Assessment of Community Planning for Mass Transit: Volume 9—Seattle Case Study

February 1976

NTIS order #PB-253687

Volume 9: Seattle Case Study

An Assessment of Community Planning for Mass Transit



UNITED STATES CONGRESS
Office of Technology Assessment

March 1976

OTA-T-24

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PREFACE

This report on urban transportation planning in the Seattle, Washington metropolitan area is one of nine case studies undertaken by the Office of Technology Assessment to provide an information base for an overall assessment of community planning for mass transit.

The findings of the overall study are reported in the summary document, *An Assessment of Community* **Planning for Mass** *Transit,* **which forms the first volume of this series. The assessment was performed at the request of the Committee on Appropriations of the U.S. Senate, on behalf of its Transportation Subcommittee.**

The study was directed by the Office of Technology Assessment's Transportation Program Staff with guidance and review provided by the OTA Urban Mass Transit Advisory Panel. The firms of Skidmore, Owings and Merrill and System Design Concepts, Inc., were contractors for the study. This assessment is a joint effort, identifying different possible points of view but not necessarily reflecting the opinion of any individual.

INTRODUCTION

This report assesses how one of nine major United States metropolitan areas made its decisions about the development or modernization of rail transit.

The assessment of the nine cities attempts to identify the factors that help communities, facing critical technological choices, make wise decisions that are consistent with local and national goals for transit. The study investigates the following issues:

- Are there major barriers to communication and cooperation among governmental agencies involved in transit planning and operating? Do these barriers interfere with making sound decisions?
- Do transit decisions reflect the combined interests of all major public groups, including citizen organizations, trade unions, the business community, and others?
- Does the planning process provide enough information about the advantages and disadvantages of alternative courses of action to provide a solid basis for making decisions ?
- Does the availability or lack of financing, or the conditions under which financing has been provided, unnecessarily limit the range of options that are considered?

The ultimate purpose of the work has been to cast light on those prospective changes in national transit policy and administrative programs which might improve, in different ways and to different extents, the way communities plan mass transit systems. The nine cities were selected to represent the full range of issues that arise at different stages in the overall process of planning and developing a transit system.

San Francisco, for example, has the first regional rail system built in decades, while Denver is planning an automated system, and voters in Seattle have twice said “no” to rail transit funding proposals.

The assessment of transit planning in each of the nine metropolitan areas has been an inquiry into an evolving social process. Consequently, the study results more closely resemble historical analysis than classical technology assessment.

This study employs a set of evaluation guidelines to orient the investigation in the nine metropolitan areas and to provide the basis for comparative judgments about them. The guidelines were derived from issues identified during preliminary visits to the metropolitan areas, a review of Federal requirements for transit planning, and an investigation via the literature into the state-of-the-art in the field.

The evaluation guidelines cover major topics which were investigated during the case assessment process. They deal with the character of the institutional arrangements and the conduct of the technical planning process.

GUIDELINES FOR ASSESSMENT: INSTITUTIONAL CONTEXT

Some of the most significant influences on transit planning are exerted by the organizations responsible for conducting the planning and making the decisions. Three guidelines were used to evaluate the institutional arrangements in the nine metropolitan areas:

- Agencies responsible for various aspects of transit decisionmaking should cooperate effectively in a clearly designated “forum”.
- The participants in this forum should have properly designated decisionmaking authority, and the public should have formal channels for holding decisionmakers accountable for their actions.
- Citizens should participate in the transit planning process from its beginning and should have open lines of communication with decisionmakers.

GUIDELINES FOR ASSESSMENT: TECHNICAL PLANNING PROCESS

The technical planning process provides the information that public officials and their constituents draw upon in making plans and decisions. Four guidelines were used to assess the technical planning process in the nine metropolitan areas:

- Broad, explicit goals and objectives should guide technical planning and decision-making.
- A range of realistic alternative solutions should be developed.
- The evaluation of these alternatives should give balanced consideration to a full range of goals and objectives.
- A practical and flexible plan for financing and implementation should be developed.

During visits to each of the nine metropolitan areas, the study team interviewed the principal representative of the transportation planning institution and other main participants in the local planning process. The visits were supplemented by interviews with UMTA officials in Washington. Pertinent documents—official plans, reports, studies, and other material—were reviewed in each case.

The information thus collected was used in compiling a history of the transit planning process in each case area, organized around key decisions such as the decision to study transit, the selection of a particular transit system, and public ratification of the decision to pay for and build the system. The main political, institutional, financial and technical characteristics affecting the conduct of the planning process were then assessed in light of the evaluation guidelines.

The same set of guidelines used in assessing each case metropolitan area was employed in making a generalized evaluation of the metropolitan experience. The results of the generalized evaluation are summarized in the report, *An Assessment of Community Planning for Mass Transit: Summary Report,* issued by the Office of Technology Assessment in February 1976.

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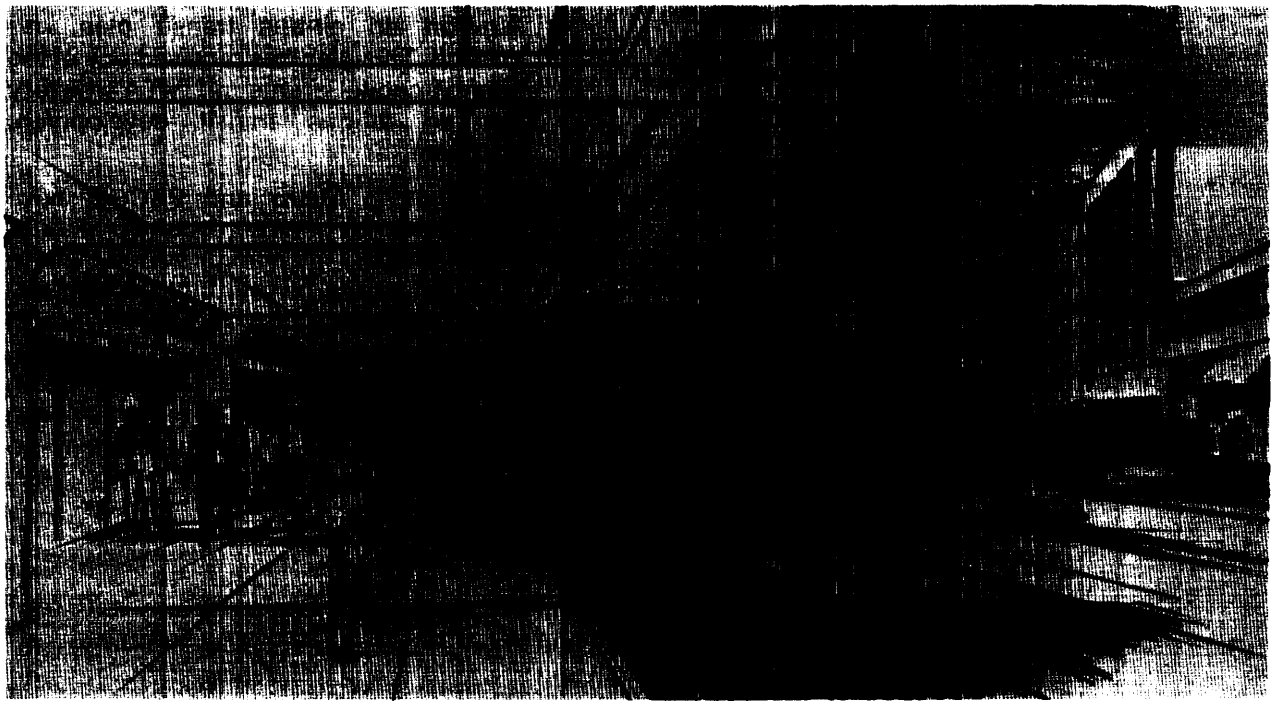
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Summary and Highlights



Bond Issues to build **rail transit in Seattle failed twice before a short-term bus improvement program gained voter approval in 1972**

- **Proposals for rail transit systems in Seattle initially were conceived during a period of economic gain (1965-68). The optimistic growth estimates of this era, combined with the expectation of large amounts of Federal funds and the perceived political necessity of providing rail transit service in several corridors, encouraged the design of extensive transit systems.**
- **Rapid rail transit advocates in Seattle emerged from two groups. Antifreeway forces joined the downtown business interests that had been principally responsible for creating a metropolitan umbrella organization called Municipality of Metropolitan Seattle (Metro). Although Metro was established in 1957, it was not empowered to plan transit until 1967.**
- **Forward Thrust was the most important of a series of extra governmental committees of businessmen and civic leaders that dominated transit decisionmaking until 1970. Forward Thrust advocated rail transit as part of a plan to revitalize Seattle through a coordinated program of capital improvements that included parks, arterial highway improvements, a major league stadium, community facilities, and urban redevelopment proposals. The organization guided the preparation of the two rail transit plans taken to voters in 1968 and 1970.**
- **The 1968 proposal for a 47-mile, $385 million system received 51 percent of the vote in referendum that year but failed to gain the 60 percent margin needed for passage, partly because of its high cost**

with no assurance that the full Federal share would be available.

. In 1970, a dismal economic situation caused by massive layoffs at Boeing led to the defeat of the second and even more expensive rail proposal (49 miles, $440 million).

- Critics of Forward Thrust complained that it was an elite organization not accountable to the voters and that its transit proposals favored downtown business interests.

- Since Forward Thrust disbanded in 1970, the forum for transit planning has been dominated by Metro and the Puget Sound Council of Governments (PSCOG). However, the city of Seattle continues to exert an important influence.

- In 1972, under the threat of complete collapse of Seattle's bus system, a tax to support an all-bus transit plan was passed. This plan has received one of the largest capital grants in UMTA's history for an all-bus transit development program.

- Since 1972, Metro and PSCOG have competed for major responsibilities in area transit planning. Metro, more oriented to the central city and directly responsible for transit operations, is most concerned with choice of technology. PSCOG, whose jurisdiction is a broader, four-county region, is concerned with the relationship of a transit system to regionwide land use.

Metropolitan Setting[1]

GENERAL CHARACTERISTICS

Seattle is the largest metropolitan area in the Pacific Northwest. Its SMSA population of 1,421,869 in 1970 represents 41.7 percent of the total State population. The SMSA's population increased 28 percent from 1960 to 1970. The suburban ring increased by 39 percent to 894,038, and of the city of Seattle decreased 4.7 percent to a population of 530,830 during the same period (see Figure 2).

Seattle is a relatively low-density city comprised largely of single-family houses. Seattle's more than half-million population comprised some 37.3 percent of the total SMSA population in 1970, in comparison to its SMSA share of 50.3 percent in 1960. In 1970, with a center city density of 6,350 people per square mile, Seattle ranked sixth among the case study areas in density. Employment in the central business district in 1970 was estimated to be 60,000, constituting only 11 percent of the total SMSA work force.

Although the Seattle CBD is the focal point of the region, several other centers to the south, north, and east have developed into significant employment areas. The Duwamish Valley industrial area, several miles to the south, has almost as many jobs as the CBD. To the north, the University District is the third largest employment center in the Seattle area. To the east, across Lake Washington, the Bellevue CBD is developing into a sizable employment center that is expected to increase in significance as the area to the east of the lake continues to attract much of the Seattle region's population growth.

Seattle is the retail trade and office center of the Northwest and a trading center serving Alaska and the Orient. Although shipbuilding and forest products are important industries in the area, the leading employer is the Boeing Corporation, the world's largest producer of commercial jets. The economy of Seattle has been heavily dependent on Boeing, and it is sensitive to shifts in Boeing's employment. Boeing's work force totaled 60,000 in 1966, a figure equal to the entire 1970 CBD employment. It increased to 93,000 in 1967, and then to a high of 101,000 in 1969 before plummeting to 46,800 by January 1971.2

The fluctuation in the aircraft manufacturing industry accounts for the wide variations in population forecasts for the area in the past 7 years. In 1967, when Boeing was experiencing very impressive growth, the population of King County alone was expected to reach 1,415,000 by 1975. In current forecasts a 9 percent average growth in King County is anticipated to project a population of 1,522,100 in 1980, and 1,690,000 by 1990.

EXISTING PASSENGER TRANSPORTATION SYSTEM

Existing growth patterns and transportation routes have been strongly influenced by the region's geographic features. Central Seattle is located on a series of hills rising from Elliott Bay, one of the metropolitan area's three main water bodies. For a long time, because Seattle was constrained on the east and west by water barriers, it grew primarily to the north and south. Expansion of the city to the east followed the construction of two floating bridges across Lake Washington. Upon completion of the first four-lane bridge in 1940, Mercer Island's population increased to 21,000. Bellevue's population grew in 10 years from 12,809 to 61,102 after the Evergreen Point Floating Toll Bridge **was** completed in 1960.

Four major highway routes run north-south and two run east-west. The heaviest traffic volumes are on the north-south interstate highway routes, I-5 and I-405. Running from Portland, Oreg., to the Canadian border, I-5 links Seattle to Washington's most important western cities, including Olympia, Tacoma, Everett, and Bellingham. Route I-405 branches off I-5 south of Seattle, runs parallel to I-5

1 See Figure 1, pages 14 and 15.

2 Frank Colcord, Urban Transportation Decision-Making, Seattle Case Study, DOT-OS-30036, October 1974, pp. 11-12.

LAND AREA (1970)
(square miles)

Center City	*83.6*
Suburban Ring	4,142.4
Entire SMSA	4,226

POPULATION

	Suburban Ring	Center City
1960	550,126	557,087
1970	894,038	530,831

DENSITY
(population/Square mile)

	Suburban Ring	Center City
1960	132	6,664
1970	216	6,350

POPULATION
Percent Change 1960-1970

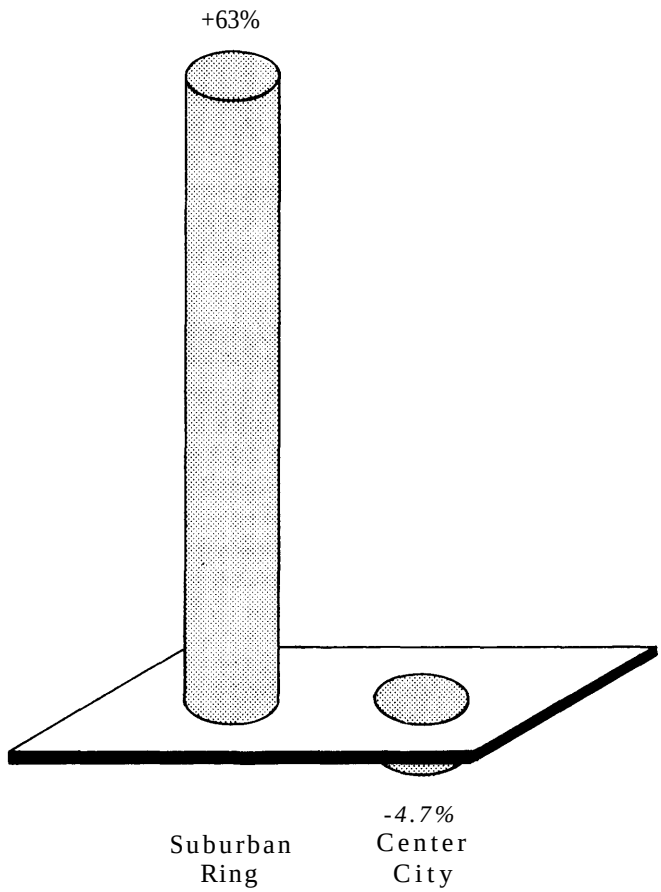


FIGURE 2: SEATTLE METROPOLITAN CHARACTERISTICS

Source: Urban Transportation Fact Book, American Institute of Planners, and the Motor Vehicle Manufacturers Association of the U.S., Inc., 1974.

A Standard Metropolitan Statistical Area (SMSA) includes a center city (or cities) , usually with a population of at least 50,000, plus adjacent counties or other political divisions that are economically and socially integrated with the central area.

on the east shore of Lake Washington, then links back up with I-5 north of Seattle. The other two north-south routes are State Highway 99, an elevated freeway along the western edge of the CBD, and State Highway 513, which serves the area around the University of Washington. The two major east-west routes which cross Lake Washington, the two floating bridges, are I-90 and State Highway 520. Proposals to increase the capacity of the I-90 corridor, part of the original interstate program, are still embroiled in controversy. Several schemes are still under consideration for providing transitways for bus or rail on one of the bridges, which would be reconstructed for this purpose.

Seattle's transit system dates from 1884, when construction began on the first horse-drawn street railway. By **1900, Seattle** had over 70 miles of interurban railway. The system had become dilapidated by 1939, had a brief upsurge during World War 11 as a result of gas rationing, but spiraled down after that through the 1970's. The Seattle Transit Commission reduced services and raised fares to avoid losses, but by the 1960's the system required local and State subsidies. As a result of the 1972 transit tax referendum, the operation and planning of both the city and suburban transit services were turned over to Metro in 1973. At that time, the city's equipment consisted of 370 motor buses, about 19 years old on the average, and 53 electric trolley buses averaging 29.6 years old. Seattle is now buying modern equipment and is expanding its bus system to serve areas that recently have gained in population. Table 1 shows total Federal grants to support Seattle transit prior to May 1975. Figure 3 shows transit ridership and revenue patterns since 1960.

TABLE I.—Federal Assistance to Seattle Transit Programs From F.Y. 1962 to May 31, 1975

Type of Assistance	Federal Share	Total Costs
Capital Grants	$56,700,000	$139,137,000
Technical Studies	3,562,000	6,521,000
TOTAL	60,262,000	145,658,000

Source Urban Mass Transportation Adminstration

A monorail system, built as part of the Seattle World's Fair of 1962, links the CBD with the World's Fair site, now an amusement and cultural park called Seattle Center. The monorail provides a shuttle service between the two termini but, because of its technological limitations, has received little attention in the rapid transit planning process. Two additional transit demonstration programs, which have been highly successful, should be noted. In **1970,** the "Blue Streak" express bus service was initiated, in which passengers from local bus routes are collected and then given express bus service on the center lanes of I-5 with exclusive bus ramps into the CBD. In 1973, a free-fare system was instituted whereby passengers could ride anywhere in the CBD free of charge.

Ferry service is provided across Elliott Bay and Puget Sound at Bremerton, Winslow, Vashon Island, and Kitsap County. In 1965, UMTA financial assistance was obtained to purchase four new ferry boats.

In 1970,14.6 percent of the employed center city residents used the bus system, as compared to 2.9 percent of the employed suburban ring residents. Also in 1970, 56 percent of the work trips by all modes were to center city destinations, while 44 percent were to suburban destinations (see Figure 4).

TRANSPORTATION PLANNING INSTITUTIONS

The principal institutions involved in transit planning in the Seattle region are the Municipality of Metropolitan Seattle (Metro), now the transit operator, and the Puget Sound Council of Governments (PSCOG), until recently called the Puget Sound Governmental Conference (PSGC). The city and county governments and the State Highway Commission also are active participants in the planning process,

TABLE 2.—Federally Recognized Regional Agencies

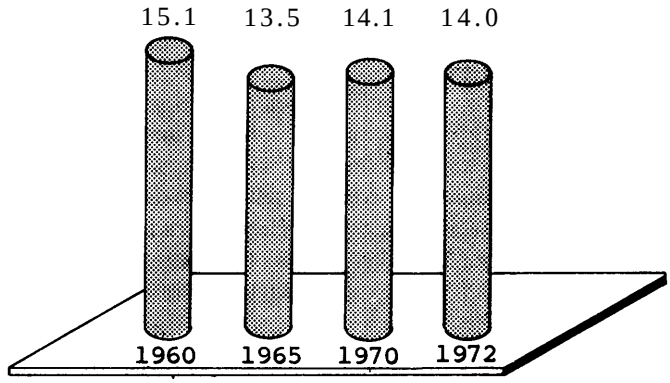
Designation	Agency
A-95	Puget Sound Council of Governments
MPO	Puget Sound Council of Governments

Municipality of Metropolitan Seattle (Metro)

State legislation enacted in 1957 permitted Washington cities and counties in urban areas to

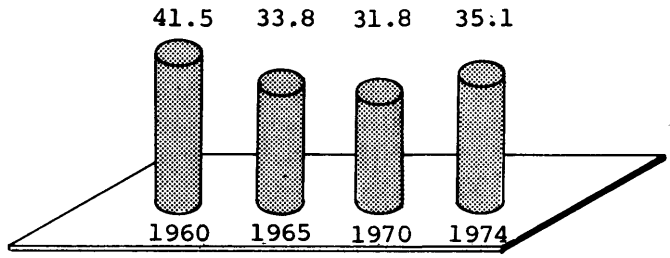
VEHICLE MILES OPERATED
(millions of miles)

Peak Year =1960 (15.1 million miles)
L0w Year= 1966 (13.5 million miles)



REVENUE PASSENGERS
(millions of passengers)

Peak Year =1962 (43.6 million riders)
Low Year =1972 (29.2 million riders)



NET OPERATING REVENUE
(millions of dollars)

Peak Year =1962 ($873,000)
Low Year =1974(-$17,643,000)

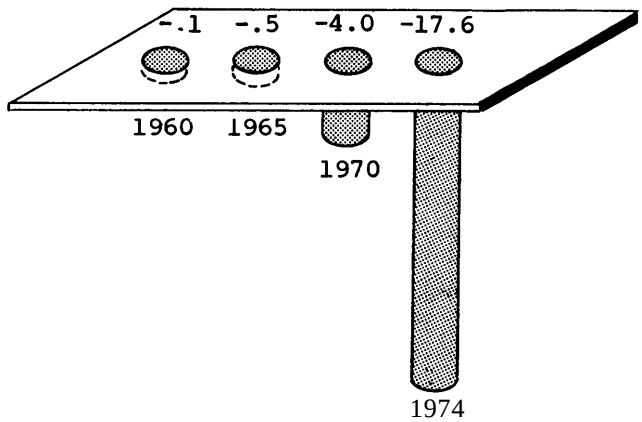
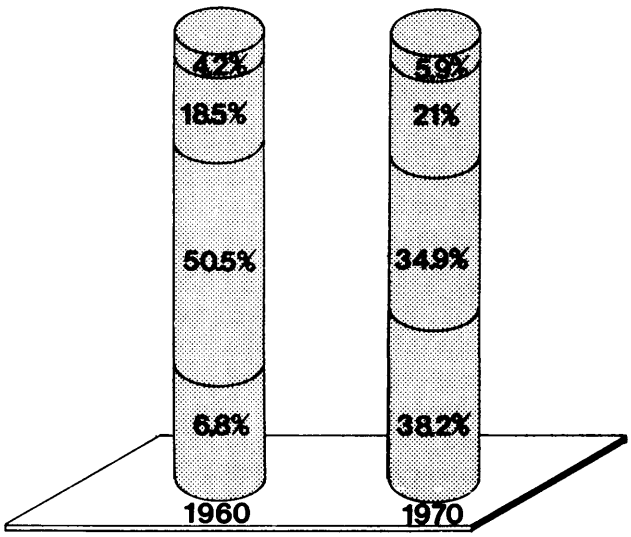


FIGURE 3: SEATTLE-TRANSIT OPERATIONS 1960-1974

No data on Seattle transit operations were reported in 1973; no vehicle miles data have been reported since 1972. The 1974 operating deficit was estimated by an official of the Municipality of Metropolitan Seattle in March 1975.
Source: American Public Transit Association records for the Seattle Transit Commission and the Municipality of Metropolitan Seattle (Metro).

WORK TRIP DISTRIBUTION



WORK TRIP MODE

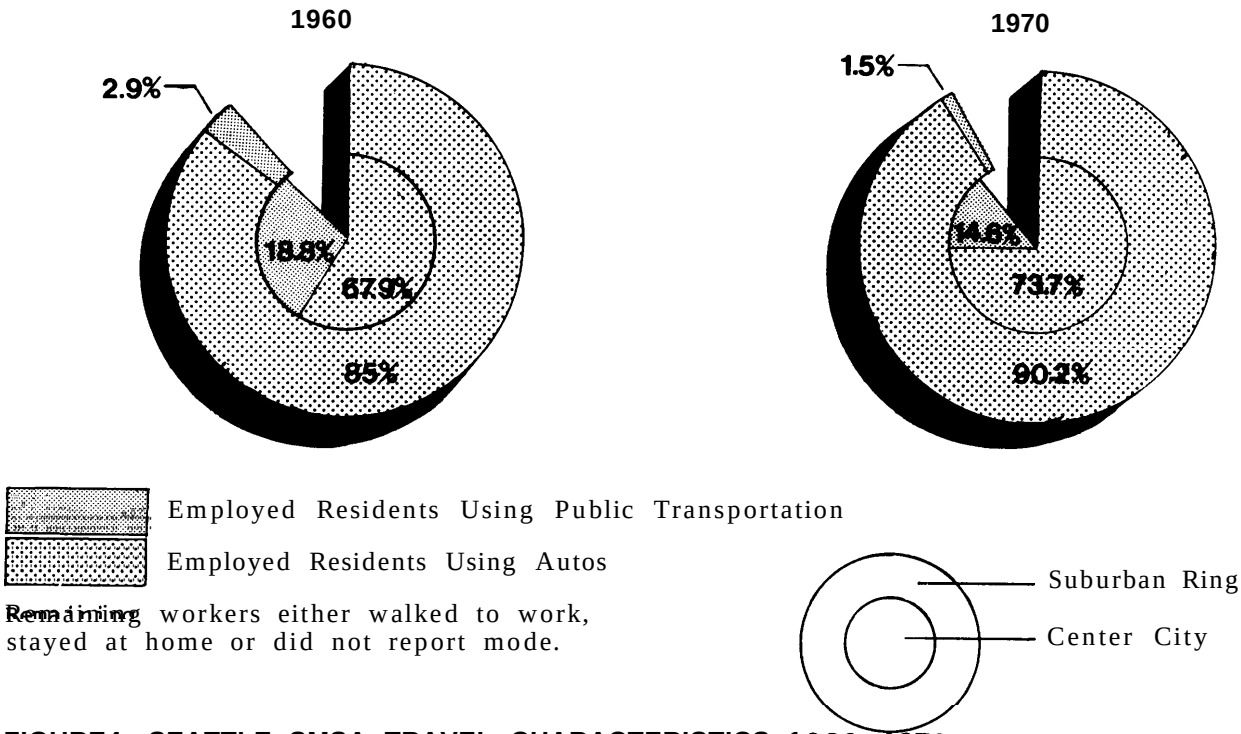


FIGURE4: SEATTLE SMSA TRAVEL CHARACTERISTICS 1960–1970

Source: Urban Transportation Fact Book, American Institute of Planners, and the Motor Vehicle Manufacturers Assocaition of the U.S., Inc., 1974.

A Standard Metropolitan Statistical Area (SMSA) includes a center city (or cities) , usually with a population of at least 50,000, plus adjacent counties or other political divisions that are economically and socially integrated with the central area.

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establish metropolitan municipal corporations, modeled after Toronto's, with authority over solid waste disposal, parks and recreation, metropolitan planning, water supply, and transportation matters—subject to specific local approvals. In a referendum in 1958, Metro was established as a single-function agency responsible for sewage control and water-related functions. It is governed by a 36-member council comprised of key elected officials of Seattle and King County, as well as representatives of may of the other cities and unincorporated areas of King County.

Metro received approval from the State legislature to plan for transit in spring 1967. On June 12, 1967, it entered into an agreement with DeLeuw, Cather & Company for the provision of consulting services to supplement the transit study already underway for the Puget Sound Governmental Conference. The October 1967 study report recommended the rail plan that was defeated by the voters on February 13, 1968. The very similar plan that was defeated in 1970 was prepared under the auspices of both Metro and the city of Seattle. Not until 1972 did voters empower Metro to levy a .3 percent sales tax to finance the purchase of the city-owned transit system and a private suburban company, making Metro the sole transit operator in the area.

Puget Sound Council of Governments (PSCOG)

Originally created in 1957 as the Puget Sound Governmental Conference (PSGC), PSCOG is a loose association of the local governments in the Seattle metropolitan region. PSCOG's jurisdiction is much broader than Metro's, encompassing the four counties of King, Kitsap, Pierce, Snohomish, and both the Seattle-Everett and the Tacoma SMSA's. It was established to undertake studies and make recommendations to its member counties and cities on a range of areawide concerns.

Since it shares the weakness of most COG's of not having the power to tax, PSCOG depends on voluntary contributions of local member governments and upon State and Federal grants. Its limited strength has derived from a series of Federal acts that have given it various review and coordination responsibilities. In 1963, it became the regional 3-C agency with responsibility for carrying out the planning requirements of the Federal-Aid Highway Act of 1962; and it recently was designated the Metropolitan Planning Organization (MPO). [3] PSCOG also is the region's A-95 review agency.[4]

King County

In 1970, King county's population of 1,156,633 represented 81.3 percent of the SMSA population. The county encompasses all of the city of Seattle and most of the urbanized portion of the region.

In 1969, a new charter that concentrated authority in the chief executive substantially increased the county's powers. Responsibility for county transportation planning is within the Long-Range Planning Division of the Department of Budget and Program Planning. The county's Transportation Planning Section is working with PSGC to update its highway plan, expanding it in accordance with the PSGC 1990 plan. However, the county government has limited power in municipal parts of the county and has delegated certain powers to Metro.

City of Seattle

Although the city's population declined only 4.7 percent between 1960 and 1970, its position in relation to the rest of the SMSA dropped significantly due to the large amount of growth elsewhere in the SMSA. Seattle is structurally a "weak mayor" form of city government with most powers resting in the nine-member City Council.

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[3] **The Urban Mass Transportation Administration and the Federal Highway Administration require Governors to designate a Metropolitan Planning Organization (MPO) in each area to carry out the "continuing, comprehensive transportation planning process . . . carried out cooperatively . . ." (the "3-C" process) mandated by the Federal-Aid Highway Act of** 1962 **and the Urban Mass Transportation Assistance Act of** 1974. **According to joint UMTA-FHWA regulations published in September 1975,** MPO's must prepare or **endorse** (1) a long-**range general transportation plan, including a separate plan** for improvements **in management of the existing transportation system; (2) an annually updated list of specific projects, called the Transportation Improvement Program** (TIP), to implement portions of **the long-range plan; and (3) a multiyear planning prospectus supplemented by annual unified planning work programs.**

[4] **The Office of Management and Budget Circular** A-95 requires **one agency in each region to be empowered to review all proposals for Federal funds from agencies in that region. Circular A-95 replaced Circular** A-82, **which was created to implement Section** 204 **of the Demonstration Cities and Metropolitan Development Act of** 1966 (42 **U.S.C. 3301).**

The position of the chief executive has strengthened in recent years due to Mayor James D. Braman's skill in dealing with the Council during his term of office in 1964-69, and due to 1967 State legislation removing the budget-making power from the Council and placing it in the mayor's office.

The city has responsibility for traffic, parking, and for developing and maintaining city streets. It also has been involved in highway planning in cooperation with the State. Starting in 1914, the city had become increasingly involved in regulating and later subsidizing services until 1973, when the Seattle transit system was turned over to Metro.

Washington State Highway Department (WSHD)

The WSHD was established in 1951 under a highway commission of five members who are appointed by the Governor for overlapping terms. The Commissioners, in turn, appoint the director of the Washington State Highway Department. The WSHD has minimal responsibilities for public transit, although its Seattle area studies have included transit elements in major interstate projects, notably I-5 and I-90. There has been considerable pressure for some years to establish a State department of transportation.

Critical History of Rapid Transit Planning and Decisionmaking

Attempts by the city of Seattle to incorporate rail rapid transit into pending highway plans began in the 1950's. But the concept of a regionwide rail system developed in another forum as a component part of the business-led movement to regionalize municipal services and improve the physical infrastructure of the city.

Transit plans for the Seattle area were proposed in 1967, 1970, and 1972. The first two plans, which were financed by property tax bond issues, failed in **1968 and 1970 to gain the 60 percent voter approval required** for adoption. The financing for a short-range bus plan involved the use of a new State excise tax on automobiles matched by a local sales tax. This plan, which required only a simple majority approval, was adopted in 1972.

While this short-range plan for an all-bus system is now being implemented, debate continues over the appropriate technology for the long-term development of transit in the Seattle region.

EARLY HISTORY OF TRANSIT IN SEATTLE

Seattle is a relatively young city; the first settlers arrived in Seattle in 1852. By 1884, a horse-drawn street railway had been constructed, and the first electric cable car began operating in 1889. In the decade that followed, Stone and Webster, a Boston engineering firm and owner of the largest electric power company in the Seattle area, began to integrate the nearly 70 miles of track owned by several transit companies into a consolidated interurban rail system.

The city of Seattle became involved in transit in 1914 when it began construction of two streetcar lines. During the First World War, problems with transit operations led the city to initiate negotiations to purchase the system, and in 1918 the voters approved city purchase of all portions of the system within its border. The railway system continued to have financial difficulties. A 1926 proposal by the City Planning Commission to build a rail transit system was ignored.

In 1939, the three-member Seattle Transit Commission was created to operate and improve the system, which had fallen into dilapidated condition and financial distress. As happened elsewhere in the country, transit ridership increased during the World War II years but then fell off again.

TRANSPORTATION PLANNING IN THE 1950's

The city made a number of unsuccessful attempts during the 1950's to incorporate provisions for rail rapid transit into pending highway plans. To resolve the ensuing controversy, the city, county, and State agreed to conduct a comprehensive transportation study; and by the end of the decade they established the Puget Sound Regional Transportation Committee to define the scope of the study.

The subject of the first major debate in the early 1950's was the configuration of Seattle's Central Freeway, which the Washington State Toll Bridge Authority was authorized to construct as a toll facility in 1953. During the preliminary design stages, the Seattle Transit Commission suggested incorporating a 50-foot median in the design to allow for the future development of rail rapid transits This request was denied by the Toll Bridge Authority in' 1955.

In 1956, when the responsibility for the construction of the Central Freeway was transferred to the Washington State Highway Commission, the Transit Commission renewed its efforts to have rail transit facilities incorporated in the Central Freeway design, this time with the support of the City of Seattle Planning Commission. Both the transit commission and planning commission issued reports in 1957 recommending that the

[5] Clifford Kurtzweg, *Rapid Transit Development in Seattle,* unpublished paper prepared for the University of Washington, June 1966, p. 5.

freeway design should provide space for rail that could be used by express buses until the rail system was constructed.

In early 1957, because of the controversy over rapid transit on the Central Freeway, the Mayor of Seattle appointed a committee to consider the problem. The committee—consisting of the Seattle City Engineer, the Director of Planning, the Seattle Transit General Manager, and representatives of the Chamber of Commerce, the Municipal League of Seattle, and King County—concluded that evidence of the need for rail transit was insufficient to merit a delay in freeway construction. b

Although rapid transit had lost the battle to gain a place in the freeway proposal, the controversy mobilized public interest in a comprehensive transportation study. In October 1957, the Puget Sound Regional Transportation Committee was formed, with representatives from the State Highway Commission, the city of Seattle, King County, and the Seattle Transit Commission. One year later, the committee employed Parsons, Brinckerhoff, Hall and MacDonald to conduct a survey to determine the scope and procedures for the comprehensive transportation study. In 1960, as an outcome of this work, the Puget Sound Regional Transportation Study was formed.

EFFORTS TO ACHIEVE METROPOLITAN GOVERNMENT IN THE 1950's

Advocates of rail transit in Seattle emerged in two different forums. Transit advocates were involved with the antihighway forces during the freeway debates. In addition, mass transit was a central concern of those who worked to create an umbrella organization with authority throughout the Seattle metropolitan region. The momentum behind this effort was led by James Ellis, a young lawyer who worked through the Municipal League of Seattle in the early 1950's. Ellis' concern focused on the inadequacy of weak and fragmented local governments to solve transportation problems along with other areawide problems involving sewage disposal, air quality, and the adequacy of recreational and cultural facilities. Ellis gave up his attempt to update the King County government after unsuccessful efforts at reform. [7] The solution Ellis proposed was a countywide metropolitan council modeled after Toronto's Metro.

In 1956, the mayor of Seattle and the Board of King County Commissioners appointed the Metropolitan Problems Advisory Committee, chaired by Jim Ellis. This group recommended to the State legislature that it pass enabling legislation to permit cities and counties in urban areas to establish metropolitan councils. In 1957, the legislature passed the Metropolitan Municipal Corporation Act. The act stated that:

> The people of the populous areas in the State . . . need to obtain . . . essential services not adequately provided by existing agencies of local government. The growth of urban populations and the movement of people into suburban areas has created problems of sewage and garbage disposal, water supply, transportation, planning, parks and parkways which extend beyond the boundaries of cities, counties, and special districts. For reasons of topography, location and movement of population, and land conditions and development, one or more of these problems cannot be adequately met by the individual cities, counties, and districts of any metropolitan areas.
>
> It is the purpose of this act to enable cities and counties to act jointly to meet these common problems in order that the proper growth and development may be assured and the health and welfare of the people residing therein may be secured. [8]

Pursuant to the State legislation, a major promotional campaign presenting the Metro concept to the people was directed by a new citizens' organization, the Metropolitan Council Action Committee, again organized by Jim Ellis. The measure lost by only 16,000 votes (out of an 187,000 vote total in the election of March 1958). [9] Although it had gained voter approval within the city of Seattle, the measure was defeated because it failed to pass outside the city.

Finally, later in the same year, the voters approved a stripped-down Metro as a special purpose agency responsible for sewage treatment and water supply. Thus, the Municipality of

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[6] Ibid., p. 6.

[7] Robert Gogerty and David Whitlow, *An Analysis of Forward Thrust*, unpublished paper, 1967, p. 5.

[8] Colcord, op. cit., pp. 70, 71.

[9] Gogerty and Whitlow, op. cit., p. 6.

Metropolitan Seattle was created which, with voter approval, had the potential to take on other critical areawide problems. This potential was reinforced when Metro gained national as well as local recognition for cleaning up Lake Washington.

While Metro was being created in 1957, so also was the Puget Sound Governmental Conference (PSGC). The PSGC was created by the elected officials of King, Kitsap, Pierce, and Snohomish counties to serve as a purely advisory organization charged with coordinating land use planning, undertaking studies of areawide problems, and making recommendations to member counties and cities.

TRANSPORTATION PLANNING BETWEEN 1960 and 1966

While the genesis of rail transit plans and the movement toward metropolitan-scale improvements occurred in the 1950's, it was during the 1960's that a regionwide rail transit system was first planned, designed, and taken to the voters.

As noted previously, the principal metropolitan transportation planning agency in Seattle at the beginning of this period was the Puget Sound Regional Transportation Study (PSRTS). Founded in 1960 by the Washington State Highway Commission in cooperation with local governments in the four-county Seattle metropolitan area, PSRTS was one of the Nation's first large-scale metropolitan transportation and land use planning agencies; most large urban regions subsequently established such programs as a result of the Federal-Aid Highway Act of 1962 and the comprehensive planning assistance program administered by HUD (then HHFA). PSRTS was responsible for an examination of the existing transit system to determine potential rail rapid transit corridors and to estimate potential patronage and construction costs.[10]

John Mladinov became the director of the Puget Sound Study in 1960. In an interview, he reported that immediately after his appointment a delegation of the Municipal League called upon him to request that a rail rapid transit system be studied, and that it be considered a part of any basic transportation network. The League further requested that any rail system be limited to the boundaries established for Metro, which included King County and Seattle only. Mladinov refused both requests, insisting that the form and extent of any rail proposal would have to be justified by PSRTS' analysis.

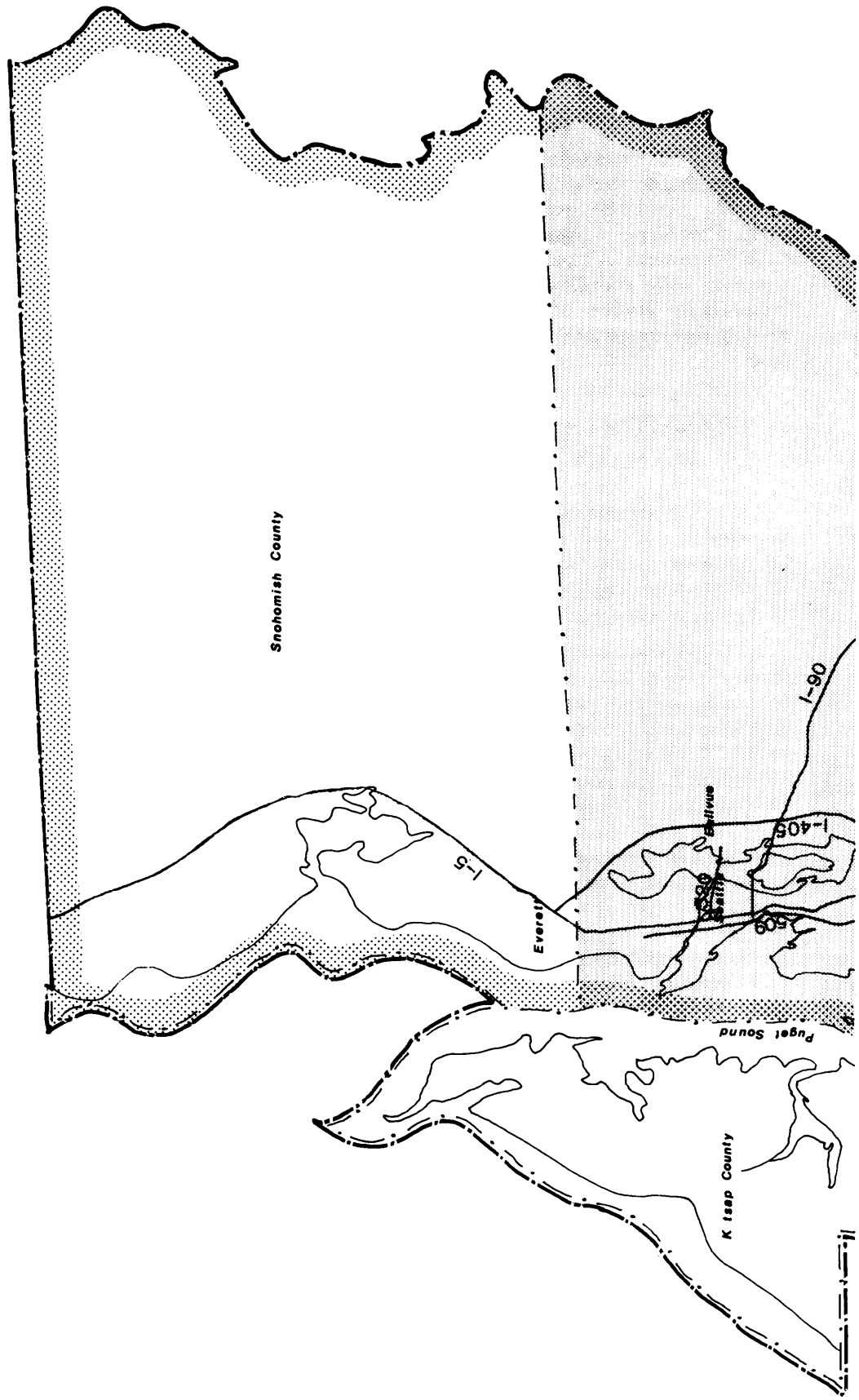
In October 1961, another citizens' committee, the Metropolitan Transportation Committee, was appointed to determine the best means for providing rapid transit in the metropolitan area.[11] The committee, which included James Ellis, concluded that Metro was the appropriate agency to perform the transit function. As a result, in February 1962 a promotional committee was formed called the Citizens' Committee for Metro Transit. The Citizens' Committee sought to get approval from Metro to prepare a rapid transit plan and financial program to present to the voters. In September 1962, despite an intense campaign, the effort failed. This time the proposal was supported by the suburbs but failed to get a majority of the city's votes.

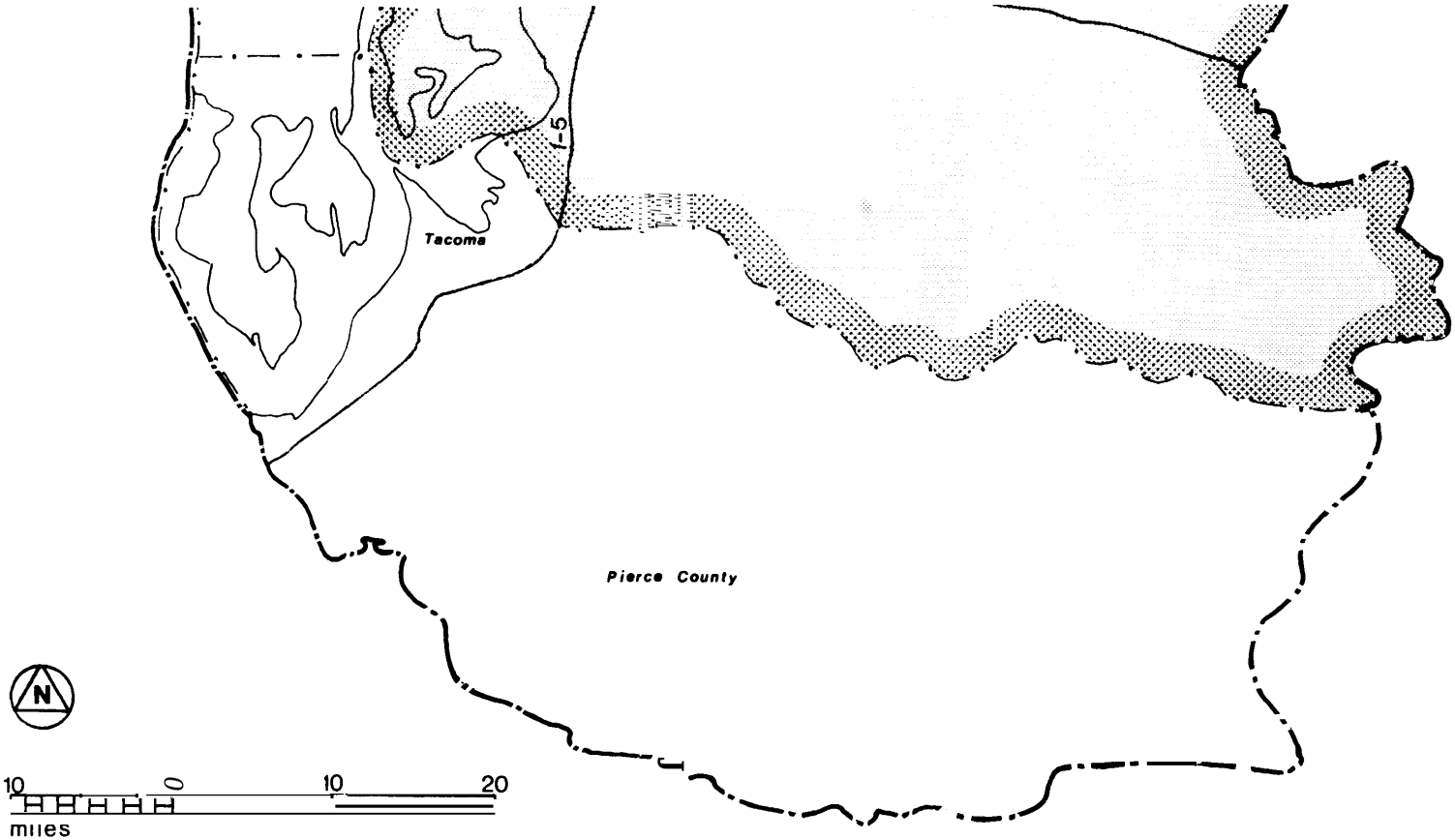
City leaders, who were dissatisfied with PSRTS' automobile-oriented approach to transportation planning, began a parallel planning activity for rail rapid transit, initially through the auspices of the Seattle Transit Commission. The city strongly favored the engineering firm of parsons, Brinckerhoff, Quade and Douglas (PBQD), one of the principal firms involved in planning the BART system, However, the Puget Sound Governmental Conference, which was to put up the money, decided it would select a consultant by competition. Although PBQD was among the four finalists, it lost its lead position, and DeLeuw, Cather & Company was selected. When DeLeuw, Cather was authorized to begin its study in June 1964, the area it considered was the same as that being considered by PSRTS. Much of the data gathered by PSRTS was used in the DeLeuw, Cather transit study.

During this period, the leading force for rail transit within City Hall was Ed Divine, an administrative assistant to Mayor Gordon Clinton and then to Mayor James D. Braman, who succeeded Clinton in 1964. Prior to becoming mayor, as a member of the City Council and chairman of its Finance Committee, Braman was reported to oppose rail transit on the grounds that it was too expensive. Ed Divine is given credit for persuading Braman to change his position radically

10 Kurtzweg, op. cit., p. 11.

11 Colcord, op. cit., p. 83.


Snohomish County
I-90
I-405
I-5
Everett
Bellevue
Seattle
509
Puget Sound
Kitsap County



G 1: SEATTLE METROPOLITAN R□

Puget Sound Council of Governments

Municipality of Metropolitan Seattle

SMSA Bo nd

County Boundary

Major Highways

after he became mayor. Braman became a strong, open, and ardent advocate for rail transit.

Another event changed the national context for mass transit. The Urban Mass Transportation Act of 1964 allowed two-thirds of capital financing of transit projects to be allocated from Federal funds. (Prior to this, Federal grants had been available only for transit demonstration projects.)

In November 1964, the first of DeLeuw, Cather's two interim reports was issued. The report recommended that the new I-90 Lake Washington bridge be designed to provide for future rail transit facilities. This recommendation was adopted by the PSGC and transmitted to the Washington State Highway Department.[12] DeLeuw, Cather's second report, the Interim *Report* to *the Puget Sound Governmental Conference on Feasibility of Rapid Transit Operation within the Seattle Area,* was submitted in November 1965. The report strongly recommended the construction of a two-line rail rapid transit facility connecting the central business district to the northeast portion of the city and to Bellevue. The plan included a regional area transit plan to meet the Seattle area's transit needs until 1985 and a staged construction program.

A 13-member Rapid Transit Advisory Committee headed by James Ellis, which was appointed by Mayor Braman on October 18, 1965, endorsed the DeLeuw, Cather recommendations in a statement transmitted to the Mayor on November 1, 1965.13

Several months after the publication of DeLeuw, Cather's reports, the Puget Sound Regional Transportation Study summary report was released. This report concluded that no strong recommendation could be made for rapid transit. An analysis of the reasons for the difference in the study findings was summarized by Clifford Kurtzweg in a paper submitted to the University of Washington in June 1966:

> Several basic concepts account for the failure of PSRTS to find rapid transit feasible in the Seattle area. First the PSRTS analysis assumes that the development of rapid transit corridors does not significantly change land use patterns or densities. Second, the PSRTS study assumes that increasing the amenities of transit service would not greatly increase patronage. Third, the PSRTS study shows no definite economic advantage to a rail transit system. DeLeuw, Cather and Company in their analysis of rail transit feasibility assumes that the improved system will attract 8 percent more passengers than the present bus system and that development within the rail transit corridor would increase patronage by an additional 15.0 percent. Further, DeLeuw, Cather, and Company lists decreases in traffic congestion, reduction of air pollution, reduction of parking demand in the CBD, more efficient use of right-of-way, and increases in land values along the transit corridors **as** being benefits of rail transit instead of depending on strictly dollar-cost economics for justification. Basically the conflict of the two studies reduces to a conflict between highway-oriented values and transit-oriented values.[14]

Seattle newspapers carried a number of articles expressing the views of PSRTS Director John Mladinov. He criticized the DeLeuw, Cather plan and charged that the study director, Israel Gilboa, was prejudiced in favor of rail transit and that DeLeuw, Cather's analyses and benefit-cost evaluations were skewed to favor a rail plan. The disagreement between the two factions resulted in Mladinov's leaving the area, largely due to political pressure from the city government.

THE CREATION OF FORWARD THRUST

In the same month that the DeLeuw, Cather interim report was published, James Ellis called for the creation of "Forward Thrust." Ellis, the force behind Metro and other metropolitan improvement organizations, called for a coordinated program to finance areawide capital improvements in a speech on November 3, 1965, to the Seattle Rotary Club.[15]

Ellis suggested that there were three physical conditions necessary for the center city to perform its functions successfully: (1) it must have a high density of activities, (2) it must be attractive, with

12 Kurtzweg, op. cit., p. 12.

13 Ibid., pp. 15, 16.

14 Ibid., pp. 14, 15.

15 James R. Ellis, "Transportation and the Shape of the City," November 3, 1965, *Selected Speeches on Forward Thrust and February 13, 1968 Election Results, 1965-68,* p. 2.

open plazas and easy pedestrian access to all facilities, and (3) there must be the capacity to move large numbers of commuters during peak hours.[16]

Ellis predicted that "on-street" transportation would not be able to meet the requirement of Seattle's core area:

> The only pattern now known which permits both open space and dense development while moving large peak-hour loads is the use of high-rise structures and some form of grade separated public transportation to supplement streets and highways. Rapid transit is the essential link in a balanced transportation system which is missing in Seattle. [17]

Ellis stressed that rapid transit is only part of a bigger picture:

> Transportation is only one of the physical elements which shape a city. To achieve a satisfactory total design the relationship between all of the shaping forces must be recognized. Transportation facilities become a more useful tool for urban design if they are integrated into the planning of other public facilities and private developments.
>
> By reducing parking requirements public transportation may free downtown space for a plaza and this plaza in turn may be additionally enjoyable if designed in conjunction with a transit station. The relationship between public transit and arterial street requirements is both causal and complementary. Just as a system of sewage disposal is necessary to the enjoyment of beaches or waterfront parks so each of the basic sinews of the city has a direct relation to the more familiar projects for city beautification and human fulfillment. By the same token, the location of other public facilities should complement and support the transportation system. A big league stadium should be served by both public transit and freeways. All public capital purposes in a city are closely interdependent. [18]

To achieve these interdependent needs, Ellis called for a joint effort, a forward thrust, by the area's several governments and all interested private groups. He envisioned coordinating a series of capital improvements that had been contemplated by various groups and local governments into a unified 10-year capital program including:

- A basic rapid transit system;
- A major league sports stadium;
- Major arterial street improvements;
- Sufficient parks, plazas, and greenbelts to satisfy metropolitan needs and to permanently eliminate urban sprawl;
- A world trade center; and
- Matching funds for urban redevelopment. [19]

Ellis' speech reflected a new approach to the goal of coordinating area wide improvement, with which he had been concerned for well over a decade. The concept gained the support of community leaders, and in March 1966, Seattle Mayor Braman and King County Commissioner Scott Wallace appointed a group to select the Forward Thrust Committee.

The organizations represented by the members of the committee covered a broad range of local government and business interests. Senior officials of large businesses formed the predominant element; academics comprised about 10 percent of the committee, and the only "public interest" figures in the present sense of the word were several conservationists. The composition of the committee was to influence its policies as well as public reactions as its work progressed.

THE FORWARD THRUST PROGRAM AND VOTER REJECTION OF TRANSIT BONDING

Once the Committee of 200 was selected, the Forward Thrust program began its work. The process was organized into three phases. The first, which lasted from September to December 1966, was a factfinding period for developing a broad consensus on areawide needs. It sought to identify the total capital improvement needs for King

[16] Ibid., p. 5.
[17] Ibid., p. 6.
[18] Ibid., p. 7.
[19] Ibid., p. 8.

County by pulling together all existing local studies and proposals.

During the second phase, Forward Thrust subcommittees examined financing methods and local agency authority for fulfilling Seattle's needs, and presented **18 bills to the State legislature to create funding and the authority to administer the necessary programs.** One such bill, passed in 1967, permitted Metro to plan for a comprehensive public transportation system.

Next, from April through October 1967, a system of priorities was established relating the urgency of the various needs to financial capabilities. The legislative package, which both doubled the county's indebtedness limit and established State funding for various measures, enabled Forward Thrust's Economic Analysis Committee to determine how much each of the other subcommittees could "spend" for their various proposals. Once a set of programs was recommended to local governments and agreed upon by them, Forward Thrust's third-phase promotional campaign was begun.

In November 1967, Forward Thrust announced its final recommendations. The program totaled some $2 billion of improvements, with $819 million to be raised locally by general obligation bonds. Of this local share, $385 million was for rapid transit—nearly half of the entire program.

Transit planning was going on simultaneously under the auspices of PSGC. During November 1965, the same month Jim Ellis introduced the concept of Forward Thrust, PSGC adopted a regional transit plan as an element of a total regional transportation **system. The** adopted transit plan, based on the DeLeuw, Cather study, recommended a two-line grade-separated rail transit system with local and express bus feeder services. In July 1966, the same month of the first meeting of the Forward Thrust Committee, a second contract was signed between PSGC and DeLeuw, Cather to refine the transit plan.

The new study had two goals. First, the study was to reexamine the 1965 two-line plan in the light of the very large increase in population projected due to industrial expansion. These increased growth projections suggested that the region's population would grow from 1.6 to 3.1 million between 1965 and 1990. The study's other task was to do detailed engineering design and to take into consideration architecture, urban design, and economics as a basis for more detailed cost estimates.

During this study, under contract first with the PSGC and then with Metro but under the guidance of the Forward Thrust Transportation Committee, DeLeuw, Cather extended the transit plan to a 47-mile system with two new legs. One of the new legs headed south to Renton and the other went northwest to Ballard, supplementing the earlier plan's northeast route and east route across Lake Washington to Bellevue. All four routes combined into a single line through the CBD. The 1985 plan included the following major elements:

- 47 miles of dual-track, grade-separated rail rapid transit routes with 32 stations. Automobile and bus-to-rail transfer facilities and parking were to be provided at appropriate stations;
- A 3-mile, grade-separated busway to west Seattle. To be converted in the future to rail rapid transit;
- 24 miles of grade-separated right-of-way for future rail rapid transit;
- 90 miles of express bus routes, which would operate on highways;
- 500 miles of local bus routes, which would operate on major arterials and serve rapid transit stations.

The total capital cost required to acquire and construct the system was estimated at $1.155 billion over a 17-year period (assuming an inflation rate of 4.5 percent per year). Annual operating costs of $29 million were to be covered by revenues by 1990. One-third of capital costs, or $385 million, was to be raised through a general obligation bond requiring 60 percent voter approval for authorization as part of the Forward Thrust program. The remaining two thirds of the cost was to come from UMTA.

In October 1967, the plan was reviewed by a blue-ribbon board of consultants: an architect, Pietro Belluschi; an engineer from Toronto, W.E.P. Duncan; and a planner/urban designer, Henry Fagin. The board met in Seattle to review DeLeuw, Cather's work and to receive presentations from Mayor Braman, Forward Thrust President Jim Ellis, and C. Carey Donworth, Chairman of the Metro Council, as well as key members of the design consultant team. A letter of endorsement

prepared by this board was included in the October report documenting the plan.

With the transit plan fully detailed, the next step was to achieve public support prior to the bond election. Forward Thrust's promotional campaign lasted 4 months and involved the work of more than 3,000 volunteers.

In addition to having representatives of the media on its Committee of 200, Forward Thrust employed a professional advertising firm with political campaign experience to carry out the promotional effort. The effort involved the writing of editorials, a mass mailing, paid advertisements in television and the press, and "an army of thrust boosters"[20] who canvassed the final weekend of the campaign. The theme of the campaign was to promise a better "way of life" for Seattle citizens.

In a survey conducted by Forward Thrust in September, the first of the two done during the campaign, transit ranked second in popularity with 64 percent of the respondents in favor, 19 percent opposed, and 16 percent undecided. During follow-up telephone surveys in January, support for transit had dropped to 49 percent of the respondents, with 23 percent opposed and 28 percent undecided.

Opposition to the Forward Thrust program and to the rapid transit proposal in particular came from several sources. The first formal opposition was voiced in the King County Democrat, the official organ of the King County Democratic Party. An antagonistic editorial entitled "Government by the Elite ??? ? ?" questioned the methods employed by Forward Thrust and called for more time to allow the communities involved to study the desirability of the proposals. The editorial also raised questions about a possible conflict of interest involving Ellis, whose law firm specializes in handling bonding' and is legal counsel to Metro. The editorial was the responsibility of Jeanette K. Williams, who at the time was the official spokesperson for the King County Democratic Party and who currently is the chairperson of the PSGC Transportation Policy Advisory Committee. Three weeks after publication of her editorial, she publicly apologized to Ellis.[21]

The Association of Teamsters in Washington also opposed Forward Thrust. Through its official paper, The Washington Teamster, with a circulation of 33,000 in King County and 50,000 statewide, it voiced strong criticism of Forward Thrust.[22] Ed Donohoe, the managing editor, ran a series of cartoons and editorials attacking Forward Thrust for causing unnecessary increased taxation, personally attacking Jim Ellis for his alleged conflict of interest, and attacking the rapid transit proposal which, said Donohoe, "won't be rapid, won't haul the people they claim . . . (these rail systems) won't pay their way and they're no damned good for the north end, south end, or east end,"[23]

A third opposition group was called Citizens for Sensible Transit. It criticized the support given by Pacific Northwest Bell, which had given Forward Thrust its billing lists as source material for canvassing. This group claimed that the company was not a private organization and therefore could not discriminate in its giving.[24] They contacted the Federal Communications Commission and asked for equal time to televise their answer to the pro-Forward Thrust editorials, which they were granted by the three major stations. Gogerty states that:

> (T)he time authorized was based on all pro-Thrust editorials, even though opposition was primarily concerned with the transit proposal. The last week of the campaign, the opponents were in possession of extensive media time, and used it effectively. The major theme, ironically, was that Forward Thrust through rapid transit was trying to take away or alter the "way of life" in the Pacific Northwest.[25]

The special election was held on February 13, 1968. Twelve tax propositions were placed before the voters of Seattle and King County. Under State law, each proposition required a 60 percent "yes" vote to pass as well as a 40 percent turnout of those who had voted in the past general election in the State. The Forward Thrust campaign elicited a much larger turnout than the 160,000 voters expected for the special election. A record-breaking 267,597 people voted, some 48 percent of the registered King County voters and a greater number than the 214,690 voter turnout of the

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20 Robert E. Gogerty, *Attitudes Affecting the* Forward *Thrust* Campaign, unpublished paper, March 14, 1968, pp. 6, 7 of unnumbered pages.

21 Gogerty and Whitlow, op. cit., pp. 44, 45. Gogerty and Whitlow speculate that Williams' apology may have been due to pressure from Senators Magnuson and Jackson.

22 Ibid., p. 46.

23 Ibid., pp. 46, 47.

24 Gogerty, op. cit., p. 20.

25 Ibid., p. 20.

previous general election. Seven of the propositions, totaling $333.9 million, received the necessary 60 percent or more support. While the other five failed, they each received at least a 50 percent majority approval. The transit proposal, which was the most costly item, won support from approximately 51 percent of the voters, but this margin was not enough for approval. Since transit was considered by Forward Thrust to be the key to its effort, there was a feeling of defeat among the leaders of the campaign.

Robert Gogerty forwards several reasons for the defeat that involve the way the campaign was run. He points out that the campaign was not geared to show the low-income voter how the transit project would benefit him. In addition, Robert Gogerty indicated that many of the voters perceived the proposed arterial highway improvements as a less expensive and more desirable alternative to the transit proposal as a solution to the county's transportation problem. This involved a misunderstanding of Forward Thrust's concept that the arterial improvements were a part of an overall balanced transportation plan.

But in the last analysis, Gogerty attributes the defeat to a policy decision taken by Forward Thrust campaign officials:

> Campaign officials admit that the September survey lulled them into thinking transit was safe and that by the time they realized that there was trouble it was questionable whether it could be saved. (The decision to give the stadium priority at that time pretty well settled the matter.) [26]

SECOND DEFEAT OF THE FORWARD THRUST TRANSIT PROGRAM IN 1970

In March 1968, with the support of the mayor of Seattle, the chairman of the Board of King County Commissioners, and several civic organizations, the Forward Thrust Committee began a second effort to secure approval of the entire capital improvement program. Although the original intention had been that Forward Thrust should disperse after the February election, the results were sufficiently encouraging to keep the program alive. Starting in April 1968, more than 100 new members were added to the Forward Thrust Committee and additional private financing was obtained.

During September through December of 1969, background surveys were again conducted; the legislative program lasted from January 1968 to February 1970. The only bill relating to the transit proposal in the 1968 session allowed any municipality which operated a public transportation system to levy a 1 percent motor vehicle excise tax.[27] The tax would replace one-half of the already existing 2 percent State motor vehicle excise tax. The tax proceeds so designated for transit would have to be matched by other locally levied tax funds also to be spent on transit. The bill also gave Metro authority (which local governments already had) to levy household utility excise taxes.

Once again, DeLeuw, Cather was retained for the transit studies, this time under a joint contract signed by the city of Seattle and Metro. Again, a team of engineers, architects, urban designers, and economists was assembled. By March 1969, the team had completed a comparative analysis of alternative transportation systems and concluded that a bus-rail concept was best for the Seattle metropolitan area.

The analysis examined four alternative transit systems: buses in mixed traffic, all-bus systems with metered freeways, all-bus systems with busways, and the bus-rail plan as modified from the 1967 plan. The first alternative was discarded as a long-range solution because it caused serious traffic congestion and minimal travel time improvement.[28] For the two remaining all-bus alternatives, it was assumed that grade-separated right-of-way would have to be provided to serve five major activity centers—downtown *Seattle, the* University District, Bellevue, the Duwamish industrial area, and Renton—in order to avoid serious conflicts with other transportation modes. As a result, the capital costs

> . . . were quite comparable, but the operating deficit of each of the two all-bus systems was four times greater than the bus-rail system, on an annual basis. This can be explained largely by the fact that, with automatic train operation, a rapid transit train with a single attendant can carry more than 600 passengers, while

[26] Gogerty, op. cit.

[27] HB 641, Chapter 255, Laws of 1969.

[28] DeLeuw, Cather & Co., op. cit., p. 40.

each bus with driver carries only about 47 passengers, fully loaded. This total payload factor is significant because about 80 percent of the total operating cost of a bus transit system is in the wages paid to vehicle operators. [29]

With equal or better patronage forecast for the bus-rail system, the consultants concluded that it was a superior alternative, considering the higher operating costs of the all-bus system. This finding was supported by the Technical Advisory Committee of key agency personnel from Metro, PSGC, and the State Highway Department.

An additional analysis of alternatives was conducted by a voluntary group from Boeing. A Boeing executive who chaired the Forward Thrust Transit Committee got together a group of technicians to review DeLeuw, Cather's study of alternatives during the 1970 program. This group worked on a voluntary off-hours basis, investigating alternative types of technology to answer a concern that the system had been overdesigned and was more costly than necessary. They suggested the use of smaller vehicles and correspondingly less expensive track and supporting structures. Their studies showed a possibility for reducing the costs by as much as 25 percent, even if the number of miles to be tunneled, depressed, or elevated were kept constant. The technicians presented their findings to the Technical Advisory Committee and to the consultant. DeLeuw, Cather took a stand against considering unconventional technologies. Forward Thrust was opposed to public discussion of these alternatives before the election for political reasons, although it indicated analysis of lower-cost technologies could be resurrected after the bond issue.

During the autum of **1969,** a series of community meetings was held to broaden the citizen participation effort.

Meanwhile, alinement studies and patronage projections had been conducted, estimates of capital cost were updated, and an initial bus system developed in more detail than had been done in the 1967 plan.

On February 19,1970, a report was published by DeLeuw, Cather documenting the "new" plan (see Figure 5). It included a letter of endorsement from a new blue-ribbon review board, this time consisting of William Boucher III, Executive Director, Greater Baltimore Commission; Guy Blain, Director of the Transportation Department of the Montreal Transportation Commission; Charles E. Shumate, Chief Engineer of the State of Colorado Department of Highways; F. Norman Hill, General Manager of the San Antonio Transit System; and Boris Pushkarev, Planning Director of the Regional Plan Association of New York City.

The 1970 plan differed from its 1967 predecessor in the following ways:

- There were 49 miles of rail this time instead of 47, still grade-separated. There were alinement shifts on all lines, a cutback of the northwest line, an extension of the northeast line, and a short extension of the east line.
- The mileage of local bus routes was expanded to 740 miles in comparison to the 500 miles included in the previous system.
- A plan for immediate improvement of the existing bus system was this time developed in greater detail than it had been in the first plan, with descriptions of service improvements to each of the community areas throughout the region.
- Instead of the 32 rail stations suggested previously, the new plan called for 34 stations, a number of them in new or modified locations.
- In addition to those in the earlier plan, **800** local bus shelters were to be provided, **32 community and neighborhood** bus stations, and 9 park-and-ride bus stations.
- There were only 8 miles of right-of-way reserved for future rail route extensions as compared to 24 miles reserved in the previous system.
- The total cost had risen from $1.155 billion to $1.321 billion, primarily due to inflation. The increase in total cost increased the local share from $385 to **$440 million.** [30]

On may 19, **1970,** 3 **months after the February publication of the Metro transit plan, another special election was held. This time only four propositions were presented to the voters. The** total cost was $615.5 million: as in 1968, the transit plan, costing **$440 million, was the most expensive**

[29] Ibid., p. 50.

[30] De Leuw, Cather & co., *The Rapid Transit Plan for the Metropolitan Seattle Area,* February 19, 1970, p. 39.

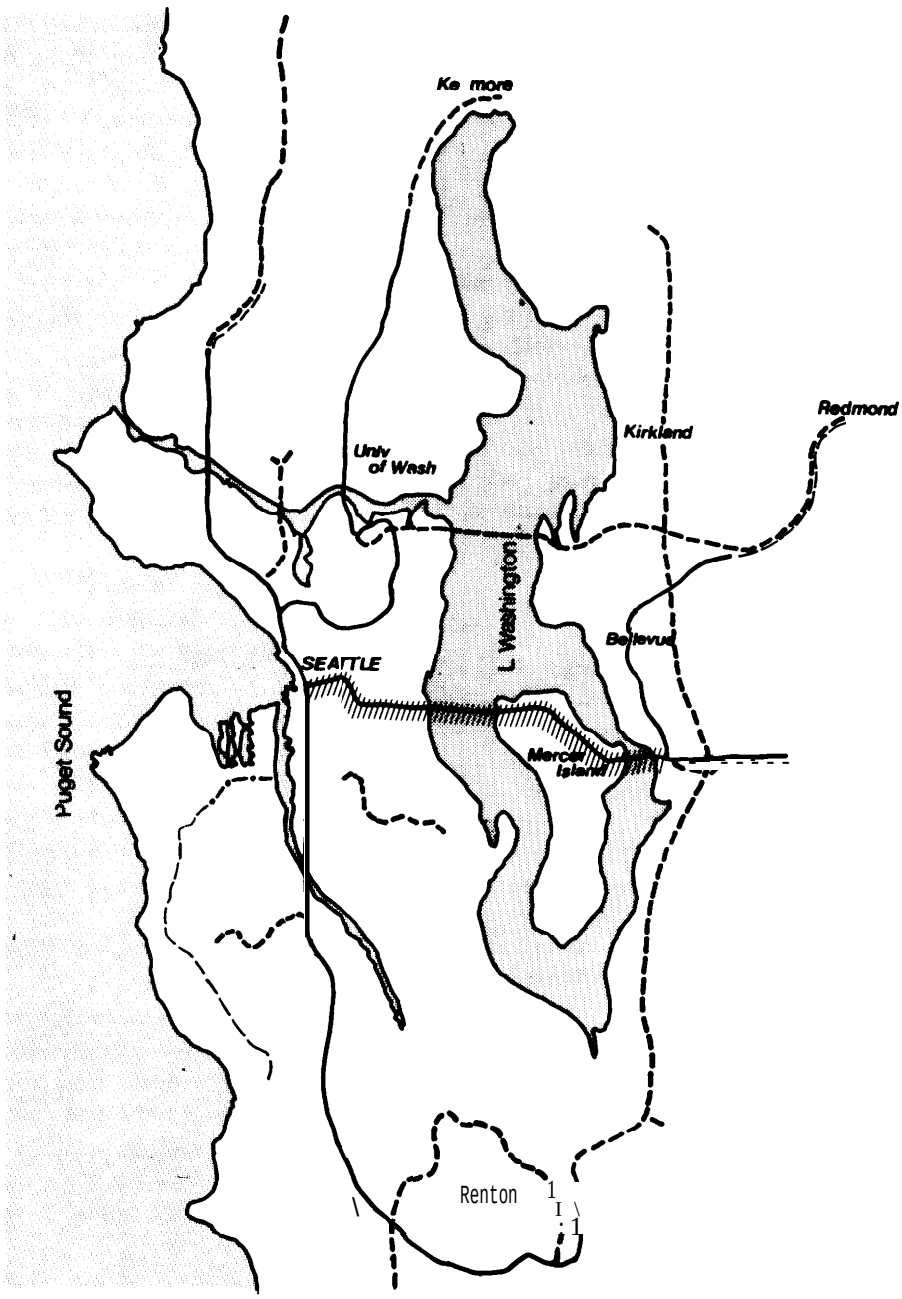


FIGURE 5: SEATTLE-RECOMMENDED PUBLIC TRANSIT SYSTEM FOR 1985

Rail Rapid Transit

Reserved for Future **Rapid Transit**

Bus Rapid Transit

Express Bus

1-90 Corridor

Local Bus Network Not Shown

SOURCE: Municipality of Metropolitan Seattle, Seattle Metropolitan Are a Recommended Public Transportation Plan, February 1970.

single item by far. Again a 60 percent majority of referendum voters was necessary. A worsening local economic situation, whose decline picked up momentum in late spring and did not bottom out until 1971, may have been the key factor in the defeat of the second transit proposal. This time the transit plan was supported by only 46 percent of the voters, and, in keeping with its original mandate, this time the Forward Thrust organization was disbanded.

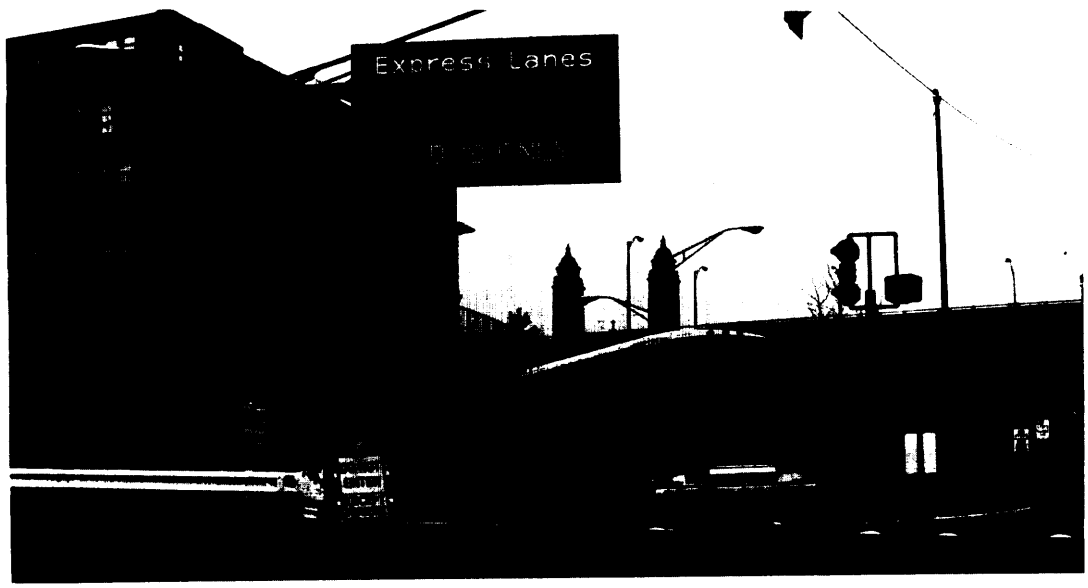
1972 VOTER ACCEPTANCE OF A SHORT-RANGE BUS PLAN

After the second transit bond issue was rejected in **1970, transit advocates turned from a regional bus-rail system to a short-range bus plan for several reasons. Economic conditions** in the Seattle area continued to be poor, which would make voters wary of an expensive transit system. A bus system would require no bonded indebtedness and therefore only a **50 percent voter approval for its financing. And,** given UMTA's warm reception of bus approaches, Federal funding seemed likely.

By far the most important element in the decision to formulate a bus system in 1972 was the threat of a complete collapse of the Seattle Transit System and suburban private bus operators. During this period the Puget Sound Government Conference (PSGO, with Metro's concurrence, hired a new consultant with bus transit planning experience to prepare a short-term bus plan. Daniel, Mann, Johnson & Mendenhall in 1972 proposed a 650-mile system of express bus routes serving four activity centers (the Seattle and Bellevue CBD's, the Duwamish industrial area, and the University District) from a series of transfer points throughout the region. The transfer points were to be served by local buses and many would have park-and-ride facilities.

The new system was estimated to cost $95.19 million, with new buses, park-and-ride facilities, and freeway bus stops being the largest budget items. Fares would be low to encourage patronage, and revenues were not expected to meet operating costs. Fare box revenues were to be supplemented by a 0.3 percent local retail sales tax plus matching State funds from a motor vehicle excise tax as provided for by the 1969 legislation. In addition, Federal and State gas tax funds were to be used for highway-related facilities in the plan, and UMTA capital grants were to be a source for buses and other facilities not covered by the highway-related funds.

PSGC took a more active role in leading this third round of the transit planning process. For the 1972 plan, PSGC supplied population, employment, and land use forecasts, and calculated the trip generation and distribution data. The data developed by PSGC indicate a much slower growth in the region. Two alternative bus systems were tested, one CBD-focused and one multicentered. The multicentered alternative that was chosen, although it



Seattle's transit system includes priority treatment for buses

does not give the highest quality service to the CBD, achieves the highest ridership overall. In comparison, previous plans sought to achieve the political goal serving the CBD.

This time, with only a 50 percent vote required, the transit scheme won approval. Financing required to implement the short-term bus transit improvement program was approved in public referendum, and Metro was authorized to develop and operate the region's public transit system.

CURRENT CONTROVERSY OVER THE LONG-RANGE PLAN

Since 1972, differences in opinion have resulted in rivalries between PSGC and Metro over the future of rail transit in the Seattle region. The Metro leaders still consider the bus plan to be an interim measure, designed to take advantage of UMTA's willingness to finance bus systems. The PSGC, which has an advantage over Metro in that it is charged with receiving and dispersing DOT funds, neither recommends nor specifically excludes rail transit.

Since 1972, Metro and PSGC have competed for major roles in mass transit planning. The agencies agree that the Seattle region can best be served by a range of technologies to be implemented incrementally and designed to meet specific transit needs in specific parts of the region. But their different orientations have led them to focus on different issues in their attempts to define their respective roles.

Metro, as the present transit operator, believes the main issue concerns the types of transit technology most appropriate for Seattle's long-term transit needs. Metro leaders consider the 1972 bus plan to be an interim measure designed to take advantage of UMTA's willingness to finance bus systems. They argue that in the long run some form of automated transit technology will be needed to diminish the bus system's high operating costs. Metro favors the provision of a range of technologies to meet different service needs throughout the region. It now has a study of transit technology systems underway whose goal is to develop a general plan, with strategies on how to achieve it incrementally.

The Puget Sound Council of Governments (PSCOG)[31] is most concerned with the broader issues such as how the capacity, speed, and location of a transit system are linked to land development intensity and timing issues. PSCOG's current long-range transportation plan calls for exclusive bus lanes on both highways and arteries, although it does not rule out fixed-guideway systems. The long-range plan is basically an extension of the policies in the adopted short-range transportation plan, which deals with the 1972-80 period. In addition to this conventional system, PSCOG staff have given serious attention to such new technology concepts as an automated small-vehicle CBD distribution network that would move people and goods and perhaps double as the solid waste collection system.

In the past year, this jurisdictional dispute has been overridden by the issue of how to use the funds allocated for the construction of Interstate Highway **90.** The decision to include some kind of exclusive transitway in the proposed I-90 freeway is several years old, PSCOG initiated accelerated studies on several options, including variations on the Highway Department's transit-freeway scheme. One proposal endorsed by Seattle's Mayor Wes Uhlman involves electrified buses operating in tunnels under a pedestrian mall on either Third of Fourth Street in the CBD. The downtown tunnel would be linked by a busway to I-90. Other options that include constructing I-90 call for including rail in the freeway design and for including transit lanes in both Lake Washington bridges, with only a modest expansion of highway capacity compared to the original WSHD scheme done in the early 1950's. Options that include no highway or busway improvements in the I-90 corridor stress fixed-guideway transit alternatives such as trolley or rail.

The amount of money at stake—$500 million—means that the decision on what to do with I-90 funds will be very important in shaping the long-run future of transit in Seattle. It seems unlikely that a decision not to build I-90 in any form will be taken.

Since the potential of massive amounts of funding was infused into the transit debate, the situation in the Seattle region has become very fluid. At best, this new potential has catalyzed fresh thought and has returned rail transit to the front of people's minds. At worst, the pressure to come up with a plan quickly could mean that the region will commit itself to a plan or a technology that has not been adequately thought through.

31 Th[e] Puget Sound **Government]** Conference recently came to be known as the Puget Sound Conference of Governments.

Chronology of the Transit Planning Process

1884 The first horse-drawn **street railway was constructed.**

1889 The first cable car line was placed in operation and electrification of transit begun.

1892 By this year over 70 miles of track in Seattle and West Seattle were operating under management of over a dozen different companies.

1901 Stone and Webster, a Boston engineering firm and owner of the largest electric power company in Seattle area, received permission to acquire all transit companies in the area and create a monopoly.

1918 The city of Seattle purchased the portions of the transit system within its borders from Stone and Webster.

1939 Seattle's three-man Transit Commission was established to operate the Seattle system.

1952 James Ellis led a campaign to restructure King County to provide for home rule and authority for metropolitanwide improvements. The proposal was defeated.

1953 The Washington State Toll Bridge Authority was authorized to construct the Central Freeway as a toll facility.

1955 The Seattle Transit Commission's request for inclusion of rapid transit facilities in the median of the proposed Central Freeway was denied by the Toll Authority.

1956 Following passage of the Federal-Aid Highway Act, responsibility for construction of the Central Freeway was transferred to the Washington State Highway Department.

The Metropolitan Problems Advisory Committee, chaired by Jim Ellis, was appointed by the mayor of Seattle and the Board of King County Commissioners.

1957 In January, the Seattle Planning Commission issued a report recommending transit on the Central Freeway.

In February, Seattle Mayor Gordon Clinton appointed a committee to consider rapid transit operation on the Central Freeway.

In April, the Transit Commission published a report recommending future rail provisions on the Central Freeway with interim use by express bus.

In June, in response to recommendations of the Metropolitan Problems Advisory Committee, the State legislature passed the Metropolitan Municipal Corporation Act, which enabled the establishment of corporations for solving metropolitanwide problems.

In October, the Puget Sound Regional Transportation Committee was formed to determine the scope and procedures for a regional comprehensive transportation study.

In November, pursuant to the State enabling legislation, a new citizens' organization chaired by Jim Ellis, the Metropolitan Council Action Committee, began a major promotional campaign supporting creation of a municipal corporation for the Seattle area.

The Puget Sound Governmental Conference was created by the elected officials of King, Kitsap, Pierce, and Snohomish Counties to serve as the area's Voluntary Council *of* Governments.

1958 In March, the Metro concept, covering sewage disposal, public transportation, and comprehensive planning, was

presented to the voters. It failed to pass by a small margin of 16,000 votes out of 187,000 votes cast.

In September, voters approved a stripped-down Metro as a single-function agency responsible for sewage disposal.

In October, the Puget Sound Regional Transportation Committee employed Parsons, Brinkerhoff, Hall and MacDonald to determine the scope and procedures of the proposed comprehensive transportation study.

1959 In April, the final report of Parsons, Brinkerhoff, Hall and MacDonald was submitted.

1960 In July, the prospectus of the proposed study was approved by the Technical Committee of the Puget Sound Regional Transportation Committee.

Later that year, John Mladinov became director of the Puget Sound Regional Transportation Study (PSRTS). A delegation of civic groups requested that Mladinov consider rail rapid transit as part of the basic transportation network, Mladinov was not cooperative.

1961 In October, the Metropolitan Transportation Committee, including Jim Ellis, was created to determine the best means to provide rapid transit for the Seattle area.

1962 In February, in response to the Metropolitan Transportation Committee's recommendation that Metro should perform the transit function, a promotional committee was formed called Citizens' Committee for Metro Transit.

In September, despite an intensive campaign, a measure to include public transportation as a function of Metro was again defeated by the voters.

1964 In June, after the city leaders' dissatisfaction with the PSRTS transit efforts, PSGC authorized DeLeuw, Cather & Company to undertake a transit study and recommend a regional transit plan.

In November, DeLeuw issued its first interim report, recommending that rapid transit facilities be incorporated into a Lake Washington bridge (the **I-90 Bridge).**

1965 In November, DeLeuw, Cather issued its second interim report on the feasibility of rapid transit operation in the Seattle area. It recommended a two-line transit system connecting the CBD to the northeast portion of the city and to Bellevue. A Rapid Transit Advisory Committee, appointed by , Mayor Braman and headed by Jim Ellis, endorsed the plan, and PSGC adopted it as an element of a total regional transportation plan.

Also in November, Jim Ellis spoke before the Seattle Rotary Club and called for the creation of Forward Thrust to coordinate the finance of needed metropolitanwide capital improvements. Rapid transit, a sports stadium, arterial street improvements, parks and open space, and urban redevelopment were suggested to be considered as part of a unified 10-year capital program.

1966 In March, Mayor James D. Braman and King County Commissioner Scott Wallace appointed a committee to select a Forward Thrust Committee.

In April, the PSRTS summary report was issued. The report concluded that no strong recommendation could be made for rapid transit.

In July, the newly appointed Forward Thrust Committee of 200 was called together for its first meeting. During the same month PSGC contracted with DeLeuw, Cather to refine the transit plan and determine if additional routes would be required.

From September to December, meetings of the Forward Thrust Committee were held to conduct background surveys of capital needs of the metropolitan area.

1967 Between January and April, Forward Thrust sponsored legislation necessary to carry out its programs. Eighteen bills

were passed, including one permitting Metro to do planning for a comprehensive public transportation system.

From April to October, Forward Thrust analyzed previously recommended improvement programs in relation to funding availability and established priorities.

In June, DeLeuw, Cather was contracted by Metro to conduct a number of detailed studies on the transit plan and to broaden the scope of its study to take into consideration architecture, urban design, economic, and other factors not previously covered.

In October, after an endorsement by a blue-ribbon consultant review board, DeLeuw, Cather published the transit plan.

In November, Forward Thrust began its promotional campaign for its 12 bond issues. The rapid transit proposal was the biggest cost-item—$385 million out of the $819 million total.

1968 On February 13, 7 of the 12 Forward Thrust bond issues received voter approval. Although transit received support of 51 percent of the voters, it failed to get the 60 percent approval required for it to pass.

In March, the Forward Thrust Committee began a second effort to secure approval of the entire program.

From September through December, background surveys were again conducted to reassess capital improvements needs.

1969 Between January and March, eight State bills sponsored by Forward Thrust were passed. One provided Metro and State financial assistance for mass transit.

In March, DeLeuw, Cather & Company, this time retained under a contract signed by the city of Seattle and Metro, completed a comparative analysis of alternative transportation systems and again recommended the bus-rail concept.

1970 Between January and February, Forward Thrust successfully sponsored five pieces of State legislation.

On February 19, a report was published by DeLeuw, Cather documenting the modified 1967 transit plan.

On May 19, four Forward Thrust propositions totaling $615.5 million were presented to the voters, with transit at a cost of $440 million being the largest. All four proposals were defeated due largely to poor local economic conditions resulting from huge layoffs at Boeing. Transit received a supporting vote of only 46 percent. After the election, the Forward Thrust organization was disbanded.

On September 8, the "Blue-Streak" demonstration express bus service went into service. It utilized priority freeway access and was well received.

1971 In September, UMTA approved a $447, -000 study requested by the PSGC. PSGC employed Daniel, Mann, Johnson & Mendenhall to prepare a short-term bus plan that would not require bonded indebtedness.

1972 On September 19, voters approved an 0.3 percent sales tax that provided funds for Metro to take over the Seattle Transit System, to buy out the suburban Metropolitan Transit Corporation, and to provide improvements in service and equipment as spelled out in the PSGC plan.

1973 On January 1, Metro began operating the transit system.

In September, Metro introduced a free downtown area zone stimulating intra-CBD travel.

1974 PSGC and Metro signed a cooperation agreement spelling out their respective ● roles. However, rivalries and competition between the two agencies *con-*tinued.

Metro put out a request for proposals to develop an incremental approach to long-term transit planning.

1975 **After much difficulty in trying to obtain** PSGC approval, Metro initiated its long-term transit planning approach.

Controversy over the I-90 Lake Washington crossing continued to highlight the battles over transportation **planning** in the Seattle area. Still at issue is whether or not to build the highway facility and whether or not to provide new transit service across the lake. Also at issue is what kind of transit is to be provided (if any), and how its entrance into the CBD is to be handled.

Assessment of the Planning and Decisionmaking Process

INSTITUTIONAL CONTEXT

Until the past several years, the transit decisionmaking process in Seattle was unique among the nine cases because it took place outside the official channels of government. The preeminent role of Forward Thrust, an organization composed of civic and business leaders, raised questions of accountability even though the participants represented a broad range of Seattle's interest groups and public spokesmen. With the disbandment of Forward Thrust in **1970 and the successful short-range bus proposal** in **1972, transit planning responsibilities passed** to the more conventional forum provided by the transit agency Metro and the regional council of governments. However, that forum has been troubled by conflict over decisionmaking prerogatives. Recent events demonstrate that the city still exerts a major influence over regional decisionmaking, and that the Governor may be becoming a more important participant.

Forum for Decisionmaking

The history of transit planning and decisionmaking in Seattle has been played out within the context of movements for civic improvements, primarily due to the influence of Jim Ellis. Ellis, although he has never held office in any major official position, was the creative force behind two of the three organizations that have provided the forum for transit decisionmaking in Seattle. (He was involved with Metro and Forward Thrust; less so with the Puget Sound Governmental Conference.)

Improved public transportation was one of Ellis' original goals by the time of the first referendum vote on Metro in 1957. Although voters gave Metro power over water treatment, they refused to grant transit authority. Subsequently, as the State Highway Commission and the Puget Sound Regional Transportation Study continued to stress auto transportation, a series of citizens' committees was developed to provide more suitable forums for transit advocacy. After another attempt to empower Metro to deal with transit failed in **1962,** transit advocates turned to the city of Seattle and PSGC. The new transit forces flexed their muscles when the DeLeuw, Cather transit plan they had influenced the city to commission, met the highway-oriented Puget Sound *Regional* Transportation Study (PSRTS) with the result that the head of the PSRTS left the Seattle area under city pressure.

In calling for the establishment of Forward Thrust in **1965, Ellis once again surfaced as a moving force in creating a new institutional mechanism (as he had** done in Metro). Although these two institutions differed vastly in form, purpose, and authority, they were alike in that they both were designed to achieve the momentum necessary to effect Ellis' goals (although neither actually has the authority to do so directly). By **1968, Forward Thrust, which considered transit the key to its effort, was making the basic transit decisions in the Seattle area.**

Over a period of time the Puget Sound Governmental Conference (PSGC) began to seek a stronger role. There were several structural problems with the PSGC. Its four-county jurisdiction was too broad and contained too many diverse interests to reflect any concrete power base, and it lacked the abilit$_y$ to tax. Its strength was derived from Federal acts that gave it the responsibilit$_y$ for review, regionwide coordination, preparation of a comprehensive plan, 3-C transportation plannin$_g$ responsibilities, and A-95 responsibilit$_y$ for reviewing fundin$_g$ applications.

Although PSGC (now PSCOG) has been gaining recognition as a forum, it was Metro that gained the support of Seattle's political leadership as the key transit organization after the termination of Forward Thrust. Metro has certain structural advantages over PSCOG. It has the means to carry out plans, once approved, and a **membershi$_p$ more** cohesive than PSCOG's because it is limited to the more immediate Seattle metropolitan area (King County). As of 1973, it became the sole transit operator in the Seattle area, with the power and the tax base to implement transit improvements.

Although the PSGC and Metro signed a cooperative agreement that attempted to spell out their respective roles in 1974, rivalry between the two agencies continues, especially in the area of long-range transit system planning. PSCOG claims a lead role in long-range planning because it wants to strengthen the relationship between transit and land use planning (which is its responsibility); Metro claims a lead role because it wants long-range plans to reflect technological considerations (because they affect transit operations and cost, which are at the center of Metro's concerns).

Evidence that PSGC is not an agreed-upon forum is provided by the fact that it became necessary to establish a new mechanism for allocation of Federal Urban Systems highway funds. PSGC wanted a major role in the allocation of these funds. Metro did not seek the basic role but proposed a special board. The Urban Systems Board, for which PSGC provided the staff, was accepted by the Highway Commission on the condition that it be advisory. The mayor, the King County executive, and other major elected officials participate on the board, and it seems to be working well: about **50 percent of the Urban** Systems money for the area is now being allocated to transit projects.

The recent proposal to package a downtown bus subway in a revised plan for Interstate **90 reflects another level of conflict, this one involving the center city interests on the one hand, and the rural and suburban interests on the other hand.** The conflict had been implicit in the earlier developments in Seattle's transit planning. The two plans developed under the leadership of Forward Thrust emphasized the importance of downtown revitalization, and they were strongly backed by Seattle's political leadership. In contrast, the plan approved in **1972 was developed under the guidance from the Puget Sound Governmental Conference and proposed relatively higher levels of service to rural and suburban areas (and less than maximum service to the CBD).** The I-90 plan differs from these earlier plans because it is more limited and CBD-oriented in scope. Inasmuch as the plan would directly affect regional transportation, however, it can be considered a regional issue. Nevertheless, the plan was shaped behind closed doors by the mayor and the Governor. PSCOG, the federally designated forum for transportation planning, was not informed of the project until the proposal had been developed.

Accountability of Decisionmakers

For a long time, Seattle businessmen and community leaders dominated transit planning through quasi-governmental channels. There was little direct accountability to voters. Accountability to decisionmakers increased when Metro and PSGC became the dominant forces in transit planning after **1970, although the city has continued to exert an important influence.**

Forward Thrust, the most long-lived of the quasi-governmental groups of civic activists and businessmen, has been termed a vigilante government—a perhaps overly pejorative term considering that it worked largely in the open, made attempts to include all major opinion-shapers and established interest groups and generally carried on its work through high minded volunteers who saw themselves as working in the public interest. Nonetheless, Forward Thrust was basically an elite group performing functions and making decisions that are normally considered the responsibility of government.

One question of accountability arose over the issue of whom Forward Thrust represented. An examination of the membership of the Forward Thrust Committee of 200 shows that a majority of the participants were from the downtown business community. Labor, the university community, and various conservative groups all at some time opposed what some considered "an organization of organization men." Forward Thrust's proposals tended to give priority to CBD routes most vital to downtown business.

Today the two organizations that compete for decisionmaking authority **(Metro and PSCOG) are** more accountable to the voter because they are governed primarily by elected officials, because their meetings are open and publicized, and because their decisionmaking processes are governed by rules that assure a formal opportunity for public involvement (e.g., public hearings). **Metro is** governed by a 37-member council, composed of the King County executive and the nine county commissioners, the mayor of Seattle and the nine city councilmen, another official of the city, six representatives of cities over **15,000 in population, six persons from unincorporated areas of King County, one representative from cities** in the county with populations of less than **15,000, one delegate from Metro's component sewer districts, and a chairman elected by other members of the**

Metro council.[32] The PSCOG has an executive board comprised of the conference chairman, the vice chairman, and not fewer than one representative from each member county, one from each member central city, and two representatives from the combined membership. [33]

Metro is more representative, more closely approximating the one-man one-vote concept, while PSCOG's votes are distributed fairly evenly to each member unit of government. Metro is dominated by the city, and, because its concern has always been with the city, it tends to support transit plans that provide greater service to the core area.

The PSCOG board, also composed of elected officials, gives more voice to areas outside the city. Therefore it is not surprising to find that it tends to move in the direction of a bus system more suitable for large, fairly low-density areas than a rail transit system.

A final issue of accountability of the transit planning process in the past has been the tendency to enlarge proposed new systems to provide service to all voters. The plans presented in the **1968 and 1970 referenda proposed extensive transit systems** in an attempt to lure the vote in all corridors of the city and suburban areas. However, analysis of the vote shows that many suburban areas did not support the transit proposals because they felt they were getting less than their share of service.

Public Involvement

Community participation programs have become increasingly concerned with involving citizens from the beginning in the early stages of the planning process.

During the campaign before the 1968 referendum, Forward Thrust kept in touch with citizens through telephone surveys, doorbelling, and presentations to local groups. The strength of the **1968 program was its intensity. It was easy to get access to information about the Thrust Proposals. Its drawback was that it was not a true community involvement approach but an attempt to "sell" an idea to a passive public.**

During the second (1970) campaign, Forward Thrust held meetings in **16 separate communities.** The two important points resulting from these meetings both had to do with short-term transit improvements. Citizens stressed the need to provide adequate transportation service in areas that would not be served by rail. They also stressed the importance of providing immediate bus service improvements while the regional rail system was under construction. While the plan presented to voters in **1970 reflected these recommendations—it included short-term** bus improvements and more extensive bus coverage than had been proposed in **1968—it** nevertheless went too far in the opposite direction—with a proposal for an expensive rail system—to win the necessary votes.

The drawback **of the 1970 program was that citizen input into the planning process was primarily limited to refining the rail plan. This indicates a major weakness of the Forward Thrust approach generally,** when viewed from the standpoint of current standards. Forward Thrust was not an unbiased funnel for citizen input. It was a private organization with a well-defined goal of providing Seattle with a rail transit system.

Following the rejections of the rail plan in **1968 and 1970, the consultants preparing the 1972 plan carried out an extensive effort to get community participation into the process.** The Metro Transit Liaison Committee, composed of appointed public officials, transportation agency personnel, and representatives of areawide citizen and civic groups, advised policy makers at their semimonthly public meetings. This committee, which met throughout the study, was supplemented by additional citizen participation through community meetings held in each of **10** areas of the county. These attempted to involve citizens in the planning process from the beginning. Community input was enlisted in five phases of the planning process: goal formulation, alternative system selection, tentative recommended plan, the recommended plans and the recommended financial plan, and phasing. The effort paid off when voters approved the plan in the **1972 referendum.**

Citizen involvement in the transit planning process today is more widespread but also more diffuse, since each major participating agency or unit of government—Metro, PSCOG, City of Seattle, WSHD, and King County—has its own citizen involvement program. However, since the forum for transit decisionmaking is not well defined and competition among many of these

32 Colcord, op. cit., 71.

33 Ibid., p. 72.

agencies continues, it is difficult to say how or when a participation program will be incorporated into decisionmaking.

TECHNICAL PLANNING PROCESS

Goals and Objectives

Forward Thrust lent to Seattle's transit movement a vision of the goal to be achieved through mass transit. It sought to provide a high capacity transit system as one of the means to improve the region's business and cultural center. In the words of James Ellis, "Transportation facilities . . . (are) a useful tool for urban design."[34] Ellis was explicit about the nature of the environment he sought to achieve: a pattern "which permits both open space and dense development . . . (a pattern) of high-rise structures and . . . grade-separated . . . transportation."[35] The interest in transit Ellis gave to Forward Thrust stemmed from a well-defined vision of the city.

By **1970, Forward Thrust's vision was badly** in need of repair. Huge layoffs at Boeing had turned Seattle from a prosperous city into one of near-depression. Yet Forward Thrust's transit program, instead of economizing, got a little larger and more expensive. One of the strongest arguments that Forward Thrust's opponents voiced during the **1970 campaign was that the transit plan was based on overly optimistic growth projections.**

Some aspects of controversy over Forward Thrust's goals centered on the strongly implied assumption that what was good for the downtown business community was good for Seattle. The two rail plans had provided priority rail service to CBD-oriented trips; public transportation for most other trips was not to be improved. In the **1972 plan, this bias disappeared as the goal of serving the downtown business community lost its preeminence.**

Development and Evaluation of Alternatives

The evaluation of alternatives in Seattle's two major rail transit planning studies assumed overly optimistic population projections, especially for the CBD. This fact, coupled with lack of serious consideration of low-capital bus alternatives, led to overly extensive, CBD-focused rail proposals,

The predictions of rapid growth for the Seattle area, based on the projected employment of the Boeing Company, were reasonable when they first were used in **1967. However, the Boeing work force, which grew from 60,000 in 1966 to 93,000** in **1967 and 101,000** in **1969, plummeted in January 1971 to 46,800.**[36] **One of the mandates of the 1970 DeLeuw, Cather plan was to take into** account this population growth. It is ironic that by the time this contract was let, the decline had begun. The overblown population forecasts were much berated by critics **of the 1970 transit plan. However, these outdated projections were used to project densities heavy enough to justify rail routes, a practice that led to an overly extensive system designed to be attractive to the suburbs. By 1972, the PSGC developed data that indicated a much slower growth** in the region.

In the first two studies, the growth forecasts favored systems that offered service to the CBD. It was an explicit goal of the **1967 study to design a transit system that would serve the CBD, and the study assumed a large percentage of the region's trips would be oriented to the CBD.** The **1970 plan, although it proposed 240** more miles of busway, did not substantially change this focus on the CBD.

A group of professors at the University of Washington questioned this orientation, arguing that the projections assumed too high a concentration of employment, particularly in the downtown, and that the system would primarily benefit downtown landowners and higher-income commuters from distant suburbs, who would be using the system to get to work downtown.

Another shortcoming of the first two studies was their failure to seriously consider low-cost bus alternatives to the rail systems. Alternatives analysis was in many aspects limited to a comparison of the automobile as the alternative to rail, with no mention of a bus option. When all three modes were compared, the bus system used for comparison was essentially the existing system, with no major improvements. The bus system was judged preferable to the rail system from a cost standpoint but was considered unacceptable in other ways. The report pictured buses hampered by downtown congestion unless exclusive bus lanes were provided and then never mentioned the possibility of bus lanes again. This stood out in

34 Ellis, op. cit., p. 5.

35 Ibid., p. 6.

36 Co[cord, op. cit., pp. 11-12.

sharp contrast to the optimistic estimates of riders attracted by comfortable and fast rail service.

DeLeuw, Cather's 1970 plan included a long **discussion of alternatives. After mentioning many possible systems, the report settled on four for further analysis: buses** in mixed traffic, all-bus **system with metered freeways, all-bus system with busways, and combined bus and rail rapid transit. However, all the less costly solutions were discarded, and it was assumed, without apparent justification, that the** only feasible bus solution would require grade-separated rights-of-way in the five major activity centers in order to avoid serious conflicts with other transportation modes. This skyrocketed the cost of a bus system to over **$350 million** more than the rail system.

The capital costs were assumed to be the same for the busrail system and the all-busway system, but operating costs were higher for the busway (this was partially due to the assumption that labor costs were expected to inflate at a greater rate than other costs).

Other technical questions about the thoroughness of **the 1970 analysis of rail alternatives were raised by analysis done by volunteer technicians under guidance from a Boeing executive. Their studies** showed the possibility of reducing the costs of a rail system as much as **25 percent if alternative lighter vehicle types of technology were used. This information would have carried far greater weight had it** been part of the material made available by Forward Thrust; as it was, Forward Thrust opposed public discussion of the issue. This reluctance reflects poorly on the quality of work on evaluation of alternatives.

The **1972 study examined only bus alternatives because it was felt that** only a bus system could get the required voter approval for its funding. The limitation of the study to relatively low-capital alternatives did not imply a permanent rejection of more costly fixed-guideways alternatives—this study was clearly defined as a short-range transit improvement plan. But for the short-term, two bus systems were examined: a CBD-oriented system and a multicenter concept. The first system was able to generate more transit trips to the CBD **(52,891 versus 52,164) but the multicenter system generated** more transit trips to almost every other location and generated a much larger total number of transit trips **(190,376 versus 245,250). The CBD-focused system generated much** more revenue and had a much smaller operating deficit but cost almost **$29 million** more in capital costs (parking spaces, freeway stops, more bus lanes, and an additional CBD terminal). The multicenter concept was chosen as a result of this thoroughly competent analysis.

A final characteristic of each of the alternatives analyses in Seattle was their lack of breadth. As was customary for analysis in its time, there was no evaluation of environmental impacts and little of the economic impact of the proposed transit systems. The bulk of the analysis concerned transit ridership figures or costs.

Financing and Implementation

The expection of Federal funds probably has influenced Seattle's transit planners to design more expensive systems than they would have otherwise. The necessity of providing local matching funds through bond issues on sales tax also has influenced the transit system design.

Seattle's two proposals for rail systems (in **1968 and 1970) were formulated in the expectation that UMTA would provide two-thirds of the cost, with local funding providing the other third. A number of critics, among them the group of professors from the University of Washington who had opposed the 1970 rail system proposal, claimed that the promise of UMTA money encouraged planners to design overly expensive transit** systems. The expectation of Federal money has also been a dominant factor in the design of rapid transit systems since **1970. In 1972, it was a conscious policy to propose a bus system instead of a rail system because UMTA was enthusiastic about bus systems. (This strategy was proven effective** when UMTA reacted by approving the largest bus system improvement grant in its history.) The availability of Federal money continues to be a dominant influence on mass transit in the Seattle region: the current flurry of alternative transit schemes is a direct result of the potential of using Federal highway money (from I-**90) for transit purposes.**

In Seattle, the issue of Federal funds has until 1972 been academic because of the planners' inability to raise local matching funds through bonding. Local financing considerations have had as much or **more influence on the extent and** mode of proposed transit systems as has Federal action.

The need for **60 percent of the voters to approve bonding to finance the local matching funds for the rapid rail transit proposals of 1968 and 1970**

influenced the design of the proposals. One of the reasons for enlarging the two-line system originally proposed in **1965 was to attract voters who** otherwise would not have been served. This plan backfired when the extensive system presented to voters was opposed because it was too expensive.

The proposed bus improvement plan of 1972 won nearly 60 percent of the voters (although only **50 percent was needed).** The vote showed that a short-term plan designed to meet an immediate need was more effective in attracting support than an extensive long-term system had been.

Summary Case Assessment

The purpose of this section is to summarize the transit planning decisionmaking process in the Seattle region in light of the guidelines listed in the Introduction to the case assessments. The summary, therefore, divided into two parts: (1) Assessment of the Institutional Context, and (2) Assessment of the Technical Planning Work.

1. ASSESSMENT OF THE INSTITUTIONAL CONTEXT

. **Forum for Decisionmaking.—During the** late 1960's, Forward Thrust made the basic policy decisions in mass transit planning for Seattle. Since **1970, Metro and the Puget Sound Council of Governments (PSCOG) have competed for major** responsibilities in transit planning. However, the city of Seattle continues to exert a strong influence.

. **Accountability of Decisionmakers.—In the late 1960's transit planning was dominated by a quasi-governmental elite of businessmen and civic leaders who, although they attempted to involve all public interests, were not directly accountable to the public. Today, the two dominant forces** in transit planning—Metro and PSCOG—are composed of officials who are elected for local positions. They can be held accountable to the public for their actions as they affect each locality, but they are not accountable for regional decisions. Metro, whose board reflects the one-man, one-vote principle, is more representative of the region's interests than PSCOG, whose board gives equal representation to lightly populated rural towns as to the city of Seattle.

. **Public Involvement.**—The public has been involved in Seattle transit decisions throughout the 15-year period of recent history, at least in the sense that financing depended on voter approval. There has been less public involvement in the ongoing planning process. While Forward Thrust conducted community meetings, many basic decisions had already been fixed by an elite leadership group of downtown interests. The **1972 planning process, following a broader citizen participation effort, achieved support for the idea of improving the rapidly deteriorating existing transit system. Although agencies have improved avenues for citizen involvement today, the confusion over planning responsibilities makes it difficult** to know which channels for participation will be most effective.

2. ASSESSMENT OF THE TECHNICAL PROCESS

• **Goals and Objectives.—Transit proposals** in Seattle have been part of a comprehensive program of municipal improvements based on explicit goals for the city. The program's goals were based on very optimistic estimates of Seattle's growth, estimates that began to divorce goals from **reality as layoffs at Boeing created a near-depression** in the Seattle area.

. **Development and Evaluation of Alternatives.—A rail rapid transit concept had** been chosen as a matter of policy by downtown-oriented civic leaders in the early 1960's. Subsequent planning was carried out to prove the feasibility of CBD-oriented rail transit and show its superiority in relation to other alternatives. After defeat of the rail plans in **1968 and 1970, a bus** scheme was sought and rail was not considered an alternative, since bonded indebtedness was to be avoided. Currently, a variety of technological alternatives are under consideration as part of a flexible, incremental planning approach.

. **Financing and Implementation.—Transit planning was strongly influenced by the**

nature of the available financing, which was dependent on UMTA support and voter approval. The early transit systems were made large in order to provide a maximum number of voters with a direct interest in transit, a plan that backfired when voters rejected the expensive proposals. More recent proposals have stressed immediate short-term transit needs, with more success.

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