/5-19-92

STAFF REPORT

CONSIDERATION OF RESOLUTION NO. 92-1620 FOR THE PURPOSE OF ELIMINATING A "TRANSIT-INTENSIVE STRATEGY" FROM FURTHER CONSIDERATION IN THE WESTERN BYPASS STUDY WITHOUT PRECLUDING FUTURE LIGHT RAIL TRANSIT IN THE HIGHWAY 217 CORRIDOR

DATE: May 14, 1992 Presented by: Andrew Cotugno

PROPOSED ACTION

To drop further consideration of an alternative which is transitintensive without additional highway investment beyond the "common roadway improvements" called "Transit-Intensive (LRT)" strategy in the strategies evaluation.

This action does not remove consideration of a high-capacity transit alternative combined with roadway improvements as, for example, in the "Transit (HOV)/Arterial Expansion" alternative which is not being recommended for deletion.

TPAC reviewed this proposal at its July 13 meeting and recommends approval of Resolution No. 92-1619.

FACTUAL BACKGROUND AND ANALYSIS

The Oregon Department of Transportation, in carrying out the study of the Western Bypass recommended in Metro's Southwest Corridor Study, has evaluated six strategies and is seeking to drop those that do not address the objectives of the study to adequately serve circumferential or north-south travel in eastern Washington County. A full description of the ODOT study process is included as Attachment A.

The study team has made two attempts to define a transit-intensive (only), (with no road improvements beyond the "common improvements"), solution to the travel demands generated by the current land use plans for the study area and region. The second attempt replaced fixed feeder bus with demand-responsive feeder service and through-routing of LRT lines along 217 to the CBD and Hillsboro for more direct service. Neither showed the ability to address the purpose and needs stated for this study.

One of the alternatives remaining, the "Transit (HOV) / Arterial Expansion" has a high-capacity transit element modeled as express bus on the transitway in conjunction with arterial improvements. From the point of view of patronage, this would give similar results to a light rail alternative (perhaps better).

From a practical viewpoint, a study such as this can address the effect of an intensive transit alternative on road needs but, in fact, cannot make a mode-within-transit decision. Both the Federal Transit Administration procedure and common sense require an Alternatives Analysis to determine the most appropriate

transit service in a corridor such as this. This choice of transit-intensive service and setting of priorities will be addressed in Metro's High-Capacity Transit System Study over the next year or so. These system considerations will be known before any possible project(s) emerging from the Western Bypass Study get to the design stage.

In terms of addressing a transit-intensive alternative along with an alternative land use plan to better utilize transit potential, ODOT has committed to include in the DEIS an evaluation of any viable alternative emerging from the 1000 Friends of Oregon LUTRAO study.

Following presentation of the evaluation data to the Technical Advisory Committee, the Citizens Advisory Committee and the Steering Committee for the project, recommended dropping this alternative.

RECOMMENDATIONS

That this Transit-Intensive Strategy with fixed guideway light rail along Highway 217 and Barbur Boulevard and no highway expansion beyond common improvements not be considered further.

That further consideration of alternatives that have combinations of highway and transit expansion be considered.

That alternatives chosen for the DEIS evaluation shall not preclude implementation of fixed guideway rail transit along Highway 217 in the future.

That the following circumstances will cause further consideration of light rail in the Highway 217 corridor:

- If a viable alternative is identified by the 1000 Friends of Oregon LUTRAQ study, it shall be included in this DEIS evaluation.
- If the preferred alternative selected includes a fixed guideway element, the subsequent Alternatives Analysis required in the federal process will examine all such options including light rail.
- If future studies produce new information significantly changing the current travel projections used in the analysis, light rail will be considered.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 92-1620.

ACC: 1mk 92-1620.RES 7-14-92

ATTACHMENT A

WESTERN BYPASS STUDY: ELIMINATION OF STRATEGIES FROM FURTHER CONSIDERATION

A. Introduction

As amended earlier this year, the Western Bypass Study Planning Coordination Agreement adopted by Metro, ODOT, and affected Washington County jurisdictions provides for ODOT to recommend, and JPACT and Metro to consider, the elimination of strategies from further detailed study as alternatives. The intergovernmental agreement provides in pertinent part:

"Based on the strategies recommended for elimination by ODOT's staff, JPACT and Metro shall consider recommending or requiring elimination of strategies considered unreasonable to meet the purposes and needs identified in the [Purpose and Need] Statement. As part of this process, JPACT and Metro shall consider any appropriate amendments to the RTP to eliminate strategies from further study. The adoption of any RTP amendments eliminating strategies from further study shall be accompanied by findings demonstrating compliance with applicable statewide planning goals and regional goals and objectives, if necessary. For each strategy eliminated, Metro shall demonstrate the reasons why the eliminated strategy cannot meet the identified statewide and regional transportation system needs."

Following review and action by its Technical Advisory Committee (TAC), Citizen Advisory Committee (CAC) and Steering Committee, ODOT is now before you to request elimination of two strategies from further detailed consideration as alternatives: Bypass Option B, which considered a new limited access facility essentially along or west of Highway 219 outside the Urban Growth Boundary, and a transit-intensive strategy which considered the ability to meet the identified purposes and needs through an approach relying primarily on transit.

Elimination of these strategies would not require an RTP amendment. Eliminating Bypass Option B does not require an RTP amendment because ODOT intends to carry forward Bypass Option A for further study as an alternative. Bypass Option A is located in an area similar to that identified in the RTP. ODOT's committees found that Bypass Option A would be more effective at meeting the identified purpose and need.

Bypass Option B is located well to the west of Bypass Option A, along and west of Highway 219 and is outside the corridor identified in the Regional Transportation Plan.

Regarding elimination of a transit-intensive strategy, ODOT considered whether a strategy relying primarily on transit, rather than a combination of transit and roadway improvements, could meet the purposes and needs identified for the Study. To develop the transit-intensive strategy, ODOT considered high-capacity transit corridors in the form of light rail transit along Highway 217 and Barbur Boulevard in addition to the Westside LRT to Hillsboro. ODOT supported these high-capacity transit corridors with park-and-ride lots, transit stations, and an expanded feeder bus network, and called this strategy the "Transit-Intensive (LRT) Strategy."

Eliminating the Transit-Intensive (LRT) Strategy would not require an RTP amendment because (1) the Barbur corridor lies outside the Western Bypass study area and is not affected by ODOT's proposal, (2) the RTP identifies the Highway 217 corridor as a possible future extension of light rail; and (3) none of the alternatives recommended for further study will preclude light rail transit along Highway 217. ODOT's position is that a strategy relying primarily on transit rather than a combination of transit and roadway expansion cannot meet the purposes and needs identified in this Study and does not merit further consideration.

While the purposes and needs identified in this Study cannot be met only through transit, ODOT recognizes that circumferential high-capacity transit (bus or light rail) combined with roadway improvements and demand reduction measures does merit further consideration in this Study.

Although RTP amendments are not required to eliminate either strategy, the intergovernmental agreement still requires Metro to demonstrate reasons why each strategy eliminated cannot meet the identified statewide and regional Westside circumferential travel needs identified in the Purpose and Need Statement. This staff report provides those reasons.

B. <u>Background</u>

Section III of the intergovernmental agreement requires ODOT to "study, develop and refine strategies to meet the state-wide and regional Westside circumferential travel needs identified in the Purpose and Need Statement." Those needs include the need to adequately provide for north-south and circumferential travel in the study area.

According to ODOT's Purpose and Need Statement, because of the lack of circumferential routes and expected growth projected for the study area, transportation problems will be significant by the year 2010 without major reduction or alleviation of traffic congestion. More traffic will likely use roads not designed for high traffic volumes. Through an extensive public involvement effort, ODOT has identified needs to reduce traffic congestion and reduce reliance on the private automobile. Options to satisfy those needs include increasing road capacity and transit service and implementing demand management programs.

In the spring of 1991, ODOT and its consulting team began to develop and study a number of strategies. These strategies focused on particular solutions to address the demand for north-south or circumferential travel, as the purpose of the study is not to solve every traffic congestion problem in the study area. The strategies included:

- a "no build" strategy;
- 2. a "common improvements" strategy (including transportation projects and transit service expansions under active development for the study area but without committed funding);
- an "arterial expansion" strategy, focusing on roadway improvements beyond those listed in the "common improvements" and including extension of a major discontinuous north-south route;
- 4. a "transit-intensive (LRT)" strategy, focusing on transit improvements adding two light rail corridors (Barbur and Highway 217) together with supporting "feeder" bus routes, park-and-ride lots and transit stations;
- 5. a "transit (HOV)/arterial expansion" strategy, combining transit facilities and service improvements with roadway improvements, and including express bus service and high occupancy vehicle lanes in the Highway 217 corridor as a high-capacity transit element; and
- 6. a "bypass" strategy, looking at two broad corridor options for a bypass facility in addition to other roadway and transit improvements.

Thereafter, following review by ODOT's advisory committees and public open houses, ODOT revised, refined and analyzed those strategies and returned them to its committees.

In October, 1991, ODOT's CAC, TAC and Steering Committee voted to recommend elimination of Bypass Option B from further detailed study as an alternative. The CAC also voted to recommend elimination of the "transit-intensive (LRT)" strategy from further study as an alternative, because this strategy did not perform better than the "common improvements" strategy which did not contain highcapacity transit elements or other transit service beyond the Westside LRT. However, the TAC and Steering Committee were not yet prepared to take that step, although they recognized its limited performance. Instead, following comments from Tri-Met's representative that the transit intensive strategy was not combined in a way that most intensively supported high capacity transit, they adopted a motion directing ODOT to remodel Highway 217 light rail, expanding on its components to consider through connection to the Central Business District, a transportation demand management program, and dial-a-ride service.

That fall and winter, Metro modeled a "revised Transit-Intensive (LRT) Strategy" containing the features suggested by the TAC. The revised strategy was developed by a group representing Tri-Met, ODOT's study team, and Metro. Like the original "transit-intensive (LRT)" strategy, the revised strategy focused on transit, relying on light rail along Highway 217 and Barbur Boulevard for its high-capacity element. However, the strategy added (1) through routing of Highway 217 LRT to Hillsboro and downtown Portland via the Westside and Barbur LRT corridors; (2) demand-responsive transit (DRT); and (3) transportation demand management (TDM) measures intended to see how TDM would work at the alternatives level.

Following completion of modeling, ODOT brought the revised Transit-Intensive (LRT) Strategy before its committees in March and April, 1992. Based on discussion and on the information generated by the modeling, the TAC voted (1) to recommend elimination from further study of a transitintensive strategy using light rail along the Highway 217 corridor as its high-capacity transit element; (2) to combine DRT, TDM and high-capacity transit into an alternative identified for further study; and (3) that no alternative "preclude long-range implementation of LRT along the Highway 217 corridor." Tri-Met's representative to the TAC concurred with these motions. In subsequent meetings, the CAC and Steering Committee followed with similar motions.

C. Discussion

1. Bypass Option B

Metro staff concurs with ODOT's recommendation to eliminate Bypass Option B from further detailed consideration as an alternative. ODOT's committees recommended elimination of this strategy based on information showing that Bypass Option B would be underutilized and does not substantially reduce congestion compared to the No-Build strategy. Elimination of Bypass Option B does not eliminate a Bypass alternative. Bypass Option A will be taken forward for further study, consistent with the RTP.

2. <u>Transit-Intensive (LRT) Strategy</u>

Metro staff also concurs with ODOT's recommendation to eliminate a transit-intensive strategy ("transit only") from further consideration as an alternative.

ODOT's advisory committees recommended elimination of a transit-intensive strategy for the following reasons:

- Transit-intensive strategies as originally developed and as revised do not address the transportation problems identified in the Western Bypass Study.
- Additional circumferential LRT service in the Highway 217 corridor connecting to the Westside LRT, to a Barbur LRT, or to the CBD does not notably improve transit ridership in the year 2010 compared to the original Transit-Intensive (LRT) Strategy or compared to the No-Build strategy.
- The LUTRAQ study is considering LRT elements as part of the 1000 Friends of Oregon alternative. Changes in planned land use designations could change the ability of LRT service in the Highway 217 corridor to address the transportation problems identified in this Study and will be folded into this Study if viable.
- High-Capacity Transit through express bus service in the Highway 217 corridor will still be included as elements of the Arterial Expansion/HOV Express and Bypass alternatives. If implemented, it would provide similar service levels to light rail transit, and would provide an opportunity to build

the transit ridership demand needed for supporting light rail transit.

Although the strategy was revised in a manner that better supported light rail, the high-capacity transit component did not result in the strategy performing significantly better than the original transit-intensive strategy. Like the original transit-intensive strategy, the revised strategy did not (1) substantially reduce north-south or circumferential traffic congestion; (2) increase study area accessibility; (3) reduce traffic diversion to minor roads and neighborhoods; or (4) reduce reliance on the single occupancy automobile.

Indeed, due to the addition of "demand-responsive transit" (dial-a-ride), the revised Transit-Intensive (LRT) Strategy actually resulted in a <u>decrease</u> in work person trips by fixed route (bus and light rail) transit. This is caused by a shift in ridership from fixed route transit to demand-responsive transit. Based on the modeling, ODOT concluded that demand-responsive transit may help meet the identified purpose and need in reducing reliance on the private auto-mobile and providing greater coverage in the study area by transit and should be carried forward as part of an alternative, but that high-capacity transit by itself does not contribute to meeting this purpose and need and therefore warrants no further detailed review in this Study as a separate (stand-alone) alternative.

Apart from demand-responsive transit, Metro has modeled transportation demand management (TDM) measures to determine their effect on reducing reliance on the single occupancy automobile. Metro found that TDM has a significant positive effect on reducing reliance on the automobile. Like DRT, ODOT will carry TDM forward into the alternatives stage supported by transit and roadway components. ODOT does not propose the elimination of DRT or TDM from further consideration.

At this point, clarification is needed. Before its committees, ODOT provided information showing how the revised Transit-Intensive (LRT) Strategy performed (1) with DRT and (2) with DRT and TDM. As earlier described, with just DRT, this strategy did not perform substantially better than the original transit-intensive strategy and, indeed, resulted in a lowering of combined bus and light rail ridership. However, with TDM, the strategy performed better, due to the impact of TDM measures.

Metro's modeling of the revised Transit-Intensive (LRT) Strategy with TDM raised questions among some ODOT committee members who compared these results with those of other strategies recommended by ODOT for further study. They questioned why ODOT would eliminate the Transit-Intensive (LRT) Strategy, when it appeared to perform as well as those other strategies in meeting some of the identified purposes and needs. The answer is that the committee members were comparing this strategy with TDM to the other strategies without TDM. This was like comparing apples with oranges. While TDM substantially improved transit ridership for the Transit-Intensive (LRT) Strategy, it also substantially improves transit ridership in each of the alternatives ODOT is recommending for further study. Those proposed alternatives, with TDM, perform much better than a transit-intensive strategy with TDM at reducing congestion. Even with TDM, a transit-intensive strategy does not assist in meeting this need. ODOT is proposing to include TDM in all the alternatives recommended for further study.

MG:lmk/92-1619.AT

26793-00.001\5ZMFNDGS.STR.0LD

BEFORE THE COUNCIL OF THE METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF ELIMINATING)	RESOLUTION NO. 92-1620
A "TRANSIT-INTENSIVE STRATEGY"	j	
FROM FURTHER CONSIDERATION IN)	Introduced by
THE WESTERN BYPASS STUDY WITHOUT)	Councilor Richard Devlin
PRECLUDING FUTURE LIGHT RAIL	•)	V.
RAIL TRANSIT IN THE HIGHWAY 217)	
CORRIDOR	1	

WHEREAS, The Metropolitan Service District is a signatory to the Western Bypass Study Planning Coordination Agreement to seek solutions to north-south and circumferential travel congestion in southeast Washington County; and

WHEREAS, The Coordination Agreement, as amended by Resolution No. 92-1550 commits the Joint Policy Advisory Committee on Transportation (JPACT) and Metro to consider the Oregon Department of Transportation (ODOT) recommendation of the elimination of any strategies from further detailed consideration prior to the refinement of detailed alternatives; and

WHEREAS, The Western Bypass Study has analyzed six general transportation strategies which were reconfigured into four revised strategies; and

WHEREAS, One strategy was a revised Transit-Intensive

Strategy using fixed guideway light rail lines along Highway 217,
and Barbur Boulevard as its high-capacity transit element; and

WHEREAS, Analysis of projected travel under current land use plans indicated that fixed guideway light rail along the Highway 217 corridor does not meet the Western Bypass Study Purpose and Need Statement; and

WHEREAS, ODOT study committees have recommended elimination of a transit-intensive strategy from further study as not a reasonable option to meet ODOT's Purpose and Need Statement; and

WHEREAS, The proposed Arterial Expansion/High Occupancy
Vehicle Express Alternative will include a high-capacity transit
element along the Highway 217 Corridor that works as well or
better than light rail transit; and

WHEREAS, ODOT has recommended that the alternatives to be considered further will not preclude light rail transit implementation along the Highway 217 corridor in the future; and

WHEREAS, ODOT has committed to including in the EIS any viable land use/transportation alternative emerging from the 1000 Friends of Oregon Land Use, Transportation and Air Quality (LUTRAQ) study; and

WHEREAS, No Regional Transportation Plan amendment is needed because the Barbur Boulevard light rail lies outside the Western Bypass Study Area and none of the alternatives will preclude long-range implementation of light rail along Highway 217; now, therefore,

BE IT RESOLVED,

- 1. That the revised Transit-Intensive Strategy with fixed guideway light rail along Highway 217 and Barbur Boulevard and no highway expansion beyond common improvements shall not be considered further in that form as an alternative for the Draft Environmental Impact Statement (DEIS) for the Western Bypass Study because it does not meet the Western Bypass Purpose and Need Statement.
- 2. That alternatives which include combinations of highway expansion and transit expansion, not excluding the possibility of rail transit, will be considered for Draft Environmental Impact Statement evaluation in the

Western Bypass Study.

- 3. That alternatives considered for Draft Environmental
 Impact Statement evaluation shall not preclude implementation of fixed guideway light rail transit along
 Highway 217 in the future.
- 4. That the following circumstances will cause further consideration of light rail in the Highway 217 corridor:
 - a. If a land use/transportation alternative is identified by the LUTRAQ study which is a viable land use/transportation strategy, it shall be evaluated in the Draft Environmental Impact Statement.
 - b. If the preferred alternative selected at the conclusion of the Western Bypass Study includes a fixed guideway element, the subsequent Alternatives Analysis required in the Federal Transit Administration process will examine appropriate fixed guideway options including light rail.
 - c. If future studies produce new information which significantly change the projected travel analysis, light rail will be reconsidered.
- 5. That the reasons for the Transit-Intensive Strategy
 failing to meet the Purpose and Need Statement are
 explained in the staff reports, the matrix summary of
 projected utilization, and the data ODOT has presented
 in the record.
- for DEIS inclusion address the Transportation Planning

Rule, the federal Clean Air Act of 1990, relevant
Regional Urban Growth Goals and Objectives (RUGGO),
and funding programs and policies.

	ADOPTED	by	the	Council	of t	he	Metropo:	litan	Servi	ice	
District	this		day	of			_, 1992.				(
`											
	•				73	-		Dwogi	4-4	0661	

ACC: lmk 92-1620.RES/5-19-92