

# M E M O R A N D U M

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



**METRO**

Date: November 2, 2000  
To: JPACT  
From: Andrew C. Cotugno, TPAC Chair  
Subject: *2002-2005 MTIP Process*

At the November 9<sup>th</sup> meeting, JPACT will be asked to recommend a public process approach for developing the 2002-2005 Metropolitan Transportation Improvement Program (MTIP). The approach will then be subject to a 30-day review period and JPACT and the Metro Council will adopt the process at December meetings. Once the process is established, development of the next MTIP will begin.

Funding in FY 02 and FY 03 has already been allocated in the current MTIP (FY 2000-2003). The current update is concerned with adjusting the first two years of programming, and allocating new funding expected in FY 04 and FY 05. About \$25 – \$38 million is anticipated to be available. Of this amount, approximately \$10 – 15 million will be CMAQ funds which are generally limited to alternative mode projects which improve air quality, and \$15 – \$23 million will be STP funds, which are available to all projects.

Given the limited resources to be allocated, a streamlined process that draws on highly ranked projects from the last MTIP process is being considered. Such an approach still has a number of policy and technical considerations. The key issues that have been discussed at TPAC include:

1. Whether to allocate resources to limited access highways (freeways). Previous allocations have not allocated flexible federal STP or CMAQ funds to the freeway system. No recommendation has been forwarded on this item from TPAC.
2. Whether to allocate the majority of available funds to large construction projects. The alternative is spread the money to smaller projects or do a combination program of various project sizes. Past allocations have generally funded projects that are less than \$6 million, even when resources have been greater. This issue is particularly difficult to address without

being able to evaluate the specific projects. TPAC has suggested remaining flexible on this issue, meaning allow locals to decide their priorities. However, if a "large" project approach is taken, allowances may need to be made in order to ensure a geographic spread of projects.

3. Whether to solicit for new projects. Utilizing the "150%" list from the last allocation process, approximately \$56 million worth of projects from around the region were highly ranked, yet unfunded. TPAC has suggested that those projects be considered a "base" package, also including Right-of-Way (ROW) and construction for projects whose Preliminary Engineering (PE) phases were funded in the last process. The unfunded list is included as Attachment A to this memo. Attachment B shows the list by jurisdiction.

Following is more information on these and other procedural issues. The guidance reflects TPAC recommendations and previous comment and direction from the Metro Council Transportation Committee and JPACT. With JPACT concurrence, an approach will be finalized and distributed for public review, with key issues highlighted.

### *Issues and Guidance*

2002-2005 MTIP Goals. Program goals have been recommended in order to provide a clear direction for the process and the program. TPAC recommended goals are:

- Establish a clear, simple, and understandable process that minimizes procedural hurdles while maintaining broad-based citizen participation.
- Fund the most critical projects that provide a clear public benefit.
- Emphasize projects and programs that most efficiently manage demand and enhance the operation of the existing transportation infrastructure. Look for low-cost projects that have large benefits. (Note outstanding issue regarding freeway projects.)
- Continue to use the flexible federal funds to implement the 2040 Growth Concept.
- Consider funding logical project phases or for projects that complete a logical gap in the system.
- Emphasize project construction either through direct funding or leveraging other potential revenue sources.
- Support projects that can be delivered in the timeframe of the FY 2002-2005 STIP.

Criteria and Project Ranking. It is recommended that the ranking criteria remain the same as they were for the last allocation. However, the 150% list projects may need to be re-ranked based on new cost information, and any new projects must be ranked.

Priorities 2000 150% List. TPAC recommends that project funding should first consider the 150% list that remains unfunded from the Priorities 2000 process for the 2000-2003 MTIP.

New Projects. TPAC recommends that limited opportunities for new projects to the 150% list be cautiously allowed as "adds." However, any new projects should be included in the Financially Constrained System of the 2000 RTP or be the result of a recently completed planning activity (e.g., the Gateway Regional Center Plan). Substitute projects should also meet or exceed Metro's requirements for public involvement.

Big Projects v. Small Projects. As noted, TPAC has made no recommendation on this issue. It seems there is interest in seeing the potential differences between a number of medium sized projects compared to an approach similar to what was done for the 2000-2003 MTIP. Choices range between 1) funding the region's priority freeway projects, which have not previously been funded with regional dollars; 2) funding major arterial projects which alone could cost \$7 – \$10 million each; or 3) funding a variety of smaller, geographically diverse multi-modal projects, which has been the past practice.

As noted, following JPACT and Metro Transportation Committee discussion on these issues, a packet summarizing the process recommendations for comment will be prepared and distributed. An actual process proposal, including the final criteria and a solicitation packet, will be reviewed for approval by JPACT and the Metro Council in December.

MGH:rmb  
Attc.

**2000 MTIP UPDATE  
UNFUNDED REQUESTS**

**ATTACHMENT A**

| A. Planning                |                        |         | B. Road Modernization      |                                                      |          | C. Road Reconstruction     |                              |         | D. Bridge                  |                               |         |
|----------------------------|------------------------|---------|----------------------------|------------------------------------------------------|----------|----------------------------|------------------------------|---------|----------------------------|-------------------------------|---------|
| Rank                       |                        | Amount  | Rank                       |                                                      | Amount   | Rank                       |                              | Amount  | Rank                       |                               | Amount  |
| Residual Unfunded Requests |                        |         | Residual Unfunded Requests |                                                      |          | Residual Unfunded Requests |                              |         | Residual Unfunded Requests |                               |         |
| NA                         | Base Planning Program  | \$1,400 | 4                          | MM7 Gresham/Mult. Co. ITS                            | \$1,000  | 2                          | PR3 NW 23rd/Burnside/Lovejoy | \$0.825 | 2                          | PBr3 Broadway Brdg Deck Rehab | \$3,651 |
| NA                         | Green Streets Handbook | \$0.090 | 4                          | MM7 Gresham/Mult. Co. ITS                            | 0.500    | 3                          | PR5 SE Holgate; 42nd/52nd    | 0.797   |                            |                               |         |
|                            |                        |         | 5                          | CM7 Clack. Co. ITS/ATMS                              | 0.625    |                            |                              |         |                            |                               |         |
|                            |                        |         | 10                         | WM10 Farmington: Hocken/Murray (RW/Con)              | 9.500    |                            |                              |         |                            |                               |         |
|                            |                        |         | 11                         | WM19 Greenbrg Rd: Wash Sq/ Tiedeman (RW/Partial Con) | 0.774    |                            |                              |         |                            |                               |         |
|                            |                        |         | 12                         | MM3 223rd O'Xing (RW)                                | 0.149    |                            |                              |         |                            |                               |         |
|                            |                        |         | 13                         | CM2 Harmony/Linwood/Railroad ROW/Con                 | 5.000    |                            |                              |         |                            |                               |         |
|                            |                        |         | 16                         | WM17 I-5/Nyberg Interchange (RW/Con)                 | 0.783    |                            |                              |         |                            |                               |         |
|                            |                        |         | 19                         | WM13 SE 10th: E Main/SE Baseline RW                  | 0.495    |                            |                              |         |                            |                               |         |
|                            |                        |         | 43                         | WM2 Murray Ext: Scholls/Walnut PE/RW                 | 1.707    |                            |                              |         |                            |                               |         |
|                            | Proposed Total:        | \$1,490 |                            | Proposed Total:                                      | \$20,533 |                            | Proposed Total:              | \$1,622 |                            | Proposed Total:               | \$3,651 |

| E. Freight                 |                                 |         | F. Boulevard               |                                        |          | G. Pedestrian              |                                 |         | H. Bike/Trail              |                                                |         |
|----------------------------|---------------------------------|---------|----------------------------|----------------------------------------|----------|----------------------------|---------------------------------|---------|----------------------------|------------------------------------------------|---------|
| Rank                       |                                 | Amount  | Rank                       |                                        | Amount   | Rank                       |                                 | Amount  | Rank                       |                                                | Amount  |
| Residual Unfunded Requests |                                 |         | Residual Unfunded Requests |                                        |          | Residual Unfunded Requests |                                 |         | Residual Unfunded Requests |                                                |         |
| 2                          | PFT Marine Dr: BNSF O'Xing (PE) | \$1,294 | 1                          | MBL1 Division: Cleveland/Birdsdales    | \$0,289  | 1                          | WP2 Millikan Way: Murray/Hocken | \$0,224 | 1                          | PBI1 Morrison Br. Ped/Bike Access.             | \$1,470 |
| NA                         | I-5 Trade Corridor Study        | 0,250   | 3                          | MBL2 Stark St                          | 0,800    | 7                          | PBI7 E. Bank Riverfront Access  | 0,340   | 2                          | CB3 Phillip Creek Greenway Trail (Con)         | 0,288   |
| NA                         | Reg. Freight Prog. Analysis     | 0,050   | 5                          | PBL2 Gateway Reg. Cntr                 | 1,000    |                            |                                 |         | 12                         | PBI3 Marine Dr. Multi-use Trail Segments (Con) | 0,500   |
|                            |                                 |         | 9                          | WBL1 Cornell: Trail Av/Saltman Rd      | 1,800    |                            |                                 |         | 14                         | WBI10 Fanno Crk Trail Phase 2 (Con)            | 0,852   |
|                            |                                 |         | 10                         | CBL4 A Ave Improvement (L/O)           | 2,700    |                            |                                 |         | 15                         | MBI1 Gresham/Fairview Trail (Con)              | 0,852   |
|                            |                                 |         | 12                         | CBL2 Willamette Dr.: "A" St/McKillican | 0,900    |                            |                                 |         | 16                         | PBI2 Peninsula Crossing Trail- Ph. 2           | 0,359   |
|                            |                                 |         | 14                         | WBL6 Hall Blvd: Cedar Hills/Hocken     | 2,000    |                            |                                 |         | 18                         | CBH2 Will. Shoreline Bike Study                | 0,150   |
|                            |                                 |         | 15                         | WBL2 Main St: 10th/20th (Cornelius)    | 0,500    |                            |                                 |         | 27                         | PBI6b E. Bank Trail - Phase 2 (Con)            | 0,471   |
|                            |                                 |         |                            | Cornell Rd R/W                         | 0,540    |                            |                                 |         |                            |                                                |         |
|                            |                                 |         |                            | Hall Blvd PE                           | 0,045    |                            |                                 |         |                            |                                                |         |
|                            | Proposed Total:                 | \$1,594 |                            | Proposed Total:                        | \$10,574 |                            | Proposed Total:                 | \$0,564 |                            | Proposed Total:                                | \$4,920 |

| I. TDM                     |                              |         | J. TOD                     |                               |         | K. Transit                 |                                           |         |
|----------------------------|------------------------------|---------|----------------------------|-------------------------------|---------|----------------------------|-------------------------------------------|---------|
| Rank                       |                              | Amount  | Rank                       |                               | Amount  | Rank                       |                                           | Amount  |
| Residual Unfunded Requests |                              |         | Residual Unfunded Requests |                               |         | Residual Unfunded Requests |                                           |         |
| 5                          | TDM5 TMA Assist Program      | \$0,500 | 1                          | RTOD1 Metro TOD Program       | \$2,000 | 2                          | WTr2 Wash. Co. Bus Stop Enhancements      | \$0,875 |
| 6                          | TDM4 Region 2040 Initiatives | 0,500   | 2                          | PTOD2 N. Macadam Dist Streets | 1,500   | 3                          | RTr2 Service Increase for Reg/T.C. TCL    | 2,900   |
|                            | Regional TDM Program         | 1,400   |                            |                               |         | 4                          | CTr2 Will. Shoreline Trestle/Track Repair | 0,397   |
|                            | ECO Clearinghouse            | 0,094   |                            |                               |         | 6                          | CTH1 SMART (Wilsonv) Transit Cntr/P&R     | 1,172   |
|                            | SMART TDM Program            | 0,110   |                            |                               |         |                            |                                           |         |
|                            | Proposed Total:              | \$2,604 |                            | Proposed Total:               | \$3,500 |                            | Proposed Total:                           | \$5,144 |

Total of Residual Unfunded Requests from the 150 percent "cut" list during the FY 2000 MTIP Update: **\$56,196**

NOTE: Includes est. FY 04-05 continuation funding of \$8.9 mil. for regional programs

Subtotal of Residual Unfunded Requests that received allocation for a first phase or incremental program implementation in the last update: **\$39,814**

NOTE: Bold projects received initial phase/partial program implementation funding in the FY 2000 MTIP Update.

## Jurisdictional and Modal Distribution of the Priorities 2000 "150 Percent" List

|              | Plan'g         | Mod             | Recon          | Freight        | Brdg           | Blvd            | Ped            | Bike/<br>Trail | Transit        | Tod            | TDM            | TOTAL           | %           |
|--------------|----------------|-----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-------------|
| Clackamas    |                | 5.625           | 1.622          |                |                | 3.600           | 0.000          | 0.416          | 1.569          |                | 0.110          | \$12.942        | 0.23        |
| E. Mult. Co. |                | 1.649           | 0.000          |                |                | 2.089           | 0.000          | 0.852          | 0.000          |                |                | \$4.590         | 0.08        |
| COP          |                | 0.000           | 0.000          | 1.294          | 3.651          | 0.000           | 0.340          | 2.800          | 0.000          | 1.500          |                | \$9.585         | 0.17        |
| Wash. Co.    |                | 13.259          | 0.000          |                |                | 4.885           | 0.224          | 0.852          | 0.675          |                |                | \$19.895        | 0.35        |
| Regional     | 1.490          | 0.000           | 0.000          | 0.300          |                |                 |                |                | 2.900          | 2.000          | 2.494          | \$9.184         | 0.16        |
| <b>TOTAL</b> | <b>\$1.490</b> | <b>\$20.533</b> | <b>\$1.622</b> | <b>\$1.594</b> | <b>\$3.651</b> | <b>\$10.574</b> | <b>\$0.564</b> | <b>\$4.920</b> | <b>\$5.144</b> | <b>\$3.500</b> | <b>\$2.604</b> | <b>\$56.196</b> | <b>1.00</b> |
| <b>%</b>     | <b>0.03</b>    | <b>0.37</b>     | <b>0.03</b>    | <b>0.03</b>    | <b>0.06</b>    | <b>0.19</b>     | <b>0.01</b>    | <b>0.09</b>    | <b>0.09</b>    | <b>0.06</b>    | <b>0.05</b>    | <b>1.00</b>     |             |

## TRANSPORTATION BUDGET REVIEW

|                                         | FY 1997             | FY 1998            | FY 1999            | FY 2000            | FY2001             | Variance<br>FY97 minus FY01 |
|-----------------------------------------|---------------------|--------------------|--------------------|--------------------|--------------------|-----------------------------|
| <b>Project Staff Support by Section</b> |                     |                    |                    |                    |                    |                             |
| Administration                          | 4.830               | 4.605              | 4.660              | 4.585              | 4.305              | (0.53)                      |
| Transportation Planning                 | 17.755              | 16.211             | 15.601             | 15.375             | 15.090             | (2.67)                      |
| Public Involvement                      | 6.000               | 6.000              | 7.120              | 4.920              | 3.020              | (2.98)                      |
| High Capacity Transportation            | 18.695              | 18.961             | 17.394             | 12.047             | 9.715              | (8.98)                      |
| Travel Forecasting                      | 8.645               | 8.412              | 10.600             | 11.458             | 8.930              | 0.29                        |
| Transit Oriented Development            | 1.000               | 2.500              | 2.425              | 3.555              | 2.800              | 1.80                        |
| <b>Total Staff Support</b>              | <b>56.925</b>       | <b>56.689</b>      | <b>57.800</b>      | <b>51.940</b>      | <b>43.860</b>      | <b>(13.065)</b>             |
| <b>Materials &amp; Services</b>         |                     |                    |                    |                    |                    |                             |
| General M & S                           | \$931,325           | \$1,283,164        | \$1,383,117        | \$1,121,850        | \$445,675          | (\$485,650)                 |
| Intergovernmental Agreements            | \$8,004,371         | \$5,891,000        | \$6,106,209        | \$2,725,000        | \$1,162,500        | (\$6,841,871)               |
| Professional Services                   | \$2,477,044         | \$2,309,549        | \$2,353,200        | \$1,589,400        | \$1,459,032        | (\$1,018,012)               |
| <b>Total Materials &amp; Services</b>   | <b>\$11,412,740</b> | <b>\$9,483,713</b> | <b>\$9,842,526</b> | <b>\$5,436,250</b> | <b>\$3,067,207</b> | <b>(\$8,345,533)</b>        |

10/30/00 9:00

## Transportation Demand Management in the Portland Metropolitan Region

Progress Report Through February 2000

Prepared for JPACT  
October 19, 2000

## TDM

- TDM is a set of strategies that encourage the use of alternative modes to driving alone to:
  - Maximize infrastructure investments
  - Reduce VMT, especially peak-hour
  - Improve air quality
  - Cost-efficient alternative to building new facilities

## Background

- TDM Program began in 70's
  - Carpool Matching
  - Rideshare Marketing
- Expansion in 1992
  - TDM Subcommittee Formed
  - Employer Outreach
- Expansion in 1994/1996 -ECO Rule
  - Technical Assistance
  - Partnerships
- Currently - Implement Region 2040

## Regional TDM Program

- TDM subcommittee:
  - Metro, Counties, TMAs, Cities of Portland, Gresham, SMART/Wilsonville, ODOT, Tri-Met, Citizen, Business, Bike/Ped, Port, Clark County, DEQ, OOE
- Programs at Tri-Met, DEQ, OOE, SMART, local jurisdictions, TMAs

## Annual Regional Funding - FY 2003

|                                |                           |
|--------------------------------|---------------------------|
| • Core Regional Program (TM)   | \$700,000                 |
| • Region 2040 Initiatives (TM) | \$250,000                 |
| • TMA Assistance (TM)          | \$250,000                 |
| • Wilsonville (SMART)          | \$55,000                  |
| • Telecommuting (OOE)          | \$50,000                  |
| • ECO Assistance (DEQ)         | \$47,000                  |
| <b><u>TOTAL</u></b>            | <b><u>\$1,352,000</u></b> |

## Programs and Services

### Employer Outreach

- TDM Options
- Marketing Materials
- ECO Compliance
- BETC Tax Credits

### Support Services

- Emergency Ride Home
- Transit Fare Incentives
- Carpool Matching
- Vanpool Subsidies

### Program Evaluation

- TDM Report
- ECO Surveys

### TMA Assistance

- Developing TMAs
- Contract Administration

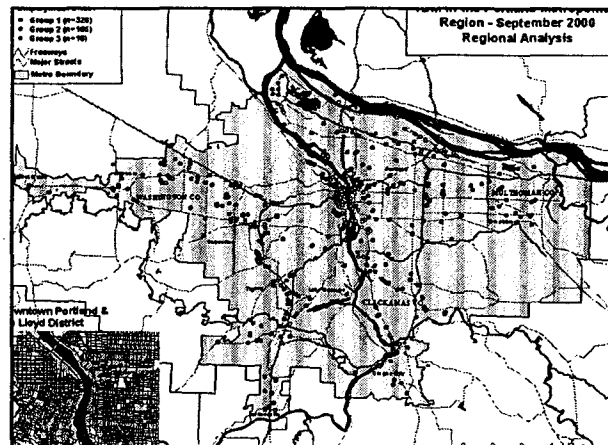
### Research & Development

- Shared-Ride Taxi
- Vanpool Shuttles
- Carpool Incentives

### 2040 Programs

- Shuttles
- Bike Racks&Lockers

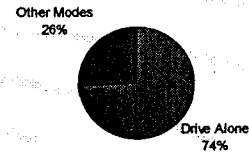
## TDM Progress



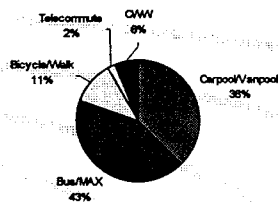
## September 2000 TDM Progress Report

- Data for 127,147 employees at 503 employment sites
- 6% reduction in daily auto trips

## Overall Mode Split (230,000 Daily Commute Trips)



## Mode Split Breakdown (60,000 Daily Commute Trips)



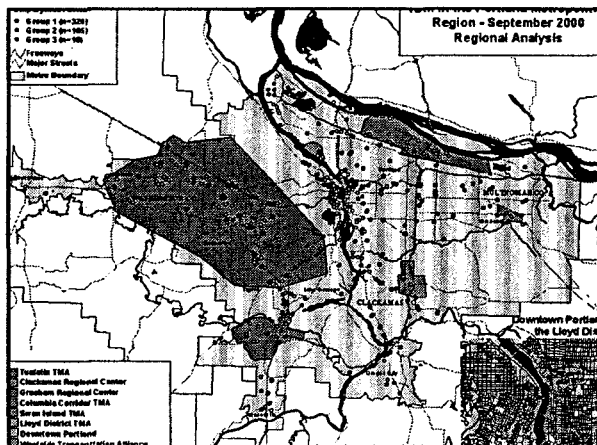
## Mode Shifts Since 1994

- 10,700 daily auto trip reduction
- 79,400 daily VMT reduction
- Equivalent capacity of 10 highway lane miles

## Cost-Effectiveness

- Maximizes efficiency of existing infrastructure
- For every public dollar spent on TDM, private sector spends an additional \$4-5

## TMA and Marquam Hill



## TMA Funding

### Start-Up Funds:

- Lloyd, WTA, Tualatin, Columbia Corridor (Airport Way), Swan Island

### Exploratory Funds:

- Clackamas, Gresham, APP (Downtown Portland)

### Future Exploratory Funds:

- Troutdale, Lake Oswego (Kruse Way), Columbia Corridor (Rivergate)

## TMA Progress

- Goals and Objectives to Reduce SOV and VMT
- Gaining Business and Local Jurisdiction Support
- Annual Reports to include:
  - Identify Goals Met
  - Identify Local Match to Regional Funds
  - Estimated SOV and VMT Reduction
  - Documents Outreach Activities
  - Outlines Future Activities

## Programs and Services

## Region 2040 Programs



## Ridesharing

- Carpool Incentives
- Vanpools
- Vanpool Shuttles

## **SUMMARY**

- **TDM Programs, Services, Innovations and Partnerships go to reducing SOV and VMT**

## **Next Steps**

- **Continue focus on implementing 2040 through RTP**
- **Leverage partnerships**
  - **Vanpool Shuttles**
  - **Jobs Access**
  - **Local Jurisdictions**
- **Technology**

## **Transportation Demand Management in the Portland Metropolitan Region**

**Progress Report Through February 2000**

**Prepared for JPACT  
October 19, 2000**

**TRANSPORTATION DEMAND MANAGEMENT IN THE  
PORTLAND METROPOLITAN REGION**

**(PROGRESS REPORT THROUGH FEBRUARY 2000)**

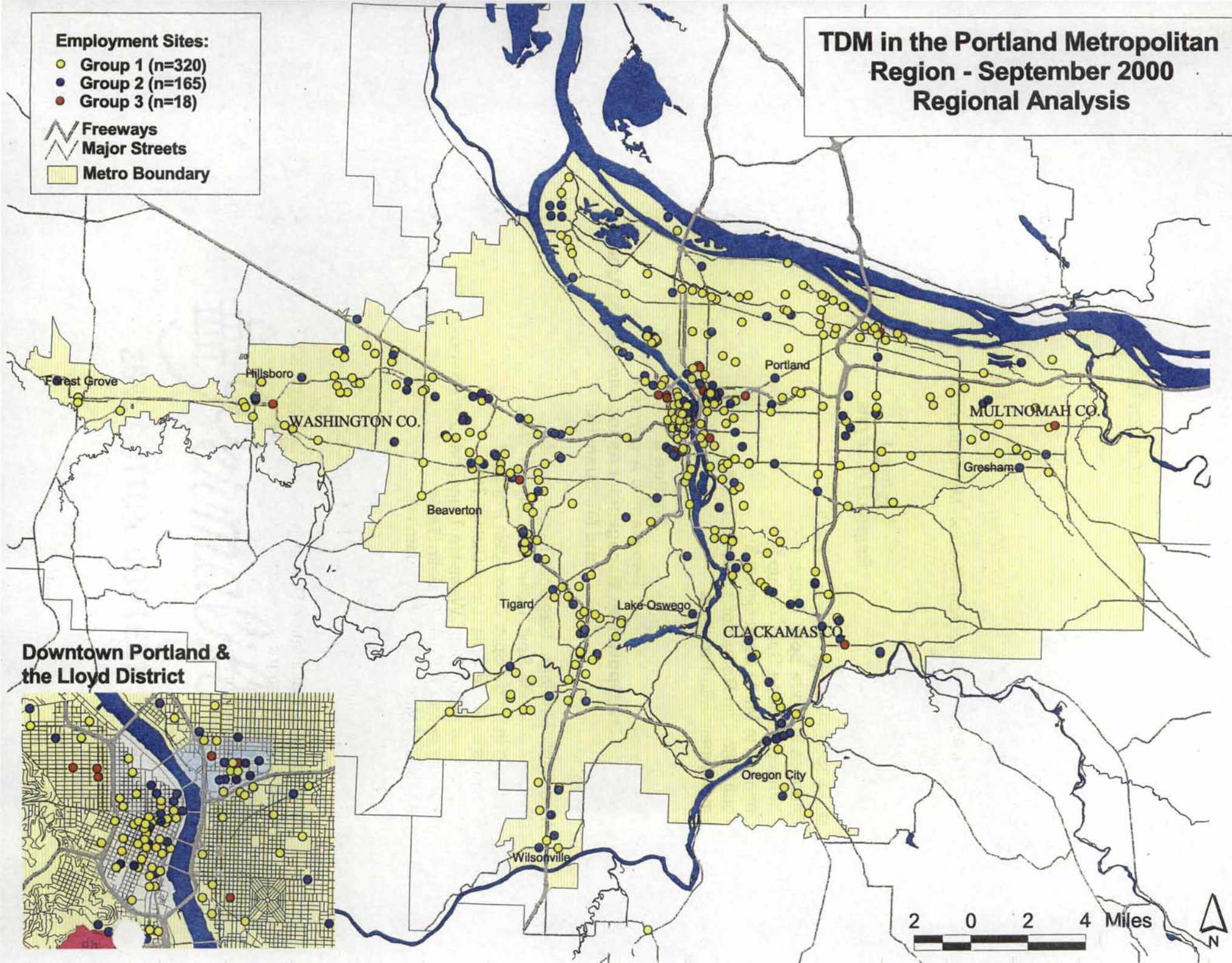
**Prepared by Tri-Met  
Marketing Information  
September 2000**

**Employment Sites:**

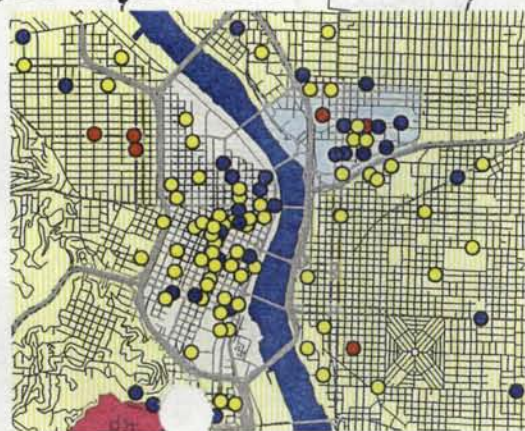
- Group 1 (n=320)
- Group 2 (n=165)
- Group 3 (n=18)

- Freeways
- Major Streets
- Metro Boundary

**TDM in the Portland Metropolitan  
Region - September 2000  
Regional Analysis**



**Downtown Portland &  
the Lloyd District**



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## EXECUTIVE SUMMARY

The Portland, Oregon, metropolitan region's transportation demand management (TDM) program focuses on strategies that encourage the use of alternative forms of transportation, rather than driving alone to work. The goals of TDM are to reduce vehicle miles traveled (VMT), reduce traffic congestion, improve air quality, enhance mobility, and make the existing transportation system more efficient.

TDM measures were introduced in the Portland metropolitan region in the 1970s with a regional carpool matching program and introductory marketing efforts. Throughout the 1990s federal, state and local governments passed legislation and provided funding to make TDM a significant part of the region's transportation strategy.

### **Section I: Regional Analysis**

In this report, the effectiveness of the TDM strategies is measured by reductions in the number of work trips made in automobiles. The data used in this report were derived from employers required by the Employee Commute Options (ECO) Rule to reduce auto trips to the worksite by 10% (within a three year timeframe), as well as those who voluntarily surveyed their employees for other business purposes. The mode split findings in Section I of this report are assembled into three groups:

- Group 1: 320 employment sites, representing 68,710 employees. This group includes the results of a baseline and one follow-up survey conducted to assess changes in employee commute choices. The average time elapsed between surveys is approximately 1.3 years.
- Group 2: 165 employment sites, representing 49,543 employees. This group includes the results of a baseline and two follow-up surveys conducted to assess changes in employee commute choices. The average time elapsed between surveys is approximately 2.6 years.
- Group 3: 18 employment sites, representing 8,894 employees. This group includes the results of a baseline and three follow-up surveys conducted to assess changes in employee commute choices. The average time elapsed between surveys is approximately 3.9 years.

Employer sites from all three groups are shown on the adjacent map.

## Highlights

Group 1: Analysis of mode split findings for Group 1 reveals that employers generally made progress in reducing auto trips to their worksites. Comparing data from baseline to the first follow-up survey indicates the following:

- One-way auto trips made each weekday to the worksite were reduced 4% from baseline to follow-up surveys.
- The majority of *drive alone* trips reduced (2,114) were shifted to *bus/MAX* (2,084).
- Sixty-eight (68%) percent of employers made at least some progress toward meeting their auto trip reduction goals.
- One in four employment sites in Group 1 reached or exceeded a 10% reduction in auto trips to the work site.

Group 2: Analysis of mode split findings for Group 2 revealed that employers made continuous progress in reducing auto trips to the worksite over two follow-up surveys. Comparing data from baseline to the second follow-up survey indicates the following:

- One-way auto trips made each weekday to the worksite were reduced 8% from baseline to the second follow-up survey.
- The majority of *drive alone* trips reduced (2,897) were shifted to *bus/MAX* (2,343).
- Most (82%) employers made at least some progress toward meeting their auto trip reduction goals.
- One-third of the employers in Group 2 reached or exceeded a 10% reduction in auto trips to their worksites.

Group 3: Analysis of mode split findings for Group 3 revealed continued progress reducing *drive alone* trips below baseline levels. However, such trips have steadily increased following the first follow-up survey. Of all alternative modes, *bus/MAX* appeared to show the most consistent increase in usage. Comparing data from baseline to the third follow-up survey indicates the following:

- One-way auto trips made each weekday to the worksite were reduced 3% from baseline to the third follow-up survey.
- Increases in trips made via *bus/MAX* (252) were drawn from reductions in *drive alone* trips and *bike/walk* trips.

- The majority (83%) of employers made at least some progress toward meeting their auto trip reduction goals.
- Over one-third (38%) of the employers in Group 3 reached or exceeded a 10% reduction in auto trips to their worksites.

## **Section II: Geographic Analysis - Transportation Management Association (TMA) Areas and Marquam Hill**

Regional funds are granted to TMAs on the condition that the goals and objectives of the organization will work to reduce single occupant vehicle trips and vehicle miles traveled. The 1999 Regional Transportation Plan identified eleven existing and potential TMA areas for regional funding. This report includes analysis for TMA areas where sufficient data exists.

Additionally, Marquam Hill employers have actively pursued TDM programs for the past five years, although have not applied for regional TMA funding. Tri-Met has tracked TDM progress of this area through a Partnership Plan since 1995 and this data is also included in this section.

The region is currently providing TMA start-up funds to:

- Tualatin TMA
- Westside Transportation Alliance (WTA)
- Lloyd District TMA
- Swan Island TMA
- Columbia Corridor Transit Management Alliance

These areas currently receive TMA Exploratory funds:

- Downtown Portland (Association for Portland Progress)
- Downtown Gresham (Gresham Downtown Development Association)
- Clackamas Regional Center (Clackamas County)

The following areas are scheduled to receive TMA Exploratory funds:

- Troutdale
- Lake Oswego Kruse Way
- Columbia Corridor Rivergate

TMA areas with sufficient data for analysis presented in this report include:

- Tualatin TMA
- WTA
- Lloyd District TMA
- Columbia Corridor TMA
- Downtown Portland
- Marquam Hill

## Highlights

- All TMA areas and Marquam Hill experienced a reduction in drive-alone trips.
- Auto trips that were reduced went to a variety of different modes depending on the services available in each area. For example, the predominate non-SOV mode in the WTA area is carpooling which continues to grow (although not as rapidly as transit use). In Lloyd District however, carpooling use (once equivalent to transit use) is experiencing a decline while transit use substantially increases.

## CONCLUSIONS

Transportation Demand Management efforts continue to make a positive difference in the region, as evidenced by the fact that the majority of employment sites in both groups 1, 2 and 3 have made substantial reductions in the number of auto trips made to the worksite. Together, over five hundred employment sites have reduced 10,730 *weekday* auto trips to and from the worksite region-wide.

Metro projects that the current one-way auto trip commute length in the region is 7.4 miles. Based on this travel distance, approximately 79,402 daily vehicle miles traveled have been reduced. \*

Surveys from groups 2 and 3 provide the first look at commute mode changes from baseline through second and third follow-up surveys. The trends in such groups show some leveling-off of commuter trips, changing from driving alone to alternative modes.

This analysis marks the first attempt to focus on TMA areas. While commute data for these areas is limited, preliminary analysis of selected target areas included in this report reveals that progress is positive with regards to reducing drive alone commute trips.

\* Equilibrated 1994 Metro Model

## **TDM BACKGROUND, PROGRAM REVIEW AND METHODOLOGY**

### **Background**

The Portland metropolitan region's transportation demand management (TDM) program includes strategies that encourage the use of forms of transportation other than single-occupant automobiles. The goals of TDM are to reduce vehicle miles traveled (VMT), reduce traffic congestion, improve air quality, enhance mobility and make the existing transportation system more efficient.

TDM effectiveness is measured by the proportion of people shifting from driving alone to using transit, carpools or vanpools, telecommuting, biking, walking, or working compressed work week schedules.

Organizations that provide TDM information and services in the Portland metropolitan region are presented below.

1. Tri-County Metropolitan Transportation District of Oregon (Tri-Met)
2. Department of Environmental Quality (DEQ)
3. Oregon Office of Energy (OOE)
4. Transportation Management Associations (TMAs)
5. South Metro Area Rapid Transit (SMART)
6. Metro

### **Program Review**

This TDM report documents a share of all commute trips made in the region. Figure A-1 (see Appendix B) shows the rate of growth of home to work trips in the region each day and compares how the TDM program is capturing a portion of these trips.

Employers have administered TDM commuter choice surveys as early as January 1994. As of the first quarter of 2000, a total of 1,487 baseline and various follow-up reports have been processed and reported. Tri-Met processed 752, DEQ processed 526, and other associations and individuals processed another 204. The greatest concentration of surveys came in just after the ECO Rule was underway in 1996, the last quarter of 1996 and the first two quarters of 1997. (Table A-4, see Appendix B)

Tri-Met has provided direct services to employers in the region. Employer outreach services include information on TDM options, on-site marketing materials and ECO compliance assistance. Support services include emergency ride home, transit fare incentives (PASSport, Transit Checks, etc.), carpool matching database and vanpool subsidies. Research and development involving shared-ride taxi, vanpool shuttles and carpool incentives is also available. Additional assistance to employers is offered by Transportation Management Associations (TMA's), SMART, DEQ and OOE.

The Oregon Office of Energy (OOE) provides a Business Energy Tax Credit (BETC) to employers who fund alternative transportation modes across the state of Oregon. The BETC program covers employers conserving energy resources through transportation alternatives and other upgrades to company efficiency. The program started in 1992 with credits to employers who set up telework offices (in the home or close to the home of their employees) and employers who bought commuter pool vehicles to facilitate ridesharing. To date, 26 applications for telework BETCs have been approved and 2 for commuter pool vehicles in Multnomah, Washington and Clackamas counties.

Transit subsidies became eligible for BETCs in 1998, and 53 have been approved in the same three counties.

New BETCs offered by OOE in 2000 reimburse financial incentives employers provide directly to employees, costs to provide bicycle facilities, and the dues an employer pays into their local TMA. One employer has been approved for financial incentives and another for TMA dues in the tri-county area. No bicycle BETCs have been applied for in the tri-county area yet. (Table A-5, see Appendix B)

## **Methodology**

The data analyzed in this report come from surveys taken by employers across the Portland metropolitan region. These employers conduct employee commute mode surveys to comply with DEQ ECO rules or for other business purposes.

All employers administered their own surveys and, nearly all passed them on to DEQ, Tri-Met, Lloyd District Transportation Management Association, Tualatin Transportation Management Association or Westside Transportation Alliance (WTA) for tabulation and analysis.<sup>1</sup> Several employers tabulated and reported their own survey results.

Completed surveys met one of the two following conditions in order to be considered valid:

1. A 75% response rate to the survey was achieved if the entire workforce was issued a survey; or,
2. A sample of the population (determined by ECO guidelines) returned a 75% response rate (Refer to OAR 340-030-0800 through 1080).

In general, employers conduct surveys one year apart.

---

<sup>1</sup> Appendix C and D show examples of questionnaires used by employers and Tri-Met's Survey Data Form.

## **TDM Historical Reference**

TDM measures were introduced in the Portland metropolitan region in the 1970s with a regional carpool matching program and introductory marketing efforts housed at Tri-Met. In 1991, the State of Oregon passed the Transportation Planning Rule (TPR) which required a reduction in automobile trips through TDM efforts. In the early 1990s, federal legislation (1990 Clean Air Act) and funding (Intermodal Surface Transportation Efficiency Act) provided another opportunity for TDM to become a significant part of the region's transportation strategy. The importance of TDM to the region was confirmed by a 1994 Metro study on TDM and Oregon's 1996 Employee Commute Options (ECO) rules (regulated by the Department of Environmental Quality). TDM measures are also included in the Regional Transportation Plan (RTP) to help the region achieve its 2040 Growth Concept land use and accessibility goals.

Local jurisdictions implemented land use and parking strategies to impact TDM measures:

- Title 2 of the Metro Urban Growth Management Functional Plan (UGMFP) establishes a regional parking policy with regional parking ratios that include reducing minimum parking standards and establishing parking maximums by land use type.
- Title 6 of the UGMFP describes a process to identify transportation mode split targets and includes TDM as one of several strategies to consider in addressing traffic congestion.

## **Section I**

### **Regional Analysis**

## MODE SPLIT FINDINGS: Groups 1, 2 and 3

Mode split findings illustrate the commute (mode) choices employees make traveling to their worksite. Mode split refers to the reported use of each commute option as a percent of the total work trips. Progress with regards to auto trip reduction is measured by comparing baseline survey findings against follow-up survey results.

The mode-split findings in this report are assembled into three groups.

- Group 1 (n=320 employment sites) includes results of baseline and one follow-up survey to assess commute choices.
- Group 2 (n=165 employment sites) includes the results of baseline and two follow-up surveys.
- Group 3 (n=18 employment sites) includes the results of baseline and three follow-up surveys.

Analysis of mode split findings for each group is provided separately along with an overall assessment of auto trips reduced region-wide.

## Changes in Mode Split: Group 1

As of February 2000, there were 320 employment sites in the Portland metropolitan region that had completed a baseline and one follow-up survey of its employees.

In terms of "percentage change" from baseline to first follow-up survey, growth is apparent in trips taken telecommuting (+136%) and via bus/MAX (+56%). *Bus/MAX* experienced the largest increase in absolute trips with a 2,084 increase. A slight gain was also recorded in compressed workweek (+9%) usage. Levels of usage for trips taken carpooling or vanpooling were on par with baseline levels, while trips made bicycling or walking decreased (-14%). (Table 1)

**Table 1**  
**Changes in Mode Split for Group 1**  
**Average Weekday Trips, One-Way**  
**(n=320 Employment Sites)<sup>1</sup>**

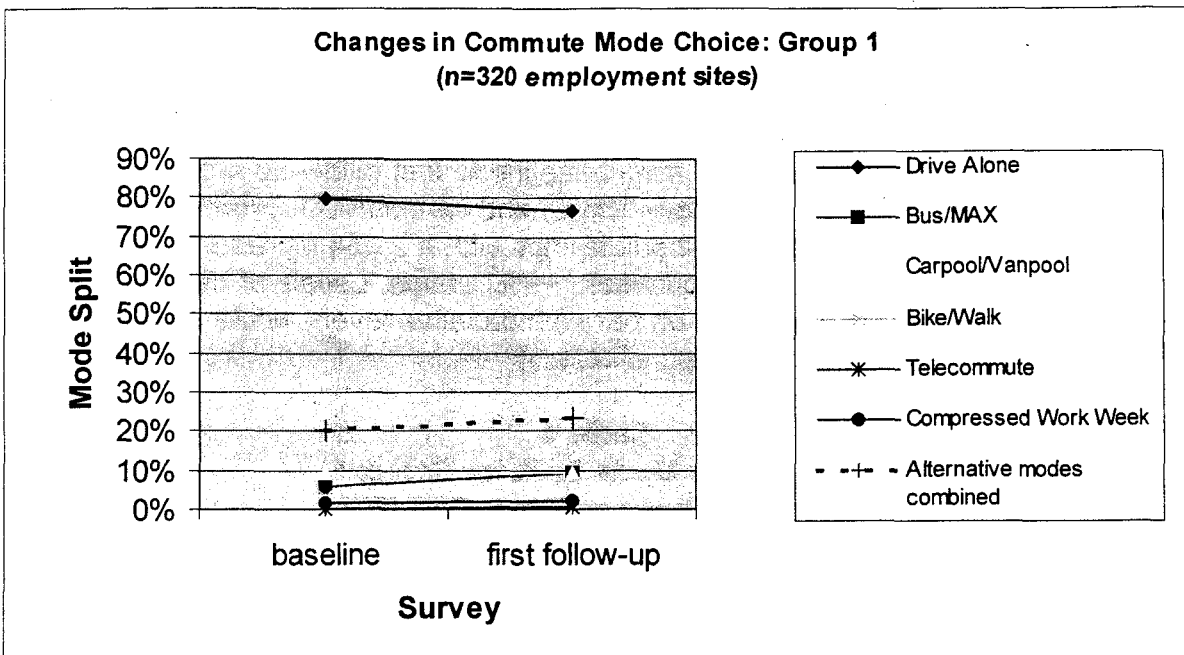
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips |     | Percentage Change<br>[(B-A)/A]*100 |
|----------------------|-----------------------------|-----|-----------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#              | %   |                                    |
| Drive alone          | 50,774                      | 80% | 48,660                | 77% | -4%                                |
| Carpool/Vanpool      | 6,024                       | 9%  | 6,046                 | 10% | 0                                  |
| Bus/MAX              | 3,735                       | 6%  | 5,819                 | 9%  | +56%                               |
| Bicycle/Walk         | 1,815                       | 3%  | 1,562                 | 2%  | -14%                               |
| Telecommute          | 121                         | 0%  | 286                   | 0%  | +136%                              |
| Compressed work week | 1,070                       | 2%  | 1,165                 | 2%  | +9%                                |
| <b>TOTAL</b>         | <b>63,538</b>               |     | <b>63,538</b>         |     |                                    |

<sup>1</sup>Represents estimates for 68,710 employees

<sup>2</sup>Baseline trips are calibrated to follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Changes in Table 1 are represented graphically in Figure 1. Responses from Group 1 indicate decreases in *drive alone* and *bicycle/walk* commute trips, increases in *telecommute*, *bus/MAX* and *compressed workweek*. (Figure 1). When considering all *alternative modes combined*, increases in such trips nearly mirror the reductions in *drive alone* trips.

Figure 1



Data source: responses are representative of 68,710 employees

### Changes in Mode Split: Group 2

As of February 2000 there were 165 employment sites in the Portland metropolitan region that had completed a baseline and two follow-up surveys of its employees.

Table 2 analyzes the data by comparing the "percentage change" from one survey to another. In this case, the mode experiencing the largest increase in usage was recorded by the *telecommute* (+141%) option, followed by *compressed workweek* (+128%). *Bus/MAX* (+66%) also made substantial gains in usage. *Carpool/vanpool* saw a slight reduction in usage (-3%). Much like Group 1, Group 2 showed the greatest gain in absolute trips in *bus/MAX* (2343). (Table 2)

**Table 2**  
**Changes in Mode Split for Group 2**  
**Average Weekday Trips, One-Way**  
**(n=165 Employment Sites)<sup>1</sup>**

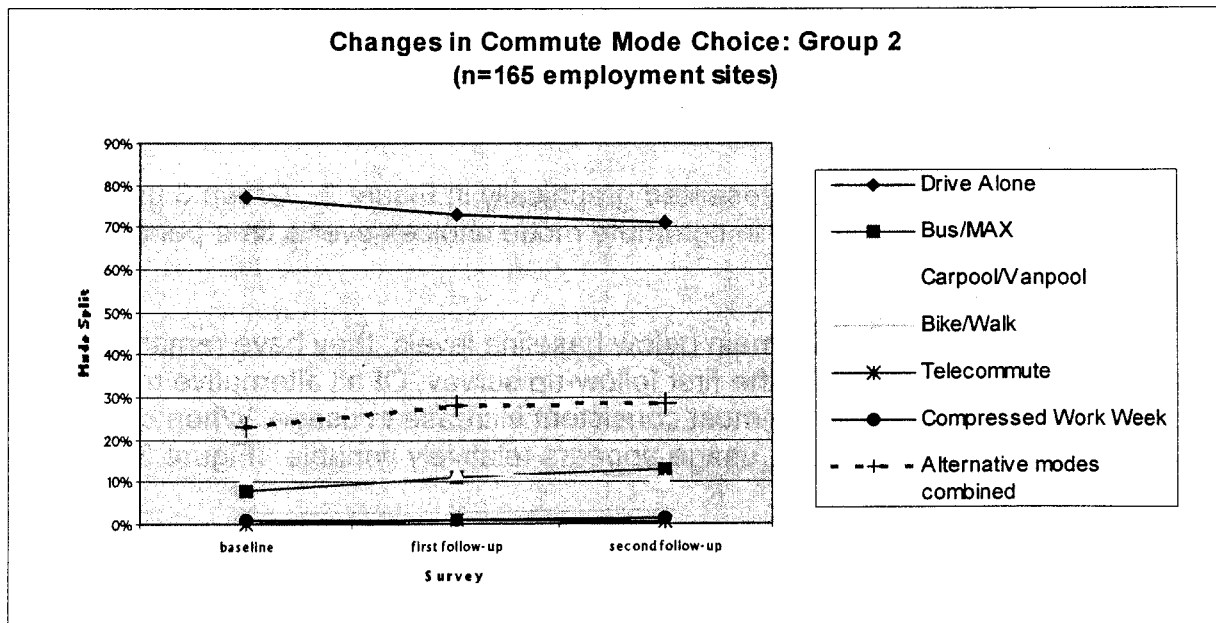
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-Up Trips <sup>2</sup> |     | Second Follow-up Trips |     | Percentage Change<br>[(C-A)/A]*100 |
|----------------------|-----------------------------|-----|------------------------------------|-----|------------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#                           | %   | (C)<br>#               | %   |                                    |
| Drive alone          | 34,150                      | 77% | 32,063                             | 73% | 31,253                 | 71% | -8%                                |
| Carpool/Vanpool      | 4,726                       | 11% | 5,210                              | 12% | 4,582                  | 10% | -3%                                |
| Bus/MAX              | 3,575                       | 8%  | 4,874                              | 11% | 5,918                  | 13% | +66%                               |
| Bicycle/Walk         | 1,288                       | 3%  | 1,313                              | 3%  | 1,487                  | 3%  | +15%                               |
| Telecommute          | 105                         | 0%  | 240                                | 1%  | 254                    | 1%  | +141%                              |
| Compressed work week | 274                         | 1%  | 419                                | 1%  | 624                    | 1%  | +128%                              |
| <b>TOTAL</b>         | <b>44,119</b>               |     | <b>44,119</b>                      |     | <b>44,119</b>          |     |                                    |

<sup>1</sup>Represents estimates for 49,543 employees

<sup>2</sup>Baseline and first follow-up trips are calibrated to second follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Changes in Table 2 are represented graphically below (Figure 2). Commute trends indicate a steady increase in trips made via *bus/MAX*. *Carpool/vanpool* trips appear relatively unchanged from baseline through second follow-up. When considering all *alternative modes combined*, increases in such trips nearly mirror the reductions in *drive alone* trips. (Figure 2)

**Figure 2**



Data source: responses are representative of 49,543 employees

### Changes in Mode Split: Group 3

As of February 2000 there were 18 employers in the Portland metropolitan region that had completed a baseline survey of employees and three follow-up surveys.

Table 3 analyzes the data by comparing the "percentage change" from one survey period to another. In this case, the modes experiencing the largest increase in usage were recorded by the *compressed workweek* (+52) and *telecommute* (+48%) options. *Bus/MAX* (+33%) has also made substantial gains in usage, leading the way in increased trips (252). Of all alternative modes, *bicycle/walk* was the only to see a reduction (-39%). (Table 3)

**Table 3**  
**Changes in Mode Split for Group 3**  
**Average Weekday Trips, One-Way**  
**(n=18 Employment Sites)<sup>1</sup>**

| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips <sup>2</sup> |     | Second Follow-up Trips <sup>2</sup> |     | Third Follow-up Trips |     | Percentage Change<br>[(D-A)/A]*100 |
|----------------------|-----------------------------|-----|------------------------------------|-----|-------------------------------------|-----|-----------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#                           | %   | (C)<br>#                            | %   | (D)<br>#              | %   |                                    |
| Drive alone          | 5,610                       | 74% | 5,296                              | 70% | 5,427                               | 72% | 5,440                 | 72% | -3%                                |
| Carpool/Vanpool      | 578                         | 8%  | 618                                | 8%  | 642                                 | 9%  | 619                   | 8%  | +7%                                |
| Bus/MAX              | 757                         | 10% | 944                                | 13% | 1,017                               | 13% | 1,009                 | 13% | +33%                               |
| Bicycle/Walk         | 477                         | 6%  | 493                                | 7%  | 327                                 | 4%  | 289                   | 4%  | -39%                               |
| Telecommute          | 29                          | 0%  | 40                                 | 1%  | 47                                  | 1%  | 43                    | 1%  | +48%                               |
| Compressed work week | 99                          | 1%  | 159                                | 2%  | 91                                  | 1%  | 150                   | 2%  | +52%                               |
| <b>TOTAL</b>         | <b>7,550</b>                |     | <b>7,550</b>                       |     | <b>7,550</b>                        |     | <b>7,550</b>          |     |                                    |

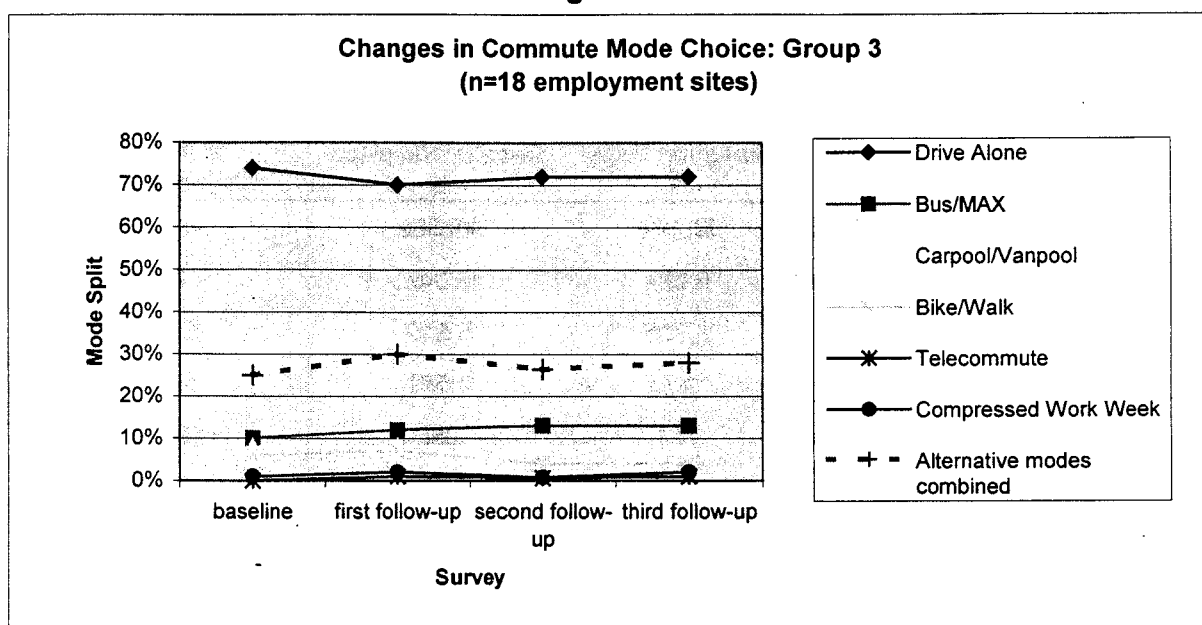
<sup>1</sup>Represents estimates for 8,894 employees

<sup>2</sup>Baseline, first follow-up and second trips are calibrated to third follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Changes in Table 3 are represented graphically in Figure 3. Group 3 provides the opportunity to observe changes in commute mode choices over a time period spanning four surveys.

Though *drive alone* trips remain below baseline levels, they have remained somewhat consistent following the first follow-up survey. Of all alternative modes, *bus/MAX* appeared to show the most consistent increase in usage. When considering all *alternative modes combined*, usage appears relatively variable. (Figure 3)

**Figure 3**



Data Source: responses are representative of 8,894 employees

### **Total Auto Trip Reductions: Group 1, 2 and 3**

The total auto trips reduced method of analysis combines the number of drive alone trips with auto trips made by the vehicles from carpools and vanpools to determine the total number of automobiles used for commute trips. For example, a two-person carpool counts for two employee trips but only one auto trip.

Table 4, below, shows the estimated reduction in total auto trips. The survey data shows that a 4% reduction was made in auto trips for employers in **Group 1**. This reduction equates to 2,124 fewer weekday auto trips to their worksite.

Baseline to second follow-up analysis of **Group 2** indicates that employers were successful in reducing 8% of their auto trips, eliminating 3,082 weekday auto trips to the worksite. (Table 3)

Baseline to third follow-up analysis of **Group 3** indicates that employers reduced 3% of their auto trips, eliminating 159 weekday auto trips to the worksite. (Table 3)

The combined reduction of auto trips by **Group 1, 2 and 3** is 6%. Together, they reduced a total of 5,365 weekday auto trips to the worksite region-wide. (Table 4)

**Table 4**  
**Total Change in Trips One-Way (to Work) per Weekday**

| <b>GROUP 1<sup>1</sup></b> | <b>Baseline Trips<br/>A</b> | <b>Follow-up<br/>Trips from most<br/>Recent follow-up<br/>B</b> | <b>Percentage<br/>Change<br/>In Trips<br/>[(B-A)/A]*100</b> |
|----------------------------|-----------------------------|-----------------------------------------------------------------|-------------------------------------------------------------|
| Drive Alone                | 50,774                      | 48,660                                                          | -4%                                                         |
| Carpool/Vanpool            | 6,024                       | 6,046                                                           | 0                                                           |
| Bus/MAX                    | 3,735                       | 5,819                                                           | +56%                                                        |
| Bicycle/Walk               | 1,815                       | 1,562                                                           | -14%                                                        |
| Telecommute                | 121                         | 286                                                             | +136%                                                       |
| Compressed work week       | 1,070                       | 1,165                                                           | +9%                                                         |
| <b>Auto Trips</b>          | <b>53,605</b>               | <b>51,481</b>                                                   | <b>-4%</b>                                                  |
| <b>GROUP 2<sup>2</sup></b> | <b>Baseline Trips<br/>A</b> | <b>Follow-up<br/>Trips from most<br/>Recent follow-up<br/>B</b> | <b>Percentage<br/>Change<br/>In Trips<br/>[(B-A)/A]*100</b> |
| Drive Alone                | 34,150                      | 31,253                                                          | -8%                                                         |
| Carpool/Vanpool            | 4,726                       | 4,582                                                           | -3%                                                         |
| Bus/MAX                    | 3,575                       | 5,918                                                           | +66%                                                        |
| Bicycle/Walk               | 1,288                       | 1,487                                                           | +15%                                                        |
| Telecommute                | 105                         | 254                                                             | +141%                                                       |
| Compressed work week       | 274                         | 624                                                             | +128%                                                       |
| <b>Auto Trips</b>          | <b>36,432</b>               | <b>33,350</b>                                                   | <b>-8%</b>                                                  |
| <b>GROUP 3<sup>3</sup></b> | <b>Baseline Trips<br/>A</b> | <b>Follow-up<br/>Trips from most<br/>Recent follow-up<br/>B</b> | <b>Percentage<br/>Change<br/>In Trips<br/>[(B-A)/A]*100</b> |
| Drive Alone                | 5,610                       | 5,440                                                           | -3%                                                         |
| Carpool/Vanpool            | 578                         | 619                                                             | +7%                                                         |
| Bus/MAX                    | 757                         | 1,009                                                           | +33%                                                        |
| Bicycle/Walk               | 477                         | 289                                                             | -39%                                                        |
| Telecommute                | 29                          | 43                                                              | +48%                                                        |
| Compressed work week       | 99                          | 150                                                             | +52%                                                        |
| <b>Auto Trips</b>          | <b>5,892</b>                | <b>5,733</b>                                                    | <b>-3%</b>                                                  |

| RESULTS COMBINED                            |                     |                                                       |                                                   |
|---------------------------------------------|---------------------|-------------------------------------------------------|---------------------------------------------------|
| GROUPS 1, 2 & 3<br>(combined <sup>4</sup> ) | Baseline Trips<br>A | Follow-up<br>Trips from most<br>Recent follow-up<br>B | Percentage<br>Change<br>In Trips<br>[(B-A)/A]*100 |
| Drive Alone                                 | 90,534              | 85,353                                                | -6%                                               |
| Carpool/Vanpool                             | 11,328              | 11,247                                                | -1%                                               |
| Bus/MAX                                     | 8,067               | 12,746                                                | +58%                                              |
| Bicycle/Walk                                | 3,580               | 3,338                                                 | -7%                                               |
| Telecommute                                 | 255                 | 583                                                   | +129%                                             |
| Compressed work week                        | 1,443               | 1,939                                                 | +34%                                              |
| <b>Auto Trips</b>                           | <b>95,929</b>       | <b>90,564</b>                                         | <b>-6%</b>                                        |

<sup>1</sup>320 employment sites, with 68,710 employees

<sup>2</sup>165 employment sites, with 49,543 employees

<sup>3</sup>18 employment sites, with 8,894 employees

<sup>4</sup>503 employment sites, with 127,147 employees

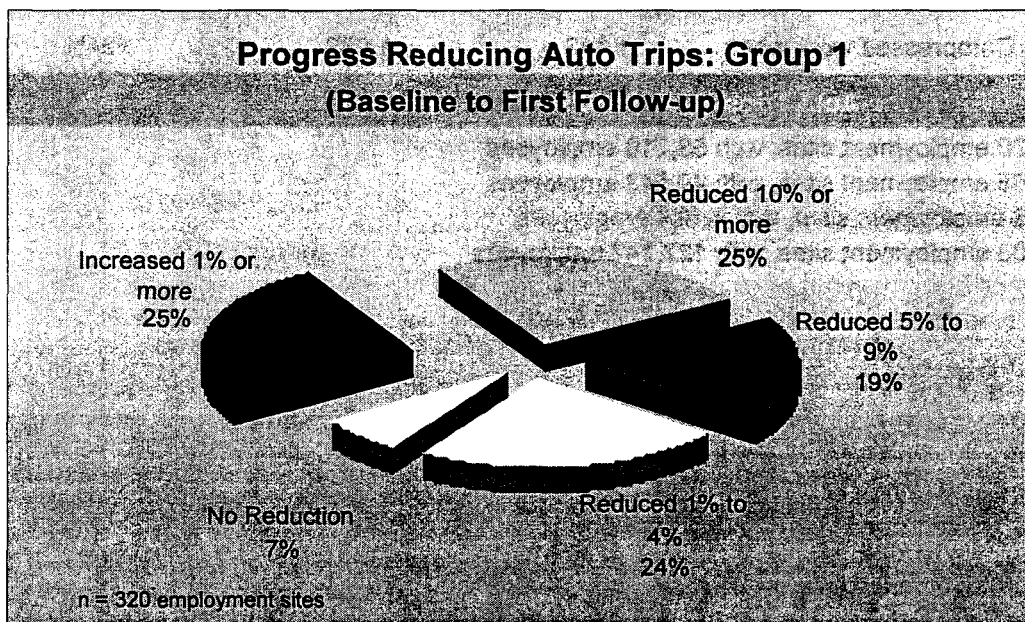
## Employment Site Progress

The majority of employers included in this study are making positive progress towards reducing auto trips to the worksite.

### Group 1

Over one-third of employment sites (68%) in Group 1 showed at least some progress in reducing auto trips from baseline to their first follow-up survey. Twenty-five percent achieved a 10% reduction in auto trips. However, 25% had an increase of 1% or more in auto trips in the time between survey efforts. (Figure 4)

**Figure 4**

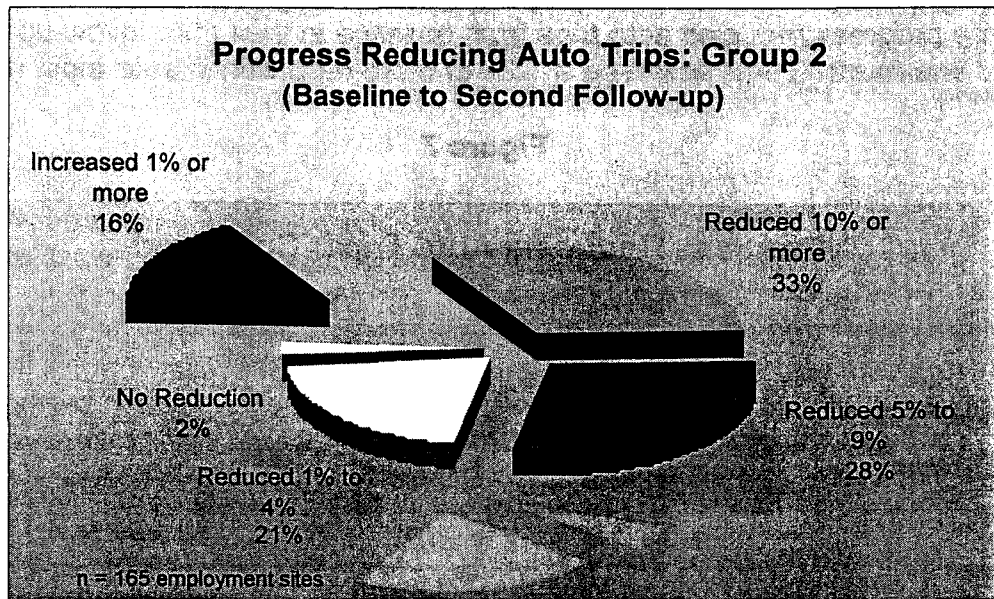


Data source: responses are representative of 68,710 employees

### Group 2

Eighty-two percent of the employment sites in Group 2 made at least some progress reducing auto trips from baseline to their second follow-up survey. One-third (33%) achieved a 10% or more reduction in auto trips. (Figure 5)

Figure 5

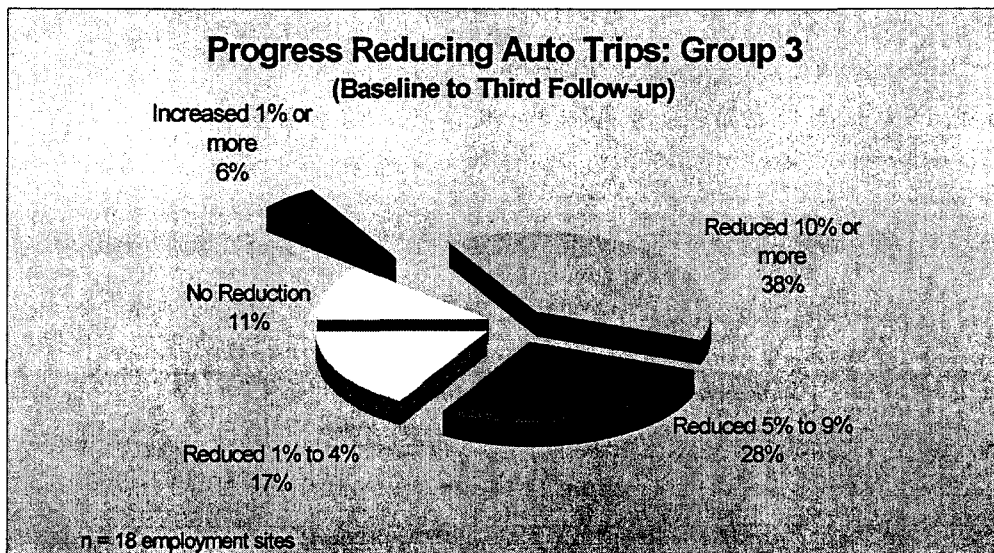


Data source: responses are representative of 49,543 employees

### Group 3

Eighty-three percent of the employment sites in Group 3 made at least some progress reducing auto trips from baseline to their third follow-up survey. Over one-third (38%) achieved a 10% or more reduction in auto trips. (Figure 6)

Figure 6

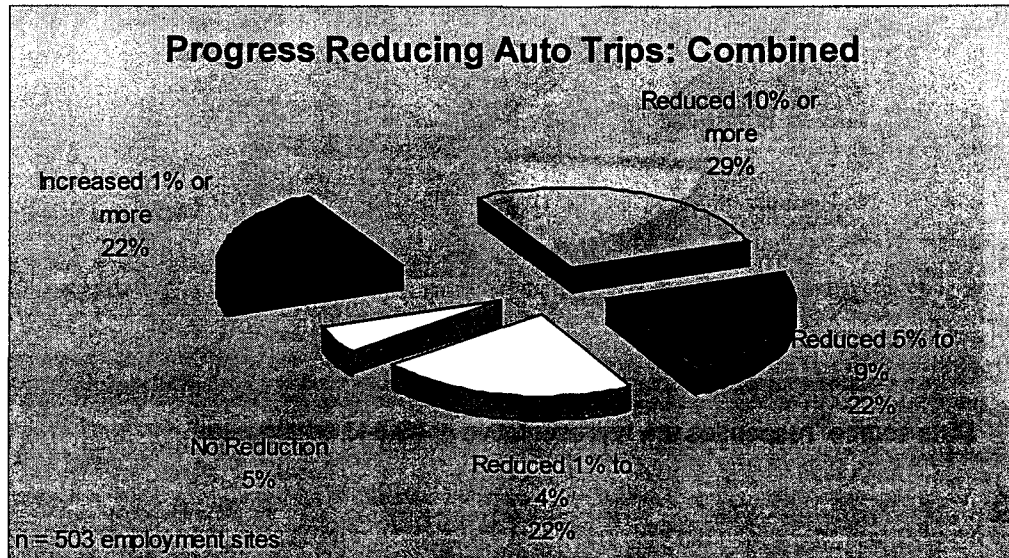


Data Source: responses are representative of 8,894 employees

### All Groups Combined

Seventy-three percent of the employment sites in all groups combined made at least some progress reducing auto trips from baseline to their third follow-up survey. Just over one-fourth (29%) achieved a 10% or more reduction in auto trips. (Figure 7)

**Figure 7**



Data Source: responses are representative of 127,147 employees

**Section II**  
**Geographic Analysis -**  
**Transportation Management Association (TMA) Areas**  
**and Marquam Hill**

## **MODE SPLIT FINDINGS: TMA Areas and Marquam Hill**

Regional funds are granted to TMAs on the condition that the goals and objectives of the organization will work to reduce single occupant vehicle trips and vehicle miles traveled. The 1999 Regional Transportation Plan identified eleven existing and potential TMA areas for regional funding. This report includes analysis for TMA areas where sufficient data exists.

Additionally, Marquam Hill employers have actively pursued TDM programs for the past five years, although have not applied for regional TMA funding. Tri-Met has tracked TDM progress of this area through a Partnership Plan since 1995 and this data is also included in this section.

The region is currently providing TMA start-up funds to:

- Tualatin TMA
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- Swan Island TMA
- Columbia Corridor Transit Management Alliance

These areas currently receive TMA Exploratory funds:

- Downtown Portland (Association for Portland Progress)
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- Clackamas Regional Center (Clackamas County)

The following areas are scheduled to receive TMA Exploratory funds:

- Troutdale
- Lake Oswego Kruse Way
- Columbia Corridor Rivergate

TMA areas with sufficient data for analysis presented in this report include:

- Tualatin TMA
- WTA
- Lloyd District TMA
- Columbia Corridor TMA
- Downtown Portland
- Marquam Hill

### **Highlights**

- All TMA areas and Marquam Hill experienced a reduction in drive-alone trips.
- Auto trips that were reduced went to a variety of different modes depending on the services available in each area. For example, the predominate non-SOV mode in the WTA area is carpooling which continues to grow (although not as rapidly as

transit use). In Lloyd District however, carpooling use (once equivalent to transit use) is experiencing a decline while transit use substantially increases.

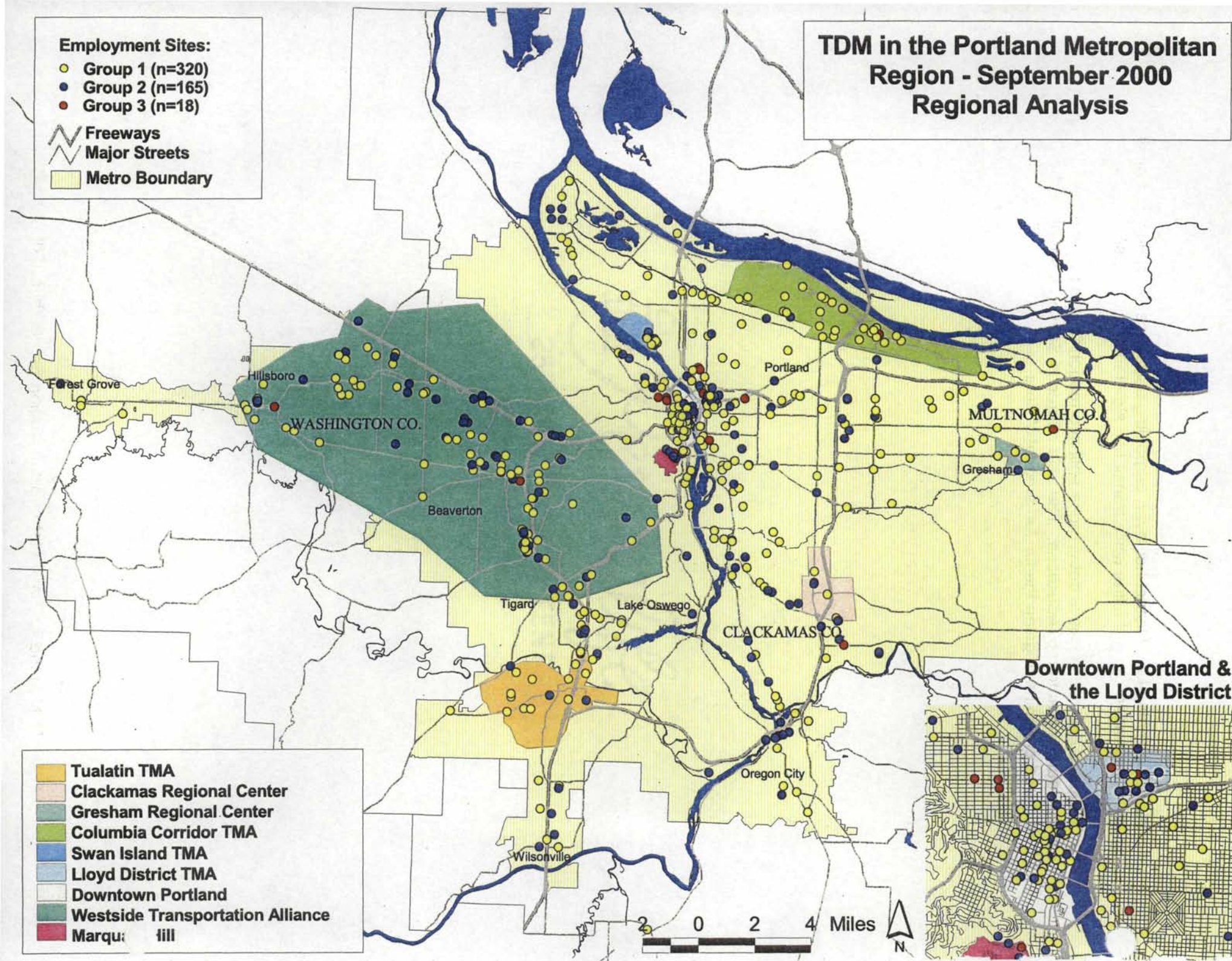
Included in this analysis is detail mode split information for the target areas actively pursuing auto trip reductions. The data offered in Section II should be considered preliminary, given the *limited amount* of data.

# Employment Sites:

- Group 1 (n=320)
- Group 2 (n=165)
- Group 3 (n=18)

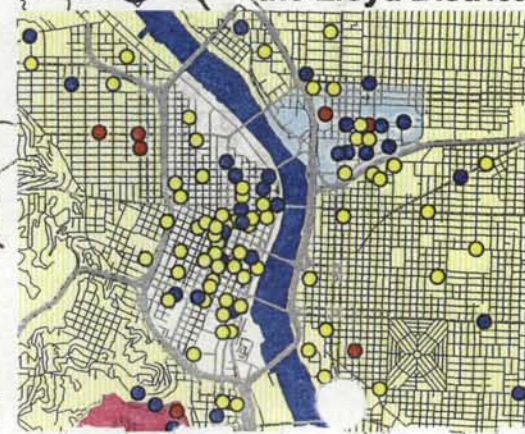
- Freeways
- Major Streets
- Metro Boundary

## TDM in the Portland Metropolitan Region - September 2000 Regional Analysis



- Tualatin TMA
- Clackamas Regional Center
- Gresham Regional Center
- Columbia Corridor TMA
- Swan Island TMA
- Lloyd District TMA
- Downtown Portland
- Westside Transportation Alliance
- Marqu: fill

### Downtown Portland & the Lloyd District



## Changes in Mode Split: Columbia Corridor TMA Area

Employment sites in the Columbia Corridor reduced five percent of the trips made to the worksite by *drive alone* commuters. The redistribution of trips has resulted in increased *bus/MAX* (+51%) and *carpool/vanpool* (+22%) usage. Aside from a slight decrease in *compressed workweek* usage, use of other modes remains relatively low and unchanged. (Table 5)

While *carpooling/vanpooling* is the predominant alternative mode of commuting in the Columbia Corridor, the largest absolute increase in trips for Group 1 moved to *bus/MAX* (87).

**Table 5**  
**Columbia Corridor TMA Area: Group 1**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=30 Employment Sites)<sup>1</sup>**

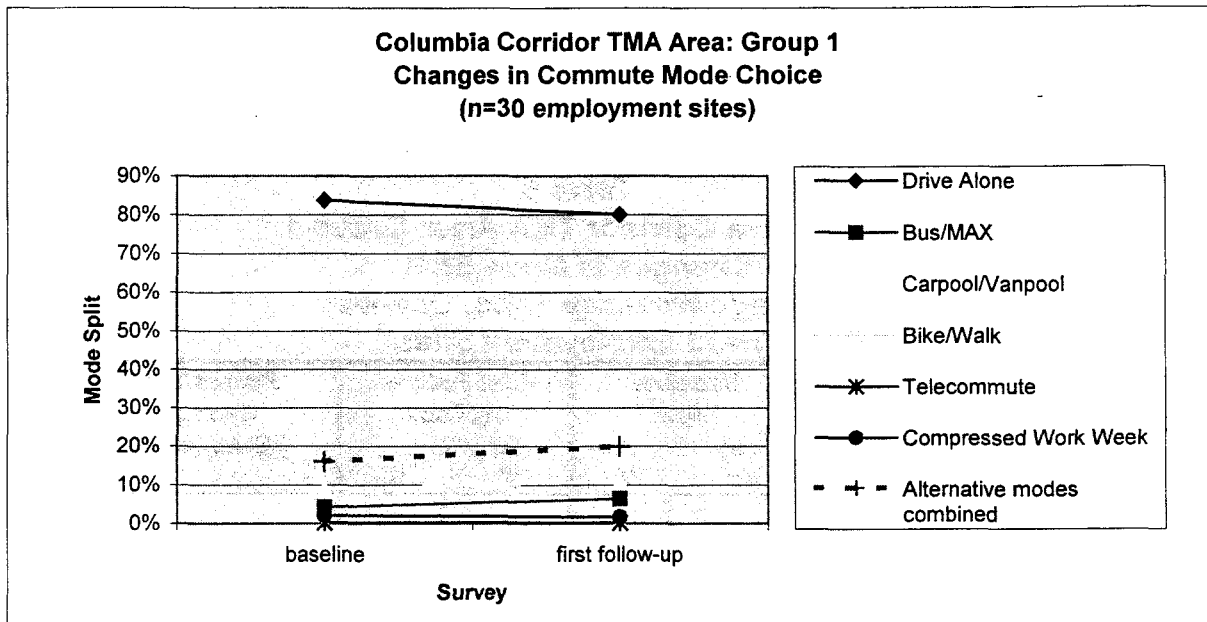
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips |     | Percentage Change<br>[(B-A)/A]*100 |
|----------------------|-----------------------------|-----|-----------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#              | %   |                                    |
| Drive alone          | 3,478                       | 84% | 3,321                 | 80% | -5%                                |
| Carpool/Vanpool      | 370                         | 9%  | 452                   | 11% | +22%                               |
| Bus/MAX              | 177                         | 4%  | 266                   | 6%  | +51%                               |
| Bicycle/Walk         | 32                          | 1%  | 34                    | 1%  | +5%                                |
| Telecommute          | 7                           | 0%  | 6                     | 0%  | -11%                               |
| Compressed work week | 87                          | 2%  | 73                    | 2%  | -16%                               |
| <b>TOTAL</b>         | <b>4,152</b>                |     | <b>4,152</b>          |     |                                    |

<sup>1</sup>Represents estimates for 4,957 employees

<sup>2</sup>Baseline trips are calibrated to follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Aside from the reduction in *drive alone* trips, increases in *carpool/vanpool* and *bus/MAX* are evident in the graphic to follow. Changes in other modes are difficult to detect given their relatively low usage. When considering all *alternative modes combined* however, increases in such trips nearly mirror the reductions in *drive alone* trips. (Figure 8)

Figure 8



Data Source: responses are representative of 4,957 employees

## Changes in Mode Split: Downtown Portland

Changes in mode split for Downtown (Group 1) employment sites were quite noticeable between baseline and first follow-up survey. While *drive alone* trips dropped by 17%, *bus/MAX* usage rose by 24%. When expressed as a "percentage", other alternative modes however displayed decreased usage, in particular *compressed workweek* (-24%) and *telecommuting* (-21%). (Table 6)

**Table 6**  
**Downtown Portland: Group 1**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=40 Employment Sites)<sup>1</sup>**

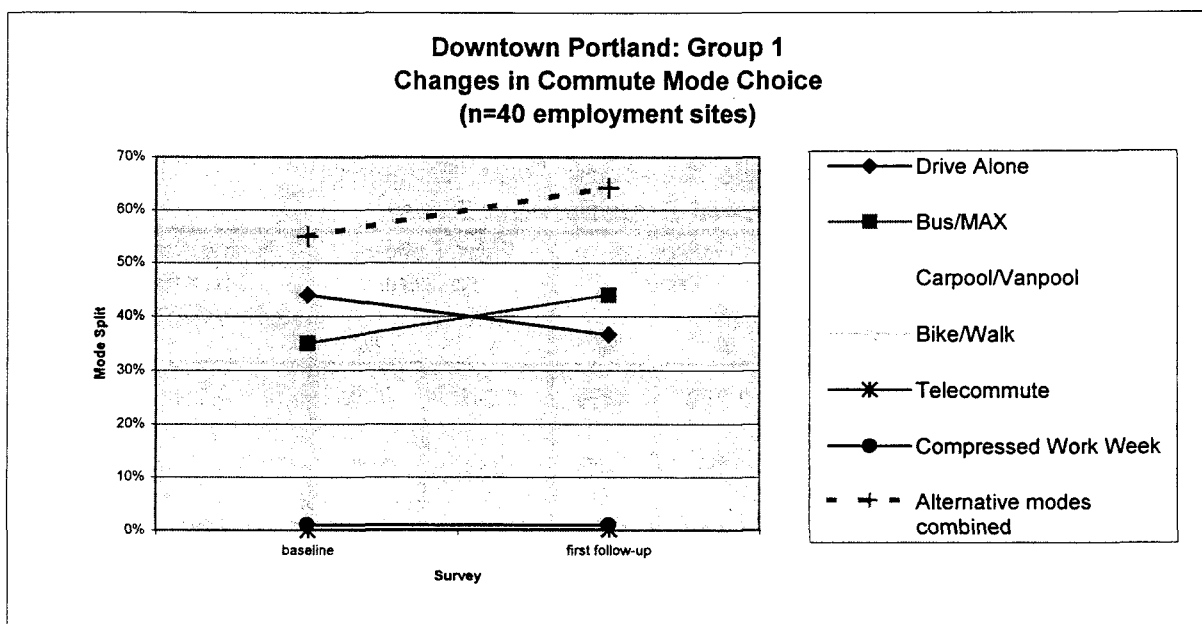
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips |     | Percentage Change<br>[(B-A)/A]*100 |
|----------------------|-----------------------------|-----|-----------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#              | %   |                                    |
| Drive alone          | 2,259                       | 44% | 1,877                 | 37% | -17%                               |
| Carpool/Vanpool      | 719                         | 14% | 668                   | 13% | -7%                                |
| Bus/MAX              | 1,801                       | 35% | 2,232                 | 44% | +24%                               |
| Bicycle/Walk         | 273                         | 5%  | 290                   | 6%  | +6%                                |
| Telecommute          | 22                          | 0%  | 17                    | 0%  | -21%                               |
| Compressed work week | 46                          | 1%  | 35                    | 1%  | -24%                               |
| <b>TOTAL</b>         | <b>5,119</b>                |     | <b>5,119</b>          |     |                                    |

<sup>1</sup>Represents estimates for 5,597 employees

<sup>2</sup>Baseline trips are calibrated to follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Most apparent in Figure 8 are changes in *drive alone* and *bus/MAX* mode usage. As indicated above, decreases were experienced in *carpool/vanpool*, *telecommute* and *compressed workweek* usage. When considering all *alternative modes combined*, a greater percentage of trips are made via alternative modes than *drive alone* trips. (Figure 9)

**Figure 9**



Data Source: responses are representative of 5,597 employees

## Changes in Mode Split: Downtown Portland (Group 2)

Employment sites having completed a baseline and a second follow-up survey (Group 2) in Downtown Portland reduced *drive alone* trips by 23%. All other modes experienced increases in usage. When expressed as a "percentage", *compressed workweek* (+170%) and *bus/MAX* (+55%) both experienced increases, with *bus/MAX* experiencing the greatest absolute increase in trips (366). (Table 7)

**Table 7**  
**Downtown Portland: Group 2**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=18 Employment Sites)<sup>1</sup>**

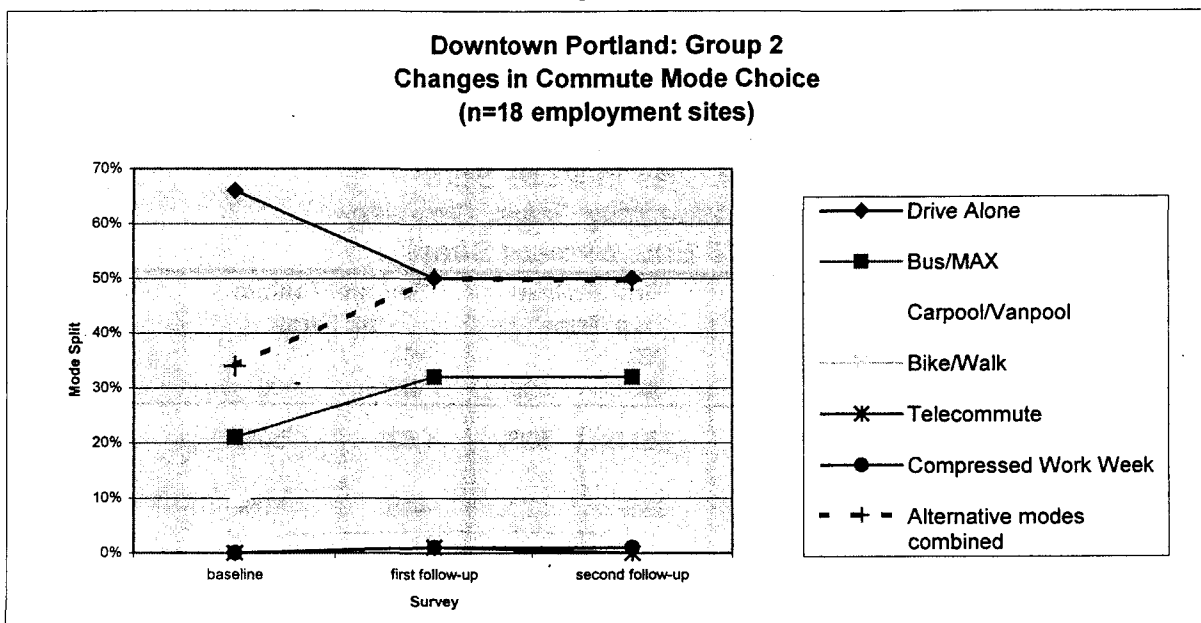
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips <sup>2</sup> |     | Second Follow-up Trips |     | Percentage Change<br>[(C-A)/A]*100 |
|----------------------|-----------------------------|-----|------------------------------------|-----|------------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#                           | %   | (C)<br>#               | %   |                                    |
| Drive alone          | 2,106                       | 66% | 1,610                              | 50% | 1,621                  | 50% | -23%                               |
| Carpool/Vanpool      | 336                         | 10% | 396                                | 12% | 418                    | 13% | +24%                               |
| Bus/MAX              | 665                         | 21% | 1,043                              | 32% | 1,031                  | 32% | +55%                               |
| Bicycle/Walk         | 92                          | 3%  | 132                                | 4%  | 115                    | 4%  | +25%                               |
| Telecommute          | 9                           | 0%  | 17                                 | 1%  | 13                     | 0%  | +39%                               |
| Compressed work week | 7                           | 0%  | 17                                 | 1%  | 19                     | 1%  | +170%                              |
| <b>TOTAL</b>         | <b>3,215</b>                |     | <b>3,215</b>                       |     | <b>3,215</b>           |     |                                    |

<sup>1</sup>Represents estimates for 3,456 employees

<sup>2</sup>Baseline and first follow-up trips are calibrated to second follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Shifts in *drive alone* and *bus/transit* usage are clearly realized when visually presented in Figure 9. All other modes, some more apparent than others, increased in usage. When considering all *alternative modes combined*, such trips share exactly 50% of the trips with *drive alone* trips. (Figure 10)

**Figure 10**



Data Source: responses are representative of 3,456 employees

### Changes in Mode Split: Downtown Portland (Groups 1 and 2 combined)

**Table 8**

| RESULTS COMBINED                         |                     |                                                       |                                                   |
|------------------------------------------|---------------------|-------------------------------------------------------|---------------------------------------------------|
| GROUPS 1 & 2<br>(combined <sup>1</sup> ) | Baseline Trips<br>A | Follow-up<br>Trips from most<br>Recent follow-up<br>B | Percentage<br>Change<br>In Trips<br>[(B-A)/A]*100 |
| Drive Alone                              | 4,365               | 3,498                                                 | -20%                                              |
| Carpool/Vanpool                          | 1,055               | 1,086                                                 | +3%                                               |
| Bus/MAX                                  | 2,466               | 3,263                                                 | +32%                                              |
| Bicycle/Walk                             | 365                 | 405                                                   | +11%                                              |
| Telecommute                              | 31                  | 30                                                    | -3%                                               |
| Compressed work week                     | 53                  | 54                                                    | +2%                                               |
| <b>Auto Trips</b>                        | <b>4,860</b>        | <b>4,008</b>                                          | <b>-18%</b>                                       |

58 employment sites, with 9,053 employees

## Changes in Mode Split: Lloyd District TMA Area

Employment sites in the Lloyd District completing a baseline and first follow-up survey, when combined, reduced *drive alone* trips by 5%. The greatest gain in absolute trips was experienced by *bicycle/walk* trips (10). (Table 9)

**Table 9**  
**Lloyd District TMA Area: Group 1**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=7 Employment Sites)<sup>1</sup>**

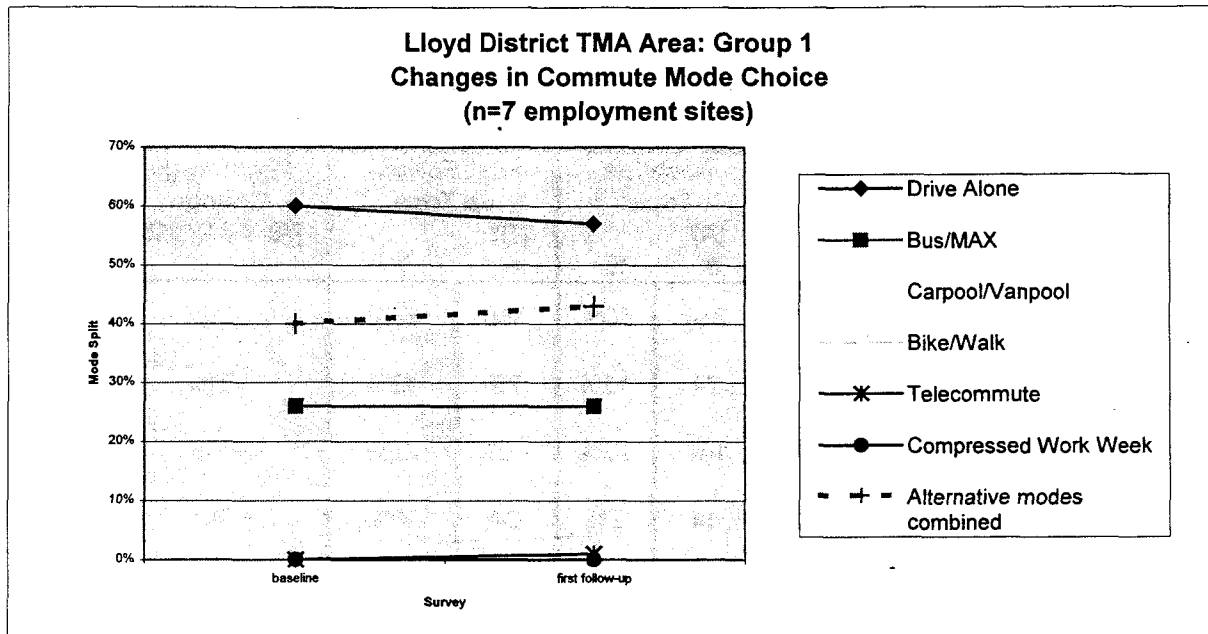
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips |     | Percentage Change<br>[(B-A)/A]*100 |
|----------------------|-----------------------------|-----|-----------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#              | %   |                                    |
| Drive alone          | 384                         | 60% | 366                   | 57% | -5%                                |
| Carpool/Vanpool      | 74                          | 12% | 76                    | 12% | +3%                                |
| Bus/MAX              | 167                         | 26% | 169                   | 26% | +1%                                |
| Bicycle/Walk         | 14                          | 2%  | 24                    | 4%  | +74%                               |
| Telecommute          | 0                           | 0%  | 4                     | 1%  | +                                  |
| Compressed work week | 1                           | 0%  | 2                     | 0%  | +52%                               |
| <b>TOTAL</b>         | <b>640</b>                  |     | <b>640</b>            |     |                                    |

<sup>1</sup>Represents estimates for 693 employees

<sup>2</sup>Baseline trips are calibrated to follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Given the limited amount of data available for Group 1 in the Lloyd-District, Figure 10 reveals only mild changes in mode choice. Most apparent is the decline in *drive alone* and increase in *bike/walk* usage. When considering all *alternative modes combined*, increases are approaching similar levels experienced by *drive alone* trips. (Figure 11)

**Figure 11**



Data Source: responses are representative of 693 employees

## Changes in Mode Split: Lloyd District TMA Area (Group 2)

Employment sites having completed a baseline and a second follow-up survey (Group 2) in the Lloyd District reduced *drive alone* trips by 10%. Changes in other modes were mixed. When expressed as a "percentage", *telecommuting* experienced the largest increase in use (+566%), followed by *compressed workweek* (+76%) and *bus/MAX* (+43%). Both *carpool/vanpool* (-27%) and *bike/walk* (-2%) experienced losses in use. In terms of absolute trips, *bus/MAX* showed the greatest increase in usage (223). (Table 10)

**Table 10**  
**Lloyd District TMA Area: Group 2**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=17 Employment Sites)<sup>1</sup>**

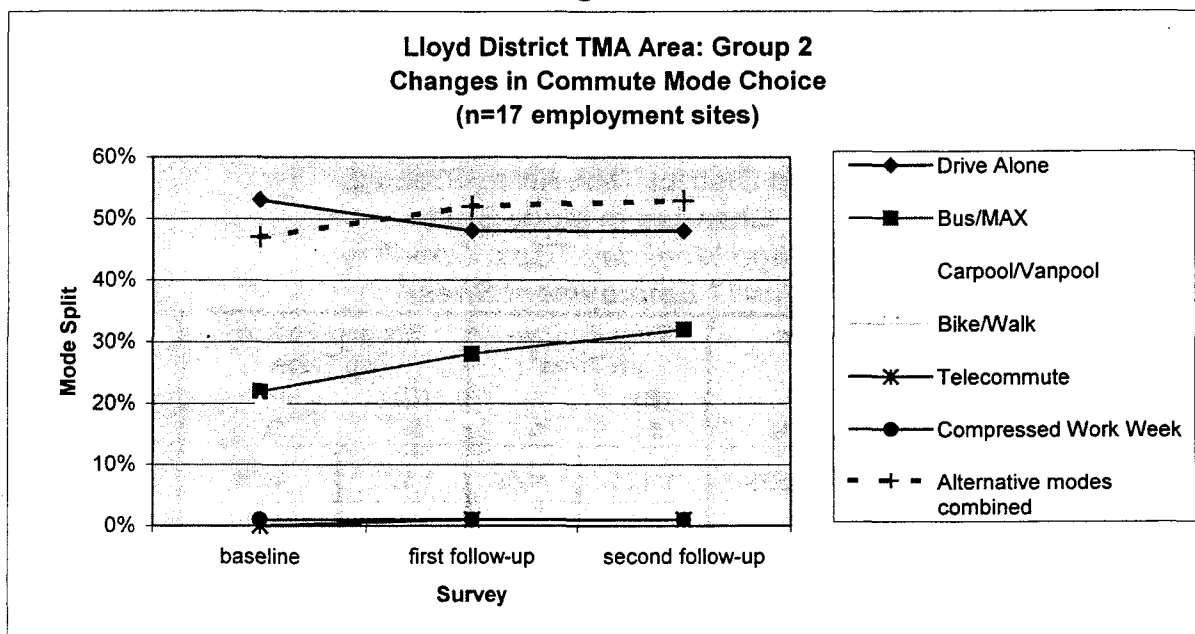
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips <sup>2</sup> |     | Second Follow-up Trips |     | Percentage Change<br>[(C-A)/A]*100 |
|----------------------|-----------------------------|-----|------------------------------------|-----|------------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#                           | %   | (C)<br>#               | %   |                                    |
| Drive alone          | 1,247                       | 53% | 1,121                              | 48% | 1,123                  | 48% | -10%                               |
| Carpool/Vanpool      | 471                         | 20% | 429                                | 18% | 344                    | 15% | -27%                               |
| Bus/MAX              | 520                         | 22% | 656                                | 28% | 743                    | 32% | +43%                               |
| Bicycle/Walk         | 93                          | 4%  | 91                                 | 4%  | 91                     | 4%  | -2%                                |
| Telecommute          | 4                           | 0%  | 24                                 | 1%  | 24                     | 1%  | +566%                              |
| Compressed work week | 13                          | 1%  | 28                                 | 1%  | 24                     | 1%  | +76%                               |
| <b>TOTAL</b>         | <b>2,348</b>                |     | <b>2,348</b>                       |     | <b>2,348</b>           |     | n/a                                |

<sup>1</sup>Represents estimates for 2,464 employees

<sup>2</sup>Baseline and first follow-up trips are calibrated to second follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Equally apparent was the increase in transit (*bus/MAX*) in Figure 11 and the decrease in commuters traveling via *carpool/vanpool*. The majority of reductions in *drive alone* trips occurred between the baseline and first follow-up survey. When considering all *alternative modes combined*, levels of usage have remained above that of *drive alone* trips. (Figure 12)

**Figure 12**



Data Source: responses are representative of 2,464 employees

### Changes in Mode Split: Lloyd District TMA Area (Groups 1 and 2 combined)

**Table 11**

| RESULTS COMBINED                         |                     |                                                       |                                                   |
|------------------------------------------|---------------------|-------------------------------------------------------|---------------------------------------------------|
| GROUPS 1 & 2<br>(combined <sup>1</sup> ) | Baseline Trips<br>A | Follow-up<br>Trips from most<br>Recent follow-up<br>B | Percentage<br>Change<br>In Trips<br>[(B-A)/A]*100 |
| Drive Alone                              | 1,631               | 1,489                                                 | -9%                                               |
| Carpool/Vanpool                          | 545                 | 420                                                   | -23%                                              |
| Bus/MAX                                  | 687                 | 912                                                   | +33%                                              |
| Bicycle/Walk                             | 107                 | 115                                                   | +7%                                               |
| Telecommute                              | 4                   | 28                                                    | +600%                                             |
| Compressed work week                     | 14                  | 26                                                    | +9%                                               |
| <b>Auto Trips</b>                        | <b>1,887</b>        | <b>1,686</b>                                          | <b>-11%</b>                                       |

<sup>1</sup> 24 employment sites, with 3,157 employees

## Changes in Mode Split: WTA Area

Increases in *telecommute* (+225%) and *bus/MAX* (+195%) experienced the greatest "percentage" changes in mode usage for Group 1 on the Westside. *Drive alone* trips decreased by four percent while *carpool/vanpool* and *bicycle/walk* trips also experienced decreases (-9% and -33% respectively). (Table 12)

**Table 12**  
**WTA Area: Group 1**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=76 Employment Sites)<sup>1</sup>**

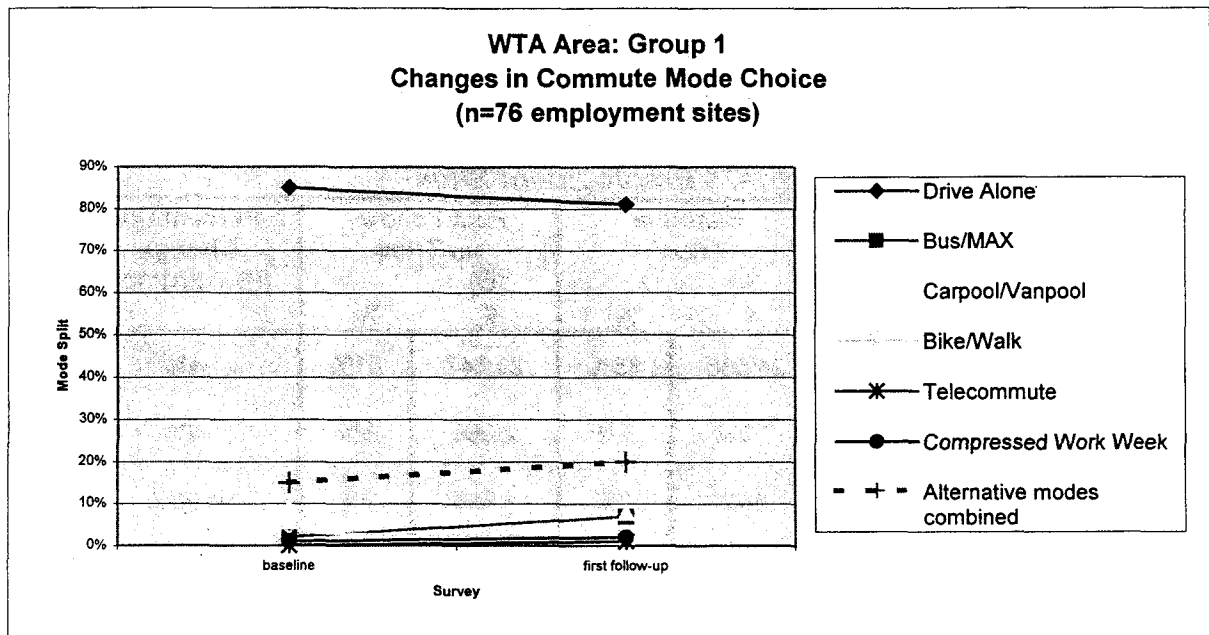
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips |     | Percentage Change<br>[(B-A)/A]*100 |
|----------------------|-----------------------------|-----|-----------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#              | %   |                                    |
| Drive alone          | 24,586                      | 85% | 23,647                | 81% | -4%                                |
| Carpool/Vanpool      | 2,587                       | 9%  | 2,366                 | 8%  | -9%                                |
| Bus/MAX              | 643                         | 2%  | 1,895                 | 7%  | +195%                              |
| Bicycle/Walk         | 802                         | 3%  | 535                   | 2%  | -33%                               |
| Telecommute          | 51                          | 0%  | 167                   | 1%  | +225%                              |
| Compressed work week | 406                         | 1%  | 465                   | 2%  | +15%                               |
| <b>TOTAL</b>         | <b>29,075</b>               |     | <b>29,075</b>         |     | n/a                                |

<sup>1</sup>Represents estimates for 30,984 employees

<sup>2</sup>Baseline trips are calibrated to follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Increases in transit (*bus/MAX*) use exceeded other alternative modes when considering its share of overall trips. This mode accounts for 7% of trips to the worksite on the Westside, while *carpool/vanpool* accounted for 8%. When considering all *alternative modes combined*, increases in such trips nearly mirror the reductions in *drive alone* trips. (Figure 13)

**Figure 13**



Data Source: responses are representative of 30,984 employees

## Changes in Mode Split: WTA Area (Group 2)

Changes in the mode split for Group 2 indicates a strong shift to *bus/MAX*, accounting for a 206% increase in trips via transit. All alternative modes reported experienced increases in usage, while drive alone trips dropped (-12%) from baseline to second follow-up survey. (Table 13)

**Table 13**  
**WTA Area: Group 2**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=40 Employment Sites)<sup>1</sup>**

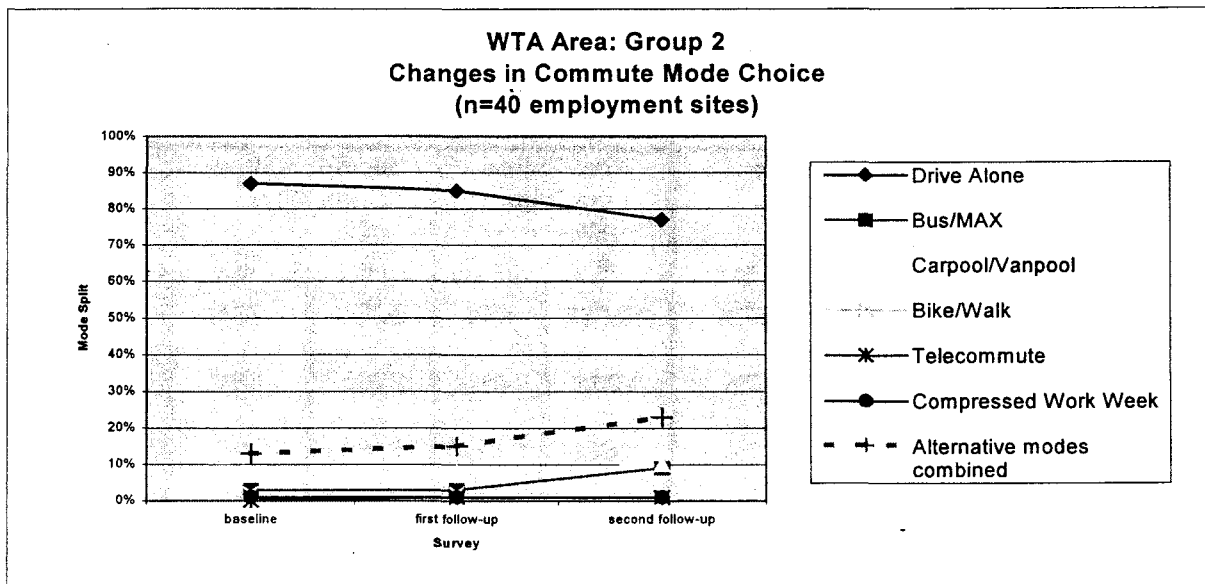
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips <sup>2</sup> |     | Second Follow-up Trips |     | Percentage Change<br>[(C-A)/A]*100 |
|----------------------|-----------------------------|-----|------------------------------------|-----|------------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#                           | %   | (C)<br>#               | %   |                                    |
| Drive alone          | 11,031                      | 87% | 10,763                             | 85% | 9,703                  | 77% | -12%                               |
| Carpool/Vanpool      | 878                         | 7%  | 1,033                              | 8%  | 1,305                  | 10% | +49%                               |
| Bus/MAX              | 360                         | 3%  | 366                                | 3%  | 1,102                  | 9%  | +206%                              |
| Bicycle/Walk         | 216                         | 2%  | 285                                | 2%  | 309                    | 2%  | +43%                               |
| Telecommute          | 52                          | 0%  | 65                                 | 1%  | 63                     | 0%  | +21%                               |
| Compressed work week | 89                          | 1%  | 115                                | 1%  | 143                    | 1%  | +60%                               |
| <b>TOTAL</b>         | <b>12,626</b>               |     | <b>12,626</b>                      |     | <b>12,626</b>          |     |                                    |

<sup>1</sup>Represents estimates for 13,635 employees

<sup>2</sup>Baseline and first follow-up trips are calibrated to second follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Increases in transit (*bus/MAX*) and *carpool/vanpool* trips appear to be replacing trips once made by *drive alone* commuters. Less apparent in Figure 13 is that trips via all other alternative modes listed are increasing. When considering all *alternative modes combined*, a sharp increase in levels of usage has been met equally by strong reductions in *drive alone* trips. Like Group 1, *carpool/vanpool* is the predominant alternative commute mode. (Figure 14)

**Figure 14**



Data Source: responses are representative of 13,635 employees

### Changes in Mode Split: WTA Area (Groups 1 and 2 combined)

**Table 14**

| RESULTS COMBINED                         |                     |                                                       |                                                   |
|------------------------------------------|---------------------|-------------------------------------------------------|---------------------------------------------------|
| GROUPS 1 & 2<br>(combined <sup>1</sup> ) | Baseline Trips<br>A | Follow-up<br>Trips from most<br>Recent follow-up<br>B | Percentage<br>Change<br>In Trips<br>[(B-A)/A]*100 |
| Drive Alone                              | 35,617              | 33,350                                                | -6%                                               |
| Carpool/Vanpool                          | 3,465               | 3,671                                                 | +6%                                               |
| Bus/MAX                                  | 1,003               | 2,997                                                 | +199%                                             |
| Bicycle/Walk                             | 1,018               | 844                                                   | -17%                                              |
| Telecommute                              | 103                 | 230                                                   | +123%                                             |
| Compressed work week                     | 495                 | 608                                                   | +23%                                              |
| <b>Auto Trips</b>                        | <b>37,244</b>       | <b>35,073</b>                                         | <b>-6%</b>                                        |

<sup>1</sup> 116 employment sites, with 44,619 employees

## Changes in Mode Split: Tualatin TMA Area

Employment sites in the Tualatin area have reduced three percent of the *drive alone* trips made to the work site. When expressed as a "percentage", increases in *telecommuting* and *compressed workweeks* (+151%) exceeded increases in any other mode, closely followed by *bicycle/walk* (+150%). In absolute terms most trips have been moved to *compressed workweek* (13) and *bicycle/walk* (12). (Table 15)

**Table 15**  
**Tualatin TMA Area: Group 1**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=10 Employment Sites)<sup>1</sup>**

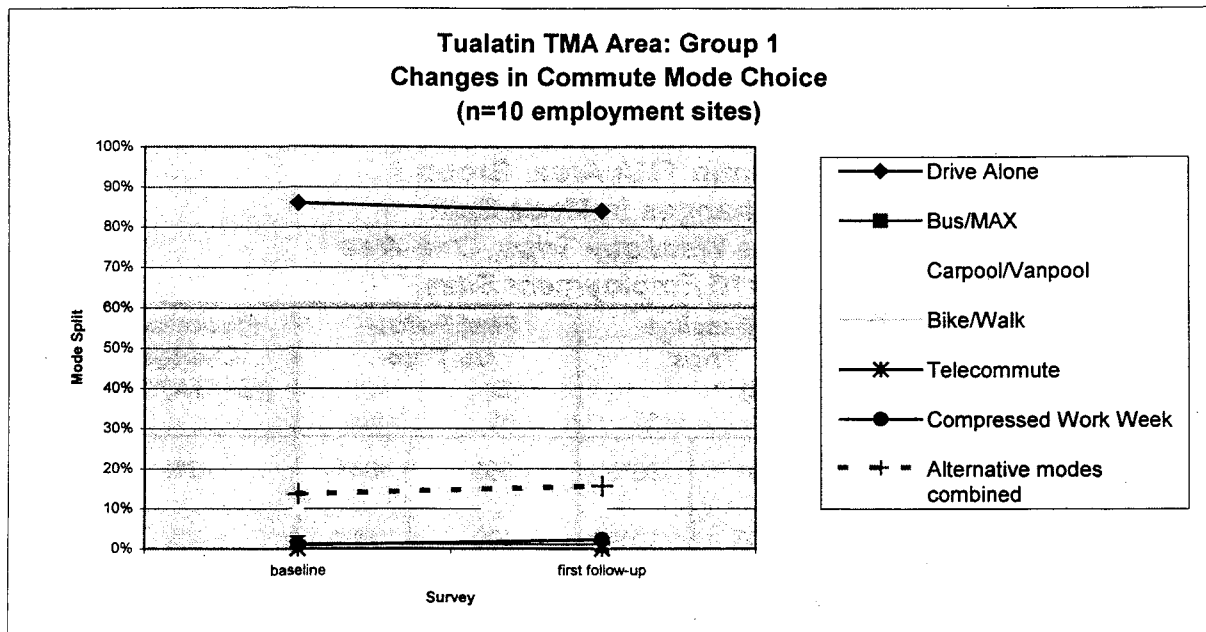
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-Up Trips |     | Percentage Change<br>[(B-A)/A]*100 |
|----------------------|-----------------------------|-----|-----------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>%              | %   |                                    |
| Drive alone          | 891                         | 86% | 866                   | 84% | -3%                                |
| Carpool/Vanpool      | 108                         | 10% | 105                   | 10% | -4%                                |
| Bus/MAX              | 14                          | 1%  | 11                    | 1%  | -19%                               |
| Bicycle/Walk         | 9                           | 1%  | 22                    | 2%  | +150%                              |
| Telecommute          | 0                           | 0%  | 4                     | 0%  | +                                  |
| Compressed work week | 9                           | 1%  | 23                    | 2%  | +151%                              |
| <b>TOTAL</b>         | <b>1,032</b>                |     | <b>1,032</b>          |     |                                    |

<sup>1</sup>Represents estimates for 1,137 employees

<sup>2</sup>Baseline trips are calibrated to follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Figure 14 exhibits very slight changes in alternative modes to *drive alone* when expressed as a “percentage”. When considering all *alternative modes combined*, increases in such trips nearly mirror the reductions in *drive alone* trips. (Figure 15)

**Figure 15**



Data Source: responses are representative of 1,137 employees

## Changes in Mode Split: Marquam Hill

Employment sites on Marquam Hill have reduced twelve percent of the drive alone trips made to the work site. When expressed as a "percentage", increases in *compressed workweek* and *telecommuting* (+916%) exceeded increases in any other mode, closely followed by *bus/MAX* (+79%) and *bicycle/walk* (+24%). In absolute terms most weekday trips have been moved to *bus/MAX* (4733). (Table 16)

**Table 16**  
**Marquam Hill**  
**Changes in Mode Split**  
**Average Weekday Trips, One-Way**  
**(n=3 Employment Sites)<sup>1</sup>**

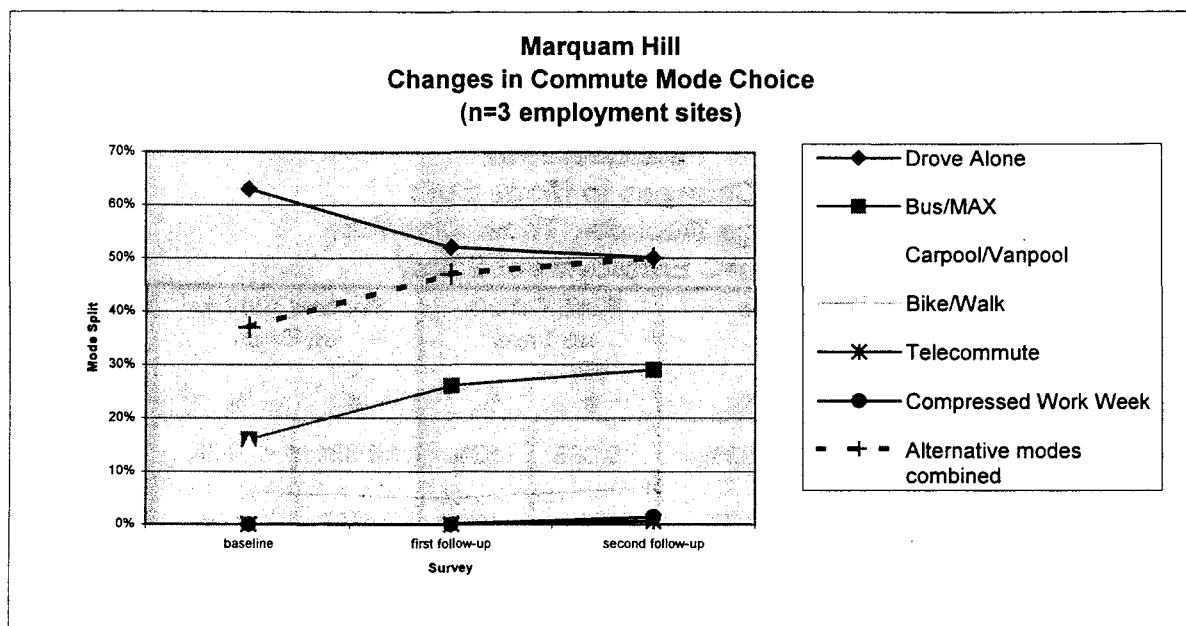
| Commute Mode         | Baseline Trips <sup>2</sup> |     | First Follow-up Trips <sup>2</sup> |     | Second Follow-up Trips |     | Percentage Change<br>[(C-A)/A]*100 |
|----------------------|-----------------------------|-----|------------------------------------|-----|------------------------|-----|------------------------------------|
|                      | (A)<br>#                    | %   | (B)<br>#                           | %   | (C)<br>#               | %   |                                    |
| Drive alone          | 23,226                      | 63% | 19,368                             | 52% | 18,631                 | 50% | -20%                               |
| Carpool/Vanpool      | 5,677                       | 15% | 6,048                              | 16% | 4,507                  | 12% | -21%                               |
| Bus/MAX              | 6,011                       | 16% | 9,610                              | 26% | 10,744                 | 29% | +79%                               |
| Bicycle/Walk         | 2,152                       | 6%  | 2,004                              | 5%  | 2,669                  | 7%  | +24%                               |
| Telecommute          | 37                          | 0%  | 74                                 | 0%  | 376                    | 1%  | +916%                              |
| Compressed work week | 0                           | 0%  | 0                                  | 0%  | 176                    | 1%  | +                                  |
| <b>TOTAL</b>         | <b>37,103</b>               |     | <b>37,103</b>                      |     | <b>37,103</b>          |     |                                    |

<sup>1</sup>Represents estimates for 8,406 employees

<sup>2</sup>Baseline and first follow-up trips are calibrated to second follow-up trips to provide a basis for comparison (see Appendix A for a detailed explanation).

Figure 16 exhibits changes in alternative modes to *drive alone* when expressed as a “percentage”. Increases in bus/MAX usage are clearly represented in the graphic below. (Figure 16)

**Figure 16**



Data Source: responses are representative of 8,406 employees

## CONCLUSIONS

Transportation Demand Management efforts continue to make a positive difference in the region, as evidenced by the fact that the majority of employment sites in both groups 1, 2 and 3 have made substantial reductions in the number of auto trips made to the worksite. Together, over five hundred employment sites have reduced 10,730 *weekday* auto trips to and from the worksite region-wide.

Metro projects that the current one-way auto trip commute length in the region is 7.4 miles. Based on this travel distance, approximately 79,402 daily vehicle miles traveled have been reduced. \*

Surveys from groups 2 and 3 provide the first look at commute mode changes from baseline through second and third follow-up surveys. The trends in such groups show some leveling-off of commuter trips, changing from driving alone to alternative modes.

This analysis marks the first attempt to focus on TMA areas. While commute data for these areas is limited, preliminary analysis of selected target areas included in this report reveals that progress is positive with regards to reducing drive alone commute trips.

\* Equilibrated 1994 Metro Model



## ***APPENDICES***

## APPENDIX A – Calculating Changes in Trip Levels for XYZ Company

### A) Baseline

Employees at XYZ Company made a total of 1000 commute trips as recorded in their baseline survey. The survey showed 70% of the employees drive alone to work, 20% carpool, and 10% take transit.

To determine baseline trips for each transportation mode, multiply the baseline percent of trips for each transportation mode by the total number of trips made, as shown in Table A-1. (A x B = C) or (70% x 1000 = 700)

**Table A-1  
XYZ Company  
Calculating Trip Levels**

| <b>Transportation Mode</b> | <b>Baseline Percent of Total Trips (A)</b> | <b>X</b> | <b>Total Trips made by Employees (B)</b> | <b>=</b> | <b>Baseline Total Trips (C)</b> |
|----------------------------|--------------------------------------------|----------|------------------------------------------|----------|---------------------------------|
| Drive Alone                | 70%                                        | X        | 1000                                     | =        | 700                             |
| Carpool                    | 20%                                        | X        | 1000                                     | =        | 200                             |
| Transit                    | 10%                                        | X        | 1000                                     | =        | 100                             |
| Total                      | 100%                                       |          |                                          | =        | 1000                            |

### B) Follow-up

As required, the company conducts a follow-up survey and finds that because employment has increased, the total number of employee trips has increased to 2000. The follow-up survey reveals that 60% of all trips are now taken driving alone, 25% by carpool and 15% on transit. The number of follow-up trips for each mode is calculated in the same manner as the baseline trips (A x B = C) or (60% x 2000 = 1200). These calculations are shown in Table A-2.

**Table A-2  
XYZ Company  
Follow-up Trip Levels**

| <b>Transportation Mode</b> | <b>Follow-up Percent Of Total Trips (A)</b> | <b>X</b> | <b>Total Trips made by Employees (B)</b> | <b>=</b> | <b>Follow-up Total Trips (C)</b> |
|----------------------------|---------------------------------------------|----------|------------------------------------------|----------|----------------------------------|
| Drive Alone                | 60%                                         | X        | 2000                                     | =        | 1200                             |
| Carpool                    | 25%                                         | X        | 2000                                     | =        | 500                              |
| Transit                    | 15%                                         | X        | 2000                                     | =        | 300                              |
| Total                      | 100%                                        |          |                                          |          | 2000                             |

### C) Converting Baseline Trips to Follow-up Trips

To accurately compare the change between baseline and follow-up trips, baseline trips for each mode must be converted to follow-up trips. To convert baseline trips to follow-up trips, as shown in Table A-3, multiply the baseline percent of total trips for each transportation mode by the total follow-up trips made by employees to obtain the adjusted baseline trips (C). ( $A \times B = C$ ) or ( $70\% \times 2000 = 1400$ )

### D) Comparing Baseline Trips to Follow-up Trips

To identify a decrease or increase in trips, regardless of a possible change in the total number of employees between baseline and follow-up surveys, calculate the difference in trips for each transportation mode ( $F - C = G$ ) or ( $1200 - 1400 = -200$ ). Changes between follow-up and baseline trips may also be expressed in percentages ( $G / C = H$ ) or ( $-200 / 1400 = -14\%$ ).

This process is displayed in Table A-3.

**Table A-3**  
**XYZ Company**  
**Calculating Trip Levels**

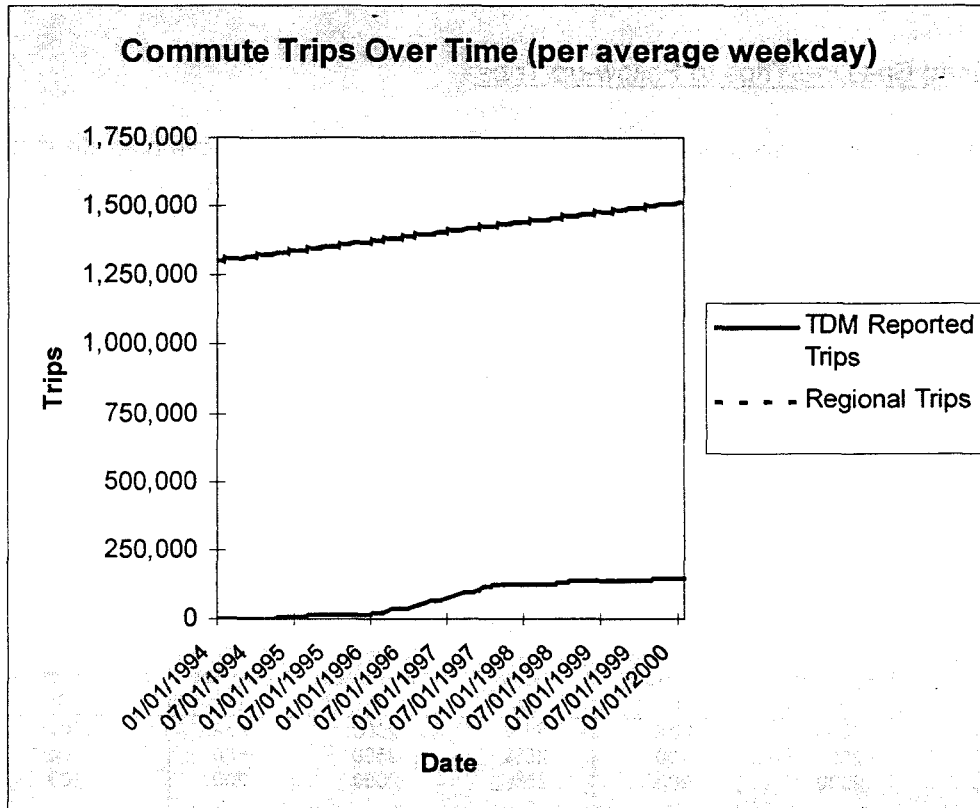
| <b>Conversion (Baseline to Follow-up Trips)</b> |                                            |                                                      |                                    | <b>Follow-up Trips</b>                      |                                                      |                            | <b>Comparison</b>                        |                                  |
|-------------------------------------------------|--------------------------------------------|------------------------------------------------------|------------------------------------|---------------------------------------------|------------------------------------------------------|----------------------------|------------------------------------------|----------------------------------|
| <b>Transportation Mode</b>                      | <b>Baseline Percent of Total Trips (A)</b> | <b>Total (follow-up) Trips made by Employees (B)</b> | <b>Adjusted Baseline Trips (C)</b> | <b>Follow-up Percent of Total Trips (D)</b> | <b>Total (follow-up) Trips made by Employees (E)</b> | <b>Follow-up Trips (F)</b> | <b>Difference in Number of Trips (G)</b> | <b>Percentage Difference (H)</b> |
| Drive Alone                                     | 70%                                        | 2000                                                 | 1400                               | 60%                                         | 2000                                                 | 1200                       | (200)                                    | (14%)                            |
| Carpool                                         | 20%                                        | 2000                                                 | 400                                | 25%                                         | 2000                                                 | 500                        | 100                                      | 25%                              |
| Transit                                         | 10%                                        | 2000                                                 | 200                                | 15%                                         | 2000                                                 | 300                        | 100                                      | 50%                              |
| Total                                           | 100%                                       |                                                      | 2000                               | 100%                                        |                                                      | 2000                       |                                          |                                  |

As shown in the last column in Table A-3, between baseline and follow-up surveys XYZ Company reduced drive alone trips by 14 percent while carpool and transit trips increased.

## APPENDIX B – Program Review

Figure A-1 below shows the growth in average weekday commute from January 1994 to January 2000. The dashed indicates the total regional trips and the solid line represents the proportion of those trips accounted for by the Transportation Demand Management Program.

**Figure A-1**  
**TDM Reported Share of Regional Trips<sup>1</sup>**



<sup>1</sup>Regional Growth of Commute Trips were published in the "Metro 2020 Strategic Network"

**Table A-4**  
**Number of Surveys Processed by Regional TDM Partners**  
**and the Number of Employees Represented**

| Year         | Quarter | TM  | Employees | DEQ | Employees | Other <sup>1</sup> | Employees | Total | Employees |
|--------------|---------|-----|-----------|-----|-----------|--------------------|-----------|-------|-----------|
| 1994         | 1       | 1   | 25        | -   | -         | -                  | -         | 1     | 25        |
|              | 2       | 1   | 10        | -   | -         | 1                  | 1,600     | 2     | 1,610     |
|              | 3       | 1   | 17        | -   | -         | -                  | -         | 1     | 17        |
|              | 4       | 2   | 17,500    | -   | -         | -                  | -         | 2     | 17,500    |
| 1995         | 1       | 7   | 221       | -   | -         | -                  | -         | 7     | 221       |
|              | 2       | 6   | 11,255    | -   | -         | -                  | -         | 6     | 11,255    |
|              | 3       | 2   | 760       | -   | -         | -                  | -         | 2     | 760       |
|              | 4       | 16  | 22,184    | -   | -         | -                  | -         | 16    | 22,184    |
| 1996         | 1       | 26  | 4,870     | 1   | 82        | 1                  | 1,246     | 28    | 6,198     |
|              | 2       | 36  | 32,234    | 1   | 166       | 1                  | 126       | 38    | 32,526    |
|              | 3       | 40  | 14,485    | 5   | 904       | -                  | -         | 45    | 15,369    |
|              | 4       | 43  | 28,678    | 40  | 7,135     | 24                 | 893       | 107   | 36,706    |
| 1997         | 1       | 83  | 9,189     | 55  | 10,189    | 20                 | 2,901     | 158   | 22,279    |
|              | 2       | 31  | 6,168     | 52  | 8,929     | 21                 | 3,461     | 104   | 18,558    |
|              | 3       | 36  | 9,704     | 32  | 5,424     | 24                 | 14,362    | 92    | 29,490    |
|              | 4       | 15  | 2,500     | 12  | 2,723     | 18                 | 2,009     | 45    | 7,232     |
| 1998         | 1       | 23  | 4,263     | 29  | 5,353     | 12                 | 1,641     | 64    | 11,257    |
|              | 2       | 79  | 23,376    | 43  | 7,371     | 23                 | 2,565     | 145   | 33,312    |
|              | 3       | 68  | 23,081    | 53  | 4,182     | 20                 | 4,368     | 141   | 31,631    |
|              | 4       | 31  | 5,424     | 33  | 5,469     | 5                  | 368       | 69    | 11,261    |
| 1999         | 1       | 26  | 10,132    | 24  | 3,884     | 3                  | 364       | 53    | 14,380    |
|              | 2       | 89  | 67,122    | 21  | 5,371     | 16                 | 3,052     | 126   | 75,545    |
|              | 3       | 58  | 14,917    | 21  | 2,819     | 13                 | 1,848     | 92    | 19,584    |
|              | 4       | 29  | 5,146     | 67  | 10,746    | 2                  | 109       | 98    | 16,001    |
| 2000         | 1       | 3   | 348       | 45  | 5,722     | 0                  | -         | 45    | 6,070     |
| <b>Total</b> |         | 752 | 313,609   | 526 | 86,469    | 204                | 40,913    | 1487  | 440,991   |

<sup>1</sup>Other includes Lloyd District Transportation Management Association, Westside Transportation Alliance, and employers working with consultants.

**Table A-5**  
**Oregon Office of Energy**  
**Business Energy Tax Credits for Transportation Projects<sup>1</sup>**

|             | Quarter | Telework<br>Approved<br>(Applied) | Transit<br>Approved<br>(Applied) | Commuter<br>Pool Veh.<br>Approved<br>(Applied) | Financial<br>Incentives<br>Approved<br>(Applied) | Bicycle<br>Approved<br>(Applied) | TMA<br>Dues<br>Approved<br>(Applied) |
|-------------|---------|-----------------------------------|----------------------------------|------------------------------------------------|--------------------------------------------------|----------------------------------|--------------------------------------|
| <b>1992</b> | 1       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 2       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 3       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 4       | 1<br>(1)                          |                                  | 1<br>(1)                                       |                                                  |                                  |                                      |
| <b>1993</b> | 1       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 2       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 3       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 4       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
| <b>1994</b> | 1       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 2       | 0<br>(0)                          |                                  | 1<br>(1)                                       |                                                  |                                  |                                      |
|             | 3       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 4       | 2<br>(2)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
| <b>1995</b> | 1       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 2       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 3       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 4       | 2<br>(2)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
| <b>1996</b> | 1       | 8<br>(8)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 2       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 3       | 1<br>(1)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 4       | 0<br>(0)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
| <b>1997</b> | 1       | 1<br>(1)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 2       | 1<br>(1)                          |                                  | 0<br>(0)                                       |                                                  |                                  |                                      |
|             | 3       | 0                                 |                                  | 0                                              |                                                  |                                  |                                      |

|              |   |      |      |     |     |     |     |
|--------------|---|------|------|-----|-----|-----|-----|
|              |   | (0)  |      | (0) |     |     |     |
|              | 4 | 2    |      | 0   |     |     |     |
|              |   | (2)  |      | (0) |     |     |     |
| <b>1998</b>  | 1 | 1    | 2    | 0   |     |     |     |
|              |   | (1)  | (2)  | (0) |     |     |     |
|              | 2 | 2    | 11   | 0   |     |     |     |
|              |   | (2)  | (11) | (0) |     |     |     |
|              | 3 | 0    | 7    | 0   |     |     |     |
|              |   | (0)  | (8)  | (0) |     |     |     |
|              | 4 | 1    | 5    | 0   |     |     |     |
|              |   | (1)  | (5)  | (0) |     |     |     |
| <b>1999</b>  | 1 | 1    | 12   | 0   |     |     |     |
|              |   | (1)  | (13) | (0) |     |     |     |
|              | 2 | 1    | 1    | 0   |     |     |     |
|              |   | (2)  | (2)  | (0) |     |     |     |
|              | 3 | 1    | 2    | 0   |     |     |     |
|              |   | (1)  | (2)  | (0) |     |     |     |
|              | 4 | 0    | 1    | 0   |     |     |     |
|              |   | (0)  | (1)  | (0) |     |     |     |
| <b>2000</b>  | 1 | 1    | 12   | 0   | 1   | 0   | 1   |
|              |   | (1)  | (12) | (0) | (1) | (0) | (1) |
| <b>Total</b> |   | 26   | 53   | 2   | 1   | 0   | 1   |
|              |   | (27) | (56) | (2) | (1) | (0) | (1) |

<sup>1</sup>BETC's for Washington, Clackamas, and Multnomah counties compiled by OOE on June 8, 2000.

**PLEASE USE NO. 2 PENCIL**

| <b>RIGHT</b>                                                                        | <b>WRONG</b>                                                                        |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |

1. How did you travel to work during the last week you worked? If you used more than one method, mark the one in which you traveled the FARTHEST. All days should have only ONE answer marked.

|                              | S | M | T | W | TH | F | S |
|------------------------------|---|---|---|---|----|---|---|
| Drove alone (or motorcycled) |   |   |   |   |    |   |   |
| Rode the Bus or Max          |   |   |   |   |    |   |   |
| Carpooled or Vanpooled       |   |   |   |   |    |   |   |
| Bicycled                     |   |   |   |   |    |   |   |
| Walked                       |   |   |   |   |    |   |   |
| Telecommuted                 |   |   |   |   |    |   |   |

| TOOK DAY OFF FOR:                 | S | M | T | W | TH | F | S |
|-----------------------------------|---|---|---|---|----|---|---|
| Compressed Work Week              |   |   |   |   |    |   |   |
| Other reason (reg. day off, etc.) |   |   |   |   |    |   |   |

**Day Off for Compressed Work Week:** A day off work because you work a full-time schedule in less than five days per week, e.g., four 10-hour days

2. If you carpooled or vanpooled to work in your answer above, how many people were in the car or van? (Include yourself, mark the best ONE)

2 3 4 5 6 7 8 9 10 11 12 13 14 15

[illegible]

Revised October 20, 1997

## APPENDIX C – Survey Instruments, continued

### EMPLOYEE COMMUTE OPTIONS SURVEY

**DEAR EMPLOYEE:** Please take a few minutes to fill out this questionnaire and return it as instructed. Mark your answers clearly and neatly in the boxes like this: ☒

- 1) How did you travel to work during the last week you worked? If you used more than one method, mark the one in which you traveled the farthest. All days should have only **ONE** answer marked.

|                                       | S                        | M                        | T                        | W                        | T                        | F                        | S                        |
|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
|                                       | ↓                        | ↓                        | ↓                        | ↓                        | ↓                        | ↓                        | ↓                        |
| DROVE ALONE (or motorcycled) ..... 1  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| RODE THE BUS or MAX ..... 2           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| CARPOOLED or VANPOOLED ..... 3        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| BICYCLED ..... 4                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| WALKED ..... 5                        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| TELECOMMUTED ..... 6                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <b>TOOK DAY OFF FOR:</b>              |                          |                          |                          |                          |                          |                          |                          |
| COMPRESSED WORK WEEK ..... 7          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| OTHER REASON (reg.dayoff, etc.) ... 8 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

17-23

**DEFINITIONS:**

**Carpool or Vanpool:** Two or more persons in a car or van traveling to work.  
**Telecommute:** Work done at home during regular work hours (rather than at your usual work site).  
**Day Off for Compressed Work Week:** A day off work because you work a full-time schedule in less than 5 days per week, eg., four 10-hour days.

- 2) **IF YOU CARPOOLED OR VANPOOLED** to work in your answer above, how many people were in the car or van? (Include yourself; mark the best **ONE**)

25-26

|                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 2                        | 3                        | 4                        | 5                        | 6                        | 7                        | 8                        | 9                        | 10                       | 11                       | 12                       | 13                       | 14                       | 15                       | -                        |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

- 3) **IF YOU DRIVE ALONE TO WORK:** Mark up to three reasons for using the commute method you use.

|                                                     |                                                   |                                                                                 |
|-----------------------------------------------------|---------------------------------------------------|---------------------------------------------------------------------------------|
| <input type="checkbox"/> 1 Need car for errands     | <input type="checkbox"/> 5 No one to carpool with | <input type="checkbox"/> 9 No bus/MAX where I live                              |
| <input type="checkbox"/> 2 Saves time               | <input type="checkbox"/> 6 Saves money            | <input type="checkbox"/> 10 No bus/MAX where I work                             |
| <input type="checkbox"/> 3 Irregular work schedule  | <input type="checkbox"/> 7 Need car for work      | <input type="checkbox"/> 11 Buses don't run during hours I commute to/from work |
| <input type="checkbox"/> 4 Want car for emergencies | <input type="checkbox"/> 8 Drop off children      |                                                                                 |

28-47

- 4) **IF YOU DRIVE ALONE TO WORK:** What benefit would encourage you to try an alternative to driving alone to work? (Mark as many as apply.)

50-61

|                                                                                                                  |                                                                                |
|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|
| <input type="checkbox"/> 1 Reserved parking for carpools or vanpools                                             | <input type="checkbox"/> 9 Compressed work week (for example: 4 ten-hour days) |
| <input type="checkbox"/> 2 Guaranteed ride home for personal emergencies                                         | <input type="checkbox"/> 10 Flex-time (employee chooses schedule)              |
| <input type="checkbox"/> 3 Incentives for carpools or vanpools (for example: free lunch, discount coupons, etc.) | <input type="checkbox"/> 11 Telecommuting (work at home part of week)          |
| <input type="checkbox"/> 4 Help finding carpool or vanpool partners                                              | <input type="checkbox"/> 12 Company car available for work travel              |
| <input type="checkbox"/> 5 Secure bike lockers or racks                                                          | <input type="checkbox"/> 13 Orientation and personal bus/MAX trip planning     |
| <input type="checkbox"/> 6 Showers for bike riders or walkers                                                    | <input type="checkbox"/> 14 Transportation bulletin board                      |
| <input type="checkbox"/> 7 Employer pays part of cost of a Tri-Met pass                                          | <input type="checkbox"/> 15 Express bus from park & ride lot to work           |
| <input type="checkbox"/> 8 Tri-Met passes sold at work                                                           | <input type="checkbox"/> 16 Employer provided van for vanpool                  |

- 5a) During the past **month**, how many trips did you make on a Tri-Met bus or MAX for any purpose? (Count each direction as a separate trip) \_\_\_\_\_ (If none, skip 5b)

62-63

- 5b) How many of your trips in Question 5a (above) were for travel to or from work? (Count each direction as a separate trip) \_\_\_\_\_

64-65

**THANK YOU!**

## APPENDIX D – Survey Data Form

### SURVEY DATA FORM

Please complete both sides of this worksheet for each work site and return it with the surveys for that site.

#### WORK SITE INFORMATION

Today's date: \_\_\_\_\_

Company name: \_\_\_\_\_

Site name: \_\_\_\_\_

Site address: \_\_\_\_\_

City: \_\_\_\_\_ Zip code: \_\_\_\_\_

#### COORDINATOR INFORMATION

Transportation Coordinator: \_\_\_\_\_

Title: \_\_\_\_\_

Phone: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail: \_\_\_\_\_

#### SURVEY INFORMATION

Date survey was distributed: \_\_\_\_\_

Date of deadline for employees to return surveys: \_\_\_\_\_

#### SURVEY RESULTS

Would you like Tri-Met to send a copy of your survey results to DEQ for your ECO Rules requirements?

YES ☐ NO ☐

Can we share your survey results with the transportation management association (TMA) in your area, if there is one?

YES ☐ NO ☐

#### RETURNING YOUR SURVEYS

Who is your Tri-Met marketing representative?

\_\_\_\_\_

Return this form with the site's completed surveys to:  
(your Tri-Met marketing representative)  
Tri-Met Marketing  
4012 SE 17th Ave.  
Portland, OR 97202

#### EMPLOYEE COUNTS

How you count employees for your survey varies, depending on the purpose of your survey. Please complete the appropriate sections below for your survey.

#### EMPLOYEE COUNT TOTALS

Total number of employees at your work site 1. \_\_\_\_\_

Total number of ECO eligible employees\* 2. \_\_\_\_\_

Total number of PASSport qualified employees\*\* 3. \_\_\_\_\_

Total number of employees and/or volunteers in a PASSport exempted group<sup>†</sup> that you surveyed 4. \_\_\_\_\_

Random sample size at this site (see Random Sampling section in Coordinator's Kit) 5. \_\_\_\_\_

Total number of surveys returned 6. \_\_\_\_\_

Survey response rate: line 6 ÷ line 2 OR line 6 ÷ line 3, whichever is larger.

If surveying a PASSport exempted group only, line 6 ÷ line 4.

If random sampling, use line 6 ÷ line 5. 7. \_\_\_\_\_

\* ECO eligible employees: Temporary or regular employees on or expected to be on the payroll for at least six months who work 80 hours or more in a 28-day period. Excluded are volunteers, persons working on a non-scheduled work week, and field personnel required to use a personal vehicle as a condition of employment.

\*\* PASSport qualified employees: To receive the reduced rate per employee, passes must be purchased for all temporary or regular employees on or expected to be on the payroll for at least six months who work 80 hours or more in a 28-day period. Exempted are employees who work less than 80 hours in a 28-day period, volunteers, those on non-scheduled work weeks, those needing their vehicle as a condition of their job, temporary or seasonal employees hired for a limited term of less than six months, those exempted from DEQ's Employee Commute Options rule, those with an Annual Pass from another source, those working shifts that start or end during times when Tri-Met does not provide service, those with their permanent residence located 20 or more miles outside the Tri-Met district boundary and independent contractors.

† PASSport exempted employees: Employers have the option to purchase passes for any exempted group of employees outlined above. Employer must survey and purchase passes for 100% of the exempted group.



PLEASE COMPLETE OTHER SIDE.

## APPENDIX D – Survey Data Form, continued

**SIDE 2** The following questions are about this work site.

### BUS/MAX INFORMATION

Does this site have a bus or MAX stop within ¼ mile?  
(Five blocks in downtown Portland or four blocks outside of downtown) YES NO  
☐ ☐

Is bus service available every 30 minutes or more often during peak commuting hours? YES NO  
☐ ☐

### PARKING INFORMATION

Does your company own, lease or pay for parking for any employees at this site? YES NO  
☐ ☐

If your company owns or leases parking spaces, are employees charged for parking? YES NO  
☐ ☐

If yes...approximately how many are charged?  
☐ every employee ☐ over half the employees  
☐ less than half ☐ other \_\_\_\_\_

And if yes...how much are they charged?  
\_\_\_\_\_

Does your company offer a subsidy or reimbursement for employee parking costs? YES NO  
☐ ☐

If yes...What is the subsidy or reimbursement amount?  
\_\_\_\_\_

Is free parking available for your employees? YES NO  
☐ ☐

Please indicate the availability of parking spaces for employees (excluding customers and visitors):

There are empty spaces available most days YES NO  
☐ ☐

All spaces are filled most days YES NO  
☐ ☐

There are not enough spaces most days YES NO  
☐ ☐

Within the next year, does your company foresee a shortage of parking spaces for employees? YES NO  
☐ ☐

### CURRENT TRANSPORTATION PROGRAM

Which of the following transportation programs or services does your company provide to your employees? Only mark "yes" on those items that your company *actively* promotes and/or informs employees about.

Bicycling/Walking YES NO

Secure bike lockers or racks YES NO  
☐ ☐

Showers for bike riders or those walking to work YES NO  
☐ ☐

Financial incentives for bike riders YES NO  
☐ ☐

If yes...What type of incentive(s) do you offer?  
\_\_\_\_\_

Bus/MAX YES NO

Subsidy to cover part or all of the cost of a Tri-Met pass YES NO  
☐ ☐

If yes...What is the subsidy amount? \_\_\_\_\_

Tri-Met passes/tickets sold at the work site YES NO  
☐ ☐

### Carpool/Vanpool

Reserved parking spaces for carpools or vanpool YES NO  
☐ ☐

If yes...How many spaces? \_\_\_\_\_

Parking discounts for carpools or vanpools YES NO  
☐ ☐

If yes...What is the discount? \_\_\_\_\_

Incentives for carpools or vanpools (such as free lunches, discount coupons, gift certificates, etc.) YES NO  
☐ ☐

If yes...How often are they offered?

☐ monthly ☐ weekly ☐ other (please specify):  
\_\_\_\_\_

Assistance matching carpool partners or vanpool participants YES NO  
☐ ☐

If yes...What format does your company use for employee matching requests?

☐ online/computer ☐ paper form  
☐ in-person ☐ Tri-Met Matching Form

Van provided for vanpool commuters YES NO  
☐ ☐

If yes...Is the van: ☐ company-owned ☐ leased

### Support and Promotional Programs

Guaranteed ride home for personal emergencies YES NO  
☐ ☐

Company car(s) available for work-related travel YES NO  
☐ ☐

Information about your company's transportation program included as part of new employee orientation YES NO  
☐ ☐

Tri-Met's New Employee Kits used YES NO  
☐ ☐

On-site personal bus or MAX trip planning available YES NO  
☐ ☐

If yes...How is it made available?  
\_\_\_\_\_

Up-to-date transportation information bulletin board YES NO  
☐ ☐

If yes...How often is it updated?

☐ weekly ☐ monthly ☐ other \_\_\_\_\_

Flex-time (employees may choose their schedule to accommodate use of alternative commuting methods) YES NO  
☐ ☐

Work Alternatives YES NO

Compressed work week (40-hour week worked in less than five days; e.g., four 10-hour days) YES NO  
☐ ☐

Telecommuting (certain employees regularly work at home or at a remote office near home one or more days a week) YES NO  
☐ ☐

Other Transportation Program Elements

Please specify: \_\_\_\_\_

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For office use only

Current Survey (mo/yr):

☐ Baseline \_\_\_\_\_

☐ 1st Year Follow-up \_\_\_\_\_

☐ 2nd Follow-up \_\_\_\_\_

☐ 3rd Follow-up \_\_\_\_\_

☐ 4th Follow-up \_\_\_\_\_

Results Format: \_\_\_\_\_

☐ Each Individual Site \_\_\_\_\_

☐ All Sites Combined \_\_\_\_\_

☐ Other (Please Specify) \_\_\_\_\_

\_\_\_\_\_

Rep Initials: \_\_\_\_\_

COMMITTEE TITLE TPACT

DATE 11-9-00

NAME

AFFILIATION

|                                  |                  |
|----------------------------------|------------------|
| Fred Hansen                      | TRI-MET          |
| Rad Monroe                       | Metro Council    |
| Kristac                          | "                |
| Andy Cochran                     | Metro            |
| Serena Cruz                      | Mult. Co.        |
| Karl Rende                       | C <sup>3</sup>   |
| Jim Kugler                       | 4. C. E. C.      |
| Kay Van Sickle                   | ODOT             |
| Dan Wagner                       | WSDOT            |
| Annette Kiebe                    | DEQ              |
| Dave Lohman                      | Port of Portland |
| ED. WASHINGTON                   | METRO            |
| <del>Tri-Met</del> Lynn Peterson | Tri-Met          |
| Tony Mendoza                     | Tri-Met          |
| Richard Brachman                 | Metro            |
| Bill Barber                      | Metro            |
| Lynn Peterson                    | Tri-Met          |
| Tony Mendoza                     | Tri-Met          |

(Next Page)

COMMITTEE TITLE JPACT

DATE 11-9-00

NAME

AFFILIATION

Dave Williams

ODOT

Mike Hoggins

Metro

Clark Berry

Wash. Co

JADUAL WAKTU ADA

BANGLADESH STATE RAILWAY

David Bragdon

Metro Council

John Houser

Metro Council

Ron Papsdorf

City of Gresham

Ed Immler

ODOT - Rail

Gary Katsion

TPAC - Citizen member

Marc Zoltan

Cann. Charlie Hules - City of PPX

STEPHAN LASIAROOK

CITY of WILSONVILLE

Suzanne LaRue

Park of Portland

Ross Williams

CST/CLK

Martha Bennett

City of Milwaukie

Gudy Edwards

Westside Transp. Alliance

Victoria Brown

TVAIATION TMA + Chamber  
OF COM.

Rob Drake (in late) *nmh*

Cities of Wash. Co.

Bill Kennemer (in late) *nmh*

Clackamas Co.