Date: June 14, 1984
Day: Thursday
Time: 7:30 a.m.
Place: Metro Offices, Conference Room A1/A2

*1. AMENDING THE FY 1984 TRANSPORTATION IMPROVEMENT PROGRAM TO INCLUDE AN UPDATED PROGRAM OF PROJECTS USING SECTION 9 FUNDS - APPROVAL REQUESTED - Andy Cotugno.

*2. AMENDING THE TRANSPORTATION IMPROVEMENT PROGRAM TO INCLUDE CORNELL ROAD BRIDGES IMPROVEMENT PROJECT - APPROVAL REQUESTED - Andy Cotugno.

*3. AUTHORIZING APPLICATION FOR FEDERAL FUNDS FOR A 16(B)(2) SPECIAL TRANSPORTATION PROJECT (ROBISON JEWISH HOME) AND AMENDING THE TRANSPORTATION IMPROVEMENT PROGRAM - APPROVAL REQUESTED - Andy Cotugno.


*5. REGIONAL TRANSPORTATION PLAN UPDATE - INFORMATIONAL - DISCUSSION - Andy Cotugno.

*Material Enclosed.
DATE OF POLL: May 9-10, 1984

GROUP/SUBJECT: Joint Policy Advisory Committee on Transportation (JPACT)


SUMMARY:

In lieu of a May JPACT meeting, Committee members were polled by phone on May 9-10 for consideration of the following action items:

1. Resolution for the purpose of amending the FY 1984 TIP to include a new Section 9(A) Tri-Met project at SE 17th and Boise Streets; and

2. Resolution for the purpose of authorizing federal funds for two 16(b)(2) special transportation projects and amending the TIP (Applicants: Highland Community Services and Tri-County Independent Living Program, two private, nonprofit social service agencies).

Action Taken: UNANIMOUS APPROVAL of the above agenda items.

REPORT WRITTEN BY: Lois Kaplan

COPIES TO: JPACT Members
        Rick Gustafson
        Don Carlson
        Ray Barker
Ed Hardt noted that the meeting report should be corrected on page 4, last sentence under "Hazardous Materials Routing Study," to read: "He further reported that a water main will be has been installed on the I-205 Bridge in response to fire protection needs." It was moved and seconded to approve the meeting report as corrected. Motion CARRIED.

2. DIESEL EXHAUST STUDY STATUS REPORT

Andy related that the Diesel Exhaust Study was initiated a year ago with respect to impact of diesel vehicles on visibility and air quality. He noted that some degradation of air quality is anticipated with regard to diesel emissions. The issue is whether or not stricter emission controls should be placed on diesel trucks and buses; it was noted that other pollutant sources, such as industry and woodstoves, must comply with strict controls to help meet the particulate standard.

Andy then reviewed recommendations under consideration by the Diesel Exhaust Study Committee including:
1) that Metro and DEQ urge Congress and EPA to adopt strict particulate emission control regulations on diesel trucks and buses; and

2) that DEQ recommend to the Environmental Quality Commission that diesel trucks be included in the DEQ inspection program. Such authority would be restricted to diesel trucks not engaged in interstate commerce.

TPAC will be apprised of any action taken by the Diesel Exhaust Study Task Force at its next meeting.

3. AMENDING THE FY 84 AND FY 83 UNIFIED WORK PROGRAMS

This amendment represents a shift in funds among the work elements but no increase or decrease in funding.

Action Taken: It was moved and seconded to recommend approval of the Resolution amending the FY 84 and FY 83 Unified Work Programs. Motion CARRIED unanimously.

4. APPROVING THE FY 1985 UNIFIED WORK PROGRAM AND CERTIFICATION

A letter from Robin Lindquist was distributed regarding the Banfield LRT Ridership Analysis work element and her concern over future commitment to the Banfield as a regional priority at the expense of the remaining region. Additionally, she questioned design efforts slated for the Westside Corridor LRT work element. A discussion followed relating that engineering work, environmental work, and developing a financial plan is what the Westside work program entails, the dollar amount representing an analysis over a three to four-year period. Andy Cotugno related that he would draft a letter in response to Robin Lindquist's regarding these two issues, indicating that the information derived from the Banfield LRT Ridership Analysis is needed to provide a reliable basis for making LRT decisions in other parts of the region (rather than a financial commitment for better bus service), and that the scope of work for the Westside Corridor project in the FY 85 UWP is consistent with the decision adopted last August. A copy of that letter will be forwarded to JPACT members.

Action Taken: It was moved and seconded to recommend approval of the Resolutions approving the FY 1985 Unified Work Program and certification. Motion CARRIED unanimously.

5. AMENDING THE REGIONAL TRANSPORTATION PLAN TO DESIGNATE UNION AVENUE/COURT AS A REGIONAL BICYCLE ROUTE

This change would shift responsibility from the City of Portland to the State Highway Department. For clarification purposes, Steve Dotterrer indicated that the $37,500 for replacement of the
bicycle route on Union Avenue/Court would be paid from the Vancouver Way project, also indicating that the City will assume maintenance of the project.

Action Taken: It was moved and seconded to recommend approval of the Resolution amending the Regional Transportation Plan to designate Union Avenue/Court as a regional bicycle route in lieu of N. Vancouver Way. Motion CARRIED unanimously.

6. CONSIDERATION OF RECOGNITION AND ACCEPTANCE OF DIRECTIONS TO PURSUE REGARDING SEVERAL FEDERAL HIGHWAY FUNDING ISSUES: FY 84 INTERSTATE TRANSFER-HIGHWAY FUNDING, FEDERAL-AID URBAN FUNDING AND HIGHWAY PLANNING AND RESEARCH FUNDING

Andy reviewed the three funding issues being pursued with the federal Congressional delegation and FHWA: FY 84 Interstate Transfer-Highway funding, Federal-Aid Urban funding and Highway Planning and Research funding. By June, decisions will need to be made on whether or not to hold up projects or use carryover funds, whether to proceed with the construction program as is and work to secure the discretionary funds or secure a higher level of appropriation for next year.

Action Taken: It was moved and seconded to recommend approval of the staff's proposed course of action on federal transportation funding as outlined on Attachments A, B and C. Motion CARRIED unanimously.

7. AUTHORIZING FEDERAL FUNDS FOR A 16(b)(2) SPECIAL TRANSPORTATION PROJECT AND AMENDING THE TIP

This action would provide a 20 to 25-passenger vehicle for special transportation services in Washington County for the Tualatin Valley Mental Health Center, which is not duplicated by Tri-Met service.

Action Taken: It was moved and seconded to recommend approval of the Resolution amending the TIP for this 16(b)(2) project, making it eligible for consideration of such funds by the State. Motion CARRIED unanimously.

8. ODOT BOND PROGRAM

Bob Bothman discussed the possible highway bond programs and outlined the strategies chosen for presentation to the AOC, LOC and LOAC in addition to JPACT. Winston Kurth described the efforts of the Association of Oregon Counties in trying to gain consensus at the county level on a 1¢ tax that would provide 100 percent pass-thru to the locals.
Rick Gustafson stressed the importance of gaining consideration by the State on projects that are not federally eligible or are not listed in the Six-Year Program but are of importance to the State. Mr. Bothman indicated they would be open for such consideration.

The targeted amount of $200,000 is slated for the bond issue. Distribution of $50,000 each would be made to: the Portland area, mid-Willamette region, east of the Cascades, and the Eugene-Springfield area.

Commissioner Veysey recommended that the vehicle excise tax be explored from a regional aspect. Also, a discussion followed on whether to bond now due to the inflation versus interest issue. It was recommended that each jurisdiction should explore that issue.

Commissioner Blumenauer cited the need for more information on the economic impacts and local costs. It was the general consensus that a strategy for financing needs be developed.

Action Taken: Rick Gustafson suggested that TPAC look at the bonding program over the next six months and develop a regional position for recommendation to JPACT. In addition, Chairman Williamson asked Rick Gustafson and Andy Cotugno to direct an effort in establishing regional representation on LOAC and report back at the next JPACT meeting. It was suggested that a metropolitan area representative should be appointed by the Association of Oregon Counties on the local officials group.

9. APPOINTMENT TO HOUSE TASK FORCE ON STATE AND LOCAL ROAD FUNDING

The appointment was announced of Andy Cotugno to a special House Task Force on State and Local Road Funding. The task force is to identify the dimension of the need for state and local road funding, recommend measures to solve it, and evaluate legislative policy for appropriateness.

10. ADJOURNMENT

There being no further business, the meeting was adjourned.

REPORT WRITTEN BY: Lois Kaplan

COPIES TO: JPACT Members
Rick Gustafson
Don Carlson
Ray Barker
CONSIDERATION OF RESOLUTION NO. 84-473 FOR THE PURPOSE OF AMENDING THE FY 1984 TRANSPORTATION IMPROVEMENT PROGRAM TO INCLUDE AN UPDATED PROGRAM OF PROJECTS USING SECTION 9 FUNDS

Date: May 15, 1984
Presented by: Andrew Cotugno

FACTUAL BACKGROUND AND ANALYSIS

Proposed Action

Approve the recommendation to include an updated program of projects using Urban Mass Transportation Administration Section 9 funds. The FY 1984/FY 1985 program proposed by Tri-Met consists of:

Parts and Equipment - Maintenance vehicles, rebuilt engines and transmissions, rebuild kits for engines and transmissions, shop equipment. Rear seat (bus) replacements, suspension overhaul kits, and security fencing. $1,422,000

Telecommunication Network System - Dispatch center equipment and transit mall video monitor replacements. $94,272

Management Information System - Computer equipment and software. $292,419

122nd Avenue Park and Ride Lot - engineering and construction $864,000

LRT Construction - Line sections 2 and 3 and signal graphics fabrication are included in the full-funding agreement for the Banfield LRT project. The amount noted herein will be an administrative exchange of Section 3 funds in the full-funding contract for these Section 9 funds. $7,096,000

Total Capital $9,768,691

Tri-Met planning assistance - the Unified Work Program for FY 1985 was previously approved under Resolution No. 84-462 and is included herein for reference. $951,832

Total FY 1984-85 Section 9 Program $10,720,523
TPAC has reviewed this program and recommends approval of the Resolution.

Background

Tri-Met has prepared a program of projects using Section 9 funds apportioned to urbanized areas in accordance with the Section 9 formula. The capital projects are a continuation of those previously established (Resolution No. 83-412) for Section 9A start-up funding. More project funding is programmed than there is availability with any difference to later be funded with FY 1985 Section 9 capital assistance.

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends adoption of Resolution No. 84-473.

COMMITTEE CONSIDERATION AND RECOMMENDATION

AC/srb
1261C/382
06/01/84
WHEREAS, Resolution No. 83-412 approved a program of Tri-Met projects using FY 1983 start-up funds under Section 9A; and

WHEREAS, A new Section 9 Follow-On Program provides funding for FY 1984 and later; and

WHEREAS, Tri-Met has prepared a program of projects using Section 9 funds which are in part a continuation of those previously established under Section 9A; and

WHEREAS, The program of projects is required to be in the Transportation Improvement Program (TIP) in order to be eligible for federal funding; now, therefore,

BE IT RESOLVED,

1. That the TIP is amended to include an update of the following Section 9 projects and amounts:

<table>
<thead>
<tr>
<th>Project Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parts and Equipment</td>
<td>$1,422,000</td>
</tr>
<tr>
<td>Telecommunication Network System</td>
<td>$94,272</td>
</tr>
<tr>
<td>Management Information System</td>
<td>$292,419</td>
</tr>
<tr>
<td>122nd Avenue Park and Ride Lot – Engineering and Construction</td>
<td>$864,000</td>
</tr>
<tr>
<td>LRT Construction – Line Sections 2 and 3, and Signal Graphics</td>
<td>$7,096,000</td>
</tr>
<tr>
<td>Tri-Met Unified Work Program Planning Assistance</td>
<td>$951,832</td>
</tr>
<tr>
<td><strong>Total Section 9 Amendment</strong></td>
<td><strong>$10,720,523</strong></td>
</tr>
</tbody>
</table>
2. That projects programmed and in excess of the apportioned amount will be assigned to FY 1985 when the FY 1984 projects are fully obligated.

3. That the Council of the Metropolitan Service District (Metro) finds the projects in accordance with the Regional Transportation Plan and gives Affirmative Intergovernmental approval. ADOPTED by the Council of the Metropolitan Service District this _____ day of ________, 1984.

Presiding Officer

AC/BP/srb
1261C/382
06/01/84
CONSIDERATION OF RESOLUTION NO. 84-474 FOR THE PURPOSE OF AMENDING THE TRANSPORTATION IMPROVEMENT PROGRAM TO INCLUDE CORNELL ROAD BRIDGES IMPROVEMENT PROJECT

Date: May 15, 1984
Presented by: Andrew Cotugno

FACTUAL BACKGROUND AND ANALYSIS

Proposed Action

This action will amend the Transportation Improvement Program to include a new project: Cornell Road Bridges Improvement. This project consists of replacement or rehabilitation of four bridges and two viaducts, all of which are located on N.W. Cornell Road east of 53rd Drive.

Highway Bridge Replacement and Rehabilitation (HBRR) Funds

<table>
<thead>
<tr>
<th></th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preliminary Engineering</td>
<td>$80,000</td>
</tr>
<tr>
<td>Construction</td>
<td>$1,400,000</td>
</tr>
<tr>
<td>Total HBRR</td>
<td>$1,480,000</td>
</tr>
<tr>
<td>Multnomah County Match</td>
<td>$370,000</td>
</tr>
<tr>
<td>Total Costs</td>
<td>$1,850,000</td>
</tr>
</tbody>
</table>

TPAC has reviewed this project and recommends approval of the Resolution.

Background and Analysis

The six structures are currently inadequate and deterioration to the four timber bridges has greatly accelerated in the last five years, causing concern for public safety.

Actions to correct these conditions consist of replacing four structurally deficient timber bridges:

Bridge #11037
Bridge #11039
Bridge #11040
Bridge #11041

and replacing or rehabilitating two concrete viaducts:

Bridge #51C35
Bridge #51C36
Other attendant work included will be elimination of minor site distance problems, strengthening or replacement of retaining walls, improved alignments, vehicle/bicycle/pedestrian access, and lighting for pedestrian/bicycle path around tunnel (#51C36).

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends approval of Resolution No. 84-474.

COMMITTEE CONSIDERATION AND RECOMMENDATION

AC/BP/srb
1262C/382
06/01/84
BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF AMENDING THE
TRANSPORTATION IMPROVEMENT PROGRAM
TO INCLUDE CORNELL ROAD BRIDGES
IMPROVEMENT PROJECT

RESOLUTION NO. 84-474
Introduced by the Joint
Policy Advisory Committee
on Transportation

WHEREAS, Through Resolution No. 83-430, the Council of the Metropolitan Service District (Metro) adopted the Transportation Improvement Program (TIP) and its FY 1984 Annual Element; and

WHEREAS, Multnomah County has requested that a new project utilizing Highway Bridge Replacement and Rehabilitation (HBRR) funds be added to the TIP; and

WHEREAS, This project will cover replacement or rehabilitation of four bridges and two viaducts on N.W. Cornell Road; and

WHEREAS, It is necessary that projects utilizing the noted funds be included in the TIP in order to receive federal funds; now, therefore,

BE IT RESOLVED,

1. That federal HBRR funds be authorized for the Cornell Road bridges improvement project. $1,480,000

2. That the TIP and its Annual Element be amended to reflect this authorization.
3. That the Metro Council finds the project in accordance with the Regional Transportation Plan and gives Affirmative Intergovernmental Project Review approval.

ADOPTED by the Council of the Metropolitan Service District this ___ day of ________, 1984.

Presiding Officer

AC/BP/srb
1262C/382
06/01/84
CONSIDERATION OF RESOLUTION NO. 84-475 FOR THE PURPOSE OF AUTHORIZING APPLICATION FOR FEDERAL FUNDS FOR A 16(b)(2) SPECIAL TRANSPORTATION PROJECT AND AMENDING THE TRANSPORTATION IMPROVEMENT PROGRAM

APPLICANT: ROBISON JEWISH HOME

Date: May 22, 1984

Presented by: Andrew Cotugno

FACTUAL BACKGROUND AND ANALYSIS

Proposed Action

Recommend Council adoption of the attached Resolution which authorizes application for Federal 16(b)(2) funds by a private, nonprofit social service agency: Robison Jewish Home. The application covers the purchase of one 5-9 passenger stationwagon and two 10-16 passenger vans with lifts to provide special transportation services in Portland metro area to specific client groups not served by Tri-Met. This Transportation Improvement Program (TIP) addition will allow the agency to apply for 16(b)(2) funding from ODOT.

This action is consistent with the adopted Intergovernmental Agreement entered into by Oregon Department of Transportation (ODOT), Tri-Met and Metro, whereby roles, responsibilities and funding for Special Needs transportation are established.

TPAC has reviewed this project and recommends approval of the Resolution.

Background

Section 16(b)(2) authorizes the Urban Mass Transportation Administration (UMTA) to make capital grants to private, nonprofit organizations to provide transportation services for elderly and handicapped persons. Capital investments include purchase of conventional and paratransit vehicles and other equipment associated with providing local and regional (non-intercity) transportation services to the elderly and handicapped. Apportioned 16(b)(2) funds are not available for operating expenses. Transportation Improvement Programs and their Annual Elements must be amended to include new 16(b)(2) projects.
Section 16(b)(2) funding is only available to private, nonprofit organizations in the Metro region and only for use to serve specific client groups that cannot be served effectively by Tri-Met. In applying these criteria, Tri-Met and Metro review all applications and recommend approval or denial accordingly.

A local provider has submitted an application for capital equipment using 16(b)(2) funds and has been found to meet the criteria of serving specific client groups which cannot better be served by Tri-Met. The application involves:

<table>
<thead>
<tr>
<th>Name/Area</th>
<th>Equipment</th>
<th>Federal Applicant $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robison Jewish Home/</td>
<td>1 5-9 passenger stationwagon</td>
<td>$7,200/$1,800</td>
</tr>
<tr>
<td>S.W. Portland Area</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 10-16 passenger vans with lifts</td>
<td>$27,200/$6,800</td>
</tr>
</tbody>
</table>

EXECUTIVE OFFICER'S RECOMMENDATION

The Executive Officer recommends adoption of Resolution No. 84-475.

COMMITTEE CONSIDERATION AND RECOMMENDATION

BP/srb
1297C/382
06/01/84
BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

RESOLUTION NO. 84-475
Introduced by the Joint
Policy Advisory Committee
on Transportation

WHEREAS, ODOT, Tri-Met, and the Metropolitan Service
District (Metro) have entered into an Intergovernmental Agreement
which established roles, responsibilities and funding for Special
Needs transportation; and

WHEREAS, This Agreement specifies that 16(b)(2) funding
will be made available only to nonprofit organizations serving
specific client-groups which cannot better be served by regular
Tri-Met service to the elderly and handicapped community; and

WHEREAS, To comply with federal requirements the TIP must
be amended to include projects recommended for UMTA 16(b)(2) funds; and

WHEREAS, The Robison Jewish Home has submitted a project
application for funding authorization involving $34,400 in Federal
16(b)(2) funds; and

WHEREAS, The project described was reviewed and found
consistent with federal requirements and regional policies and
objectives; now, therefore,

BE IT RESOLVED,

1. That application for Federal 16(b)(2) funds be
authorized for the purchase of the following:
Robison Jewis Home, a private nonprofit health care and social service agency in the Southwest Portland area

1. 5-9 passenger stationwagon $7,200
2. 10-16 passenger vans with lifts $27,200

2. That the TIP and its Annual Element be amended to reflect this authorization.

3. That the Metro Council finds the project to be in accordance with the region's continuing, cooperative, comprehensive planning process and, thereby, gives affirmative Intergovernmental Project Review approval.

ADOPTED by the Council of the Metropolitan Service District this _____ day of __________, 1984.

Presiding Officer

BP/srb
1297C/382
06/01/84
Date: June 7, 1984

To: Joint Policy Advisory Committee on Transportation

From: Keith Lawton, Technical Manager

Regarding: Long-Range Forecast -- Year 2005
Population/Employment -- Overview

- Long-range population and employment forecasts, prepared to the census tract level of detail by Metro, are important for infrastructure decisions by Metro, ODOT, Tri-Met, the counties and major cities of the region. These decisions on roads, transit and sewers ultimately guide the economic development pattern.

- Because of questions about the impact of the recent recession on the long-range forecast plus related questions raised by the transportation planning community, it has become necessary to revise these forecasts.

- There is a need to conduct this process openly and with the involvement of other institutions/agencies/industries which depend on forecasts for their own planning. This is to create a good quality product with a fairly ubiquitous "ownership" and to maximize technical credibility.

- There is also a need to have this process openly visible, reviewed and discussed by two key groups whose input and understanding are important.

  - Politicians who have to make project decisions; and
  - The development and investment community.

**Recommended Process and Participants**

The overall process is as shown on Exhibit "1" -- Forecast Production Process. The major participants in this effort can be categorized in four groups: the Regional Growth Forum, Key Interest Groups, Political Decision Group and the Growth Allocation Working Group.
Exhibit 1

FORECAST PRODUCTION PROCESS

<table>
<thead>
<tr>
<th>EST. TIME</th>
<th>PRODUCTION</th>
<th>REVIEW AND COMMENT</th>
<th>APPROVAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>June-July</td>
<td>Staff produces series of Technical Resource Papers - Drafts on growth issues</td>
<td>TPAC Regional Development Committee</td>
<td></td>
</tr>
<tr>
<td>June-July</td>
<td>Regional Growth Forum Workshops - Recommended assumptions/factors on growth issues - Resulting regional growth totals</td>
<td>Circulate to Key Interest Groups</td>
<td>Political Decision Group TPAC/JPACT/Council Preliminary Acceptance Regional Forecasts</td>
</tr>
<tr>
<td>July</td>
<td>Growth Allocation Working Group Workshops (jurisdictional staff)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>July-Aug.</td>
<td>Circulate to Regional Growth Forum participants and Key Interest Groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sept.</td>
<td></td>
<td></td>
<td>Political Decision Group TPAC/JPACT/Council Adopt Forecast</td>
</tr>
</tbody>
</table>
The definitions of these four participatory groups are as follows:

- **Regional Growth Forum** - A working group composed of forecasting or projection staff members from the investment community, utilities, development agencies and government. The task of this group would be to develop a technically based consensus on the probable dimensions of the growth of the region as a whole through 2005.

- **Key Interest Groups** - An informal sounding-board composed of separate groups such as chambers of commerce, development committees, commissions or task forces composed of key decision-makers who may be currently empaneled for other related purposes. The procedure with these groups would be to circulate relevant information to them as the process continues, giving presentations or engaging in discussions if this seems appropriate, and using reaction or input from them as part of the information used in developing the forecast.

- **Political Decision Group** - A formal organization of elected representatives and major agency representatives from the region. The proposed organization here is to use the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council as the ratifying body. The task of this group would be to receive the recommendations of the working groups (Regional Growth Forum and Growth Allocation Working Group), review the comments and input of Key Interest Groups and finalize a set of forecasts for general regional use.

- **Growth Allocation Working Group** - This group is composed of planners or administrators from the jurisdictions interested in being involved in the process, together with Metro forecasting staff and interested staff from operating agencies. The task of this group will be to allocate the forecast growth by small areas within the region: first to 20 major subareas or districts and ultimately to census tract. This would be run as a series of all-day workshops similar to the process used in 1981.
Date: June 7, 1984
To: Joint Policy Advisory Committee on Transportation
From: Keith Lawton, Technical Manager
Regarding: GROWTH FORUM - TASKS, TIME AND PARTICIPANTS

PURPOSE: The purpose of the growth forum is to review assumptions, models and relationships used for long-range forecasts in the region (counties of Multnomah, Washington, Clackamas and Clark); to make recommendations on assumptions to use, and to develop a common estimate of employment and population for the Portland region through the year 2005.

USE OF FORECASTS: The forecast will form the basis for a sub-allocation of growth to various parts of the region, to be used for transportation and other infrastructure decisions over the next three to five years.

TASKS: The members of the growth forum will meet to discuss and build a consensus on a reasonable set of assumptions in three areas:

1. Growth in employment by major sector, with particular discussion on issues such as the possible effects of Pacific Rim trade which may not be suitable for analysis based on past performance.

2. The resultant effects on population, population migration and the development of overall housing demand through a consideration of demographic trends and assumptions.

3. A discussion of large-scale growth trends within the region, particularly with respect to the relative growth of each county and the strength of Portland's central area and central business district.

Information on recent past trends, recent forecasts by BPA, Wharton Econometric Forecasting Assoc., and National Planning Association, including, where available, the assumptions used, will be summarized in a series of short papers which will be available before the forum is convened.
TIME COMMITMENT: The expected process would be to attempt to achieve consensus in three separate half-day workshops. (One for each topic—employment, population and housing, location trends.) We are hoping to complete these in June. We will attempt to space each of them a week apart.

PARTICIPANTS: We are attempting to use people from the private sector, utilities and the public sector in order to maximize the breadth of input and to gain insights from different perspectives.

The desire is to have participants who have a working knowledge of projections and trends developed within their organization, but who also have involvement in policy development.

A list of groups/agencies being approached is included.

KL/gl
1386C/344
06/07/84
Following is the most current list of participants for the upcoming Regional Growth Forum.

**Finance**

U. S. National Bank - John Mitchell
First Interstate Bank - Ray Broughton

**Import/Export**

Port of Portland - Glen Vanselow

**Real Estate Development**

Portland Development Commission - Steve Petersen
Portland Metro Home Builders - Fred Webber

**Utilities**

PGE - Charles Alcock

**Special Expertise**

Portland State University
Center for Population Research and Census - Ed Schaefer

State of Oregon
Department of Economic Development - Laila Cully
June 13, 1984

Joint Policy Advisory Committee on Transportation

T. Keith Lawton, Data Services Director

Regional Growth Forum

The enclosed information has been provided to the Regional Growth Forum participants.

The upcoming Regional Growth Forum will bring together persons representing the region's economic forecasting expertise and provide the setting and technical support to develop a common estimate of employment and population for the Portland region through the year 2005. The forecast will form the basis for a suballocation of growth to various parts of the region and will be used for transportation and other infrastructure decisions over the next three to five years.

The process will attempt to achieve consensus in three separate half-day workshops—one each for employment, population/housing and intraregional growth trends.

Meeting Schedule

June 19, Tuesday, 9:00 a.m. - Employment
June 26, Tuesday, 9:00 a.m. - Population/Housing
July 10, Tuesday, 9:00 a.m. - Intraregional Growth Trends
   (optional)

All meetings will be held at the Metro offices, 527 S.W. Hall Street, in Conference Room A1/A2.

TKL/RB/srb
1426C/D3

Enclosure
REGIONAL GROWTH FORUM

List of Participants

Mr. Ray Broughton
Vice President and Economist
First Interstate Bank

Dr. John Mitchell, Corporate Economist
U.S. Bank Corp

Mr. Charles Alcock
Senior Planning Supervisor
Electric Business Planning
Portland General Electric

Mr. Steve Peterson, Director
Economic Development
Portland Development Commission

Dr. Fred Webber, Consulting Economist
Home Builders Assoc. of Metropolitan
Portland

Mr. James Strathman, Associate Prof.
Dept. of Urban Studies and Planning
Portland State University

Mr. Glenn Vanselow
Research Manager
Port of Portland

Mr. Tom Lynch, Director
Labor Market Information Programs
Oregon State Employment Service

Mr. Charles Schneider, Chief Economist
Economic Research Section
Bonneville Power Administration

Mr. Scott Hannigan, Manager
Load Forecasting and Analysis Dept.
Pacific Power and Light
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PURPOSE OF FORUM

The purpose of the Growth Forum is to develop a common estimate of employment and population for the Portland region for the year 2005. The forecast will form the basis for a sub-allocation of growth to various parts of the region, to be used for transportation and other infrastructure decisions over the next three to five years.

METHOD

The members of the Growth Forum will meet to discuss and build a consensus on a reasonable set of estimates in three areas:

1. Growth in employment by major sector.
2. The resultant effects on population and the development of overall housing demand.
3. Large-scale growth trends within the region, particularly with respect to the relative growth of each county and the strength of Portland's central area.

It is intended to hold three meetings, one on each of the above topics.

This resource paper is for the first meeting. It includes information on recent trends, recent forecasts by Bonneville Power Administration (BPA), and the National Planning Association (NPA), and Draft 1, a Metro estimate based on a disaggregation of BPA's Wharton Econometric Forecasting Associates 1984 forecast.

Rather than reviewing the forecasting model, the Growth Forum will review the results themselves. We believe the most productive way to accomplish this is to compare trends and relationships derived from the forecasts and discuss their validity. This is the way the Forum will be run.

Determination of Draft 1 Forecast

Table 1 is a review of previous Portland SMSA forecasts made between 1975 and 1984. As can be seen, those made in the 1979 to 1981 period (pre-recession data) show a very high growth in comparison to the post-recession forecasts. Table 1 shows an overall comparison of some of these.

It seems sensible to start off our effort by focusing on post-recession forecasts.

There are three major options:

1. BPA; a detailed forecast of growth by country carried out by in-house economic staff in 1979 (for all sectors) and in 1983 (for primary sectors and total). Metro staff has used these two sources of information to create a composite BPA
### TABLE 1

**COMPARISON OF RECENT FORECASTS OF SMSA TOTAL EMPLOYMENT**

<table>
<thead>
<tr>
<th>Forecast by</th>
<th>2000 (in 1,000's)</th>
<th>2005 (in 1,000's)</th>
<th>AAGR(^1)</th>
<th>Jobs/Year (in 1,000's)</th>
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<tr>
<td><strong>Pre-Recession</strong></td>
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<td>15.05</td>
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<tr>
<td>Draft 1 (1984)</td>
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\(^1\)Average Annual Compounded Growth Rate,
\(^2\)Year 2000/Year 2005.

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which fits with the 1983 work, but shows sector detail provided in the 1979 forecast. (Shown as BPA '83 in the tables.) The forecast is to 2005, in five-year intervals.

2. National Planning Association; a less detailed forecast of growth by sector using a BEA-type shift in share model. The level of detail here is the county. The forecast is to 2000 by yearly intervals.

3. Wharton Econometric Forecasting Associates for BPA; a detailed forecast of growth by sector using a dynamic equilibrium model. This model simultaneously considers items such as sector demand growth, cost of production, wage rates, capital costs, etc., resulting migration and changes in cost of production, in a series of feedback loops that achieve a demand - supply - cost equilibrium for the states in the region and between the states and the U.S. as a whole. Population growth, housing demand, etc. are handled on a year by year basis using cohort survival and migration as driven by the equilibrium model. The model also allows for time lag in migration allowing for both initial and final production cost changes.

A brief description of the BPA/WEFA model proposed is given as Appendix C. The methodology for factoring the WEFA state results to the SMSA level is given in Appendix B, Disaggregating the BPA/WEFA Model to the SMSA.

Because the BPA/WEFA model effectively supersedes the BPA '83 work, because the model has been built and calibrated for the Pacific Northwest, and because the dynamic equilibrium form is conceptually appealing, the staff at Metro has used the BPA/WEFA data for the Draft 1 forecast.

The following graph illustrates the relationship of recent forecasts from four sources.
RESULTS

The Draft 1 forecast results are shown in Tables 2, 3 and 4. The attached graphs also depict the forecast, together with recent history, for some of the major elements. Following that data are a list of issues which we need your judgment on, in terms of "do they make sense."

Each of the forecasts shows a continuation of the shift of jobs from the primary sector (primarily manufacturing) to the secondary sectors (FIRE, trade and service). A shift of jobs from transportation, communications and public utilities (TCPU) is also shown.
ISSUES

Several immediate issues and discussion points emerge:

1. Overall growth rate: Draft 1 shows a post-recession growth rate which is close to the previously assumed annual growth rate in Metro's 1981 forecast (Metro 1980 to 2000 has a 2.28 percent annual average growth rate; draft 1 has a 1983 to 2000 annual average growth rate of 2.34 percent). The economy is seen as recovering, but reaching a lower total because of a lower starting point.—Is this reasonable?

2. The reduction in share of manufacturing which has been rapid in the last 13 years (from 20 percent to 17 percent share) is shown to taper off—leading to a 16 percent share in 2000 and 2005.—Is this reasonable?

3. Service and Trade show a significant gain vis a vis manufacturing—this implies a larger multiplier of primary to secondary jobs in the future. Service, which has recorded rapid growth sector in the last 13 years, is shown to remain solid, but to reduce the rate of growth with a slight increase in share.

4. The weakest forecast performance is for TCPU with a drop in share from 6 percent to 4 percent. This sector has had a fairly solid rate of growth over the last 13 years at just below the regional average.

5. Finance, Insurance and Real Estate (FIRE) has shown large growth over the last 13 years, with an increase in share from 6 percent to 8 percent of total employment. This sector is still shown as solid, but with a large reduction in growth rate leading to no further increase in share.

6. Within the manufacturing industries, the biggest question is probably the performance of the electronics industry which was the strongest performer during the 1970 to 1980 period, but suffered a sharp decline from 1980 to 1983. The major issue here is probably that of product growth versus productivity. The BPA/WEFA output shows a fairly large growth in productivity in the manufacturing sector as a whole and the electronics industry in particular. A look at the past employment on the chart for this group would indicate the futility of trying to estimate trends from past history in this sector.

7. A perusal of the graphs yields several other discussion points which will doubtless surface during discussion.

"New" Growth Sectors

Another element for discussion is possible "new" elements for growth which would not be addressed in a forecasting model, but could
become significant. If you have any thoughts in this area, please come prepared to discuss them at the meeting.

Constraints and Growth

The inverse of the previous discussion topic would be on existing industries which would suffer constraints on growth in this region, thus changing historical patterns significantly. Have you any thoughts on "constraints" that the forecast should reflect?
A COMPARISON OF POST-RECESSION EMPLOYMENT FORECASTS
BY MAJOR SECTOR
(000's)

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AAGR = Average Annual Rate of Growth
FIRE = Finance, Insurance and Real Estate
T.C.P.U = Transportation, Communications and Public Utilities
BPA = Bonneville Power Administration
NPA = National Planning Associates
WEFA = Wharton Econometric Forecasting Associates/BPA

Note: Agriculture, mining and fishing are excluded.
# Table 3

**Total Employment by Major Sector**

**Past Trends and Forecasts to 2005**

**Draft 1**

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*Except for self-employed - Metro estimates

**AGGR** = Average Annual Rate of Growth

**FIRE** = Finance, Insurance and Real Estate

**TAC** = Transportation, Communication and Public Utilities

**WA** = Walla Walla Power Administration

**NPA** = National Planning Associates

Note: Agriculture, mining and fishing are excluded.

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S.F./5/94
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Forecasted Growth for Total Employment - Draft One

Forecasted Growth for Primary Metals - Draft One
Forecasted Growth for Fabricated Metals - Draft One
Forecasted Growth for Machinery - Draft One
Forecasted Growth for Electrical and Instruments - Draft One

- (1,000's)
Forecasted Growth for Paper and Allied Products - Draft One
Forecasted Growth for Printing and Publishing - Draft One
Forecasted Growth for Other Manufacturing$^1$ - Draft One

$^1$Chemicals, Textiles, Apparel, Stone/Clay/Glass, Furniture, Other
Forecasted Growth for Transportation, Communication and Public Utilities - Draft One
Forecasted Growth for Service - Draft One
Forecasted Growth for Trade - Draft One
Forecasted Growth for Government - Draft One
APPENDIX A

BACKGROUND - PURPOSE AND OVERALL PROCESS

In most major U.S. metropolitan areas, metropolitan planning organizations, or councils of government, are responsible for developing forecasts at some level of spatial disaggregation. Metro is the organization that carries out this function for this metropolitan area. The last long-range forecast was completed in 1981 using data through 1980. The following issues are the stimuli for the decision to revise the forecast and for the process and method to do so:

- Long-range population and employment forecasts, prepared to the census tract level of detail by Metro, are important for infrastructure decisions by Metro, ODOT, Tri-Met, the counties and major cities of the region. These decisions on roads, transit and sewers ultimately guide the economic development pattern.

- Because of questions about the impact of the recent recession on the long-range forecast plus related questions raised by the transportation planning community, it has become necessary to revise these forecasts.

- There is a need to conduct this process openly and with the involvement of other institutions/agencies/industries which depend on forecasts for their own planning. This is to create a good quality product with a fairly ubiquitous "ownership" and to maximize technical credibility.

- There is also a need to have this process openly visible, reviewed and discussed by two key groups whose input and understanding are important.

- Politicians who have to make project decisions; and
- The development and investment community.

Recommended Process and Participants

The overall process is as shown on Exhibit "1" — Forecast Production Process. The major participants in this effort can be categorized in four groups: the Regional Growth Forum, Key Interest Groups, Political Decision Group and the Growth Allocation Working Group.

The definitions of these four participatory groups are as follows:

- Regional Growth Forum - A working group composed of forecasting or projection staff members from the investment community, utilities, development agencies and government. The task of this group would be to develop a technically based consensus on the probable dimensions of the growth of the region as a whole through 2005.
FORECAST PRODUCTION PROCESS

**PRODUCTION**

- **June-July**
  - Staff produces series of Technical Resource Papers - Drafts on growth issues

- **June-July**
  - Regional Growth Forum Workshops
  - Recommended assumptions/factors on growth issues - Resulting regional growth totals

**REVIEW AND COMMENT**

- Circulate to Key Interest Groups

**APPROVAL**

- Political Decision Group
  - TPAC/JPACT/Council Preliminary Acceptance Regional Forecasts

- Circulate to Regional Growth Forum participants and Key Interest Groups

- Political Decision Group
  - TPAC/JPACT/Council Adopt Forecast

EST. TIME

- **June-July**
- **July**
- **July-Aug.**
- **Sept.**
Key Interest Groups - An informal sounding-board composed of separate groups such as chambers of commerce, development committees, commissions or task forces composed of key decision-makers who may be currently empaneled for other related purposes. The procedure with these groups would be to circulate relevant information to them as the process continues, giving presentations or engaging in discussions if this seems appropriate, and using reaction or input from them as part of the information used in developing the forecast.

Political Decision Group - A formal organization of elected representatives and major agency representatives from the region. The proposed organization here is to use the Joint Policy Advisory Committee on Transportation (JPACT) and the Metro Council as the ratifying body. The task of this group would be to receive the recommendations of the working groups (Regional Growth Forum and Growth Allocation Working Group), review the comments and input of Key Interest Groups and finalize a set of forecasts for general regional use.

Growth Allocation Working Group - This group is composed of planners or administrators from the jurisdictions interested in being involved in the process, together with Metro forecasting staff and interested staff from operating agencies. The task of this group will be to allocate the forecast growth by small areas within the region: first to 20 major subareas or districts and ultimately to census tracts. This would be run as a series of all-day workshops similar to the process used in 1981.
APPENDIX B

DISAGGREGATING THE BPA/WEFA STATE LEVEL MODEL TO THE SMSA

The region's share of state growth as developed by BPA in its 1979 forecast provided the basis for disaggregating the BPA/WEFA state level forecast. For the three Oregon counties (Multnomah, Washington and Clackamas) the shares, county of state, were applied to the BPA/WEFA Oregon employment forecast. Clark County's share was taken from Washington State, linking it to that state's more robust growth forecast. This was done by employment sector.

The share of manufacturing employment sectors within manufacturing as a whole (county to state) was carried out by using the existing (1983) sectoral relationships, State of Oregon to SMSA.

The result of this process is a regional forecast lower than other recent forecasts.

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HOW WE PROPOSE TO MODEL THE PACIFIC NORTHWEST FOR BPA

OBJECTIVES

This project's principal objective is to design, construct, and install on BPA's computing system a model of the economics of Washington, Oregon, Idaho, and part of Montana. The model must be capable of producing annual forecasts of economic and demographic variables for each of the four states over a twenty-year forecast horizon. These forecasts must be capable of use as inputs to various models of demand for electricity used in the Pacific Northwest region.

To satisfy these objectives, the model will forecast:

- Value added, gross output, employment, annual wage rate, and capital stock and investment for at least nineteen industries, as listed in the RFP
- Personal income, by detailed component
- Population, by age and sex. Population will be driven by migration as forecast by the economic model and by region-specific forecasts of mortality and fertility
- Households, by type of housing unit
- Households, by income class
- Consumer prices, by state
- Fuel oil and natural gas prices, by major consuming sector

Since it is possible that the data on which the model's estimated parameters will be based may not be identical to the data to which BPA's energy demand models have been fitted, we propose to deliver the full model database to BPA. This will permit reestimation of BPA's energy demand models as required.

In the model design section of this proposal, we explain in detail why we believe that our model design is fully capable of meeting BPA's needs. Our experience with the New York Region Econometric Model and with the WEFA-EPRI
Multiregional Model, as well as the inner logic of the model design itself, support this belief.

OVERVIEW OF THE MODEL STRUCTURE

The regional model whose blueprint is presented below is designed to be part of a system of linked regional models. This system of regional models makes up a spatially disaggregated general equilibrium model. In it, regional product and labor markets move toward equilibrium in the short run by adjusting output levels, factor prices, and factor input demands. They move toward long-run equilibrium via adjustments to investment and migration flows, i.e., factor input supply conditions.

In the following sections we address output determination, investment, demographics and the labor market, and the government sector. The estimation of the system can be performed using pooled cross-section and time-series data throughout. The short time series available for some equations would in itself almost preclude a "pure" time-series model. Secondly, we need the greater variation introduced by pooling the regional data. Finally, we believe that careful estimation will permit the construction of a dynamic forecasting model which combines short-run precision with reasonable long-run properties and elasticity estimates.

The regional model described below will be composed of a set of state-specific modules, one each for:

- final demand
- intermediate demand
- industry output
- employment, by industry
- wage rate, by industry
- investment and capital stock, by industry
- personal income, by component
- population, by age and sex
- income distribution of households
- households, by housing type
- consumer and fuel prices
Industry detail will be provided, at a minimum, for the nineteen industry sectors listed in the RFP. Exactly how many industries will be modelled depends on the robustness of data for the states served by BPA. We note that in a project now underway for the New York Power Pool, we contracted to produce forecasts for at least fifteen industries, and are in fact working to model more than thirty.

The flow of causation through the model is shown in the flow chart below. As can be seen, the state models are primarily linked via demand; output from each state is affected by final and intermediate demand originating in the other states in the region, as well as by demands from the entire United States. In addition, it can be seen clearly that the model is highly simultaneous.

This structure represents the state of the art in regional econometric modeling. Among its noteworthy features are input-output interindustry linkages, capital-constrained output and factor demand functions, and direct linkages between the state of the regional economy and regional population.
U.S. (Wharton's Annual Model) Typical State or Exogenous

- Sector Prices
- Sector Outputs
- U.S. Output Prices
- U.S. Energy Prices
- Components of U.S. Personal Income, Employment, Population
- U.S. Prices
- Consumer Prices
- Investment, Capital Stock
- Employment, Wage Rates
- Personal Income
- Migration, Population
- Final Demand
- Intermediate Demand
- Final Demand (Other States)
- Births, Deaths, U.S. Employment
- Households, by Income, by Housing Type
The proposed model's structure can also be summarized as:

Final Demand = \( f(\text{Personal Income}, \text{Population}, \text{Employment}, \text{Prices}) \)  
\hspace{1cm} (I)

Intermediate Demand = \( I \)-0 coefficient-weighted sum of sector outputs  
\hspace{1cm} (II)

Total Demand = Economic distance-weighted sum of regional and U.S. Final and Intermediate Demands  
\hspace{1cm} (III)

Energy Prices = \( f(\text{Corresponding U.S. Energy Prices}) \)  
\hspace{1cm} (IV)

Output = \( f(\text{Capital Stock, Total Demand, Real factor prices}) \)  
\hspace{1cm} (V)

Employment = \( f(\text{Output, Capital Stock, Wage Rate, Real Prices of Other Variable Factors}) \)  
\hspace{1cm} (VI)

Wage Rate = \( f(\text{Employment, Available Pool of Labor, Last Year's Wage Rate, Antiwage Rate}) \)  
\hspace{1cm} (VII)

Personal Income = \( f(\text{Employment \& Wage Rate, U.S. variables}) \)  
\hspace{1cm} (VIII)

Net Migration = \( f(\text{Labor market conditions relative to U.S.}) \)  
\hspace{1cm} (IX)

Population = Last Year's Population + Births - Deaths + Net Migration  
\hspace{1cm} (X)

User Cost of Capital = \( f(\text{State and federal business taxes, Prices, Bond rates}) \)  
\hspace{1cm} (XI)

Investment = \( f(\text{Capital Stock, Output, UCC, all with lags}) \)  
\hspace{1cm} (XII)

Capital Stock = Capital Stock last year + Investment last year - Depreciation last year  
\hspace{1cm} (XIII)

Households (by housing type) = \( f(\text{Population}) \)  
\hspace{1cm} (XIV)

Households' Income Distribution = \( f(\text{Households, Personal Income}) \)  
\hspace{1cm} (XV)

Consumer Prices = \( f(\text{U.S. Prices, Relative labor market conditions}) \)  
\hspace{1cm} (XVI)

To get an idea of how the system works, we can trace the effects of an exogenous shock, for example, an increase in SIC 37's output, through the system. An increase in SIC 37's output will, first of all, increase SIC 37's demand for inputs; all of the increase in its demand for labor will be satisfied locally, as will part of the increase in its demand for material inputs. The increases in SIC 37's output and in its suppliers' outputs will work through the labor market, where employment and wage rates will be pulled up, to personal income to final demand, which will cause further increases in local output. However, because local capital stocks are fixed (in the short run), only part of the increase in local demand will be met by increases in local output. Further, because local output's response to the increase in
demand will be somewhat dampened by the rise in wage rates, the secondary effects of the shock will partly offset the initial ones. In the longer run, i.e., after the first year, labor market tightness and pressure on capital stocks will lead to an increase in net in-migration and in investment. The ultimate effects of the shock will be higher capital stocks, output and employment in all industries, higher population, and, probably little or no change in unemployment (assuming the economy was already close to full capacity).

In the proposed model, since investment is sensitive to state business taxes, we will be able to use the model to estimate the effects of, for example, a reduction in a state corporate income tax rate. This would lower user costs of capital, which would raise investment. As time passed, this would cause regional output to rise and regional labor/output ratios to fall. The overall effect would be to increase employment and wage rates, but by less than output, and, eventually, to increase population.

As can be seen from these examples, the model we propose to build for BPA is capable of answering "supply side" as well as "demand side" questions.

Data

The data needed to implement our model design, and a description of data development, is included in the model design section. We present here a brief summary of key aspects. The basic sources of regional economic and demographic data are identified in the table on the following page.
# Sources of Regional Economic and Demographic Data

<table>
<thead>
<tr>
<th>Source</th>
<th>Spatial Coverage</th>
<th>Concept</th>
<th>Frequency</th>
<th>Comments</th>
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<td>BLS790</td>
<td>State, SMSA, U.S.</td>
<td>Establishment Employment</td>
<td>M,A</td>
<td>Comparable across states</td>
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<td></td>
<td>Average Weekly Hours</td>
<td>M,A</td>
<td>Manufacturing only</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Average Hourly Earnings</td>
<td>M,A</td>
<td>Manufacturing only</td>
</tr>
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<td>ES202</td>
<td>State, County</td>
<td>Covered Employment</td>
<td>M,A</td>
<td>Not comparable across states</td>
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<td></td>
<td></td>
<td>Covered Wagebills</td>
<td>Q,A</td>
<td>Not comparable across states</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Available for all industries at state level,</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>by 1-digit SIC at county level</td>
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<tr>
<td>Annual Survey of Manuf./ Census of Manuf.</td>
<td>State, County, U.S.</td>
<td>Value Added</td>
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<td>Not consistent with NIPA</td>
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<tr>
<td></td>
<td></td>
<td>Employment</td>
<td>A</td>
<td>Not consistent with 790 or 202</td>
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<tr>
<td></td>
<td></td>
<td>Investment</td>
<td>A</td>
<td>Not consistent with NIPA</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Not internally consistent, very spotty</td>
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<td>coverage</td>
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<td>BEA Intermediate Table</td>
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<td>Not consistent with 790 or 202</td>
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<tr>
<td></td>
<td></td>
<td>Wagebills</td>
<td>A</td>
<td>Not consistent with 202</td>
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<td></td>
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<td></td>
<td>Wage rates (annual) often same as 202,</td>
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<tr>
<td>FEDS &amp; SEDS</td>
<td>State</td>
<td>Energy Consumption, by Type by Sector</td>
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<td>Disclosure problems at county level</td>
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<td>Pers. Income by Component</td>
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<td>Labor &amp; Proprietors' Income, by 1-digit industry</td>
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<td></td>
<td></td>
<td>Total Population</td>
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<td>BEA Table 5</td>
<td>State, County, U.S.</td>
<td>Employment by 1-digit industry</td>
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<td>Disclosure problems at county level,</td>
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<tr>
<td>BEA Table 25</td>
<td>State, County, U.S.</td>
<td>Population</td>
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<td></td>
<td></td>
<td>Households</td>
<td>every</td>
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<td></td>
<td></td>
<td>Income Distribution</td>
<td>10 yrs.</td>
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<tr>
<td>Census of Population</td>
<td>State, County, U.S.</td>
<td>Tax Rates &amp; Rules</td>
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<tr>
<td>Commerce Clearing House State Tax Guide</td>
<td>State</td>
<td>Population</td>
<td>once</td>
<td></td>
</tr>
</tbody>
</table>
The following lists the data needed to implement our model as designed, and the source data from which we propose to construct the model data.

<table>
<thead>
<tr>
<th>Model Data</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output (value added)</td>
<td>BEA wagebills, U.S. NIPA Value Added</td>
</tr>
<tr>
<td>Output (gross output)</td>
<td>Value added, U.S. 1972 Input-Output Table,</td>
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<tr>
<td></td>
<td>Wharton Annual Model</td>
</tr>
<tr>
<td>Intermediate and Final Demand</td>
<td>Gross output, U.S. 1972 Input-Output Table</td>
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<tr>
<td>Employment</td>
<td>BLS790, supplemented by ES202 and BEA</td>
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<tr>
<td></td>
<td>Intermediate Table</td>
</tr>
<tr>
<td>Wage Rates</td>
<td>BEA Intermediate Table and ES202</td>
</tr>
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<td>Sector Prices</td>
<td>Wharton Annual Model, BEA</td>
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<tr>
<td>Pop'n and Migration by Age &amp; Sex</td>
<td>BEA, Decennial Census, POPMOD</td>
</tr>
<tr>
<td>User Costs of Capital</td>
<td>State Tax Rates and Rules, Wharton Annual</td>
</tr>
<tr>
<td></td>
<td>Model</td>
</tr>
<tr>
<td>Capital Stock, Investment</td>
<td>Value Added, Employment, Wharton Annual</td>
</tr>
<tr>
<td></td>
<td>Model, U.S. NIPA Value Added &amp; Wagebills</td>
</tr>
<tr>
<td>Personal Income by component</td>
<td>BEA Table 5</td>
</tr>
<tr>
<td>Energy Prices</td>
<td>SEDS</td>
</tr>
</tbody>
</table>

We propose to use state wagebills to share down U.S. value added and gross output. Capital stock and investment will reflect national distributive shares and estimated state value added and employment. Employment will be based on BLS 790. Historical estimates of population by age and sex will be generated from data from the 1960 and 1970 Censuses (and 1980, if it is out in time), and from intercensal population estimates using POPMOD, Wharton EFA's demographic model.

Detailed discussion of data construction is presented in the model design section of this proposal, primarily in the section on output determination.

Parameter Estimation

It has been our experience that regional data for the years before 1967 are quite weak, and will not support an extensive modeling effort. At present, the BEA intermediate table on which most of the data needed for our model rest, is available no later than 1980. We will have, then, at best fourteen
years of data from which to estimate the parameters of the proposed model. Since fourteen observations are not likely to be enough to obtain precise estimates of parameters, we propose to pool time-series data from the four states to get fifty-six observations from which to estimate the model's parameters. We have successfully used pooled cross-sectional and time-series data to estimate the parameters of a number of models, including NYREM, NYPPEM, the WEFA-EPRI Multiregional Model, and the WEFA Census Region Model.
Since adoption of the Regional Transportation Plan (RTP) in 1982, changes have occurred to raise questions about a number of underlying assumptions upon which the plan is based:

- the rapid growth rate of the 1970s has disappeared with the 1982/83 recession raising questions about what size region we should be planning for and whether or not there is a need to invest in major new transportation facilities;

- the various parts of the region have weathered the effects of the recession differently, raising questions about whether or not new highway and transit facilities are being focused in the appropriate part of the region;

- lower gas prices and higher unemployment have reduced transit ridership and operating revenues raising questions about the future role for a significantly expanded transit system; and

- ridesharing and telecommunications are being proposed as easy, low-cost alternatives to providing expensive new transportation facilities.

To address these questions and update or reaffirm the RTP, a major re-examination is now underway. Generally, this effort is structured around two distinct steps: 1) re-examination of the underlying assumptions affecting travel patterns to provide the basis for the 1984 annual update, and 2) re-examination of the plans and policies for transit expansion and new highway construction providing the basis for the 1985 Annual Update.

The major tasks and time frame to complete this effort is described below.

I. Update Basic Assumptions - Now to August 31

A. Update regional growth forecasts (population, employment, households, labor force, commercial/industrial acreage) for year 2005.

1. Produce resource documents. - June 1
2. Develop total regional forecasts in cooperation with area forecasting groups. - July 1
3. Distribute regional growth forecasts to 20 districts in cooperation with area planners. - August 1
4. Distribute 20 district totals to traffic zone in cooperation with individual jurisdictions. - September 1
B. Re-examine and refine mode split model to reflect latest transit travel behavior.

1. Evaluate 1983 transit ridership patterns based upon 1983 on-board ridership survey. - June 15
2. Refine and calibrate mode split model to replicate 1983 transit ridership. - August 1
3. Evaluate the sensitivity of the model to varying levels of service, gas prices and transit fares. - September 1

C. Re-evaluate the currently adopted 35 percent ridershare target, current program effectiveness and establish an updated long-range target. - September 1

D. Evaluate the potential for telecommunications to reduce peak hour travel demand. - September 1

E. Update assumptions on gas price, fuel efficiency, parking cost, transit fare. - September 1

F. Complete conversion of highway and transit networks to EMME-2 based travel forecasting system.

1. Complete Westside 1983 highway and transit networks. - Done
2. Complete Westside "Adopted RTP" highway and transit networks - July 1:
   a. with Sunset LRT; and
   b. with Sunset Bus Service Expansion.
3. Complete Westside "Committed" highway and transit networks (i.e., highway projects and transit service that is funded). - July 1
4. Complete Eastside 1983 highway and transit networks. - June 1
5. Complete Eastside 1985 highway and transit networks (with January 1, 1985 service cuts). - August 1
7. Complete Eastside "Adopted RTP" highway and transit networks. - October 1
8. Complete Eastside "Committed" highway and transit networks. - October 1

G. Update capital, operating and maintenance costs and revenue sources for the Adopted RTP. - October 1

II. Produce 2005 traffic and transit ridership forecasts using updated population and employment data, models, cost factors and incorporating assumptions on telecommunications and rideshare.
A. Westside - September 1 - October 15
   1. Adopted RTP with Sunset LRT.
   2. Adopted RTP with Sunset Bus Service.
   3. Committed transit and highway improvements.

B. Eastside - October 1 - November 15
   1. Adopted RTP.
   2. Committed transit and highway improvements.

III. Adopt 1984 RTP Update to reflect:
   A. Re-examined assumptions;
   B. Updated travel forecasts; and
   C. Updated costs and revenues.

IV. Evaluate long-range transit and highway concept. - January to
    June 1985
   A. Evaluate the degree to which currently adopted RTP
      improvements meets the policy intent of the plan for
      updated 2005 travel demands compare to 2005 travel demands
      assuming only "Committed" improvements.
   B. Assess transit ridership and system productivity for
      serving various markets, including: downtown,
      non-downtown, peak hour, off-peak, major regional
      corridors, etc.
   C. Identify unresolved traffic problems; include projects
      identified in local plans or elsewhere to address problem.
   D. Evaluate alternative scenarios involving different levels
      of transit service and highway investment relative to the
      objectives of the RTP.

V. Adopt 1985 RTP Update to reflect:
   A. Preferred level of transit service and system concept;
   B. Preferred package of highway improvements as needed to
      meet 2005 demands;
   C. Updated travel forecasts; and
   D. Updated costs and revenues.

VI. Relationship to Other Studies
   A. Westside Corridor Project - This RTP Update will provide a
      portion of the basic data needed to assess whether to
      proceed with construction of the Sunset LRT.
B. Southwest Corridor Study – This work program is already defined and underway in cooperation with jurisdictions in the I-5 South/Barbur Boulevard Corridor. As soon as 2005 travel data is available from this RTP Update, the Southwest Corridor Study will continue using the updated data.

C. Five-Year Transit Development Program (TDP) – From a policy standpoint, the TDP is primarily focused on service and capital plans within existing financial resources while the RTP is focusing on the long-range needs of the region which is beyond existing financial resource. Upon final adoption, the TDP must be consistent with the RTP. From a technical standpoint, the two efforts are using consistent base data, including ridership data, costs, population, etc.

D. Regional LRT Plan – This effort is examining the design, operation and cost-effectiveness of LRT in each of the major travel corridors assuming the current RTP policy direction calling for a major increase in transit service and ridership. Upon completion of each corridor study and after this RTP update completes the re-examination of the overall role for transit, the RTP will be amended to include these corridors that prove cost-effective with the remaining being deleted from the RTP.
<table>
<thead>
<tr>
<th>NAME</th>
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<td>Clackamas County</td>
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<td>Rick Walker</td>
<td>TRI-MET</td>
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<td>Ted Spencer</td>
<td>Cities of Mult Co.</td>
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<td>Bebe Rucker</td>
<td>DOT</td>
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<td>Ed Hardt</td>
<td>Washington County</td>
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<td>Charls Allsman</td>
<td>Metro</td>
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<td>Margaret Weil</td>
<td>East County cities</td>
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<td>City of Portland Staff</td>
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<td>James Garfield</td>
<td>TRI-MET (usually)</td>
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<td>Steve Dotenker</td>
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</tbody>
</table>