

Metropolitan Setting¹

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

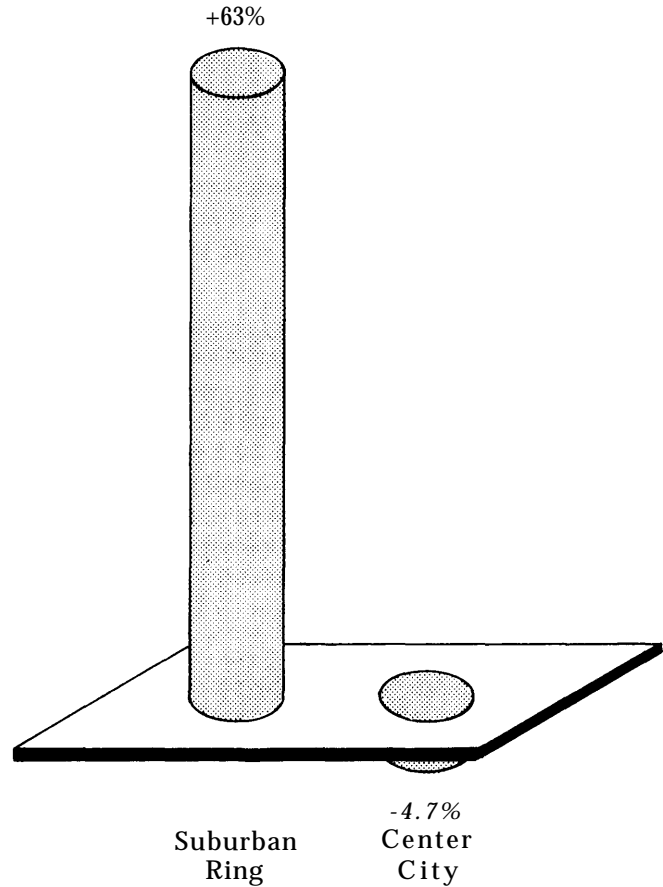
¹ See Figure 1, pages 14 and 15.

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
Percent Change 1960-1970



POPULATION

	<u>Suburban Ring</u>	<u>Center City</u>
1960	550,126	557,087
1970	894,038	530,831

DENSITY
(population/Square mile)

	<u>Suburban Ring</u>	<u>Center City</u>
1960	132	6,664
1970	216	6,350

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 II 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 1.—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 Administration

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)

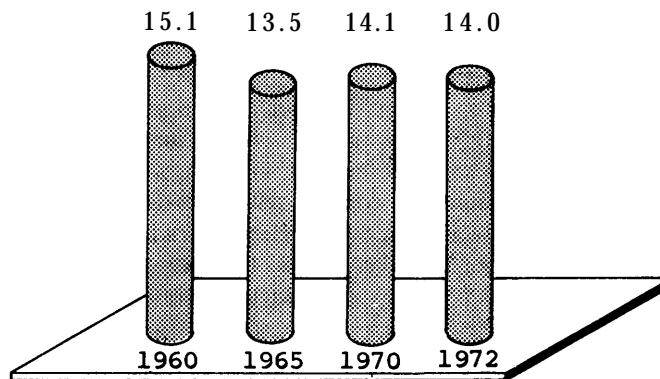
State legislation enacted in 1957 permitted Washington cities and counties in urban areas to

VEHICLE MILES OPERATED

(millions of miles)

Peak Year =1960 (15.1 million miles)

Low Year= 1966 (13.5 million miles)

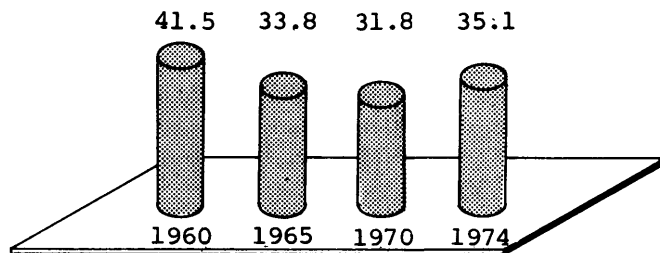


REVENUE PASSENGERS

(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)

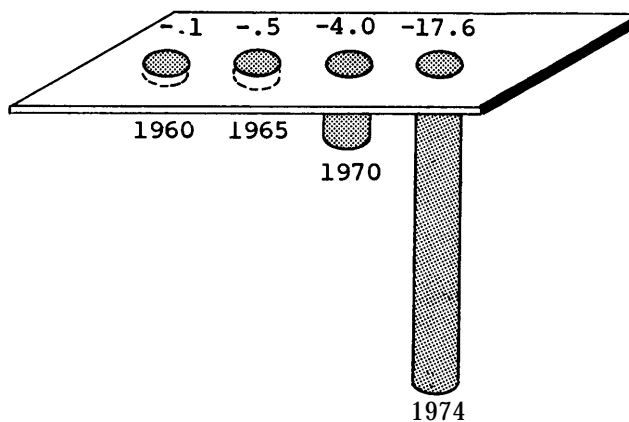
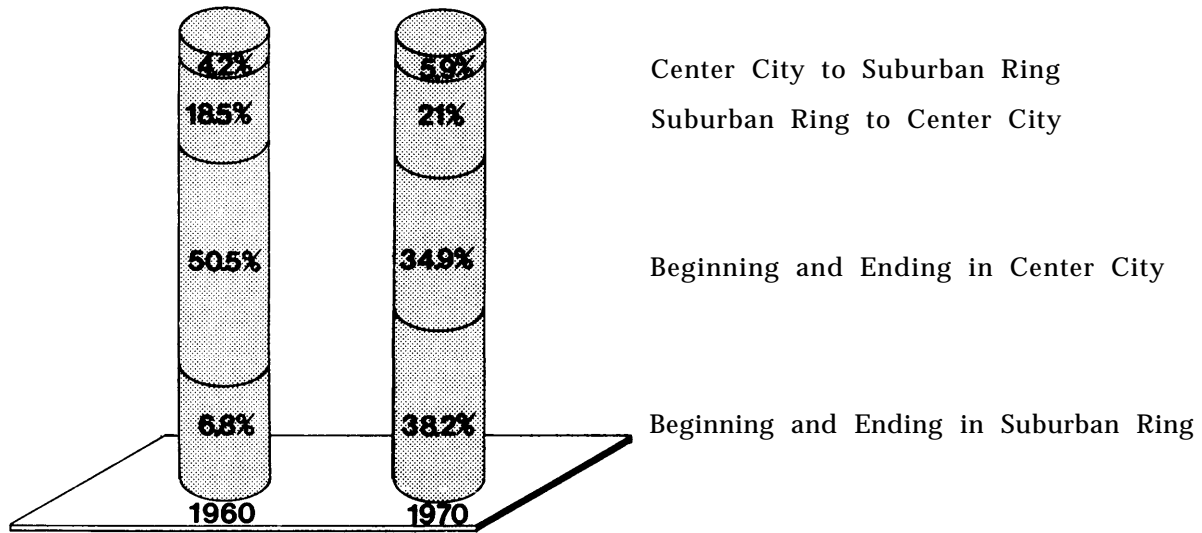


FIGURE 3: SEATTLE-TRANSIT OPERATIONS 1960-1974

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

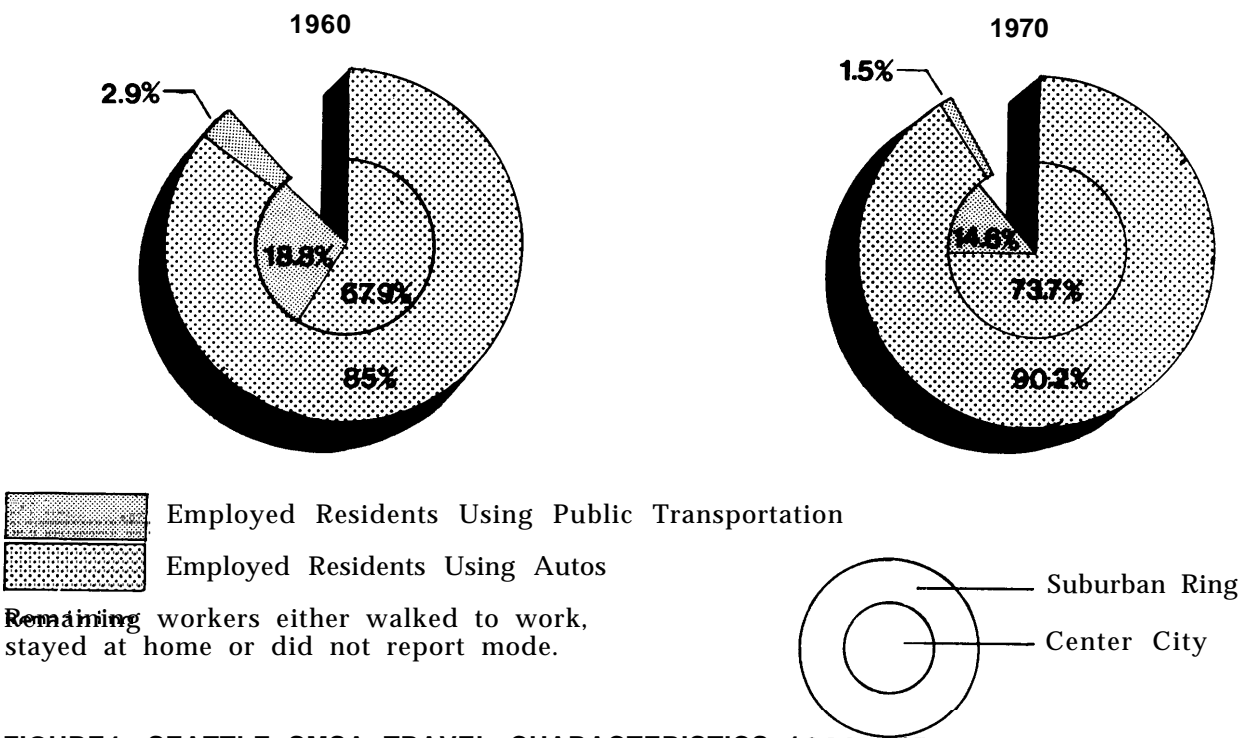


FIGURE 4: SEATTLE SMSA TRAVEL CHARACTERISTICS 1960-1970

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.

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 many 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.

³The 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.

⁴The 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.