BEFORE THE COUNCIL OF THE
METROPOLITAN SERVICE DISTRICT

FOR THE PURPOSE OF AUTHORIZING $204,000 OF THE FUNDS ALLOCATED TO THE MACADAM AVENUE PROJECT FOR PRELIMINARY ENGINEERING ON THE SOUTH PORTLAND CIRCULATION PROJECT AND AMENDING THE TIP ACCORDINGLY	Resolution No. 79-43 Requested by Rick Gustafson

WHEREAS, Through Resolution BD 780805 the CRAG Board of Directors adopted the Transportation Improvement Program (TIP) and its Fiscal Year (FY) 1979 Annual Element; and

WHEREAS, The CRAG Board in Resolution BD 770710 reserved $2.5 million (escalated to $3.1 million as of September 30, 1978) for the Macadam Avenue project; and

WHEREAS, The City of Portland has prepared a South Portland Circulation Study which identified critical problems in the South Portland area; and

WHEREAS, The City of Portland has formulated a set of improvement objectives which respond to the critical problems and evaluated five "system alternatives" as to how well they meet the objectives; and

WHEREAS, It has been determined that one of the "system alternatives" (documented in Attachment A) meets the improvement objectives to the greatest degree; and

WHEREAS, The City of Portland has requested that preliminary engineering (PE) be initiated on a South Portland Circulation Project; and

WHEREAS, The CRAG Board in resolution BD 781213 resolved that for each project to be funded with Interstate Transfer funds which is not yet in preliminary engineering, the regional Transportation Systems Planning Program in cooperation with local jurisdictions would prepare a systems report on the project; and

WHEREAS, This systems report is contained in Attachment B; now, therefore,

BE IT RESOLVED,

(1) That the MSD Council authorize $204,000 in federal Interstate Transfer funds allocated to the Macadam Avenue Reserve Account be authorized to fund preliminary engineering on the South Portland Circulation Project.

(2) That as a part of the preliminary engineering activities on the South Portland Circulation Project the following areas be included for detailed study as part of this effort:

a. The Broadway to Fourth Avenue Area

b. Arthur Street Area

c. Front Avenue Connections Area

d. Ross Island Bridge Ramps Area - specifically the Ross Island Bridge and Kelly intersection will cease to be free flowing. Appropriate alternative designs for this intersection should be considered during preliminary engineering.

e. The Barbur Boulevard (Sheridan to Hamilton) Section and the Barbur and Hamilton Intersection should be studied with improvement designs formulated if appropriate.

(3) That the MSD Council amend the FY 1979 Annual Element accordingly, find that the project is in accordance with the region's continuing, cooperative, comprehensive planning process and hereby give affirmative A-95 approval.

ADOPTED By the Council of the Metropolitan Service District this 26th day of April, 1979.

Presiding Officer

GS:gh
3170A
0033A

PROJECT INFORMATION FORM - TRANSPORTATION IMPROVEMENT PROGRAM

PORTLAND—VANCOUVER METROPOLITAN AREA

PROJECT DESCRIPTION

RESPONSIBILITY (AGENCY) City of Portland

LIMITS n/a LENGTH n/a

DESCRIPTION see below

PE funds for this project transferred from Macadam project

PROJECT NAME South Portland Circulation Project (PE)

ID No

APPLICANT City of Portland

SCHEDULE

TO ODOT

PE OK'D EIS OK'D

CAT'Y BID LET

HEARING COMPL'T

RELATIONSHIP TO ADOPTED TRANSPORTATION PLAN

LONG RANGE ELEMENT X TSM ELEMENT

FUNDING PLAN BY FISCAL YEAR ($000)

	FY 78	FY 79	FY 80	FY 81	FY 82	TOTAL
TOTAL		240				240
FEDERAL		204				204
STATE						
LOCAL		36				36

APPLICANT'S ESTIMATE OF TOTAL PROJECT COST

PRELIM ENGINEERING	$ 240,000
CONSTRUCTION	
RIGHT OF WAY	
TRAFFIC CONTROL	
ILLUMIN, SIGNS, LANDSCAPING, ETC	
STRUCTURES	
RAILROAD CROSSINGS	
TOTAL	$ 240,000

DESCRIPTION:

Preliminary engineering on the South Portland Circulation Project consists of:

1. Removal of existing connections between the Ross Island Bridge and Front and replacing with connection to Barbur via Kelly and Arthur.
2. Close and remove the segment of Front between Barbur and Arthur and the Front Ave elevated structure.
3. Provide a new road link along the south sie of I-405
4. Reconstruct the intersection of Kelly and the Macadam Ave north ramp.
5. Reconstruction of the intersection of Front & Harrison and removal of the Front Ave ramps.
6. Pedestrian, bikeway and transit facilities

new 4/79

SOURCE OF FUNDS (%)

FEDERAL

FAUS (PORTLAND)	
FAUS (OREGON REGION)	
FAUS (WASH REGION)	
UMTA CAPITAL	*UMTA OPRTG*
INTERSTATE	
FED AID PRIMARY	
INTERSTATE SUBSTITUTION CAT III	85

NON FEDERAL

STATE *LOCAL* 15

ATTACHMENT A

ATTACHMENT B

Staff Report No. 43

MSD SYSTEMS PLANNING REPORT
SOUTH PORTLAND CIRCULATION PROJECT

Metropolitan Service District

APRIL 9, 1979

PUBLISHED BY

METROPOLITAN SERVICE DISTRICT
527 SW Hall
Portland, Oregon 97201
(503) 221-1646

C. William Ockert — Transportation Director

STAFF PRINCIPALLY RESPONSIBLE FOR THIS REPORT

Gary Spanovich — Senior Planner

REPORT PRODUCTION

Alan Holsted — Graphics
Karen Thackston — Administrative Aide

BACKGROUND

The South Portland circulation project proposed by the city of Portland is a new project proposed to use Interstate Transfer funds. As such, three conditions must be met before funding can be authorized. Before this project can proceed into preliminary engineering (PE), the MSD staff, in conjunction with the sponsoring jurisdiction, must:

1. describe the objectives to be met by the project,
2. assess the degree to which the project meets the objectives,
3. document the impact of the proposed project on the overall regional transportation system.

This Systems Planning Report responds to these conditions. It was prepared by MSD staff with significant assistance by the staff of the city of Portland.

The South Portland circulation project is an outgrowth of the city of Portland's recently completed South Portland Circulation Pre-Project Planning Study. It is the opinion of the MSD staff that the circulation study provides an adequate base for answering the three systems questions.

PROBLEM IDENTIFICATION

The South Portland area is bisected by a maze of regionally significant major arterial highways concentrated at the west end of the Ross Island Bridge. These highways service a large number of regional and local trips in a confusing and circuitous fashion. The interchange of regional and local trips between Macadam/Barbur/ the Ross Island Bridge/I-405 and I-5 within the area is currently plagued by problems of abrupt changes to alignment, short weaving distances, failure to distinguish between arterial and local service streets, confused and circuitous arterial routing which affects both highway and transit movements, and congestion problems at selected key locations.

The South Portland circulation study identified eleven major entry/exit points in the South Portland area. The ease of movement between all regional arterials was examined and a problem severity rating assigned. Projected traffic volumes (1990) between each of the eleven points was forecasted. The 1990 traffic volumes were multiplied by the severity ratings indicating the priority of routes and problems to be addressed (Figure 1).

Additionally, problems related to pedestrian movement, neighborhood identity, and local traffic, bicycle and pedestrian movement were identified.

OBJECTIVES OF THE SOUTH PORTLAND PROJECT

Based on the identified problems, a set of improvement objectives were formulated.

As submitted by the city of Portland, the objectives of the South Portland project are as follows:

A. Consolidate and clarify the arterial street system within the South Portland area.

B. Support the overall goal of improving accessibility to the downtown by public transit and diverting trip making from autos to transit. (Transportation Strategy to Achieve Air Quality Standards in Downtown)

C. Reduce serious traffic safety problems within the area.

D. Reduce problems of through traffic in the Corbett-Lair Hill neighborhoods.

E. Improve local access to land uses within the South Portland area.

F. Improve local air quality and support long range air quality goals of the City.

G. Facilitate pedestrian and bicycle movement through and within the South Portland area.

H. Stabilize, consolidate and support the rehabilitation of the Corbett and Lair Hill neighborhoods.

I. Minimize the displacement of housing and commercial activities.

J. Provide opportunities to construct needed inner-city housing.

The MSD staff opinion is that these ten objectives adequately address the problems. Objectives A through I involve traditional transportation objectives addressing existing and future transportation deficiencies in the South Portland area. Objective J concerns a non-transportation problem in the South Portland area.

SYSTEM ALTERNATIVES

Five system concepts were evaluated by the city of Portland. Based on that evaluation, four have been dropped from consideration because of their low cost-effectiveness in solving the problems and their inability to sufficiently meet the objectives.

One of the system alternatives has been selected to proceed into PE. This project concept, shown in Figure 2 consists of:

1. Removal of existing connections between the Ross Island Bridge and Front Avenue, replacing them with connections to Barbur via Kelly and Arthur Streets.

2. Closure and removal of the segment of Front Avenue between Barbur and Arthur.

3. Provision of a new road link for eastbound traffic from Fourth to Sixth Avenues along the south side of I-405.

4. Provision of a new, two-way link along the south side of I-405, east of Fourth Avenue connecting Front Avenue to Kelly.

5. Reconstruction of the intersection between Kelly and the Macadam northbound-Ross Island Bridge eastbound ramp.

6. Reconstruction of the intersection of Front and Harrison and removal of Front Avenue ramps.

7. Pedestrian, bikeway and transit facilities.

ACHIEVEMENT OF THE IMPROVEMENT OBJECTIVES

Objectives A through E and G through J are attained by the proposed project. It is not possible to determine if Objective F, "Improve local air quality and support long range air quality goals in the City", is attained. While the project would increase vehicle miles traveled and vehicle emissions in an area where federal carbon monoxide standards are not met, a more specific carbon monoxide assessment is needed as part of the PE study to determine whether specific violations would occur. While increases in hydrocarbon emissions resulting from the project could aggrevate the region's ozone problem, other projects and actions are programmed which will compensate. The net result of the overall program is a significant reduction in regional hydrocarbon emissions. The following describes how each objective is attained by the project concept:

Objective A: Consolidate and clarify the arterial street system within the South Portland area.

- Four existing routes will be consolidated into one clearly defined route.
- Simplification of routes from the downtown to Macadam Ave., Macadam to the Ross Island Bridge, I-405 to the Ross Island Bridge and Barbur Blvd to the Marquam Bridge.

Objective B: Support the overall goal of improving accessibility to the downtown by public transit and diverting trip making from autos to transit. (Transportation Strategy to Achieve Air Quality Standards in Downtown)

- Two regional transit corridors, Macadam light rail and Barbur reversible busway will maintain and enhance accessibility to the downtown.
- An exclusive transit lane connection from the Portland Mall to the Barbur busway is provided.

- Additional vehicle miles are traveled within the study area (additional one to two percent of average daily vehicle miles traveled in the study area). Most traffic links under the proposed concept would not violate the eight hour carbon monoxide standard in 1990.
- Additional housing close to employment centers in the downtown and good transit service, provided by reclaimation of land in the study area.

Objective C: Reduce serious traffic safety problems within the area.

- Simplification of the ramps at the west end of the Ross Island Bridge.
- Closure of existing connections between Barbur and Ross Island Bridge ramps which have severe weave conflicts.
- Revise connection between Barbur Blvd and Ross Island Bridge ramps.

Objective D: Reduce problems of through traffic in the Corbett and Lair Hill neighborhoods.

- Close Front Avenue
- Reroute through traffic around the neighborhoods via historical through corridors.
- Revise state route connections that circumvent neighborhoods.
- Separate local and through traffic.
- Accommodate regional trips on improved transit service in designated regional corridors.
- Restore local access to businesses and residences.

Objective E: Improve local access to land uses in South Portland area.

- Close Front Avenue
- Reroute through traffic around neighborhood via historical through corridors.
- Separate local and through traffic.
- Provide improved pedestrian and bicycle access.
- Provide improved transit service access to downtown.

Objective F: Improve local air quality and support long range air quality goals in the City.

- Overall the proposed concept would most likely not violate the eight hour carbon monoxide standard in 1990.
- Additional vehicle miles traveled will add to the amount of vehicle emissions in the study area.

Objective G: Facilitate pedestrian and bicycle movement through and within the South Portland area.

- Provide major pedestrian bicycle overcrossing improvements at key locations within the study area.
- Coordinate pedestrian crossings with transit stops or pullout sites.
- Close Front Avenue.

Objective H: Stabilize, consolidate and support the rehabilitation of Corbett and Lair Hill neighborhoods.

- Close Front Avenue.
- Reclaim 17 acres for inner-city housing, commercial and recreational areas.
- Consolidate Ross Island Bridge ramps.
- Provide improved access to local business and residences.
- Reroute through traffic around Corbett and Lair Hill neighborhoods.

Objective I: Minimize the displacement of housing and commercial activities.

- Design of the arterial system within and leading to South Portland should be in balance with the capacity limitations to the key entry points.
- Minimize the displacement of housing and commercial activities in the area due to anticipated roadway construction.

Objective J: Provide opportunities to construct needed inner-city housing.

- Close Front Avenue.
- Reclaim 17 acres of land within the South Portland district for inner-city housing.
- Reinforce rehabilitation of existing neighborhood through addition of opportunity for new families to move to areas close to employment centers.

IMPACTS OF THE REGIONAL TRANSPORTATION SYSTEM

The project proposed for preliminary engineering has a number of system impacts. Many of the problems identified in the study are regional transportation system problems. The project adequately addresses the problems in the area and appears to offer potential in relieving many of the problems. Specifically, these regional impacts include:

- consolidation and clarification of arterial routes
- simplification of routes between downtown and Macadam, Macadam Ave and the Ross Island Bridge, and Ross Island Bridge and Barbur

- reservation for transit facilities in the Macadam Corridor
- provision of an exclusive transitway between Barbur and the Portland Mall
- provision of housing well served by transit which is close to downtown
- provision of bikeway connections
- rerouting of through traffic around neighborhoods
- balancing traffic leads with capacity limitations
- separation of local and through traffic

Other system impacts of the project concept include:

1. Movements on the Interstate freeway system will not be modified.
2. Existing access problems between the Interstate system and the major arterials in the area will be either improved or negligibly affected by the project. The project will simplify a confused existing arterial system and remove certain arterial inefficiencies and points of congestion.

   The following movements on and off the Interstate system are affected:

   a. I-405/Ross Island Bridge: This particular movement should be improved by the project. Development of a new road south of I-405 and new ramps at the west end of the Ross Island Bridge are being planned in order to facilitate this flow. However, traffic westbound off the Ross Island Bridge will cease to be free-flowing but will instead be regulated by a signal. The signal could cause queues affecting the Ross Island Bridge to I-5 south and Macadam flow.

   b. I-405/Macadam Avenue: The I-405 to Macadam Avenue connection should be improved by the project. The Macadam Avenue to I-405 movement, however, will cease to be free-flowing at the Ross Island Bridge ramp.

   c. I-5/Barbur Blvd: The project will result in increased VMT for this movement.

   d. I-5/Ross Island Bridge: The I-5 northbound to Ross Island Bridge movement will be improved while the reverse movement will probably not be affected.

   e. I-5/Macadam Avenue: This movement will cease to be free flowing. It is expected that substantial changes will not occur.

3. Transit access to the downtown area will be improved.

4. In order to simplify the existing arterial system, the project will result in additional vehicle-miles of travel (VMT). As a result, hydrocarbon emissions from the South Portland area will increase.
5. Carbon monoxide violations may still occur. Further study is needed to fully assess this.
6. Traffic westbound off the Ross Island Bridge and westbound on the Macadam Avenue north ramp will cease to be free-flowing as is currently the case. Instead, these two traffic movements will be regulated by a signal device. Initial analysis indicates this would be sufficient. Elimination of the "free-flowing" movement could create queue backups. These would probably not affect I-5 but could hamper movement on the Ross Island Bridge. Alternative designs need to be studied in PE to ensure that this situation does not develop.
7. Traffic volumes on Barbur (Sheridan to Hamilton) will increase substantially as a result of the project. Assuming the existing network, southbound pm peak-hour traffic on Barbur is projected to be 1,100 vehicles in 1990. This figure is projected to be 3,400 vehicles with the project. This section of highway (particularly the intersection with Hamilton) should be studied in PE to determine if design changes are needed.

The project is also inter-related to a number of other project development activities being undertaken in the area. Every effort should be made to ensure coordination between the South Portland project and the following project activities:

- Development of the Westside Transitway
- Projects planned for Beaverton-Hillsdale Highway
- Terwilliger/South Burlingame Intersection

MSD STAFF CONCLUSION

The project proposed by the city of Portland adequately addresses existing and future problems in the South Portland area. These problems will worsen in the future without corrective action.

MSD staff recommends that the project proceed into preliminary engineering. In addition to the carbon monoxide analysis the following areas should be included for further study as part of PE:

1. The Broadway to Fourth Avenue area
2. Arthur Street area
3. Front Avenue Connections area
4. Ross Island Bridge Ramps area - specifically the Ross Island Bridge and Kelly intersection will cease to be free

flowing. Appropriate alternative designs for this intersection should be considered during preliminary engineering

5. The Barbur Blvd (Sheridan to Hamilton) section and the Barbur and Hamilton intersection should be studied with improvement designs formulated if appropriate

Finally, the project assumes the removal of the existing connections between the Ross Island Bridge and Front Avenue and the removal of Front Avenue between Barbur and Arthur. The removal is to be followed by the redevelopment of the land for housing purposes. Every effort should be made to separate transportation and non-transportation costs to ensure that Interstate Transfer dollars are used for transportation purposes.

FIGURE 1

RELATIVE SIGNIFICANCE OF PROBLEMS ON ROUTES BETWEEN ENTRY POINTS (ON A SCALE OF 10)

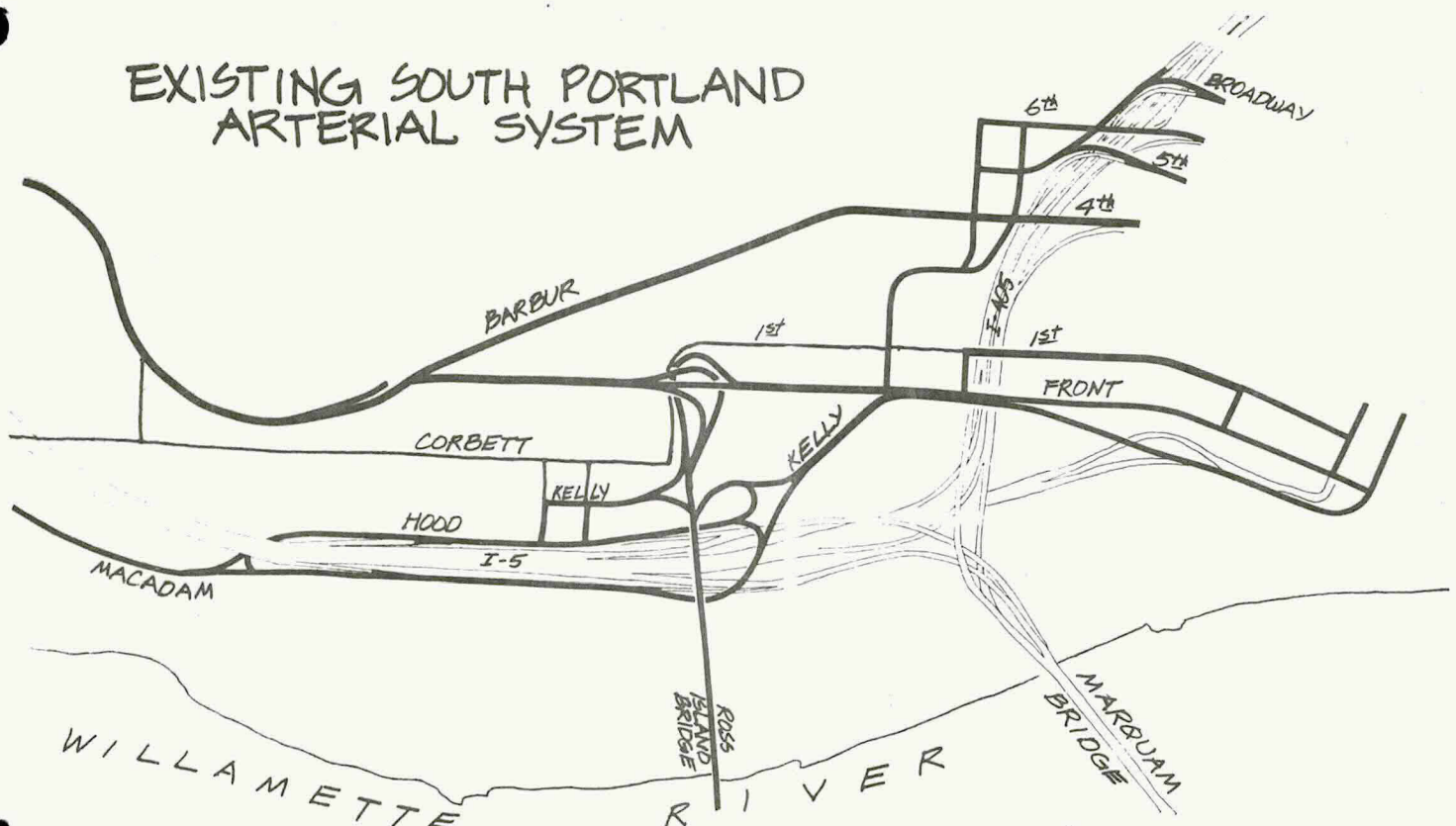
	1 SUNSET	2 I-405	3 4TH-B'WAY	4 FIRST	5 FRONT	6 I-5 NO.	7 R.I. BR.	8 MACAD.	9 I-5 SO.	10 BARBUR	11 TERW.
1 SUNSET	\	-	1	-	-	2	(3)	-	10	2	(3)
2 I-405	-	\	-	-	-	1	(3)	-	7	2	(3)
3 4TH-B'WAY	1	-	\	-	-	1	(7)	(4)	2	2	-
4 FIRST AVE.	-	-	-	\	-	-	-	-	-	-	-
5 FRONT	-	-	-	-	\	-	-	-	(3)	-	-
6 I-5 NO.	5	1	2	-	-	\	-	1	6	-	-
7 R.I. BRIDGE	(2)	(2)	(4)	-	1	-	\	(2)	(2)	-	1
8 MACADAM	-	-	1	-	-	-	(3)	\	-	-	-
9 I-5 SO.	5	2	(3)	-	1	3	(3)	-	\	-	-
10 BARBUR	1	1	(2)	-	-	-	(5)	-	-	\	-
11 TERWILLIGER	(3)	(3)	-	-	-	-	(2)	1	-	-	\

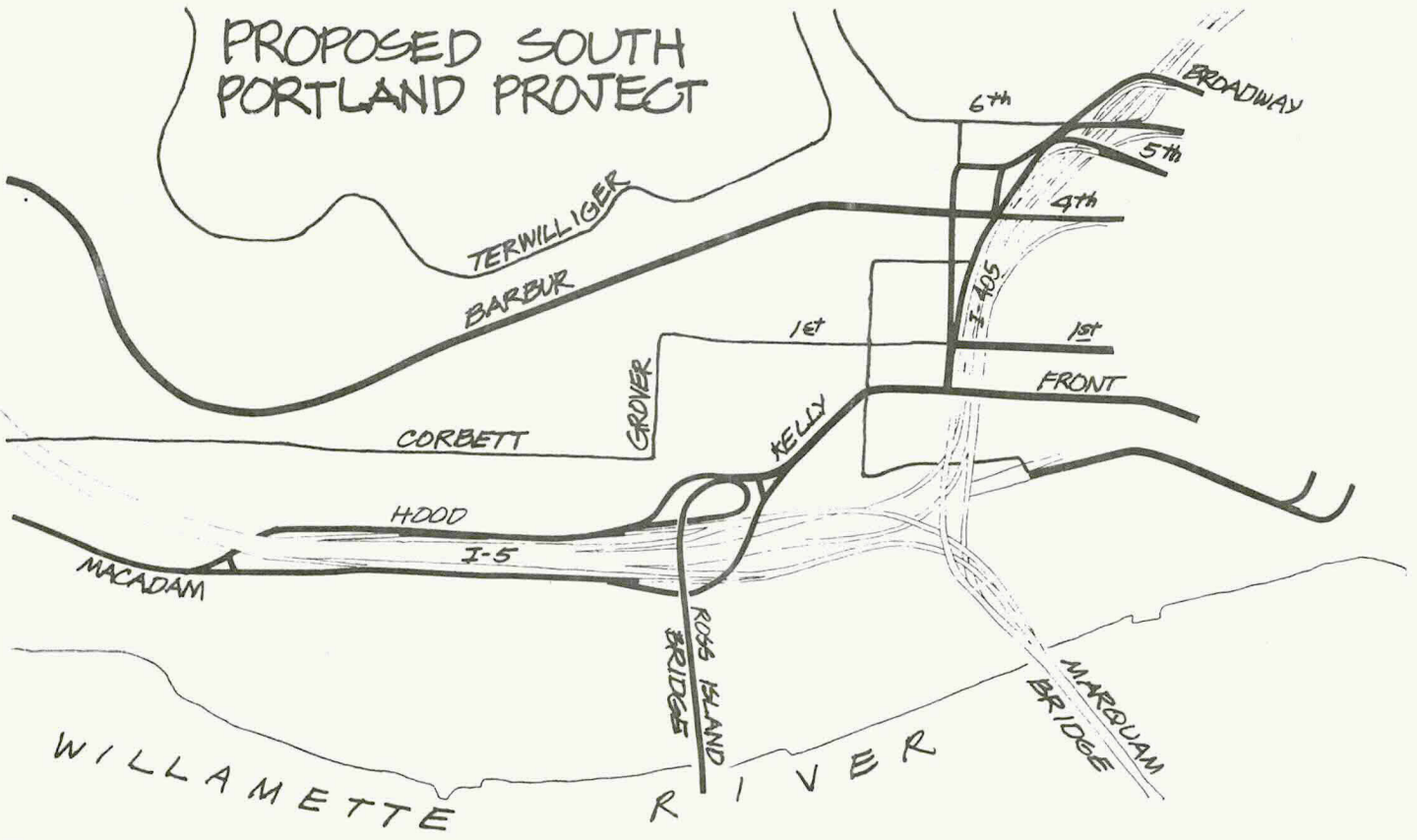
(○) = ROUTES AND PROBLEMS OF PARTICULAR SIGNIFICANCE TO THIS STUDY

SOURCE:

SOUTH PORTLAND CIRCULATION STUDY, TECHNICAL APPENDIX, PAGE B-7

FIGURE 2


EXISTING SOUTH PORTLAND ARTERIAL SYSTEM
BROADWAY
6th
5th
4th
I-405
1st
1st
FRONT
BARBUR
CORBETT
KELLY
KELLY
HOOD
I-5
MACADAM
ROSS ISLAND BRIDGE
MARQUAM BRIDGE
WILLAMETTE RIVER


PROPOSED SOUTH PORTLAND PROJECT
BROADWAY
6th
5th
4th
TERWILLIGER
BARBUR
I-405
1st
1st
FRONT
GROVER
KELLY
CORBETT
HOOD
I-5
MACADAM
ROSS ISLAND BRIDGES
MARQUAM BRIDGE
WILLAMETTE RIVER