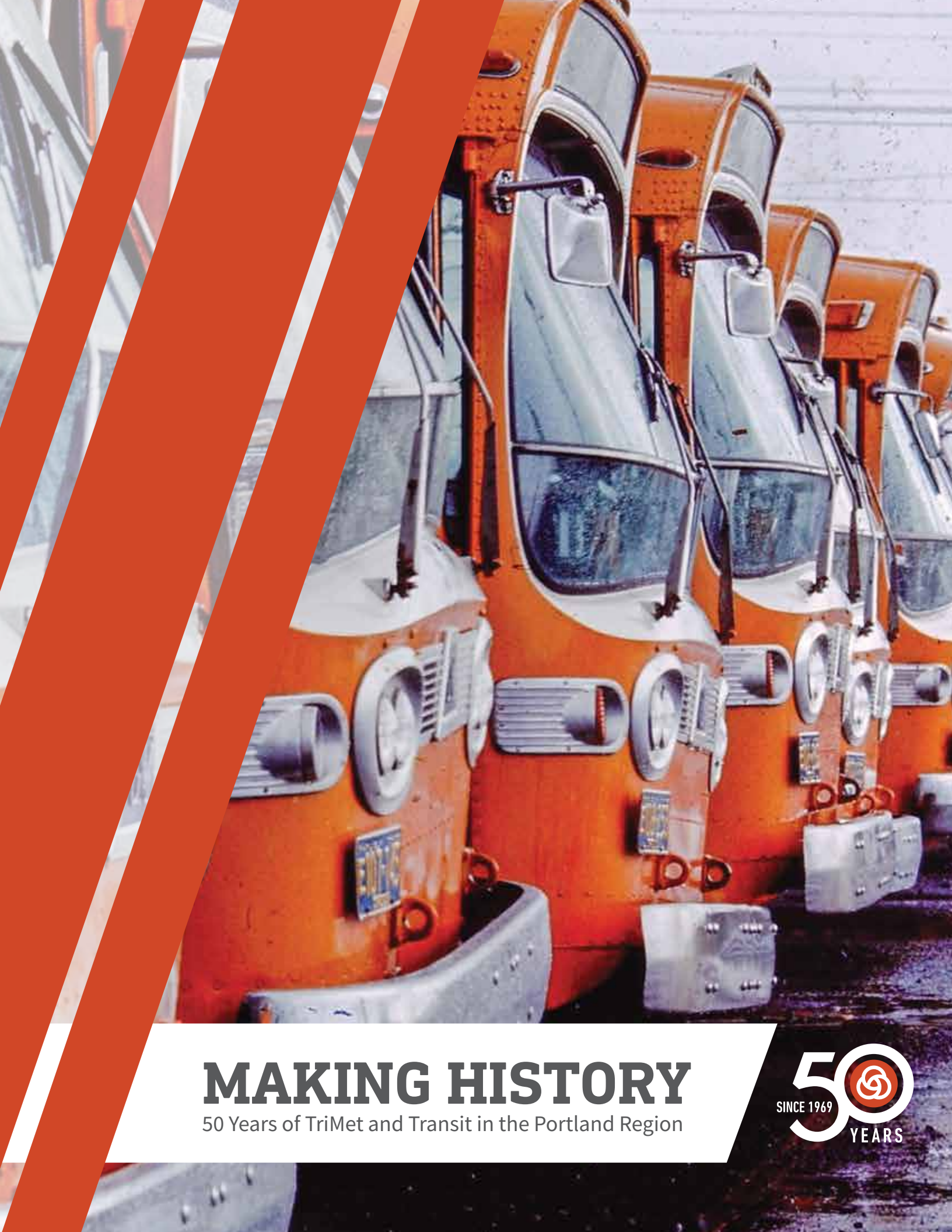

MAKING HISTORY

50 Years of TriMet and Transit in the Portland Region

SINCE 1969
50 YEARS

MAKING HISTORY

50 YEARS OF TRIMET AND TRANSIT IN THE PORTLAND REGION

Prepared by the Tri-County Metropolitan Transportation District of Oregon with encouragement from Congressman Earl Blumenauer

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Making History: 50 Years of TriMet and Transit in the Portland Region is available at trimet.org/makinghistory. Please check the web edition for updates.

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FOREWORD: 50 YEARS OF TRANSIT

CREATING LIVABLE COMMUNITIES

U.S. Congressman Earl Blumenauer, 3rd Congressional District of Oregon

Heroes are not giant statues framed against a red sky. They are people who say: This is my community, and it is my responsibility to make it better. ***Tom McCall***

Any history of a great organization like TriMet is really a history of the visionary, brilliant or just plain doggedly determined people, both inside and outside the agency, who captured the spark of an idea, nurtured and grew it. It's also the story of men and women who did the hard and diligent work to make it a reality. Together they believed the vision that the Portland region could do transportation differently—and better—than any other region in the country.

It's also about the people of our community, thousands of neighborhood leaders, activists and just plain folks who have embraced the idea of innovation. Our stakeholders were not afraid of trying something different and were not willing to settle for usual strategies that have proven unsuccessful in the past or in other regions.

Our region's unique vision has been shaped, tended and advanced by notable figures who have had a huge impact on Oregon's history, like Senator Mark Hatfield and Glenn Jackson. But there were also many players behind the scenes, like TriMet's Dick Feeney and Metro's Andy Cotugno, business people like Bill Roberts and Bill Robertson and less well-known elected leaders like Don Clark and Shirley Huffman. The combination of hundreds of key actors at the right time created an agency and a vision that was much greater than the sum of its parts. As a result of these accomplishments, TriMet is one of America's most admired transit systems. Our region is a recognized national model for transportation innovation and results.

History also shows that progress is seldom linear. Implementing new ideas requires taking some risks, and sometimes those bold moves don't turn out exactly as planned. One secret ingredient in Portland's success is a willingness to try new approaches and to adapt when circumstances change or things don't turn out as expected. Portland has been blessed with citizens who are willing to embrace innovation and its challenges.

While this history is only partly about Portland's light rail system, that part of the agency's story is the most visible and enduring manifestation of the region's bold vision for charting a different and better course for shaping its future. In September 2015, TriMet and the region opened the Orange Line to Milwaukie. The project includes the remarkable Tilikum Crossing, the first bridge spanning the Willamette River in more than four decades. True to our legacy of innovation, this is the first bridge in America to serve light rail, streetcar, bus, bike and pedestrian traffic—but not cars. Now, TriMet and the region look to fund and construct the SW Corridor light rail line. This 12-mile line will connect downtown Portland to Tigard and Bridgeport Village.

Like all past light rail projects, this achievement has been realized through visionary leadership and long, difficult work. We saw the willingness of the region's leaders to sometimes defer their local short-term needs to build the regional system. The real question now is how that model, that has served us so well, will continue to shape our future and achieve the next generation of projects. It is a question we all must help answer.

SETTING THE STAGE FOR

DOING THINGS DIFFERENTLY

The history of TriMet, the Portland region's public transit agency, is steeped in Oregon's fabled pioneering spirit. Founded 50 years ago from the ashes of the bankrupt Rose City Transit Co., TriMet has been profoundly influential in shaping the growth and character of the Portland region. Through innovations in policy development, system design and technological advancement, TriMet continues to set benchmarks for the transit industry at home and abroad.

TriMet is the most recent in a long line of transit pioneers in the Portland area. The region was once crossed by one of the nation's most extensive systems of streetcar and interurban routes, supplemented by mainline railroads and river ferry crossings. Early innovations in electric power and coordinated transit service were harbingers of the extensive transit system that serves the region today.

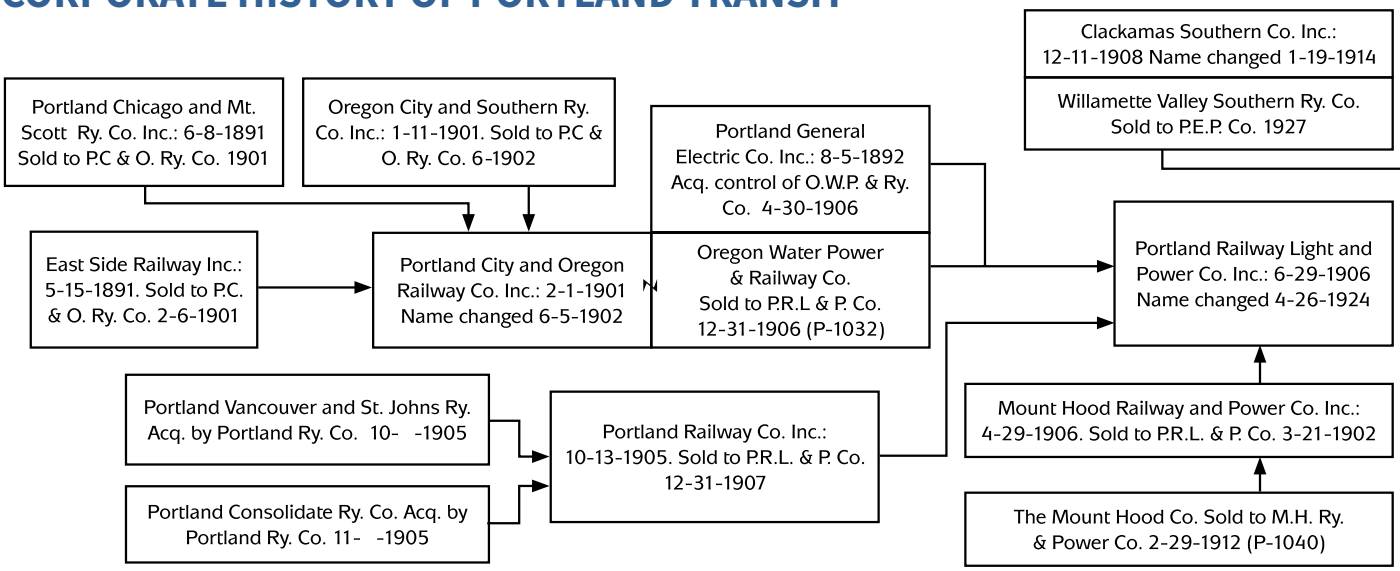
By the 1960s, like many other cities Portland had embraced the automobile culture and faced loss of residents, businesses and capital. Suburban housing developments, shopping areas and business parks were draining Portland's downtown of its vitality.

Today Portland's central city is one of the most admired in North America. The central city and surrounding town centers provide vibrant options for a diversity of lifestyles. They are interconnected with efficient and accessible public transit services. Perhaps the most significant factor contributing to this turnaround was the vision advanced by regional leaders who understood and insisted on planning transportation and land use in sync. Decisions made during the 1960s and 1970s set the course for Portland to find itself highly rated on many "best places" lists. Important milestones include:

- A decision to cancel freeways that would have destroyed Portland neighborhoods, leading to state and local support for MAX, the regional light rail service, that now links suburban communities from one end of the region to the other.
- Creation of public institutions that continue to collaborate and foster community engagement and public/private and city/suburban consensus.
- Establishment of TriMet, a public regional transit agency with new buses, a 12-block-long downtown transit mall and regional transit facilities.

These achievements emerged from a pragmatic, "can do" attitude that identified and resolved problems with a minimum of partisanship or quarrel. The Portland region may be unique in its ability to marry public with private interests and achieve urban and suburban consensus. Portland is often described as a "big little city," where

CORPORATE HISTORY OF PORTLAND TRANSIT



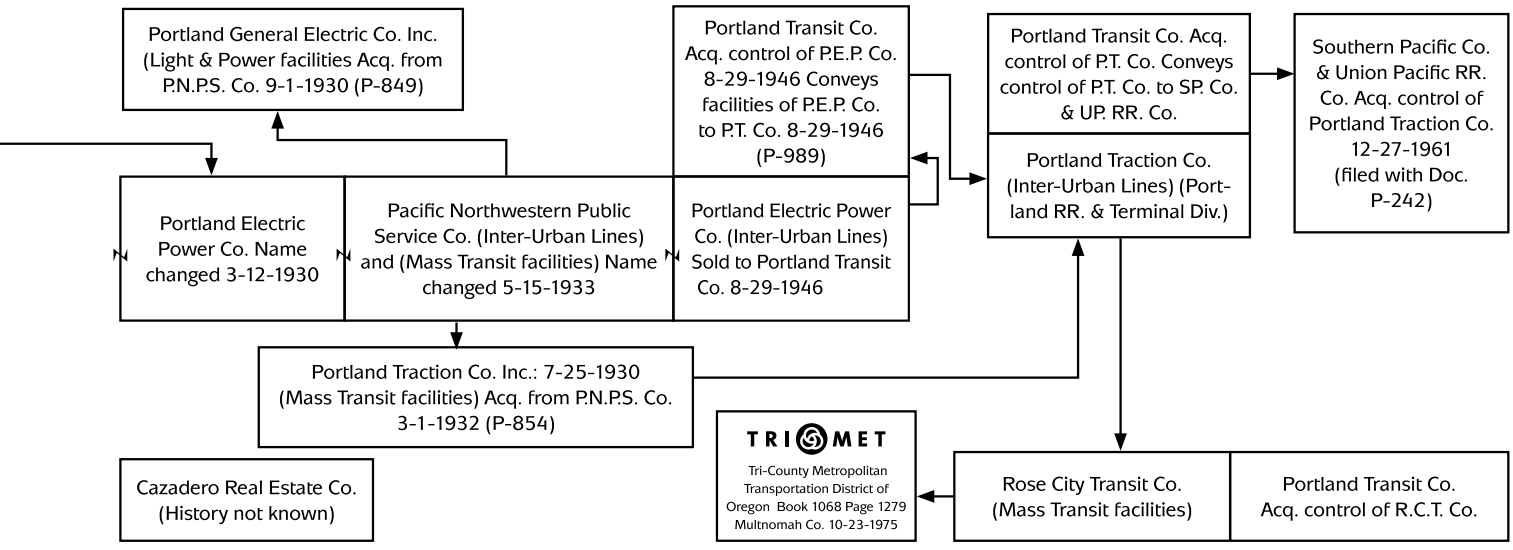
networks abound and plans are conceived over coffee, a beer or a glass of retsina. Yet back-room conversations have not preempted nor replaced the engagement of citizen activists and community leadership.

Perseverance is the standard for how TriMet has approached its mission and its quest for efficiency in operations, place-sensitive and attractive design, informed innovation, technological leadership and land-use integration. The results draw visitors from all over the world to learn from TriMet and its partners as they continue to shape our livable and sustainable region.

None of what TriMet has accomplished has come about easily. There have been crises—even tragedies—financial shortfalls, labor strife, project delays, leadership turnover and regional battles. This account of TriMet's first 50 years is offered to inspire the next generation of citizens, leaders, students, employees, partners and those from other communities to learn from the experience of TriMet and its regional partners, and their embrace of innovation, collaboration, accommodation and prudent risk-taking. At several points in TriMet's history, foresighted leaders sent TriMet in what turned out to be the right direction. These pivotal times included a reassessment of TriMet's role in the mid-1970s, recovery from a premature expansion of service in the mid-1980s, the fortuitous decision to sustain the high-capacity rail program in the early 1990s and a fiscal course correction in TriMet's most recent history. These episodes are chronicled here—accompanied by stories, some humorous in hindsight—to illustrate how TriMet and its partners responded to particular challenges.

This history of TriMet has borrowed from much that has already been written. It is as accurate as a group of TriMet veterans has been able to determine. There may be errors and alternative points of view as to how events unfolded and their consequences. Only a few of the many players in TriMet's history are represented here, resulting in unavoidable but regrettable omissions.

TriMet's history is grounded in a legacy of civic and corporate leaders. Among these, to name just two, are Governor Tom McCall, who called for TriMet's creation, and Congressman Earl Blumenauer, who steadfastly has promoted transit's role in supporting livable communities locally and nationwide for more than 40 years. Over the years many visionary individuals, including eight general managers and dozens of board members, have embossed their unique stamps on the organization. At the outset Rick Gustafson aligned regional thinking and helped create a transit organization sensitive to the needs of varied communities. Staffer Dick Feeney for many years shaped TriMet's inter-agency and national relationships and crafted legislation that propelled TriMet's development. In the 1960s, Mayor Neil Goldschmidt helped turn around the prevailing highway mentality and established Portland as an inseparable partner in TriMet's success. The area's regional governments, first the Columbia Region Association of Governments (CRAG) and later Metro, played an indispensable role in creating a regional vision and promoting region-wide discussion and consensus around large and complex projects. Metro Planner Andy Cotugno is a master of that process. Additional transit-supportive leaders in Oregon's congressional delegation have included Senator Mark Hatfield, Congressman Les AuCoin, Senator Gordon Smith and Congressman Peter DeFazio.



Ben Holladay's streetcars getting fresh horses, Southeast Morrison and Grand, 1888

PORTLAND, OREGON'S LEGACY OF TRANSIT

Like many other American cities, Portland grew up with the streetcar. The early history of Portland transit is nicely chronicled in John T. Labbe's book, *Fares Please: Those Portland Trolley Years*. This history followed the development of the city along the western shore of the Willamette River, jumping to the east side as the first bridges were built. Progress was influenced by technological advances that enhanced the streetcar's capabilities and by challenges posed by rivers and Portland's hilly topography.

BEGINNINGS

Only two decades after Portland was founded in 1851, the city's growth—initially concentrated in what we now consider Portland's downtown—prompted the need for a public transportation system.

THE HORSE-DRAWN ERA

A horse-drawn streetcar line started by Ben Holladay opened on December 7, 1872, running along Southwest First Avenue and was dubbed the Portland Street Railway Company. A decade later, in 1882, this line had competition from the Multnomah Street Railway Company and the Transcontinental Street Railway Company. Those lines extended west and northwest from downtown to Portland's early and most densely developed neighborhoods.

A series of important events occurred in 1888. First, the Willamette Bridge Railway Company built the first streetcar line on the east side of the river, running horse-drawn cars across the recently completed Morrison Bridge to what then was the city of East Portland. Horse-drawn cars continued to provide most street railway service, but they couldn't meet the needs of the longer suburban routes. Steam-operated streetcar lines began service, developing into a network that served Portland, its west bank neighborhoods and, on the east side, Hawthorne, Mount Scott, Mount Tabor, St. Johns, and over the Columbia River to Vancouver, Washington.

ELECTRIC- AND CABLE-POWERED STREETCARS

On the other side of the country, in Richmond, Virginia, an inventor named Frank Sprague came up with a solution for reliable travel over longer distances. He built the first successful electric streetcar line, the Richmond Union

Passenger Railway, which extended a distance of 12 miles and included gradients of up to 10 percent. Urban public transportation would never be the same.

Portland soon adopted this new technology. In 1889 electric streetcars began service, gradually replacing the horse-drawn and steam-powered lines. A mainstay of early urban development that would be rediscovered decades later, streetcar lines were built to foster growth of new neighborhoods. Portland's streetcar network eventually extended to city limits in all directions.

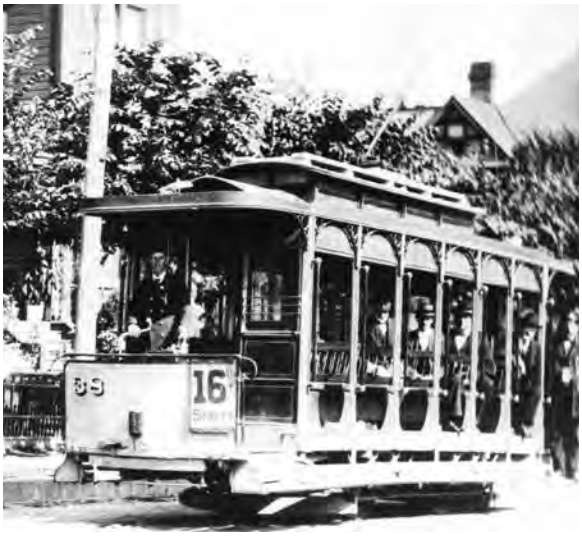
By the 1890s an era of major streetcar line expansion included new lines on both sides of the Willamette River. The Metropolitan Railway Company began the first electric streetcar service on Second Street in downtown Portland. The first eastside electrified streetcars were operated by the Willamette Bridge Railway Company in the Albina area. The Multnomah Street Railway started converting its horse-drawn lines to electric operation, and the Waverly-Woodstock Electric Railway began operation in southeast Portland using streetcars ordered from the pioneering Sprague Company. Fares were five cents. Portland's streetcar era was in full bloom.

In 1890 the Portland Cable Railway Company began operating the city's first cable cars. This line climbed Portland's west hills on a 1,040-foot trestle ascending a 20 percent grade. One hundred years later the original cable pulley was unearthed during light rail construction at the intersection of what are now Southwest 18th Avenue and Southwest Jefferson Street in the Goose Hollow neighborhood. The new cable line was heralded as a unique addition to Portland's metropolitan prestige. An official proclaimed that "no other thing adds more to the metropolitan prestige of the city than this superior car system. We are fast eliminating the elements of time and space. We have taken the burden off man and beast." But cable railways were to last only 12 years in Portland.

CONSOLIDATIONS BRING EFFICIENCIES

Streetcar operation was a competitive business. Consolidations of financially troubled companies began as early as 1891. In that year the City & Suburban Railway Company absorbed four smaller businesses and their lines—Willamette Bridge Railway, Third Street, Transcontinental Street Railway and Waverly-Woodstock Electric Railway—to form the largest street railway company west of the Mississippi River. For the first time it was possible to cross from one side of town to the other, approximately 16 miles, on a single fare. The following year the Portland Consolidated Street Railway Company was formed, absorbing the remaining three lines—including the Metropolitan Street Railway and Portland & Vancouver Railway, a steam line.

These streetcars ran on electricity, which was still a new source of energy. Portland pioneered the extension of streetcars into regional interurban lines. In contrast with city streetcars, interurban railways used streetcar technology to operate over longer distances at higher



Streetcar, 1889

Early streetcars at Southwest 3rd and Yamhill

Interurban streetcar boarding passengers for Oaks Park

1889 transit network

1906 transit network

1912 transit network

speeds and often on dedicated rights-of-way—much as TriMet's MAX does today outside central Portland. In 1893 the East Side Railway Company built a 16-mile interurban electric railway that drew power from a new 14-mile high-voltage transmission line between Portland and Oregon City, site of a new hydroelectric plant at Willamette Falls. It was the first such line in the United States and one of the first attempts at long distance electrical transmission. Other interurban lines followed, connecting Portland to its suburbs and outlying towns.

Streetcar operations by this time had become a national enterprise. In 1896 the Portland Consolidated Street Railway Company was foreclosed, and the Portland Railway Company was formed (the second use of this name) by the Clark and Seligman interests of Philadelphia and New York, which acquired the Consolidated Railway property for $6 million. The Portland Railway and the City & Suburban lines were added to this holding in 1905. This was the same year that Portland's last cable car lines were converted to electric operation.

It is interesting to note that in 1896 approximately four million Americans were riding bicycles. It would be these bicyclists who would press for the more universal paving of roadways. Streetcar officials thought this new and convenient mode of transportation might supplant their product. They were relieved eventually with the thought that operating bicycles required too much skill to offer serious competition. Little did they know what lay ahead. Those road improvements that were promoted by bicyclists would eventually enable the widespread use of the automobile.

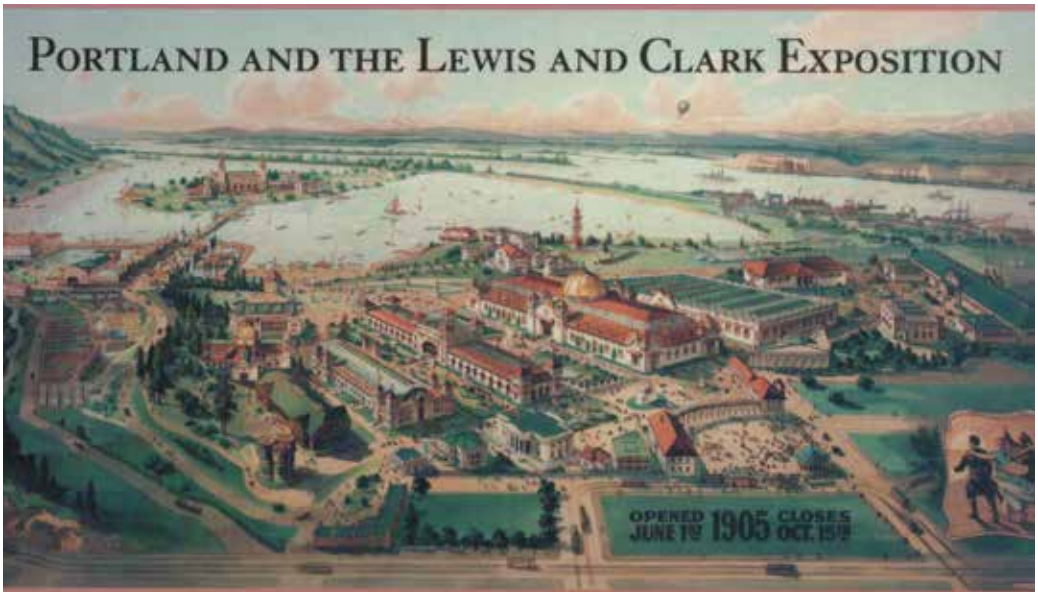
TWENTIETH CENTURY

Even as the first automobile arrived in Oregon in 1899, consolidations and reorganizations of streetcar lines continued into the new century. In 1902 the East Side Railway Company, with its electric passenger/freight railroad service, was sold in foreclosure, resulting in the formation of a new company, the Oregon Water Power and Railway Company.

THE GREAT EXTRAVAGANZA

The Lewis and Clark Centennial Exposition, held in northwest Portland in 1905, celebrated a coming of age for the city. The exposition showcased the latest in technology and attracted foreign exhibitors and visitors. Around this time streetcar technology was becoming more reliable and versatile. Just before the opening of The Great Extravaganza, the Portland Railway Company replaced the cable car on the hilly Council Crest Line with powerful new electric streetcars. The cars operated on Washington Street to 23rd Street and south along the Ford Street Viaduct (now Vista Bridge) and Patton Road.

The Portland Railway and City & Suburban merged in September 1905 and combined remaining streetcar operations in one



The Great Extravaganza, the Lewis and Clark Centennial Exposition, northwest Portland, 1905

Crowds take streetcars on Portland Beavers' opening day, 1910: the A-league team would win the pennant that year

company. The new entity was briefly known as the Portland & Suburban Railway, until it was learned that a freight railroad was using that name. It became the Portland Consolidated Railway in time to bring the estimated one million visitors to the Lewis and Clark Centennial Exposition. The following year it merged with the Oregon Water Power & Railway Co. to become the Portland Railway, Light and Power Company (PRL&P), a system of 28 electric streetcar and interurban lines. The PRL&P's standard vehicles were Pay-As-You-Enter (PAYE) cars with long vestibules built by the American Car Company.

THE GOOD ROADS MOVEMENT

By 1910 interurban railway service extended from Vancouver south to Eugene and Corvallis, and from Gresham and Troutdale west to Forest Grove and McMinnville. The apogee of electric rail line development was approaching as the Good Roads movement was taking shape. Efforts to improve roads after an 1896 good roads convention languished until 1913, when the Oregon legislature created the Oregon Highway Commission to "get Oregon out of the mud." At the time, Oregon had 25 miles of paved road and 13,957 registered vehicles. Like the rest of the country, Oregon embraced the automobile. Although Oregon became the first state to pay for roads with gas tax revenues, rail lines remained the only mode of public transportation.

After years of franchise battles, the Mount Hood Railway & Power Company completed laying tracks for an ambitious interurban line from East Portland to the Bull Run watershed at the base of Mount Hood. Dreams of

An early Portland Railway Light and Power bus, 1924

Sound and sight advertising on a World War II-era bus

Wartime transit service, 1943

connecting Portland with Mount Hood died soon after the line became part of Portland Railway Light and Power the following year. While beautiful interurban cars arrived from the Kuhlman Car Company of Cleveland, the line was never electrified.

In 1912, as Portland's population surpassed a quarter million, rail transit ridership rose to 70 million annual riders. As new residential areas and towns sprouted along the rail lines, Portland and the Willamette Valley gave rise to one of the largest urban rail systems in the American West. This was a time when most infrastructure investments were privately funded. Many of the streetcar lines were built by entrepreneurs to provide access to homebuyers in new "streetcar neighborhoods." Land developers and streetcar operators were sometimes a single company or related via corporate holdings. In exchange for operating franchises, the streetcar companies were obliged to pave and maintain the streets on which they operated. As few persons living in the city owned horses, streetcars were the primary means of transportation.

Nationwide by 1917 there were 44,800 miles of streetcar track and 11.3 billion riders. With one small gap (on the Lake Erie shore), it was possible to travel from New York to Chicago with streetcar fares. Not long after, by 1923, streetcar ridership peaked at 14.8 billion. The later decline coincided with continued growth of automobile transport and road building. "A rather satisfying urban legend holds that General Motors stepped in and killed the streetcars so it could sell buses. But in fact, when presented with the choice of either maintaining the street railway infrastructure—power supply, tracks, cars, overhead wires—or operating buses on publicly funded roads, it was an easy choice for the private sector."[1]

The Good Roads movement had gathered momentum after World War I, and streetcar operations began to feel the pinch. The first official Oregon state roadmap was published in 1919. Competition from the automobile drove the need for better management of streetcar costs. Portland Railway Light and Power ordered 25 new Birney Safety Cars to maintain efficient operation on marginal stub lines. The Birneys enabled one-man streetcar operation (traditionally cars had both an operator and a conductor). They were the last cars ordered for many years.

TRANSIT'S DECLINE

By the roaring '20s, streetcar transportation had contracted. Cutbacks in service and the pursuit of labor economies became the norm. By the 1930s several interurban rail lines discontinued passenger service. The aging streetcar system began a conversion to gas-powered buses and electric trolleybuses, operating from paired overhead wires. In time,

[1] Graebner J., A History of the Electric Streetcar, 2005

Portland, like other West Coast cites, enjoyed an extensive trolleybus network, particularly on the city's east side.

WARTIME REPRIEVE

In 1940 Portland Railway changed its name to Portland Electric Power Company, a holding company that included Portland General Electric, Portland Traction Company and an interurban system. It retained operation of the interurban lines, while releasing direct control of Portland Traction Company's city lines. The advent of World War II brought a reprieve for streetcar lines, as fuel and rubber were rationed and fewer automobiles were built for the public market. In 1941, in spite of regional system cutbacks, Portland Traction Company declared itself to be the finest streetcar system in the world. The process of converting streetcar lines to buses had stopped. In fact, the Bridge Transfer line that interconnected the eastside bridgeheads for transfers into downtown Portland was restored by chipping its tracks along Grand Avenue out of the pavement. Transit ridership—now including buses and trolleybuses—hit an all-time high immediately after the war.

Not long after the war ended, the pendulum swung back toward the automobile. In the post-war era Portland, like the rest of the country, was turning away from public transit as a means of getting around. The automobile offered greater autonomy, versatility and the ability to cover longer distances. This trend was also manifest in Portland's urban form, as sprawling suburbs replaced compact streetcar neighborhoods.

Fred Meyer's first suburban one-stop shopping center had opened in 1931 in Portland's Hollywood District. The store's innovations included a grocery store alongside a drugstore plus home products, off-street parking, a gas station, and—eventually—clothing. Fred G. Meyer would base store locations on planned highway construction.

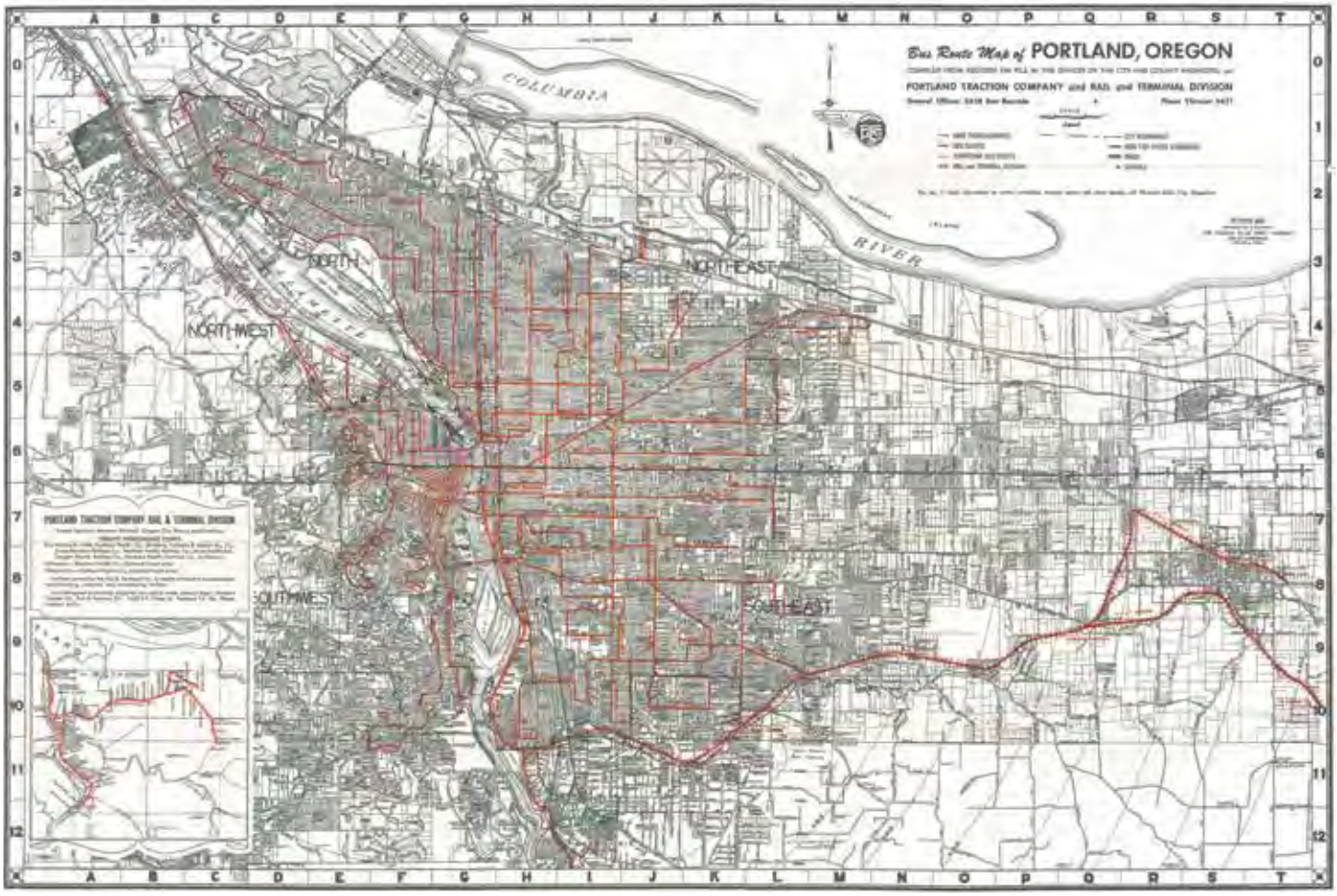
The construction of Harbor Drive in 1942 was part of an auto-oriented paradigm that was taking hold. The hiring of Robert Moses in 1943 would further advance this view of urban form and the region's road network.

In 1946 the interurban lines were turned over to a new company, the Portland Railroad and Terminal Division (PR&T). PR&T launched a modernization plan, purchasing several used streetcars from other cities to spruce up suburban service. In 1950 the last narrow gauge streetcar lines of the Portland Traction Company—Council Crest, Willamette Heights and 23rd Avenue—ceased operation. A Willamette Heights all-night "owl" was the last run. These were the last of Portland's "city" streetcar lines, and their closure left two interurban lines—to Oregon City and

Portland Traction Company trolleybuses at rest

Bellrose—as the only remaining rail transit still operating. As the Portland region continued to grow, the new suburbs beyond the old transit network became increasingly dependent on automobiles, and traffic congestion soon was a concern. Rose City Transit assumed the city routes of the Portland Traction Company in 1956.

Though both passenger and freight service had become profitable, Portland Railroad and Terminal's San Francisco owners did not encourage ridership. By 1954 ridership had declined to less than a fifth of its wartime level. While all of the city's downtown bridges at one time carried streetcar



Portland Traction Company service map on the eve of the Rose City Transit takeover, 1955

lines, the Hawthorne Bridge was the last to do so. In 1956, construction of the new Morrison Bridge blocked streetcar service across the Hawthorne. The decision was also made that year to not replace the rails on the remodeled approach ramps to the Hawthorne Bridge, effectively terminating downtown service. In spite of a last-minute citizens' effort called "Save Our Streetcars" (known as SOS), all streetcars disappeared from the Rose City with the final cessation of service on Portland's last two interurban lines, between Portland's east side and Oregon City and Bellrose, in 1958. Trolleybuses, which already had replaced some streetcar lines, were also being removed. Diesel freight operation took over the former interurban division. The transit system at this point consisted of gasoline-powered buses operated by seven different private bus companies.

Fortunately, selected examples of rolling stock from this long urban rail heritage have been preserved by the Oregon Electric Railway Historical Society. Former Portland streetcars, including Council Crest streetcars 503 and 506, PAYE streetcar 611, Broadway streetcar 813, Hollywood streetcar 4022, interurban car 1067 and snow sweeper 1455, found their way to the historical society's trolley park, now located at the Antique Powerland Museum (Powerland Heritage Park) in Brooks, Oregon.[2]

RIDERSHIP FALLS, BANKRUPTCY LOOMS

By 1968, the year before TriMet's creation, annual transit ridership had fallen to 16 million from a wartime high of 169 million. Former union leader Mel Schoppert, who was a bus operator at the time, recalled, "They kept cutting the service…I remember there was five-minute service on the Mount Tabor bus line. There was one-minute service on Sandy Boulevard in the peak hours. One lousy minute between buses, you know, and they cut it to 10 minutes, to 15 minutes. They drove the people away."[3] Rose City Transit Company, faced with bankruptcy, threatened to discontinue all service unless granted a major fare hike. From its beginnings in the 1870s through the next 90 years, the presence and influence of transit in Portland followed a roller coaster trajectory to this latest low point. Its revival awaited.

[2] Thompson R., Portland Trolley Chronology, 2009
[3] Schoppert, Interview, 2001

Robert Moses' plan for new Portland highways, 1943

BUCKING NATIONAL TRENDS IN
THE DYNAMIC 1970s

While public transit in Portland teetered on the brink of insolvency in 1969, Portland's citizens and leaders were catching the national enthusiasm for addressing widespread pollution and environmental degradation. In Portland there was precedent: as early as 1925, voices within the region expressed concern about the effects of the automobile on urban form and the ability of government institutions to manage related development and infrastructure.[4] The years following the Great War brought many new residents to the city and accentuated these concerns.

Portland needed to come to grips with its destiny as a growing region with increasing demands on its transportation infrastructure. A plan prepared by celebrated New York urban planner Robert Moses signaled a heightened intensity in auto-oriented urban planning that would lead to urban flight and a focus on suburban living. At the urging of shipbuilder Edgar Kaiser, Moses and his team arrived in 1943 and prepared a plan in short order that revamped how Portland would look, with a focus on roads, bridges and regional connections. Featured were inner and outer highway loops. Moses said, "Every citizen of Portland has a right to be proud of the fact that this community is prepared, while there is still time, to face the future with unclouded vision."[5] Although somewhat controversial, key elements of the plan were implemented, including the close-in Interstate 405 freeway. Full realization of the highway elements of the ambitious plan would have required clearance of blocks upon blocks of thriving neighborhoods. Harbor Drive, which was widened in 1950 along Portland's downtown riverfront, was a short-lived part of that road-building fervor.

Portland historian Carl Abbott contrasts Moses' vision with Jane Jacobs' more organic appreciation of urban form that was gaining traction in the 1960s. Abbott notes that it was the work of Jane Jacobs, tempered by the arguments of Herbert Gans, that ultimately shaped the Portland mindset of the 1960s and 1970s, and brought about the removal of Harbor Drive and the acceptance and revitalization of public transportation as an essential part of the region's future.[6] It was better to fix the ills of the city than to build roads so those with means could escape it.

[4] Abbott C., Portland Planning, Politics, and Growth in a Twentieth-Century City, 1983
[5] Mirk, The Dead Freeway Society, September 24, 2009
[6] Abbott C., Portland Planning, Politics, and Growth in a Twentieth Century City, 1983

Portland-Vancouver Metropolitan Transportation Plan, 1969

NEW INSTITUTIONS FOR A NEW VISION

Planning, coordination and implementation of these new ideas for the region called for new institutions. A 1944 conference of the League of Oregon Cities resolved that "sporadic, scattered, and unregulated growth of municipalities and urban fringes has caused tremendous waste in money and resources." It called on the Oregon legislature to allow "the creation of metropolitan or regional planning districts and the establishment of metropolitan or regional planning commissions."[7] This need would be addressed initially through county planning commissions. With a look to roadway development as proposed in the Moses Plan, the Metropolitan Planning Commission was created in 1957, utilizing federal Department of Housing and Urban Development Section 701 funds authorized by the Housing Act of 1954. The four-member Metropolitan Planning Commission board represented Portland and the surrounding three Oregon counties. The agency compiled demographic and land-use data and offered a venue in which elected officials could discuss emerging regional issues.

In 1959, the Portland-Vancouver Metropolitan Transportation Study—directed by the Oregon State Highway Commission—began areawide highway planning in compliance with federal requirements. This study brought together the three counties, Portland, the Metropolitan Planning Commission and a dozen local cities, with Clark County and the state of Washington as advisory participants. Work was conducted by internal staff, consultants and state highway planners.

COUNCIL OF GOVERNMENTS MODEL EMERGES

The struggle to manage rapid post-war regional growth resulted in a tangle of special municipal districts and studies. By the 1960s cities and counties were battling over annexations and the distribution of services. Suburban resentment toward Portland grew. The League of Women Voters, the Chamber of Commerce and Metropolitan Area Perspectives, made up of professionals and business interests, attempted to make sense of the chaotic provision of services. The 1961 Oregon legislature responded by establishing the Portland Metropolitan Study Commission. The initial call for a "greater municipality for the greater Portland urban area"[8] instead led to clearer delineation of the respective roles of constituent jurisdictions, for example between the City of Portland and Multnomah County.

In October 1966, following the recommendation of the study commission, the Metropolitan Planning Commission was replaced by the Columbia Region Association of Governments (CRAG), adding in Clark County, Washington, and Columbia County, Oregon, to the regional forum. CRAG was a council of governments, an institutional form found in many U.S. metropolitan areas. With fortunate timing, CRAG became the regional Metropolitan Planning Organization, as mandated by the Federal Aid Highway Act of 1962. Members of CRAG's governing board were appointed by the elected leadership of its constituent counties and municipalities and thus represented governmental units rather than citizens directly. The Oregon Department of Environmental Quality was another product of this consolidation of regional responsibilities.

[7] Abbott C., A History of Metro, 1991
[8] ibid

CRAG continued the data collection efforts of the Metropolitan Planning Commission and in August 1967 took over the coordination of the Portland-Vancouver Metropolitan Transportation Study. This study provided the first comprehensive analysis of travel demand in the region, assuming no constraints on highway travel. The Portland/Vancouver Transportation Plan for 1990 was approved in 1969 with a recommendation for 54 major new highway, road and bridge-building projects, many of them freeways and expressways on roughly a two-mile grid. The plan predicted that the declining bus system would remain insignificant for regional travel except for the rush-hour commute to downtown. "It was a grid of freeways with a school and a church within each grid cell," said Ethan Seltzer, while serving as director of the Institute of Portland Metropolitan Studies at Portland State University.[9]

The council of governments model stretched the limited attention span of constituent mayors and local representatives. Consensus-building was a slow process as representatives felt obliged to seek affirmation from their respective councils. Without an independent, directly elected voice, CRAG simply reflected the plans and ambitions of the constituent governments, with little ability to consolidate and make sense of competing aspirations.[10] Funding remained another handicap for CRAG, as most funds were locally collected per-capita dues and federal pass-through allotments earmarked for specific purposes, such as transportation, storm water management and air quality.

In addition to CRAG, the Portland Metropolitan Study Commission proposed a multipurpose Metropolitan Service District, which could pick up as many regional services as voters chose to assign to it. Public transit was considered one of those services. Establishing the service district, however, required action by the legislature and thus became tied to legislation paving the way for TriMet's creation. The tie, however, was weakened when City of Portland concerns caused service district approval to languish. In the meantime Rose City Transit was going bankrupt.

Statewide legislation enabling the creation of mass-transit districts allowed metropolitan service districts, including Portland's, at any time to "order the transfer of the transit system of the transit district to the metropolitan district" (ORS 267.020), along with its taxing authority, by a simple majority vote. Rick Gustafson, former legislator and Metro executive officer, recalled the creation of the Metropolitan Service District:

> *It was going along fine, but some people decided they needed to have a vote to form it, and they needed a vote to fund it. This was in '69, and then Rose City announces that it's going bankrupt, and the transit union goes down to the legislature, and they work up this temporary legislation to save the transit union and Rose City, and they form the Tri-County Metropolitan Transportation District, but it really was in conflict with the Metropolitan Service District (MSD), and so it was Connie McCready, who was a legislator at the time, who basically struck the compromise to allow this temporary organization to be created, TriMet, and have a provision that if MSD was formed by the voters that MSD would then assume responsibility for TriMet.*[11]

The creation of the Metropolitan Service District was authorized in a close three-county vote in 1970, followed by another vote that failed to produce a revenue source for the new district. The City of Portland did not pursue an MSD takeover of TriMet. The notion of providing greater accountability to the electorate would resurface at other times in TriMet's history. One such instance was a merger proposal promoted by Metro Councilor Jim Gardner in 1990. The proposal was dropped so as not to jeopardize Federal Transit Administration negotiations for the Westside MAX project.

URBAN RENEWAL AS AN IMPLEMENTATION TOOL

In 1958 Portland voters approved the creation of the Portland Development Commission, which took on specific responsibilities for housing, land development and economic development. Ira Keller was its first director. Over its history the development commission has managed 25 urban renewal areas and programs, mostly with local funds. The four earliest, all federally funded, were the Albina Neighborhood Improvement Plan, Portland State Urban Renewal, Emanuel Hospital Urban Renewal and the Model Cities/Neighborhood Development Program. The remaining dozen-plus areas were funded with bonds backed by expected increases in the local property tax. Early development commission projects were caught in the transitional thinking of the 1960s and 1970s, when renewal efforts were accused of running roughshod over

[9] Young B., Highway to Hell, March 9, 2005
[10] Abbott C., Portland, Planning, Politics and Growth in a Twentieth Century City, 1983
[11] Gustafson, Interview, 2003

One of the acquired Rose City buses (photo courtesy of Steve Morgan)

traditional neighborhoods and bulldozing many blocks for redevelopment. The development commission's subsequent urban renewal programs would become a significant source of local financing for the reincarnated regional rail system.

PUBLIC TRANSPORTATION AS NATIONAL POLICY

As Rose City Transit was struggling for survival, the federal government was seeing a disturbing trend and a need for assistance to ailing transit systems. President John Kennedy called for creating a federal capital assistance program for mass transportation, saying: "To conserve and enhance values in existing urban areas is essential. But at least as important are steps to promote economic efficiency and livability in areas of future development. Our national welfare therefore requires the provision of good urban transportation, with the properly balanced use of private vehicles and modern mass transport to help shape as well as serve urban growth."[12]

Kennedy's call was answered when President Lyndon Johnson signed the Urban Mass Transportation Act of 1964 into law. The Urban Mass Transportation Administration was charged with providing federal assistance for mass transit projects, supported with $375 million in capital assistance annually for the first three years, as mandated by the act.[13] The TriMet and Metro relationship with the Urban Mass Transportation Administration would be nurtured and, with the region's early success in delivering rail projects, would lead to a regional rail development pipeline that remained full. The agency was renamed the Federal Transit Administration in 1991.

TRIMET IS BORN

After early progress on projects such as I-405, efforts to implement the ambitious Portland/Vancouver highway construction plan were running into growing resistance to the next major piece of that plan—the Mount Hood Freeway. That plan was still on the drawing board as TriMet was created in 1969.[14]

LEADERSHIP EMERGES

Against this backdrop, regional leaders considered reinvestment in transit as an alternative to comprehensive and impactful freeway construction. This rethinking of highway expansion coincided with recognition of a transit system in trouble. In January 1969, Portland Mayor Terry Schrunk accepted the advice of Portland's downtown-based business community and appointed the seven-member Mass Transit Advisory Commission. Membership included Leland Johnson, chairman, with Marion McCrory, George Brown, Jack Meier, William E. Roberts, Alvin Batiste

[12] A Brief History of Mass Transit, Federal Transit Administration, 2017, transit.dot.gov/about/brief-history-mass-transit
[13] ibid
[14] From its creation until 2002, TriMet spelled its abbreviated name with a hypen: Tri-Met. For consistency, the editors have used the current spelling throughout this narrative.

and Al McCready. Ray Kell provided legal counsel. This committee would become the foundation of TriMet's first board of directors. The Oregon legislature had passed House Bill 1808 in March 1969 without strong opposition, allowing the creation of transit districts and providing them with the power to raise revenue through a payroll tax (Oregon Statute 267.085).

On October 1, 1969, Portland City Council passed Resolution 30598 to create the Tri-County Metropolitan Transportation District of Oregon, called TriMet, to take over the local bus systems and provide regional transit service. The first organizational meeting of TriMet directors was convened on October 14. TriMet was born. Its powers included entering into contracts, condemning property, fixing and collecting transit charges, bargaining with employees, applying for federal funds and building facilities. It was able to levy taxes without voter approval and exercise its legislative authority through ordinances subject to enforcement.

In November the privately operated Rose City Transit and its property-owning subsidiary, Landport Company, proposed to assign operations to the City of Portland and TriMet, while maintaining title until the legal issues around fair value and pension claims were resolved. The emerging TriMet organization accepted the Rose City Transit proposal. A memorandum of understanding between Portland and Rose City Transit was readied. Terms of the agreement provided for conveying Rose City Transit property to the city at 12:01 a.m. on Monday, December 1, 1969, whereupon the city would immediately transfer these assets to TriMet. Details were to be worked out.

The Amalgamated Transit Union Local 757, however, saw an opportunity to take advantage of the transition. The union sought deferred pay increases from this new management. Union leader Schoppert recalls, "My members got so mad some of them stole the handles off the buses so they couldn't go to work that morning. They all wanted to strike." A new 19-month labor contract that included a $0.49 wage increase was approved by the union a day ahead of TriMet's takeover of operations on December 1. At the time the system consisted of 175 buses operating over 36 routes and a daily ridership of roughly 65,000. The new seven-member TriMet Board of Directors, led by property owner and businessman William E. (Bill) Roberts, included George Brown, Angie Davis, Leland Johnson, Al McCready, Sed Stuart and Robert Weil, with Ray Kell as consulting attorney. The board had diverse representation, including an AFL-CIO director, bank executive, newspaper editor and real estate broker. It was tightly controlled by Board President Roberts, an influential businessman. Meetings were held over lunch at the Arlington Club. Roberts was viewed as competent in his role but overly controlling. Union leader Schoppert described him "…as a little kid would run an electric train. You know, he was proud of it."[15] Former acting general manager Steve McCarthy described him as an "old school gentleman."[16]

TriMet buses, 1973

PAYROLL TAX SELECTED

The board considered seven tax options for raising funds and selected the one best able to provide immediate resources—an employer payroll tax. The tax was easily computed and inexpensive to administer. The TriMet Board of Directors adopted a 0.5 percent payroll tax (TriMet

[15] Schoppert, Interview, 2001
[16] McCarthy, Interview, 2015

Ordinance No. 2) on December 18, 1969. Board President Roberts was in the awkward position of defending TriMet against the business community's immediate opposition to the tax. Schoppert noted, "You think these employers like to pay this employer payroll tax? Hell, he pushed it down their throats, you know." Business interests argued that TriMet's formation and the tax were illegitimate in the absence of elected representation.

The Portland Board of Realtors named Roberts First Citizen in 1974, noting that ''he pressed for what he thought was needed to make TriMet a dependable public service. Only a man of Bill''s charm and recognized integrity could have retained the friendship and respect of his colleagues when he bulled through the so-called 'payroll tax' that gave the system a new lease on financial life.''[17]

The Oregon Supreme Court in July 1970 upheld the validity of the TriMet actions, asserting that the Oregon legislature had granted taxing authority to TriMet. That decision did not erase rancor between TriMet and the business community. The payroll tax was to vary over time, and from 1971 to 1974 was reduced to 0.3 percent. It was increased to 0.35 percent in 1975, 0.45 percent in 1976 and 0.5 percent for 1977 and 1978. It was raised to 0.6 percent in 1979.

The selection of a payroll tax set TriMet apart from all other transit districts in the country. As a tax unlike any other regional tax, it did not compete with other claims for public sector revenue, as a sales tax might in other regions. (Oregon is one of five states without a statewide general sales tax.) The payroll tax, however, would prove to be sensitive to economic downturns, as TriMet would learn in 1984 and again in 2008.

A SYSTEM TAKES SHAPE

While the transit fare had been 35 cents since 1967, TriMet adopted an off-peak senior citizen 25-cent fare in April 1970. The service map at the time showed routes as far east as East 144th Avenue, south to Harmony Road, southwest to the Lewis & Clark College campus and Southwest 92nd Avenue, and northwest to Linnton and Terminal 4 in St. Johns. In April TriMet filed a grant application with the Urban Mass Transportation Administration for two-thirds of the acquisition cost of the Rose City system and the purchase of 75 new transit buses. Fifty of these would be the first Flxible-brand buses sold with a package of anti-pollution equipment. The $4.25 million grant was awarded that June.

By September 1970 TriMet had acquired the suburban Blue Bus Lines systems—four companies providing service on 43 routes to and within the suburbs—under the cloud of another strike threat. The companies were Portland Stages, Tualatin Valley Buses, Intercity Buses and Estacada-Mollala Stages. This consolidation added another 88 mostly dilapidated buses to TriMet's fleet. The acquisition was supported by a second federal grant application in August 1970 for half the cost of the Blue Lines System and the purchase of another 135 Flxible buses. That $3.37 million grant was awarded in April 1971. Bus 323 would later be elaborately painted for dedicated Line 63 service to the Washington Park Zoo and Forestry Center. The last of these remarkable buses were retired in April 1999, with ten of them having logged over a million miles on their odometers.

Victor Cox, a carry-over official from Rose City Transit, served as TriMet's general manager until Thomas Starr King was appointed in September 1970. Ray Booth took over Cox's duties as the operations director. As a gesture of good will, a week of free rides was offered to senior citizens. The payroll tax was reduced to 0.3 percent on January 1, 1971. With the acquisition of disparate bus systems, TriMet now owned a strikingly diverse collection of buses, each with unique parts and maintenance needs. Most of these buses ran on diesel fuel, but a collection of vintage Mack buses was gasoline powered. By March 1971 new buses began arriving—the first among hundreds that would revitalize the system over the next decade. In that same month, TriMet consolidated routes and adopted a flat fare.

Victor Cox, TriMet's first general manager

TriMet's system was a confusing amalgam of the various companies it had taken over. The state Public Utility Commission forced TriMet to drop a 38-mile route to McMinnville that extended beyond its legislated boundaries. That line was taken over by Greyhound. In June 1971, TriMet initiated new routes that consolidated former Rose City and Blue Lines service. Up to this point, the only crosstown service was a line on East 39th Avenue and another line, which had evolved from the Bridge Transfer streetcar line along the inner eastside. New crosstown service was established on East 122nd, 102nd and 82nd avenues, including service to Portland International Airport. Service was otherwise downtown oriented, with service headways

[17] Obituary: findagrave.com/memorial/63435984

on radial routes as frequent as 10 to 12 minutes during peak hours. A new suburban route extended 10 miles west to the new Somerset West apartment development.

In June 1971 TriMet applied for federal funds to study its financial systems and design much-needed maintenance facilities. As TriMet grappled with organizational challenges and the task of rebuilding an outmoded system, the region continued to debate the role of diverse transportation modes in shaping the region's future. Major developments in that thinking emerged in 1972 and 1973.

SHIFTING GEARS

TRANSIT AS THE CENTERPIECE OF THE PORTLAND DOWNTOWN PLAN

When Neil Goldschmidt became mayor in 1973, Portland was out of compliance with federal clean air standards one out of every three days. Downtown Portland had become a patchwork of parking lots. A shift had begun with the city's adoption of the Portland Downtown Plan in 1972, which placed transit prominently at its core on Southwest Fifth and Sixth avenues. Changes were happening at the state level as well. Guided by then-state representative Earl Blumenauer, on December 28, 1972, the Oregon legislature passed House Bill 3166, creating the Oregon Department of Transportation to replace the Oregon State Highway Department, with a multimodal role that continues to include highways, roads, bridges, railways, public transportation services, transportation safety programs, driver and vehicle licensing, and motor carrier regulation. Glenn Jackson was named chair of the new Oregon Transportation Commission.

Oregon Governor Tom McCall

TOM MCCALL SETS THE VISION

The Robert Moses legacy spurred the unchecked growth of suburbs all across America in the 1950s and '60s. In 1940, 61 percent of the Portland region's population lived in Portland. That population doubled to a million by 1970, with only 38 percent living in the city.[18]

On January 8, 1973, a week after Portland's new mayor took office, Governor Tom McCall addressed the Oregon legislature, proclaiming words that would set the tone for the region's development to this day: "…and the ravenous rampage of suburbia in the Willamette Valley threatens to mock Oregon's status as the environmental model for the nation." Architect Greg Baldwin reflected in an interview:

> *Something interesting was happening at the state level. Old friends like Steve Schell were working on Senate Bill 100. What was really fascinating was that they were articulating an ethic that reconciled the preservation of natural and agricultural resources with the promise of an urban environment.*[19]

The following May the Oregon legislature adopted Senate Bill 100—landmark legislation establishing land-use laws to protect livability and deter sprawl. This led to the adoption of a statewide land-use planning program that positioned the urban growth boundary as a central tenet of land-use planning in Oregon. Cities would establish urban growth boundaries within which a 20-year land supply would accommodate growth. In 1975 Governor McCall founded the nonprofit 1000 Friends of Oregon to act as the citizens' advocate for planned growth. This organization and its active members were protectors of Senate Bill 100 in these early years and maintain this watchdog role to this day.

REVERSING TRANSIT'S DECLINE

The new TriMet staff was busy. In 1972, for the first time in over two decades, transit boarding ridership increased over the prior year. In June 1973, with help from DeLeuw Cather & Company consultants, TriMet completed the Immediate Transportation Improvement Plan and 1990 Master Plan to reverse the transit system's decline. These studies recommended a radial system of routes consolidating all local bus service on a Southwest Fifth and Sixth Avenue transit mall couplet, building suburban Park & Ride lots and transit centers, developing transitways in major corridors and expanding the number of buses. Board member John Piacentini proposed a 10-cent toll on all Portland bridges to raise up to $13 million annually to help pay for transit improvements—an idea that didn't catch on.[20]

REGIONAL PLANNING MAKEOVER

As TriMet organized itself and began adding service, regional planning was getting its own makeover. In 1973, the Oregon legislature enacted Senate Bill 769, which transformed the Columbia Region Council of Governments (CRAG) into a regional planning district with mandated membership made up of the three core metropolitan counties and municipalities. The law gave the agency

[18] Young, March 9, 2005
[19] Baldwin, Interview, 2003
[20] Bridge Toll Asked to Pay for Buses, November 6, 1973

authority to adopt and enforce regional plans. In February 1973, at Mayor Goldschmidt's request, John Piacentini was appointed by TriMet as its long-range planning liaison to Portland and CRAG. CRAG, however, struggled to gain the respect it needed to be effective. The July 5, 1974, *Oregonian* commented that CRAG was "still a stranger to the people it serves."[21] Portland and Goldschmidt secured new operating rules that weighted the voting power of CRAG representatives by the population of respective constituencies, much to the City of Portland's advantage.

From the outset there was apparent overlap in the representation and staffing of CRAG and the Metropolitan Service District. An extensive review process, conducted in 1976 by the Tri-County Local Government Commission and funded by a grant from the National Academy for Public Administration, recommended the consolidation of the planning function of CRAG with the service delivery functions of the Metropolitan Service District. It also called for a directly elected council of decision makers as "the best, and perhaps only, way to secure a democratic, responsive, responsible and effective areawide government."[22] The Oregon legislature affirmed this recommendation, while reducing boundaries to the urbanized portions of the Portland-area counties (in Oregon). Ballot Measure 6, titled "Reorganize Metropolitan Service District, Abolish CRAG," was approved by voters in May 1978. The ballot measure appealed to suburban voters, who may well have viewed CRAG as a vehicle of the City of Portland.

Simulation of the proposed Mount Hood Freeway, 1974

Clackamas County sought exclusion from this new regional entity, now renamed Metro. This was denied by the courts. Rick Gustafson, Metro's first elected executive officer, set the tone and culture of the Metro Council and its Joint Policy Advisory Committee on Transportation (JPACT), made up of officials from metro-area jurisdictions. Looking back, Congressman Earl Blumenauer lauded Gustafson as Metro's George Washington.[23] Metro continues to provide the regional land use, transportation, data analysis, and mapping functions previously offered by CRAG. It is the only directly elected regional government in the United States. (The Twin Cities Metropolitan Council, created in 1967, is appointed by that state's governor.)

THE FREEWAY REVOLT

The Banfield Freeway was completed in 1958, connecting Portland to the town of Fairview 13 miles to the east. Ironically, the freeway opened one day before the final run of Portland's last interurban line.[24] By the mid-1960s the Banfield already was congested. After seven years of construction, in 1966 the Minnesota Freeway (Interstate 5) was completed within Oregon, forming the transportation backbone of the Portland region. Its construction, however, sliced through African-American neighborhoods in North Portland—an unfortunate legacy that TriMet would address in the course of future light rail construction. The impact of that project raised doubts regarding further freeway construction.

In the meantime a freeway revolt was taking root. Citizen activists and political leaders recognized that full build-out of the Portland/Vancouver transportation plan would worsen the region's already substandard air quality. In 1973, the semi-subsurface, 4.2-mile Stadium Freeway (I-405), a surviving element of the plan, was completed around the west side of Portland's downtown core. The new freeway carried some of the traffic that had taken Harbor Drive (Highway 99W) along the river's edge. In May 1974, as one of the nation's first freeway removals, Harbor Drive was closed and transformed into today's Tom McCall Waterfront Park.

[21] Abbott C., 1991
[22] ibid
[23] Blumenauer E., Interview, 2001
[24] Young, March 9, 2005

THE TRIMET AND CITY OF PORTLAND PARTNERSHIP

by Steve Dotterrer, former Portland transportation planning director

An institutional partnership is the subject of constant discussion and renegotiation, grounded in a set of shared principles. It involves risk-taking for both partners. For Portland and TriMet, shared principles typically center around planning and implementing an integrated system of land use and transportation to create the best community possible. Most importantly, successful collaborations require that individuals, both elected leaders and staff, take risks, make commitments and deliver.

With multiple actors in both agencies, and especially with the city's diffuse administrative form and TriMet's governor-appointed board, the negotiations and discussions can seem endless.

But risks were taken and the work got done. Even the creation of a public transit agency was a partnership. Portland Mayor Terry Schrunk and the Portland City Council took multiple risks in 1968 when they denied the Rose City Transit Company a fare increase, took over the company and ran it while simultaneously asking the state to create the regional transit agency that became TriMet.

Mayor Goldschmidt, working with staff Doug Wright, Ernie Bonner and others, sought to forge a better community through land-use and transportation integration. Their start was the withdrawal of the Mount Hood Freeway and the redirection of its funds for light rail and other purposes. Here again, big risks were taken, and the collaboration extended far beyond Portland and TriMet. It involved the state transportation department accepting the conclusions of a public discussion about freeways, a governor willing to work out new arrangements, and other local governments that had to see some direct benefits through transportation projects in their areas, in addition to the then-experimental light rail line.

And that was just in the first five years. The partnership continued through the Downtown Plan's concept of a spine of high density uses served by a transit corridor—which initially became the 1977 bus transit mall and more recently has blossomed to include a downtown light rail line. Other fruits of the partnership included bus improvements, curb extensions, the regional rail program, regional land-use planning, local match for light rail expansions, bus advantage at traffic signals traded for operational funds for streetcar, and on and on. There have been many successes, a few failures—including some that need to be rectified (will we ever get the Rose Quarter Transit Center right?)—and many things still to do.

As the city has grown and become ever more multimodal, the city's level of partnership commitment with TriMet has grown dramatically. The City, with TriMet as an integral partner, took the lead in the development, construction and financing of the Portland Streetcar. Beyond that, the city made substantial financial commitments to light rail expansion—from the single Banfield line to the near-60-mile light rail system today—to the tune of $204 million in urban renewal and transportation funds.

All of this is the result of a partnership. Its hallmarks are shared goals, constant discussion and negotiation, working with many other partners, and a willingness to share and trade roles. Above all, it involved individuals taking risks, making commitments and delivering.

At around the same time, a new mood among state and local leaders was casting doubt on the merits of the eight-lane Mount Hood Freeway proposed to run through southeast Portland. This massive project would run through traditional neighborhoods, destroying 1,500 homes and 200 businesses. Similar concerns were raised regarding the planned St. Helens Freeway (Interstate 505) through the Northwest Industrial District, which would have been an elevated structure between the Fremont and St. Johns bridges. Community and business opposition was led by a group called Sensible Transportation Options for People, STOP, founded by activists Betty Merten, Steve Schell, Ron Buell, Jim Howell and others. Portland's City Club also took up the debate.

Neil Goldschmidt had run for mayor on a platform of reconsidering the road-building program. He reasoned that the citizens of Portland would pay for new roads in the form of neighborhood destruction and a loss of tax base, while suburbanites passing from one side of town to the other would benefit.

The Mount Hood Freeway project's environmental impact statement, prepared in 1973 by the firm Skidmore, Owings and Merrill (SOM) for the Oregon Department of Transportation, said the freeway would not relieve congestion, would overwhelm downtown Portland streets and would be obsolete by the time of its completion. Greg Baldwin, who worked at SOM at the time, noted in an interview:

> *The Mount Hood Freeway was starting. And our sentiments about infrastructure and cities were maturing. Howard McKee, Frances DeMose and Matt Lackey of SOM arrived from Baltimore having just eliminated the Inner Harbor Freeway.…Coincidentally, my father [George Baldwin] had just become head of the Department of Transportation/Highway Division. (We had been hired before he was.) The feds told Dad and Glenn Jackson, "You have just hired the firm that is going to kill urban freeways in America." I remember my father's comment—"And so?"*[25]

On February 24, 1974, U.S. District Judge James M. Burns ruled that the state highway division failed to follow its own rules when deciding where to locate the Mount Hood Freeway. The ruling was the death knell for the project and left little room for state officials and freeway boosters trying to save the freeway. In July of that year, the Portland City Council voted 4 to 1 to cancel the Mount Hood Freeway, with Councilor Frank Ivancie casting the dissenting vote.

Other components of the Portland/Vancouver transportation plan were put on hold. The oversized ramps from the Fremont Bridge pointed at Northeast Fremont Street and Northwest St. Helens Road are reminders of that ambitious plan. A two-lane stub that would have connected to the Mount Hood Freeway from the Marquam Bridge was removed only recently. A stub from I-5 near the Hawthorne Bridge remains.

At the same time, the contentious passage of the Federal Aid Highway Act of 1973 allowed states for the first time to transfer funds from unneeded segments of the interstate system to other transportation options with 90 percent federal participation. Shortly thereafter, in response to citizen outcry, the region's jurisdictions formally rejected the $500 million Mount Hood Freeway and the St. Helens Freeway projects.

With the demise of freeway plans, there was a push to transfer some of the funds to smaller-scale road and transit projects. The Oregon Public Utility Commission proposed a regional light rail system based largely on existing railroad rights-of-way. Discussion was heated. Skepticism remained over the abandonment of the freeway. A 1974 *Oregonian* editorial said, "Americans would sooner abandon their spouses than their cars."

Portland Mayor Neil Goldschmidt used his power on what was still the CRAG board, supported by the technical expertise of Portland planning staff, to direct funds previously committed to the Mount Hood Freeway plus funds from the canceled I-505 freeway to projects that would improve access to downtown Portland. Multnomah County Chair Don Clark was another avid promoter of a transit solution. Transferred funds would build a diversity of regional projects, including Eastman Parkway in Gresham, Cornell Road in Hillsboro and highways 212 and 213 in Clackamas County. "It was the first big regional decision, and it established the precedent that everyone would get taken care of," said Bill Scott, then a young attorney in Neil Goldschmidt's office and later director of the Oregon Economic Development Department and general manager of FlexCar.[26]

"It is still quite unique that a city looked to a solution other than building additional roads. I recently told the Mount Hood Freeway story in Austin, and an elected official stood up and said it was a travesty and sacrilege to turn down a perfectly good freeway," reported John Fregonese, former Metro planning director, looking back on the era in 2005.[27]

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[25] Baldwin, 2003
[26] Young, March 9, 2005
[27] ibid

A VIABLE ALTERNATIVE

A task force appointed by the governor turned its attention to TriMet to develop a viable transportation alternative to the Moses-inspired plan and in May 1975 recommended a system of "transitways." Multnomah County, led by Commissioner Mel Gordon, began to make reference to "light rail," inspired by Toronto's extensive and well-regarded system that had been going through a revitalization program since the mid-1950s. He was impressed also with what Boston was doing. The mayor's agenda would include the region's first new rail transit line since 1958, when the Oregon City interurban line was discontinued.

Five alternatives to the Mount Hood Freeway using the Banfield freeway corridor initially were considered by TriMet and the Oregon State Highway Department: 1) a full-scale eight-lane freeway with two lanes for exclusive bus use, 2) a depressed two-lane freeway for mass transit use only, 3) an exclusive transitway with boulevard improvements, 4) a four-lane freeway with two lanes for buses and 5) express bus operation on surface streets.[28]

In 1976 the Oregon Department of Transportation (ODOT), in concert with TriMet, convened the 120-member Banfield Citizens Advisory Committee, which looked at 30 alternative modes and alignments for directing Mount Hood Freeway transfer funds. The process was inclusive of both participants and ideas. Doug Allen, an activist and former TriMet employee, recalled that this committee was an expansion of an original committee. The expanded committee included Ray Polani, Jim Howell, Terry Parker, Larry Griffiths, Charles Sauvie, Doug Coleman, Lynn Fish and others. He noted that the Union Pacific Railroad was included and that future Metro Councilor Ruth McFarland participated. Doug noted, "Ray Phillips, who helped instigate Measure 5, was on the East County Committee. Portland and TriMet sent various representatives, usually Laurel Wentworth from Portland and Bill Lieberman or G.B. Arrington from TriMet. Don Adams and Gary Ross were the original ODOT guys, I think; the second committee had a couple of friendlier guys. Also, TriMet started sending Miriam (McClure) Selby."[29]

At the suggestion of activist Ray Polani, a Trolley Bus Evaluation Study was prepared by DeLeuw, Cather & Company for consideration as one of the alternative modes. In June 1976 ODOT issued a memorandum eliminating light rail from further consideration in the Banfield corridor, based on a cost and ridership assessment. The assessment concluded that carpool lanes supporting bus operations would be more cost effective and more readily integrated into the existing transit system, noting also that such lanes could be converted for light rail in the future. That conclusion was protested by the activist group Citizens for Better Transit, which found allies in Multnomah County Commissioners Don Clark and Mel Gordon. The county issued a letter of protest, challenging the validity of the findings and conclusion without a public hearing. Light rail was reinstated. Interest and the popularity of light rail throughout the community would solidify as the public agencies continued to jockey for influence over the outcome.

THE FIRST GAS SHORTAGE ACCELERATES THINKING

The revolt was not limited to concerns over the Mount Hood Freeway. Other triggers included the gasoline shortage of winter 1973–74, the conversion of downtown land into surface parking lots, and competition from suburban shopping malls. The region began to see a resurgence in transit use as public concerns about environmental issues mounted. The Oregon Department of Environmental Quality called for a 50 percent increase in regional transit ridership by May 1975 to begin reversing the degradation of the region's air quality.[30] Oregon adopted tough new emissions standards for cars. Downtown parking limits were enacted, and things were beginning to shape up at TriMet.

Portland's 1972 Downtown Plan incorporated three strategies: improved pedestrian amenities; a mix of densities, activities, and land uses; and good access through the management of parking resources and more public transportation. The plan sought to "create a pleasurable human environment" to attract residents and business investment into downtown. The Downtown Parking and Circulation Policy, first adopted in 1975, implemented the Downtown Plan's transportation goals and guidelines. Major components of these policies included a limit or "lid" on new parking spaces downtown, maximum parking ratios for new development, and restrictions on surface parking lots. The policy sought to ensure compliance with the amended 1963 Federal Clean Air Act and later helped advance Oregon's 1977 Carbon Monoxide and Ozone Implementation Plan.

A City of Portland staff report also recommended a fare-free zone for transit service, similar to Seattle's "Magic Carpet" fare-free zone. Among five options studied, the city study

[28] Hortsch D., Tri-Met Gives Nod to Major System If Financing Found, June 7, 1977
[29] Allen D., Interview, May 4, 2015
[30] Tippens, Tri-Met Analysis: Born, Reared in Controversy, February 1974

recommended a "fareless square" covering Portland's entire central business district. Objectives included promoting transit riding, reducing auto trips within the zone and improving mobility downtown. The TriMet Board of Directors affirmed the city's proposal in March 1974, envisioning a convenient and inexpensive movement system connecting downtown destinations. The plan was refined by a TriMet staff report in July. In January 1975, Fareless Square would become a symbiotic benefit for both businesses and TriMet, while supporting compliance with the state's plan for controlling carbon monoxide and ozone emissions.

In August 1973, bus routes previously designated by name only were given route numbers. A "Shop & Ride" marketing program was mounted and a downtown shuttle system studied. "Intercept" Park & Ride lots were planned, and Portland's first bus shelters were installed.

TRIMET TURBULENCE

While it would appear that TriMet was fully engaged, leaders in Portland and Salem shared concerns that things were not moving fast enough. Together with TriMet chief counsel Ray Kell, Board President Bill Roberts was seen to be acting unilaterally and unchecked.

Governor McCall appointed two new board members, Ken Lewis and Steve McCarthy, to shift the power balance, but discord among board members grew. The *Oregon Journal* reported, "Debate has raged over such far-ranging questions as incorporating light rail into the transit system, the role TriMet should play in comprehensive planning for the metropolitan area, and the scope of bus transportation after completion of the present phase of development."[31]

There was also frustration over the slow roll-out of new bus stop signs, shelters and customer information. The initial burst of restorative activity had diminished. The *Oregon Journal* noted:

> *Governor McCall inserted himself into the issue a little more than a year ago when he issued a charge to the TriMet board. He said that TriMet should be a member of the Columbia Region Association of Governments (the regional planning agency) because transportation must be a part of any comprehensive plan. He urged the board to seek more citizen participation in its planning, to adopt a long-range mass-transit plan, to form a team to recommend capital improvements, to name a committee to upgrade the marketing and public information program, to spread board assignments among more directors and to strengthen the planning staff.*[32]

THE ROLE OF TRIMET DEBATED: THE REGION SPEAKS UP

The role of TriMet was much debated. Should it be a narrowly focused bus company or an innovative problem-solver? Steve McCarthy, who during this era served on the board and subsequently as both assistant and acting general manager, said Roberts viewed TriMet as a "boutique transit agency" that would cater to downtown commuters and west hills attorneys. In 1973, as part of testimony before the interim legislative Committee on State and Federal Affairs and Human Resources, Diarmuid O'Scannlain, director of the state Department of Environmental Quality, took TriMet to task for a lack of leadership in transportation planning that could respond to the state's clean air standards. He was quoted by the *Oregon Journal* stating, "Quite recently a TriMet board member told me that TriMet's responsibility is to provide transit service to people who don't have cars or who are physically handicapped. If this is the case, then TriMet has fulfilled its obligations. Obviously, this is not sufficient."[33]

Board member Ken Lewis asked whether TriMet should provide a radially oriented commuter system or offer cross-town service with convenient transfers to multiple destinations. General Manager Tom King noted that, "By a sufficient series of transfers, you can get any place."[34] While three crosstown routes had been created, the debate over service orientation would occupy the TriMet board and planning staff for several years to come. The board struggled over whether tax resources made available by the Oregon legislature should be used to develop new services and facilities. Was TriMet taking advantage of opportunities and resources or resting on its success in reviving a decrepit private system? Steve McCarthy suggested that Roberts felt obliged to restrain TriMet's taxing authority in deference to the tax-paying business community.[35]

Focused on consolidating bus operations, TriMet had largely removed itself from the greater regional transportation debate. TriMet's inward orientation soon began to attract notice and concern. Portland, CRAG and even the Public Utility Commission engaged in these conversations, but TriMet did not. The first studies for light rail as an innovative solution to the region's travel needs in major corridors did not come from within TriMet. Instead, the study of potential rail corridors was initiated by the Oregon Public

[31] Tippens, Tri-Met Analysis: Born, Reared in Controversy, February 1974
[32] Tippens, Tri-Met Analysis: Footdragging Laid to Old Board, February 1974
[33] Yocum, Transportation Planning Blasted, November 8, 1973
[34] Tippens, Tri-Met Analysis: Footdragging Laid to Old Board, February 1974
[35] McCarthy, 2015

Utility Commissioner. The push to replace the Mount Hood Freeway with a package of road and transit improvements to include light rail had come from an Oregon Department of Transportation citizens committee and Portland's City Hall rather than TriMet. Planning at TriMet was supported by a single staff position. What planning that did take place seemed to emanate from the Portland mayor's office, led by the mayor, Doug Wright and other planners. TriMet had declined to be a member of CRAG, serving only on a CRAG transportation committee. A. McKay Rich, acting director of CRAG, noted: "While transportation is as big a part of comprehensive planning as it so obviously is, no one from their [TriMet's] policy board is sitting on our policy board."[36]

Outside TriMet, the rebuilding of a 500-bus system, plans for the transit mall, development of Park & Ride lots and possible use of exclusive bus lanes were regarded as limited accomplishments. TriMet was focused on running a bus system, showing no particular urgency to engage in a broader regional dialogue. Rick Gustafson, then a TriMet planning staffer, noted:

> *It was unbelievable. They had taken four years to try to get these little blue triangle signs up to signal where a bus stop was, they had a federal grant for it and they couldn't quite figure out how to do it. It had taken four years to get this grant approved. So here's Neil's [Goldschmidt] office, running a little faster, and fortunately, Lloyd Anderson was smart enough to retain Roger [Shiels] to do the transit mall, because basically, I was the representative for TriMet, but I basically had total opposition internally. "This isn't going to work" and "Why the hell are we doing this. Isn't the system just running fine?*[37]

The governor felt it was time for a fresh start. He told Steve McCarthy that Roberts was "missing the boat."[38] In 1973 Governor McCall called for the resignations of the TriMet board and appointed a new board of directors with Gerard Drummond as chair. The new board also included David Abram, Ruth Hagenstein, Elsa Coleman (one of the parties to the Mount Hood Freeway lawsuit), Charles Frost, Dean Killion and Hershal Tanzer. The *Oregon Journal* series "TriMet Analysis" concluded with: "The old board saved a dying bus system and breathed life into it. The new board is given the challenge of restoring Portland's mass-transit to vigorous health for the task that lies ahead."[39] Just as the old board had been largely the creation of Mayor Terry Schrunk, the new board was shaped by Mayor Neil Goldschmidt. TriMet promptly expanded the planning department from one person to more than 30 planners and interns. New planners included Bob Post, Bill Allen and G.B. Arrington, who would log many years of TriMet service. The new board also increased service hours by 40 percent.

TRIMET STRUGGLES TO BE CREDIBLE

The dust, however, had not settled. An *Oregon Times* exposé published in July 1974 faulted TriMet management for poor performance, laying most of the blame with General Manager King and his political staff appointments. The scathing article noted that neither King nor the assistant general manager (and former board member) Steve McCarthy, hired in May 1974, had any transit experience. The article reported that Tom King was a former Navy admiral, recruited on a Washington, D.C., golf course, whose military experience was a mismatch for a job managing civilians and encouraging public engagement. He alienated former Rose City employees and exhibited a disdain for labor unions. Staff turnover—three marketing directors and four personnel directors in 18 months—provided evidence of internal strife and managerial inexperience. Ed Wagner, an architect recruited from the Portland Planning Commission, led the expanded planning department and recruited new staff. Among top TriMet management, only the operations director, Ray Booth, brought extensive transit experience (albeit with other issues that compromised his effectiveness). Steve McCarthy's May 1974 move from the board to the newly created position of assistant general manager, orchestrated by Board President Drummond, also proved controversial.[40] McCarthy had a relationship with the governor, which put McCarthy at odds with Portland's mayor, particularly as McCarthy sought to build relationships with other jurisdictions within the TriMet service area.

Michael Kyte, one of the TriMet planners

[36] Tippens, Tri-Met Analysis: New Board Faces Task of Restoring Transit to Health, February 15, 1974
[37] Gustafson, 2003
[38] McCarthy, 2015
[39] Tippens, Tri-Met Analysis: New Board, February 15, 1974
[40] Drukman M., Discontent, Disarray and Disinterest at Tri-Met, July/August 1974

In 1975 the board dismissed Tom King and appointed Steve McCarthy acting general manager. McCarthy served in that role until his resignation in January 1978 after being turned down for the general manager position.

There would be debate over which agencies would set the agenda and conduct the planning for the region's transit program. Some voices were calling for CRAG to take the lead in transit planning, at least at the conceptual level, if only to assure the connection between transit and land use. Planning Director Ed Wagner responded to the proposed CRAG role by saying:

> *If we're going to get serious about a transit system, if we're going to try to build something that people are going to accept, love and use, it has to be designed from a transit standpoint in the most coherent, concise manner possible. If we let Joe down the street do part of it and maybe Alex up the street do the other part and Highways do the other component, it's always going to be a fragmented mess.*[41]

TriMet eventually did join CRAG. At the urging of Steve McCarthy and Ken Lewis, the board began scheduling night meetings throughout the region to encourage citizen engagement. Directors were assigned to board committees to improve transparency.[42]

Flat fares for the first time, 1975

SETTING A COURSE

With a new board and expanded staff at the end of the 1970s, TriMet had a full head of steam. Board President Gerard Drummond restored confidence in and assigned responsibility to the general manager, who built up TriMet's capabilities for policy development, planning, engineering, marketing and public relations. Drummond would serve as board president for 12 years. Steve McCarthy recalled that Drummond was "big time, no nonsense, played his cards well, had no wasted gestures and was able to stand up to Neil [Goldschmidt]."[43] While Steve McCarthy never became general manager, he served on the board and as assistant and acting general manager at a pivotal time for TriMet. He influenced a change of course and, with Board President Drummond, began to change TriMet's internal operations and staff's relationship with the board.

From the 1970s into the 1980s TriMet would direct its attention to three important needs:

- Rebuild its infrastructure to match the burgeoning demands on the system.
- Update the service plan to meet new transit rider needs and preferences.
- In concert with the region's revised land-use planning, develop high-capacity transit along major commute corridors in order to relieve the highway system. (The connection between high-capacity transit and land use had not fully crystallized.)

[41] Drukman, July/August 1974
[42] ibid
[43] McCarthy, 2015

CAPITAL PROGRAM

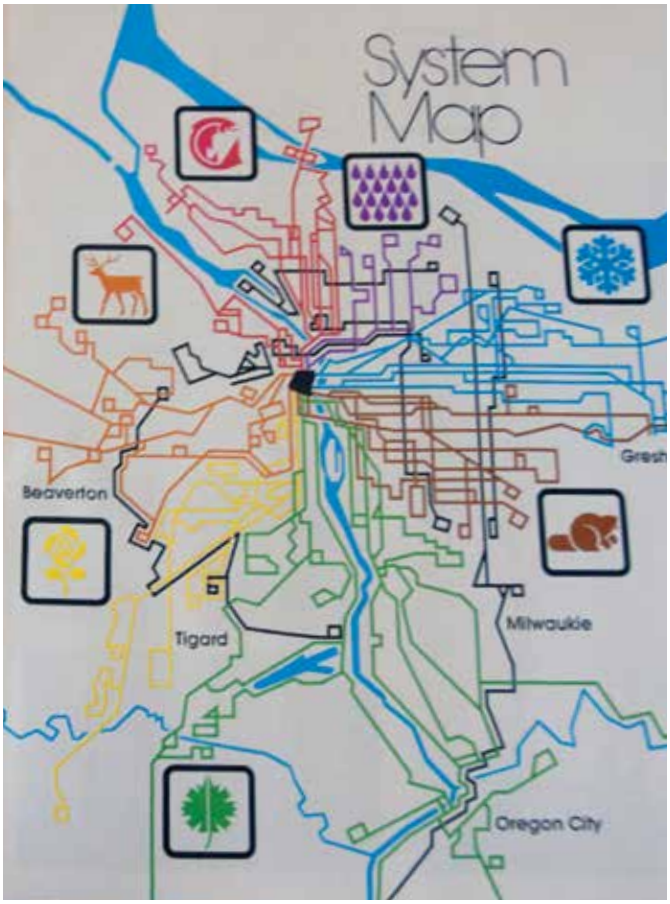
While the Mount Hood and St. Helens freeways had been canceled, an outer beltway around Portland's east side, Interstate 205, was in the works. Construction initially included a graded but unfinished section between Southeast Foster Road and the Columbia River to the north. While the two other freeway plans were thrown out, the decision was made to complete I-205 through Multnomah County. The design of I-205 reflected a new sensitivity to the promise of mass-transit. Planners preserved right-of-way for a future light rail line[44] next to the new freeway—a decision that would pay dividends years later when light rail lines were constructed. The design also made room for a new TriMet bus operating base at Powell Boulevard. Steve McCarthy recalled that it was to be a temporary facility, but the Oregon Department of Transportation's Bob Bothman had it upgraded for long-term service, which it continues to provide.[45] After the new facility opened in January 1977, TriMet replaced the large but dilapidated Rose City Transit/Portland Traction facility at Southeast 17th Avenue and Holgate Street with a new headquarters and primary bus operating base ("Center Street") that opened in May 1978. A few years later, in March 1980, another operating base opened on Southwest Merlo Road on the west side. These three facilities continue to serve TriMet's more than 600 fixed-route buses.

The first bus shelters were installed in July 1974, with hundreds more on order. TriMet began to require the deposit of the exact bus fare in December 1970 and in January 1975 eliminated zone fares established years earlier by the private transit operators. Three years later, in 1978, TriMet reversed course by reestablishing three fare zones. Work began on the downtown Portland Transit Mall in April 1976. In October 1976, the federal Urban Mass Transportation Administration awarded TriMet its Administrator's Award for Outstanding Public Service.

INNOVATION BECOMES A FOUNDATION

A regionwide vote in 1976 on a license fee for transit-supportive Park & Ride lots failed, putting a crimp in implementation of the transit components of the region's Interim Transportation Plan. Regardless, innovation was blossoming at TriMet. The first Bus Rider's Guide was printed in the fall 1976, based on an idea conceived by a 14-year-old with a passion for transit, David Bragdon. (Years later Bragdon was elected Metro Council president.) TriMet continues to produce Rider Guides, which since January 1981 have included a complete set of schedules, but the need and demand for them dwindled when the on-line schedule and trip planning information rolled out in 1995. In September 1978 the "Tri-It" marketing promotion targeted new riders. TriMet reached out to suburban commuters with a program of new Park & Ride lots, largely through low-budget shared-use agreements with churches and movie theaters along primary radial bus routes.

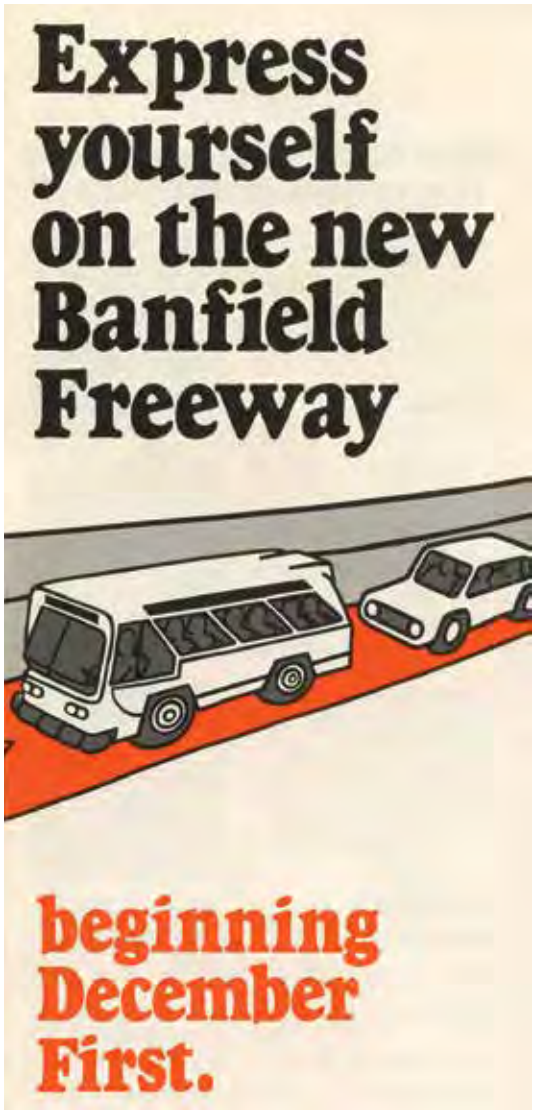
TriMet also dabbled in "bus rapid transit" before that became a transit industry term. As early as July 1971, TriMet petitioned the Oregon State Highway Department to plan and construct a Park & Ride station serving a proposed exclusive express busway along Southeast Clinton and Division streets. Portland and the state could not agree on the busway plan, and it was dropped along with the Mount Hood Freeway.



System map with graphic designators, 1978

Another busway and Park & Ride lot were envisioned along Southwest Barbur Boulevard on the west side, designed and constructed by the successor to the highway department, the Oregon Department of Transportation. As designed, the Barbur Transit Station was 200 feet long, with

[44] There seem to be varying reports on whether this was a "busway," a "transitway" or reserved light rail right-of-way.
[45] McCarthy, 2015



High-occupancy vehicle lanes on the Banfield Freeway, 1975

The Portland Transit Mall, 1978

a heated shelter, 300 parking spaces, drop-off lanes and bicycle parking. A pedestrian bridge connected the transit station with neighborhoods to the east of I-5. A center-lane reversible busway was constructed in a 1.9-mile stretch of Barbur Boulevard from Southwest Slavin Road (near Capitol Highway) to Southwest Sheridan Street, just south of downtown.[46] The Barbur Transit Center opened in 1978 and was TriMet's first dedicated Park & Ride facility. Express buses on Barbur connected at the transit center to local routes fanning throughout the southwest corridor. The busway operated during congested weekday peak hours, 7 to 9 a.m. and 4 to 6 p.m. While the Barbur Transit Center remains a popular Park & Ride lot, the reversible express lane was dismantled in 1984 due to left-turn conflicts and safety issues.

Gresham was the fastest-growing community in the region. TriMet tapped that commuter market with the Banfield Flyer express service, operating in a carpool lane within the Banfield Freeway between Northeast 39th and Northeast 82nd avenues. Carpools required three or more passengers in a car. The service emulated similar carpool and express bus lanes on the Shirley Highway in Washington, D.C., and the Oakland Bay Bridge in San Francisco. Initiated in December 1975 with bus routes 90 from Mall 205 and 91 from the Multnomah Kennel Club, the service was discontinued with the rebuilding of the freeway and the introduction of light rail. In 2014 the City of Troutdale, led by State Representative Chris Gorsek—who at the time served on the city council—asked to restore a similar express route.

A TRANSIT MALL IS BUILT

The most visible capital accomplishment in these early years was the construction of the Portland Transit Mall as part of the strategy to reduce air pollution in the downtown area by 60 percent. At the suggestion of Portland Commissioner Lloyd Anderson, TriMet's board president at the time, Bill Roberts, in 1971 retained Roger Shiels as the project manager. Removing cars from the mall was a politically risky proposition. Shiels faced opposition from some downtown property owners. Greg Baldwin recalled, after reflecting on the decision to nix the Mount Hood Freeway:

> *I remember going to Bill Roberts and Roger Shiels to meet with the property owners. The response, in a series of morning meetings, was either, "Convince me, I'm lukewarm to the idea" or "I don't like it." Bill said, "Look, it's going to happen. How can we ease your pain? How will you help us make it work?" And today, we are following the same process [putting light rail on the mall]. Fortunately, with 30 years of intervening experience, the reception today is a bit warmer and a lot more constructive.*[47]

Former Portland Mayor Frank Ivancie called Roberts "the father of the mall" and said he garnered support for it because "he had enough prestige, he was a selfless type of public servant, and he had a good feel for things. People said, 'If it's good enough for Bill, it's good enough for me.'"[48] The mall concept won approval from the Portland City Council in January 1972. Councilors required new off-street parking for

[46] ODOT Newsletter: West Portland Park & Ride Station and Southwest Barbur Boulevard Express Bus Route, August 1975
[47] Baldwin, 2003
[48] Obituary: findagrave.com/memorial/63435984

Suburban service explained, late 1970s

Marketing bus transit, 1973

all displaced on-street parking before construction could begin. Fifth and Sixth avenues were to be rebuilt from building face to building face. Existing parking garages had to be reoriented to cross streets. In February the mall project was added by amendment to the Downtown Plan and CRAG's Unified Work Program. After a struggle between TriMet and Portland's chief engineer over costs, TriMet selected Skidmore, Owings & Merrill in December 1972 to refine the plans. Following council's approval that summer, in September 1973 TriMet submitted a grant application for construction funds to the Urban Mass Transportation Administration.

The Portland Transit Mall opened in December 1977, gaining credit over the years for triggering extensive new downtown construction and solidifying the downtown's status as a retail center. The mall covered 22 blocks on Southwest Fifth and Sixth avenues through Portland's high density office, retail and commercial core. While not the nation's first, the Portland mall was lauded for exceptional design quality and strategic operational innovation. The mall won architectural design awards and became the defining feature of Portland's people-friendly downtown. It also became a prototype for similar redevelopment initiatives in other cities. The Portland Downtown Plan began to work, and transit ridership grew. The mall is named for Bill Roberts.

IN THE SUBURBAN COMMUNITIES, TOO

TriMet believed suburban riders could benefit from the combination of concentrated transit service and good design that distinguished the Portland Transit Mall. In 1976, TriMet studied seven potential suburban transit stations. Greg Baldwin, then working for Environmental Disciplines Inc., and Skidmore, Owings & Merrill's Howard McKee produced the Suburban Transit Station Study, guided by TriMet planner Edgar Waeher. In June 1979 timed transfers were inaugurated at the Beaverton Transit Center, followed by Cedar Hills. Service was synchronized so all local and express buses arrived at a transit center at the same time.

Super-saver suburb to city service, 1979

Enhanced suburban service, 1979

General Manager Peter Cass at his desk

Similar coordinated transit service was introduced at Burlingame, Tualatin, Tigard, Washington Square, Lake Oswego, Milwaukie, Clackamas Town Center, Hollywood, Gateway, Gresham and Oregon City transit centers. TriMet was the first to make timed transfer operations standard practice, enabled by pioneering efforts to improve the industry's computerized run-cutting software, which prepared and optimized transit schedules.

Next, a push from the Oregon Department of Transportation prompted location of transit centers and park and ride lots at each of the region's principal shopping malls—Washington Square, Mall 205 and Clackamas Town Center. Greg Baldwin recognized ODOT's significant role:

> *Then we would discover that ODOT had just told Washington Square, Mount Hood Mall [Mall 205] and Clackamas Town Center that it would deny or limit their access to the freeway system unless each shopping center made a significant commitment to transit, and their anchor stores a corollary commitment to the redevelopment of downtown. You'd say, "Where did that come from?" I know Neil didn't ask for it. It just happened because it made sense.*[49]

The TriMet board backed a statewide ballot measure to fund transit by local option from the state highway gas tax and vehicle registration revenues. Voters defeated the measure in May 1974.

In January 1978, after a national search, TriMet recruited Peter Cass to become the agency's third general manager, replacing Acting General Manager Steve McCarthy. Cass was an executive with Discover America, a promoter of tourism. Cass' role over a short tenure would be to consolidate the organization into four divisions and create an executive team reporting to the general manager, a model that has been sustained. He laid a foundation for TriMet's development into the next decade as light rail moved from concept to reality. Cass promoted greater sophistication in TriMet's marketing program, firmly establishing the TriMet brand. His private sector experience came at a time when TriMet needed to demonstrate tighter management control.

ANOTHER ENERGY CRISIS

In 1979 America experienced its second energy crisis of the decade, this one triggered by the revolution in Iran and relatively modest cuts in the amount of Middle Eastern oil brought to market. Along with gas price increases and long lines at the pump, transit ridership grew. TriMet moved to procure used buses from Denver and Honolulu, intensifying the challenges of maintaining a diverse fleet. The crisis subsided after 1980, but the newly acquired buses were kept in reserve for many years, ready for the next emergency.

[49] Baldwin, 2003

TRIMET EARLY YEARS AND THE **MOUNT HOOD FREEWAY**

by Rick Gustafson, executive vice president, Shiels, Obletz Johnsen
former Metro executive officer, Oregon legislator

The first action of the new board in 1974 was to expand service and to expand the planning department from one to 34 employees. The centerpiece of the work plan was to pursue the Suburban Transit Station (STS) program, which called for the development of six corridors for radial bus service, stations and Park & Ride networks.

The rapid expansion of the planning and development team, headed by Ed Wagner, encountered increasing controversy. *Willamette Week* published an article highlighting the problems and financial challenges of the new initiative. To address the issue, Steve McCarthy, then deputy general manager, replaced Ed Wagner with Bill Hall, who was more administratively-oriented. Ed remained with TriMet to plan the Park & Ride developments, particularly the one at Barbur and Capitol Highway. The STS program was stopped, and about 30 percent of the employees were terminated. This underlined the fact that TriMet was still trying to find its way in building an organization that could handle its new role of expanding transit.

Bob Straub was elected governor in 1974. Portland's activism began showing up at the state level. The Democrats had assumed a majority of both houses in 1973, electing Earl Blumenauer, Vera Katz and Steve Kafoury to the Oregon House of Representatives. In 1975, new state representatives included Hardy Myers, Ted Kulongoski, Dave Frohnmayer, Bill Wyatt and myself. Phil Lang was elected speaker. Another addition from southern Oregon, who proved enormously valuable in the Mount Hood Freeway debate, was Al Densmore from Medford.

The City of Portland was advocating that the state agree to withdraw the Mount Hood Freeway and transfer the funds to an account that could be spent only on support for transit expansion. A new law, the Federal-Aid Highway Act of 1973, was made possible by an initiative from Boston, which had experienced similar neighborhood resistance to the freeway plans. The law presented a big problem for transit, in that it implied that transit projects could replace freeway projects, which galvanized highway supporters. The Associated General Contractors (AGC) was a strong advocate of freeway construction. AGC's publicity centered on demeaning transit and its value. A 1976 reelection ad for the Portland mayoral race included an ad by the Frank Ivancie campaign showing Neil Goldschmidt shoving a bus down the throat of citizens of Portland. TriMet was in the center of all this turmoil.

Goldschmidt led the effort to amend the federal legislation to allow "interstate transfer" dollars to be spent on any federal category for transit or highways, based upon approved local plans. Bob Duncan, a member of the House Transportation Appropriations Subcommittee, was a freeway supporter and would not assist Goldschmidt. Goldschmidt was able to convince New York Congresswoman Bella Abzug to sponsor what was dubbed the "Portland Amendment," which Congress adopted. The amendment enabled transfer dollars to be directed to solving transportation problems, regardless of mode.

The Columbia Region Association of Governments (CRAG) went to work to allocate the $500 million in funds from the Mount Hood Freeway to regional

(Continued on next page)

THE BANFIELD PROJECT

AN AGGRESSIVE PLAN AND NEW APPROACH

Per requirements of Oregon's Senate Bill 100, Metro adopted an urban growth boundary in 1979 to manage land use and development in the Portland region. The urban growth boundary was a belt around the urbanized area that could be loosened in a deliberate process dictated by regional growth. Oregon's Land Conservation and Development Commission approved ("acknowledged") Metro's work. The following year Metro adopted the region's first federally mandated Regional Transportation Plan, which focused growth within the urban growth boundary and around light rail. In May 1979, TriMet staff prepared the first Planning with Transit: Land Use and Transportation Planning Coordination Handbook. This would become

(Continued from previous page)

transportation projects, including $60 million for the Banfield transit corridor, $60 million for the westside transit corridor, and numerous road projects.

The Banfield transit corridor and reconstruction of the freeway were the top priorities for the region. With the cancellation of the Mount Hood Freeway, it was necessary to immediately offer access improvements to the east. A new project envisioned a major rebuild of the freeway and the evaluation of busway and rail options.

An environmental impact statement (EIS) was required for the Banfield combined highway and transit project. As TriMet had no experience doing these studies, ODOT was selected to lead the EIS preparation. Bob Bothman, region 1 administrator, would direct the work and report directly to Glenn Jackson, chair of the Oregon Transportation Commission.

The regional political leaders, Goldschmidt and Don Clark, understood that Governor Straub had provided significant support for transferring the freeway funds and needed to show as much progress as possible by 1978, when he faced a reelection campaign. There was enormous pressure to move rapidly in completing the EIS. TriMet supported the inclusion of light rail as an EIS option and pledged that all the necessary information and reports would be available to meet the EIS expedited schedule. ODOT, Portland and TriMet agreed to proceed with an EIS that included both busway and rail alternatives.

TriMet retained the services of Wilbur Smith Associates to prepare all of the necessary light rail information. Steve McCarthy directed this effort and assured that the proper information was provided for the expedited EIS process.

The EIS was completed in 1977. Through this process, support for the rail option grew. Approval of the same option by all affected jurisdictions was required. These included Portland, Multnomah County, Gresham, TriMet, ODOT and CRAG. In 1978, all the jurisdictions adopted a resolution supporting the improvement of the freeway and construction of the light rail line from downtown Portland to Gateway, along I-205 to Burnside, and Burnside east to Gresham. The final step in adoption was taken in November 1978 by CRAG. This decision and commitment to rail transit has to be marked as one of the most significant regional decisions impacting Portland's future. There was an equally challenging process to secure all the financial commitments necessary to finally enable the light rail line to open in 1986.

The story of the Mount Hood Freeway coincided with planning for the I-205 freeway. Both projects were symbolic of the efforts by Neil Goldschmidt and Don Clark to develop agreements between road and transit interests, advancing projects on both fronts in order to end competition between the various modes. This principle of consensus served the Portland region well for the next 40 years.

MAX arrives, 1986

a model for other transit properties seeking to integrate planning for transit with complementary land-use planning. The publication helped popularize the concept of "transit-oriented development," in which transit and development are mutually responsive to the needs of the transit rider. Where transit goes, new development would locate and produce more riders. The planning and process tools were falling into place for a new era of transit development in the region.

In the meantime, the TriMet board had been considering transit development scenarios—which staff characterized as the "Yugo,"[50] "Chevy" and "Cadillac." The board chose to focus on an aggressive plan with a light rail network that aspired to serve between 220,000 and 400,000 daily riders by 1990—an optimistic outlook given 1979 ridership of roughly 110,000 daily riders. Light rail was favored over a network of busways. The plan's goals included energy conservation, more service for aging populations and people with disabilities, increased operating efficiency and strong land-use planning.

PLANNING BEGINS

Back in 1977, Board President Gerard Drummond called for TriMet to take the lead in promoting this expanded system.[51] Drummond recalls that Goldschmidt and his staff were very much engaged and largely responsible for bringing Drummond on board in favor of light rail.[52]

Thus empowered, General Manager Tom King identified as potential transit corridors the Banfield, Sunset, Oregon City, and I-205—which was under construction with provisions for future light rail transit. Increases in the payroll tax, a fare hike from 40 to 70 cents, bonding, the state general fund and federal aid were cited as potential sources of financing. Expedited action to implement the plan would be necessary to meet the ambitious ridership goals for 1990, only 13 years away.

First up was the Banfield transitway. TriMet engaged Wilbur Smith Associates in 1978 to produce plans and engineering drawings. The Portland City Council approved the downtown alignment in June 1979. The project was approved by the boards of CRAG, Multnomah County, Portland, Gresham, the Metropolitan Service District and the Oregon Transportation Commission. ODOT prepared the environmental impact statement for the combined light rail and freeway-widening project.

The latter was not an easy process. ODOT was still pressing for a busway, and TriMet knew little about rail transit. Board President Drummond and Acting General Manager McCarthy wanted light rail. The Banfield needed widening, and ODOT wanted to expedite freeway construction by separating the two projects. But additional pressure for light rail came from Don Clark and Mel Gordon at Multnomah County. Gresham narrowly supported the rail option. CRAG was still undecided. The Union Pacific Railroad was sympathetic to accommodating light rail on a portion of its right-of-way.[53] The decision came down to the wire. Light rail advocates urged action before the sitting governor, Bob Straub, a light rail supporter, who would be replaced in January 1979 by Vic Atiyeh, who had opposed canceling the Mount Hood freeway in the first place.[54]

[50] The Yugo was Yugoslavian-produced car from Zastava Automobiles that was just being introduced to the United States at a fraction of the cost of other U.S.-made cars.
[51] Hortsch, June 7, 1977
[52] Drummond email, April 26, 2015
[53] McCarthy, 2015
[54] Gustafson, 2003

Sentiment also shifted in Salem. Goldschmidt helped bring Senator Glenn Otto around to support light rail. Otto had been an unwavering highway supporter up to that point. Otto, when he was representing "Greater Metropolitan Troutdale," as he described it, was key to funding the Banfield project because of the strong support for the Mount Hood Freeway in east Multnomah County and its hostility to light rail. His dramatic change was revealed during a floor speech in support of the appropriation request, when many thought he might oppose the project. Representative Denny Jones, the late conservative Republican from southeastern Oregon, was a steady light rail supporter throughout all the sessions in which he served. He remembered taking the streetcar from downtown Portland to the race track in Orchards, Washington, where he was once a jockey. "It's time to bring light rail back!" he exhorted the House. Final approval for the combined Banfield light rail and highway expansion project came in 1979. Preliminary engineering commenced that November.

In September 1980 the $214 million Banfield light rail project received federal approval for construction. The state approved an additional $16.1 million in matching funds through House Bill 5063. In exchange, the region agreed to transfer an equivalent amount of federal highway funds down state. Though operating extensively in Europe, the only modern light rail line in the United States had just opened in San Diego in 1981. Portland officials decided that San Diego's barebones design treatment was not right for Portland and decided to develop their own approach. New light rail lines in Calgary and Edmonton, Canada, greatly influenced the design of Portland's first line, as TriMet's initial project manager, Don McDonald, was a veteran of the Edmonton project.

LINING UP REGIONAL AGREEMENT

In March 1981 the TriMet board promoted James E. Cowen, then operations director, to become TriMet's fourth general manager. Cowen's nuts-and-bolts pragmatism was complemented by the earlier hiring, in November 1978, of a government affairs director, Dick Feeney, with notable experience in local and statewide political circles. Feeney had worked as chief of staff to both County Executive Don Clark and U.S. Congresswoman Green, and had set up the press office for Bobby Kennedy's Oregon presidential primary campaign. Around this time Feeney led regional transportation planners in establishing the Transportation Managers Advisory Committee (TMAC), a place for senior staff to discuss regional planning and funding approaches. The TMAC forum was by no means controlled by TriMet. Votes were rarely taken; participants talked through to consensus, no matter how long the process took. TMAC played a major role in delivering consensus around all aspects of regional transportation policy, funding and lobbying at the state and federal levels.

Richard Feeney, government affairs director

The formal counterpart to TMAC is Metro's Transportation Policy Alternatives Committee (TPAC), which shared much of the same staff representation. TPAC, however, is more technically and policy-oriented than TMAC, which provides a strategic planning forum. Elected and executive officials serve on the Joint Policy Advisory Committee on Transportation (JPACT), and indeed the sentiments of TMAC participants typically align with their official counterparts on JPACT. JPACT had been created in 1979 as an ad hoc council of governments to meet federal requirements for formal regional transportation policy decisions, like the one to proceed with light rail on the Banfield. Metro Council seldom has overruled JPACT decisions. With TMAC, Metro's staff-level TPAC and the elected-level JPACT, the Portland region has a set of multi-jurisdiction, city-suburban consensus-building forums that became the envy of other regions around the country.

These forums helped the region convert the Mount Hood Freeway's $500 million into a package of regional transportation priorities that included key road projects and the region's first light rail project. This process was guided by the Regional Funding Group, chaired by TriMet's Dick Feeney and comprised of then-Mayor Frank Ivancie, TriMet Board President Gerard Drummond, Metro Executive Rick Gustafson and Fred Miller, director of the Oregon Department of Transportation, with the support of the three county commissions. In 1981 TriMet and Metro secured a funding agreement with the Reagan administration for the Banfield light rail project. This significant feat was accomplished with guidance from members of Oregon's congressional delegation, including Senator Mark O. Hatfield, long-time chair of the Senate Appropriations Committee, and Congressman Les AuCoin, a member of the House Appropriations Committee.

Former Congressman Bob Duncan, who provided legal representation in Washington, D.C., for TriMet, noted, "Without Hatfield and AuCoin, this simply would not

have happened." It was a tricky process, as the mayor, the governor and the Reagan administration all were sympathetic to freeway construction.

In January 1982 President Ronald Reagan signed the Surface Transportation Assistance Act, which was focused on highway and bridge funding, largely to the exclusion of mass-transit needs (other than creation of a "Buy America" provision for mass-transit projects). Portland's new light rail project was derailed with the administration's "No New Rail Starts" declaration. Any rail initiative less than 10 percent complete was eliminated from the budget. The Banfield project, however, was reconfigured to qualify for existing interstate transfer money, arguing that this was a separate funding pot exempt from the moratorium. To make the project whole, other regional road funds in Washington County were exchanged for non-rail transit improvements. This basic approach to funding—known to TMAC insiders as "switchy-switchy"—would be used repeatedly over the years through regional cooperation to optimize federal funding opportunities.

Former Congressman Duncan was not only TriMet's first lobbyist on the Washington, D.C., scene, he was also one of the originators of the Banfield project while in office, serving as chair of the transportation subcommittee of the House Committee on Appropriations. Having appeared at many American Public Transit Association meetings and aware of the anxiety his colleagues had about the money required to build what were then brand new rail projects, he differed strongly with Mayor Goldschmidt's plan to exchange Portland's federal highway trust fund money for state of Oregon general fund money to meet federal matching requirements.

He warned that the scheme would not pass congressional muster, and that the project would fail at getting federal match. "You need some skin in the game," Dick Feeney recalls him saying, meaning locally generated matching funds. As the project grew in complexity both the Goldschmidt scheme and the Duncan assertion were necessary. On his last day as a congressman, Duncan joined Hatfield in dictating the terms of a "Federal Letter of Intent" in the *Congressional Record* for the entire project.

Only with the renewed efforts of Senator Hatfield was federal approval for light rail restored. Senator Hatfield and Governor Atiyeh joined for the official groundbreaking for the Banfield light rail project (eventually named MAX, for Metropolitan Area Express) on March 26, 1982.[55] Vic Rhodes, a City of Portland engineer, said, "When something got thrown in our path, we simply sidestepped it or jumped over it. The miracle is that we were successful in darn near everything we attempted."[56] What started with discord turned into a consultative and cooperative effort that kept transportation consensus in the region alive.

The light rail project continued, however, to have its detractors, and doubts persisted right up to opening day. Norma Paulus, who was Oregon's Secretary of State during Banfield project construction, called light rail "WPPSS on Wheels," a reference to massive cost overruns on the Washington Public Power Supply System's failed nuclear power plants. John Charles, a free-market proponent then with the Oregon Environmental Council, asserted that comparable bus service would be far more cost effective. Controversy also arose over the routing of light rail in Gresham. Concerns from downtown merchants led to shifting the rail line to bypass downtown, a change that Gresham leaders later would regret. Portland's Historic Landmarks Commission initially opposed running light rail through the Yamhill Historic District in downtown Portland, relenting after designers added Belgian Block pavers and landscaping.

Construction started in Gresham in April 1983 and, later that year, along East Burnside Street. Earl Blumenauer, then a Multnomah County commissioner, persuaded TriMet to construct a dry trunk sewer on East Burnside Street along with construction of the light rail project, so as to avoid more costly future construction. TriMet then successfully pursued a federal grant to help with the sewer construction and installed sewer hook-ups for residences along Burnside. This was an example of inter-jurisdictional collaboration that became a pattern for future projects in all parts of the region. It also was TriMet's first experience working closely with the community—especially along the fully reconstructed East Burnside Street—to address the impacts of construction. The Ruby Junction light rail facility was completed in July 1983, in time for the arrival of the first rail car the following spring. System testing began on the eastside in 1984 and covered the entire line after the reopening of the Steel Bridge in spring 1986.

U.S. Transportation Secretary Elizabeth Dole delivering funding for the Banfield project

[55] Gustafson, 2003
[56] Light Rail Commemorative Magazine, 1986, p. 36

THE TRANSPORTATION MANAGERS ADVISORY COMMITTEE

by Richard Feeney, former TriMet government affairs executive director

When former Congressman Robert Duncan became TriMet's Washington, D.C., lobbyist in 1981, a unique advisory group was formed at TriMet made up of transportation managers from local governments that were sharing Duncan's contract costs. This group, eventually called the Transportation Managers Advisory Committee (TMAC), still advises the TriMet governmental affairs executive on congressional strategies. During the last 40 years, TMAC has continued to be the forum in which multiple jurisdictions hammer out their agreements and strategies. When the group first formed, the presence of the interstate withdrawal funds—Highway Trust Fund money that could be allocated for transit thanks to the Federal-Aid Highway Act of 1973—disciplined the group.

The consensus under which the region's transportation agencies have behaved since 1978—after the searing political catharsis that settled the fate of the freeways and the old Portland/Vancouver Metropolitan Transportation Study (PVMTS) system—is unusual in this region's political history, so far as I know, and perhaps unique in the country.

These agencies shared more than the vision borne out of the freeway and land-use struggles about balanced systems and land conservation, which they did share, albeit with varying degrees of orthodoxy.

They shared resources and they shared risks. They worked cooperatively. They were generous with one another, supportive, and patient; and they were intensely focused. They kept their eyes on the prize—$500 million in federal money made possible by the freeway withdrawal accounts. And it wasn't just their eyes they wanted on that prize; they wanted their hands on it too.

The region figured out that by staying tight with each other, they could get even more money than that promised by the withdrawal of the freeways. How we did it is still a bit of a puzzle, but what people brought and are still bringing to TMAC offer some clues. These include:

- Excellent professional and technical ability, although some acted as if they were idiots: "I'm just a country boy," a planner would say—always a sign to beware.
- Willingness to share professional know-how and to bring others along.
- Willingness to share financial resources and political risks.
- Fidelity to the ideological organizing principle of land use.
- Fierce loyalty to one's own jurisdiction's aspirations.
- Acknowledgment of what it means to be staff and how that differs from being an elected official; even though some would like to have been, should have been and in a few cases became elected officials.
- Willingness and ability to deliver political support, as well as to demand it.
- Willingness to spend the time to think a problem through until a solution was found that everyone could support. This meant long hours after work, copious quantities of beer, lots of retsina (Greek

wine) at Demetri's Mediterranean Grill, working lunches, dinners out, stomach-grinding breakfasts the next day with every manner of elected official, colleague, acolyte and cupbearer in the decision process.

The point about beer and retsina is less whimsical than it sounds, and it had a lot to do with building trust. We would look at a problem and often declare it a "two-beer problem" or that it would take a whole bottle of wine to get through it. And we would go out and drink the beer and get to understand each other better, get to be friends, and learn to respect the pressure and problems we each faced.

A really tough problem would take two bottles of wine, and a massive issue would take a full dinner at Demetri's to sort it through. I have in a file a placemat from Aldo's Italian Ristorante spotted with chicken cacciatore sauce upon which Andy Cotugno wrote the funding plan for the Banfield project. I have a similar file with a napkin from a pub near Metro upon which John Rosenberger from Washington County and Tom Vanderzanden from Clackamas County wrote the funding plan for the South-North project.

Aldo's is closed, the pub is no longer there, and Demetri's is gone too, but you may still sometimes hear, "We need a Demetri's solution to this." Besides party venues, probably every jurisdiction has some place where those under the gun retreat to sort out issues over food and drink. For TMAC, Demetri's became the place for numerous such meetings, including those where the strategy to get the 1989 gas tax, in which nearly all of JPACT (elected officials from the region's jurisdictions) showed up a couple of weeks in a row. It was also the place where the more clandestine meetings 10 years later gave birth to the Interstate MAX project.

It may not be true anymore, but at one time I was told that TMAC was unique in the nation as an intergovernmental group of transportation officials scheming how to get funding from the federal government. And our tasks were difficult. There often would be a wave of bowel-gripping terror come over us. The job was huge and the risks terrifying.

But over the years we learned a lot together. We learned to share risks if we were going to share money, and we learned how to share a lot of money—over half a billion dollars in withdrawal funds, as much in surface transportation funds—and how to find money that otherwise wasn't there, maybe another $1 billion or more.

Best of all, we learned how to spend transportation money responsibly and spend it we did, building hundreds of road projects and rail lines into all three counties.

At the outset of this adventure in about 1979 the head planner at the City of Portland told me, "There is no way you are going to spend all that withdrawal money. You will never get agreement on what to do before the authority to spend this money lapses."

Well, we proved him wrong.

RETURN TO SENDER

by Richard Feeney,
former TriMet government affairs
executive director

When the full-funding grant agreement (FFGA) for the Banfield project came back from the federal transit agency for TriMet to sign, it contained nothing for the reconstruction of the freeway. To have the freeway so unceremoniously scuttled, after much political work by Senator Hatfield to get the entire project legally declared a transitway, was like a body blow. Local officials were particularly furious because the contract came only days before the groundbreaking ceremony in which federal support for the Banfield was to be announced.

There was no time left for negotiation. TriMet's pledge to be a team player was at stake, so with two days to go before groundbreaking, TriMet sent the contract back and said, "no deal."

Until the $107 million for the highway was amended into the contract, TriMet's Jim Cowen refused to sign. This was risky for sure. It meant potentially saying goodbye to $214 million in New Starts funding, but Susan Long in Senator Hatfield's office said, "Go for it!"

The feds balked, but with almost gleeful pressure from Senator Hatfield's office, they finally agreed on the very day of the ceremony, and a single contract for a project of $321 million was approved.

THE OREGON TRANSIT ASSOCIATION

The Oregon Transit Association (OTA) was founded in 1978 by TriMet's then-General Manager Peter Cass, who reasoned that the initial $16.1 million general fund request to the 1979 Oregon legislature for a light rail construction match would go nowhere without some supportive transit friends downstate.

Board President Gerard Drummond influenced the hiring of Roger Martin to be the OTA's executive director. Martin was a former Republican leader of the state House of Representatives. Although he was a recently defeated candidate for governor in the Republican primary, Martin had strong ties to the new Atiyeh administration. With Martin's help, the proposed light rail matching request was included in the new governor's budget. This surprised Portland-area Democrats, who knew Atiyeh was a strong freeway supporter and assumed that he would oppose light rail, which he did not.

Later in the Atiyeh administration Martin and the OTA leadership, which was usually from downstate transit operators, successfully persuaded the legislature to pass a cigarette tax dedicated to disabled transit services statewide. The initial penny tax was doubled in the Goldschmidt administration. Because of the cigarette tax, OTA cemented relations with ODOT's public transit section and helped expand public transit into every county of the state. This realized TriMet's strategy to broaden the political interest in and active support for transit statewide, making its own requests easier for downstate legislators to understand and accept.

OTA was the vehicle through which TriMet made requests for assistance in meeting federal matching requirements for bus purchases, which over the years were in the millions of dollars. It was instrumental in creating the Special Transportation Fund to help fund transportation services for individuals with disabilities. Among OTA's best legislative friends were Oregon Senators Jane Cease and Glenn Otto, Representatives Denny Jones and Tom Brian, and Representative and later Senator Margaret Carter. TriMet's presence at the annual conference was significant, with Dick Feeney providing steadfast guidance for the OTA.

SERVICE DEVELOPMENT AND INNOVATION

TriMet had made great strides in service development as it went into its second decade. Between March 1973 and

Early monthly pass

Articulated buses: high-capacity and high maintenance

March 1982, service increased from 16,321 to 31,238 weekly hours—an increase of 91 percent. Ridership hit an interim peak in fiscal year 1981, with 39.8 million originating rides. The economy was doing well, the cost of driving a car was on the rise and TriMet's planners were bullish on an increasing role for transit in the region.

Since 1976 TriMet has made a monthly pass available to riders as a strategy to solidify TriMet's ridership, provide a predicable revenue base and improve convenience for the daily rider. This strategy was aggressively expanded in 1982, when TriMet created a discounted employer transit pass program, one of the first in the nation. At the initiative of Multnomah County Commissioners Don Clark and Earl Blumenauer, county employees were first to enroll in this new program. Don Clark received pass 001. TriMet's marketing director, Bob Prowda, quickly developed and expanded the program to meet the needs of diverse employers and university students.

Meanwhile, 24-hour recorded schedule information became available for customers over the telephone, 238-RIDE, through the Teleport system using a Unix shell and Lynx—which was innovative at the time, though old technology now. In February 1982 a rectangular bus stop sign was introduced with the route numbers identified, replacing the generic blue triangular signs. A vandalism telephone hotline was added in August 1983. By the early 1980s TriMet also hosted an aggressive carpool matching program that would eventually be taken over by Metro.

ARTICULATED BUSES

Even as TriMet was designing the first light rail line, line-haul capacity was being enhanced on the regional trunk bus routes. Articulated buses, long commonplace in Europe, were coming to many large transit systems around North America. A 60-foot articulated bus could seat approximately 64 riders versus a seated capacity of 43 riders on a standard 40-foot bus. Articulated buses promised a cost-efficient solution for high-volume and long-haul commuter routes.

TriMet was keeping an eye on peer transit systems around the country, particularly to the north in Seattle. Seattle's private city and suburban transit providers were consolidated under King County Metro in 1972, much as TriMet had been created. Seattle had preceded Portland in establishing a downtown free-ride zone, named the "Magic Carpet." At this time, however, TriMet and King County Metro had a philosophical divergence regarding the development of transit systems. When Portland looked to light rail for its high-capacity corridor needs, Seattle distinguished itself in 1978 as the first North American region to embrace articulated buses—while also rebuilding its electric trolleybus network. One rationale was the need to achieve the biggest and most immediate bang for the buck in the congested long-haul freeway-oriented corridors. The region leveraged the appointment of Washington Congressman Brock Adams in 1977 as U.S. Secretary of Transportation to maximize this investment in buses and bus-related facilities. The focus on line-haul bus service led ultimately to construction of the 1.2-mile downtown Seattle

transit tunnel that opened in 1990. That tunnel was initially dedicated for buses, but buses now share the tunnel with light rail.

TriMet also looked to articulated buses for its line-haul routes. Two qualified European vendors responded to a solicitation. Peter Cass and Jim Cowen (who was operations director at the time) joined Board President Drummond for a tour of MAN manufacturing in Munich, Germany, and the Ikarus facility in Budapest, Hungary. They came away believing that the German MAN product was far superior to the Hungarian product. Under federal procurement rules, TriMet was obligated to accept the low bid and hoped it would come from MAN. Unfortunately, Seattle was in the market at the same time with a larger order. TriMet believed that MAN did not have the capacity to fulfill both orders. MAN low-balled the Seattle bid and high-balled the Portland bid, thus forcing TriMet to accept the Crown-Ikarus bid. These buses were manufactured in partnership with Crown Coach—a school bus and fire truck manufacturer based in California. The federal government encouraged this procurement in exchange for the sale of McDonald-Douglas aircraft to that eastern block country.

The first of 87 Crown-Ikarus articulated buses went into regular service on two lines, at the time known as Line 44-Sherwood-Gresham and Line 57-Forest Grove, in January 1982. The buses proved to be problem prone, in part resulting from the untested marriage of American-made components with the tried-and-true Hungarian chassis and body. The American content on these buses was dictated by the Buy America Act, which was a provision of the federal Surface Transportation Act of 1982. The buses were hard to handle in slippery conditions and remained parked after snow and ice storms.

TriMet was by far the largest North American buyer of these buses. The agency committed itself to making the best of a difficult situation by working with component vendors and the Hungarians to address the issues one by one. Much research and retrofit was done by TriMet's mechanical workforce. TriMet sued the manufacturer over the extensive repair and retrofit costs and hosted a small army of Hungarian workers at the Merlo bus facility to strengthen the easily fractured bus chassis, stressed by a heavier, American-made diesel engine and drive train. After many modifications and repairs involving multiple component suppliers at the expense of Crown-Ikarus, a settlement was reached in 1987. TriMet would operate these buses over their full federally mandated service life of 14 years, when other jurisdictions had already abandoned these trouble-prone buses.

The articulated buses were quickly withdrawn after Westside MAX came on line in September 1998, with the last ones retired in March 1999. In spite of their problems these buses built ridership in high-volume commute corridors. The need for the larger capacity buses was diminished as light rail and TriMet's reliable 40-foot bus fleet created new multimodal connections. TriMet nonetheless recognized a role for the larger buses and would go on to consider "Bus Rapid Transit" alongside light rail for the anticipated Powell/Division and Southwest Corridor high-capacity routes.

TriMet began looking again at articulated buses in 2015 when an electric articulated bus was tested in the Powell-Division corridor. While light rail was selected as the preferred mode for the Southwest Corridor, Bus Rapid Transit was selected to operate on the Division Transit line, thus reintroducing the 60-foot "bendable" buses to the Portland region's streets by the year 2022—40 years after their first appearance.

This first troublesome experience with articulated buses did not deter TriMet from considering their future reintroduction. The 60-foot "bendable" buses will soon return to the region's streets.

PUBLIC TRANSPORTATION AS A LIFESTYLE CHOICE

While TriMet was trying out articulated buses to achieve cost efficiencies, it was looking to light rail transit as a long-term investment to interconnect major regional centers and attractions while meeting the needs of long-distance commuters.

At the same time, TriMet began to reshape other bus services to meet a full range of rider needs, in addition to the suburban peak commute trip. In 1981 TriMet took a hard look at trolleybuses for the highest-ridership urban routes—Hawthorne Boulevard, Northwest 23rd Avenue and Sandy Boulevard. Trolleybuses, as used in Seattle and Vancouver, B.C., draw their power from overhead wires without diesel engine exhaust. The high up-front cost of supportive electrical infrastructure as the region was also looking to light rail put this concept on hold.

Instead planners proposed to take advantage of eastside Portland's cross-hatched streets to create a grid bus network that enabled access to most destinations with a single transfer. TriMet board member Kenneth Lewis in 1973 was an early proponent of this approach, but it was not fully implemented at the time. More than a decade later, TriMet

added the popular Line 70-12th Avenue which traveled north/south in Portland's inner east side. Advocates with Citizens for Better Transit saw improved crosstown service as a "must" for TriMet to maintain credibility, particularly in light of recent fare increases.[57] The proposed route restructuring unveiled in 1981 would allow many of the system's 145,000 riders to complete a trip without passing through downtown Portland.

Because of the irregular street pattern on Portland's west side, routes there were oriented to serve transit centers, with coordinated schedules allowing timed transfers among routes. Buses would arrive at these centers and then depart with a minimum of wait time between connections.

This 1981 package of service enhancements was called the City and Eastside Transportation Improvement Plan (CETIP). Features included:

- Major route restructuring, including the addition and deletion of some existing routes.
- Improvement of service frequencies with 15-minute service on crosstown routes.
- Access to North Portland and Northwest Industrial Area destinations for the first time.

TriMet expected this transformation to make public transportation attractive for a variety of trips, in addition to the work commute. More people would be able to choose transit instead of their car—resulting in as many as 230,000 daily riders by 1986.[58]

The package of improvements—a new fare collection system, all-door boarding and route structuring—inspired the creation of "Bus School," with three specially equipped buses touring the region to provide 10-minute courses in "busology." It was an unprecedented education and marketing effort, accompanied with a 16-page "Speed Riding Manual."

In September 1981, less than three months before CETIP service was to begin, the TriMet board expressed misgivings over its capacity to support the $7.5 million annual price tag. The budget projected a 30 percent increase in CETIP farebox revenue and required a 27 percent increase in the payroll tax, which was appearing increasingly unlikely to happen. The Multnomah County Tax Supervisory and Conservation Commission and the TriMet Citizens Advisory Committee proclaimed these projections to be "wildly optimistic."[59] Further misgivings over the readiness of the new articulated buses and the installation of self-service fare equipment delayed the service improvements to September 1982—in spite of board misgivings and inaction on increasing the payroll tax.

INNOVATION OR RISK: SELF-SERVICE FARE COLLECTION

This new service plan was coupled with a dramatic push to improve the speed, convenience and attractiveness of bus service by allowing passengers to board through any door. Part of this aggressive "America's Fastest Buses" marketing campaign included the introduction of self-service fare collection (proof-of-payment), modeled on European systems and Zurich, Switzerland, in particular. This approach entrusted riders to validate their pre-paid fares using on-board machines, with random checks for compliance by TriMet fare inspectors. It was essentially an honor system. Riders paying a cash fare, however, continued to need a receipt issued by the bus operator. Along with other service improvements, this new system was introduced in September 1982. Proof-of-payment had never been applied in North America, and TriMet secured a $5.1 million three-year federal demonstration grant to test and evaluate its application.

The new system aimed to streamline boarding by eliminating or reducing a passenger's interaction with the bus operator. A distance-based five-zone fare structure sought to make the system more equitable. The system differed, however, from standard European practice. As a result, what might have been off-the-shelf equipment had to be redesigned and was plagued with mechanical difficulties. Citations for fare violations overwhelmed the local courts. TriMet's evaluation of the program revealed that the promised $2.1 million in operating savings was not being realized. Although the system was popular with riders, TriMet's credibility suffered and the experiment was discontinued in April 1984. (It lived on in the form of fare inspectors conducting random proof-of-payment checks in the new light rail service.) TriMet returned to traditional fare collection methods on bus routes even as other systems nationwide were looking to new technologies.

Numerous changes to the fare structure would follow over the years. While TriMet's foray into innovative self-service fare collection did not work out, by TriMet's 50th anniversary, fare collection would take on a whole new innovative look and level of convenience with mobile ticketing using a rider's mobile device.

[57] Federman, Beleaguered Tri-Met Faces Crucial Decisions, September 13, 1981
[58] TriMet: Proposed Route Changes: January 1982 for Northwest, North, Northeast and Southeast, Spring 1981
[59] Federman, September 13, 1981

Self-service fare validator and dispenser

As a separate action, in July 1983, an important agreement simplified fare collection for trips over the Columbia River by integrating fares on Clark County's C-TRAN with TriMet's fares in a complex agreement based upon revenue-sharing calculations.

ZIGGING INSTEAD OF ZAGGING

PUSHBACK FROM PAYROLL TAXPAYERS

Even as TriMet was planning for enhanced service, it faced resistance from factions in both the rural and business communities. At the time TriMet's district covered the full tri-county area, stretching from the Mount Hood National Forest to the Coast Range—much of it far from settled communities. TriMet reasoned that transit service improved the air shed for everyone, and that Park & Ride lots served the needs of rural commuters. However, under pressure from rural communities like Corbett and Banks, in May 1981 the Oregon legislature enacted Senate Bill 802, which reduced TriMet's territory to 375 square miles—the area served by Metro along with additional areas within 2.5 miles of a TriMet bus route.[60] An annual loss of $500,000 in payroll tax revenue was more than offset by legislation extending the payroll tax to self-employed individuals, which produced $1.9 million in new revenues annually.[61]

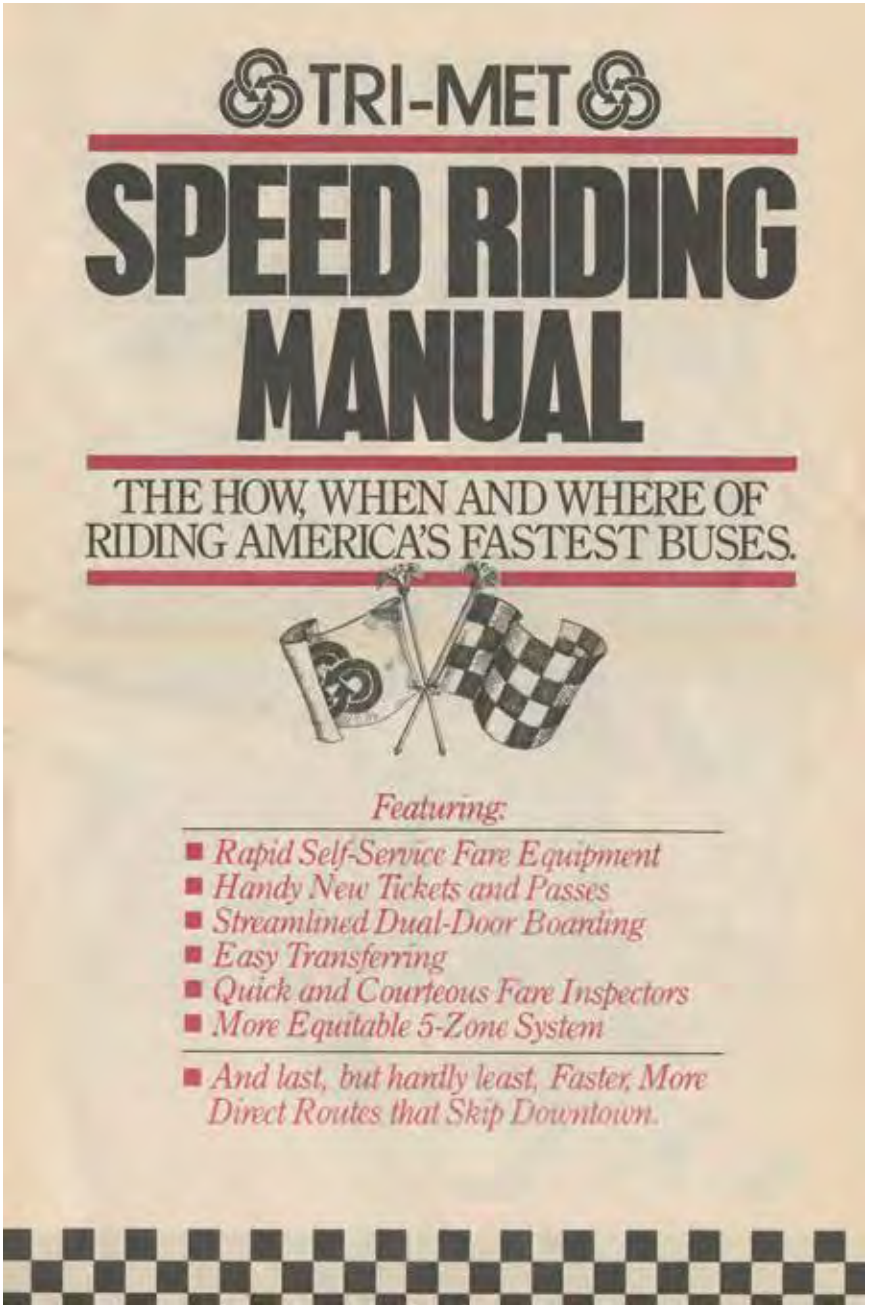
A year later the Portland Chamber of Commerce called on TriMet to reduce its dependence on the payroll tax, which produced 57 percent of operating revenue. The chamber asserted that the percentage of revenues from fares should be increased from 32 percent to 50 percent. It suggested reduced expenditures for lobbying, carpool promotion and public school fare subsidies. A chamber report noted, "It is the transit user, not the business community, who should be paying for the bulk of TriMet's operational costs."[62]

TRIMET FACES SOME MORE HARD TIMES

Barely a year after the fall 1982 CETIP service enhancements took effect, an economic recession hit in January 1984. TriMet finances suffered as ridership declined due to falling gasoline prices and rising unemployment. Ridership had not responded as anticipated to significant improvements in service. Federal grant programs also shrank. Circumstances were exacerbated by the failure of self-service fare collection to generate the predicted savings. Life was pretty grim at TriMet and around the region.

General Manager Cowen announced a series of drastic actions, based on "the realities of ridership and the constraints of revenue," that included service reductions, personnel reductions, materials and service reductions,

[60] Dailey, Tri-Met Taxing of Rural Areas Under Attack, May 19, 1981
[61] Federman, Tri-Met Gets Its Way in '81 Legislature, August 16, 1981
[62] Federman, Business Again Takes Tri-Met to Task, June 27, 1982



How to ride "America's Fastest Buses," implementing the City and Eastside Transportation Improvement Plan (CETIP), 1981

and a revised fare collection system. TriMet was forced to reduce service by 2.3 percent in June 1983. Service hours were further cut 5.8 percent in January 1984 and an additional 6.3 percent in June 1984—15.9 percent overall—to address the budget shortfall. TriMet discontinued all-night "owl" service, making Portland the second-largest U.S. city without any night transit service. Seven regular (daytime) bus routes also were eliminated. Personnel cuts included 174 union and 43 management positions. At one point, TriMet was barely covering its payroll. Cowen asserted that the reduction would not compromise fundamental goals. "Our provision of transportation service to the tri-county area will continue to support basic air quality and land-use standards," he wrote in a 1984 release that projected austerity until revenues and ridership picked up.

Portland was not alone. Transit systems across the nation also cut service to survive the recession. Nonetheless, TriMet was criticized for failing to establish a realistic grasp on its financial and operating metrics. In connection with the CETIP improvements, TriMet conveyed optimism that farebox revenues would sustain the service increases, even while its innovative in-house financial model forecast the opposite. A debate had taken place between optimistic planners and worried financial analysts. An internal, interdepartmental Route Analysis Committee disbanded after fierce disagreement over next steps. An internal memo titled "CETIP: Whither Thou Goest" documented the risks. The recession came at exactly the wrong time for the successful implementation of CETIP. The financial stress highlighted the sensitivity of TriMet's primary source of revenue to recession-induced unemployment. TriMet's Board President Gerard Drummond was famously quoted as saying, "We zigged when we should have zagged."[63]

SCRUTINY AND REASSURANCE

Community leaders and rider advocates wanted the TriMet board to better reflect the community and bus riders. TriMet was criticized for coming to the community with completed service plans and cut proposals, leaving little opportunity for meaningful citizen input.

The disconnect between service expansion and the economic recession put TriMet under the magnifying glass. The Oregonian's "TriMet in Transition" series

[63] Federman, Tri-Met Moves to Recoup Losses from Policy 'Folly,' April 29, 1984

asserted that the overly conservative board of the 1970s had been replaced by an overly liberal board during the '80s. The board was accused of rubber-stamping staff recommendations and kowtowing to Board President Drummond. While board member John Frewing, from Portland General Electric, chaired community meetings and held work sessions with TriMet staff, other board members missed meetings (perhaps as a result of competing obligations). Drummond, who had served on the board since 1973, was respected by many for providing strong leadership. Meanwhile some board members felt their voices were not heard and resigned out of frustration. Concerns over the board's misjudgment and consequent financial crisis once again raised consideration of a Metro takeover of TriMet. Advocates of this course reasoned that Metro's elected representation was more directly accountable to the voters than TriMet board members, who were appointed by the governor.[64]

The Oregonian disclosed the top management salaries and made claims of inappropriate qualifications of some TriMet staff. Salaries were contrasted with those of both local and national peers and were said to be out of sync with TriMet's dire straits. On the other hand, the article praised TriMet's general manager, James Cowen, for having the nuts-and-bolts experience to put the agency back on track.[65] "Service cuts are never easy, and we all regret having to make them, but it's a question of basic survival at this point. There just isn't enough demand for all the service we have out there on the streets," said Cowen. Cowen noted that, while the crosstown service might have been ahead of its time, it would prove helpful in bringing riders to the new light rail line then under construction.[66] Philosophical differences between long-time planning director Paul Bay and Cowen led to Bay's departure in January 1984. He was replaced by the engineering and contracts manager, John R. Post.

With so many service delivery changes occurring at the same time, it was difficult to sort out contributions to the fiscal crisis, but the service development concepts advanced with the CETIP improvements actually were successful in attracting new riders, exceeding the estimates of TriMet's service planners. Most of that growth in ridership came from the new crosstown lines. An increase in crosstown service of 62 percent yielded a 98 percent increase in ridership among that subset of eastside lines. The productivity of those routes improved by 24 percent. The results suggested that the concept was solid, but that the timing for implementation was premature.

Rick Gustafson, executive officer of Metro, was cautious about any radical retrenchment:

> *The tri-county area is a dynamic entity which is constantly changing and growing. Its land uses will expand, and this will eventually expand TriMet's ridership; the agency must be prepared for that future expansion.*[67]

Portland Commissioner Mike Lindberg was also bullish on TriMet's role:

> *Portland went from the seventh worst air quality area to one of the best because of TriMet. The agency has also helped increase downtown jobs from 66,000 to 88,000 over the past decade. It has more than doubled ridership in that decade and given us a beautiful transit mall and other key innovations, such as timed-transfer centers, that have provided Portland with a national transit reputation. We should remember many of the good things the agency has accomplished at a time when it is in trouble and could use some public support.*

Stressing transit's role in the region's future, he went on to say:

> *That's really the bottom line, the area's future, and TriMet, no matter how many short-term crises may occur, is a major part of that future.*[68]

The financial crisis and media inquiry triggered an immediate retrenchment of work plans and salary freezes. By the mid-1980s, TriMet was focused on completing the Banfield light rail project and returning to the basics of operating buses. The 1984–85 budget had been reduced by 12 percent.

[64] Federman, April 29, 1984
[65] ibid
[66] Federman, TriMet in Transition; TriMet's financial trouble part of a national problem, May 2, 1984
[67] ibid
[68] ibid

TRIMET FINANCES: UNDERSTANDABLE AND CREDIBLE

by Bruce Harder, former TriMet finance and administration executive director

Understanding and maintaining fiscal stability in organizations large or small is simple and timeless. Although public finances are portrayed in somewhat mysterious and arcane terms, the underlying principles of financial reporting and budgeting can be straightforward and easily understood.

TriMet historically has relied primarily on two sources of operating revenue—employer payroll taxes and passenger fare revenue. The payroll tax historically has provided approximately 60 percent of annual operating revenue, while passenger fares account for 25 percent.

Payroll tax receipts are beyond agency control and correlate with the vitality of the regional economy. Fare revenues are controlled by the agency.

Maintaining fiscal stability requires that the agency:

1. Live off the middle of the payroll tax growth curve (not the most optimistic nor most conservative possible outcomes).
2. Increase fares regularly in small increments with inflation.

To budget off the top of the payroll tax forecast curve inevitably leads to fiscal instability. To postpone increases in passenger fares requires large adjustments at a later point, accompanied by widespread negative public and rider reaction. From the outset the payroll tax has demonstrated a pattern that is every bit as uneven or volatile as the economic cycle. But in the early 1980s, an economic downturn had reduced revenues so sharply that the resulting service retrenchments were disruptive.

How was this pattern addressed? In 1986 a concerted effort to improve financial forecasting and planning was assigned to me as the new head of Finance and Administration. Led by Claire Potter, director of financial planning, the effort culminated in the publication of Financial Issues Report #1 (FIR#1), a multi-year financial forecast and plan that considers the affordability of actions before they are part of the annual budget.

The financial and budgeting model served the agency for decades. The financial forecasting model detailed five years of actual revenue and expenditure history, current year experience, and at least five years of expected revenue growth and expenditure requirements.

In 1987 the first comprehensive capital improvement and maintenance plan was developed by Phil Selinger, director of capital and materials management. The capital plan supplemented the operating forecast, thereby integrating all annual operating and capital assumptions and requirements in the FIR#1 forecast.

At its simplest, the forecasting model and the FIR#1 story was based on broadly understood terms: continuing revenues (CR), continuing expenditures (CE), one-time-only revenues (OTO-R) and one-time-only expenditures (OTO-E).

To maintain fiscal and service stability there are a few inviolate requirements:

- CR must at some point during every forecast period equal or exceed CE.

(Continued on next page)

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- CE exceeding CR over even a limited term leads to financial and service instability.
- OTO-R can only be used to support CE in very special or emergency circumstances and for limited periods of time.
- OTO-R can be used to underwrite OTO-E indefinitely.

Whenever CE exceeds CR, steps taken early in the five-year forecast period to raise revenues or decrease costs reduce the likelihood of dramatic expenditures and service reductions later.

These basic principles are supplemented by the goal of maintaining at least three months of working capital reserve against unplanned or negative financial results—all pretty basic stuff.

The ongoing task was to institutionalize these principles and fiscal realities. Forecast integrity and credibility was based on the explicit, detailed and transparent rendering of all the financial assumptions supporting each resource and expenditure category in the annual operating and capital budget.

During the course of every fiscal year, the dependence on this analysis of fiscal issues became so important that agency staff would ask when the forecast update or annual FIR#1 would be released. In order to get the forecast read and used, it needed to:

1. Unmask financial complexities.
2. Make financial forecasting and budgeting transparent.
3. Speak a financial language that is understood and believed so that the board of directors, executive leadership, and agency staff can explain it to the public.

UNION RELATIONSHIPS

While the early board had worked closely and in relative harmony with the union since the 1970 showdown, the relationship shifted when Bill Roberts and the old board departed. In 1980 the hot issue was security on transit, following a series of assaults on bus operators. A new contract in 1982 brought significant benefits for the bargaining unit, including an enhanced pension, disability plan, sick leave revisions and—for management—an increased allowance for part-time operators. Management was given the ability to contract out extraordinary maintenance work. The 1984 budget reductions included the layoff of 74 full-time and 101 part-time operators. Nonetheless, a new contract that year included wage increases.

Increasing acrimony came to a head one year later when TriMet brought a five percent wage cut into contract negotiations, along with an increased allowance for part-time workers. TriMet's lead negotiator was a hard-nosed attorney, Bill Lubersky. Rich Ries was the business agent for the Amalgamated Transit Union (ATU). Board President Drummond recalls: "Cowen and I agreed that the key goal to be achieved was the ability to utilize many more part-time drivers. The cost benefits would be dramatic over time. We were not advocating the firing of full-time operators. As attrition reduced their ranks, we would replace many of them with part-time drivers to cover the peaks. We anticipated that these drivers, many of whom would be college students, would have fewer benefits and would not be long-term employees. Thus, overall wage and benefit costs would be substantially reduced."[69] Negotiations extended for five months. ATU leader Melvin Schoppert promoted striking: "You go down there today, you go down to 17th and Holgate, and you see those high cyclone fences clear around their property; well, that's what they were putting up because they figured we'd strike them, see?"[70]

Drummond supported the management position, but recalled that Portland Mayor Bud Clark and Governor Atiyeh had "no stomach for a strike and its short-term impact on the community."[71] Extended negotiations came down to just days before a Monday, September 9, 1985, strike date set by the ATU. When Commissioner Margaret Strachan went to the mayor with some of her transportation bureau people and explained what a disaster a strike would be, the mayor met with Cowen and Doug Capps, a TriMet management team member, and explained Portland's position on the impasse. Chris Tobkin, Mayor Clark's chief of staff, recalled

[69] Drummond, April 21, 2015
[70] Schoppert, 2001
[71] Drummond, April 21, 2015

that, privately, Cowen said a strike would be disastrous not only for riders but also for the agency. He didn't think TriMet could recover from a strike, but he held no hope for a settlement. Tobkin recalls that city staff contacted Governor Atiyeh's office and were informed that the state did not intend to get involved in the negotiations, which surprised the city, since TriMet was a state agency. Portland decided on an independent initiative.[72]

Chris Tobkin remembered retired labor leader Ed Whelan as someone who might be able to bring the parties together. Whelan was the former president of the Oregon AFL-CIO. Tobkin considers Whelan as perhaps the most highly respected labor leader Oregon had ever known. He was a veteran negotiator from the 1960s and 1970s and a former member of the Oregon legislature. At the time he was an executive with Portland General Electric's public affairs department, though not working full time. Whelan was summoned to town. Whelan knew what the problems were, agreed to talk to both sides and ask if they would sit down with him as "arbitrator" and give one last try at a settlement. Whelan would do it only if all parties—union, management, and the city—agreed to absolute secrecy. Fortunately, everyone agreed, so Whelan arranged to lock up the warring parties at the Hilton Hotel. They went in on either Thursday or Friday, as Tobkin recalls, and settled the contract late Saturday night. The 18-member ATU board accepted the agreement and the membership affirmed it the next day. Enhanced pension provisions had sweetened the deal for employees. It was a 3 a.m. showdown nearly resulting in a shutdown. They announced the three-year contract settlement at a press conference live for Sunday night's 11 o'clock news.[73]

General Manager James Cowen with William Lubersky in labor negotiations

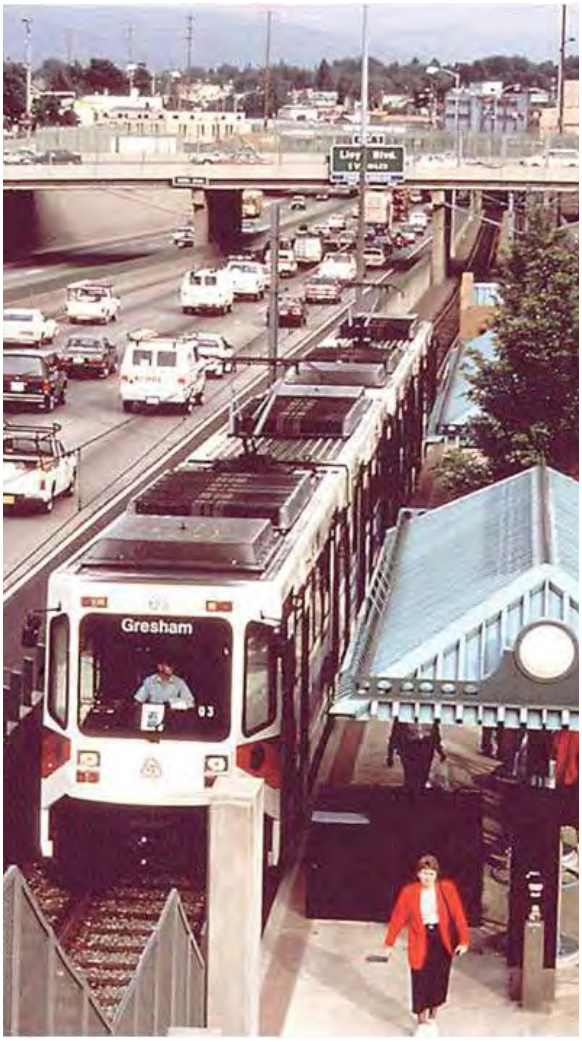
Tobkin relates: "What was kind of amusing at the time was that Bud spent three days dodging the press, who had picked up the scent of something going on, but all Bud would say was that he didn't know anything. The press literally followed him around, even interrupting dinner on, I think it was, Friday night. No one leaked a thing!"[74]

Schoppert expressed his view, "In fact, Cowen was going to push it down to a strike. Well, I knew that if we took TriMet down to a strike, we could beat them in the press."[75] Drummond notes that without high-level political support from the mayor and governor, TriMet's negotiating team was forced to pull back. "I firmly believe that if the politicians had had some spine, TriMet's cost structure over time would have been substantially improved."[76]

Over the ensuing decades, TriMet's relationship with the ATU waxed and waned over a wide range of issues. Schoppert recalls a disastrous ATU agreement, made unilaterally by ATU board member Del Hadley, offering early retirement to full-time operators rather than laying off part-time operators first, as called for in the contract. A new set of rules and benefits associated with the arrival of light rail and new classifications of positions was another challenge.

[72] Tobkin C., Interview, April 21, 2015
[73] ibid
[74] ibid
[75] Schoppert, 2001
[76] Drummond, April 21, 2015

MAX type 1 cars undergoing maintenance in new Ruby Junction operating base in 1985, photo courtesy of Steve Morgan



MAX at Hollywood station

As an old hand in the transit industry, Cowen monitored the pulse of the union leadership, but his replacement had a different set of credentials. General Manager Tom Walsh and his management team had a tough time holding the line with the union in the 1990s. Precedents and the continuing push for enhanced benefits made it difficult to contain costs. The benefits package became far more generous than the industry norm and would contribute to future fiscal troubles. Loren Wyss, board president in the early 1990s, identified the long-term burden that these contract provisions would impose and in 1994 expressed disagreement with Walsh over the handling of the contract. Governor Barbara Roberts then asked Loren Wyss to resign his board position.[77]

While extended and stressful labor negotiations returned in 2014, Portland has never come closer to a shutdown of transit service than during the 1985 showdown.

THE ARRIVAL OF MAX

A NEW PATH EMERGES

The year 1986 set TriMet on a path that would change public transit in Portland forever. In July the Banfield light rail line gained a new name: MAX, for Metropolitan Area Express. TriMet publication designer Jeff Frane won the public contest to name the light rail line. Frane noted that the name was inspired by his son Alex:

> *I used to read him these picture books and there was a character—I think he's a rabbit—his name was Max. The ad agency had a list of criteria. The name had to be simple, had to be friendly. I was playing around with acronyms. MAX just seemed like a really friendly name.*[78]

On September 5, 1986, Banfield light rail—now MAX—opened on a 15.1-mile alignment between the eastern suburb of Gresham and downtown Portland. With community organizer Joan Biggs, a party was planned and funds solicited by then-Portland Commissioner Earl Blumenauer.

It was the first rail service in the Portland region since the 1950s. The $214 million project was completed $10 million under budget. A three-day celebration stretched for 15 miles with free rides and entertainment, attracting an estimated 200,000 participants. "MAX" was soon in the vocabulary of every Portlander, and the MAX vehicle became a Portland icon. Evening news broadcasts typically opened with MAX pulling into the downtown Pioneer Square station. MAX was a point of pride that put Portland on the map with other modern transit cities.

While MAX stole the show, the coordinated highway corridor project that widened the Banfield Freeway from four to six lanes along a 4.5 mile section was completed in summer 1985. All was paid for by

[77] Oliver, Who's Running Tri-Met Anyway?, November 8, 1995
[78] Strom D., July 25, 1986: Banfield Light Rail Line Named MAX, July 25, 2011, portland.daveknows.org/2011/07/25/july-25-1986-banfield-light-rail-line-named-max

funds saved by canceling the Mount Hood Freeway. MAX trains filled up, and so did the freeway. While congestion remains a part of life in a growing region, the marriage of the Portland region's transit system with a growth boundary and coordinated land-use planning has resulted in shorter commute times and distances compared to other cities similar in size.

Portland was among a few metropolitan areas electing to bring back light rail transit as a more robust version of the traditional streetcar—electric-powered through overhead catenaries but capable of freeway speeds. Toronto, Boston, Newark, Philadelphia, New Orleans and San Francisco had saved remnants of their former streetcar systems, while only San Diego, Calgary and Edmonton dabbled in light rail. There were few models other than European cities for TriMet to follow. TriMet raised the bar for design of light rail in North America, with full street-wide reconstruction in downtown and 15 miles of smartly designed stations. In-street running within downtown featured Belgian Block pavers to define the exclusive rights-of-way. Trains could preempt traffic signals to keep moving. The coming of MAX allowed the eastside Lloyd Center business district to expand with hardly any new parking. High-capacity transport via MAX supported the construction of a major league sports arena and the Oregon Convention Center in the urban core—bucking the national trend toward building stadiums in the suburbs with unlimited parking.

Vintage Trolley near Skidmore Fountain

VINTAGE TROLLEY

Beginning in 1974, well before plans for light rail were inked, the idea of returning a vintage trolley to downtown Portland was championed by Leo Williams, a Portland planner and longtime Historic Landmarks Commission member, and Dr. Larry Griffith, a retired dentist. Griffith quickly pulled in Bill Failing at KISN radio and Betty Merten, a citizen activist, to embellish the idea. Willamette Traction was incorporated in 1975. Prominent Portland developer Bill Naito made the opportunistic but ill-fated purchase of three Portuguese-built, American-styled, streetcars from Porto, Portugal, for the vintage trolley. They would turn out to be too expensive to retrofit and have lower rider capacity compared to new vehicles.

The idea of bringing the vintage trolley back was slow to gain traction until the light rail project came along in 1978. Ernie Munch, Rick Gustafson and the firm Shiels, Obletz, Johnsen stepped in to tie the vintage trolley to the Banfield project as a way to address the concerns of the Portland Historic Landmarks Commission regarding light rail's impact on the Old Town and Yamhill historic districts. Richard Norman, chairman of the Yamhill Historic District Advisory Council, said light rail would "cut to pieces" that two-square block area.[79] Off-peak introduction of the vintage trolley was viewed as mitigation for light rail's intrusion.

A new organization, Vintage Trolley Inc., now had the attention of some prominent business leaders who saw the potential of the trolley to attract more shoppers. Meier & Frank, Zell Brothers, McCormick and Schmick's, Melvin Mark, U.S. Bank and Lloyd Center stepped forward as sponsors. The trolleys would run between downtown and the Lloyd Center across the river, a distance of 2.3 miles. Operating costs were to be split between TriMet and sponsorship revenues.

[79] Historic Unit Opposes Plan for Light Rail, March 14, 1978

Funds from a local improvement district promoted by Bill Naito, matched by a $2 million grant from the Federal Transit Administration, paid for construction of four faithful replicas of the 1904 Council Crest streetcars by GOMACO of Ida Grove, Iowa. TriMet's Pat Maloney and Thomas Heilig were instrumental in preparing specifications and overseeing production and testing. The new cars were numbered 511–514 after their Brill-built Council Crest ancestors.[80] While faithful in appearance, the cars were built with modern propulsion and safety systems. A streetcar barn was constructed beneath I-5 in the Rose Quarter. A terminus tail track was constructed as part of the Banfield project at Holladay Park near the Lloyd Center.

The first replica trolley arrived in August of 1991, and service started in November 1991. Service ran daily during the first month, reduced to weekends and holidays from 1992 through May 1994. Weekday midday service operated during the December holiday season. From mid-1994 through 1999 service operated 10 a.m. to 3 p.m. on weekdays (and until 6 p.m. on weekends), March through December. With the introduction of new MAX service on the line and the depletion of Vintage Trolley Inc. trust funds, service was reduced to Sundays in 2000. In September 2009, operation was shifted to the new MAX tracks on the Southwest Fifth and Sixth Avenue Portland Transit Mall.

The operation of the vintage trolleys had to fit between regular MAX runs. This sequencing became increasingly difficult as new MAX lines added trips between downtown Portland and the Lloyd Center. As budget pressures mounted, Sunday operations finally ended in December 2013 (other than two trips made later in 2014). Streetcars 511 and 512 were sent to St. Louis on a long-term lease to run on the Delmar Loop trolley line. The other two cars, 513 and 514, have been retained for operation on the Oregon Electric Railway Historical Society's Willamette Shore Trolley Line between Lake Oswego and Portland's South Waterfront District.

SUSTAINED INTEREST IN THE RAIL PROGRAM

The new MAX line was well received by the community. Civic leaders and planners embraced its potential for guiding regional development and alleviating road congestion. The fears of light rail detractors had not been realized. It was understood that other light rail corridors would follow the Banfield line, but planning for those lines languished as TriMet recovered from its financial crisis and learned how to operate its first light rail line.

In 1994, eight years after the opening of the Banfield line, Earl Blumenauer, then a City of Portland commissioner, sought to build on the region's enthusiasm for light rail that had blossomed upon opening of the Banfield MAX line. He envisioned a series of regional rail summits to engage the public in a conversation about a sustained Portland rail transit program with coordinated livable communities. Portland's Benson High School hosted an early community summit, which was geared toward an exchange of ideas and strategies for expanding the Portland region's MAX light rail network, with an eye particularly to the west side.

At the 1994 rail conference, Blumenauer announced that in 1995 Rail~Volution would become a national conference, dedicated to helping communities around the country integrate transportation in all forms and capitalize on opportunities for transit-oriented development of livable communities. From that point, Rail~Volution became a loose federation of sponsoring partners, united by common interests and dedication. In 1996, Blumenauer won election to the U.S. Congress from Oregon's 3rd Congressional District, which encompasses much of Portland and most of Multnomah County. Rail~Volution became a vehicle for building smart growth coalitions in and out of the U.S. Congress.

In 2000, the Rail~Volution steering committee realized the need for a more formal entity and applied to have the organization designated as a 501(c)(3) nonprofit charity. In more than 20 national conferences from Seattle to Miami, Rail~Volution has showcased innovations that demonstrate how transit investments create jobs, improve health, and stimulate vibrant, livable cities. The international forum has twice been held in Portland, and Portland is featured in the agenda of speakers and presentations, but the event encompasses all that is happening in communities across America. TriMet remains a sponsor and active participant.

HIGHWAY RESURGENCE

Even as the Portland region launched light rail and revitalized transit service, some transportation planners, economists and engineers continued to advocate traditional highway solutions. At the national level Don H. Pickrell, a researcher at the Volpe National Transportation System Center under contract to the Federal Transit Administration, analyzed rail costs and ridership in eight cities, including Portland. In his spring 1992 article appearing in the Journal of the American Planning Association, "A Desire Named Streetcar: Fantasy and Fact

[80] Thompson R., Portland Trolley Chronology, 2009, vintagetrolleys.com

Orenco Map: The plan for Orenco in Hillsboro embodies the LUTRAQ vision, 1998

in Rail Transit Planning," Pickrell concluded that pre-construction forecasts were misleading. TriMet and Metro challenged some of the Portland numbers used in the Pickrell study, but the critique gained admirers, particularly in politically conservative academic circles.[81]

A proposal for a bypass around Portland's western suburbs framed a new debate on regional growth management. The original 1960s concept for the bypass stretched from approximately the juncture of I-5 and I-205 on the south to I-5 north of Vancouver, Washington. The 1988 bypass proposal—which had roots in the Portland-Vancouver Metropolitan Transportation Study—recommended Highway 26 as the northern terminus. The new roadway would partially complete a beltway loop around Portland, connecting on the east side to I-205. The land-use watchdog organization 1000 Friends of Oregon and the reborn Sensible Transportation Options for People (STOP) squelched the proposal, and it was dropped in 1996. An alternative plan promoted by 1000 Friends, called LUTRAQ: Land Use, Transportation, Air Quality, proposed modest road expansions, light rail and focused transit-oriented development around light rail stops. The LUTRAQ option relied on integrated land-use and transportation planning to reduce reliance on the automobile, improve air quality, reduce energy consumption and foster a sense of community. Linking land-use and transportation planning would become a new mandate for regional plans. LUTRAQ accelerated planning for extending MAX to the region's western suburbs. While officially dead, the western bypass concept periodically resurfaces, most recently in a 2012 white paper prepared at the direction of Hillsboro Mayor Jerry Willey.[82]

[81] Oliver, MAD for MAX, August 23, 1994
[82] Maus J., Hillsboro Mayor Pushing Massive Westside Freeway Project, Nov. 16, 2012, bikeportland.org

MEETING THE GOALS OF

INCLUSIVITY AND ACCESSIBILITY

TriMet was still a young organization when Congress enacted the Rehabilitation Act of 1973. TriMet first addressed access to transit for people with disabilities in March 1975, when the board of directors adopted a three-year demonstration program offering specialized transit service to senior citizens and individuals with disabilities, including door-to-door service funded by a federal grant. TriMet today provides comprehensive services for transit-dependent communities. All fixed-route bus and rail service have accessibility features, including TriMet's pioneering use of low-floor light rail vehicles. TriMet's LIFT program provides door-to-door service. TriMet also provides grant support to the nonprofit Ride Connection, which offers customized services for individual needs.

FIRST SERVICE AND OVERSIGHT

The LIFT program began service in December 1976 with 15 lift-equipped Mercedes-Benz mini-buses operated by senior bus operators who had volunteered for reassignment. Initially, service was available weekdays from 7 a.m. to 7 p.m. within Portland city limits. Service to Vancouver, Washington, was added in June 1977. When the federal demonstration grant expired in 1978, TriMet assumed the program costs.

Section 504 of the Rehabilitation Act of 1973 requires organizations receiving federal funds to provide equal opportunity for individuals with disabilities to receive program benefits and services. The TriMet board created the 18-member Special Needs Transportation Advisory Committee to develop a plan to address the mandated regulations. The committee's recommendations, presented to the board in February 1980, included operating LIFT service through contractors. In July 1980 the board allocated $825,000 for contracted LIFT services using TriMet LIFT vehicles.

In June 1981, TriMet reduced fares for "honored citizens"—seniors and people with disabilities. Honored citizens paid 10 cents between 9 a.m. and 3 p.m., and rides were free on evenings and weekends. The Accessible Service Consumer Group began meeting in February 1982 to recommend improvements in the accessible bus service program.

TriMet's first regular service buses with lifts (devices to help people using mobility devices get on and off buses)

LIFT vehicles and passengers

were 11 Canadian GMC buses diverted from Lane Transit District in the fall of 1980 and retrofitted with front door lifts in December 1981. They were assigned to two urban lines, but the lifts soon developed mechanical difficulties and were deactivated. On January 31, 1982, lift-equipped articulated buses began service on four lines. At the time 98 buses had lifts, representing 15 percent of TriMet's 661 fixed-route buses. These were joined in January 1983 by 75 GMC buses, increasing to 24 percent the portion of the fleet with lifts. All subsequent bus procurements specified lift-equipped buses. Early wheelchair lifts, however, were subject to frequent mechanical failure. The lifts on the articulated buses were decommissioned in April 1989 after a malfunction caused a serious accident.

The STAR identification card was introduced as part of the honored citizen program in September 1982 and extended to persons with chronic mental illnesses in July 1983.

COMMITTEE ON ACCESSIBLE TRANSPORTATION IS CREATED

In January 1984, the Special Needs Transportation Advisory Committee began a three-month study of the program. Its final report was accepted in July by the TriMet board, with an added provision calling for all MAX light rail stations to be provided with wayside lifts.

Introducing LIFT door-to-door transit service for travelers with disabilities, 1976

In January 1985 the TriMet board established the Committee on Accessible Transportation (CAT) as a successor to the special needs committee. CAT today continues to advise the board and staff on plans, policies and programs for seniors and people with disabilities. The committee has 15 community members, including eight seniors and/or people with disabilities who use TriMet, six representatives of seniors and/or people with disabilities, and one member of the TriMet Board of Directors. CAT members are appointed by the TriMet general manager for two-year terms.

A boost in funding for statewide special transportation needs came in June 1985, when the Oregon legislature enacted a cigarette tax, one cent of which was earmarked for special needs transportation. Even small Oregon communities were included in the legislation. The next year the statewide Special Transportation Fund Advisory Committee was formed. It is charged with overseeing the distribution of tax revenues from cigarettes for special needs transportation throughout the state.

TriMet's Park Woodworth and Dick Feeney followed this success by creating a statewide coalition supporting special transportation services. Their efforts bore fruit when the state legislature doubled the cigarette tax in June 1989. In 2104, two cents of the total $1.31 tax was dedicated to public transit, resulting in $7.3 million statewide in the 2013–2015 biennium.

THE COMMITTEE ON
ACCESSIBLE TRANSPORTATION

by Jan Campbell, chair, Committee on Accessible Transportation

TriMet's Committee on Accessible Transportation (CAT) was formed out of federal law, Section 504 of the Rehabilitation Act of 1973, forbidding employers that receive funds from the federal government to exclude or deny individuals the equal opportunity to receive program benefits and services. In 1982 CAT had its first meeting. The committee includes a TriMet board member, individuals with disabilities, seniors, and representatives of organizations that provide services to people with disabilities and seniors. CAT advises the TriMet board and staff on issues regarding district plans, policies and programs for persons with disabilities and seniors. We also review and make recommendations on issues ranging from current services to future plans.

I remember when the first bus rolled out in the '80s with an accessible lift on it. I got on the lift, the driver told me to hold on, and my wheelchair and I were raised from sidewalk level to the floor of the bus. Then I steered my chair into a mechanical lock to secure me. It was a bit frightening because of the height I was raised to.

The original light rail vehicles had high floors and required a wayside lift. I named the original lift used for light rail "the dumpster" because, when using it, you were literally encased on all four sides in this big metal structure. Once my fears went away, I felt so free because I now could travel by myself without asking a friend or family member to transport me. As technology improved on buses and light rail, we have gone from lifts to low-floor or "kneeling" vehicles. While drivers at one time called out stops, we now have automated stop announcements and reader boards on vehicles so customers can read the street names and know where they are. We have a paratransit system for individuals unable to use the fixed-route system because of their disabilities but who nevertheless wish to go places like everyone else. These improvements have not only helped persons with disabilities and seniors access the transit system, but they have improved the system for everyone. CAT has helped guide this change, transforming our dreams into reality.

CAT has been in existence now for more than 30 years and continues to advise TriMet. Its longevity and influence says a lot about TriMet's commitment to ensuring that persons with disabilities and seniors are heard. We meet on a regular basis to discuss issues with the appropriate TriMet staff. We do not always agree, but I believe we listen to each other and try to work together to find solutions that advance the ultimate goal of making our transit system the best in the country. I will always be thankful to CAT, TriMet staff and drivers. My life has changed so much over the years, moving from dependence to independence. Now I can choose where I want to go, and when.

RIDE CONNECTION

In 1986 the Ride Connection organization was created to supplement TriMet's door-to-door LIFT program. Two years later, Ride Connection became a nonprofit, working with community partners to provide and coordinate transportation options, primarily for older adults and people with disabilities. Today Ride Connection and its network of partners serve thousands of individuals in Clackamas, Multnomah and Washington counties with customer-focused, safe, reliable transportation options.

Ride Connection hosts a menu of programs in concert with other social service programs, including:

- The Ridewise program that teaches individuals with modest mobility challenges how to use the fixed-route transit system.
- Door-to-door services, which are supported by Ride Together, Ride About Shuttles, ride-upon-request and shared-vehicle programs.
- Other tips for using fixed-route transit are provided through travel options counseling, Worklink, riders' clubs and fare relief programs.

Ride Connection also works with Forest Grove and Washington County on general transit services for westside areas not served by TriMet.

Ride Connection relies on volunteers—44,000 hours in 2018—to support many of these programs. Led by Executive Director Elaine Wells, in 2014 Ride Connection moved into a permanent Gateway Commons facility alongside affordable housing and senior service providers—a fine example of using partnerships to leverage resources and enhance outcomes. Elaine Wells retired from Ride Connection in 2018 after 28 years of able leadership.

In 2018, Ride Connection celebrated its 30-year anniversary as a non-profit public transit provider. Ridership grew from over 12,000 in 1988 to 500,000 by 2018. Thirty percent of those trips were for medical purposes. Six hundred volunteer and paid operators are meeting the needs of the community that might not otherwise be served with TriMet's fixed-route services. It is one of the largest non-profit providers of accessible transportation options in the country.

ADA CHANGES THE GREATER LANDSCAPE

The federal Americans with Disabilities Act (ADA) of 1990 led to sweeping changes in the national landscape for individuals with disabilities. In particular, ADA led to dramatically enhanced accessibility throughout the public transit system for individuals with restricted mobility.

In January 1992 TriMet submitted its first ADA Joint Complementary Paratransit Plan to the Federal Transit Administration. This was followed by the Key Station Plan in July. Per these plans, in September 1992 LIFT hours were expanded to match daily fixed-route service, and fares were integrated. Between 1996 and 1997, next-day LIFT service was introduced, allowing a request to be placed by 5 p.m. for transportation the next day.

Meanwhile, by the end of the 1980s TriMet fixed-route service was becoming increasingly accessible as lift-equipped buses replaced older models. Thirty routes were declared accessible in October 1989. By 1991, 52 bus routes, light rail, and all weekend service had followed suit. The entire TriMet system was declared accessible in April 1999.

Nonprofit Ride Connection works with community partners to supplement LIFT service, 1988

In September 2002, responding to a recommendation by CAT, TriMet eliminated the obligation for passengers to use tie-downs to secure their mobility devices. In February 2010 TriMet initiated personal interviews and functional assessments to more accurately match individuals to appropriate levels of accessible service. A new mobility center opened in downtown Portland in April 2010 to provide these assessments.

Technology was catching up with the needs of the disabled community when, in July 2005, TriMet buses began testing automated stop announcements to assist riders with impaired vision. In January 2014 global-positioning-system-based devices (INIT CAD/AVL vehicle tracking systems) were added to bus and LIFT fleets, and made scheduling special services easier. These technologies improved options for riders with disabilities while helping reduce the cost of on-demand service, which at the time was 10 times that of a ride on a fixed-route bus. Eager to maximize accessible service while prudently managing costs, TriMet has continued to improve the efficiency of its door-to-door service while adding accessibility features to fixed-route service, including working with jurisdictions to improve sidewalk connections to transit stops.

LOW-FLOOR VEHICLES

The choice to order low-floor light rail vehicles in the 1990s is perhaps TriMet's greatest contribution to accessible transit, not only in Portland but all over North America. When the agency purchased its first 26 vehicles for the Banfield line, the only light rail cars on the market required passengers to climb three steep steps to reach seats. Access for people using wheelchairs was provided via wayside lifts on each station platform. Operating these devices was time consuming, unreliable and required the wheelchair user to occupy a lift "box," in effect a small, three-sided elevator, an experience many users felt was stigmatizing and inconvenient.

In the early 1990s, with ADA implementation in full swing, the time came to order cars for the extension of MAX west to Hillsboro. ADA considerations—in combination with urging from the Committee on Accessible Transportation and a new, sympathetic general manager, Tom Walsh—drove the decision to revisit the viability of low-floor light rail cars. These vehicles were in widespread operation in Europe and allowed wheelchair users to roll on board on a short, easily extended ramp. The European cars were lighter in weight compared to American transit vehicles and did not meet stringent American crash-worthiness requirements. Lead TriMet staff were cautious in pioneering the design of a North American car, but TriMet accepted the challenge and sent several engineers and accessibility consultant Bob Pike, a wheelchair user, to Europe to investigate. Optimistic conclusions resulted in an order for 39 (ultimately 46) new low-floor light rail vehicles engineered by Siemens Duewag to meet U.S. standards. Engineers were able to lower the floor by relocating most of the car's electrical components to the roof. Low-floor MAX vehicles entered service in August 1997 when Westside MAX opened to Goose Hollow. All of TriMet's subsequent light rail vehicles would continue to feature low-floor technology. The cars proved to have broader benefits, including speedier boarding for all passengers, especially those with bicycles and strollers, and fewer trip-and-fall injuries.

While low-floor light rail cars were TriMet's most dramatic contribution to improved accessibility, many other features have appeared on the MAX system to upgrade the experience of riders with disabilities. Included below is a partial list of MAX improvements.

- Ticket machines have instructions in audio, raised letter and Braille.
- Textured tiles, detectable with the foot or cane, identify the platform edge at MAX stops.
- MAX stations have Braille and raised-letter signs with service information.
- Many stations have digital displays showing the next expected arrival.
- Portland Transit Mall, I-205 Green Line and Orange Line stations feature audio announcements of the next arrivals.
- Priority seating inside near the door is reserved for seniors and people with disabilities.
- An on-board audio system announces the name of the next station.
- Reader boards inside the train show the name of the next station.

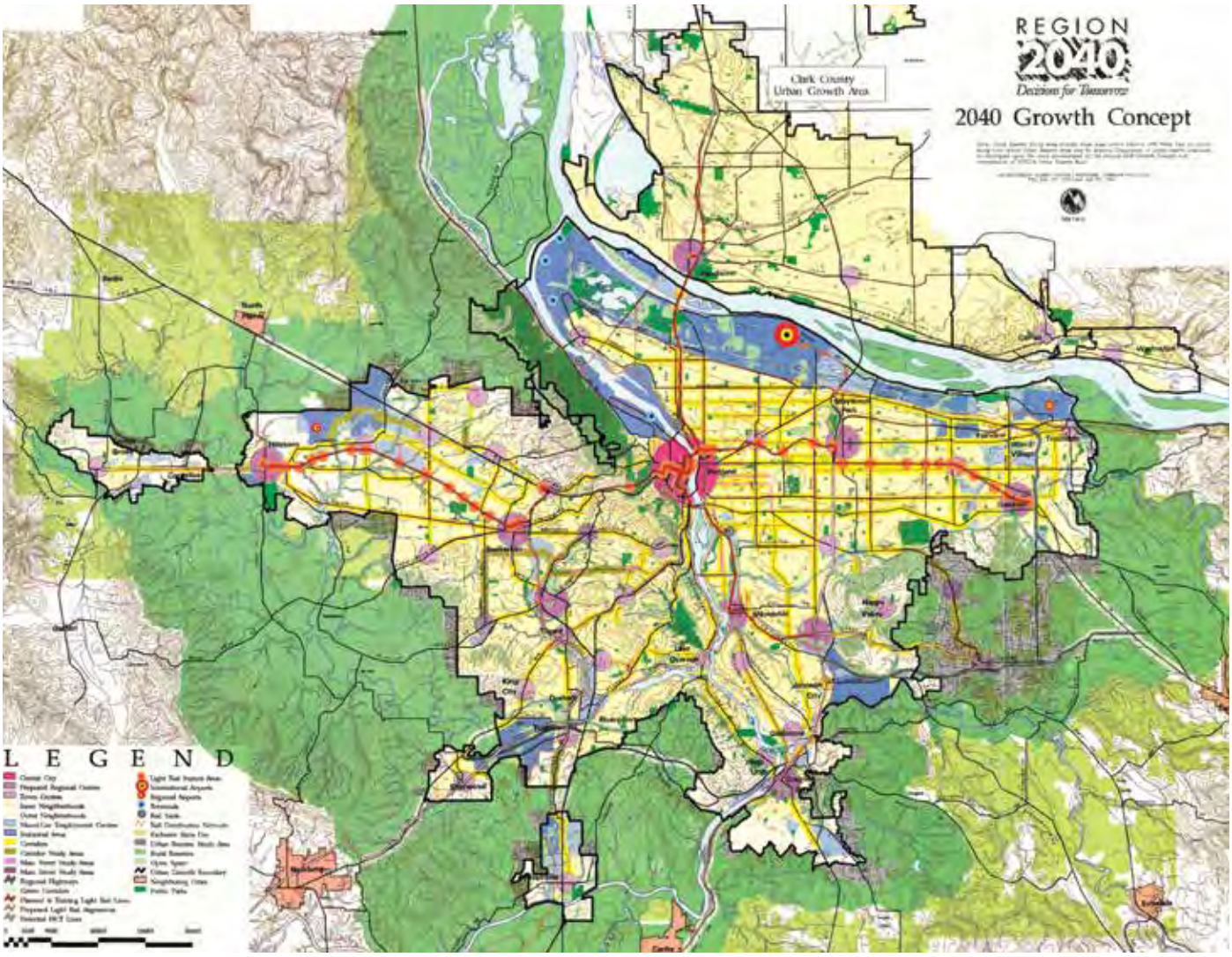
At the same time these rail system innovations were implemented, TriMet became one of the first North American transit systems to adopt the newly developed low-floor bus as a new standard. The low-floor bus replaced mechanically complex and breakdown-prone lifts with a flip-down ramp. The first low-floor buses entered service in December 1997. They shortened boarding times and were easier to negotiate for passengers using a wheelchair, walker or cart. In 1998 the TriMet board adopted the "Fleet of the Future" resolution, calling for the entire fleet to feature low-floor boarding. That aspiration was realized in 2016. Following is a list of other accessible features of the bus system.

MAX type 2 low-floor vehicles, first in North America to offer roll-on boarding, 1997

Low-floor buses with flip-down ramp

- Bus stops on the Portland Transit Mall have digital displays and audio announcements with next bus arrival information.
- Buses announce their line name and destination over an external speaker system as they pull up to a stop.
- Many low-floor buses can “kneel,” lowering the first step closer to the curb for easier boarding.
- Priority seating inside the front door is reserved for seniors and people with disabilities.
- There are securement areas on board with room for two mobility devices.
- Major stops and transfer points are announced automatically over the interior speaker system and displayed on a reader board near the operator.
- A sign near the operator lights up when a stop has been requested.

The voice and Braille guidance systems for bus and MAX that were added in November 2004 made TriMet a national leader in the provision of this technology.



Metro's Region 2040 Growth Concept, envisioning higher density in transportation corridors, 1995

SHAPING THE REGIONAL VISION OF THE 1990s

By 1990, TriMet and its transit service were getting positive national notice, often in conjunction with coordinated land-use planning. At the same time, TriMet worked closely with partner agencies to integrate transit service into new developments and to bolster land-use plans around regional centers and corridors.

A MARRIAGE OF TRANSIT WITH LAND USE

A recurring theme in allocating limited transit resources is service coverage versus service frequency. With more than 50 percent of TriMet's revenue coming from the regional payroll tax, TriMet has been expected to serve new employment sites even when sites are located in low-density areas—for example, large office park campuses. Similarly, large residential development characterized by meandering streets and cul-de-sacs are not easily served without significant out-of-direction travel. TriMet countered that a substantial portion of its service area was within walking distance of a bus stop or MAX station. Improving that statistic had to be weighed against sustaining and expanding the number of routes offering frequent service. TriMet struggled to meet both service coverage and frequency criteria.

In more recent years, regional leaders have gained a deeper understanding of the relationship between infrastructure requirements and land development. While Portland can

take credit for pioneering transit-oriented development codes, some of the most innovative and earliest transit-oriented developments in the early 1990s took place at the eastern end of the Banfield MAX line. As Gresham's mayor and an advocate for smart growth, Gussie McRobert led a community-wide visioning program that supported successful mixed-use, transit-compatible development around that city's MAX stations. The 90-unit Gresham Central Apartments, featuring front porches facing a multi-use transitway, was completed in 1996 and served as a successful prototype for transit-supportive development in a suburban environment. TriMet provided excess MAX right-of-way as a contingent contribution to that project.

In 1991 the Land Conservation Development Commission adopted the Transportation Planning Rule to clarify the relationship between transportation and land use. It included standards for transportation system performance and targets for reduced reliance on single-occupant automobiles. In 1995, Metro adopted the Region 2040 Growth Concept, envisioning increased density along major transportation and light rail corridors to avoid encroachment into neighborhoods and farmland. The plan presented a 50-year vision for managing the region's growth and kicked off a major effort to enact the new regional vision through local plans. It also triggered a five-year effort to expand the urban growth boundary. Also in 1991 Portland adopted its first Central City Transportation Management Plan, which replaced the parking limit or "lid" with a comprehensive transportation strategy for downtown Portland to cut single-occupant automobile travel. TriMet now had a framework for making transportation investments that are compatible with local land-use planning and development.

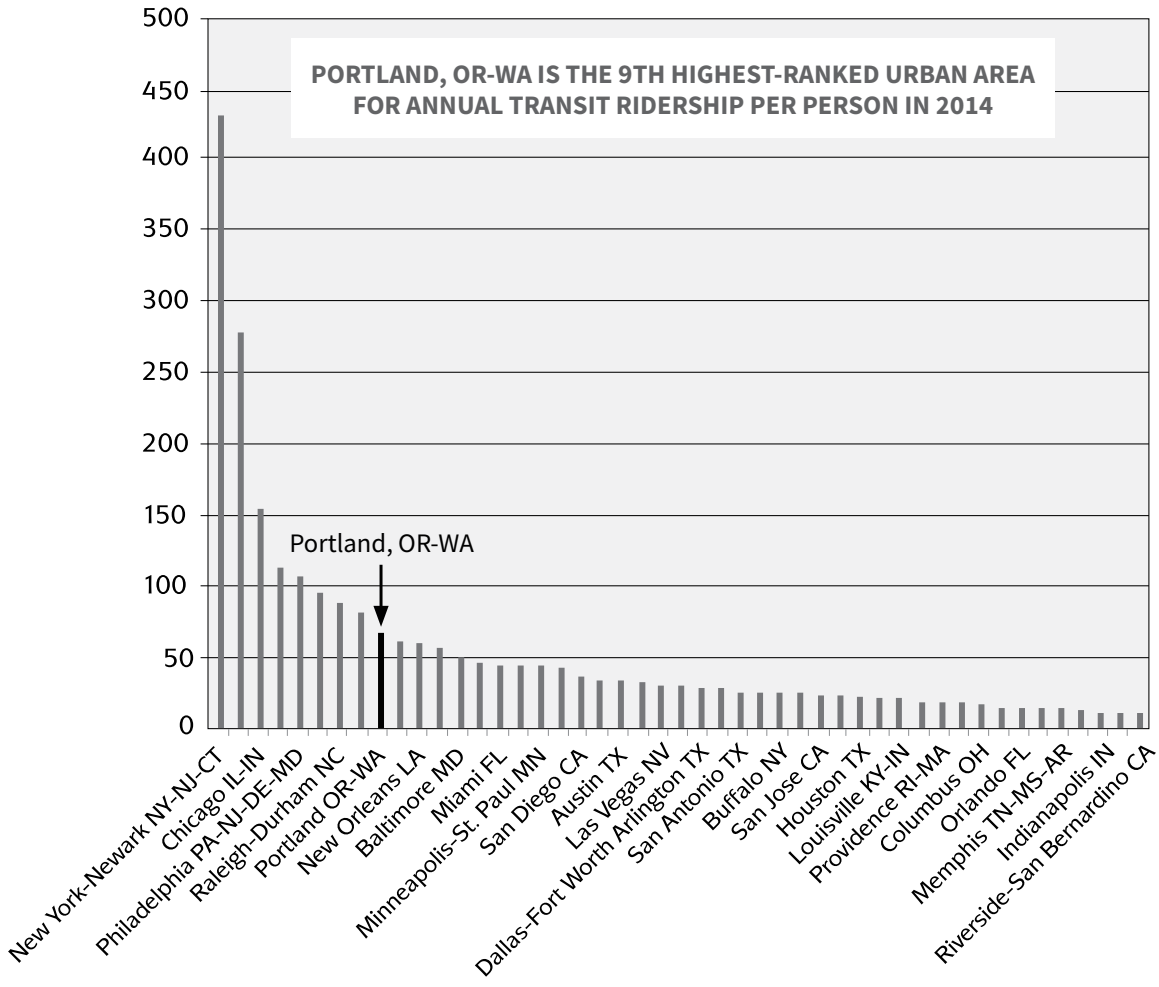
Gresham Central Apartments, a transit-oriented development in Gresham, 1996

THE PORTLAND REGION: MAKING THE LAND USE/ TRANSPORTATION CONNECTION

by Andy Cotugno, Metro senior policy advisor

It's been said that land use and transportation are two sides of the same coin, and it's always been that way with transit and development in the Portland region. From the very beginning, eastside Portland neighborhoods sprung up seemingly overnight with each addition to the streetcar system. This was followed by development of amusement parks at Oaks Bottom and Hayden Island to take advantage of unused weekend capacity on the rail system.

Recognizing how the real estate market responds to transit investment, Portland's 1972 Downtown Plan and successor 1988 Central City Plan relied heavily on investment in the Portland Transit Mall, light rail and the streetcar loop to catalyze revitalization and minimize traffic growth. In the early 1990s, Metro and the rest of the region got on board by examining alternative ways to "grow up or grow out" through the landmark 2040 Growth Concept. Theory was put into practice when the alignment for the MAX Blue Line between Beaverton and Hillsboro was selected to follow an abandoned railroad corridor through the vast area of vacant land in order to shape new development around transit rather than try to



reshape the auto-oriented development pattern along the Sunset Highway and Tualatin Valley Highway. Planning for each subsequent expansion of the MAX system reinforced the principle by making the development potential of alternative station locations a development decision, not just a mobility decision.

So, is it evident that there is a difference here? Yes, the proof is in the ridership data. The best measure of effectiveness is annual rides per capita, because this statistic captures all of the riders, whether resident or visitor, weekday and weekend, day and night, work and leisure, rich and poor, and is based upon an actual ridership count, not a relatively small sample size. Throughout the U.S., metropolitan areas fall into two general categories. The large metropolitan areas—New York, Chicago, Washington, D.C., San Francisco, Philadelphia and Boston—grew up around extensive rail systems, and their annual ridership per capita reflects a robust use of transit for all sorts of purposes. Most other U.S. metropolitan areas, which grew up around the interstate highway network, have an annual ridership per capita level that reflects use of transit primarily for commuters and transit-dependent households. The TriMet system is right in between these two groups and approaching the levels of some of the historically rail-oriented cities. With the region's metropolitan population ranked at 24th highest in the nation, an annual ridership per capita ranking of 9th demonstrates a level of ridership much greater than could be expected.

Portland Streetcar at Portland State University, 2008

PORTLAND STREETCAR FILLS A NICHE

Downtown Portland presented specific needs and opportunities that did not quite fit the menu of transit solutions TriMet offered. In some places light rail was too massive and buses insufficient to anchor new development. The void would be filled by a modern-day streetcar. In reviving this old-fashioned form of transit, Portlanders seemed to recall their streetcar roots and the effect of early streetcar lines in shaping close-in neighborhoods. Congressman Earl Blumenauer said, "Taking a cue from the success of streetcars at the turn of the 20th century, Portland began to focus on streetcars as a smaller, less expensive, and easier-to-construct option than light rail to connect close-in neighborhoods, a large hospital and Portland State University." He noted that local funding has made the streetcar "a home-grown product, born of civic engagement, local revenues and political will."[83] The streetcar renaissance took on cultural dimensions with a legacy of streetcar champions. Like light rail before it, initial support for the re-introduced streetcar emanated from Portland's City Hall. It arose from a collaboration among citizen activists, urban developers, a fledgling nonprofit organization and civic leaders that included then-commissioners Charlie Hales and Blumenauer and, later, Mayor Sam Adams.

"We were pretty clear about what we wanted to achieve with redevelopment: the best European city in America," Hales told the New York Times in 2006. Portland Streetcar Inc.'s former director, Rick Gustafson, noted, "The streetcar was a device for changing attitudes and development priorities and creating the right decision-making environment." It's an environment that brings together developers with the public sector as investment partners.

Former TriMet planner G.B. Arrington, now an international planning consultant for transit-oriented development, distinguishes the role of the re-imagined streetcar:

> *Streetcars are different from light- and heavy-rail systems in their effect on land use. Planners are now accustomed to the dense nodal "wedding cake" pattern of development that occurs in the half-mile radius around light- and heavy-rail stations. Streetcars, in contrast, encourage linear development. It can be thought of as a "ribbon" of density that follows the streetcar corridor.*[84]

Revitalization of warehouse districts, such as Portland's Pearl District, into a dense mix of commercial and residential development requires something similar in permanence to MAX, but scaled to a neighborhood and suited for more frequent circulator service. The Portland

[83] Blumenauer E., Street Smart, 2005
[84] Arrington, Zoning for Density, Intensity and Intimacy, 2005

Streetcar enhanced the city's vitality on a human scale while helping the city accommodate new residential and business growth.

THE STREETCAR RETURNS TO PORTLAND

With TriMet focused on building and financing the regional rail network, Portland's 21st century streetcar originated with the Portland Bureau of Transportation and took shape courtesy of the city and a newly created organization, Portland Streetcar Inc. Portland Streetcar contracts with TriMet to provide operators and maintenance for the streetcar system, and streetcar routes and fares coordinate with TriMet service. The city and TriMet share the cost of operations. The engineering and design of streetcar extensions is a collaborative effort, led by TriMet's experienced engineering staff. Portland Streetcar assets are owned by the city. Overall the Portland Streetcar is a good example of the effective partnerships that have shaped public transit in Portland.

Portland began planning the streetcar in 1990 with a feasibility study and the newly created Streetcar Citizens Advisory Committee. Obtaining funding was a threshold challenge. Federal transit programs had no resources for streetcars. The U.S. Department of Housing and Urban Development (HUD) looked more favorably on modern trolleys because of their promise to spur urban redevelopment. In 1992 HUD offered a $500,000 grant, requiring a matched amount from local resources. The local share derived from parking revenues and the agreement of businesses along the planned line to tax themselves through a local improvement district.

The nonprofit Portland Streetcar Inc. arose in 1995 to oversee design, construction, operation and maintenance of the initial streetcar line. Planning and design was launched in 1997, and construction began in April 1999. The first segment ran from Legacy Good Samaritan Hospital in Northwest Portland to Portland State University at the south end of downtown. This route, and its eventual extension, travels through areas such as the Pearl District, dominated then by vacant warehouses that were thought to be ready for redevelopment. Through the magic of the streetcar, these areas have since transformed into vibrant, hugely popular neighborhoods.

The first five streetcar vehicles were built by a Czech Republic company, Skoda-Inekon. Underutilized land beneath the I-405 freeway provided the site for a streetcar maintenance facility.

The first streetcars rolled into service in July 2001, and Portlanders jumped on board. To meet the growing demand, two more vehicles arrived in 2002. Three years later, the line was extended to the Riverplace district south of downtown along the Willamette River. As new high-rise medical facilities and residential towers emerged, a further, short extension to Southwest Moody and Gibbs—and soon to Lowell—began carrying passengers in 2006. By then three additional streetcars had been added to the fleet. The Portland Streetcar's North-South Line now extended four miles.

THE TRIP NOT TAKEN

The most effective means of addressing street congestion is to reduce the number of automobile trips. The availability of visible, high-quality transit—i.e. the Portland Streetcar—along dense, mixed-used development encourages residents and commuters to keep their cars parked, or to forego car ownership altogether. Metro analysis demonstrated that "good transit/mixed use areas of Portland have much lower auto use at 58.1 percent [of total] trips and 9.8 vehicle miles per capita. Typical suburban areas of the region experience 87.3 percent [of trips] and 21.79 vehicles miles per capita.[85] This symbiotic relationship between transit and land use has flourished along Portland's streetcar routes. Prior to 1997, the density of new development along the streetcar route was 30 percent of the amount allowed by code. With the coming of the streetcar, developers have used, on average, 90 percent allowable density within one block of the streetcar line and 75 percent within two blocks.[86] The successful renaissance of the streetcar in Portland inspired a long list of streetcar studies and installations across the country. Tiffany Sweitzer, a former TriMet board member and president of Hoyt Street Properties, notes:

> *Of all our negotiations made with the city, [the streetcar] has been one of the most significant pieces. We knew that transportation was so important to getting people through our property and to other parts of the city. I call the streetcar a horizontal connector because one can use the streetcar to take you to the next mode of transportation. The streetcar gets you downtown to MAX, and MAX gets you to other parts of the city and the suburbs. For example, we have people living in our buildings that work at Intel, and they can still live in the central city because they have that connection. So it's probably been the biggest piece of infrastructure and the most important component for this entire development.*[87]

[85] Gustafson, Streetcar Economics, The Trip Not Taken, August 2, 2006
[86] ibid
[87] Fields J., Tiffany Sweitzer—Hoyt Street Properties, February 18, 2015, portlandinterviewmagazine.com/interviews/business/tiffany-sweitzer-hoyt-street-properties/

THE CENTRAL LOOP

The next chapter of streetcar development moved across the river to build a 3.3-mile eastside streetcar loop. Modeled conceptually after Zurich's "Ringstrasse" streetcar, the loop was promoted by Mayor Sam Adams as the next logical increment of the city's streetcar master plan. The eastside extension connected to the original North-South line via Broadway Bridge on the north and the new Tilikum Crossing: Bridge of the People light rail bridge to the south. This new link brought the Lloyd Center area and the Central Eastside Industrial District into the streetcar sphere. Like its predecessor, this project has stimulated new development on a scale unprecedented on the east side of the river, although thus far with less intensity than occurred in the Pearl District.

Local resources could not cover the full cost of the eastside streetcar expansion. Fortunately, a new source of federal funds had recently emerged. Encouraged by Congressman Blumenauer, Congress directed that the Federal Transit Administration create a new program for small-scale, streetcar-style projects destined to stimulate renewal and appropriate development. A $75 million Small Starts grant, awarded in October 2009, gave the Central Loop project—already under construction—a welcome infusion of new resources. In September 2012 Portland began running Central Loop streetcars from Southwest Market Street downtown to an interim terminus at the Oregon Museum of Science and Industry in the southeast. The project cost $148 million. Although some form of redevelopment along the streetcar routes would have occurred in the absence of the new service, the streetcar by all accounts has stimulated more intensive and vibrant development than otherwise would have emerged.

In 2009, the City of Portland completed the Streetcar Concept Plan promoted by Mayor Sam Adams. A centerpiece of that concept plan was a proposed new streetcar route along Burnside and Couch Streets through the central city and along NE Sandy Boulevard.

Further development of the streetcar network in accordance with the Concept Plan continues with planning for an additional route from Montgomery Park in Northwest Portland to the Hollywood District on Portland's Northeast side. The northwest terminus is near 45 acres of land that could be made ready for redevelopment. The purpose of the project is to support economic development and equity, including the creation of affordable housing and job sites, served by high quality and frequent transit in Northwest Portland. A Federal Transit planning grant for just over $1 million is supporting this early design and land-use review with study completion anticipated by the end of 2020.

Future streetcar network extensions could include service along Martin Luther King Jr. Boulevard, Southeast Belmont Street and a stand-alone route providing circulation in the Gateway District.

The Central Loop, 2012

SUMMARY OF THE PORTLAND STREETCAR DEVELOPMENT

STREETCAR SEGMENT	OPENING YEAR	LENGTH/MILES
Good Samaritan Hospital to Portland State University	July 2001	2.4
Portland State University to Riverplace	March 2005	0.6
Riverplace to South Waterfront	October 2006	0.6
South Waterfront to Lowell/Bond	August 2007	0.5
Central Loop–SW Market to OMSI	September 2012	3.4
"Close the Loop"—Tilikum Crossing	September 2015	1.3

THE NEXT LEVEL OF REGIONAL TRANSIT PLANNING

As a regional transit mode, MAX light rail's relationship with redevelopment may not be as intimate as the streetcar's but is nonetheless essential. Light rail provides station area nodes where development can be focused over the long term. The track record for transit-oriented development is mixed, with some stunning successes and some cautionary lessons. Both Portland and suburban planners have viewed transit system investment as a catalyst for development.

MORE INNOVATION

Builder Tom Walsh became TriMet's general manager in June 1991. It was a good time for TriMet to have construction industry experience at the top of the organization.

As TriMet was getting ready to construct Westside MAX from downtown Portland to Hillsboro, other developments were keeping TriMet staff busy. Bikes were welcomed on TriMet buses in June 1992, using bike racks designed in-house for a one-year trial. The racks were a hit and became standard on all fixed-route buses. Permits were required; cyclists were trained in using the racks when they picked up their permits. By March 2002, the bike rack design had been simplified and the permit requirement discontinued. Bikes and transit were viewed as complementary modes of travel.

Buses welcome bikes with front-mounted racks, 1992

BUMPS IN THE ROAD

A series of incidents in the mid-1990s shook the fabric of TriMet and its hard-earned community trust. Urban gangs emerged across the country, including in Portland. Violent incidents on Line 4 in 1993 led to a blue ribbon committee review of crime and security on the TriMet system. This was followed by gang-related murders on buses in August 1996 and again in August 1997. An October 1995 sexual encounter between a bus operator and a rider led to another internal examination. The rape of a LIFT customer by an operator with an undiscovered criminal record led to more rigorous employee new-hire screening. Suburban communities expressed fear that gangs would overwhelm light rail lines and stations. In response, TriMet tightened procedures, beefed up employee training and applicant screening, heightened the presence of transit police and installed security cameras on trains, buses and at stations.

ANOTHER LOOK AT TRANSIT MODES

TriMet monitors the performance of its bus and rail service. The number of riders varies with the level of service provided, the nature of the community served, and access to customer information. TriMet, like its constituent municipalities, recognizes an

obligation to provide service throughout the district—not limited to areas that are conveniently located. TriMet also acknowledges that its far-flung routes cannot all meet the standards for ridership and cost per rider while addressing aspirations for service coverage.

The average bus route in 2014 carried 34 boarding rides for every hour of service. Any route carrying less than 15 riders per hour is flagged as low performing. Throughout its history TriMet has sought a balance between improving service to attract riders in dense areas and responding to the social compact by providing access to people in more distant and lower density locations.

While TriMet found that light rail transit works well in high-capacity corridors, by the 1990s the agency began examining prospects for high-performing bus routes with a blend of frequent service, enhanced facilities, exclusive rights-of-way and larger vehicles—sometimes with premium amenities. Called "bus rapid transit," this approach can provide a viable alternative to light rail transit. Although not even high-capacity articulated buses have the carrying capabilities of light rail, bus rapid transit offers other advantages, such as flexibility—unlike vehicle on rails, buses can deviate from a bus rapid transit corridor, thereby helping riders avoid transfers. TriMet studied projects in Eugene, Los Angeles and Vancouver, B.C., each of which had established a version of bus rapid transit with varying levels of capital investment. In sum, planners have a menu of transit mode options that can be tailored to specific needs and operating environments.

TriMet recognized the need for and appeal of creating a level of service somewhere between traditional bus routes and light rail. While its capital resources were focused at the time on light rail development, the agency was attracted to a "light" version of bus rapid transit that would offer consistent frequency of service—most of the day, seven days a week. While 10-minute headways might be the industry norm for this brand of service, TriMet's top strategic planner at the time, Bob Stacey, suggested that TriMet stretch this to a 15-minute frequency, along with strong branding of customer information and bus stop improvements.

By the mid-1990s, TriMet was developing a full range of transit modes, each suited to its operating environment. Light rail transit connected designated regional centers. Frequent Service would focus on connecting town centers and serving corridors. Streetcars would provide internal circulation in dense urban areas. Other regional and local bus routes served the routine needs of regional residents and workers. TriMet now had a more differentiated model for stretching resources to meet all of these needs.

In 1998, under the direction of a new general manager, Fred Hansen, TriMet selected four bus routes with 15-minute-or-better service and rebranded them Frequent Service. Evening and weekend service had to be added to some routes. Many bus stops received a combination of pavement, sidewalk connections and shelters. New, distinctive signs were installed. The changes produced a bounce in ridership with minimum investment. In fall 2002, 12 more bus lines were upgraded to Frequent Service, bringing the total to 16. Subsequent consolidation cut the total to 12 routes. Riders flocked to the 15-minute service, suggesting that adding frequency and amenities to existing routes may be more effective in attracting riders than offering new, infrequent service. By 2010 these 12 routes accounted for 58 percent of TriMet bus ridership but only 49 percent of all bus service hours. In spite of the success of Frequent Service, the debate over the distribution of limited resources for frequency versus service coverage continues to this day.

MAX and buses at Sunset Transit Center, 1998

RELEVANCE IN THE SUBURBAN SETTING

While the Portland region enjoyed remarkable consensus between city and suburban interests—played out for the most part in Metro's Joint Policy Advisory Committee on Transportation (JPACT) and its counterpart land-use forum, the Metropolitan Policy Advisory Committee (MPAC)—some suburban jurisdictions believed they were not getting a fair share of transit service in return for their payroll tax dollars. Some communities were receiving infrequent or only peak-hour bus service.

At the urging of some of these communities, the Oregon legislature enacted a statute in 1987 allowing local jurisdictions with populations less than 10,000 to opt out of their respective transit districts. Between 1989 and 2002, Wilsonville, Molalla, Damascus, Sandy and Canby all seceded from TriMet. Four of those communities created mini-transit systems that coordinate with TriMet's services. The base payroll tax rate for the balance of the TriMet service area rose incrementally with each of these withdrawals in order to ensure TriMet's ability to service revenue bonds, resulting in aggregate a four percent tax rate increase. Meanwhile, TriMet pursued new programs and strategies to better serve the needs of remaining low-density suburban areas.

In July 1998 the TriMet board adopted Transit Choices for Livability, a 10-year strategy for meeting growth management goals of Metro's then-new 2040 Plan. Strategic recommendations grew out of a two-year process of intensive outreach, with 30 community workshops and open houses that generated almost a thousand ideas. The study concluded that TriMet and the region, working together, should make dramatic and rapid changes in the design, operation and financing of transit services. Steve Clark, chair of the study's advisory committee and later a member of TriMet's board, said:

> *This is all about community and livability. If we can demonstrate with these kinds of projects that we've preserved livability and kept our transit system, then we've achieved a lot of what we set out to do.*

The recommendations called for 3.8 percent annual service increases and $46 million in new operating revenue by 2010. Service increases would skew toward the suburbs, where 70 percent of the region's growth was projected to take place. Specific routes and service amenities were identified. Services would be tailored to the unique needs of communities. Some services could be locally controlled and funded through new sources of revenue. New partnerships would be a part of the plan. The report stated that:

> *Transit Choices is aimed at giving individual communities the tools they need to achieve their plans and goals for a livable future. For TriMet, the challenge of serving travel needs outside of its traditional Portland market requires change. TriMet will need to look and operate differently, and develop more and stronger partnerships.*[88]

While Transit Choices for Livability was taking shape, TriMet developed the Strategic Initiative Reserve program, aimed at uncovering new opportunities for persistently hard-to-serve transit markets. The board set aside a portion of TriMet's annual budget for demonstration projects focused on industrial districts and suburban office parks. One project offered lunch-time circulator service connecting nearby office parks to the Washington Square Mall and transit center. The pilot failed to meet ridership targets, and the service was dismantled within a few months. Another plan to offer commuter and lunchtime transit service between the Tigard and Lake Oswego transit centers, focused on the dense Kruse Way office district, fell through when businesses did not produce a financial match for TriMet's investment. TriMet continued working with major employers on tailored service for two more years but, when none of the efforts bore fruit, the program was discontinued.

TriMet continues to pursue practical approaches to meeting diverse service needs. In coordination with TriMet, Ride Connection is providing supplemental transit service in two communities. Grovelink extends TriMet service in Forest Grove, and the Tualatin shuttle offers supplemental service—each with two local routes. Mary's Woods at Marylhurst launched a free shuttle service in the fall 2013, connecting the Marylhurst University campus with Lake Oswego and Oregon City.

[88] Transit Choices for Livability: A TCL Committee Recommendation to the TriMet Board, 1998

Celebrating the addition of a second track in Gresham, 1996

BUILDING OUT THE SYSTEM:
OPPORTUNITIES AND CHALLENGES

While other regions approved massive capital funding packages for multi-decade transit development programs (e.g. Denver, Seattle and Salt Lake City), the Portland region has tailored each capital project and funding plan to particular opportunities and priorities. Funding mechanisms have included federal grants, state and regional flexible highway funds, urban renewal tax increments, general obligation bonds, local improvement districts, state lottery funds and public/private partnerships—with contributions from TriMet's general fund as well. The arrangements require reaching consensus among partners and creatively plugging gaps in financial plans. Projects generally employ commitments at all levels of government and engage private contributions when appropriate. TriMet and its partners have proven to be adept at leveraging all available resources for the timely delivery of high-quality projects.

TriMet committed to delivering large projects on time and within budget—with increasing design sophistication, greater community engagement and technical innovation, while minimizing unwanted impacts on project neighbors. New extensions required new design and construction techniques to produce tunnels, bridges, in-street treatments, complex auto-bus-train circulation, and freight railroad interface. New solutions were needed to integrate roadway rehabilitation and urban redevelopment. Each new link reinforced the region's national reputation for excellence in project design and delivery. TriMet became the Federal Transit Administration's example of how to best manage and construct projects. The federal agency directed transit properties to seek out TriMet for advice. Portland became a center of public transit talent, exporting private planning, engineering and construction expertise from consulting firms and construction contractors that had helped realize Portland's transit successes. In December 2005 the Portland region also became the home of United Streetcar, for a time the only manufacturer of streetcars in the United States. It has since gone out of business.

SUMMARY OF REGIONAL RAIL DEVELOPMENT

REGIONAL RAIL PROJECTS	PROJECT LENGTH	OPENING YEAR	TOTAL PROJECT COST (YOE)	FEDERAL TRANSIT SHARE	PARK & RIDE SPACES
Banfield Blue Line	15.1 mi	1986	$214 million	83%	2,363
Westside Blue Line	17.7 mi	1998	$963 million	73%	3,645
Airport Red Line	5.5 mi	2001	$125 million	0%	193
Interstate Yellow Line	5.8 mi	2004	$350 million	74%	600
I-205/Mall Green Line	8.3 mi	2009	$576 million	60%	2.320
Milwaukie Orange Line	7.3 mi	2015	$1.49 billion	50%	718
Light Rail Total	59.7 mi		$3.72 billion	60%	8,232
WES Commuter Rail	14.7 mi	2009	$163 million	36%	700
All Rail Total	74.4 mi		$3.88 billion	59%	8,932

The Portland region's transit project pipeline has been full for most of the past 50 years, starting with the Portland Transit Mall. Staff leaders for these projects included Tony Venturato and Ron Higbee on the Banfield line, and Tuck Wilson and Neil McFarlane on extensions from Westside MAX through the Green Line. Dan Blocher led the most recent project, the Orange Line. Through skill and hard work, regional leaders have built consensus and technical expertise. The sustained and sequential development of the rail systems would fulfill a priority of the Regional Transportation Plan, apply the talents of specialized staff and construction resources, satisfy the expectations of regional partners for inclusivity, and retain the region's place in line for sustained discretionary federal funding.

TRANSIT-ORIENTED DEVELOPMENT

In July 1995 the City of Gresham adopted the Gresham Civic Neighborhood Plan, which provided a framework for transit-oriented development around and near Gresham's MAX light rail stations. In January 1996 TriMet updated its decade-old Planning and Design with Transit Handbook. Nationally, transit-oriented development in the late '80s and '90s was still new to the transportation planning lexicon but was rapidly gaining ground, a tribute to the longstanding and outstanding synergy between transit and land use in the Portland region.

Metro's Region 2040 Plan lists designators for different community types. Within that mix are regional and town centers, as well as station areas. Depending on location and future development, station areas can be part of town and regional centers. Portland area planners pioneered the concept of transit-oriented development to describe projects that combine high quality transit with relatively high development density and a mix of uses. Communities with clustered homes, shops and businesses, good transit and easy walking connections encourage less travel by auto and more travel by transit, walking and bicycling.

In the early years, transit-oriented developers faced challenges. Banks were reluctant to provide loans for mixed commercial/residential development. Building codes discouraged creative blending of building types.

Although TriMet was early in embracing the role of encouraging compatible development around station areas, it was never TriMet's intent to enter into the role of developer or landlord. TriMet would provide incentives for achieving catalytic development that could set a standard for development to follow. Former TriMet planner Kim Knox described TriMet's role as "the hand felt but not seen." TriMet leveraged its land assets and modest set-aside project budgets. Some of those funds were passed on to local jurisdictions for station-area planning. This required close partnerships with local jurisdictions, developers, nonprofit community development organizations and Metro—which had a separate transit-oriented development program using regional flexible funds to more directly stimulate development near transit stations.

TriMet's strategies for promoting transit-oriented development around light rail stations included consolidating transit facilities and parking in order to free up prime land for development. Portland Community College's 100,000-square-foot Willow Creek Center serves as a one-stop destination for the unemployed and underemployed, serving 7,435 students in the 2012–2013 academic year. It was the site of a generously designed bus

transfer platform at the Willow Creek/185th MAX Station. A surface Park & Ride lot at Gateway was consolidated into a structure and now hosts the Oregon Clinic. At the Sunset Transit Center, building a parking structure made adjacent land available for the planned Peterkort Town Center, yet to be developed. Parcels with redevelopment potential may be selected as construction staging areas and turned over for development at a project's conclusion. The property now occupied by Collins Circle Apartments next to the MAX Goose Hollow Station is an example of this strategy. Another approach is to purchase strategic properties for future transit-oriented development. TriMet purchased a pair of obsolete industrial properties near the Kenton MAX Station with this intent.

TriMet's Westside MAX extension, built in the 1990s, was the first in the nation to gain Federal Transit Administration approval to include transit-oriented development in the project scope. FTA allowed transit agencies to calculate increased ridership and fare revenue from prospective transit-oriented development and include that factor in federal grant requests. TriMet has taken this approach in every subsequent light rail project, in concert with local development agencies and Metro. TriMet's success influenced similar programs in San Francisco, Denver, Salt Lake City and Dallas.

TriMet has been invited by most jurisdictions in the region to provide non-binding reviews of all significant development outside the TriMet district but along or near transit. TriMet may suggest changes to improve transit access or orientation on these sites. Numerous suggestions from TriMet staff have influenced the design and approval of new projects. As of July 2005, an estimated $3.8 billion in new development had been permitted around MAX stations. Combined with Portland Streetcar, this value was $4.4 billion in 2005.

TRIMET ART PROGRAM

The Federal Transit Administration has stated:

> *The visual quality of the nation's mass-transit system has a profound impact on transit patrons and the community at large. Good design and art can improve the appearance and safety of a facility, give vibrancy to its public spaces, and make patrons feel welcome.*[89]

Art and design on the TriMet system does all of this and more. While local architectural talent has produced award-winning designs for the transit system, the public art program has helped create unique places and identities that reflect the history and culture of specific neighborhoods along transit lines.

In 1992, TriMet initiated an art program for Westside MAX, the 18-mile extension of the original MAX line. With more than 20 artists participating, at the time the Westside MAX public art program was one of the country's most ambitious efforts to integrate artistic vision into public transit. In March 1997 TriMet formalized its commitment to art by establishing an agency-wide public art program. TriMet's public art celebrates the contributions of public transportation and the region's cultural richness. The program is funded by 1.5 percent of capital project budgets over $100,000 and guided by citizen advisory committees.

Beginning with Westside MAX, the TriMet public art program has added stimulating and enjoyable flourishes. TriMet has commissioned and installed artworks at most MAX and commuter rail stations, celebrating the unique character of each station area. More than 100 artists have produced nearly 300 individual art elements. From the Core Sample Timeline at the Washington Park Station to the Fishbird pedestrian bridge at Parkrose and the Timber Gates at Expo Center, artwork brings individual identity to the stations and honors the history, culture and landscape along the line.

On occasion TriMet asks artists to address practical considerations. For instance, one of TriMet's artists proposed half-moon-shaped bus stop signs that are easier than the old rectangular signs for customers to discern in a crowded streetscape. An artist also recommended innovative bus shelter glass treatment that discourages graffiti and saves the agency thousands of dollars a year. The art program commissioned an industrial design company to re-think the look and function of sidewalk trash containers.

GOING WEST

As the new millennium approached, TriMet began to expand the MAX light rail system. The first upgrade, completed in 1996, replaced the original single-tracked section through Gresham with a pair of tracks, eliminating an operational headache.

Planning for a MAX extension west to Beaverton and Hillsboro had begun in 1979, in parallel with consideration of the original Banfield line. The community was fully engaged in 1982. Local jurisdictions and an areawide citizens committee approved the route in 1983. The alignment would present a great challenge: how to get

[89] Federal Transit Administration Design and Art in Transit Projects, Circular 9400.1A, June 9, 1995

Transit Investment Plan emphasizing corridor development, 2012

Collins Circle apartments, a transit-oriented development at the MAX Goose Hollow Station, 2000

Rendering of art at the MAX Washington Park Station, 1996

From left, General Manager Tom Walsh, Hillsboro Mayor Gordon Faber, Congresswoman Elizabeth Furse, Congressman Earl Blumenauer and Deputy U.S. Secretary of Transportation Mort Downey, celebrating MAX funding authorization for extending Westside MAX to Hillsboro, 1994

over—or, as it turned out, through—Portland's west hills. A surface route had been considered but had the disadvantage of requiring large retaining walls and a steep (six percent) grade rising 700 feet in a narrow and sometimes icy canyon next to the Sunset Highway. The solution offering greater service reliability and lower cost operations was a three-mile twin-bore tunnel.

FUNDING CHALLENGES

Planning for Westside MAX coincided with the election of Ronald Reagan as president and the subsequent appointment of Ralph Stanley as head of the Federal Transit Administration's predecessor agency, the Urban Mass Transportation Administration (UMTA). Just as the Reagan administration threw up hurdles for the Banfield project, efforts to advance the Portland region's second light rail line were also being thwarted in Washington, D.C. With David Stockman, former director of the U.S. Office of Management and Budget, leading the charge, the Reagan administration sought to undo many of the federal funding programs developed during previous presidencies. Stanley was a critic of light rail and sought to reduce federal expenditures by delaying existing projects and denying federal approval for development of future projects.

Senator Hatfield and Representative AuCoin, both members of their respective appropriations committees (Hatfield chaired the Senate committee), teamed up to get funds for preliminary engineering and the environmental review process. This was an important step, as such funding generally leads eventually to funding for construction. AuCoin was fervently focused on getting the project to Hillsboro, a terminus not yet approved by UMTA. There were two roadblocks: Ralph Stanley, head of UMTA, and Representative Marty Szabo of Minnesota, a senior member of the House Public Works Committee. Representative AuCoin appealed to Senator Hatfield, and together they moved to roll over any objections to a Hillsboro terminus by writing an authorizing rider to the appropriations bill that mandated a Hillsboro terminus beyond Southwest 185th Avenue. This was also meant to force the hand of a reluctant UMTA.

Stanley continued to stonewall the approval until Senator Hatfield called a meeting with Stanley and AuCoin. Hatfield had a copy of the enrolled bill with President Reagan's signature on it. He asked Stanley if he recognized the signature of the president of the United States on a duly enacted law of the United States government. Even after the confrontation Stanley continued to stonewall for more than a year. Exasperated, in the initial draft of the next annual appropriations measure Hatfield zeroed out funding for Stanley's personal office, meaning he couldn't buy paper clips, pay for travel or even pay his office phone bill. Finally Stanley relented and approved moving the project into final design, and Hatfield added back funding for his office. Stanley's antipathy toward light rail during his time at UMTA is ironic in light of the fact that he later became a strong proponent of light rail and Portland's Airport MAX in his work for Bechtel Corporation.

In the meantime, the region needed to find a means of funding the project's construction. In May 1990, statewide voters defeated a ballot measure that would have allowed local voters to decide how to spend vehicle registration revenues on local priorities—which could include roads, light rail, or special elderly and disabled services. With this source off the table, the TriMet board presented a $125 million Westside MAX general obligation bond measure to voters within the TriMet district, of which $15 million was set aside for planning a line into Clackamas County. Ballot Measure 26-1 passed with 73 percent of the vote in November 1990.[90] This was the first successful vote approving a public transit project. Previous unsuccessful votes included a regional measure that would have funded Park & Ride lots in 1976 and a prior 1974 statewide proposal seeking the option to use vehicle registration funds for transit. The 1991 Oregon legislature followed with a commitment of $113.6 million in lottery-backed bonds.

Hillsboro Central Station, 1997

Westside MAX tunnel east portals, 1997

Relations with what became the Federal Transit Administration improved as General Manager Tom Walsh nurtured a positive relationship with its administrator, Brian Clymer, a successor of Stanley's. FTA completed the funding package with a $516 million grant in October 1992 to build the project as far as Southwest 185th Avenue.

In August 1993 contracts were awarded and construction began on the west hills tunnels. Michael Hollern, chairman of the Oregon Transportation Commission, declared "This is the single most important project in the state."[91]

It would be some time later that local jurisdictions enlisted Oregon Senator Jeannette Hamby and Hillsboro Mayor Shirley Huffman to press TriMet to fund and build the extension to Hillsboro to serve rapid development there. Congresswoman Elizabeth Furse had filled AuCoin's seat and promoted the fulfillment of federal commitments outlined in the full funding grant agreement. "The language Congresswoman Furse has secured in the House bill is a momentous accomplishment for any member of Congress. But for a freshman it's simply astounding," commented Tom Walsh, then TriMet general manager. Her good efforts are recognized with a plaque at the Sunset Transit Center. In 1994 Hillsboro became the project's western terminus, funded with the aid of another $113 million in federal funds.

Furse was in Congress at the height of the South-North project, as well in the middle of Westside MAX project. She continually reminded colleagues that we were building a system, and not just a line or two. Her contributions were forceful and steady, working with the House Appropriations Committee and its staff. In her last term she had to deliver the support for appropriations after Senator Hatfield had left the Senate, which he did at the end of 1996. Furse delivered the House appropriations amounts on her own. Becoming her own lobbyist and operating strictly within the House rules, she brought wine from her own Washington County vineyard for important folks on the committee and their staff—lending truth to the old Blitz commercial in which a fictional congressman unloads baskets of Henry Weinhards for congressional big shots with the signature tag: "How do you suppose we got that new rail line?" She was an outstanding champion for transit.

Starting with the Banfield MAX line, TriMet prioritized the importance of building relationships with neighboring communities and providing accurate, timely public information. The agency ratcheted up its community

[90] Mayer J., Board Approves $125M Westside LRT Bond Measure, July 27, 1990
[91] ibid

relations effort for the Westside MAX project, which, due to its unprecedented scale, promised more unwanted construction impacts—such as noise from tunnel blasting and taking a slice from the middle of a Beaverton apartment complex. Community affairs specialists became ombudspersons, helping address community concerns and working with project contractors to avoid disturbances whenever possible. TriMet staff walked their beats, strengthening relationships with adjacent residents and businesses. Prickly problems got creative, hands-on solutions. Communications were frequent and aimed for accuracy. The program became a model for transit construction projects around the country.

BEER PARTY WITH THE PRESIDENT

by Richard Feeney,
former TriMet government affairs
executive director

Getting the Hillsboro extension in the president's budget was yet another step Senator Hatfield felt he had to pursue, and he did so by inviting President George H.W. Bush to dinner. When President Bush and his wife showed up at the Hatfield's, Bush said he'd like a glass of beer. Hatfield, known for being abstemious, had no beer, but neither was he reluctant about getting some. Slipping out the back door, he drove quickly to the nearest liquor store for a six-pack so the president of the United States could sip a beer while learning of the Westside MAX project to Hillsboro!

Hatfield later announced that he had received a "Letter of Commitment" from the secretary of transportation—a form of approval never heard of before nor since—to budget for the Westside MAX project.

THE SHARK CAGE

by Bernie Bottomly, TriMet executive director of public affairs

The construction of the Westside MAX light rail tunnel under Portland's west hills was one of the largest and most difficult undertakings in TriMet's history. A number of incidents during construction have become part of TriMet lore.

Unexpected difficulties arose almost immediately after construction began and snowballed as the project progressed. The fractured rock under Portland's west hills didn't hold its shape as geologists had expected, instead falling apart in front of the boring machine. Rather than a solid wall of basalt, the machine's ultra-hard carbon steel cutting head encountered piles of crumbled rock and enormous empty voids. Project Director Tuck Wilson described the situation as trying to tunnel through a hill of popcorn kernels.

After much trial and error, the tunnel crew tried the crazy idea of running the boring machine's cutting head backwards, allowing the rock to essentially fall into the debris scoops on the cutter face. This innovation was not enough to fix the problem, and the machine continued progress at a snail's pace. TriMet brought in engineers from all over to brainstorm solutions. One of the suggestions was to shoot plastic in front of the machine to hold the rock together. This was tried and it produced combustion and deadly gases, requiring the tunnel to be shut down and huge fans brought in to evacuate the bad air. After a long nine months, an engineer from Italy came up with the winning strategy: injecting fast-acting shotcrete ahead of the machine and allowing it to set before being attacked by the boring machine. This held the rock together and allowed the carbon steel to do its job. Eventually the boring machine made it through the fractured rock and into more favorable strata, where it picked up speed and made up much of the time lost during the early months.

The tunnel project had many visitors during its construction. Everybody wanted a chance to see the amazing work going on and experience the awesome scale of the effort. But tunnel work is dirty, dark, wet, smelly and dangerous—so giving tours to the uninitiated, while they could impress, also was fraught with the potential for disaster or misfortune.

On a beautiful clear day, the project took a group of congressional staff on a tour of the west portal, just where it passes under the Sunset Hills cemetery. Although it was sunny outside, inside the tunnel water poured from the rock fissures in the ceiling, drenching the staff as they walked along. The tour that day included Mark Van de Water, a key member of Senator Hatfield's appropriations staff—essentially the staff person who was responsible for making sure federal funding for the project would continue. As the tour slogged through the torrent of "rain," Mark asked the tunnel construction foreman if it the ceiling always dripped so much.

"Only when they're waterin' the cemetery" was his response. The lively conversation that had been taking place among the staffers came to an abrupt halt as a number of them turned a distinctive shade of green.

Because of the challenges with the tunneling operation, TriMet was anxious to have members of Congress and their staffs visit the site to see that, although the boring machine was stalled, work on other areas of the project was proceeding apace. Invitations were made to all the members of

Westside MAX tunnel east portals, 1995

the Oregon congressional delegation, and a number agreed to take tours. Because of his great political stature, age and impeccable business attire, project staff never expected Senator Hatfield to take them up on the offer of a tour—but take them up he did.

At the time, the most impressive, and most accessible, part of the project was the huge vertical shaft excavation at what would eventually become the Washington Park Station. Standing at the edge of the giant hole, it was impossible to see all the way to the bottom, as the shaft plummeted more than 250 feet down into darkness. To access the floor of the excavation, a few workers at a time entered a metal cylinder called the "Shark Cage" and, hoisted by a towering crane, were lifted, swung out over the abyss, and lowered at the end of a thin black cable.

Upon arriving at the site, Senator Hatfield watched as an advance group of cameramen and staffers were hoisted into the air and lowered out of view.

An ashen-faced Hatfield staffer approached the TriMet staff and half asked, half pleaded if there was a different way down. "Well, there's a stairway—but it's about 18 stories down and 18 stories back up," the TriMet staffer replied. As it turned out, Senator Hatfield suffered from vertigo, and he and his staff had no idea that a tour of the tunnel would entail being lowered more than 300 feet in the air in a contraption with sides made of open mesh steel, providing a spectacular and extremely airy view of the ground below.

As he did with so many things, however, Senator Hatfield took it all in stride and climbed aboard the shark cage for the ride. A relieved, if somewhat pale Senator Hatfield emerged from the tunnel some 20 minutes later safe, sound and as enthusiastic as ever to help support the project.

ANN'S DOWN

by Richard Feeney, former TriMet government affairs executive director

Congressman and House Public Works Chairman Bud Shuster came at our invitation (and at the invitation of prominent members of the Republican Party here in Portland who also were supporters of the Westside MAX project) to "inspect" the tunnel.

He brought with him his long-time associate Ann Eppard, chief staffer on the House Public Works committee, who showed up at the reception the Republicans had for the chairman in an expensive Gucci or Versace suit. When they showed up at the tunnel entrance for the inspection tour, they were both offered work-quality coveralls, which they declined. Escorted by General Manager Tom Walsh and Project Director Tuck Wilson, these congressional dignitaries, either one of whom had the power to kill our project, made their way through the tunnel and its several puddles of "tunnel muck" fed by the drippings from the rain-soaked cemetery on the surface.

In spite of the fact that Walsh and Wilson had arranged for a Buddhist holy man to exorcise evil spirits who may have invaded the tunnel from the graves above, Ms. Eppard slipped on the wet surface, Gucci gown and all. She tumbled straight into the muck, causing a panicked Shuster to shout, "Ann's down! Ann's down!"

TriMet's Bernie Bottomly, waiting to drive Shuster back to his hotel, was standing with a Shuster aide at the tunnel entrance when the report of the incident came over a walkie-talkie. He nearly fainted when the aide suggested that he forget about this particular $963 million authorization in the next transportation bill.

Horrified by the incident, TriMet's D.C. lobbyist, Peter Peyser, arrived on Eppard's doorstep Monday morning with two dozen roses and a $1,500 gift certificate to replace the suit.

Some months later, Eppard, having left Shuster's staff to become a powerful lobbyist, was investigated for receiving gifts and contracts from people who had issues to bring before Public Works. House ethics investigators called TriMet staff, wondering why the agency had made this generous gift to Eppard. However, after they heard the story of the ruined suit, they moved on to other issues.

OVER—OR THROUGH—THE HILLS TO HILLSBORO

Geologists suggested using dynamite to blast through the westernmost mile of each tunnel. They recommended an impressive 278-foot-long tunnel boring machine, affectionately named Bore-Regard, to drill the two miles from the east portal. Even with information from 80 test bores predicting geologic conditions for the 21-foot diameter tunnels, Bore-Regard found the west hills rock to be looser than anticipated. The machine had trouble pushing its way through the initial run of rock. After head scratching and nine months down time, a special cement grout was prepared to solidify the rock, and the 42 cutting blades of Bore-Regard eventually "holed through" (twice, actually) to meet the miners on the western side of the tunnel.

Progress of tunnel construction was little smoother at the west end. Noise from tunnel blasts awakened and disturbed people in houses near the tunnel portal. Blasting was halted until heavy rubber curtains could be installed to dampen the noise. Quite another noise-related concern emerged at the surface. Anticipating construction deep underground, Finley-Sunset Hills Cemetery, on behalf of families with loved ones buried there, sued to have the MAX alignment moved from underneath the graves. In May 1993 a Washington County judge ruled in favor of TriMet, securing an easement beneath the cemetery. The 260-foot-deep station at Washington Park, the deepest in North America, required special soil nails to stabilize the landslide-prone slopes around the station. The tunnel would be named for long-time TriMet board member Bill Robertson.

The management of parking revenue from visitors to the Oregon Zoo and Forestry Center became a source of disagreement between the City of Portland and Metro, with TriMet caught in the middle as it sought to secure property for the light rail station. Parking management at the Washington Park Station would be an ongoing topic of discussion.

Westside MAX, like the Banfield line, was designed and constructed in conjunction with highway widening and improvements. The projects shared an environmental review process.

Concern arose that construction impacts would compromise commuting capacity. TriMet partnered with

Readying Bore-Regard, the tunnel boring machine, to drill into the west hills during construction of Westside MAX, 1994

ODOT in preparing and implementing a comprehensive traffic management plan that established employer commute options programs, subsidized transit passes, an emergency ride home program and two new peak-hour bus routes, three temporary Park & Ride lots and on-ramp bypass lanes for carpools and buses—launched with a Wacky Alternative Transportation Parade in September 1993.

A WESTSIDE MAX CELEBRATION

In 1994, TriMet received approval to construct the Hillsboro segment of the Westside MAX line from Southwest 185th Avenue to the Government Center complex on the western edge of downtown Hillsboro.

MAX arrives at the Mark O. Hatfield Government Center Station, Hillsboro, 1998

On the 10th anniversary of Westside MAX, former TriMet board member and Hillsboro Mayor Shirley Huffman, a staunch promoter of the project, said, "It helps people. This (MAX) is about options, about choice, about alternatives for the citizens. In this community, it makes sense to empower people with more transportation alternatives."[92]

With some fine-tuning and removal of desirable but non-essential project features, the project was completed on time and within its overall $963 million budget. In August 1997 Westside MAX opened as far as the Kings Hills/SW Salmon Street station on 18th Avenue, running the first low-floor cars. On September 12, 1998, the full 18-mile extension opened from downtown Portland through Beaverton to Hillsboro, serving the fast-growing high-tech corridor in Washington County. The Westside MAX extension connected with the eastside line in downtown Portland, creating a single 33-mile alignment that would eventually be called the MAX Blue Line.

The Westside MAX line was an instant success. The new low-floor light rail cars were popular. Ridership on the east side jumped, now that a convenient through east-west connection was available. The beginning of a light rail system was evident.

The geography of the west side called for different community connections than along the eastside route. Park & Ride lots served residents of the west side's neighborhoods, which were less densely organized than their eastside counterparts. Transit centers timed bus service to meet MAX trains. Changing to feeder service saved many buses from the long ride downtown, and those savings were plowed back into service improvements on the west side. While some riders lost a one-seat ride to downtown Portland, everyone benefited from improved coverage and frequency of service.

In 2000 Westside MAX won the Presidential Award for Design Excellence and the Federal Design Achievement Award.

[92] Christensen, MAX 10th Anniversary, September 12, 2008

MAX CONSTRUCTION REQUIRES
CREATIVE COMMUNITY RELATIONS

by Jan Schaeffer, former TriMet community relations director

Since the Banfield days, TriMet has honed the art of being a good neighbor while dishing out the annoying and sometimes damaging side effects of building big projects.

There was no manual for this. Jan Shearer—my "twin" and mentor—and her cohorts went door-to-door along the eastside MAX route in the early '80s persuading residents to sell thin strips of their front yards and informing them when to expect water cut-offs and other unpleasant accompaniments of construction. The field engineers, who traditionally ran things on a construction site, came to appreciate the soothing effect their community relations ambassadors had on periodically unhappy project neighbors.

When we started the Westside MAX project a decade later, the community relations ethic was deeply embedded at TriMet. At the outset, we paired each "resident engineer" (the leader of a given piece of project geography) with a community relations specialist. Together the two individuals, at least one of whom was an expert communicator, would collaborate to keep neighbors informed in advance about what was coming next, and what they could do about it. From this arrangement came a cornucopia of stories.

For instance, at the outset of blasting and drilling the tunnels under the west hills, we assured nearby residents that we would meet stringent noise guidelines. After the first day (and night—blasting was a 24-hour operation) we were bombarded by upset neighbors. They said the blasts rattled windows, cracked walls and ruined their sleep. No, this can't be, we said. A few days into these denials, our engineers discovered we were reading noise levels on the wrong scale. On the so-called c-scale, which measures especially low sounds, our noise levels were off the charts. We convened the neighbors in a large meeting room to explain our mistake and lay out mitigation plans. When the resident engineer entered the room, there was a loud call to "get a rope." We ended up insulating some homes and paying for hotel rooms to help nearby residents during the blasting period.

Ann Becklund, then one of the community relations specialists, remembers meeting one of these neighbors. She paid a visit to a concerned homeowner across the highway and away from the blast zone. The door opened and a kindly woman in a bathrobe introduced herself as Marge Groening—mother of Matt, who created The Simpsons and fashioned the character of Marge after his own mother. Ann said the information she provided was satisfactory to Mrs. Groening.

Back on the blasting side of the highway, high above the underground work, owners of a cemetery sued to have the alignment moved out from underneath their graves on behalf of sensitive family members. The county court ruled in TriMet's favor after we agreed to move any of the deceased whose families requested this. We re-interred 18 bodies in other parts of the cemetery.

Fresh out of college, Tammy Going started as an intern and worked her way into a community relations field job. Shortly after stepping into her new role, Tammy remembers delivering notices about noisy pile-driving work to neighbors near Highway 217. Tammy said she received a call from "the sweetest retired couple, who

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asked if we could stop pile driving from 1:30–3 p.m. on a weekday afternoon when their bridge club would be meeting in their back yard." Tammy brought this up at the weekly scheduling meeting "and literally was laughed out of the room." At that point, she decided to talk to the contractor's foreman to see what might be done.

"For instance, I make a mean blueberry tart," Tammy said. "It worked! They ate my pie and had a safety meeting while the happy neighbors played bridge."

We had a 24-hour hotline and took turns on the night shift answering pages. Nighttime hotline calls came frequently during tunnel blasting. Tammy remembers a caller explaining, "if I have to be awake, I want someone else to be awake with me." After listening for an hour to complaints, Tammy said the neighbor calmed down and apologized.

Later, Tammy had charge of the Hillsboro segment of MAX construction. One night the contractor left a backhoe idling all night. Tammy received a page from a neighbor near the backhoe whose house was vibrating, making sleep impossible. She woke the resident engineer from a sound sleep in his Portland home. He drove to Hillsboro to turn the machine off. Tammy baked him a chocolate cake.

She remembers another couple in downtown Hillsboro who, at ages 86 and 88, were newlyweds. They returned from their honeymoon too late to read Tammy's notice about "temporary parking" during sewer work, which blocked driveways for an entire block at a time. Their car was stuck in their driveway and they could not do their weekly "Meals on Wheels" delivery. Tammy picked them up in the TriMet car, and the three of them delivered meals that day.

More MAX extensions brought more stories, such as the day we moved the Paul Bunyan statue 60 feet in Kenton, and the time Jan Shearer had to negotiate a permit of entry with the owner of Dancin' Bare inside his establishment, not far from the pole. Coral Egnew recalls the day the station at Expo Center was dedicated. "The smell of manure due to landscaping nearby wafted by at the exact time when the speaker was referencing the old stockyards." Jennifer Koozer remembers contractors attempting to attach spanwire to the exterior of a luxury hotel and inadvertently busting through the wall. TriMet's contractors had to rent the hotel room while they repaired the wall.

Throughout its many light rail projects, TriMet has continued the strategy of empowering community relations staff to build relationships with neighbors. What resulted, after some inevitable missteps, was trust and mutual respect. And trust between government and citizen, contractor and neighbor, is the primary ingredient in the recipe for good community relations.

LAND DEVELOPMENT AROUND LIGHT RAIL

Approval of the Hillsboro extension was an important precedent for federal review of rail projects and introduced the term "green field" land development. For the first time regional planning for development in a light rail corridor was considered in weighing project approval.

TriMet's public affairs executive director, Bernie Bottomly, recalls the visit from Congressman Bill Lehman, who was then chairman of the House Appropriations Subcommittee on Transportation. Lehman was a good friend of Oregon's Congressman Les AuCoin, so when AuCoin asked Lehman to come to Oregon to take a tour of the proposed Westside MAX rail project, he was happy to do so. It was arranged that the tour would take place using a truck equipped to run on the Burlington Northern freight railroad track, which was slated to become the light rail alignment. Metro planner Richard Brandman worried that the view from the rail line

Retail center in Orenco Station, an award-winning transit-oriented development at the MAX Orenco Station in Hillsboro, 1999

The Round, a transit-oriented development at the MAX Beaverton Central Station

was mostly blackberry bushes and fields and that the new developments at Intel, Nike and other high-tech firms in the area would be just out of view. He feared that Lehman would think the region wanted to build light rail through empty countryside. Those worst fears were realized when the hi-rail truck had to stop for a deer grazing in the right-of-way. As it turned out, AuCoin's friendship with Lehman was strong enough to overcome any misgivings the tour might have created. The line was approved, and—years later, with new high-density housing, malls, and industrial facilities—the Hillsboro MAX extension proved to be a model of excellence in urban planning.

The Orenco Station development in Hillsboro is a classic instance of "green field" development. It had been zoned for light industrial but was rezoned to accommodate a mixed-use community anchored on one end by a large Intel plant and by a MAX station on the other. It received

design awards and accolades from Vice President Al Gore, who held a livable communities forum on Westside MAX's opening day in September 1998. Orenco Station is a tribute to effective collaboration between the City of Hillsboro, developer PacTrust, TriMet and Metro. It would turn out to be one of the line's great success stories.

A three-year planning effort, catalyzed by the arrival of MAX, culminated in Hillsboro's adoption of station community plans around Southwest 185th, Quatama, Hawthorn Farm and Fair Complex, in addition to Orenco. Hillsboro also embarked on a downtown urban revitalization effort that included the reconstruction of Main Street and the development of a block-sized government center. While TriMet applauded the complementary redevelopment program, there arose questions as to which civic improvements—described as "betterments"—were appropriately tied to the light rail project and which should be borne by the city.

THE BI-STATE SOUTH-NORTH PROPOSAL

As ground was broken for Westside MAX, Metro, TriMet and the region were already looking to the next light rail corridor. The South-North corridor was an ambitious plan to build light rail from Oregon City and Clackamas Town Center southeast of Portland north through Vancouver to Washington State University and the fairgrounds in Clark County, Washington—an endeavor that had many disparate constituencies with profound differences about next steps. More than 10 years would pass before the first segment of this corridor welcomed light rail transit along Interstate Avenue. (TriMet named it "South-North" to emphasize the fact that this line would be the region's first to serve Clackamas County in the southern portion of the Portland region. Clackamas County had supported prior projects without gaining a direct benefit.)

A BIG REACH

In November 1994 TriMet introduced ballot measure 26-13, proposing a $475 million bond package to fund 64 percent of the local share of a 26-mile South-North light rail line in Oregon. The Portland area vote would be contingent on affirmation by voters from Clark County, Washington, and pledges of contributions from Oregon, Washington and the federal government. While the end points were identified, a specific route had not yet been established. The measure passed with 63 percent support.

In February 1995, by a 2:1 margin Clark County voters rejected a measure that included both an increased operating fund and their $237 million share of funding for the South-North project's nine-mile link from the Columbia River to Hazel Dell, placing the project funding plan in jeopardy.

In August 1995 the Oregon legislature passed a $750 million transportation package using lottery-backed bonds that included $375 million for a scaled-back go-it-alone South-North project, but opponents—led by anti-tax activist Bill Sizemore—forced the package into a statewide vote. Measure 32 included $375 million for rural transportation projects around the state. While the measure was approved by a majority of the voters within the TriMet service area, it went down to defeat statewide.

By 1997, recognizing the stalemate over funding, Metro and TriMet began to separate from the bi-state project a component that could proceed without participation by Clark County or the state of Oregon. Under the new concept, funds would come from Clackamas County and Portland. The citizens of Milwaukie objected and launched a campaign to recall the Milwaukie mayor and city council. With low voter turnout, in December 1997 the recall won and the officials were turned out of office, their support of light rail rejected.

In August 1998 the TriMet board voted to place another measure (26-74) before regional voters, calling for phased construction of the project without the Clark County segment. The intent was to secure voter approval of the same amount originally approved by voters ($475 million) for the local matching funds ahead of the next federal funding cycle. The proposal envisioned construction in three phases: from the Rose Quarter to Milwaukie, from Milwaukie to Clackamas Town Center and Rose Quarter to Kenton, and eventually Kenton to Vancouver and Clark College (though this funding was not a part of the package). The measure failed regionwide by a 52 to 48 percent vote but passed in Multnomah County and Portland. Following the election, Ed Lindquist, a Clackamas County commissioner who had been supportive of light rail and fought to keep it alive, said that "Portland is the model for the nation, and we have this grand experiment that we need to continue."[93]

RETRENCHING WITH THE COMMUNITY

In 1999, following a series of community "listening sessions," North Portland neighbors affirmed their support of light rail. "We voted yes," they noted. Policy makers moved forward with a light rail project in the northern portion of the South-North corridor that became Interstate MAX.

In the meantime, Metro staff guided a citizens committee tasked with reviewing options through a study of

[93] Charles, Railroaded: Light Rail Gravy Train Rolls Toward Clackamas, April 2002

non-rail modes, including high-occupancy vehicle lanes, high-occupancy toll lanes, a busway, bus rapid transit and commuter rail. As the new millennium approached, neighborhood and business groups were calling for reconsideration of light rail with a modified alignment through Milwaukie's downtown and a route to Clackamas Town Center along I-205 rather than through Milwaukie. By February 2003 the plans had gained approval. Phase 1, light rail along I-205, would be followed by a Portland-to-Milwaukie line in phase 2. Both projects became regional priorities.

As part of first phase work, TriMet would rebuild the Portland Transit Mall to accommodate a new downtown light rail alignment. In April 2003 Metro Council approved the south corridor project, outlining transportation options for Clackamas County. The first phase of this plan included an 8.3-mile light rail project from Gateway Transit Center to Clackamas Town Center along I-205 and the Portland Mall between Union Station and Portland State University.

FAST WORK

by Bernie Bottomly, TriMet executive director of public affairs

In 1994, while the Westside MAX project was in the middle of being constructed, TriMet held a successful local vote on the next light rail line—the South-North project, and Dick Feeney went to Washington to get congressional support and visited with Jim Bunn, then the congressman from Oregon's 5th Congressional District.

Bunn was a freshman and hadn't yet learned all the ways of Capitol Hill—including a full appreciation of his lowly status as the junior member of the Public Works Committee. With the Republicans in the majority, Bud Shuster (of the infamous "Ann's down" incident) had taken command of Public Works, the committee with responsibility for passing legislation authorizing projects like the Westside.

At a meeting with Jim Bunn, Feeney mentioned that TriMet needed language to authorize the South-North project, which could require $900 million in federal aid. Congressman Bunn asked Feeney to wait a minute while he checked on it. Thinking that he was going to talk with a staff member, Feeney sat in the congressman's office. What he thought would be a short wait grew longer and longer until Dick thought that maybe the congressman had simply forgotten that he was there or had been sidetracked by other business.

The typical process for including requests like this one from TriMet into authorizing legislation would be for Congressman Bunn to hand off the issue to his staff, for his staff to then discuss the potential with the Public Works Committee staff and, after months of dialogue, most if not all of it without the chairman's personal intervention, the issue might or might not move forward. Typically the chairman of the committee would be engaged if his staff informed him that the issue was of concern to a member. Given the size of the committee, at over 50 members, individual congressmen, particularly junior members like Bunn, almost never spoke directly to the chairman about issues of this kind.

After cooling his heels for an hour, Feeney was startled when Congressman Bunn came bursting into the room to report that he had marched TriMet's request down to Shuster's office, badgered the staff into letting him have an audience with the chairman and then told him he had to have the TriMet language in the bill. Shuster had agreed on the spot, and TriMet got the authorization for what eventually became Interstate MAX, Milwaukie light rail and portions of the Green Line to Clackamas Town Center. Feeney recounted later that it might have been the fastest transaction in Capitol Hill history.

The second phase included a proposed six-mile extension from downtown Portland to Milwaukie.

Metro's citizens committee also recommended addressing interim needs, including construction of the Southgate Park & Ride in Milwaukie and the eventual relocation of Milwaukie's downtown transit center to the Southgate area. The committee suggested bus rapid transit in the corridor as an interim measure. The Southgate Park & Ride was eventually constructed with federal funds, the transit center was improved and retained in the downtown, and interim bus service was satisfied with the recently enhanced Frequent Service on Southeast McLoughlin Boulevard.

MAX GROWS WINGS

Portland city planners back in 1975 began reexamining earlier designs for I-205. Their work was led by Doug Wright, Portland's chief transportation planner, assisted by planner Ernie Munch. The city hired Robert Conradt, a California traffic engineering consultant noted for his creative approach to roadway design. The collaborators recommended downsizing the freeway and including a transit right-of-way. This was done and made way for both the Airport MAX line and the Green Line to Clackamas County. The phased expansion of the airport terminal, completed in 2001, also anticipated the arrival of light rail.

The region's transit plans from the mid-1980s envisioned a light rail extension to the airport to be built decades in the future. The project leapfrogged over the others in 1997 when construction giant Bechtel Corporation submitted an unsolicited proposal to design and build the link in exchange for development rights to 120 acres near the airport. The area, then known as the Portland International Center, was the largest assembled piece of commercially zoned property within Portland city limits. (Bechtel would rename a proposed commercial stretch Cascade Station.) The designation of the Airport Way Urban Renewal Area in 1986 gave the city an important tool in advancing the plan. Ensuing deliberations were long and the agreements legally complex. An informal team—with Portland Mayor Vera Katz, Commissioner Charlie Hales, TriMet General Manager Tom Walsh (and later Fred Hansen), Bechtel Project Manager Ralph Stanley and Port of Portland Director Mike Thorne as members—led the effort. Neil McFarlane, who also had a lead role, related a comment from a Federal Transit Administration administrator: "…thank heavens you aren't asking for FTA funds on this deal, never could happen with the legal complexities and paperwork." (The FTA did assist in processing the project's environmental assessment.)

In spite of a decision to fast-track the project by eliminating FTA participation, the project required the execution of 85 interlocking agreements and 20 formal approval steps between three public agencies and the private partner. Nonetheless, the absence of federal transit participation allowed the project to be fast-tracked.

Through those agreements, Bechtel received the sole right to design and build the project and the right to develop the 120 acres. Funding contributions were divided among the parties, with the city issuing tax increment bonds to raise $23.8 million, TriMet providing $45.5 million, the Port of Portland providing $28.3 million (and the 120 acres), and Bechtel providing $28.2 million for construction in lieu of future rent for the land. Each contribution was assigned to an appropriate segment of the project. All of the agreements were completed in nine months. A public review committee gave the project the nod in 1998, and construction commenced on June 19, 1999.

Logo for the Airport MAX extension, which opened September10, 2001

Construction was structured under a design-build contract, unique at the time. The track configuration at Gateway, the median station at Parkrose and the airport terminal station all presented design challenges. After several options in consideration of airport expansion plans, the terminus platform was located just 200 feet from baggage claim. The extension incorporated well-integrated public art, including the striking Fishbird pedestrian bridge connecting the

Parkrose platform in the I-205 median with the adjacent transit center and Park & Ride lot.

After 13 years of MAX service, in the fall of 2000, TriMet adopted line-color designations ahead of the upcoming expansion. TriMet designated colors for the Gresham-Hillsboro, Airport and planned Interstate MAX lines, and introduced them to the public with the opening of the Airport line.

The new line opened on September 10, 2001, just one day before the terrorist attacks on the East Coast. Celebrations were canceled and, in fact, the airport was closed for a period of time. At $125 million for 5.5 miles, it was a lean and mean extension that topped three million rides in its first 10 months of operation. It was conceived, funded, designed and constructed in four years—half the time typically required for these large projects. Titled the Red Line, airport service initially stopped in downtown Portland but was extended to the Beaverton Transit Center in September 2003. Portland was the first West Coast city to join the elite club of U.S. cities with a direct rail connection to their international airports. Adding Red Line service helped relieve overcrowding on the existing Blue Line between Gateway and Beaverton Transit Center.

Airport MAX is an example of how highly motivated partners can come together to seize a unique opportunity. As a result, the region received an airport connection 10 years ahead of schedule. The project is noted for its unique partnership, the pace of execution and the marshaling of funds from diverse sources—and, as noted, for foregoing the usual contributions of the Federal Transit Administration. The project proposal, however, was largely in place before the community was engaged. While a public review committee was convened, the nature of closed-door discussions was possible only because the alignment did not pass directly through active neighborhoods. Were that the case and if federal funds had been involved, more extensive public engagement would have been required.

In part drawing upon the synergy of the new Airport MAX extension, in 2005 the Portland Development Commission, TriMet and a private business, the Oregon Clinic, agreed to redevelop the Gateway Transit Center with a shared-use parking structure and a medical office building on the existing Park & Ride lot. The new Oregon Clinic opened in fall 2006.

The market for redevelopment at the airport, however, was disappointing. Bechtel and its real estate partner, Trammel Crow, hoped to build a mixed-use development with offices, a hotel, shops and restaurants on the 120-acre Cascade Station site near the airport. In the chilled market following the September 11 attacks, there were no takers. Bechtel sold its interests to Trammell Crow, which subsequently developed an interim plan for more auto-oriented retail and big box stores. The site, however, incorporates street and light rail infrastructure that is ready to support future infill and redevelopment.

THE INTERSTATE LINE GOES NORTH

While the southern end of the South-North light rail plan was being sorted out, TriMet moved to address the needs of the North Portland community with a MAX extension on North Interstate Avenue. The resulting Yellow Line was the first segment of the original South-North line to be built, running from the Rose Quarter Transit Center to the Oregon Expo Center, just south of the Columbia River.

The revival began with a series of community meetings convened by Metro Councilor Ed Washington, asking "What's next?" The format was more open-ended than was typical of a Metro-led process. Councilor Washington's initiative was the spark that revived the project.

With some prompting from General Manager Fred Hansen, Portland business leaders, notably Dick Reiten of NW Natural, also were asking TriMet and Metro to find a way to build the "north" segment, after addressing several issues. Reiten became a member of a new informal management team that again included Mayor Katz. The firm of Shiels, Obletz and Johnsen was hired to revisit the alignments and came back with a straight shot up Interstate Avenue, with Roger Shiels saying that "…you could shoot ducks on that street, so underutilized.…"

Dick Reiten enlisted the help of public outreach consultant and long-time neighborhood resident Tom Markgraf to supplement the work of Portland and TriMet staff by conducting community outreach and consensus building. Markgraf spent countless hours meeting with neighbors in their living rooms and holding small coffees to discuss the alignment and design of the proposed line. That grassroots input was provided to the project and resulted in dozens of modifications to the project's details, such as shelter designs, street treatments and the locations of driveways and sidewalks. Although initially skeptical, at the conclusion of the outreach effort, more than 70 neighborhood residents attended a hearing called by Metro Councilor Ed Washington to express their support for moving the project forward.

A more structured citizen advisory committee review process followed, and the conversation with the Federal Transit Administration started. Neil McFarlane,

Sign announcing access to a North Interstate Avenue iconic restaurant and bar, 2001

Laying tracks on North Interstate Avenue, 2002

Patton Park Apartments on Interstate Avenue, a TriMet collaboration with REACH Community Development, 2009

TriMet's capital projects director at the time, recalled a high-ranking FTA official noting, "We can fit little ones like that in readily.…"

The community sought a less expensive project with no home or business displacement. That was a tall order, but the resulting project met the challenge. The city created an urban renewal district that directed $30 million in tax increment funds to the project. The South-North alternatives analysis had considered a line operating alongside I-5 as one of the options that might offer faster travel times to Clark County, but the North Portland community wanted a project with more local usefulness and identity. Before I-5 opened, North Interstate Avenue was the main route north to Washington. Operating mostly in the median of the street and reducing its width from four lanes to two, the MAX project transformed the wide streetscape and continues to be a catalyst for redevelopment.

Almost 74 percent of the $350 million project cost came from the federal New Starts program. The unusually high federal participation was a recognition that the region had constructed the Airport MAX Red Line via a public/private partnership without any federal New Starts funds. By leveraging that local investment, the feds elevated their share of Yellow Line funding to $257.5 million. Regional transportation monies administered by Metro, TriMet and funds from the newly created Interstate Urban Renewal District covered the $92.5 million balance.

Interstate MAX construction began in late 2000. The line was designed with strong community engagement and includes station art elements inspired by local history and tradition. The 5.8-mile Yellow Line joins the existing Red and Blue lines at the Rose Quarter Transit Center for the continued ride into downtown Portland. The project was noted for its celebration of the cultural diversity of the corridor and for green construction innovations. It excelled in the engagement of disadvantaged (minority- and women-owned) businesses and workforce diversity. Nineteen percent of the project contracting dollars went to disadvantaged firms. Businesses along the alignment were supported through access management and tailored advertising campaigns during construction. TriMet even enlisted project partners to support eateries in the corridor by providing a "lunch bus" operating from administrative offices to featured restaurants.

In May 2004, the Interstate MAX Yellow Line, with 17 new, low-floor vehicles, opened four months ahead of schedule and $25 million under budget. In November 2004 TriMet received approval to acquire 10 additional light rail vehicles and security cameras for MAX platforms with the remaining project budget. The project was conceived and built in relatively short order, even with the additional bureaucratic hurdles that typically come with federal participation. The corridor continues to thrive with new development and businesses along its length. Several transit-oriented development projects have been completed, including the affordable Patton Park Apartments on land TriMet had acquired.

Gentrification remains a concern of close-in neighborhoods near light rail. The North Portland community had become depressed due to the disruption of the I-5 freeway and racial segregation, but a significant rebound has taken place along the light rail line. A Metro audit conducted in 2013 found that the population within a quarter mile of the Killingsworth Avenue MAX Station on North Interstate Avenue had significantly changed since the completion of the light rail line and development promoted by the Portland Development Commission's urban renewal program. Seventy-one percent of area residents had moved there since the line was built. City of Portland planner Tom Armstrong said, "The challenge with all of this is how to balance neighborhood improvements and community revitalization. By virtue of making those investments, they become more attractive places to live."[94]

This fourth MAX line increased the MAX system to 44 miles and 64 stations. The regional system at this time included 638 buses, 208 paratransit vehicles and 105 MAX light rail vehicles.

THE TOTAL TRANSIT EXPERIENCE

Fred Hansen became TriMet general manager in 1998. Hansen set in motion a renewed effort to address all aspects of TriMet's mission—described as the Total Transit System or the Total Transit Experience. This holistic view of service delivery addressed not only on-board customer experience but delivery of information to prospective riders, convenient and safe access to transit stops, safe and secure trips, and more frequent, comfortable and reliable service. For the first time TriMet emphasized its commitment to ensuring transit equity and environmental justice and its intent to move toward greater sustainability.

[94] Redden and Law, Portland Tribune, July 19, 2013

The Total Transit System aimed to achieve ridership levels called for in the Regional Transportation Plan. Many of these elements, such as Frequent Service, were already in place, but the next years would bring a new look and renewed attention to the details.

TriMet's Line 33-McLoughlin became a pilot for applying these concepts as part of the "Streamline" program. Bus stops and sidewalk connections were improved, new signage installed and more service added. When the upgrades were unveiled in September 1999, riders responded positively and ridership grew. TriMet has applied these measures to many more routes and reaped significant ridership dividends.

HIGH-TECH AS PART OF THE TRANSIT EXPERIENCE

TriMet was among the first transit operators to embrace real-time and web-based customer information, beginning with the bus dispatch system introduced in 1995. Today this system tracks all vehicles using global positioning system technology, thereby revolutionizing bus operations and fostering the real-time delivery of bus arrival information to customers. By 1996 all TriMet buses were equipped with vehicle tracking. Combined with on-board passenger counters, TriMet now had detailed service profiles with which to fine-tune schedules and balance loads on vehicles.

In 1995 TriMet also embraced the information highway with the launch of its website. In 1999 the bus-tracking technology began providing satellite-assisted real-time bus arrival time information (later named TransitTracker) to the website and to reader boards installed at selected bus stops. An on-street pilot project on Martin Luther King Jr. Boulevard preceded the first downtown installation at Southwest Fifth and Salmon in June 2001. The online trip planner was introduced in February 2001, and in February 2002 the web-based TransitTracker was launched. Starting in August 2003, customers could access TransitTracker over the telephone and via cell phones. By August 2004 monthly use of TransitTracker exceeded 28,000 calls. The system would top 100,000 calls by June 2005, 300,000 by that October and 500,000 by November 2006. Using TransitTracker was fast becoming second nature for bus riders. The website added an interactive system map in August 2003 that allows trip planning to be customized based on combinations of quickest route, topography and bike friendliness.

TriMet's leading-edge use of global positioning technology and open source systems for customer communications led Google in 2005 to select TriMet as the first transit system to be incorporated into Google Maps. Customers could plan trips and find directions for walking, travel times and costs. Five other transit systems had adopted TriMet's platform by the following September. More than 50 third-party transit-supportive applications have been created at no cost to TriMet.

The Portland Bureau of Transportation in October 2001 installed a technology called Transit Signal Priority at 250 Portland intersections. The system holds the green signal light a few seconds longer for buses that let the system know they are behind schedule. This was expected to improve schedule reliability, although such benefits have been difficult to pin down.

TriMet strengthened customer security on MAX trains by installing cameras, beginning in July 1998. By August 2001, every MAX vehicle had been retrofitted with cameras.

Another technological innovation improved fare collection. In September 2013, TriMet launched a mobile ticketing application for smart phones, becoming the first transit agency in the U.S. to implement a mobile ticket for use on both buses and trains. Riders could download the free app, register their debit/credit cards and purchase tickets as needed. Tickets could be stored on the phone. In 2015, TriMet began installing a state-of-the-art electronic fare system. In 2017, riders were able to purchase Hop Fastpass® cards, allowing them to quickly pay fares by tapping against card readers on buses and rail platforms.

A NEW LOOK AND IMPROVED AMENITIES

TriMet adopted a new simplified blue and orange paint scheme in 2018, with the first buses, the 3900-series, entering service in February of 2019. This was the first change to TriMet's paint scheme in nearly 17 years. In 2002, TriMet adopted a then-new look, the first change in more than 20 years. The hyphen in TriMet's name was dropped at that time (the new version has been used throughout this document), and the red striped design of TriMet vehicles gave way to a blue, white and yellow color palette. With each new paint scheme, new vehicles come with the look and older vehicles in the fleet receive the new paint scheme as they come due for repainting. Bus stop signs were also re-conceived 2002 in with half-moon-shaped "flags" and blue poles, both changes intended to make these signs easier for customers to recognize in the crowded streetscape. New signs marked "quick drop" zones were installed at key MAX stations and Park & Ride lots where drivers drop off and pick up MAX riders.

On October 13, 2000, TriMet began offering popular rider website information in Spanish. TriMet's on-line trip planner introduced a Spanish language version in March 2001. Chinese, Russian and Vietnamese translations were added in April 2002. Continuing the rider-friendly changes, in 2001

MAKING TRANSIT BETTER, WITH OPEN DATA, ONE APP AT A TIME

by John Canfield, Nimbler founder and WePay vice president of risk management

I have been in the high-tech industry my whole career, working in start-ups and large tech companies. Over the years, the hot areas of innovation have shifted from the computers themselves to packaged software, to the Internet, and more recently to mobile devices. But I never heard people talking about *transportation* being a hot area of innovation until this last year.

Millennials are leading us away from the car-dominated America of past generations. They are looking for options. Start-ups and established players are offering an array of new services—carsharing, bikesharing, ridesharing and transportation apps of every sort.

Transit agencies are offering real-time arrival times so riders can find the best route and get there with a minimum of waiting. In 2014, Uber, then a five-year-old start-up, was valued at $18 billion—one of the highest private valuations ever. Venture capitalists around the world are taking notice. The Portland area plays a special part in this transportation innovation. In 2005, an engineer at Google started working on a skunkworks project to build transit directions into Google Maps.

The big problem was where to get the data. Transit agencies had schedule data in proprietary systems that varied widely from agency to agency. Even if the data were technically accessible, many transit agencies did not want to publish it for free.

TriMet had a different approach. They proactively reached out to Google and offered to partner. The result was the General Transit Feed Specification (GTFS), which is used to communicate schedule data. Google launched its transit directions in Portland first. Now, Google and other apps offer transit directions around the world using GTFS.

TriMet also innovated by investing in open-source trip planning. Traditionally, when transit agencies wanted a trip planner for their website, they worked with private software companies to build one just for their agency. TriMet instead started a project in 2009 with OpenPlans to build the Open Trip Planner for the Portland area that combines bike and transit directions.

The start-up I founded, Nimbler, just introduced its fourth transit app: Nimbler Portland. At the heart of Nimbler's routing lies Open Trip Planner and GTFS. Nimbler offers transit directions, bike directions and combinations of the two. Nimbler also integrates with TriMet's real-time vehicle location feed to provide real-time arrival predictions that minimize wait time.

Without the innovative approach of TriMet working with Google, OpenPlans and Open Street Maps, apps like Nimbler would not be possible. Because of TriMet's leadership, apps around the world are benefiting and innovating using open source and open data for transportation.

Curved "flags" at bus stops, an artist-proposed change from traditional rectilinear signs, 2002

TriMet added hooks for hanging bikes on low-floor MAX vehicles. That same September, Fareless Square was extended east across the Willamette to include MAX service in the Lloyd District. In 2005 TriMet began installing etched artwork on bus shelter glass in order to mask and discourage graffiti. Some of those shelters were illuminated with solar power.

The fine-tuning of the system produced marked benefits. In October 2001 daily boarding ridership topped 300,000 for the first time since World War II. Approximately a third of passengers rode MAX.

FUEL-EFFICIENT BUSES

As could be expected from a general manager who once ran Oregon's Department of Environmental Quality and served as deputy administrator of the Clinton-era Environmental Protection Agency, Fred Hansen was eager to improve fuel economy and reduce pollution from TriMet's bus fleets. Steps in that direction included a switch to re-refined motor oil in 2002. In 2005 biodiesel fuel was introduced, using a B5 blend initially on LIFT paratransit buses only, with expansion to the entire bus fleet in late 2006. TriMet was the nation's first transit agency to shift to biodiesel.

TriMet borrowed from NASCAR the idea of powering cooling fans with electricity from the bus battery instead of the engine. This step reduced engine load and improved fuel economy.

TriMet also experimented with hybrid buses. Two hybrid electric buses entered service in 2002. They were retired in 2012, after ascertaining that the buses did not perform sufficiently better than new diesel buses to justify the estimated 50 percent higher purchase cost.

PRODUCTIVITY IMPROVEMENT AND ANNUAL PLANNING

In November 1999 TriMet turned to front-line employees to ferret out waste and propose efficiencies. The Productivity Improvement Process assembled department-level teams to suggest changes and improvements. Ideas included revisions to bus inspection cycles, better use of bus shop space and eliminating repetitive office work. Between 2000 and 2008 the program saved TriMet an estimated $20.5 million annually. TriMet burnished its credibility by demonstrating responsible management of tight financial resources. This exercise would greatly benefit TriMet's request to the Oregon legislature for a payroll tax increase.

Every four years, Metro updates the Regional Transportation Plan, a guide for future investments in the region's transportation system. The plan establishes policies and priorities for all modes of travel and promotes efficient management of the

transportation system. Each update reflects new forecasts of population, jobs and travel. The plan identifies federal, state and local funding for transportation improvements, estimates project costs and proposes funding strategies. In addition to roads and highways, transportation alternatives such as transit, walking and bicycling are included in the plan, as are commuter rail and vanpools, telecommuting, ridesharing and other programs that reduce demand on the transportation system.

In the 1980s TriMet prepared annual transit development plans. At the time the Urban Mass Transportation Administration required these plans but dropped that mandate as transit systems grew more stable. Nudged by Metro to create an equivalent to highway-focused transportation systems plans, in June 2002 TriMet produced its first annual Transit Investment Plan, a rolling five-year guide for regional transit investments. Community partners helped plan improvements, leverage investments and set priorities outlined in the Transit Investment Plan. The transit plan, in turn, informed each edition of the long-range Regional Transportation Plan.

TriMet's Business Plan, updated annually since 2002

In 2003, drawing upon the Transit Investment Plan, TriMet asked the Oregon legislature to authorize increasing the employee payroll tax rate by 0.01 percent incrementally over a period of 10 years to help pay for new transit service throughout the region. TriMet's success with the Productivity Improvement Program and on-time and on–budget light rail projects helped build its case. The legislature provided the TriMet board with the authority to levy the incremental tax rate increases, with the first increase under this authority approved in January 2005, increasing the payroll tax from 0.006243 to 0.007243 percent by 2015.

LOFTY TRANSPORTATION

As the new century began, the Oregon Health and Science University (OHSU) confronted a dilemma. The institution faced pressures to expand, but its hilltop location could not easily accommodate further growth. One choice was to move to the suburbs where OHSU's affiliate, the Oregon Graduate Institute, had surplus land. Another was to redevelop industrial land directly below the campus along the Willamette River. Portland wanted to keep OHSU in the city and agreed to consider an aerial tram to connect the hill with the riverside.

In 2002, the Portland Bureau of Transportation joined forces with the nonprofit Portland Aerial Transportation, Inc., to explore the tram concept. The idea progressed, and after a design competition in January 2003, the Los Angeles/Zurich-based Angélil/Graham/Pfenninger/Scholl design team was selected. In November, Doppelmayr CTEC was selected to fabricate and install the tram.

Construction began in August 2005. Cables were installed during the late summer and early fall. In October 2006, the tram's two cars arrived from Switzerland. The tram

opened to OHSU employees on December 15, 2006, and to the public on January 27, 2007. Portland's tram is the second commuter aerial tramway in the U.S., after New York City's Roosevelt Island Tramway. It travels a horizontal distance of 3,300 feet and a vertical distance of 500 feet in a ride that lasts three minutes at 22 miles per hour. The cabins, named Walt and Jean, operate between the South Waterfront terminal adjacent to the OHSU Center for Health & Healing and the upper terminal at the Kohler Pavilion on OHSU's main campus, passing over Interstate 5, the Lair Hill neighborhood and the Southwest Terwilliger Parkway. The tram was jointly funded by OHSU, the City of Portland and South Waterfront property owners, with the bulk of the funding coming from OHSU. It is owned by the city and operated by OHSU. The $57 million cost was nearly four times the initial estimate.

The tram runs along Southwest Gibbs Street above houses in the Lair Hill/Corbett Neighborhood on its route up the hill to OHSU. Neighbors voiced concerns about privacy and the tram's appearance. To help offset these concerns, Portland promised a pedestrian bridge to connect the neighborhood with the North Macadam District and tram station. The pedestrian bridge opened in mid-2012. The Portland City Council also offered to buy out any homeowner preferring to move. None accepted the offer.

The tram's cost overruns were deeply controversial. They were attributed to the severely restricted hillside site for the upper terminal, a decision by OHSU to expand its main facility into the tram landing zone, the need to isolate the adjacent medical building from tram-related vibration, the complexity of combining European mechanical and electrical systems with sophisticated U.S. steel structure, and the need to install tramway cables over an interstate highway and other major roads.

OHSU and Portland quarreled over how to pay these extra capital costs but reached agreement in April 2006. Operating costs are divided between Portland and OHSU. Riders affiliated with OHSU do not pay, while others pay a

BEING HEARD

adapted from an *Oregonian* article by Fred Leeson, April 21, 2003

If TriMet's Productivity Improvement Program was to be successful, it had to have the support and input from the employees who really knew how the system worked—or didn't. TriMet employees were accustomed to being asked to submit their ideas or complaints, but for PIP to be successful, management would truly have to break down the barriers. As a TriMet plant mechanic said, "At first, employees were kind of reluctant to participate. They'd heard the same things before. Under the old program, ideas would get to a certain point on the ladder and stop."

The program created teams within work units to produce documented ideas and an analysis of cost savings. Some of the dozens of ideas that emerged from these forums were:

- Merging the light rail and bus control centers to improve coordination and crisis responsiveness.
- Turning off half of the light bulbs in the light rail tunnels, which it was determined were brighter than necessary.
- Changing seats in the MAX trains from cloth to vinyl to facilitate cleaning.
- Using a common medical tubing to seal the garage doors rather than an expensive proprietary product.

The savings from the PIP program allowed TriMet to avoid service cuts and layoffs and generally had the support of the labor union. The program offered no monetary reward but was well received by employees, regardless.

"Programs like these can be very effective if you stick with them a long time," said Randall Thomas, a Portland business executive monitoring the program as part of a TriMet advisory committee.

Portland Aerial Tram at Oregon Health and Science University building in South Waterfront, 2007

$4 round-trip fare. The tram carried its 10 millionth rider on January 8, 2014.[95] While not a TriMet project, the Portland Aerial Tram is an interesting complement to the region's transit system and adds another mode for getting around in Portland. The confluence of the streetcar, the MAX Orange Line and the tram within a short walk of each other provides this growing professional and residential district with convenient mobility options.

MAX IN CLACKAMAS COUNTY AND DOWNTOWN PORTLAND

Meanwhile, light rail expansion continued with the construction of the Green Line next to I-205 between Gateway and Clackamas Town Center. This was another segment in the South-North corridor. Even as the I-205 freeway was being constructed in 1977, General Manager King had suggested that the transitway could accommodate a light rail line that could connect with the anticipated Banfield line. This first light rail line into Clackamas County followed the southern section of the I-205 reserved transitway as far as Southeast Fuller Road and ungraded freeway right-of-way for the last mile to Clackamas Town Center. A box tunnel near Southeast Division Street had been constructed earlier to carry a transitway from Gateway on the east side of the freeway to the remaining transitway on the west side. The Green Line parallels the Line 72-82nd Avenue bus route, which once was TriMet's most productive route but was bumped down a notch after the rail line went into service. The Green Line serves a similar crosstown function, distributing trips along its route.

The new Green Line joined existing track between Gateway and the Steel Bridge. From the Steel Bridge the new tracks—added as part of the Green Line project—would run to Union Station and turn south along the transit mall to Portland State University. Placement of light rail on the Portland Transit Mall had been considered as early as 1978 during the design of the Banfield project. The idea was set aside because placing rail on the mall would require tearing up what was then a pristine, new transit facility.

PORTLAND TRANSIT MALL MAKEOVER

By 2007, however, the Portland Transit Mall was 30 years old and showing its age. Pavement was crumbling, and design elements needed updating. With two MAX lines (Blue, Red) already using the downtown alignment on Southwest First Avenue and Yamhill and Morrison streets, additional service on that alignment would constrain operations. The Steel Bridge would continue as the only river crossing for four MAX lines (Blue, Red, Yellow, Green), but the new mall alignment would relieve congestion downtown.

There was another good reason for running MAX on the transit mall. Portland State University, while served locally by the Portland Streetcar, had no nearby access to the light rail system, and it was (and is) the region's largest transit destination. Beyond Portland State, the light rail network in future years might extend to the southeast (a reality with the Orange Line) and/or southwest, and a new downtown alignment on the mall would provide a take-off point for those possible future system extensions.

Design for Lents Station on MAX Green Line, which opened in 2009

Designing the revamped Portland Transit Mall presented enormous challenges. The automobile lane on the original mall was limited to three-block segments, after which drivers encountered a forced left turn. The business community, City of Portland and TriMet agreed that each one-way street forming the transit mall needed a truly continuous automobile lane—leaving two lanes for MAX and buses to share and criss-cross to reach stops. The solution raised eyebrows. In a February 2006 issue of the *Portland Tribune,* Ron Buel, a long-time civic activist

[95] Rose J., Portland Aerial Tram Hits 10 Million Riders, 234,000 Miles of Travel, January 9, 2014

and former *Willamette Week* owner, said the reconfiguration would be "a disaster for downtown," architect George Crandall said it would be "devastating," and Portland State's Gerald Mildner called it "insanity."[96] Skeptics also raised concerns about pedestrian safety. A series of computer, table-top and parking lot simulations demonstrated that buses and light rail could operate successfully and safely if the placement of bus stops changed from every second to every fourth block. The Portland Bureau of Transportation and Professor Rob Bertini's students at Portland State University helped TriMet develop the concept, offering another example of innovative and collaborative problem solving.

Construction workers on MAX Green Line, 2009

With most of the transit mall buses shifted temporarily to Southwest Third and Fourth avenues, construction commenced in February 2007 and took more than two years to complete. To minimize impacts on stores and offices, work was concentrated on three- to four-block segments for up to eight weeks or less in any one segment. The I-205 portion of the project proceeded efficiently under a design-build contract that permitted faster construction at reduced cost.

TRI-COUNTIES CONNECTED WITH RAIL

In May 2009 the Portland Transit Mall reopened for buses and test runs for the new MAX alignment. The fifth MAX line, the 8.2-mile Green Line, opened on September 12. The new MAX tracks were brought into use on August 30, when the Yellow Line was diverted onto the Mall from the Morrison-Yamhill alignment, which the Blue and Red Lines continued to use. The project cost $575.7 million with 60 percent federal participation. The MAX system now extended 52.6 miles with 87 stations. For the first time, all three counties in TriMet's region were linked by light rail. Overblown fears of multimodal chaos on the transit mall did not materialize.

Prior to the Green Line opening, the TriMet board voted to discontinue Fareless Square for bus service, beginning in January 2010, while retaining fare-free rides in the downtown area and the Lloyd Center on MAX and the Portland Streetcar.

WES: SUBURB TO SUBURB RAIL

There were several irons in TriMet's fire during those turn-of-the-century years. Westside jurisdictions were eager to build on the success of Westside MAX and looked for a pragmatic transit-based solution for congestion in the north-south Highway 217 corridor. That corridor had become a commuting route for persons living and working along the east and west sides of the I-5/Highway 217 corridor. This was the fastest growing part of the region, and its leadership wanted transit to keep pace with development. Some leaders hoped to forestall revival of the Western Bypass highway proposal.

WASHINGTON COUNTY LEADS THE WAY

A lightly used freight rail line ran parallel to Highway 217 and appeared to offer a satisfactory alignment for a new commuter rail line. The former Oregon Electric Railway and the Southern Pacific Railway tracks had once hosted passenger service to Salem and Eugene. That service was discontinued in 1933. Ownership of the line had transferred over time to the Portland & Western Railroad for freight operations. The corridor was defined by the cities of Beaverton, Tigard, Tualatin, Sherwood and Wilsonville. Oregon House member Tom Brian championed the project at the Oregon legislature. U.S. Senator Gordon Smith and Representative David Wu actively pursued federal support for the project.

Consultants were hired in 1996 to study the possibilities, but TriMet had its hands full with Westside MAX, and General Manager Tom Walsh elected not to take a lead role in this consideration. TriMet believed that it was a good idea

[96] Budnick and Redden, February 9, 2006

that was ahead of its time, but sat in the back of the room. The project advanced, however, and eventually arrived on TriMet's doorstep for final design. Fred Hansen was then general manager and eventually became convinced that TriMet needed to own the project. TriMet took over the lead role in September 2002.

UNIQUE CHALLENGES

This was a unique project for a variety of reasons. It would extend from the Beaverton Transit Center to Wilsonville with three intermediate stops: the Nimbus office park (Washington Square), downtown Tigard and downtown Tualatin. The project would be the nation's first suburb-to-suburb commuter rail line. It would share tracks with existing Portland & Western Railroad freight trains and, with a lean project budget by typical commuter rail standards, would depend on few bus connections and small Park & Ride lots. Additionally, the southern segment serving Wilsonville would be outside the TriMet district. In 1989 Wilsonville replaced participation in TriMet with its own South Metro Area Regional Transit (SMART) service. The project also represented a major investment for what was to be peak-hour-only service.

Because of those factors, TriMet and Metro had difficulty convincing the Federal Transit Administration that the project had sustainable ridership potential. Between 3,000 and 4,000 daily riders were forecast for the line by 2020, half of them new to transit. The region's integrity and credibility were on the line when the federal agency at last offered 50 percent funding for the project. The cost of building the Westside Express Service (WES), escalated, and the federal share shrank to 36 percent.

Negotiations with the Portland & Western Railroad dictated that much of the track required reconstruction, and sidings needed to be relocated. The upgrades allowed commuter rail trains to achieve speeds of up to 60 mph, which the line had not seen in many years. Stations required special "gauntlet" trackwork to achieve safety clearances, and signal systems had to be upgraded. Complete track rehabilitation was expedited with an all-in-one P811 track machine. A new section of mostly in-street track was installed on the reconstructed Lombard Avenue in downtown Beaverton in coordination with the respective local jurisdictions. The alignment passed through wetlands associated with Fanno Creek and the Tualatin River, necessitating some bridge and trestle rehabilitation.

Safety became a concern and a focus as the new line approached its grand opening. Thirty-two trains a day would cross 29 grade crossings at up to 60 miles per hour. Community and emergency responder training sessions were held, and grade crossings were scrutinized for optimal signal and gate protection. Under pressure from Tualatin, TriMet designed quiet-zone grade crossings that met requirements for mostly horn-free operation.

Perhaps the toughest challenge was finding a diesel railcar that could meet stringent federal rules for North American operation, as the last diesel railcar in the U.S. had been built in the early 1950s. While in common use in Europe, European prototypes did not meet federal crash standards for mixed-freight railway operation. As a limited commute operation, only four rail cars were required. The order included three powered railcars and one trailer car. Colorado Railcar was new to the commuter railcar business and struggled to satisfy the TriMet contract and, with TriMet's help, was able to fend off bankruptcy until after the TriMet order was fulfilled. A dedicated maintenance facility was constructed in Wilsonville for these unique cars.

While early studies of the line carried an estimated cost of close to $75 million, the final project budget rose to $161.2 million in response to necessary trackway rehabilitation, systems protections and extraordinary railcar costs driven by federal requirements. In February 2009 the 14.7-mile WES commuter rail line opened, providing weekday rush hour service between Beaverton, Tigard, Tualatin and Wilsonville. It connects with MAX in Beaverton and adds an alternative to I-5/Highway 217 driving for commuters in Washington and Clackamas counties. WES averaged more than 2,000 daily boarding rides in 2014, and ridership continues to grow.

In 2009, TriMet purchased two additional Budd Company Rail Diesel Cars (RDCs) from the Alaska Railroad. TriMet refurbished the cars, originally built in 1953, and they entered service on January 24, 2011.

In 2017, TriMet bought two additional Budd RDCs from Allearth Rail, LLC who purchased the vehicles from Dallas Area Rapid Transit's Trinity Railway Express (TRE) commuter rail service. TriMet began refurbishment of the vehicles in 2018. They were originally expected to enter service in 2019 but, due to budget deferment, they are now expected to be in service in 2021.

A SECOND MAX LINE INTO CLACKAMAS COUNTY

While construction progressed on the Green Line along I-205, Metro—with TriMet's support—continued to plan a second phase of rail service into Clackamas County. Reaching agreement on station and Park & Ride locations required many hours of community and Milwaukie City Council meetings. This latest line, the Orange Line, would extend from the interim Yellow and Green Line terminus near Portland State University east along Southwest Jackson Street and then descend on a long structure, weaving through I-5 ramps to serve the emerging South Waterfront District and the significant Oregon Health Science University facilities built and planned for the district. Connecting the dots, the line would extend over the Willamette River to the Oregon Museum of Science and Industry and Oregon Rail Heritage Center, which—together with South Waterfront—was dubbed the Innovation Quadrant. After crossing the Oregon Pacific Railroad spur at grade, the line would follow the southern and western edge of the Union Pacific Railroad, deviating down the middle of Southeast 17th Avenue before running between the Union Pacific Railroad and Southeast McLoughlin Boulevard into downtown Milwaukie. The line would end just south of town with a Park & Ride structure at Park Avenue.

Two downtown Milwaukie stations and another large Park & Ride structure at the south end of downtown were proposed initially. In the end these were reduced to a single downtown station and a structured parking lot to the south. Station locations, particularly with respect to the Waldorf School, and the plight of the small Kellogg Lake beside the parking structure were the source of considerable controversy. The conversation was much like the one TriMet had experienced in Gresham 20 years before, with fears that light rail would overwhelm the scale of the community and introduce undesirable behaviors.

CLACKAMAS COUNTY BOLTS

Clackamas County's Board of County Commissioners had voted three times over many years to support and move the Portland-to-Milwaukie Project into design and construction. This included approving the alignment via the locally preferred alternative in 2009; an intergovernmental agreement in 2010 obligating funding and cooperation for preliminary engineering, final design and construction; and a supplemental intergovernmental agreement signed in August 2012 that reduced the county's cash contribution, allowed in-kind contributions and limited permit fees and development charges.

Based on the approved finance plan, TriMet signed a full funding grant agreement with the Federal Transit Administration. That binding Federal agreement, the sale of bonds and issued construction contracts obligated the district to deliver the multimillion-dollar project.

After the ink had dried on the intergovernmental agreements and construction was under way in 2013, anti-light-rail activists secured the necessary signatures for a ballot measure that would put any county contribution to light rail, then or in the future, to a vote of county residents. With a 39 percent turnout, measure 3-401 was approved with 60 percent of the vote. The county, however, was already legally bound to uphold its $19 million commitment to the light rail project. The measure's author, Eric Winters, said, "The measure will, however, require the board of county commissioners to come before the voters if it wants to devote any more resources to Portland-Milwaukie light rail, or to any other light rail line in the future."[97] Clackamas County commissioners sent a letter to TriMet in February 2013 proposing the termination of light rail line just north of the Clackamas County boundary at Tacoma Street, in Multnomah County. In reply, TriMet Board President Bruce Warner expressed disappointment in the letter and asked whether the county should call into question the fulfillment of county commitments in a May 2013 special election ballot. "At this point, no modifications as to scope are possible, and there is no 'funding uncertainty' that would change the project's 'key elements.' The whole project will be built as agreed to by all the regional partners, including [Clackamas] county," Warner said.[98]

As a consequence of the fall 2012 vote, voters were again asked in May 2013 to weigh in, this time approving a reduction in the county's cash commitment in exchange for other project contributions, including the funding of street and signal improvements at the Park Avenue terminus and the transfer of two small land parcels along the line.

The vote also provided for a continuing control agreement that assures TriMet's sustained control of the light rail asset. Measures 3-424 and 3-425 would have authorized funding to help pay for the expansion and sell a strip of land, respectively. To measure 3-424, 56 percent of voters said no to expansion funding. On measure 3-425, voters in a different part of the county approved the property exchange with TriMet.

In July 2013, following both votes and responding to a suit filed by TriMet, Circuit Court Judge Henry C. Breithaupt ruled the county had breached its contractual

[97] Manning R., Clackamas Voters Want to Approve Light Rail Funding, September 19, 2012
[98] Harbarger, TriMet Tells Clackamas County It's Too Late to Stop Light Rail, February 11, 2013

commitments when it held up a portion of its previously approved funding for the project. The judge said that the recent ballot measures do not "…excuse performance by Clackamas County of its obligations under the intergovernmental agreements." Judge Breithaupt noted, "It is important to recognize that those agreements were acts by the parties in a long string of actions by each of the parties…for the purpose of carrying forward a common decision to build the light rail system…." TriMet General Manager Neil McFarlane applauded the decision, saying that, "We're pleased that the court upheld the long-standing commitments that TriMet and the county have made. We also remain committed to working with the county while it completes its final obligations to the project."

THE BRIDGE OF THE PEOPLE

Just as the Robertson Tunnel had presented a civil engineering challenge during construction, but would become the highlight of the Westside MAX line, the new cable-stayed bridge over the Willamette River—an engineering feat—would become the centerpiece of the Orange Line. Since opening in 2015, Tilikum Crossing, *Bridge of the People*, has served as a vital cross-river connection for bus, MAX and Portland streetcar, as well as pedestrians and bicyclists. The bridge does not need to lift for ships and boats to pass under it. The bridge completed the Portland Streetcar's eastside loop. Its multimodal function would fulfill its name, Tilikum Crossing, Chinook jargon for "bridge of the people."

The west bank station links to the Portland Streetcar and the Portland Aerial Tram up the hill to the Oregon Health & Science University. People on foot and bicycles reach the new bridge from the Eastside Greenway and the Willamette Greenway. The potential future extension of the streetcar to Lake Oswego would further enhance this confluence of modes and routes. On the east bank, the bridge connects with the Esplanade, the Oregon Museum of Science and Industry, the Oregon Rail Heritage Center, Portland Opera, All Classical Portland radio, Portland Community College and more development to come in that emerging district. A series of land swaps and compensation facilitated the construction of the Oregon Rail Heritage Center that today lies at the confluence of four modes of rail transportation—light rail, streetcar and both mainline and short line railroads. The bridge, with its panoramic view of downtown, has been a popular walking and cycling destination.

In 2019 another innovation promoting sustainability was added to the bridge. Twelve vertical-axis wind turbines, paid for by funds remaining when the project was completed under budget, were affixed to existing poles and began producing up to 1,000 watts of electricity an hour.

Tilikum Crossing, *Bridge of the People,* 2015

The new Orange Line opened on schedule in fall 2015 and $48 million below the $1.49 billion project budget. "Not only are we improving our transit system with this project, we're delivering it on time and under budget," said TriMet General Manager Neil McFarlane. Ridership for the line, however, has been slow to meet projections pegged at 17,000 weekday riders by 2016 and 22,800 average weekday trips by 2030. Ridership was 12,160 in January 2019. The difference stems from any number of reasons including a drop in gasoline prices from over $3 per gallon to just $2. In 2016, Dave Unsworth, then TriMet's director of project development and permitting, reported to The Oregonian, "I think gas prices were significant. People are motivated by convenience and cost, and people weigh those differently." Projections also did not anticipate the impact of the recession on regional development. Transit consultant Jarrett Walker told The Oregonian that the goals of light rail go beyond serving the existing audience. "Most light rail lines are designed to encourage denser and more sustainable development in addition to serving people who are there now. Their ridership is almost always disappointing in the short term."[99]

A new pedestrian bridge near the Clinton St/SE 12th Ave MAX Station, spanning both the Orange Line and Union Pacific tracks—from SE 14th Avenue north of the tracks to SE 13th Place at SE Gideon Street on the south—is slated to open in summer 2020. Although part of the original scope, the bridge was deferred in 2010 when the federal funding for the project came in below earlier expectations. With the strong support of the surrounding community and the City of Portland, TriMet successfully secured approval from the Federal Transit Administration to construct the new bicycle and pedestrian bridge using remaining Portland-Milwaukie Light Rail Transit Project funds.

STREETCAR TO LAKE OSWEGO

The proposed extension of the Portland Streetcar to Lake Oswego would relieve serious traffic congestion on Highway 43 by re-purposing an historic right-of-way south from Portland along the west bank of the Willamette River. Adding road capacity in this corridor is next to impossible, given the narrow and steep right-of-way for much of its length. In 1984, at the urging of Earl Blumenauer, then a Multnomah County commissioner, a consortium of public agencies—including the City of Portland and Lake Oswego, Multnomah and Clackamas counties, the Oregon Department of Transportation, TriMet and Metro—was formed. In October 1988, they purchased the abandoned Southern Pacific Railroad alignment. Historically, the line carried passenger and freight trains since 1887, and beginning in 1914, it also carried the Red Electric interurban rail cars. Passenger service was discontinued in 1929 and freight service in 1983. In 2003, TriMet contracted for the rehabilitation of five deteriorated wood trestles along the alignment and placed fill under a fifth trestle at a cost of $550,000. These improvements allowed the nonprofit Willamette Shore Trolley to safely conduct tourist trolley operations and preserve the right-of-way for future transit purposes. In 2004, a regional Rails to Trails study began preliminary planning for a multi-use trail and regular streetcar service along this line, connecting to the Portland Streetcar terminus in the North Macadam District. Next came a full outreach effort.

The study considered phasing and implementation strategies, mode and cost assessment, and the means of integrating streetcar, bike and pedestrian facilities. The proposed project would have extended 5.6 miles from South Waterfront to downtown Lake Oswego, with a Park & Ride lot at the southern terminus. Four additional streetcars would be needed for the extension, assuming 15-minute service. The conceptual capital cost was set at $70 million in 2008 dollars.

In December 2010, federal environmental studies were completed. In February 2011, the project's steering committee—comprised of elected and appointed officials from each of the project's jurisdictions—lent its support. A community advisory committee agreed. In spring 2011 Lake Oswego, Portland and Portland Streetcar Inc. all voted to approve the Lake Oswego Streetcar.

Within a few months of these approvals, however, the climate of support gave way to controversy. In 2012, at the request of the City of Lake Oswego, further study of a streetcar connection between Lake Oswego and Portland was abruptly suspended. Project partners, however, remain committed to preserving options for the Willamette Shore Line right-of-way, perhaps with a first segment from South Waterfront to the Sellwood Bridge within the City of Portland.

In April 2015, the Metro Council voted to unlock $5.86 million in bond funds, intended for engineering and environmental studies for the project, and redirect most of the money to high-capacity transit project development in the Southwest Corridor and along Southeast Powell Boulevard and Division Street between Portland and Gresham. The decision was made with the unanimous support of the Metro-led Joint Policy Advisory Committee on Transportation. General Manager Neil McFarlane

[99] Njus E., MAX Orange Line Riders Aren't Showing Up As Predicted, October 13, 2016

praised the reallocation decision as an example of strong regional collaboration: "This was really a very broad regional conversation." Conditions on the funds, which originated in a tax-exempt TriMet bond in 2010, required that they be spent for specific transit project development activities—meaning they couldn't be reallocated toward other transportation priorities like trails or roads. The Powell-Division Transit and Development Project received $1.5 million and the Southwest Corridor Plan received $3.5 million, both to be matched by local governments and potentially the federal government. The remaining $861,000 was allocated for safety improvements along the publicly owned rail line in the Lake Oswego streetcar corridor so the vintage summertime trolley could continue carrying sightseers along the Willamette River and hold the right-of-way for potential revival of the streetcar study.

DIVERSITY IN CONTRACTING

TriMet has established a strong commitment to engaging diverse community members in its workforce and business procurements. TriMet adopted its first goals for engaging minority- and women-run contractors in 1982. Two decades later, the agency again demonstrated its commitment to fair practices by creating the Diversity and Transit Equity Department, which reports directly to the general manager.

While diversity values permeate all aspects of TriMet operations, major construction projects provide a particular opportunity to reach diverse communities. Each light rail project sets diversity goals, and each new project requires a longer reach. Lessons learned on one project are put into practice on subsequent ones.

Disadvantaged Business Enterprises (DBEs) are small, for-profit businesses that are at least 51 percent owned by individuals defined by the federal government as, "socially and economically disadvantaged." By demonstrating practices that secure significant levels of DBE participation and workforce diversity, TriMet has been able to deliver major projects at the best price, ahead of schedule and millions under budget.

A proven strategy for increasing the diversity of individual workers and the contractors who hire them is to split large contracts into smaller ones, appropriately sized for minority- and women-owned firms, which typically are not large. While put into practice for the Westside MAX project, the program was not formalized until the Interstate MAX project came together. The Airport Red Line project was not tracked, as that work was performed under a design-build contract with Bechtel Corporation. Participation rates have been exceeded for every project for which targets were established.

RAIL CONSTRUCTION PROJECT	GOAL	ACHIEVED
Westside Blue Line	Not established	17 percent
Interstate Yellow Line	16 percent	19 percent
I-205 Green Line	16 percent	17 percent
Portland to Milwaukie Orange Line	20 percent	25 percent
Washington County Commuter Rail (WES)	16 percent	17 percent

TriMet's commitment was shared by its large contractors, whose support was crucial to the success of these efforts. The Interstate Yellow Line project, by virtue of its presence in a historically diverse and disadvantaged community, became the first test of the program. The DBE participation for that project meant that $35 million went to those firms. An aspiration for 17 percent of total labor hours in each apprentice trade to be performed by state-registered apprentices was exceeded, with 25 percent or more apprenticeship hours worked. Apprentices accounted for more than 18 percent of hours worked, with minority and female apprentice hours providing almost eight percent of total project hours.

A post-project report prepared by TriMet found that, "although contractors had to show only good-faith efforts to improve workforce diversity, over 30 percent of the Interstate MAX workforce was comprised of women and racial and ethnic minorities…women comprised 10 percent of the project workforce and racial minorities, 23 percent." The report also noted that of 249 subcontractors on the Interstate project, 17 percent (45) were from North or Northeast Portland and eight percent (22) were DBE subcontractors from those communities.

TriMet has continued this commitment as it looks to new capital projects. In July 2018, the TriMet Board of Directors awarded a pre-construction contract for the Division Transit Project to Raimore Construction, a certified DBE with a 20-year history of work for TriMet, dating to the construction of the Yellow Line. Selection for pre-construction services positions Raimore to receive the largest DBE contract in Oregon history when construction of the Division Transit Project begins in 2019. The award put Raimore Construction on the road toward its decades-long goal of graduating from the DBE program and sustains TriMet's commitment to equitable, sustainable and fiscally prudent business practices. The TriMet Board has also sought workforce diversity goals similar to its jurisdiction partners.

WORKING WITH THE RAILROADS

For most of TriMet's rail projects, the acquisition of railroad right-of-way has been essential—and difficult. America's

CONSTRUCTING MAX WHILE **BUILDING BUSINESS**

by Maurice Rahming, O'Neill Electric president

My business, O'Neill Electric, was bringing in little more than $1 million annually in 2002. That year we were selected to provide duct banks, grounding and cathodic protection for Interstate MAX and the Ruby Junction expansion. We've been engaged on TriMet jobs ever since. In 2014, we exceeded $14 million and are on track to add another $1–2 million in annual sales this year. We are hiring; we have close to 60 employees now.

I have long been an advocate for advancing the participation of people of color and women in the workforce, along with increasing demand for minority- and women-owned businesses. In recent years I have been active with the Metropolitan Alliance for Workforce Equity, which is recognized as an historic partnership between building trades and community-based organizations.

Two of our workers are success stories in themselves. Both played huge roles on the Orange Line. Born in Guadalajara, Mexico, Camilo Marquez was a farmworker until about nine years ago, when he joined the electrical workers' apprenticeship program. We hired him during his apprenticeship. Today he is superintendent of all the electrical work on Tilikum Crossing, the Orange Line bridge—including the complicated art lighting that changes with conditions in the Willamette.

Another O'Neill standout, Miriel Aguirre came from his birthplace in Michoacán, Mexico, to work in low-paying food service jobs in the U.S. Some seven years ago Miriel joined the electricians' apprenticeship program and went to work for us. He has supervised electrical work, including all the duct banks and conduit, on the Orange Line's east side. Miriel appreciates having a challenging job with a good salary and benefits. These stories reveal the underlying benefit of giving support to small, minority-owned businesses: we are helping workers move from poverty into family wage jobs, buy homes and pay taxes. This is the best kind of economic development.

While TriMet is not the only factor in our success, it helped. Light rail projects gave our company the opportunity to do different types of work and to work on a larger scale. Our role has grown. For the Orange Line, for instance, in addition to all the electrical work, we functioned as a sort of sub-prime contractor for several buildings that house electronic and other equipment. Stacy and Witbeck, the overall prime, entrusted us to hire subs and manage construction of these facilities.

The light rail experience has helped O'Neill Electric catch the attention of project owners outside Portland. In addition to work for Sound Transit in Seattle, we have won U.S. government contracts in a number of locations. Locally and elsewhere, we've been selected as general contractor for nearly a dozen projects.

I appreciate TriMet's ability to provide opportunities to so many small contractors, including minority-owned businesses like mine. With each new project TriMet has become even more engaged and flexible. Through its large infrastructure projects, TriMet has made a meaningful, positive impact on the development of local, minority-owned businesses.

Incidentally, I am a big fan of public transit. Transit lets people get around who might not be able to afford a car, or who live too far from work to bike, or who have mobility issues.

I believe rail transit, in particular, attracts business investment. It's fixed, so you know your investment is secure. You can cancel a bus line but you can't stop running trains. Portland and TriMet have made some good choices over the years.

railroads are near sovereigns by virtue of many years of federal legislation and Supreme Court decisions. They are beyond the reach of eminent domain claims by cities, states or transit districts. Through skilled and patient negotiation, combined with strategic lobbying, TriMet acquired necessary rights from five railroads over more than 30 years of building rail lines. From the Banfield days to the Orange Line, attorney Tuck Wilson led these complex negotiations for TriMet and, for the Westside Project, he led as TriMet's Executive Director of Capital Projects.

As the redesign of the Banfield was being planned, it was evident that additional right-of-way would be needed if light rail was to fit between the freeway and the existing Union Pacific Railroad. Howard Burnett of the Union Pacific, however, was supportive of light rail and worked with the Oregon Department of Transportation (ODOT) to free up the right-of-way. TriMet also acquired approximately five miles of right-of-way for the Banfield line from Portland Traction Company through east Multnomah County to Gresham. The Banfield and all subsequent extensions required rights to traverse the Steel Bridge, secured by lease and sublease from ODOT and Union Pacific in the 1980s. In 2006, TriMet led negotiations on behalf of ODOT to secure a 25-year extension of the lease across the Steel Bridge, including bridge modifications required by the Green Line.

The Westside MAX Blue Line extension to Hillsboro necessitated acquisition of right-of-way and rights from the Southern Pacific, Burlington Northern Santa Fe, and Union Pacific railroads. Negotiations for five miles in Beaverton required compensating Burlington Northern and Southern Pacific for re-routing freight traffic and rail bed improvements. TriMet had to obtain rights from Union Pacific to permit Burlington Northern to use the Steel Bridge.

The Interstate MAX Yellow Line extension to the Expo Center required arrangements with Union Pacific to close five at-grade crossings and rebuild access to its Albina Rail Yard with a new bridge and ramps over the railroad's busy sidings and approach to the rail yard.

The diesel-powered Westside Express Service (WES) commuter rail line, connecting Beaverton and Wilsonville, involved joint use agreements with Portland & Western Railroad that allowed TriMet and the railroad to use the same tracks under complex operating arrangements. Fifteen miles of track were rebuilt to meet stringent safety standards. Portland & Western engineers receive continuing compensation from TriMet to operate the commuter rail vehicles. Reaching agreement on the construction and ongoing operation of WES proved to be the most challenging of any of TriMet's railroad negotiations.

By 2009, the fate of the Portland-Milwaukie MAX light rail project required breaking an impasse with Union Pacific. TriMet needed several miles of Union Pacific property and an agreement to share several at-grade crossings. Most challenging was the railroad's insistence on 50 feet of clearance from their right-of-way, rebuilding all customer spur lines and mitigating light rail impacts on Brooklyn Yard. An interesting byproduct of the lengthy negotiations was an agreement to replace a narrow culvert under the Union Pacific mainline tracks with a new, fish-friendly passage for Crystal Springs.

Common to all of TriMet's railroad encounters was the commitment by the region's congressional delegation to support these projects in communications with senior railroad officials. Each experience underscored the value of understanding the personalities of railroad negotiators and their constraints. Discovering arrangements to enhance railroad financial performance helped mitigate the issues stemming from TriMet operations next to rail lines. As always, the need to meet project schedules helped sustain momentum, even in the face of obstacles.

REAFFIRMING THE COMMITMENT TO SAFETY AND SECURITY

Safety has always been paramount in TriMet's operations. Cameras on vehicles, the presence of TriMet-funded police, the addition of K-9 units and specific operator safety training all figure in TriMet's focus on maintaining a safe and secure transit system. Nonetheless, unfortunate incidents have occurred throughout TriMet's history. The first light rail line encountered several automobile conflicts early in its operation. In November 2007 an elderly man was beaten on a Gresham MAX platform, triggering a call for increased police patrolling of the system. A "Guardian Angel" voluntary security group was formed within the community to ride the MAX system, and Gresham police also started riding the trains on that portion of the Blue Line.

TriMet's lowest moment occurred near midnight on April 24, 2010, when a bus making a left turn in Portland's Old Town crashed into a group of pedestrians, killing two and injuring three others. A $4 million settlement with plaintiffs was reached in August 2013.

This was the worst tragedy in TriMet's history triggering a comprehensive top-to-bottom review of its operations, including reviewing every bus line, every lane change, turn and bus stop location. An independent consultant interviewed employees and critically reviewed documents and procedures. Key changes included elevating safety to the executive level with the hiring in March 2011 of a safety and security executive director reporting to the general

manager, launching annual bus operator recertification and changing how operator feedback on safety concerns is handled.

General Manager Neil McFarlane created a Safety & Service Excellence Task Force in July 2010 to further the work of the consultant's comprehensive safety review. The task force, chaired by former TriMet General Manager Tom Walsh, included stakeholders with key areas of expertise including public safety, professional drivers, pedestrians, bicyclists, a TriMet bus operator and a TriMet rail operator. McFarlane challenged the group to, "focus on how to migrate TriMet to the highest levels of safety performance and thereby improve our performance in all areas of our business." The task force looked at the culture of safety within the agency, the physical operating environment and the behavior of individuals that interact with the system. The task force held a series of public meetings and wrapped up its work with 19 recommendations that were incorporated into action plans.

A line-by-line review of every bus route was conducted, looking for possible safety issues (such as stops or turns that might be unsafe or illegal) resulting in some stops being closed or moved and routes adjusted to put safety first.

TriMet also elevated its efforts to educate riders—especially youth—on how to be safe around buses and trains. A Safety Education Advisory Committee is composed of community representatives with a shared interest and stake in promoting safe interactions between bicyclists, pedestrians, drivers and transit users. Safety messages are included in most rider materials on the website, in brochures and on signs at bus stops and rail stations. Safety awareness campaigns accompany the opening of new rail lines and major service changes. Outreach staff work directly with schools to educate faculty, parents and students on how to behave safely around buses, MAX and WES.

Orange Line MAX platform cameras, 2015

TriMet's dynamic operating environment means that safety is more than a priority, it is a core value and the philosophy used to make all decisions. This includes everything from hiring and training employees to operating and maintaining vehicles. Every TriMet employee is charged with embracing safety as a value.

The Tri-County Public Transportation Improvement Plan (PTIP) described in the next chapter calls for spending funds to add cameras, lighting and improve sightlines at stops and transit centers that need additional security improvements. These improvements would be focused on projects located in disadvantaged areas.

BELT TIGHTENING AND REBUILDING: GETTING BACK TO BASICS

THE GREAT RECESSION

TriMet's payroll tax is highly sensitive to economic changes. In fall 2009, the board began implementing a series of service reductions and fare increases to balance the budget. The Great Recession that officially began in December 2007 hit the Portland region and TriMet hard.

In July 2010 Neil McFarlane, who had taken a lead role in advancing TriMet's capital program, was appointed as general manager, following Fred Hansen's tenure. He was immediately faced with three great challenges—TriMet was still reeling from the recession, a continued response to the pedestrian tragedy was needed, and labor contract negotiations were not proceeding well. Neil initiated a five-year plan that included a renewed focus on the customer, pursuit of financial stability and development of partnerships that would attract new ridership.

While the recession put a damper on service and facility enhancements, several notable achievements also marked this period. In 1996, the platforms for a future Gresham Civic Drive station were anticipated when the east end of the Blue Line was double-tracked, but the station platforms were not installed until adjacent transit-oriented development was constructed as part of a planned Gresham Civic Neighborhood development.

The new station opened in fall 2010 at a cost of $3 million. The Rockwood/East 188th MAX Station was reconfigured to complement plans for the former Fred Meyer site and intersection redesign. The new station elevated safety and security priorities with new platforms, modern fixtures and a 58-foot-high art installation entitled Rockwood Sunrise. This $4.95 million project was funded by the state's Connect Oregon II program and the Gresham Redevelopment Commission. It was completed in May 2011.

TriMet also received a boost from the federal American Recovery and Reinvestment Act, which made available over $30 million for much-needed capital refurbishment and energy-saving projects.

During the recession, TriMet fell behind in replacing its oldest buses. The agency sought to blunt the fiscal pinch with a $125 million general obligation bond proposal submitted to voters in November 2010. The package aimed to address cost pressures associated with increasing service to elderly riders and customers with disabilities. The newer buses would provide more convenient boarding for persons with mobility challenges and take pressure off the more expensive door-to-door LIFT service. The package included new low-floor buses and access improvements at bus stops. It was a tough sell during a recession and the measure failed. In January 2013, the City of Boring left the TriMet service area. Vintage Trolley service was discontinued in 2014.

LABOR STRIFE, AGAIN

In November 2009—in the midst of the Great Recession—TriMet's contract with the 2,100-member Amalgamated Transit Union (ATU) expired. TriMet, like most public bodies, was forced to wrestle with the rapidly rising cost of employee health coverage and retiree health and retirement benefits. What followed was a prolonged management and labor face-off that was unprecedented in TriMet's history. Engagement ranged from the workplace to the Oregon legislature, the legal arena and the media. It became all too personal at times for the lead participants.

During periodic collective bargaining sessions over many years, TriMet had not proposed to the ATU a significant reduction to employee health and retiree costs. In 2009 the unresolved union contract was adding $5 to $10 million to TriMet's annual budget shortfall and curbing the increasing costs was a challenge for all participants. The ATU believed it was being asked to carry too much of the budget burden. "For far too long, the labor agreement and the workforce have been made the scapegoats for TriMet's financial difficulties," said ATU Local 757 President Bruce Hansen.[100]

It was reported that disagreements ranged from the petty and personal to serious and substantive. Management was rolling back benefits the union had gained over the years. The Northwest Labor Press identified issues ranging from eliminating use of employee vending machine profits to pay for an annual employee picnic to the right of union staff to purchase the agency's group life insurance at their own expense. By far the biggest source of contention was TriMet's redistribution of health care costs.[101]

In July 2012, the independent arbitrator in the contract dispute ruled in TriMet's favor, with a retroactive contract that expired the previous November. There was some irony in the ATU's loss of the arbitration ruling. For many years the ATU had urged the legislature to grant the union the same status as prison guards, firefighters and police—prohibiting them from striking, but granting them the right to binding interest arbitration. Under binding arbitration, an outside arbitrator decides which proposal to accept, with no opportunity for combining elements from the two proposals. TriMet had resisted the change for many years, but in 2009 the legislature adopted the ATU proposal. Historically, organized labor has fared well in binding arbitration, particularly when management is proposing to reduce wages or benefits. However, the strategy backfired when the arbitrator found in TriMet's favor, citing the extraordinary cost of benefits. General Manager Neil McFarlane said, "Today's ruling is terrific news for the entire region, especially our riders, as we were facing another $5 million in service cuts if we had lost the arbitration. It provides quality benefits to our union employees, while beginning to reign in unsustainable health care benefits. This is the first step in realigning our benefits to be in line with the market. It's a good first step, but we're in a marathon. We face many years and several contracts to truly make our benefits financially sustainable. Until we reach that point, TriMet will continue to face financial challenges."

By 2012, TriMet and the ATU were again conducting tense contract negotiations. TriMet's lead negotiator, Randy Stedman, said the core issues in the negotiations were wages and health care costs: "We're asking for our union employees and retirees to share in the cost of their health care benefits at a level comparable to TriMet's peer transit agencies and, with that, we're able to ensure TriMet's fiscal stability for years to come." Challenging long-standing practice, the ATU sought public negotiations, which management did not believe would be productive.

Over the summer of 2014, TriMet grew frustrated by the reluctance of the ATU to schedule negotiating sessions and

[100] McIntosh D., ATU-TriMet Conflict Accelerates, Jan. 15, 2013
[101] ibid

consider compromises proposed by management. TriMet eventually filed a complaint with the Oregon Employee Relations Board (ERB). With the board's urging, negotiations began in earnest.

Some of the proposed cost-saving proposals were removed from consideration by the ERB, but in October 2014, after protracted deliberations that included 37 negotiation and eight mediation sessions, the TriMet board and ATU entered into a new labor contract. The agreement called for active and retired employees to share more of the cost for their health care and included annual wage increases for 2014 and 2015. Under the previous contract, employees paid no portion of the premiums. The hard-fought contract would run from December 2012 through November 2016. Over the life of the four-year contract, TriMet would avoid paying approximately $50 million in wages and health care benefits, compared to the 2009–2012 contract terms. More importantly, contracts going forward would reduce TriMet's long-term liabilities.

The economic recovery from the recession and the new labor contract put TriMet on a long-term financially sustainable path, allowing the restoration of service hours to pre-recession levels and the successful completion of the MAX Orange Line.

RECOVERY AND RESTORATION

TRANSIT FUTURES

By the fall of 2013, TriMet was implementing service improvements that included added trips and schedule changes to relieve overcrowding and shorter waits for transfer connections. TriMet expanded the Frequent Service network, comprised of 14 bus routes, which was carrying roughly 56 percent of ridership. With the new improvements, ridership on Frequent Service lines rose steadily. In addition to biannual service upgrades, the TriMet Board voted in 2014 to extend the duration of a single bus or rail fare from two hours to two and a half hours, making it easier to transfer without paying a new fare.

Between 2011 and 2016, TriMet engaged Portland area communities in a process to envision a 20-year expansion of bus service. The process divided the region into five subareas—Eastside, Westside, Southeast, Southwest, and North/Central—and developed Service Enhancement Subarea Plans for each. The process relied on significant stakeholder outreach which included current riders; neighborhood associations; business organizations and large companies; social service providers; institutions like schools, colleges, and hospitals; and jurisdictions. To support the plan's development, TriMet staff looked at demographic and trip pattern data for the region. Finally, individual jurisdictions provided short- and long-term growth redevelopment plans to help guide the service enhancement subarea plans. The long-term vision for each service enhancement subarea plan identifies opportunities to improve bus service and provides guidance as TriMet considers each new Annual Service Plan. Recommendations from each of the five service enhancement subarea plans are as follows:

Westside Service Enhancement Subarea Plan

- More north/south service for intra-county travel by residents in the south seeking employment opportunities in the north.
- Last mile connections to reach many jobs located just beyond a reasonable walking distance from transit.
- Improved frequency as development on the Westside continues and urban amenities provide the opportunity to serve more persons with more frequent bus service.

North/Central Service Enhancement Subarea Plan

- New routes and more coverage on existing routes for the neighborhoods not served as comprehensively as others.
- More frequency and hours of service on existing routes to help relieve overcrowding and to add more service at the beginning and end of the day.
- Shuttles for some communities where traditional fixed-route service is not cost-effective, yet some demand for bus service remains.
- Service over the Fremont Bridge, connecting the Northwest neighborhoods with those to the North and Northeast.

Eastside Service Enhancement Subarea Plan

- More north/south service that improves regional connections to jobs, education, health care, affordable housing, and essential services.
- Improved service on existing routes to provide more frequency, longer hours of service, and better schedule adjustments.
- Shuttles for some communities where traditional fixed-route service is not cost-effective, yet some demand for bus service still remains.

Southeast Service Enhancement Subarea Plan

- More east/west service to provide new access for growing communities and employment centers.
- Shuttles for some communities where traditional fixed-route service is not cost-effective, yet some demand for bus service remains.

- Improved service on existing routes to provide more frequency, longer hours of service, and better schedule adjustments.

Southwest Service Enhancement Subarea Plan

- Route reconfigurations that serve growing job centers in areas other than Downtown Portland. This is especially true for east/west service.
- Increased service levels where existing bus service significantly lacks frequency and service only runs during commute hours.
- Shuttles for some communities where traditional fixed-route service is not cost-effective, yet some demand for bus service remains.

In 2016, TriMet kicked off a 10-year Bus Service Improvement Plan, leading to the largest ever single bus service expansion in agency history in September 2018. TriMet expanded weekly bus service by more than a thousand additional service hours. Fall 2018 service improvements brought the return of 24-hour bus service; gave riders round-the-clock transit access to Portland International Airport and created the eastern-most, north-south Frequent Service bus line. In March, TriMet also added three new bus lines, improving bus service in East Portland, Gresham and Washington County. A route extension placed service for the first time over the I-405 Fremont Bridge, connecting Northwest Portland with North/Northeast Portland.

KEEP OREGON MOVING

In July 2017, with bipartisan support, the Oregon legislature passed House Bill 2017, also known as Keep Oregon Moving, which for the first time ever, established statewide funding for general transit service. The bill was passed easily and with more bipartisan support than predicted—highlighting Oregon's urgent need for better transportation. The bill was signed by Governor Kate Brown on August 29, 2017, and went into effect on July 1, 2018. House Bill 2017 is a $5.3 billion package for improvements in Oregon's transportation systems funded with a series of new or increased taxes:

Governor Kate Brown signs HB2017 on August 29, 2017

- Gas tax: Four additional cents per gallon in January 2018 and two additional cents every two years until 2024.
- Bike tax: A $15 tax on bicycle purchases of $200 or more.
- Car registration fees: Increase the base fee to $56 and additional fees based on mileage ratings, starting in 2020.
- Transit payroll tax: An additional 0.1 percent on all employees.
- New car sales: 0.5 percent.

The new employee payroll tax for transit benefited public transportation throughout the state with a dedicated, reliable long-term source of funds. This tax increase was projected to provide TriMet with $40 to $50 million annually, beginning in January 2019. Keep Oregon Moving required establishing a broad-based regional citizen advisory committee to develop initial recommendations for using the new funds. The committee met over the course of eight months and presented its recommendations to the TriMet board. The recommendations included:

- Low-income Fare: On January 24, 2018, the TriMet Board approved a new Low-Income Fare Program that provides half-price fares for individuals and families below 200 percent of the federal poverty level. That program was introduced to the public on July 2 of that year and quickly had over 10,000 qualified participants.
- More equitable service: Service improvements would target low-income communities by extending bus routes and increasing frequency. Connections to employment, services and recreation were to be emphasized.
- Addressing congestion: Bus service was also to be improved in the region's busiest corridors—addressing an increasing demand for more frequent transit service.
- Making an initial down payment toward the conversion of TriMet's bus fleet to non-diesel vehicles through the purchase of up to 80 battery-electric buses.

A FRAMEWORK FOR TRANSIT IMPROVEMENTS

House Bill 2017 made TriMet the responsible agency for coordinating the state public transit program within the tri-county region. As the Qualified Entity (QE), TriMet oversees the region's Statewide Transportation Improvement Fund (STIF) planning process and manages STIF funds. TriMet also prepares and submits the Tri-County Public Transportation Improvement Plan (PTIP) to the Oregon

Transportation Commission. TriMet's Five Transit Futures Service Enhancement Subarea Plans helped to identify geographic and service gaps in the system to be targeted for new, extended or expanded service. The initial PTIP was developed in accordance with approved STIF Rules except that 'local plans' were developed and approved by the TriMet Board of Directors in its role as the QE. The PTIP directly references service enhancement plans developed by TriMet leading up to PTIP adoption.

The Unified Service Enhancement Plan assembles the service enhancement subarea plans for approval by the TriMet Board of Directors. That plan directly references the PTIP along with additional service enhancements within the tri-county region not limited to the TriMet's service district. The five chapters of the Unified Service Enhancement Plan are also tied to the STIF Rules.

Both the Unified Service Enhancement Plan and the PTIP included comprehensive outreach and engagement with stakeholders at every level. This is essential input to the development of the service enhancement subarea plans and helps to establish supportive partnerships, transit improvement priorities and possible funding allocations, including those of interest outside of the TriMet district in Clackamas, Multnomah and Washington counties. The PTIP further reflects the consensus of the ODOT's Public Transit Advisory Committee regarding service improvements within the service district.

In spring 2018, the public was asked to set priorities for transit system improvement through workshops and an online survey. The Public Transit Advisory Committee also embraced the individual plan recommendations from cities and transit districts outside the TriMet service district, but within the tri-county area. The committee appointed a regional coordination subcommittee to recommend specific improvements to enhance transit connections between service districts.

Regional long-range, 20-year population and employment forecasts were considered, to help better gauge the vision for transit. The Five-Year PTIP planning horizon accounts for community growth, projected STIF revenue and transit service options. TriMet staff examined how the current transit system helps connect people with jobs. A Transit Equity Advisory Committee developed a Diversity and Transit Equity Index to aid in planning transit service investments. The resulting map was approved by the HB 2017 Public Transit Advisory Committee in May 2018.

PTIP service enhancements that improve the quality of bus service are just as important as providing bus service to areas that do not currently have any transit service. The PTIP includes recommendations to:

- Increase the number of trips on bus lines to reduce wait times between buses.
- Upgrade bus lines to 15-minute or better Frequent Service most of the day, seven days a week.

Bus #3913 at launch of expanded Line 24 route, providing the ceremonial first ride across the Fremont Bridge since the bridge's opening in 1973. March 2019

- Introduce 12-minute or better Frequent Service on the highest ridership bus lines and Portland Streetcar most of the day, seven days a week.
- Bring back 24-hour bus service to the region. Begin new, late-night bus service to Portland International Airport when the MAX Red Line isn't running.
- Begin service earlier and end service later on some bus lines and add new midday service on lines that don't currently have midday service.
- Add more weekend service to the system to help people make trips during all days of the week.
- Improve frequency on the Portland Streetcar.

All transit expansions and improvements in the plan serve areas identified in the PTIP as having a high-equity need. This program has propelled TriMet's 10-Year Service Improvement Plan with over 50 significant service improvements implemented since Spring 2016. These improvements to both bus and MAX service are listed in the appendix. More improvements are planned for fall 2019 and beyond.

OTHER PLAN ELEMENTS

- Regional Coordination and Community/Job Shuttles: Often times, fixed-route transit is not economically viable in areas with low development density and under-developed street networks—areas that are often home to high-paying middle-skill manufacturing jobs. However, the region has a long history of finding creative ways to help economic development by forwarding federal, state, or local grant funds to community-based organizations to operate community employment shuttle services to reach these areas. HB 2017 also required that funding be used to facilitate trips between the TriMet district and areas outside the district, trips that also can be supplied by shuttle services. The PTIP includes funding for both types of community and job shuttles to be provided to community or third-party operators. Initially, 13 shuttle service areas were recommended.
- Senior and Disabled Transportation Services: The PTIP sets aside funds for community-based transportation services for seniors and people with disabilities. These may include shopping and medical shuttles, on-demand services and transportation provided by volunteers with mileage reimbursement. The services are operated through bids by private third parties that would fill the gap between regular fixed-route service and TriMet LIFT service.
- Enhanced Transit Concepts: The PTIP allocates $5 million to improvements that will increase the speed and reliability of bus services in the TriMet district. Strategies include smart signals that give buses priority, queue jump lanes that allow buses to move around traffic at intersections and changing lane configurations allowing buses to move more efficiently through congested areas.
- School Transportation: The STIF rules require that plans set aside a minimum of 1 percent of funds for school transportation for grades 9 through 12. The PTIP includes funds to expand the existing Access Transit Program to include high school students who are enrolled in free and reduced-price lunch programs. Schools participating in the Youth Pass Program would not be eligible for the Access Transit Program.

STRONG FINANCIAL FOOTING

Bolstered by the Keep Oregon Moving Act, in February 2019 TriMet learned that it retained the top Standard and Poor's (S&P) Global Ratings AAA bond rating having been credited with reliable revenue sources and future service increase plans. The opinion was based on new, stricter evaluation criteria, which considered the strength and stability of pledged revenue, as well as general credit quality. The AAA rating reflected the strong and stable creditworthiness of TriMet's bonds. The S&P report noted:

> *We believe TriMet's credit profile benefits from a strong degree of local and state support for transit funding, with historical payroll tax rate increases and, most recently the passage of state house bill 2017 (HB2017).*

The report attributed the AAA rating to a number of credit characteristics, including "Very strong" economic fundamentals, "Very strong" coverage and liquidity; and "Very low" revenue volatility.

S&P cited above-average income levels, low unemployment rates and continued population growth as credit support for TriMet's payroll tax revenue bonds. The firm also found that past and projected rate-increases and payroll growth led to strong pledged revenue growth, which offset increases in annual debt service requirements. Historical evidence of the low volatility with TriMet's payroll and self-employment taxes also contributed to the AAA rating. The report praised TriMet's business practices as credit supportive, noting the agency's efforts to build ridership through service expansion.[102]

[102] Redden J., TriMet Retains Top AAA Bond Rating, February 12, 2019

MAKING GOOD THINGS HAPPEN: **AN ADVOCACY STORY**

by Sherifa Roach, transit rider

At the turn of the last century a passenger ferry crossed the Willamette River connecting my neighborhood of Albina (inner N/NE) to Northwest Portland.[103] Soon the construction of various bridges and the ascension of the automobile rendered such a service obsolete. On March 3, 2019, TriMet put bus service on the Fremont Bridge for the first time since it opened to traffic in 1973. Thus, roughly a century after the ferry ceased operations, mass transit passenger service to this particular span of the river has resumed.

I am visually impaired, transit reliant, and live just four blocks from the east side approach to the Fremont Bridge. For years a trip to NW involved a bus transfer at the Rose Quarter then a ride over the Steel Bridge. This took upwards of an hour (sometimes more), yet in a personal vehicle, the same trip takes less than 10 minutes via the Fremont Bridge. I was effectively excluded from a quadrant of the city that many of my neighbors enjoyed with ease. I never bothered to seek employment in Northwest Portland, nor was I able to patronize services offered there with any regularity. For over a decade I erroneously assumed TriMet was not permitted access to an interstate bridge. When I opened a bicycle repair shop at my commercially zoned residence, I learned from customers I was not the only one bothered by this gap in TriMet's service.

After I attended a TriMet open house to express my concerns, a customer recommended I take the free PBOT: Traffic and Transportation class offered annually at PSU. People who have taken that class 'get things done' here in Portland he told me. In the (2016) class I gained access to the mentorship of its stellar faculty, and to a TriMet Senior Planner. I learned TriMet had been considering a route over the bridge for decades, and that the extension of the #24 bus line that traveled N/NE Fremont Street between Gateway Transit Center and Legacy Emanuel Hospital (also just four blocks from the bridge) was on the drawing board. However, the extension was unlikely to be implemented anytime soon…unless they heard from more people to warrant it. From my mentors I learned that folks in the Northwest District Association (NWDA) were already working on this and had been for years.

At a NWDA Transportation Committee meeting I was entrusted with a recently drawn up persuasive solicitation letter addressed to all the neighborhood associations along the #24 bus line detailing the merits of an extension. It could help alleviate the congestion and parking issues, so pressing in the central city; provide alternate access to NW for employees, customers, and residents; and directly connect, by bus, two of the fastest growing neighborhoods in the city. I included this letter with my solicitations from neighborhood and business associations, local bike shops, leasing agents, developers, firms, nonprofits and institutions that operate in my area, as well as individuals. This letter gave me a legitimacy I would not have had on my own.

As a student of history, I was inclined to research the bridge itself. It is easy enough for a visually impaired person to appeal to one's empathy, but I feel the story of the Fremont Bridge and the river crossing itself, was a unifying force for my argument that helped bring together the interests of diverse parties. Historic revelations allow individuals to take ownership of common places, in this case a major piece of public infrastructure. And of course, there was the view—arguably the best in the city. Such a view is not quantifiable. Though fleeting in nature, the view from the bridge inspires us, and all Portlanders deserve access to its panorama.

[103] Schreiber S., The Volga Germans in Portland, 2019

FACILITIES PLANNING, UPDATING AND EXPANSION

Upon its formation in the 1970s, TriMet moved quickly to construct much-needed bus facilities and administrative offices. Thirty years later it was outgrowing those facilities. An early assessment conducted in the late 1990s called for a fourth bus operating base, perhaps to the north of downtown, but a later, more tightly constrained study concluded that needed capacity could be obtained from TriMet's existing properties, particularly at the Powell base to the east and the Center Street facility, TriMet's largest. The Powell facility had land on which to expand but had limited shop space. The Center Street facility had the opposite situation, being land locked, but offered some latitude for reallocating shop space. The Productivity Improvement Program had demonstrated the benefits of consolidating bus body shop operations at the Merlo base, thus freeing up maintenance bays at Center Street.

The same planning effort examined administrative needs. TriMet had leased office space to accommodate its capital construction effort. Core administrative offices in the Center Street complex were in desperate need of updating. There was also a strong preference for relocating the central dispatch and rail control center from Ruby Junction in Gresham to a more central and less weather-impacted location. The new MAX Orange Line traveling down the middle of SE 17th Avenue would present opportunities for reconfiguring the Center Street base. A grand plan anticipated doubling the office space at Center Street and placing a second, elevated level for parked buses next to the shop. Eventually, TriMet selected a more modest scenario that relocated employee parking lots to accommodate the Orange Line, consolidated the central dispatch and command center with the customer service call center at the Center Street operations headquarters and moved administrative offices to a new leased downtown location on SW 1st Avenue at Harrison Street. The leased offices on NE Holladay Street and improvised leased offices on SE 17th would be consolidated at Harrison Street. The plan also restored some bus parking at Center Street that over time had been given to TriMet's non-revenue cars and trucks. The renovations and complex reshuffling of people, offices, equipment, buses and cars was completed in 2014.

The next phase of TriMet's facilities plan was updating the Powell Garage to improve bus and employee circulation and safety at its access points, replacing and modernizing its aging buildings and accommodating 50 percent more buses, including larger articulated buses for the anticipated Division Transit Project. The garage was constructed in 1976 in conjunction with the I-205 freeway as a temporary facility—largely to house the bus fleet while the more substantial facility at SE 17th and Center Street was reconstructed. To make space for these improvements, the parking and dispatch of LIFT vehicles domiciled at the garage were moved in 2018 to the underutilized portion of the Powell Park & Ride on SE 92nd Avenue alongside I-205. Completion of the Powell Garage replacement and expansion is anticipated for 2022, 46 years after the "temporary" garage was constructed.

Powell Garage Rendering

Even as work proceeded at the Powell facility, TriMet recognized a need for additional capacity and searched for the site of a deferred fourth bus base that was considered in the late 1990s. The proposed facility on 4421 NE Columbia Boulevard will bring jobs to the Columbia Corridor and will support service expansion, with new bus lines and more frequent service anticipated over the next ten years. The site was selected based on appropriate zoning, adjacent land uses and access to major arterials. It will allow buses to begin and end their routes closer to their home base and minimize their time in traffic when not in service. Existing on-site buildings will be repurposed or removed to provide more space for buses and maintenance equipment.

TriMet and the Portland Bureau of Transportation are working together to define improvements for adjacent streets and sidewalks. The garage will employ about 330 bus operators, plus up to 100 support positions. TriMet's Disadvantaged Business Enterprise (DBE) program will maximize contracting with firms owned by people of color and women. A conservation zone will be protected along the site's Columbia Slough frontage. To start, the new garage will house buses from the existing biodiesel-mix fleet but will facilitate a transition to alternative fuels. The estimated $56 million facility is expected to be in service by late 2020.

RENEW THE BLUE

TriMet had already given bus stops, signage and other amenities a new look, but the Eastside MAX line was more than 30 years old and looking every bit of its age. A program looked at station and crossing make-overs to update amenities and improve rider safety. TriMet did a comprehensive review of the older Eastside MAX stations for safety and American with Disabilities Act (ADA) access beginning in 2011 with what was called the "Renew the Blue" program. Work was funded through Federal Transit Administration "State of Good Repair" grants equaling $2.46 million a year for five fiscal years. Work included upgrades to Eastside Blue Line stations from the Hollywood/NE 42nd Ave Transit Center in Portland to the Cleveland Ave Station in Gresham. Harry Saporta, then TriMet's Executive Director of Safety, Security and Environmental Services described the program:

> *These safety improvements were planned to better channel and guide pedestrians and bicyclists into controlled and predictable crossing paths. They also improve ADA accessibility and increased pedestrian awareness at crossing locations. Additionally, these changes were designed to help operators better identify a pedestrian's intent at a crossing. By fencing off large open areas where trespassers had easy access onto MAX tracks, both safety and security were enhanced.*

Renew the Blue locations included the Gateway Transit Center, the Division Street MAX crossing, 97th and East Burnside and several crossings in Gresham. Improvements included:

- Realigning sidewalks and crossings.
- Making crossings more perpendicular to the rail.
- Installing additional pedestrian warning signals.
- Directing pedestrians to safe crossings with pipe barriers.
- Upgrading ADA tactile strips (textured pavement markers).
- Installing pavement markings.

Gateway Transit Center improvements were first. Grade crossings there needed to be brought up to ADA and TriMet standards, including directing passengers with tactile pavement, railing and signage to encourage safe passage. The other 14 Blue Line stations, between the Hollywood/NE 42nd Ave Transit Center and Cleveland, entered a multi-year Blue Line Station Rehabilitation (BLSR) program. Ongoing improvements generally include installation of new signage and light poles with LED fixtures, CCTV upgrades, new shelter paint, new stainless steel shelter roofs, new windscreens with etched glass, replacement of platform tactile pavers, new railings, relocation of the Ticket Vending Machines (TVMs) to the Paid Fare Zone, enclosure of the end of platform buildings and installation of TransitTracker digital displays.

The first three sites for renovation were Gresham City Hall, East 122nd Avenue, and East 162nd Avenue. Gresham City Hall work was completed in 2017 and included new railings to create a Paid Fare Zone. East 162nd Avenue work was completed in 2018 and included the demolition of brick shelter walls and closure of the Burnside station mid-block crossings. East 122nd Avenue work was also completed in 2018. The safety and security upgrades, along with amenity improvements, gave the stations a lighter and brighter aesthetic.

Maintained track is essential for safe and reliable operation. By 2016, much of the MAX system was 30 years old and rail needed to be replaced, particularly at curves where wheel wear is greatest. Starting in 2017, TriMet has made major improvements in Portland City Center, near Providence Park and Lloyd Center, in the Rose Quarter area and in Hillsboro to rejuvenate the MAX system. Work included replacing switch machines, and sections of curved and worn rail, as well as improvements to the overhead wire system and rail ties to reduce heat-related delays. In fall 2019, TriMet completed improvements at the end of the line in Gresham, and in 2020 TriMet plans to tackle major rail upgrades on the Steel Bridge.

In addition to the Eastside Blue Line renovations, crews also spruced up the Washington Park Station in Spring 2017 with added colorful graphic wall coverings opposite the boarding platforms, upgrading LED lighting and new wall treatments in both elevator lobbies.

In February 2019, TriMet initiated the process to replace all 26 original "Type 1" light rail vehicles that have been operating since light rail service began in 1986. Type 1 vehicle maintenance costs are 28 percent higher than newer models and parts are increasingly scarce. The Type 1s surpassed the original equipment manufacturer's estimated useful life of 1.5 million miles of service per car

in 2014. Built by Bombardier, the units are expected to reach 2 million miles per vehicle by the time they're retired. Replacement vehicles will have updated mechanical and electrical systems, modern safety features and low floors to make boarding quicker. An order for the first 26 "Type 6" vehicles was placed in July 2019, and they could enter service as early as fall 2021.

In 2019, a contractor began the process of refurbishing the Type 2 and Type 3 light rail vehicles. Work includes rebuilding the HVAC system, interiors, fresh paint, new windows and exterior lighting. Each vehicle overhaul takes two to four months and will finish in 2025 with all 52 Type 2 and 27 Type 3 vehicles included.

TRIMET GETS A NEW GENERAL MANAGER

Neil McFarlane retired in February 2017 after a 27-year career at TriMet, including serving as General Manager since July 2010. Neil played a critical role in the development of the MAX light rail system having come to TriMet as second in command for the Westside Light Rail Project. As General Manager, Neil helped TriMet manage labor costs and benefits and weather the recession.

Doug Kelsey was appointed general manager in March 2017, having already served TriMet as Chief Operating Officer since November 2015. With his new lead assignment, Kelsey noted:

Doug Kelsey

> *It's an exciting time at TriMet as we expand service to meet the growing demand of the region. While we move full steam ahead, I am committed to improving our communication and collaboration with the community since we are stronger when we work together. I would also add that improving diversity and equity is a top priority so that our agency reflects our community that we, at TriMet, are so proud to serve.*

Kelsey's achievements had already included:

- Implementing a strategy to significantly improve rail on-time performance from 75 percent to more than 88 percent and on-time bus performance as well, from 81 percent to 86 percent.
- Implementing the agency's first comprehensive strategic business plan.
- Using key internal assessment and accountability performance indicators to improve the customer experience.
- Launching a rail safety review that led to a more than 200 percent reduction in rail rule violations.
- Improving the diversity of employees within the operations division.

Kelsey, a Canadian citizen, had worked at TransLink, the regional transportation authority in the Vancouver, British Columbia, metro area, where he served in many capacities including Chief Operating Officer. He was directly responsible for the transportation plans for the Vancouver Olympic and Paralympic Games, and supported the strategic plans of other Olympic Games, including London and Sochi. He has had an extensive career in the private sector, including employment at Shell and Starbucks.

Kelsey has fully embraced and championed TriMet's transition from a traditional transportation provider to a dynamic passenger-integrated mobility provider—one prepared to embrace new modes of travel and technology.

FARES BECOME MORE FAIR

TriMet's fare structure went though some significant changes over the years, moving from a flat fare structure to a three-zone system; to a complex, five-zone system (under the Self-Service Fare Collection demonstration); and back to a three-zone system. The most recent iteration of a zone-based system was created 30 years ago in an attempt to charge for distance-based trips that typically started in the suburbs and ended in downtown Portland. It kept fares lower for low-income or transit dependent riders who lived and traveled within the central city. Over the years, demographics and travel patterns shifted with more transit-dependent and low-income riders moving to neighborhoods on the fringe of regular or frequent service. In response to those changes, TriMet converted to a $2.50 flat fare system in September 2012. This made it simpler for riders and made the bus and train transfer times the same, at two hours. The change also emphasized a bargain $5 all-day fare. Youth fares were reduced by 40 cents for a single ride ticket and by $2 for a monthly youth pass. The downtown free-rail zone was eliminated. These changes promised savings of $8.7 million annually. These gains, however, were offset in early 2015 when the TriMet Board voted to extend transfer times from two to two and a half hours in response to pressure from Portland's bus riders union, *Bus Riders Unite!*, who advocated for 3-hour transfers. All of these changes set the stage for the rollout of an electronic fare system in July 2017.

MOBILE TICKETING

In September 2013, TriMet, C-TRAN and Portland Streetcar launched the TriMet Tickets mobile app. TriMet riders

THE ALCHEMY OF SUCCESS

by Neil McFarlane, former TriMet general manager

I am honored to have been a part of TriMet's first 50 years and hope that in some small way, I helped to shape the next 50 years.

Our region is changing rapidly. More jobs, housing and a million more people will soon be placed on top of a mostly static road system. This accelerated growth requires TriMet to quickly build out the rail system, make dramatic bus improvements, and embrace new transportation technologies and business models.

TriMet has done amazing work in the last 50 years. It has met the region's transportation challenges, building a legacy that has been surpassed by few of our peers. To me, there are five key reasons for TriMet's international reputation of excellence, the alchemy of our success if you will. They have served TriMet well in the last 50 years and I believe they will do so in the next 50. TriMet excels because it delivers what it says it will; builds strong partnerships and listens to the community; has a strong Board and a sound fiscal base; has great people; and is an innovator.

TriMet delivers "real stuff"

TriMet has the means, talent, determination and professionalism to get it done—whether it's a new bus line, a billion-dollar light rail project or anything in-between. With a history of delivering projects on-time and on budget the agency has achieved credibility and recognition for being a "can do" organization. Maintaining that record is essential, especially as the agency navigates growth, competition for resources and the complexity of the present challenges.

TriMet builds strong partnerships and listens to the community

TriMet has crafted its service and projects to align with partner goals and aspirations, creating strong partnerships along the way. Partners, including the FTA, the State, ODOT, cities and counties, and private companies, have seen TriMet's flexibility and "fresh thinking" as an important tool in advancing their own agendas.

Through public meetings, open houses, polls, focus groups and other community input, TriMet molds its service, plans and projects. Not everyone can love every result, but this effort has resulted in TriMet maintaining among the highest approval ratings of any public agency in Oregon.

Strong partnerships with ride-share firms and others offering "new ways for people to get around," will be an inevitable part of TriMet's future. In an increasingly active and diverse community, it is essential that TriMet continues to listen and respond.

TriMet leads through a strong Board of Directors and having long-term fiscal stability

The Governor-appointed Board provides a balance of skills, geography, gender and racial diversity. They are true volunteers, serving only because they care about the mobility and overall success of our region by focusing on long-term goals. The appointed Board, carefully curated by the Governor, has been a major reason for our success.

Meeting goals takes strong leadership and money. TriMet has the highest financial rating of any transit agency of its type. This history of fiscal stewardship has resulted in the region and the state entrusting TriMet with more resources, allowing the agency to deliver more and better service. Continued support of the employer payroll tax, together with a growing tax base provides TriMet the fiscal stability it needs to ensure long-term solvency.

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TriMet has great people

My greatest joy at TriMet was being surrounded by people who did their job well. A special event? No problem. Ten major bus service changes at one time—no problem! A new bus garage—let's dig in and get it done! TriMet has been blessed with both dedicated tenured employees and extraordinary new talent. There is no better team. The future workforce will need to be even more nimble with the rapid pace of technology and a growing region.

TriMet is an innovator

TriMet has been an innovator and a prudent risk taker. The agency was the first in North America to put low-floor light rail vehicles in service, and has been a leader in innovative public/private partnerships, such as the Airport light rail line. A more recent example is the development of the Hop Fastpass® system and its open architecture and partnership with Google and Apple. The list goes on and on. It is in the DNA of staff to look for new ways of doing business.

I have been tagged as an eternal optimist. I plead guilty. But I am an optimist because of what I have seen TriMet achieve. I have no doubt the next 50 years will be even more successful and offer further proof that mobility is key to creating vibrant and livable communities.

became the first in the nation to use a mobile ticketing app to ride both buses and trains. "The TriMet Tickets app is just one of the steps we're taking to improve the experience for our riders wherever and whenever possible," said TriMet General Manager Neil McFarlane. "We're excited to put this mobile ticket in the palm of their hands and make riding easier. We hope everyone will join us as we kickoff this new era at TriMet." With the TriMet Tickets app riders were able to easily buy tickets on Android or iPhone devices. The TriMet Tickets mobile ticketing app was the first big step toward a state-of-the-art electronic fare system.

HOP FASTPASS®

In February 2017, TriMet and partners C-TRAN and Portland Streetcar started beta-testing a new electronic fare payment system, named Hop Fastpass®. In July of that year, Hop Fastpass® was publicly launched. This allowed seamless transit fare payment throughout the Portland-Vancouver region with contactless payment devices such as a Hop card. It could be used on TriMet and C-TRAN buses, Portland Streetcar, MAX Light Rail, WES Commuter Rail and C-TRAN Vine bus rapid transit routes. Shortly after the public launch, riders also were able to use a contactless bank card or smartphone with a mobile wallet connected to a bank card to pay for their trips. Just 18 months after its public launch, Hop Fastpass® saw its 20 millionth card tap.

The Hop Fastpass® card, a contactless smart card with stored value, uses ISO 14443-compliant RFID technology to replace paper tickets, passes, transfers and the related equipment. Cards are issued for standard adult, honored citizen and youth fares. The user "taps on" with the card upon boarding and stored value can be reloaded by phone using a credit or debit card account. Regardless of the number of daily trips, fares are capped at the day pass and monthly pass rates—simplifying the need for the upfront purchase of a daily or monthly pass. The system became simple, equitable and minimized the chances of theft or loss of tickets or passes.

TriMet worked with Google to launch a virtual card in Google Pay starting with a beta test in December 2017. In April 2018, TriMet launched the virtual Hop Fastpass® to Google Pay users, making it the world's first account-based regional virtual transit card on Google Pay in the world. The virtual card provided all the benefits of a plastic Hop card, with adult, honored citizen and youth fares available.

Hop Fastpass® reader on a downtown MAX platform, 2017

TriMet General Manager Doug Kelsey said of the launch:

> *TriMet continues exploring innovations to improve the experience of our customers. The combination of Hop and Google Pay puts transit riders in the Portland-Vancouver region on the cutting edge of technology while truly getting the best value with daily and monthly fare caps as they ride.*

Pali Bhat, Google's Vice President of Product Management, Payments, said:

> *We're excited to work with TriMet to help ease the daily journey for commuters. Google Pay aims to create an effortless, immersive mobile transit experience for users, removing the friction of getting a ticket and saving valuable time for busy commuters.*

In May 2019, Hop Fastpass® became the first transit fare card in North America to launch in Apple Wallet. TriMet, C-TRAN and Portland Streetcar were also the first in the world to launch Apple Pay Express Transit on iPhone or Apple Watch with both a transit fare card and credit and debit cards, offering local riders and visitors multiple ways to easily pay for trips.

With Apple Pay Express Transit, riders can truly tap-and-go by holding their iPhone or Apple Watch near the reader—there is no need to wake or unlock the device, open an app or use Face ID or Touch ID.

Doug Kelsey noted during the announcement:

> *TriMet has long been a leader in the transit industry, focused on the customer experience and ways to simplify riding transit. Now with the Hop card in Apple Wallet, our riders and our region take a major leap forward in transit fare payment.*

The Hop Fastpass® system is in wide and popular use as TriMet phases out the use of paper fare instruments. The ticket vending machines were converted to the Hop Fastpass® system in January 2019 to include new faceplates, ticket encoder hardware, and new software.

Using resources allocated through the Keep Oregon Moving legislation, on January 24, 2018, the TriMet Board approved a new Low-Income Fare Program. The program provides half-price Honored Citizen fares for individuals and families below 200 percent of the federal poverty level and 73 percent off the price of a monthly pass. Additionally, members of specific social programs are automatically eligible to receive an Honored Citizen Fare. The program was introduced to the public in July 2018 and quickly had over 10,000 qualified participants. Participation grew to over 15,000 by Spring 2019.

TRANSIT ACCESS

Improved bus stop amenities like shelters, benches, and lighting make riding transit more comfortable and encourage continued ridership. TriMet's Transit Amenity Development Program—including installation of new digital arrival displays in transit centers and MAX stations, and making bus stops ADA compliant where possible—is supported by STIP funds. Improvements include concrete bus stop landing pads, sidewalk connections and ramps. TriMet partners with local jurisdictions to advance improvements and leverage existing funding. These investments are distributed throughout the TriMet district and targeted toward areas with notable equity needs.

PEDESTRIAN ACCESS PROJECT

Every transit rider is a pedestrian, and excellent transit service is useless if safe and convenient access is not provided. In further consideration of the Total Transit Experience, TriMet has worked closely over the past decade with jurisdictional partners to enhance access to transit by pedestrians and cyclists. In 2011 TriMet partnered with cities and counties in preparation of an extensive pedestrian network analysis that highlighted the needs and opportunities for making sidewalk and crosswalk improvements on a priority basis to improve transit access. In particular, the project looked at areas where sidewalks are missing, traffic volumes are high, speed limits are high and pedestrian crashes have occurred in the past. TriMet analyzed 7,000 transit stops and made specific, actionable recommendations that cities, counties and the state can incorporate into community plans, project designs and funding decisions. Examples include:

- Adding or widening sidewalks.
- Calming traffic.
- Installing protected crossings.
- Adding street lighting.
- Adding landscaping.
- Planting trees.

The project identified ten focus areas as a starting point:

- City of Beaverton: SW Farmington Rd & SW Murray Blvd.
- Clackamas County: Clackamas Town Center Transit Center.
- City of Gresham: SE Division St & SE 182nd Ave.
- City of Hillsboro: Tanasbourne Town Center.
- Oregon City: Clackamas County Red Soils Campus.
- City of Portland: SE Division St & SE 122nd Ave.
- City of Portland: SE Powell Blvd & SE 82nd Ave.

- City of Portland: Hillsdale.
- City of Tigard: Tigard Transit Center.
- Washington County: SW Beaverton-Hillsdale Hwy & SW Scholls Ferry Rd.

This in turn has allowed TriMet to leverage regional flexible federal transportation funds to improve access to transit in partnership with the region's road jurisdictions.

In the meantime, the City of Portland has led the way in promoting pedestrian improvements, especially in transit corridors. The city's emerging PedPDX program is based on an affirmation that walking is a fundamental human right and the most fundamental means of transportation. The program seeks to make walking a safe, accessible, and an attractive experience for everyone in Portland by putting pedestrians at the forefront of city policy, investments, and design. Included below are the goals of the program.

- Equitable and Inclusive: Make Portland walkable and accessible for all, no matter who you are or where you live.
- Safe and Secure: Make walking in Portland safe and secure for everyone.
- Comfortable and Inviting: Provide a comfortable, inviting, and connected pedestrian network that supports walkable neighborhoods and strengthens community.
- Healthy People and Environment: Increase walking for transportation and recreation in Portland as a means of achieving improved health outcomes for all people and for the environment.

BIKETOWN AND E-SCOOTERS

The City of Portland has long been regarded as a bike-friendly city, yet it was slow to initiate bike sharing, which has become commonplace in Europe and already implemented in several U.S. cities. In July 2016, Portland joined over 60 U.S. cities, including New York, Chicago, Washington, D.C., San Antonio, Indianapolis, Boise and Austin, as well as 500 cities worldwide that have popular, safe and successful bike share systems. The BIKETOWN program makes 1,000 bikes available to ride from one point to another for a small fee. It is a partnership between the City of Portland's Bureau of Transportation and Nike, and is operated by Motivate, the world's leading bike share operator. The program's "smart bikes" use GPS technology to make bikes easy to find, rent and park. BIKETOWN is designed to be affordable and accessible, encouraging even more Portlanders to ride and allowing visitors to experience the city by bike.

Nearly 400,000 BIKETOWN trips were taken in 2018, resulting in a 28 percent increase in BIKETOWN ridership and an 87 percent increase in annual members for the same year. The program also offers bike rental through the Adaptive BIKETOWN program for people with different abilities.

Electric scooters provided further options for getting around Portland, first tested between July and November 2018 and again in 2019. During the 120-day pilot program, more than 700,000 paid rides on more than 2,000 scooters were made with an average trip length of 1.15 miles. While a survey showed that 34 percent of e-scooter trips would have been made by automobile, 10 percent replaced transit trips. With many questions regarding the safe use of e-scooters—the Multnomah County Health Department reported that scooter-related injuries accounted for roughly five percent of the 3,220 traffic crash injury visits to emergency rooms and urgent care centers—the City of Portland decided to conduct a second trial starting in spring 2019 to collect further data and to address identified problems.

In April 2019, the Portland Bureau of Transportation (PBOT) issued operating permits to three scooter companies: Bolt, Lime and Spin. Two more were added in June: Razor and Shared. The second pilot will run through April 2020. "Our first e-scooter pilot demonstrated two things: scooters have the potential to be a fun and useful transportation option for Portlanders, and we need to address significant safety and equity concerns. That's why we are launching this second pilot," said Transportation Commissioner Chloe Eudaly. "Our streets are a valuable public asset—if private industry wants access to our streets, they have to demonstrate alignment with our values and priorities, pay a reasonable fee for the privilege, and deliver social benefit. This second scooter pilot will allow us to gather more data, increase equity and accessibility, and make the most of this 'last mile' technology in Portland."

PBOT introduced key changes for the second pilot aimed at improving public safety, ensuring wide access to scooters, especially in East Portland, and providing funding for safety improvements. The five scooter companies will compete for a final contract.

A CLEAN ENERGY FLEET BY 2040

TriMet's diesel bus fleet burns six million gallons of diesel fuel annually—emitting an estimated 57,000 metric tons of carbon monoxide. Because it takes so many cars off the road, TriMet reduces net carbon emissions by 78,000 metric tons annually. TriMet aims to move away from combustion technology altogether, reducing emissions even further. In 2002, TriMet tested two diesel-electric hybrid buses. A decade later, eight more hybrids were added to the fleet. While those buses had some advantages, the modest

performance advantages did not support system-wide use. Electric bus technology has advanced significantly over the past few years, and electric buses have become more economical.

With two grants through the Federal Transit Administration's Low or No Emission Vehicle Program (Low-No) awarded in 2016 and 2017 TriMet will obtain ten battery-electric buses. In 2018, TriMet began testing a prototype American-made New Flyer Xcelsior CHARGE™ battery-electric bus. Thirty-eight other transit agencies, including King County Metro in Washington, are performing similar tests. Other cities, including New York City, Los Angeles and Winnipeg are using or testing these same battery-electric buses. The bus, powered by cutting-edge electronic technology, are generally quieter than the surrounding ambient noise, idling at about 39 decibels, and produce zero emissions, which means cleaner air. Regenerative braking reduces energy consumption. The buses are projected to be easier and cheaper to maintain, with fewer moving parts and fluids to replace.

TriMet's first battery-electric bus charging at Sunset Transit Center (above) and on Line 62 (below)

In April 2019, TriMet formally unveiled and deployed the first New Flyer Xcelsior CHARGE™ zero-emission bus on Line 62-Murray Blvd in Washington County. In what is believed to be a United States transit industry first, TriMet and partner, Portland General Electric (PGE), announced, at the April 2019 launch, that TriMet's all-electric buses will be powered by 100 percent wind energy. On August 1, the fifth New Flyer battery-electric bus entered service, making TriMet's Line 62 the first fully electrified, wind-powered bus route. On August 14, the TriMet board approved the purchase of five additional battery-electric buses from a competing manufacturer, Gillig, in order to compare. TriMet also plans to place a third order for three additional buses from Proterra.

The impact of the region's climate and terrain on electric bus operations has yet to be determined. An allocation of $53 million in State Transportation Improvement Funds (STIF) has allowed TriMet to initiate the larger electric bus pilot program that is planned to include an additional 70 battery-electric buses over a period of five years. The pilot program kicked off TriMet's commitment to a clean energy bus fleet by or before 2040, a nearly $500 million plan to phase out diesel powered buses. The STIF funds are going

HOLLYWOOD TRANSIT CENTER TRIBUTE

Honoring the lives that were lost and the lives that were touched by the assaults on MAX in May 2017.

The afternoon of May 26, 2017, three riders on board a MAX train approaching Hollywood Transit Center were assaulted after they stood up to a man who was harassing two young women based on their race and religion. Two of the intervening riders were killed and the third was left with life-threatening injuries.

The tragedy sparked an immediate and tremendous outpouring of love and support at the transit center. Thousands of people expressed their appreciation for the men who intervened and offered condolences to their families and friends. Words of healing and encouragement were left for the young women. Altogether, the messages, chalk art and bouquets of flowers created a moving and spontaneous temporary memorial.

We Choose Love

The attack forever changed lives and deeply affected TriMet and our community. To honor the lives lost, the strength of those who stood up to hate and the emotional outpouring in the days after the attack, artist Sarah Farahat and her team created a mural entitled “We Choose Love.” The mural transformed nearly 2,000 feet of wall space at the Hollywood Transit Center, weaving together color, text and images to invoke a transition from sunset to night. “Awakening,” a poem by Climbing PoeTree, a New York-based duo, winds through the space, with each line written in a different language:

Excerpt from “Awakening”

Climbing PoeTree

We were born right now for a reason *Somali:* Sababta aad hadda u dhalatay ayaa jirta
We can be whatever we give ourselves the power to be *Chinese:* 我们可以成为任何我们赋予自己力量的人
Give what you most deeply desire to give *Spanish:* Da lo que más profundamente deseas dar
Every moment you are choosing to live or you are waiting *Russian:* У каждого мгновения есть выбор-жить или ожидать
Why would a flower hesitate to open? Now is the only moment *Vietnamese:* Giây phút đó là đây
Raindrop let go, become the ocean *Chinuk:* K^{h}anawi ixt snas-t’ik, ixt-təmtəm k^{h}apa saltsəqw ukuk
Possibility is as wide as the space we create to hold it *Arabic:* اهِبِ كُسَمَّتْلِلِ ُهُقِلِخْنَ يذّلِا ءاضَفلا ةعس ةعساو ُتالمِتْحالا

Also depicted in the mural is the western peony, a native Northwest perennial traditionally used for healing grief, and Hamsa images symbolizing protection. The trains painted on the interior ramp walls include phrases from the spontaneous memorial that transformed the transit center in the days following the attacks. Finally, the dark blue walls facing the MAX platform show the peony dropping its seeds, symbolizing the difficulty of standing for what you believe, and the phrase “We Choose Love” emblazoned in large, golden letters.

toward the purchase of the buses, charging infrastructure, maintenance garage modifications, and repair equipment.

In May 2019, TriMet began testing an emerging fuel known as "renewable" or "green diesel." Renewable diesel performs just like petroleum, but it contains no fossil carbon. The agency plans to conduct a four-month test of renewable diesel in 180 buses based out of the Powell Operating Facility in East Portland. Most of the nearly 700 buses in the existing fleet are equipped with Cummins engines, which have been certified fully compatible with renewable diesel fuel. An independent assessment by Cummins found that particulate emissions dropped by 30 to 90 percent when using renewable diesel.

These tests will help to determine which alternative fuels will best balance operational performance with environmental impact. It may be that some combination of battery-electric, hydrogen, renewable natural gas or another promising fuel source may emerge. Alternative-fuel buses are in their infancy in North America. It's going to take a few years find the best path forward, while the agency continues to purchase diesel buses that will be on the road for about 16 years.

The costs of these buses could slow the conversion if they don't come down over time. Tax credits help with the significant cost. Conversion will take longer if state or national policies change and those funds are no longer available.

DIVISION TRANSIT PROJECT

Throughout 2014, Metro and partners from the cities of Portland and Gresham, Multnomah County, the Oregon Department of Transportation and TriMet set out to study transportation options in the Powell-Division corridor, which at the time was serving more than 18,000 weekday transit trips on existing bus routes, with more than 15 percent of commuters from east Portland taking transit to work.

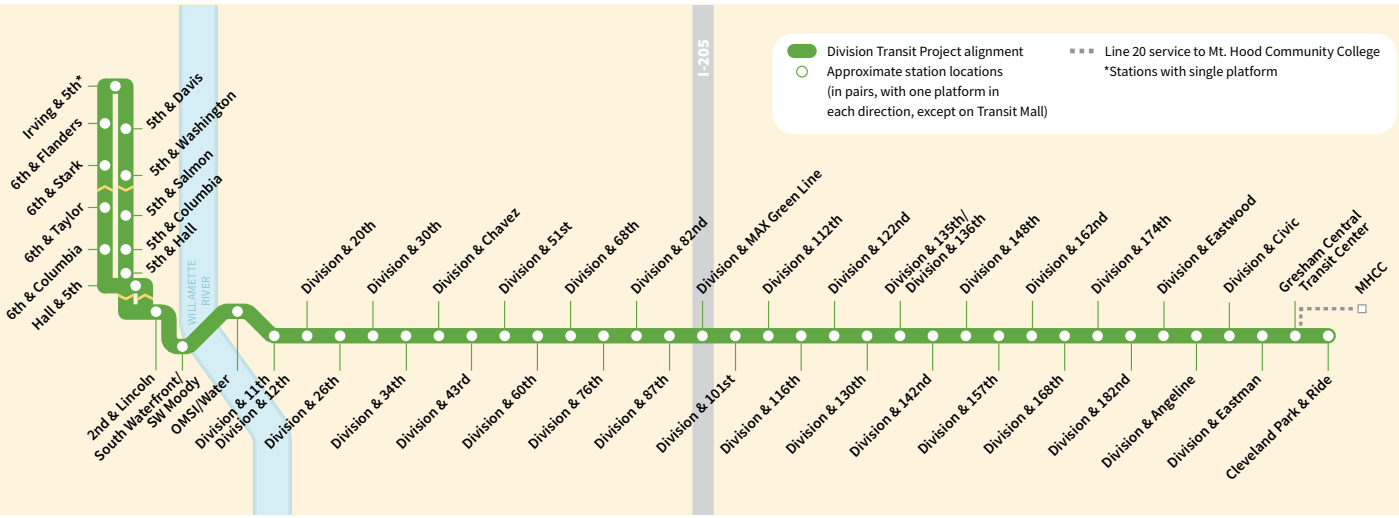
Options studied for this corridor, immediately to the south of the MAX Blue Line, included light rail, streetcar and bus rapid transit. In spite of the high transit ridership already in the corridor, from the outset there was skepticism from many study participants that light rail could be justified, given the proximity to existing light rail and the traffic demands already placed on Powell Boulevard. Key nodes along possible routes were studied, including Portland State University, the Innovation Quadrant, the southeast transportation hub, the Southeast 82nd Avenue Jade District, the Portland Community College southeast campus, the Southeast 122nd Avenue commercial district and Rockwood at Southeast 182nd Avenue, as well as downtown Gresham and Mount Hood Community College to the east. Service to Cleveland and Centennial high schools was also considered.

Armed with detailed land-use, demographic, traffic, cost and operational data prepared by Metro, in September 2014, the 22-member project steering committee reached consensus on bus rapid transit as the preferred mode for further study. Committee members discussed the merits of light rail for the long term and the equity implications of selecting one mode versus the other. Since spring 2015, the project team continued to study a range of bus rapid transit options with rail being out of consideration. In March 2015, a route following the Tilikum Crossing, Powell Boulevard and Division Street was adopted, with consideration of a crossover connection between Powell and Division at Southeast 82nd, 50th or 52nd avenues. Extensions through Gresham as far east as Mount Hood Community College near Troutdale were also studied. At the same time, project staff worked with communities in the corridor on economic development plans that protect valuable neighborhood characteristics. The "Locally Preferred Alternative" was approved in November 2016 by the cities of Gresham and Portland, the Multnomah County Commission and the TriMet Board of Directors. Metro transferred project leadership to TriMet on December 20, 2016.

The Division Transit Project emerged, which will improve travel between downtown Portland, southeast and east Portland and Gresham with easier, faster and more reliable bus service. The 15-mile project will improve bus service in this corridor by providing:

- Longer buses with 60 percent more capacity.
- Multiple-door boarding for briefer stops.
- Bus stations with shelter and amenities.
- Stations spaced to minimize travel time while providing convenient access for the most riders.
- Use of transit signal priority to reduce travel time by up to 20 percent.
- Service frequency of 15 minutes or better during peak hours.

The project connects Downtown Portland and Gresham with up to 40 stations between Union Station in Downtown Portland and the Gresham Central Transit Center. The route will traverse the Tilikum Crossing: Bridge of the People over the Willamette River and predominantly follow SE Division Street on the Eastside. A Gresham Central Transit Center connection with Line 20-Burnside/Stark will extend service to Mt. Hood Community College.



Division Transit Project route alignment with approximate station locations

The project will connect educational facilities at Portland State University, Oregon Health & Science University, Portland Community College and Mount Hood Community College. An existing transit-exclusive right-of-way is available from SE 8th Avenue and Division to SW Naito Parkway. TriMet continues to work with the Union Pacific Railroad to further improve travel reliability at the grade crossing at SE 8th Avenue.

While the Powell Blvd alignment would have served a low-income and more diverse community, the route would have had slower travel times for many riders—in comparison with existing bus service.

The 60-foot-long articulated buses are common in the Seattle area and in Vancouver, Washington, where C-TRAN has one rapid bus line and a second line set for completion in 2023. TriMet also operated articulated buses from 1982 until as late as 1999. The bulk of the project cost is attributed to the new buses and specially designed passenger platforms along the 15-mile-route.

The Federal Transit Administration announced approval of a Capital Investment Grant of $87.4 million for the Division Transit Project in April 2019, representing half of the estimated $175 million project cost. The balance of funds will come from TriMet and regional partners. “This important project improves mobility for the region while making critical safety and multimodal investments along Division Street,” said Congressman Earl Blumenauer. “I am especially pleased that it provides improved transit service to a part of our community that has been traditionally under-served. For too long, residents have faced unreliable, unsafe and unaffordable transportation options east of 82nd Ave. I’m proud of the work we did to secure this funding and I look forward to seeing the impact it will have on our community.”

As of the date of publication, the project is in the design phase and is slated to begin construction—encompassing stations, adjacent crossings and modifications at major intersections along the route—in late 2019, with service beginning in 2022.

SOUTHWEST CORRIDOR

A review of the Portland region’s high-capacity transit map shows a conspicuous gap in the southwest region. Historically, this corridor had been served by interurban lines and TriMet had installed an exclusive bus lane in the median of Barbur Boulevard in the 1970s. The corridor, defined by the cities of Portland, Tigard, Tualatin, King City and Sherwood, was selected by the Metro Council in 2009 as a component of the 30-year High-Capacity Transit System Plan. The area experiences significant traffic congestion on its three principal arteries—I-5, Highway 217 and Highway 99W. In addition, the area is expected to grow significantly in the coming years in both jobs and housing. Transportation options are limited by the Terwilliger Hills, the I-5 freeway and built-up neighborhoods.

In 2013, regional leaders established priorities to address a range of transportation, land-use, social and economic needs in the area, including local bus service and high-capacity transit; roadways, bikeways and sidewalks; and parks, trails and nature. They recognized the necessity of attracting private investment with a collaboratively designed funding strategy to make any of these improvements.

This “shared investment strategy” prioritized more than 80 roadway, transit, bicycle, pedestrian and trail projects. Collectively these improvements would bring much-needed relief to the area’s congested road system, improve local access and safety for bicyclists and pedestrians, and meet the region’s latent transit demand.

Two high-capacity transit alternatives emerged after the initial studies: light rail (MAX) and bus rapid transit (BRT). Public scrutiny of these options ensued and pressure to select a mode and an alignment along with associated roadway, bicycle and pedestrian projects in surrounding areas ramped up. BRT was considered as an option for transit service in the Southwest Corridor, however, research indicated that BRT vehicles would not have the capacity to meet rush hour demand as soon as 2035, ten years after opening. BRT, as compared to light rail, is slower, more expensive to operate per rider, has less potential capacity and can create more greenhouse gas emissions.

In August 2018, the study recommended a MAX light rail alignment serving Southwest Portland, Tigard and Tualatin. The proposed route was developed by partner staff from Metro, TriMet, ODOT, Washington County, Portland, Tigard, Tualatin and Sherwood with information from the Draft Environmental Impact Statement (DEIS) process and previous public feedback. Several factors influenced the initial route proposal:

- Minimize impacts to housing and businesses, as much as possible.
- Improve transit travel time.
- Locate stations in proximity to destinations for future riders (employment, health facilities, homes, etc.).
- Promote safety for all modes of travel.
- Assure efficient and cost-effective transit operation.

The route extends south from the Portland Transit Mall on Barbur Boulevard to the Barbur Transit Center. From there, it is to cross I-5 on a new bridge and run adjacent to I-5 to Tigard. The route serves the Tigard Triangle with two stations, crosses Highway 217, serves downtown Tigard and then is to run adjacent to the railroad tracks to the end of the line at Bridgeport Village.

The project is envisioned to include a connection to Marquam Hill, a shuttle to the Portland Community College Sylvania Campus, a new light rail maintenance facility, roadway improvements, and a selection of accompanying walking and biking improvements. Project partners also recognize the importance of a Ross Island Bridgehead improvement in Portland as part of a larger effort to improve mobility in the region. The Marquam Hill connection will extend from the planned Gibbs Street MAX Station on Barbur Boulevard, requiring some combination of pathways and mechanical facilities, such as an elevator. These features may be funded as single or coordinated projects.

With an anticipated travel time of just 30 minutes between Bridgeport Village in Tualatin and downtown Portland, the MAX line is projected to carry 43,000 riders on an average weekday by 2035. This means light rail could carry almost a fifth of the southbound rush hour commuters from downtown Portland.

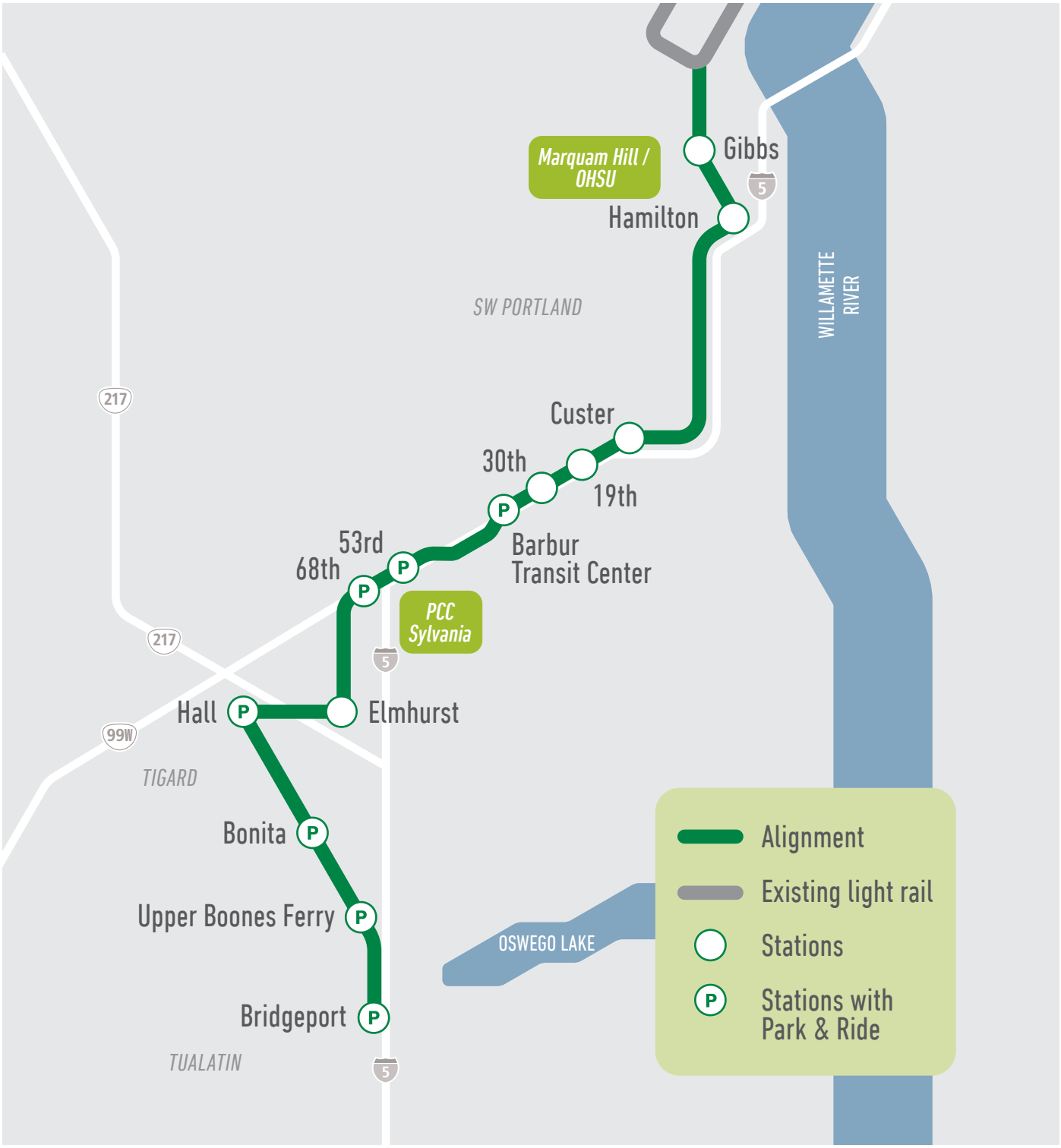
In the fall of 2018, the 12-member steering committee consisting of elected and appointed officials from partner jurisdictions prepared a recommendation that was reviewed and approved by the local agencies and jurisdictions. Project partners held public meetings and provided online updates to share design information and gather feedback from the community. Based on that review and recommendation the Metro Council adopted the final route as part of the Regional Transportation Plan in November 2018.

With the preferred route identified, the project moved into the Final Environmental Impact Statement (FEIS) analysis and design phase. The FEIS will refine route options identified in the Draft Environmental Impact Study (DEIS) intended to minimize impacts, reduce cost and improve ridership. Community involvement is a part of that process and is refining the route, station design, sidewalks, bike lanes, and roadway improvements. Workshop topics included the design of a link to Marquam Hill and the final connection from Bonita Road to Bridgeport Village in Tualatin. A 16-member Community Advisory Committee

Jennifer Koozer, with TriMet's community affairs group, at a community workshop, 2018

will continue to advise the steering committee and project staff by bringing a broad community perspective during the final selection of a light rail route and station placement. A region-wide transportation funding measure that could fund part of the proposed MAX line, along with other regional transportation projects, may be on ballots in November 2020.

TriMet and SW Corridor project partners are working on several initiatives to preserve and improve communities along the light rail route, including a Southwest Corridor Equitable Housing Strategy and a Metro Southwest Corridor Equitable Development Strategy.



Southwest Corridor March 2019 Preferred Alternative

INNOVATION IN SERVICE, TECHNOLOGY AND POLICY:
A LEGACY OF LEADERSHIP

Oregon is fortunate to have a legacy of pragmatic and collaborative leadership. TriMet's accomplishments are a result of the broad visions for Oregon expressed by Governor Tom McCall, Mayor Neil Goldschmidt, Senator Mark Hatfield, Congressman Earl Blumenauer and many others. In addition to these elected leaders, strong support from civic-minded business leaders and close community collaboration have plowed the Oregon soil that gave rise to the Portland area's world-class transit system.

Many observers have commented that Oregon and the Portland region stand out for their sustained and successful achievement of strong consensus behind the requests for federal funds to build the transit network. TriMet can take its share of credit for the outcomes of regional collaboration.

TriMet has borrowed from and contributed to the nation's collective expertise in transit and community planning and development. Lead staff at many local and national planning and engineering firms are former TriMet planners, engineers, managers and directors.

EARLY VISIONARIES

The Portland region did not always possess such homegrown talent. The first Portland park plan was prepared by outsiders—the Olmsted Brothers of New York—in 1904. TriMet's first master plan was written by DeLeuw Cather and Associates. As Portland refined its priorities in the 1960s and 1970s, the region attracted and cultivated talented and dedicated professionals. In many respects, since the 1970s Portland has been an incubator for innovative and creative ideas, plans and projects shaping urban transportation nationally and globally.

Relationships in the formative years of the 1960s and '70s reflected Portland's reputation as the "big little town." There was great energy and youthful creativity. Leadership was open and inventive. Architect Greg Baldwin noted:

> *There was a high level of faith—and naiveté. People were candid and open. Independently they followed complementary paths. What was unusual about the era was that a few fundamental truths and shared values were so evident, that opportunistic individuals were almost always inclined to capitalize or to complement the initiatives of others.*[104]

Baldwin observed that the early leaders were able to leverage public funds with private investment. There were no sacred cows: innovation and creative solutions were the rule of the day. It seemed that once the region was on this path there was no turning back.

Congressman Blumenauer reflected on his early years in politics:

> *It was a terrific time to have served your political apprenticeship. I felt like Tom Walsh and Neil Goldschmidt were sort of big brothers. People like Glenn Jackson and Don Frisbee were like uncles. They were approachable and things were open in a way that it was possible to make things happen.*[105]

Both Jackson and Frisbee were, at different times, heads of PacifiCorp. Jackson chaired the Oregon Highway Commission and a Frisbee protégé, Bill Robertson, served on the TriMet board.

REGIONAL RELATIONSHIPS

Good relationships connecting Metro and TriMet have been crucial to the region's transportation and land-use successes. As the region's designated Metropolitan Planning Organization (MPO)—assigned by the state to distribute federal funds—Metro played a key role in funding TriMet's capital program. While the Oregon Department of Transportation directed planning for the original Banfield line, Metro led light rail planning thereafter, in close coordination with TriMet. By the mid-1980s, all technical studies—transit simulations, travel demand forecasts and the like—were absorbed into Metro, with TriMet as advisor.

A long list of Metro staff championed this effort. Metro's transportation modeling guru for many years was Keith Lawton. Steve Siegel was the master of strategic and financial planning, while Andy Cotugno shepherded policy and regional consensus building. Richard Brandman guided the region's rail program through federal approvals. Champions of public transit on the Metro Council included David Bragdon, Rex Burkholder and, more recently, Bob Stacey.

[104] Baldwin, 2003
[105] Blumenauer E., 2001

The City of Portland had a more complex relationship with TriMet. City planner Doug Wright had a lead role in advancing the Banfield light rail project. Transportation planner Steve Dotterrer established many of the standards and policies that integrated TriMet planning with that at the city. For example, Dotterrer developed an unwritten rule that no Park & Ride lot would be established within five radial miles of Portland's downtown. Elsa Coleman, a transportation leader, kept TriMet and City of Portland objectives aligned during Westside MAX planning and construction. Portland Commissioners Mike Lindberg and Earl Blumenauer tirelessly promoted the rail program. Blumenauer moved on to shape national transportation policy. The leadership and vision of Portland Mayor Neil Goldschmidt was essential in TriMet's formative years. Mayor Vera Katz provided great support during the light rail development program. Portland Mayor Charlie Hales was a commissioner when he oversaw the building of the first Portland Streetcar segment. His sustained advocacy for rail transit and transit-oriented development earned him the nickname "Choo-Choo Charlie." As a consultant with the engineering firm HDR Inc., following his time as commissioner, Hales worked on streetcar projects across the country. Mayor Sam Adams presided over the further development of the Portland Streetcar network. Mayor Adams directed staff in the preparation of the Portland's Streetcar System Concept Plan.

There have been many heroes within these partnerships—too numerous to name.

SUBURBAN CHAMPIONS

Especially in the early years, the region's counties shaped TriMet's history. Multnomah County fostered TriMet's creation and lent inspiration for the first light rail line. TriMet's Richard Feeney, Bruce Harder and Tuck Wilson were of Multnomah County lineage. Don Clark, a former chairman of the Multnomah County Commission, was a staunch supporter of converting the Mount Hood Freeway into the Banfield light rail line.

Suburban champions were much in evidence. Gussie McRobert's blunt style as Gresham's mayor from 1988 to 1998 brought attention to her city, Portland's sometimes overlooked neighbor to the east. "As much as any single person could, Gussie McRobert put Gresham on the map," said Shane Bemis, who succeeded McRobert as mayor. She presided over years of rapid growth when Gresham was remaking itself largely through orientation to the light rail line. This was a time when Gresham, with help from Metro, facilitated some of the region's first transit-oriented development.

Beaverton Mayor Rob Drake became McRobert's counterpart on the west side as light rail wove its way through central Beaverton. Drake, too, stood up for station-area plans and an ambitious transit-oriented project, The Round.

Hillsboro assertively embraced light rail transit with cutting-edge station area plans—notably at Orenco and a transformed downtown. Hillsboro mayors Shirley Huffman and Gordon Faber, along with deputy city manager David Lawrence and lead planner Marion Hemphill, leveraged the coming of Westside MAX to rebuild Hillsboro's Main Street through a downtown-funded local improvement district.

In the region's southern portion, Lake Oswego Mayor Judie Hammerstad advanced the study of a streetcar extension to her city and led the National Streetcar Coalition. Mayor James "Jim" Bernard was a voice of reason in Milwaukie when it was difficult to sort out the winds of public opinion regarding light rail.

COMMUNITY ACTIVISM

Engraved on the Skidmore Fountain in Portland's Old Town are these words: "Good citizens are the riches of a city." Perhaps nowhere has that notion been truer than in Portland. The Portland region has succeeded where other regions have failed, thanks to community engagement and activism. Congressman Blumenauer noted:

> *I think part of our success was our citizen infrastructure. There was the expectation of what we were going to do. There were some extraordinary people; there was some real leadership. There was the expectation that there would be some collaboration, that it was open, that a 23-year-old kid could get into a corporate board room, that a 29-year-old Jewish Legal Aid attorney could get elected to city council, that a boy contractor could almost beat the most powerful person on the city council. It was open. There were some extraordinary people that came back. I'm not willing to accept that it was luck, although there were some close calls, but I do think the dynamic, the scale, the people, the ethic and the opportunities are far more important than the structure itself.*[106]

The community has been an essential collaborator with TriMet in the shaping of plans and projects. That relationship is at times complicated and even stressed, but the input has always been welcome.

An outside voice largely critical of TriMet and the region's multimodal transportation strategy has been John Charles from the libertarian Cascade Policy Institute. A transit rider

[106] Blumenauer E., 2001

BETTER TRANSIT WITH **COMMUNITY ENGAGEMENT**

by Jim Howell, Citizens for Better Transit co-founder

One of the crucial early TriMet decisions was to finally choose light rail in the Banfield corridor. Neither the City of Portland nor the Oregon Department of Transportation (ODOT) favored light rail, and TriMet was going along with them. Citizens for Better Transit had two people on the citizens advisory committee for the project, which at that time were selected not by the affected agencies but by neighborhood associations. I represented the Beaumont Neighborhood, and Doug Allen represented the Foster-Powell Neighborhood Association. ODOT and the city finally got light rail dropped (per a June 28, 1976, memo from Don Adams, the Oregon State Highway Division engineer who ran the CAC meetings). Incidentally, it seems that public officials today seem to show the same timidity regarding a farsighted solution to the southwest corridor as those in the past had regarding light rail.

We (and numerous others) continued to lobby for light rail and found an ally in Multnomah County Chair Don Clark, who got the entire board to ask for light rail to be put back in the project (see September 28, 1976, letter from the Multnomah County commissioners to Gov. Straub). Clark worked through county staff members Bebe Rucker, Dave Hupp and Roger Mellum, Commissioner Mel Gordon's assistant, with whom Citizens for Better Transit also met and found a sympathetic ear. Multnomah County's implied threat of a lawsuit helped give courage to TriMet, which by now had Bill Lieberman on staff, who understood the benefits of light rail and worked with Acting General Manager Steve McCarthy to assign consultants Wilbur Smith Associates and Howard Ross to study a Banfield light rail alignment. With their findings, TriMet's position was bolstered enough so that when the citizen advisory committee renewed meeting, we were no longer told to shut up about light rail, and the process could move forward on how to make it happen.

Ray Polani, co-founder of Citizens for Better Transit, played a key role in TriMet's early successes. He convinced TriMet to hire Don McDonald, the former general manager of Edmonton Transit Services, who was responsible for building the first modern light rail system in North America and became the project development manager of our first MAX line. Ray also convinced TriMet to hire Tom Matoff, a nationally known transit planner, who shepherded TriMet's highly successful route restructurings in the early 1980s and also managed MAX's successful start-up in 1986.

himself, Charles is no fan of light rail and has advocated free-market-oriented proposals for moving people. Another pair of critical voices were those of Ray Polani and Jim Howell. Often joined by Fred Nussbaum, Polani and Howell founded and led the Association of Oregon Rail and Transit Advocates (AORTA) and Citizens for Better Transit. These individuals were relentless in advancing progressive, practical (and sometimes less practical) and visionary ideas for improving public transit in Portland. Some of their proposals were implemented and others deemed to be "ahead of their time."

More recent advocacy has come from OPAL Environmental Justice Oregon. OPAL and an allied group, Bus Riders Unite!, believe that transportation is a lifeline to opportunity, and that public transit, especially in urban environments, is a basic human right. The group has worked with TriMet to extend transfer times to allow roundtrip errands on a single fare and has identified high-priority bus stop improvements. The group actively reviews TriMet's plans and programs to advance social equity in all aspects of TriMet's mission.

In 2013 TriMet established a new advisory committee focused on equity and fairness. The Transit Equity and Access Advisory Committee is made up of a diverse cross-section of community leaders appointed by the general manager. The 14-member panel meets monthly to provide input and guidance to TriMet's general manager and staff on fairness and equity considerations.

PRIVATE SECTOR PARTNERS

Portland's success in integrating land-use planning with public transit development has made the region an incubator for private sector excellence. Numerous local firms have provided a wealth of talent in all aspects of transit system planning, design and construction, transit-oriented development, strategic planning and community engagement. TriMet's rail development program long benefited from the guidance of project management firm Shiels, Obletz, Johnsen, led by Roger Shiels. Parsons Brinckerhof, CH2M Hill, David Evans & Associates, HDR Engineering, URS Corporation and many others have engineered projects from bus stops to bridges and tunnels. While several firms have lent excellent design services, Zimmer Gunsul Frasca has made the greatest impact on the design of light rail in Portland. Greg Baldwin, Ron Stewart and Joy Gannett were the lead ZGF architects, ably guided by TriMet (and former ZGF) architect Bob Hastings.

TriMet's relationship with many of these firms has been fortuitous. These firms have picked up TriMet talent and, likewise, TriMet has filled its ranks with talent from these firms. While there is a diversity of resources available nationally, TriMet has been fortunate to have a deep bench of local expertise. These individuals represent Portland's accomplishments to other cities and, in turn, bring home good ideas from other communities—cross-pollinating the nation's pool of transit talent, knowledge and skills.

LEGISLATIVE SUPPORT

From TriMet's early history, it has nurtured relationships with elected leaders. With the board appointed by the governor, relationships with Salem legislators are all but guaranteed. Governor Tom McCall was instrumental in TriMet's creation. Senator Jane Cease, chair of the Senate Revenue Committee, and Representative Glenn Otto, chair of the House Local Government Committee, were vital to TriMet's legislative program, which was not limited to light rail requests. Expansion of tax authority, the establishment of the self-employment tax for transit, revisions of the laws regarding TriMet's boundaries and other revisions of the Oregon statutes on public transportation were the work of their committees.

Representative Tom Brian, credited for being the political force behind the Westside Express Service (WES), helped save the South-North light rail proposal, which designated the $375 million match for a light rail line from Clackamas Town Center to Vancouver, Washington. Although accepted by the legislature after two special sessions in 1995, the project failed to get voter approval in Clark County, Washington. Brian, who became Washington County commission chair, lent his political support to the Yellow Line and, with his colleague Roy Rogers on the Washington County Commission, prevented a rift in Metro's Joint Policy Advisory Committee on Transportation (JPACT) by making the Yellow Line a priority. Ultimately their reward was getting the JPACT go-ahead for the WES commuter rail project.

State Senator Margaret Carter was crucial in lining up votes to pass the cigarette tax. She also was a key supporter of the expansion of light rail. She was often the Oregon Transit Association's link to suspicious and sometimes hostile downstate interests who appreciated her effort to work "across the aisles."

There is a similar honor role of federal legislative supporters, most already mentioned. Senator Hatfield rescued the first light rail project in 1981 and used his influence to secure a timely $320 million appropriation for that first project. Representative Les AuCoin secured light rail support in the House of Representatives for the second light rail project.

TriMet educated the entire congressional delegation and their staffs on the merits of transit. Some staff members became experts because of the Portland rail projects, and their congressional connections helped them build careers. When Les AuCoin left the U.S. House, Senator Hatfield hired Mark Van de Water, who was AuCoin's transportation expert for the Senate committee he chaired. Jenna Dorn, also a Hatfield committee aide, went on to become administrator of the Federal Transit Administration (FTA). Kathie Eastman, the transportation expert for Representative DeFazio, was hired away by Blumenauer to work on many projects in Portland. Jeff Boothe, head of the New Starts Working Group, a national association of transit lobbyists, was first a Hatfield aide and then a TriMet lobbyist. Similarly, Michelle Giguere, an AuCoin staffer, became a D.C. representative for ODOT and then Clackamas County.

Notably, Grace Crunican went from being a Senate Appropriations Committee staffer, where she managed TriMet's request for the vintage trolley and downtown street additions, to the Portland Bureau of Transportation as deputy and then to head the Surface Transportation Project. From there she became deputy FTA administrator, where she directed TriMet regarding how to get the Hillsboro extension approved at the U.S. Department of Transportation. After a few years running Seattle's transportation department, Crunican became general manager of Bay Area Rapid Transit in San Francisco.

Greg Walden had been a state senator and helped negotiate the successful state appropriation for the South-North project while in Salem. Representative Darlene Hooley was vital in all the efforts relating to South-North light rail. Representative David Wu's focus on Washington County commuter rail was significant.

The cooperation between congressional offices and their staffs was nothing short of legendary, Richard Feeney remembered. They had really formed a team. Taking the lead from Mark Hatfield, Senator Gordon Smith was already a strong transit convert when he came to the U.S. Senate, after being an important rail advocate for Clackamas County while president of the Oregon Senate. Senator Ron Wyden, having served first as congressman from the Third District (Portland) before Blumenauer, brought with him deep knowledge of Portland's rail projects.

An example of how the delegation banded together for the good of the whole is related by Richard Feeney:

> *Before the FTA instituted a complex project approval process, in the late '90s New Start rail projects were the subject of political competition in which the needs of the community were expressed through the political clout of their senators and representatives in Congress. For the Westside project, that clout was first exercised by Representative Peter DeFazio of Eugene who, as a senior member of the U.S. House Public Works Committee, achieved a $516 million authorization in the 1991 Surface Transportation Act (which later became ISTEA, the Intermodal Surface Transportation Efficiency Act). Until that time an amount this large was nearly unheard of for a city the size of Portland, and DeFazio wasn't even from Portland! DeFazio's achievement was even more notable because the project managers were still working on the final estimates, and the effort to get Hillsboro authorized as the terminus had not yet been accomplished.*

Congressman Blumenauer shows up repeatedly in TriMet's history. When Blumenauer entered Congress there was a discipline to get the agreed-to projects done in the order of priority dictated by Metro's JPACT forum, and with few exceptions all the congressional staffs and members strove to do that.

Blumenauer's office became a repository of the knowledge and purpose associated with transit. Not only did he start the congressional bike caucus, but he succeeded in getting prominent members of Congress and that caucus to visit Portland and see for themselves how the alternatives to highways were working. He weighed in importantly on every rail project from his position on the committee and became a close associate with committee chair James Oberstar, whom he brought to Portland several times.

Blumenauer hired Mariia Zimmerman directly from the FTA as one of several staffers devoted to working on congressional approaches to improve support for transit, notably tax incentives for transit and the now legendary "Rail-Volution" conferences, which have become a sort of summit for rail advocates, surpassing the influence of trade organizations like the American Public Transportation Association (APTA).

Blumenauer forged an early alliance with Paul Weirich, a well-known and outspoken conservative who strongly supported public transit, which he saw as preferable to the huge public subsidies for highways. Blumenauer and Weirich appeared on the same platform at APTA conferences, each validating the advocacy of the other to the delight of transit professionals, who long had desired exactly the connections and advocacy that Blumenauer, by reaching across the ideological divide, was giving them.

That meant watching the appropriations and authorization levels for the transit program, becoming very familiar with it, assigning a staff member to watch and sometimes to guide things, working with TriMet's lobbyists, the FTA, the Federal Highway Administration and various trade groups—especially APTA and the Surface Transportation Project. Starting with the reassignment of interstate transfer funds, TriMet influenced national transportation policy with both House and Senate committees visiting Portland prior to the drafting of the Intermodal Surface Transportation Efficiency Act of 1991.

At the state level, TriMet more recently benefited from the hard work of the Joint Committee on Transportation Preservation and Modernization, co-chaired by Representative Caddy McKeown of Coos Bay. That committee sponsored Keep Oregon Moving (House Bill 2017) that has revived transportation programs across the state and given TriMet a much-needed shot in the arm. McKeown recognized the benefits, ranging from bridge safety to providing transit alternatives, to those citizens otherwise without them. The bill was a major priority for Governor Kate Brown who had failed previously in 2015 to craft such a package with Republicans.

TRIMET LEADERSHIP AND TALENTED STAFF

TriMet was established at a time when public transit was new to much of North America. The earlier for-profit transit companies had a very different mission from TriMet's. TriMet found many of its general managers outside the transit world. Over the years, each general manager has lent distinctive perspectives and discipline to the organization. Nine general managers have served the agency since its creation in 1969.

It is interesting to note the diverse backgrounds of this roster of general managers—military service, civic activist, business leaders, public transit manager, construction, government and environmental leadership, planning and project management.

GENERAL MANAGER	SERVICE AS GM	BACKGROUND
Victor Cox*	1969–1970	Rose City Transit
Thomas King	1970–1974	U.S. Navy
Steve McCarthy**	1974–1977	Attorney, director of the consumer activist Oregon Science in the Public Interest Research Group (OSPIRG)
Peter Cass	1978–1981	CEO of Discover America
James Cowen	1981–1991	Golden Gate Transit, operations head for Greyhound, founder of Korea Greyhound
Tom Walsh	1991–1998	Civic leader, Walsh Construction, Tom Walsh and Company
Fred Hansen	1998–2010	Oregon Department of Environmental Quality, U.S. Environmental Protection Agency, congressional aide
Neil McFarlane	2010–2017	TriMet capital projects, Metro, Convention Center project
Doug Kelsey	2017 to present	Private sector, Olympic Games, TransLink (BC, Canada), TriMet Chief Operating Officer

Oregon's governor appoints the TriMet board. Most of its presidents have come from the business community and most have a long resume of civic engagement.

BOARD PRESIDENT	TERM AS PRESIDENT	BACKGROUND
William Roberts	1969–1973	Merchandising (Lipman's-Roberts Bros. department stores), real estate investor
Gerard K. Drummond	1973–1986	Attorney, NERCO, Willamette Industries
Dan Mercer	1986–1987	Mercer Industries, window manufacturing
Loren Wyss	1987–1994	Investment counseling
William D. Robertson	1994–1995	Portland General Electric
Philip R. Bogue	1986–1999	Arthur Anderson Accounting
George Passadore	1999–2010	Wells Fargo Bank
Richard Van Beveren	2010–2012	Cafe owner, civic leader
Bruce Warner	2012–2020	Washington County, Portland Development Commission, Metro, ODOT, City of Hillsboro, The Warner Group LLC

The day-in, day-out work of making TriMet successful falls, of course, to its employees. The core of the TriMet workforce are the bus and rail operators, maintenance crews, field staff, schedulers, engineers, planners and all the back-of-the-office administrative support needed to keep an organization like TriMet humming. Operators excel in driving skill, are courteous greeters and even, on occasion, become first responders. Mechanics "invented" the first bus bike racks and coaxed full service lives out of problematic buses. Countless others do their part to keep the system rolling. Over the years many hundreds of capable, committed workers have made the region's transit system what it is today. Throughout earlier sections of this history the exploits and legacies of some of TriMet's more colorful staff leaders are told. Most will not be mentioned again here, nor will dozens of other influential staff members who stand out for their contributions to the TriMet story.

*Designated general manager while his successor was being recruited
**Officially serving as acting general manager

A LIGHT RAIL SYSTEM
DESIGNED AND BUILT BY WOMEN

by Leah Robbins, 2015 TriMet director of the Orange Line East Segment

Gender matters less when we work in a culture that respects and values individuals for their intelligence and experience. In my career, TriMet has been a welcome place to grow as an engineer and a woman.

For those of us engineers at TriMet who happen to be women, by the time we got to TriMet we already were familiar with being outnumbered by men in our field. My Oregon State University graduating class of civil engineers had five women out of more than 50. But now, looking around Portland, I'm surrounded by all those same graduates working in our field, and it's a big family.

My colleague Amy Fandrich offered her thoughts. "What…this isn't normal? I have nothing to compare it to, lucky me! But would say I had an easy transition from college to career. I love having a great example to share with my nieces and others in future female generations."

And another coworker, Katharine Brendle, recalls that "more often than not at TriMet, the faces looking back at me from across the table were those of strong-willed, hard-working, intelligent and compassionate women. I always felt that I was in good company."

I can remember many times, however, when people have been surprised more by the youth of women in project management roles than by their gender. I'd like to see the TriMet of the future hire many more women into entry positions, allowing them to advance their careers in a challenging and meaningful way. I know that's possible! I started as an intern in 1994 and am now a project director responsible for one of our largest capital contracts.

WOMEN ENGINEERS AT TRIMET 1990s–2000s
Banfield, South-North, Westside, Technical Services, Portland/Milwaukie Light Rail

Professional engineers: Vicki Barron Sumann, Isabella Bejarano, Lisa Cobb, Amy Fandrich, Kristen Frey, Jenny Lyman, Meghan Oldfield, Leah Robbins, Jennifer Ryan, Vicky Smith

Other technical professionals: Janni Baugh, Katharine Brendle, Kristin Burrus, Sarah Espinosa, Deneen Everly, Liz Higgins, Laura Hixson, Paige Schlupp

On Interstate MAX, in the late '90s, we had to coordinate technical design with Union Pacific Railroad related to Albina Yard and a new overcrossing. All the Portland engineering representatives were women, including Jeanie Caswell, Jennifer Ryan, Karen Karlsson and me. It was fun to disarm the Omaha (UPRR) gentlemen with our XX chromosomes. We surprised one of them with baby shower gifts, as he was going to be a first-time father. And we resolved the technical issues to everyone's satisfaction.

On the Portland/Milwaukie project, women outnumber men in many meetings, quite the opposite of the past. Portland, the Oregon Department of Transportation, Milwaukie and Clackamas County all have women as project managers and technical resources.

Ride a TriMet bus line almost anywhere in the region and you might notice many riders saying “Thank you” to the operator as they exit the bus. This frequent practice by many riders has been around for many decades. It’s a symbolic feature that differentiates the Portland region and TriMet bus service from transit in larger cities, adding a personal touch to the relationship between TriMet operators and riders. Each year, TriMet makes a more formal practice of encouraging riders to thank their operators with Transit Driver Appreciation Day, as part of a larger effort during a whole week called Recognizing Outstanding Service and Excellence.

Bus maintenance mechanic Andrea Dobson, 1991

Bus Driver of the Year Willie M. Jack, 1985

Bus operator and photographer Cindy Kassab, 1985

Rail trainer James Hilliard, 2015

RUNNING A TRANSIT SYSTEM WITH **GENERATIONS OF EMPLOYEES**

by Denis Van Dyke, former TriMet director of operations support

In 1969 TriMet was formed and took over what used to be the Rose City Transit Company, which operated buses in Portland's urban area. A year later, the Blue Buses, which operated in the suburban areas of Portland, were added to TriMet. One of the Blue Bus drivers who came to TriMet was my future father-in-law, Ralph Neibauer.

Ralph eventually made his way into the training department as a "driver supervisor," as they were known in those days. After my wife and I were married, Ralph encouraged me to come to work at TriMet. He felt it was a good place and thought I would find it the same. He eventually convinced me. I started as a part-time operator in spring 1980. Little did I know that on my first day of training, I would be walking into a multi-generational environment where individuals and their families built life-long careers. The head of training at the time was Lyle Lafollette. Lyle's son Dave also worked at TriMet. Dave eventually became senior garage manager.

In addition to Ralph, Merle Dalrymple and Clyde Earl Sr. worked for Lyle. Merle's son Rick was advancing his career in the facilities department and Clyde's son was building his career at TriMet. Clyde Jr. would eventually become the director of transportation, having responsibility for all bus operators.

After training, I became a full-time operator quickly and worked the "extra board," a fill-in operator for those absent from work. I worked out of all three of our operating garages. This meant I could be driving any route in the system at any given time. I later became a station agent, one of the people who make sure operators have their work assignments and that all the service is covered each day.

In 1986, I made my way out to light rail, starting as an operator, but quickly moved into supervision and the Command Center. I eventually become a training supervisor, and then manager of training and the Command Center. This led to my work with the light rail projects as they progressed one after another over the years. In 2013, my son joined the TriMet ranks as a light rail vehicle engineer. He received his degree in mechanical and electrical engineering in Scotland, where he worked and lived with his wife and daughter for several years until they all moved back to Portland in 2013.

Later that same year, my youngest brother came to work as a part-time operator and later became a full-time operator. He found the best part of the job to be his interactions with customers and his fellow operators.

As you can see, mine is not the only one of the many generations of families that have worked at TriMet. To me, that says something very positive about the organization.

In addition to the many opportunities TriMet gave me to grow, gain experience and then use that expertise, I got to do all of that alongside a group of wonderful people. Over the years, many of them have become lifelong friends.

My father-in-law retired after more than 20 years of service between the Blue Buses and TriMet. He enjoyed his retirement as a snowbird, spending winters in Arizona and summers here in Oregon. When the time comes, in addition to enjoying my retirement years as much as my father-in-law did, I will take with me many fond memories of my colleagues, and I will treasure the knowledge that I contributed to an important part of what makes the Portland region a great place to live, raise a family and do interesting work.

TriMet has been good to my family. It has provided us a good living and offered me a working environment that feels like an expanded family. It doesn't get better than that.

THE ROLE OF ACADEMIA

An important ingredient in the Portland and TriMet synergy is Portland State University. Professors Robert Bertini and Ethan Seltzer both have monitored TriMet for many years. They have worked with students to develop new planning and analytic tools, conduct essential studies and provide a regular flow of new talent to TriMet.

Congressman Blumenauer credits the program at Portland State University for sustaining a strong community focus and addressing the region's transportation needs.

He describes how the City of Portland covered the tuition of about 40 students per semester to attend a transportation class. Students would identify a local problem and propose solutions, some of which have been implemented by the city. The course has hundreds of alumni. The students learn from planners and engineers and become informed citizens, community activists and transportation professionals in their own right. The congressman laments that there are too few today who are picking up this legacy of good planning and design in Portland.[107]

PORTLAND STATE UNIVERSITY'S PORTLAND TRAFFIC AND TRANSPORTATION COURSE

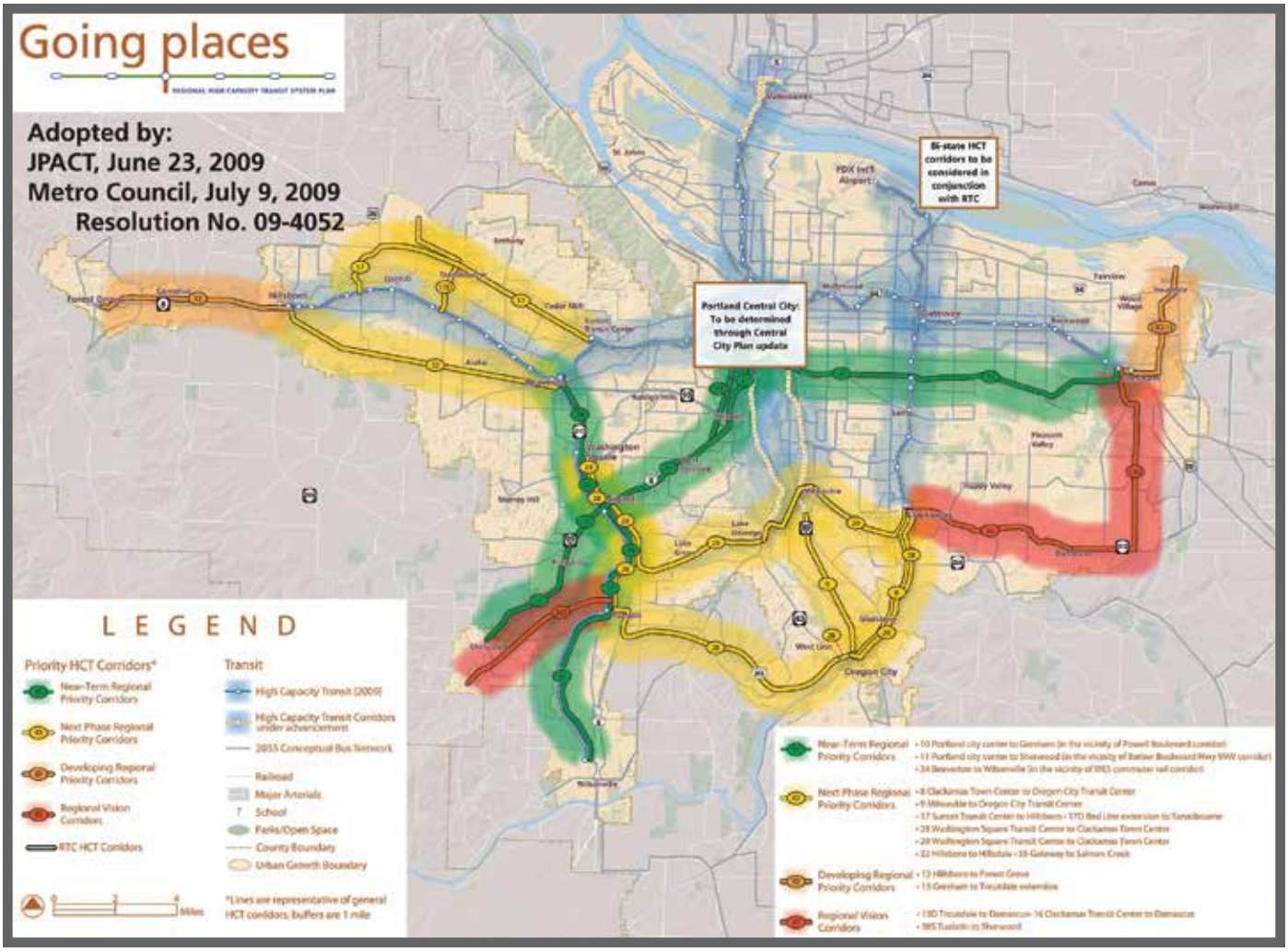
The Portland Traffic & Transportation Course was created in 1991 by Earl Blumenauer and Rick Gustafson. 2019 marks its 28th consecutive year. It is now led by Thuy Tu and has added to the course title to include, "The New Evolution."

Over 1,000 Portland residents have taken this popular class and learned how to negotiate the maze of traffic and transportation agencies and issues. Here's your chance to hear about how you can make a difference by developing a class project focused on a transportation issue. You will get consultation and guidance from professionals during the process.

Emphasis will be on aspects of land use, mobility, and social justice, including racial equality. Class speakers include policy and decision makers, planners, and engineers from TriMet, Metro, PBOT, and more.

This class has a fresh new feel this year (2019) with a new instructor, new guest speakers, and an updated, equity-focused curriculum. The new instructor, Thuy Tu, brings with her 20 years of experience as a Senior Transportation Planner and Civil Engineering Project Manager and a strong focus on equity, livability, and resilience.[108]

[107] Blumenauer E., 2001
[108] Portland State University 2019 course description



High-capacity transit corridors plan, 2009

LOOKING AHEAD TO THE NEXT 50 YEARS

TRIMET IN 2019

TriMet is a mature, multimodal transit system serving 1.5 million residents within a 533 square-mile district. It has come a long way since its origins in 1969. Every weekday Portland-area residents take more than 308,000 trips on TriMet and still more including the streetcar and the aerial tram. TriMet is the nation's 25th largest metropolitan area, yet it ranks 16th in total ridership and ninth in per capita ridership. Employers at 1,200 locations offer TriMet passes as an employee benefit. TriMet continues to attract more riders for shopping and recreational trips than most of the nation's transit systems.

TriMet has emerged from a devastating economic recession and prolonged labor contract negotiations stronger than ever with increasing

TRIMET IN 2019	LINES	VEHICLES*	STOPS	MILES	FISCAL YEAR 2019 RIDERSHIP
Buses	79	706	6,591	n/a	58 million
MAX Light Rail	5	145	97	59.7	40 million
WES Commuter Rail	1	6	5	14.7	0.45 million
Portland Streetcar	3	17	76	16	4.87 million
LIFT Paratransit	n/a		n/a	n/a	1 million

*Active fleet as of August 2019

service, efficiency and reliability. The new labor contract and new statewide transit funding puts TriMet on a sustainable fiscal footing. Existing and new service and innovations are making transit easier and more appealing for riders. The new MAX Orange Line, Frequent Service upgrades, new routes to meet new demand, Hop Fastpass® e-fare, arrival screens at more MAX stations, new buses, alternative-fueled vehicles, Blue and Red Line upgrades and a new dispatch system are all helping to make this happen. Crime prevention and safety assurance continue as priorities.

TRIMET INNOVATION

For an individual or an institution like TriMet, successes can be large or small. Accumulated successes over time can build a reputation. TriMet has earned a good reputation over many years, step by step. Looking back on her service on the TriMet board from 1974 to 1977, Elsa Coleman noted:

> *Sometimes we take for granted the small improvements that have been made. For example, in 1972, from the Citizens Advisory Committee on TriMet's Immediate 5-year Public Transit Plan: "We recommend modifications to all buses so they may accommodate bicycles and strollers.…" When I was appointed to the TriMet board in 1974, the Sellwood Bee asked what I envisioned. I rambled on about having monthly passes, a discount on the purchase of a book of tickets, and route maps. About using drive-in movie theaters during the day for park-and-rides. (OK, I didn't know they'd disappear.) About not having just transit stations but whole service areas with day care centers, small shops for essentials, cleaners, etc.*

Times have changed since 1972. TriMet has come a long way since shared use Park & Ride lots and timed transfers and has had to keep up with a long list of challenges that include:

- Changing demographics and with that changing expectations regarding getting around and using public transit.
- Keeping up new technology that demands real-time information.
- Housing affordability is forcing many transit-dependent residents to move further away from both jobs and from transit. Many of these riders thus become car dependent.
- New transportation technologies and delivery systems that include car sharing, ride hailing, e-scooters, bike rental, autonomous cars—all of which are aimed at travel when you want with immediate access to destinations. These new modes present both challenges and opportunities as TriMet collaborates and competes with a wide array of mobility providers.

For example, BIKETOWN is Portland's bike share program, launched in July 2016 with 1,000 bikes at over 100 stations across downtown and several neighborhoods. The system is designed for quick trips with convenience in mind. It is one more transportation option that might replace some shorter transit trips. E-scooters further extend the range of travel.

TriMet is looking for ways to integrate this list of transportation options for the diversity of travel needs and individual abilities for getting around. When comparing the ease of door-to-door trip planning between public transit and ride-hailing services, riders of transit face more barriers, or "friction points", to plan their full trip. Currently the cost-per-ride is what sets public transit apart from ride-hailing services. As the cost difference narrows and as TriMet looks to attract new choice-riders, friction points must be removed. TriMet is looking to create a seamless, "plan/book/pay" customer experience—a one-stop planning option that integrates the first and last-mile trip options and allows riders to select and pay for the door-to-door service in one application. TriMet is also looking at "loyalty" incentives that will encourage repeat use of transit among both choice and captive ridership groups. Sustained innovation is essential to TriMet's role in the region.

ENHANCED TRANSIT CORRIDORS (ETC) PLAN WITHIN THE CITY OF PORTLAND

The Portland Bureau of Transportation (PBOT) is leading a planning process in coordination with TriMet to develop the Enhanced Transit Corridors Plan. This plan will help identify where transit priority, streamlining, and access treatments could be most beneficial for the TriMet Frequent Service network within the City of Portland. Such improvements can help make transit more attractive and reliable for people to get to work, school, and to meet their daily needs, especially for people who depend upon public transit. The Portland City Council unanimously adopted the Enhanced Transit Corridors Plan on June 20, 2018.

Characteristics of Enhanced Transit:

- Increased capacity, reliability and transit travel speed.
- Moderate capital and operational investments.
- Context sensitive.
- Deployed relatively quickly.
- Inclusive of buses and streetcars.

Program goals:

- Increase transit ridership and improve the experience for current riders.
- Support planned growth in centers and along corridors consistent with the City's 2035 Comprehensive Plan.

- Define and identify “Enhanced Transit Corridors” in Portland.
- Establish clear and objective operational performance measures and thresholds to define what success looks like for the most heavily used Frequent Service lines.
- Guide the prioritization of capital and operational investments in Enhanced Transit Corridors.

The plan goes a long way to support transit and recognizes the role of bus transit as the primary building block of the city’s transportation system. Data shows that buses are getting stuck in traffic, trips take longer, and growth dictates better transit service and access. Unfortunately, transit ridership is falling short of the City’s policy goals. This program is intended to make the best use of limited funding.

As a part of the of the Enhanced Transit Plan, Portland and consultants developed an Enhanced Transit Toolbox. This Toolbox is a collection of potential capital and operational treatments that can be applied to improve transit performance or create safer, more predictable interactions with other travel modes. Numerous locations for this collection of treatments have been identified—15 within the central city and an additional 12 outside. A bus-only lane installed in May 2019 on SW Madison Street from the Morrison Bridge to the Portland Transit Mall is one example. One of the tools is the Red Paint Program which would better define transit-only rights-of-way as already applied in cities such as Baltimore, Seattle and San Francisco. These transit-only lanes would help frequent service transit move through congestion.

TriMet’s pride bus in front of a living mural by artist Fin DAC at SE Division Street and 9th Avenue, February 2019

It is hoped that this City of Portland program can be transferred to other congested corridors that are managed by regional partners.

NEW TRIP PLANNER

General Manager Kelsey has emphasized that TriMet needs to shift from its role as a transit agency to a passenger-integrated mobility agency—not limited to providing bus, light rail and paratransit services, but enabling convenient travel by any combination of modes. While similar to General Manager Hansen’s “Total Transit Experience,” Kelsey is emphasizing a more integrated approach that addresses technologies and new ways of getting around.

TriMet was the first transit agency to open trip data to the public. It teamed up with Google in 2005 to add transit into Google Maps and create the now worldwide General Transit Feed Spec (GTFS). In 2009, TriMet developed the first open source trip planner (OpenTripPlanner) that combined transit with walking and biking. OpenTripPlanner (OTP) is an open source, multimodal trip planning system that is collaboratively developed by a team from across the world. Initially coordinated by OpenPlans and TriMet, the OTP Project was first funded through a Metro 2009–2011 Regional Travel Options Grant.

TriMet’s original text-based trip planner was a proprietary system, providing transit trip itineraries with limited walking instructions. However, it could not plan multimodal trips (e.g., biking to transit) as was often requested by customers. The ability to combine transit, walking, and biking trip information into one central location would allow commuters to make informed decisions about their transportation choices while encouraging the use of sustainable modes of travel. Commercial off-the-shelf

solutions were cost prohibitive for TriMet and many US transit agencies.

In 2011 TriMet brought stakeholders together to collaborate on an open source multimodal trip planning system that would not only meet TriMet's increasing needs but could potentially be a viable alternative for other agencies. OpenPlans was responsible for leading the technical development of the project, facilitating a strong development community and providing a sustainable business model that would assure maintenance and support options for agencies.

TriMet began work on a new trip planner in January 2017, after being awarded a $678,000 Mobility on Demand (MOD) Sandbox grant by the FTA, which was supported by $324,000 of in-kind contributions. The results of projects like the new multimodal trip planner will provide the public transportation industry with a better understanding of how to adapt to the rapidly changing mobility marketplace.

With this grant, TriMet formed a partnership with Uber, SHARE NOW and BIKETOWN to make getting around easier. The tool uses real-time locations of vehicles and bikes to plan a single trip with a mix of travel options. Testing began in 2019 to include buses and trains, Portland Streetcar, Portland Aerial Tram, Uber drivers, SHARE NOW locations and available BIKETOWN bikes, with more to come in the future. It's mobile-friendly for use on smartphones, including a map for laying out your multimodal trip.

"By partnering with private companies, TriMet makes it easier for people to get to work, school, appointments or any place they need to go in the Portland metro area," said TriMet's Manager of Mobility and Location-Based Services Bibiana McHugh. "The new trip planner will help our customers make informed decisions about their travel options, including the first and last parts of their trips where a bus or train alone doesn't provide full access."

TECH TREND-SETTER

by Doug Kelsey, TriMet general manager, March 2019

It's not every day when you hear the CEO of Apple, Tim Cook, on the big stage for a major product announcement and he's mentioning Portland, Oregon, transit. In case you missed it, riders will now be able to use their Hop card on their iPhone or Apple Watch to ride the bus or MAX with Apple Pay. It's an exciting new step toward merging technology with mobility. Riders can already enjoy using their debit or credit card with Apple Pay to ride transit in the Portland-Vancouver metro area.

We're now on the map with cities like Beijing, London and Tokyo. In fact, Portland is one of only six cities worldwide where riders can use Apple Pay. Our Hop card is even featured on Apple's web site! Of course, making this big step toward the future takes many, many steps behind the scenes and none of it happens overnight. A major milestone such as this takes great collaboration across several teams. Over the past year, our Director of Fare Revenue & Administrative Services, Rhyan Schaub, and her teams have done a tremendous amount of coordination and detailed project management with Apple to make this vision a reality for our customers.

Our communications and marketing team worked hard to promote this new feature as we continue to educate our riders about the convenience that's now at their fingertips. Our Managing Director of Communications, Marketing and Customer Experience, JC Vannatta, worked with his team to tell our story for the entire region. Over the past 50 years, TriMet has shared many stories of becoming a trend-setter in transit. We can now add the story of Apple Pay to our rich history book of magnificent milestones on our path toward making us one of the best transit agencies worldwide.

Using the real-time locations of buses and trains along with real-time availability of cars and bikes from these private transportation companies, the tool pieces together single trips using multiple modes. If the trip planned includes Uber, the tool links the user to the Uber app so one can easily book and pay for that part of the trip. TriMet is working to combine the planning, booking and paying for all services in the trip planner.

"We believe that ridesharing and transit go hand-in-hand, which is why we're honored to be a part of TriMet's new trip planner," said Uber spokesperson Nathan Hambley. "It will allow riders to more seamlessly integrate and plan end-to-end multimodal trips."

"Mobility options shouldn't exist in a vacuum," said SHARE NOW Portland General Manager Ken Hills. "Partnerships like TriMet's multimodal trip planner give commuters the ability to choose and combine modes of transportation that work best for their trip, and we strongly believe these collaborations between public and private providers can open up useful new possibilities for people navigating the city. SHARE NOW is proud to work with other mobility services to move Portland—one trip at a time."

"We believe that this expanded, multimodal tool will show more and more Portland residents just how convenient, quick, and affordable bike share can be—and by encouraging the use of more sustainable modes of transportation, we all win," said BIKETOWN Market Manager Dorothy Mitchell. "Congratulations to the TriMet team on this innovative new trip planner. It will truly move our metro area forward."

The new trip planner is designed to be easily replicated by transit agencies in other cities. Since it uses open source technology and open data, including OpenStreetMap, other transit agencies could quickly adjust the trip planner for their systems. TriMet then can benefit from improvements other agencies make. TriMet proposed to extend its existing multimodal trip planner to include private mobility service providers. Thirty-eight private and public partners collaborated on the two-year project, which was completed on-time and within budget in January 2019.

UNFINISHED BUSINESS

As TriMet improves operating efficiencies, the agency and its regional partners continue to implement the Region 2040 Plan and the Regional Transportation Plan. Four corridors have been studied for high-capacity transit extensions: Streetcar to Lake Oswego, Columbia River Crossing, Southwest Corridor and Division Transit Project. The Southwest Corridor and Division Transit Project are in the final stages of planning, design and construction. Others remain shelved with lingering interest in their revival.

COLUMBIA RIVER CROSSING

The Columbia River Crossing would have replaced the existing, congested and seismically deficient pair of bridges carrying I-5 over the Columbia River with a new bridge, adding light rail to the transportation mix. The existing lift bridges, constructed in 1917 and 1958, can no longer handle traffic volumes, including C-TRAN buses, especially during rush hour. A study from January 2000 made note of the high number of collisions, severe congestion, limited transit options, freight immobility, poor provision for bikes and pedestrians, and seismic risks. Creating a new solution would require unprecedented bi-state coordination and consensus.

Mixed modes: TriMet Bus, BIKETOWN and Portland Streetcar

The Oregon and Washington transportation departments shared the lead in subsequent planning. Extensive

community engagement began in 2005. Technical and environmental studies moved the project forward over the ensuing years. Design of the project's highway, bridge, transit, bicycle and pedestrian elements was refined. Questions related to land-use, bridge design, traffic, tolling options and other topics were addressed. Independent experts reviewed aspects of the project, including greenhouse gas emissions and the appropriate bridge structure.

It was forecast to be an expensive project, costing $3.1 to $3.5 billion. Oregon and Washington representatives differed over cost sharing and project scope, including Republican opposition in the Washington Senate to the light rail extension promoted by Oregon lawmakers. Transit elements were expendable for some of the Washington representatives but deemed essential by Oregonians. After prolonged deliberation and $170 million spent for planning, engineering and permitting, the two state legislatures independently decided not to proceed with the project, and it was shut down in May 2014.

However, the need remains, and light rail is poised to make the bi-state connection from its northern terminus at the Expo Center if and when Washingtonians are ready for it. TriMet's then-General Manager Neil McFarlane noted, "We haven't solved the problem. The bridge was built for horses and it rests on Douglas fir pilings in mud in the Columbia River. A state geologist report on the bridge includes the term 'total collapse' in case of an earthquake."

A bill that would expand TriMet's authority to help finance non-transit projects has increased flexibility in possible funding of a Columbia River Crossing. A provision in Oregon Senate Bill 1510 would allow TriMet to spend bond and grant funds on non-transit projects. Bonds for transit projects could be bundled with non-TriMet road projects, in an effort to reduce duplicate overhead costs. "It's just easier and cheaper for us to do it on behalf of the region," said Bernie Bottomly, TriMet's public affairs executive director. "We're offering this tool as something the region can use to support the region's needs."

A strategy of packaging transit and road projects could enhance a funding plan's appeal to the community. This would be similar to a strategy that led Seattle voters to pass a record $930 million transportation funding levy. In Oregon, the bill reawakened critics of the Columbia River Crossing, including Joe Cortright, a Portland economist who has long opposed the bridge project: "What the bill does is greatly expand TriMet's bonding authority, authorizing it to accept IOUs from other agencies and then use that authority to build freeways, if they choose. My concern is that this could be a stealth funding plan for the Columbia River Crossing."

TriMet, however, distanced itself from a lead role in the Columbia River Crossing project and it would need authority from the many other participating agencies making that explicit distinction. The bill limits TriMet to participating in projects in counties in which it operates, seemingly excluding the north half of the bridge project in Clark County, Washington.[109]

Since the May 2014 shutdown of the project, Clark County's legislative delegation has sought to restart the process to replace the bridge and some local jurisdictions have voiced support for the effort. Washington Department of Transportation staff showed that travel times and congestion have worsened in recent years. It wasn't until December 2018 that two state legislators met to consider a replacement I-5 bridge, but Oregon legislators made it clear they weren't forgetting Washington State's walking away from the project in 2013. Oregon Senator Cliff Bentz, Republican from Ontario, reminded his Washington counterparts that he put a lot of political capital in shepherding the first project through the Oregon legislature. "I can assure you I'm not enthusiastic about going through that process again." He added that Washington lawmakers would have to "convince us if you're for real" this time.[110]

Oregon Senator Lee Beyer, a Democrat from Springfield, who chairs the Senate Committee on Business and Transportation, reluctantly agreed to start addressing the bridge once again. "Do I want to spend more time on this? No," Beyer said, noting they've spent about two decades on the project. "Do I feel like we should? Probably."[111]

The inclusion of a MAX light rail extension as part of the project was a significant area of disagreement between the two states. On the Oregon side, there was near unanimous support for a light rail connection to downtown Vancouver. On the Washington side a small but vocal opposition arose and had the ear of conservative legislators such as Senator Don Benton, a Republican from Clark County. More recently the opening of C-TRAN's successful BRT called The Vine, has been well received by the community and discussions about including high-capacity transit on a new Columbia River Bridge are generating less heated responses.

[109] Njus, E, TriMet Bonding Bill Raises Specter of Columbia River Crossing, March 2, 2016
[110] ibid
[111] Dake L., 'Convince Us If You're For Real': Lawmakers Reopen I-5 Bridge Talks, Dec. 11, 2018

MAX at Pioneer Square, the heart of downtown Portland

Steve Wallace, from Vancouver, told lawmakers to remember his community wants "lanes, not trains."

Several lawmakers brought up the idea of pursuing more than one bridge. Oregon Representative Richard Vial, a Republican from Scholls, pushed the idea of a new highway west of Interstate 5 through Washington County, stating, "it's a missed opportunity if we don't include a conversation of the need of a westside solution." Senator Lee Beyer said Oregon's land-use laws would slow the building of any third crossing and the $5.3 billion transportation package did not include a replacement bridge, stating, "we probably do not have the opportunity to go to the well again."[112]

Joe Cortright, a Portland economist, told the panel one of the reasons why the first effort failed was because some of the hard decisions were put off until the end. He urged the group to "refuse to make the same mistakes." Washington Senator Annette Cleveland, a Democrat from Vancouver, who was influential in getting lawmakers in the same room again, said she was feeling hopeful after the meeting. There's still a long way to go," she said, "but I'm enthusiastic."

RETURN TO THE WEST SIDE

Back on the west side, the City of Hillsboro is considering extending light rail or streetcar to the new regional center at AmberGlen. Hillsboro leaders believe that growing density in AmberGlen and nearby Tanasbourne could support a MAX extension west from the Sunset Transit Center or north from Quatama. Metro's 2014 Regional Transportation Plan and pending 2018 update shows a possible light rail extension in a loop originating near the Quatama/ Northwest 205th Avenue MAX station and heading north through AmberGlen, west toward the city's industrial areas and back south, rejoining the system near the Washington County Fair Complex.

Other long-range corridors in which light rail, streetcar or bus rapid transit may be considered include Tualatin Valley Highway from Beaverton to Hillsboro, a connection from Washington Square to Clackamas Town Center via Lake Oswego and/or Oregon City, an extension from Milwaukie to Oregon City, and a line north from Gateway to Salmon Creek in Clark County, Washington. Such projects are described by Metro as "corridors where future (transit) investment may be viable if recommended planning and policy actions are implemented."

[112] Thomas J., Washington, Oregon Get Talking About I-5 Bridge, Dec. 11, 2018.

A DOWNTOWN SUBWAY

Metro's 2018 update to the 25-year Regional Transportation Plan introduced the idea of digging a tunnel underneath Portland's downtown for high-capacity rail transit. The capacity of above-ground MAX trains is constrained through downtown by the city's short block faces and the above-ground route is slowed by frequent stops and cross streets. The residual MAX tracks, it is argued, might be useful for future Portland Streetcar extensions. The idea has also been promoted by the Association of Oregon Rail and Transit Advocates (AORTA).

The concept has been in consideration since the 1990s, but it is still a long-term vision. A cursory review concluded that it was more cost-effective to build out the regional MAX light rail system before constructing a downtown tunnel that could serve the Red and Blue MAX lines with tunnel portals east of Lloyd Center and in proximity to Collins Circle, to the west.

A plan, prepared as a collaboration between the City of Portland, TriMet and Metro, was presented to the Portland Planning and Sustainability Commission in June 2017, but the design has a long way to go and is assumed to be beyond a 30- to 40-year time frame. A tunnel would be an expensive proposition. In Seattle, a 3-mile tunnel from downtown to the University of Washington cost $1.8 billion when it was completed in 2012.

TriMet is also studying the long-term future of the Steel Bridge with a look at short-term repairs and options for increasing the bridge's carrying capacity, including assessing a possible replacement. TriMet engineer Amy Fandrich noted, "At this point, planners are in the brainstorming phase, and there are a lot of ideas on the table. Our hope is to develop concepts that will integrate with transit technology that will be available in 2040 and beyond."[113]

A HISTORY OF INNOVATION

TriMet's history is peppered with "firsts"—the product of creative thinking combined with the commitment to identifying and solving problems. The list of "firsts" (and "almost firsts") is a long one:

- First North American use of suburban transit centers for focused service nodes and timed transfers.
- Promotion and use of a federal policy for converting planned freeways into transit and road projects that put communities and livability first.
- Publication of a comprehensive paperback "Transportation Guide and Map."
- One of the first North American transit systems to adopt policies that recognize the relationship between land use and good public transit as "transit-oriented development."
- Development of one of the first financial forecasting models for transit.
- Test site for federal transit travel demand modeling tools—a role eventually turned over to Metro.
- First use of an automated bus route "run cutting" tool to optimize scheduling.
- One of the first downtown transit malls—one that stood out for excellence in design.
- Early use of monitors to show rolling transit mall schedule information.
- Third U.S. and fifth North American city to develop a European-style light rail system.
- One of the early North American users of articulated buses to enhance route productivity.
- Use of European-style "self-service fare collection" to speed up operations.
- Pioneering development of a maintenance management information system (MMIS).
- Participation in the birth of the Rail~Volution forum founded by Congressman Blumenauer.
- First North American system to specify the need for and operate low-floor light rail vehicles.
- One of the first rail systems to institute a funding set-aside for public art.
- Early adopter of the low-floor transit bus enabling convenient access with a mobility device.
- Use of NASCAR-type technology to increase bus operating efficiency.
- First transit system to power buses with clean biodiesel fuel.
- Early developer of a global-positioning-system-based bus dispatch system.
- Innovative promotion of transit-oriented development as federal policy; first such development plans to be granted federal light rail funds.
- Pioneering provision of real-time customer schedule information—in-house and on Google Maps.

[113] Njus E., City Planners Float Idea of Subway Tunnel Through Downtown Portland, June 14, 2017

- First suburb-to-suburb commuter rail line and supportive development of the first U.S.-made diesel multiple-unit rail car in 50 years.
- Pioneering (with the City of Portland) reintroduction of the modern streetcar to revitalize downtowns and promote redevelopment.
- First North American light rail system to install regenerative braking on light rail vehicles that recycles energy using super capacitors.
- Developer and implementer of the mobile ticketing application—first in the nation to utilize mobile ticketing on both buses and trains.
- First U.S. transit system to provide open source trip making data.
- The Tilikum Crossing: Bridge of the People as the first major transit, bicycle and pedestrian only bridge in the United States.
- First transit system to launch an account-based regional virtual transit card on Google Pay in the world.
- First transit agency in the nation to have a tax-backed bond (Senior Lien Payroll Tax Revenue Bonds, Series 2018A) rated triple A by three top rating agencies: Moody's; Standard & Poor's Global (S&P); and KBRA Kroll Bond Rating Agency.
- First North American transit system to launch a transit fare card in Apple Wallet and first in the world to launch Apple Pay Express Transit on iPhone and Apple Watch.
- All-electric buses powered by 100 percent wind energy—a United States transit industry first.

What TriMet learned to do right:

- Concurrent land-use and transit planning.
- Developing and maintaining important partnerships—requiring hard work and leadership.
- Including citizens and customers early in any process.
- Making safety paramount in design, training and operations.
- Hiring smart, skilled and dedicated employees.
- Building on success.
- Daring to innovate and take risks but having a backup plan when things don't work out.
- Far-sighted thinking and planning. Anticipating opportunities and potential crises.
- Integrating projects into the fabric of the community through thoughtful design and public art that reflects local history, culture and values.
- Communicating openly and transparency leads to credibility and support.
- Managing projects to minimize community disruption.
- Instilling complementary values in partner organizations, including the importance of access to transit and inclusion of transit-supportive features in development projects.
- Promoting diversity in the workforce and for-hire services with participation goals.
- Embracing and adapting to changes in technology, communication and mobility—and sometimes leading the advancement of new and better ideas.

What TriMet could have done better:

- The early years were tough, but eventually the agency found its identity and gained credibility.
- TriMet experienced two financial crises that led to severe service cuts. The payroll tax is as equally volatile in the "up" years as in the "down" years. The agency needs to plan for economic storms.
- The 1982 testing of the ill-fated self-service fare collection led to stress that TriMet did not need, especially ahead of a recession.
- Articulated buses were not so much a risk—they were in widespread use, especially in Europe—but TriMet's 1982 buses were a mess mechanically. TriMet, nonetheless, made them work.
- Freeway corridors were the easiest and least impactful, but maybe not the most beneficial alignments for light rail in the long run.
- It took 12 long years to produce the second light rail line, the longest and most ambitious of any of the projects.
- Response to crashes and crime initially was slow in some instances. There is no substitute for proactive identification of safety and security deficiencies.
- The Westside Express Service may have been constructed ahead of its time—but its construction was about opportunity, regional partnerships and long-term benefits.
- TriMet rode a roller coaster with the workforce. Consistency and transparency are important. Labor agreements need to be kept current with fiscal reality.

CHALLENGES AND OPPORTUNITIES

The world is changing at an exponential pace. The first horsecars of 1872 bear little resemblance to the Type 5 MAX trains. Who would have guessed that an innovative paperback guidebook with every route schedule would be replaced with real-time arrival information from a hand-held smartphone in just 20 years?

TriMet's history has been one of challenges and opportunities. Sometimes opportunities must be created. They don't just happen. "Cashing in" a freeway for the beginning of a regional high-capacity transit system was such an opportunity. Working with the Bechtel private venture to make an airborne light rail connection was another. TriMet's history reflects an attitude that there's always more to be done. It does not rest on laurels. Greg Baldwin reflected on the 1970s:

> *It was then that I began to appreciate one of the qualities that are basic to Portland. That is the concept of establishing the fertile project, the project that begets the next project, which, in turn, begets the next project. Yet this is a very important concept that today we often forget. As a consequence, we've begun to build a lot of elegant mules. They aren't very fertile. They're nifty projects, but they aren't stimulating other projects.*

Baldwin outlined several principles that defined the ethic of the 1970s and live on today:

- If it's a good idea and a good deal, do it, don't talk about it.
- The utility of the fertile project creates an environment that causes individual initiatives to coalesce and complement each other.

He noted also that professional relationships matured in the 1980s as public/private partnerships and became more sophisticated. Posturing almost disappeared and the resulting cooperation led to the benefit of all.

Congressman Earl Blumenauer's recall of the 1970s was similar:

> *I am convinced that one of the strengths of the Portland region—maybe even the state—especially in the '70s was that we figured out ways to play the cards we were dealt, that we took full advantage of opportunities—in part because we're thrifty and conservative, in part because we're a little contrarian, in part because the scale here is big enough to make a difference but small enough to be manageable, in part because it's far more egalitarian than people recognize. We had an "elite"—from the business community, from the media, from the City Club, from civic leadership. This elite group had a fairly broad membership but was still small enough to get things done.*

As TriMet looks to the next 50 years, it faces new challenges and opportunities that will still call on the qualities outlined by Greg Baldwin and Congressman Earl Blumenauer. It will rely on leadership, creativity and a commitment rooted deeply in the community.

The January 8, 2019, issue of Metro Magazine featured an article by Amos Haggaig[114] where he makes several predictions about the future of transit and mobility that are summarized as follows:

1. Micro-mobility devices that transport one or two people will gain traction and become a first and last mile option. Mobility is rapidly changing, with new service offerings, electrification and an increasing impact on our basic transportation choices, from possibly changing whether people own a car to having a major impact on public transportation ridership.
2. Electric buses won't become omnipresent in the U.S. and Europe, but more presence can be expected. 2019 will be a year where the numbers of electric buses in Europe and North America will grow.
3. There will be more ridership turnaround stories. Recently, mass transit ridership has been declining, partially due to economic growth, increased car ownership and the emergence of new mobility alternatives. This is forcing agencies and operators to take a hard look at what determines public transit ridership, from on-time performance, to trip volumes and routes. New technologies will help make systems more efficient while reducing the costs.
4. The government's role will change as new mobility options enter the public transit sphere, and since each option has an impact on the economic viability of transit, congestion, and even city-wide economies, transit agencies won't just deal with traditional mass transit but with regulating and managing multiple modes of transportation and how they affect cities.
5. Driving will remain a useful skill for now. Big brands will continue to invest millions of dollars in autonomous vehicles and there will be more pilot programs in more cities trying to prove the safety of these vehicles, however usage will remain limited.

[114] Amos Haggiag is the co-founder and CEO of Optibus, which helps transit providers better run mass-transportation through advanced artificial intelligence and optimization algorithms.

The Portland region is halfway along the 50-year vision expressed in the 2040 Concept Plan. Much remains to be done to realize the vision for mature centers and corridors. Transit has a critical role to play. The region's urban centers are becoming more densely developed, and town and regional centers are taking shape. Transportation options are more important than ever. There is an opportunity for traditional public transit to embrace and complement "new" modes—car sharing, ride hailing, rental bikes and scooters—for the first and last mile, integrated with new ways to access information and to plan and pay for travel.

THE NEED FOR NEW LEADERSHIP AND CREATIVITY

TriMet and the Portland region will continue to need new visionary leaders and talented doers. Great things lie ahead for the Portland region and for its transit services, but only if the citizens and their leaders can learn from the past and plan wisely for the future. Congressman Blumenauer sums up the need for this perspective:

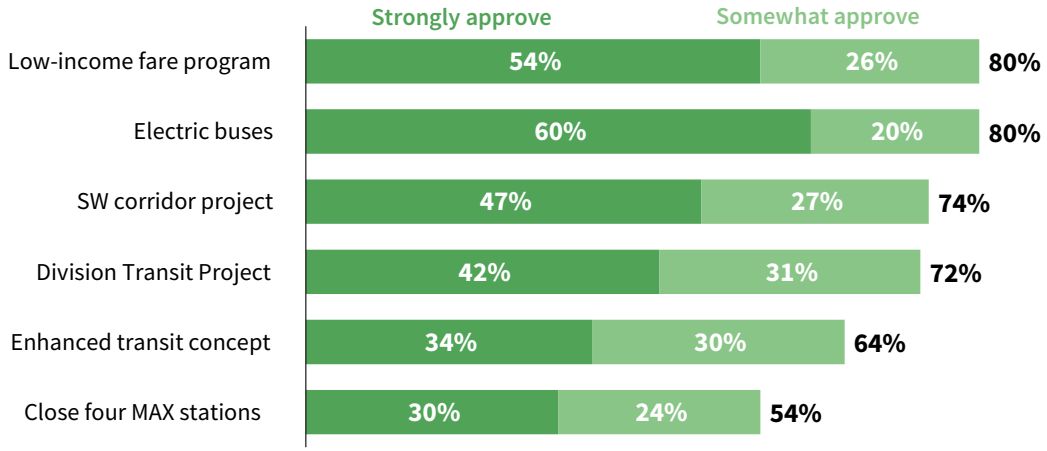
> *The frustrating part for me is it's very clear that we have an awful lot of people here who take for granted what's happened and don't have any perspective about what's going on elsewhere, how bad it can be or what those forces are, and there isn't appreciation for how we got to where we are.*

TriMet today serves a region of 533 square miles. A November 2018 poll conducted by DHM Research in Portland found that 75 percent of residents expressed overall satisfaction with TriMet's performance. TriMet choice ridership (those choosing to ride rather than drive) is up to 86 percent. The community gives TriMet favorable approval for reliability, safety and for planned projects and programs as TriMet approaches its 50th year.

Going forward, TriMet and the region's leaders will work to sustain and build on this record. State Transportation Improvement Funding (STIF) will be combined with funding from local jurisdictions to develop bus queue jump lanes and install traffic signals that give transit priority over auto traffic. These improvements will be targeted toward bus lines that benefit communities most in need of travel options. TriMet will continue to develop the regional high-capacity network, starting with the Division and Southwest transit corridors. Innovation will continue to play a major role in how TriMet improves and integrates mobility with public and private partners.

RESIDENTS APPROVE OF TRIMET'S CURRENT PROJECTS

80% APPROVE OF THE LOW-INCOME FARE PROJECT AND ADDING ELECTRIC BUSES



DHM Research, TriMet A&A, November, 2018

PLANNING FOR THE NEXT 50 YEARS

Since 2016 TriMet has maintained a rolling Five-Year Strategic Business Plan that envisions TriMet as a "leader in delivering safe, convenient, sustainable, and integrated mobility options necessary for our region to be recognized as one of the world's most livable places." TriMet's mission is to "connect people with valued mobility options that are safe, convenient, reliable, accessible, and welcoming for all," and to do this with values based on "safety, inclusivity, equity, community, and teamwork."

The plan calls for the strategic pursuit of prioritized improvements and enhancements that help the agency live up to its vision and meet goals and objectives. It aims to consider equity in all activities and continue to build a culture of safety and security for all mobility options. The Five-Year 2020–2024 strategic priorities include:

- Enhancing customer experience and and integrating customer transportation choices.
- Increasing the share of trips in the region on transit and other low-impact and/or healthy options such as walking, biking, telecommuting, bikeshare, and similar mobility options.
- Reducing customer travel times significantly, improving people's access to the needs in their lives.
- Helping counter the global climate change threat by reducing carbon emissions from transportation in our region, including converting to a non-diesel bus fleet.
- Supporting the Regional Transportation Plan and regional transportation funding efforts.
- Improving system safety and security for all mobility options.
- Optimizing internal systems and processes including information technology.
- Improving farebox recovery, properly managing all TriMet assets and working them relentlessly to generate a greater financial return.
- Improving state of good repair for TriMet assets.
- Ensuring TriMet is highly rated by the FTA and developing other 3rd party funding relationships to advance regional projects, such as Southwest Corridor, Division Transit Project, Red Line Extension and reliability investments.

The near-term emphasis as TriMet enters its 50th year is placed on:

- Pursuing new mobility opportunities and partnerships that enhance mobility and connections to transit.
- Implementing near-term improvements that will increase ridership.
- Reducing customer travel times and increasing reliability.
- Championing policies that give transit priority over single-occupancy vehicles in coordination with cities, counties, Metro and ODOT.
- Encouraging and engaging in meaningful public engagement.
- Sustaining a safety and security presence on the system including fare enforcement.
- Exploring technology and process modernization, especially information technologies that make data more useful and work more effective and efficient.
- Focusing on adequate staffing for operational excellence.
- Implementing recommendations from the employment diversity report and investing in training and workforce development.
- Delivering HB2017—payroll-tax-funded services and benefits, including increased enrollment in the Low-Income Fare program.
- Delivering a capital program including design and funding steps for regional projects.

TriMet's Business Plan is informed by ongoing efforts to understand the needs and desires of riders as well as the broader community. TriMet continues to engage diverse communities as the plan is implemented and updated.

TriMet sees its primary regional role as the provider of services and projects that:

- Support the economy: Getting employees to work and customers to businesses with integrated mobility options.
- Ease congestion: Attracting many riders to transit and encouraging travel modes other than driving during peak periods by providing integrated mobility, coordinated information and the kinds of service and capital projects that lead to development and lifestyles that rely less on peak-period driving.

- Provide mobility for those with few options: Providing a critical service for seniors, people with disabilities, school kids, low-income households, households without cars and others who have few mobility options by getting them to work, school and other destinations by transit or other accessible mobility options.
- Help shape the future of our region: Delivering service, mobility options, and capital projects that help attract residents, businesses, and development to centers, main streets, and corridors that communities have identified as future growth areas.
- Reduce emissions and support environmental sustainability: Delivering mobility options and supporting development that encourages mobility other than driving. Transit, walking, and bicycling especially promote personal and community health, and reduce resource use, greenhouse gases, and emissions in neighborhoods.

During TriMet's 50-year history the Portland region has become a much different place. The urban growth boundary has discouraged sprawl and forestalled the wasting of resources and paving of farmlands. The decline of Portland's downtown was reversed, and suburban nodes have been reinforced with the careful distribution of transit services and related facilities. The needs of citizens with no other means for getting around are being met, and TriMet offers attractive alternatives for those who can choose how they get around. TriMet is making the Portland region a better place.

BUILDING ON TRIMET'S HISTORY: THE 50 YEARS AHEAD

by Doug Kelsey, TriMet general manager

When I think back over TriMet's first 50 years, I think of the early leaders who were likely both passionate and humbled by the undertaking that lay before them in 1969.

From tumultuous beginnings, we grew to become a national transit leader and a cornerstone of our community. This evolution was the result of hard work by thousands of dedicated TriMet employees and contractors, led by enterprising leaders who laid out bold visions for what we could become.

Much has changed in our first 50 year, having grown from a bus-only system to the multimodal service provider of today. However, a few things have remained constant over the decades, including dedication to customer service, commitment to employees and resolute leadership in transit innovation.

During this time of celebration, it is important to take a moment to look back on how far we have come, to not only honor the accomplishments of those who led way, but to use our shared history as inspiration to continue our push forward. It is with our trailblazing spirit I look forward to what we will accomplish in the next 50 years.

We are working to become a stronger, more diverse, and responsive agency that removes barriers for transit use. We continue to lead and advocate for mobility advancements for our region. I, along with the dedicated team at TriMet, have a vision and a plan to advance the customer experience, foster stronger employee engagement, and grow sustainable transit services to meet the demands of our rapidly growing district.

We are entering a new era and face new challenges as an industry. As transportation technologies evolve, we need to become increasingly nimble in a rapidly changing landscape. To remain competitive, TriMet will need to leverage new sources of funding and realign our cost structure. In addition to growing our bus and rail network, we also need to bring new transportation service alternatives to market and manage them with a heightened focus on the customer.

We are now competing with a wide array of mobility service providers and this competition will grow as the cost difference between subsidized transit and ride-hailing services narrows, longer term. We are working to remove barriers to riding, including simplifying trip planning, integrating new technologies to speed the "Plan. Book. Pay." process and offer customer benefits akin to our private sector counterparts. One key benefit on our side is the vital role we play in the regional effort to improve air quality and eliminate our carbon footprint.

We are laying the foundation now to advance these key issues, moving TriMet from a traditional transportation agency to a passenger-integrated mobility provider. For 50 years, TriMet has built and strengthened regional partnerships and this spirit of collaboration will continue to serve this pursuit and our riders in the future.

As I look to the future, I know we will continue to build on our combined history of determination and innovation. I am confident that TriMet will successfully address new challenges due to the combined strength of our employees, our leaders and our legacy.

APPENDIX

HISTORY OF TRIMET BUS FLEETS

FLEET	LENGTH	QUANTITY	VEHICLE NUMBERS	MANUFACTURER	MODEL	YEAR BUILT	YEAR ACQUIRED	LIFT/RAMP	SEATED	STANDING	REMAINING IN SERVICE	YEAR RETIRED (LAST UNITS)
Many of the bus fleets from predecessor operators, including 130 Rose City gas-powered Mack buses and Twin Coaches, were in poor condition and were gone by 1972. Information on those fleets has not been located.												
10	30	5	108–10, 125, 127	GMC	TDH-3612	1949–1951	1970	None	38	NA	0	1973
11	35	14	186–188, 90–200	GMC	TDM-4515	1955	1970	None	45	NA	0	1972–1973
12	35	4	182–185	GMC	TDH-4517	1960	1970	None	47	NA	0	1973
12X	35	9	490–498	GMC	TDH-4517	1960	1979	None	45	NA	0	1981
13	35	5	501–505	GMC	TDH-4517	1960	1969	None	45	NA	0	1982
14	35	20	506–525	GMC	TDH-4519	1963	1969	None	45	NA	0	1985
14X	35	2	499–500	GMC	TDH-4519	1963	1979	None	45	NA	0	1985
15	35	15	526–540	GMC	TDH-4519	1964	1969	None	43	NA	0	1985
16	35	15	541–555	GMC	TDH-4519	1965	1969	None	43	NA	0	1985
17	35	4	255–258	GMC	TDH-4519	1965	1970	None	47	NA	0	1973
18	35	20	556–575	GMC	TDH-4519	1966	1969	None	43	NA	0	1985
19	40'	25	576–600	GMC	T8H-5305A	1971	New	None	51	NA	0	1986
20	35'	50	601–650	Flx	111DD-D51	1971	New	None	50	NA	0	1989
21	35'	135	300–434	Flx	111DC-D061	1972	New	None	42	NA	0	1999
22	40'	20	700–719	Flx	45102-8-1	1973	New	None	42	NA	0	1992
23	40'	20	800–819	GMC	T8H-5307A	1973	New	None	49	NA	0	1985
24	30'	10	200–209	GMC	TDH-3714	1953–1956	1974	None	37	NA	0	1976
25	40'	7	900–906	GMC	TDH-5106	1955–1956	1974	None	51	NA	0	1976
26	40'	80	100–179	Flx	53102-8-1	1974	New	None	49	NA	0	1991
27	40'	10	1100–1109	GMC	TDH-5303	1963–1964	1975	None	53	NA	0	1984
28	40'	100	1000–1099	AMG	10240B-8	1976	New	None	49	NA	0	1989
29	40'	20	900–919	Flx	F2D6V401-1	1962–1963	1979	None	53	NA	0	1988
30	40'	5	200–204	GMC	TDH-5301	1961–1962	1979	None	53	NA	0	1984
31	40'	3	1200–1202	GMC	T6H-4521A	1970	1979	None	45	NA	0	1988
32	40'	11	200–210	GMDD	T6H-4523N	1980	New	Lift	35	NA	0	1994
33	60'	87	700–786	Crown-Ikarus	286.02	1981–1982	New	Rear Lift	64	NA	0	1999
34	40'	75	900–974	GMC	T80204	1982	New	Rear Lift	43	64	0	2001
35	40'	50	500–549	Flx	40102-6C	1988	New	Lift	43	64	0	2003
36	40'	88	550–637	Flx	40102-6C	1989	New	Lift	43	64	0	2005
37	40'	63	1401–1463	Gil	40102TBL10	1990	New	Lift	43	64	0	2014
38	30'	30	1601–1630	Gil	30102TBL10	1990	New	Lift	28	35	0	2015
39	30'	13	1631–1643	Gil	30102TBL10	1991	New	Lift	28	35	0	2015

HISTORY OF TRIMET BUS FLEETS

FLEET	LENGTH	QUANTITY	VEHICLE NUMBERS	MANUFACTURER	MODEL	YEAR BUILT	YEAR ACQUIRED	LIFT/RAMP	SEATED	STANDING	REMAINING IN SERVICE	YEAR RETIRED (LAST UNITS)
40	40'	108	1701–1808	Flx	40102-6C	1992	New	Lift	43	64	0	2014
41	30'	10	1901–1910	Flx	30102-6C	1992	New	Lift	28	35	0	2015
42	40'	2	1464–1465	Gil	40102TBL10 (LNG)	1992	New	Lift	43	64	0	2001
43	40'	8	1809–1816	Flx	40102-6C (LNG)	1993	New	Lift	43	64	0	2000
44	40'	27	1817–1843	Flx	40102-6C	1994	New	Lift	43	64	0	2013
45	40'	10	1844–1853	Flx	40102-4D	1994	New	Lift	43	64	0	2008–2009
46	40'	22	2001–2022	NFI	D40LF-SR483	1997	New	Ramp	39	56	0	2016
47	40'	60	2101–2160	Gil	C21D102N4	1997	New	Lift	43	60	0	2016
48	40'	5	2161–2165	Gil	C21D102N4		New	Lift	43	60		2014
49	40'	58	2201–2258	NFI	D40LF-SR538	1998	New	Ramp	39	56	0	2019
50	27'	18	2401–2418	Collins	300-RE-185	1998–1999	New	Rear Lift	21	23	0	2009
51	40'	60	2259–2318	NFI	D40LF-SR559	1999	New	Ramp	39	56	0	2019
52	40'	60	2501–2560	NFI	D40LF-SR664	2000–2001	New	Ramp	39	56	57	
53	40'	2	2561–2562	NFI	D40LF-SR721 Hybrid	2001	New	Ramp	39	56	0	2012
54	40'	55	2601–2655	NFI	D40LF-SR836	2002	New	Ramp	39	56	51	
55	40'	25	2701–2725	NFI	D40LF-SR882	2003	New	Ramp	39	56	25	
56	40'	39	2801–2839	NFI	D40LF-SR958	2005	New	Ramp	39	56	39	
57	40'	40	2901–2940	NFI	D40LF-SR1301	2008–2009	New	Ramp	39	56	40	
58	40'	51	3001–3051	Gil	G27D102N4	2012	New	Ramp	39	56	51	
59	40'	4	3052–3055	Gil	G27D102N4 Hybrid	2012	New	Ramp	39	56	4	
59X	40'	4	3056–3059	Gil	G27D102N4 Hybrid	2015	New	Ramp	39	56	4	
60	40'	70	3101–3170	Gil	G27D102N4	2013	New	Ramp	39	56	70	
61	40'	60	3201–3260	Gil	G27D102N4	2014	New	Ramp	39	56	60	
62	40'	30	3301–3330	Gil	G27D102N4	2014	New	Ramp	39	56	30	
63	29'	22	3401–3422	Gil	G27E102N2	2015	New	Ramp	23	40	22	
64	40'	77	3501–3577	Gil	G27D102N4	2015–2016	New	Ramp	39	56	77	
65	40'	50	3601–3650	Gil	G27D102N4	2016	New	Ramp	39	56	50	
66	40'	57	3701–3757	Gil	G27D102N4	2017	New	Ramp	39	56	57	
67	40'	5	3801–3805	NFI	Excelsior XE40	2018–2019	New	Ramp	40	56	5	
68	40'	64	3901–3964	Gil	G27D102N4	2019	New	Ramp	39	56	64	
69	40'	71	4001–4071	Gil	G27D102N5	2019	New	Ramp	39	56	ordered	
TOTAL BUS FLEET AS OF AUGUST 2019: 706												

GMC = General Motors Corporation Flx = Flxible Corporation AMG = AM General Corporation NFI = New Flyer Industries Gil = Gillig Corporation

Source: TriMet Bus Maintenance and Steve Morgan

MAX LIGHT RAIL VEHICLE ROSTER

FLEET	LENGTH	QUANTITY	VEHICLE NUMBERS	MANUFACTURER	MODEL	YEAR BUILT	SEATED	STANDING	REMAINING
Type 1	89'	26	101–126	Bombardier	None	1983-1986	76	166	26
Vintage Trolley	40'	4	511–514	Gomaco	None	1991-1992	40		0 (loaned out)
Type 2	92'	52	201–252	Siemens	SD660	1996-2000	64	166	52
Type 3	92'	27	301–327	Siemens	SD660	2003-2005	64	166	27
Type 4	96'	22	401–422	Siemens	S70	2008-2009	68	172	22
Type 5	95'	18	521–538	Siemens	S70	2014-2015	72	186	18
Type 6	95'	26	601–626	Siemens	S700	2021-2022	66	179	Ordered (7/2019)
TOTAL MAX LIGHT RAIL FLEET AS OF JUNE 2019: 145									

Sources: en.wikipedia.org/wiki/MAX_Light_Rail and Steve Morgan

WES COMMUTER RAIL VEHICLE ROSTER

FLEET	QUANTITY	VEHICLE NUMBERS	MANUFACTURER	MODEL	YEAR BUILT	SEATED	STANDING	REMAINING
Diesel multiple units (DMUs)	3	1001–1003	Colorado Railcar	Aero	2008	74	139	3
Unpowered control car	1	2001	Colorado Railcar	Aero—Unpowered	2008	80	139	1
Former Alaska Railroad, acquired in 2009, in service 2011	1	1702	Budd	RDC	1953			1
	1	1711	Budd	RDC	1952			1
Former Trinity Rail Express, Dallas, Texas, acquired in 2017, awaiting service readiness	1	2007	Budd	RDC	1957			1
	1	2011	Budd	RDC	1957			1
TOTAL WES COMMUTER RAIL FLEET AS OF JUNE 2019: 8								

Source: en.wikipedia.org/wiki/WES_Commuter_Rail

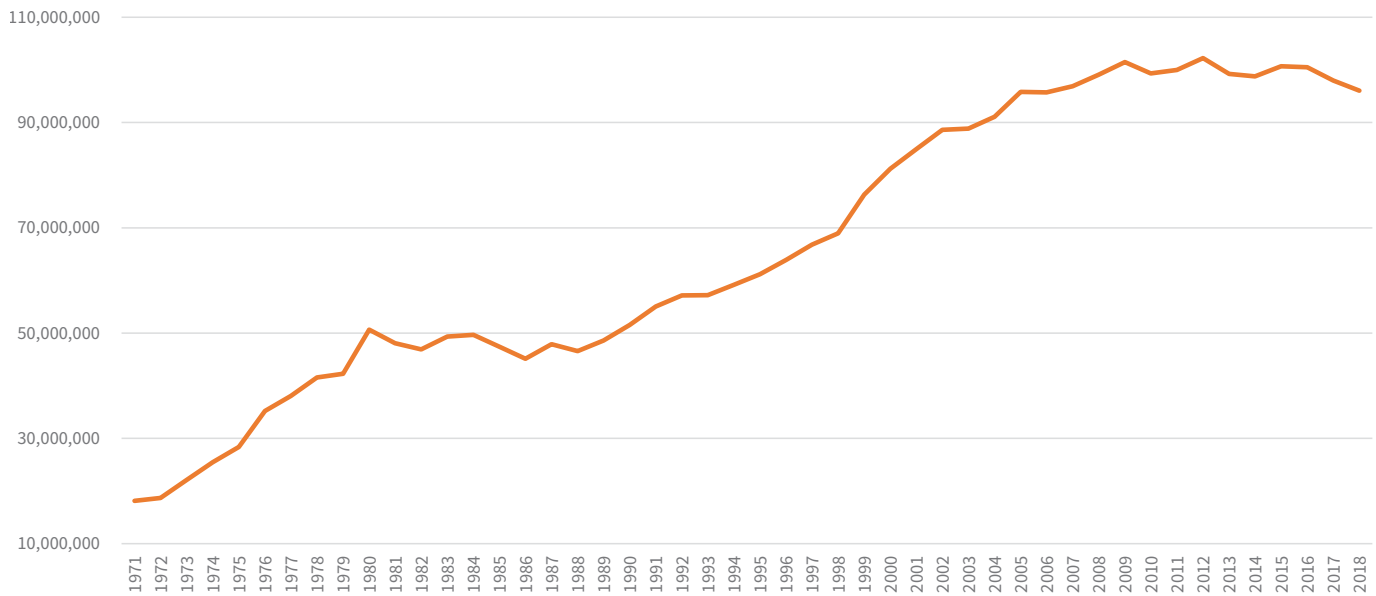
RIDERSHIP AND PRODUCTIVITY SINCE TRIMET BEGAN

FISCAL YEAR	BOARDING RIDES	TOTAL VEHICLE HOURS
1971	18,132,600	735,000
1972	18,696,600	789,000
1973	22,080,600	818,000
1974	25,480,000	887,000
1975	28,360,000	1,122,000
1976	35,210,000	1,287,000
1977	38,080,000	1,360,000
1978	41,570,000	1,432,000
1979	42,250,000	1,443,000
1980	50,670,000	1,544,000
1981	48,090,000	1,560,000
1982	46,930,000	1,615,000
1983	49,360,000	1,747,000
1984	49,680,000	1,723,000
1985	47,400,000	1,522,632
1986	45,120,000	1,515,504
1987	47,880,000	1,529,136
1988	46,560,000	1,545,456
1989	48,600,000	1,544,772
1990	51,541,000	1,570,078
1991	55,031,000	1,602,204
1992	57,172,000	1,643,218
1993	57,198,000	1,700,126
1994	59,148,000	1,793,292
1995	61,188,000	1,837,836
1996	63,912,000	1,880,664
1997	66,780,000	1,879,068
1998	68,952,000	1,936,044
1999	76,309,200	2,068,284
2000	81,237,600	2,152,248
2001	84,946,800	2,177,616
2002	88,633,200	2,232,132
2003	88,863,600	2,241,672
2004	91,071,600	2,249,172
2005	95,826,000	2,278,800
2006	95,736,000	2,192,124
2007	96,918,000	2,206,416
2008	99,098,400	2,231,064
2009	101,466,746	2,268,049
2010	99,337,044	2,194,656
2011	100,002,660	2,038,392
2012	102,238,070	2,032,908

RIDERSHIP AND PRODUCTIVITY SINCE TRIMET BEGAN

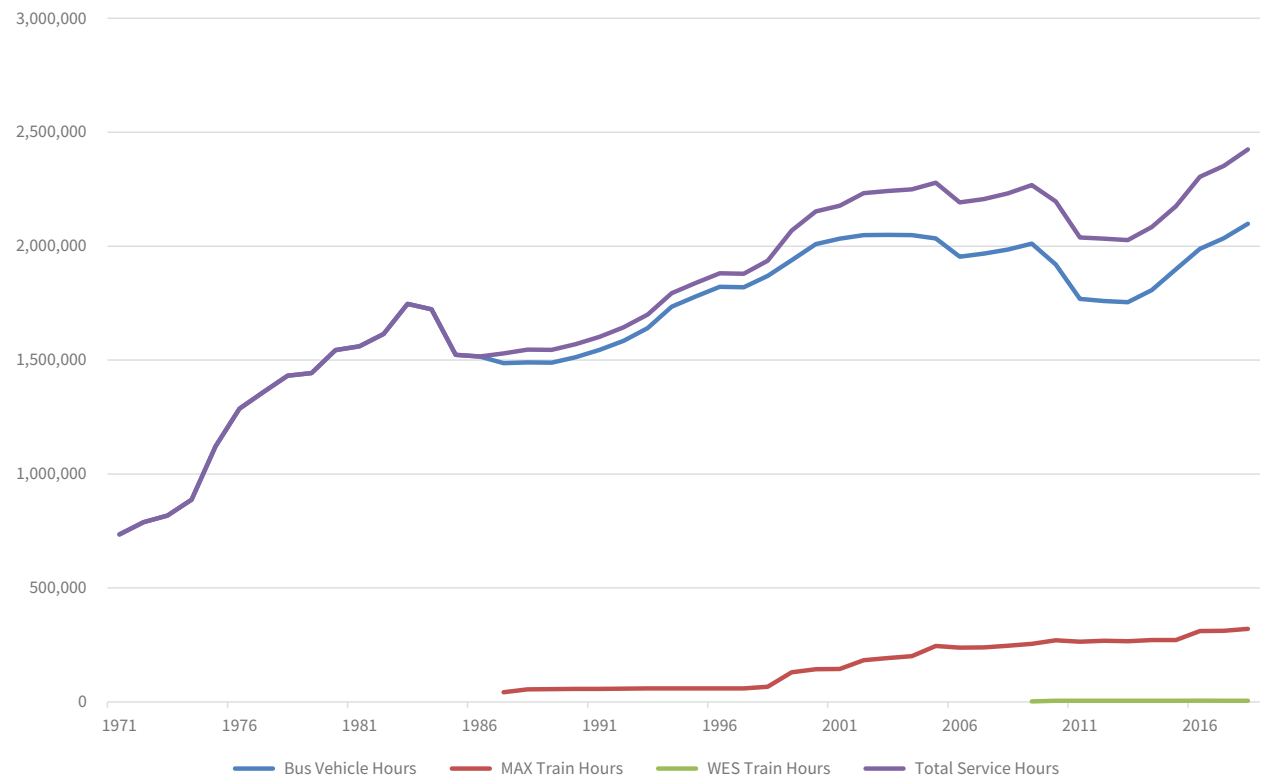
FISCAL YEAR	BOARDING RIDES	TOTAL VEHICLE HOURS
2013	99,246,930	2,026,056
2014	98,775,270	2,083,680
2015	100,711,776	2,175,549
2016	100,478,770	2,304,518
2017	97,968,810	2,351,724
2018	96,058,592	2,424,432

TRIMET ANNUAL BOARDING RIDES



ANNUAL SERVICE HOURS

BY FISCAL YEAR



TRIMET 10-YEAR SERVICE IMPROVEMENT PROGRAM

This list is subject to revision and potential refinement of priorities with HB 2017 Transit Advisory Committee approval.

LINE	DESCRIPTION	IMPLEMENTED
Line 12-Barbur/Sandy Boulevard	More late night and early morning service to Tigard	Spring 2016
Line 57-TV Highway	More early morning service to Forest Grove, late night service to Beaverton Transit Center	
Line 72-Killingsworth/82nd Ave	Earlier service from Clackamas Town Center and Swan Island	
Line 75-Cesar Chavez/Lombard	All buses to serve Milwaukie on weekdays	
Line 76-Beaverton-Tualatin	More Sunday service	
Line 78-Beaverton/Lake Oswego	More Sunday service	
Line 87-Airport Way/181st	More midday service between 182nd/Powell and Gateway Transit Center	
Line 97-Tualatin-Sherwood Road	New route	Summer 2016
Line 4-Division/Fessenden	Add early and late-night trips	Fall 2016
Line 32-Oatfield	Increase weekday hours of operation	
Line 36-South Shore	Restructure route for improved reliability	
Line 63-Washington Park	Add Saturday and Sunday service	
Line 71-60th/122nd Avenue	Increase frequency on 122nd, restructure route	
Line 85-Swan Island	Add an evening trip and adjust schedule	
Line 20-Burnside/Stark	Increase weekday service, match Sunday to Saturday frequency	Spring 2017
Line 21-Sandy Boulevard/223rd	Add peak weekday trips. Adjust schedule to match Line 12	
Line 155-Sunnyside	Extend route to 172nd, discontinue 157th, Misty, 162nd section	
Line 33-McLoughlin	Expand weekend hours for service Milwaukie to Clackamas Town Center	Fall 2017
Line 77-Broadway/Halsey	Increase weekday midday frequency	
Line 6-Martin Luther King Jr. Blvd	Adjust route for better retail and MAX connections	
Line 12-Barbur/Sandy Boulevard	New morning trip	
Line 44-Capitol Hwy/Mocks Crest	Increase midday weekday frequency	
Line 52-Farmington/185th	Increased frequency weekends and midday on weekdays	
Line 42-Denney/Hall	New service between Tigard Transit Center, Washington Square and Beaverton Transit Center	Spring 2018
Line 74-162nd Avenue	New weekday service between SE Powell and Airport Way	
Line 82-South Gresham	New service replacing a portion for the former Line 87-Airport Way/181st	
Line 87-Airport Way/181st	All trips between Gateway Transit Center and SE 182nd/Powell, new weekend service	
Line 152-Milwaukie	Route revision to SE Harmony Road, more weekday service	
Line 33-McLoughlin	Add Saturday night trip	Summer 2018
MAX Red Line	Later trips to Portland International Airport	Fall 2018
Line 272-PDX Night Bus	New bus line from PDX to Stark when Red Line doesn't run	
Line 4-Division/Fessenden	Split into 2 lines for better on-time performance	
Line 17-Holgate	Added commute trips	

TRIMET 10-YEAR SERVICE IMPROVEMENT PROGRAM

This list is subject to revision and potential refinement of priorities with HB 2017 Transit Advisory Committee approval.

LINE	DESCRIPTION	IMPLEMENTED
Line 20-Burnside/Stark	24-hour service	Fall 2018
Line 35-Macadam/Greeley	Add one morning and one evening trip	
Line 56-Scholls Ferry Road	Add one morning and one evening trip	
Line 57-TV Highway	24-hour service	
Line 61-Marquam Hill/Beaverton	Earlier and later trips	
Line 64-Marquam Hill/Tigard	Earlier and later trips	
Line 66-Marquam Hill/Hollywood	Earlier and later trips	
Line 68-Marquam Hill/Collins Cir	Earlier and later trips	
Line 73-122nd Avenue	Upgrade to 15-minute Frequent Service	
Line 81-Kane/257th	Revised route, increased frequency and span of service	
Line 94-Pacific Hwy/Sherwood	Add one afternoon trip	
Line 96-Tualatin/I-5	Add midday service	
Line 24-Fremont	Extend to NW Portland & Providence Park via Fremont Br	Spring 2019
Line 31-Webster Road	New line	
Line 79-Clackamas/Oregon City	Streamline route for faster service. Coordinate with Line 31.	
Line 30-Estacada	Add Sunday service	Planned for Fall 2019/Spring 2020
Line 32-Oatfield	Add Sunday service	
Line 74-162nd Avenue	Increase frequency, Saturday and Sunday service	
Line 19-Woodstock/Glisan	Route shift to improve reliability	
Line 20-Burnside/Stark	Upgrade to 15-min. Frequent Service	
Line 61 or 64-Marquam Hill	Increase to all day service	
Line 70-12th/NE 33rd Avenue	Shift southbound route to reduce travel time	
Line 76-Beaverton-Tualatin	Upgrade to 15-min. Frequent Service	
Division Transit Project	Downtown Portland to Gresham	Fall 2022

ANTICIPATED NEW SERVICE THROUGH FISCAL YEAR 2023

NEW, REVISED OR EXTENDED ROUTES	DESCRIPTION
Jennings Road	New Line
148th Avenue	New line
Jones Farm	New Line
Baseline Road	New line between downtown Hillsboro & Willow Creek Transit Center
Line 10-Harold	Change route to serve SE 7th Avenue; add Sunday service
Line 19-Woodstock/Glisan	Revise route to use SW Lincoln
Line 32-Oatfield	Extend to Oregon City High School
Line 36-South Shore	Extend to Durham Road, 30 min peak/40 off-peak
Line 47-Baseline/Evergreen	Reroute to South Hillsboro; increase peak frequency
Line 56-Scholls Ferry Road	Extend every other trip to Progress Ridge/South Cooper Mtn
Line 62-Murray Blvd	Extend to Progress Ridge
Line 78-Beaverton/Lake Oswego	Replace Line 42 which adds weekend and span of service
Line 81-Kane/257th	New route to better serve major employers
MAX Red Line	Extend to Fair Complex
FREQUENT SERVICE	**DESCRIPTION**
Portland Streetcar	Upgrade to 12-minute Frequent Service
Line 14-Hawthorne	Upgrade to 12-minute Frequent Service
Line 15-Belmont/NW 23rd	Upgrade to 12-minute Frequent Service
Line 57-TV Hwy/Forest Grove	Upgrade to 12-minute Frequent Service
Line 72-Killingsworth/82nd Avenue	Upgrade to 12-minute Frequent Service
Line 54-Beaverton-Hillsdale Highway	Upgrade to 15-minute Frequent Service
Line 87-Airport Way/181st	Upgrade to 15-minute Frequent Service
INCREASED TRIPS	**DESCRIPTION**
Line 1-Vermont	Add morning and evening service
Line 6-Martin Luther King Jr. Blvd	Increase frequency
Line 10-Harold	Add morning and evening service
Line 16-Front Avenue/St. Helens Rd	Increase peak frequency
Line 20-Burnside/Stark	Increase frequency between Portland and Beaverton
Line 32-Oatfield	New weekend service
Line 42-Denney/Hall	Early/late/weekend improvements w/Line 76 upgrade
Line 48-Cornell	Increase frequency to Hillsboro; increase frequency Saturday/Sunday
Line 66-Marquam Hill/Hollywood TC	Earlier and later trips
Line 67-Bethany/158th	Increase frequency to 15-minute peak, 30-minute off-peak
Line 71-60th/122nd Avenue	More morning and afternoon service
Line 77-Broadway/Halsey	Increase peak frequency
Line 99-Macadam/McLoughlin	Add midday service
Line 152-Milwaukie	Revise and increase frequency
Line 155-Sunnyside	Increase frequency

In 1969, the City of Portland adopted the following resolution, effectively creating the Tri-County Metropolitan Transportation District of Oregon (TriMet).

RESOLUTION NO. 30598

WHEREAS Chapter 643, 1969 Oregon Session Laws, provides that the governing body of the most populous city in a standard metropolitan statistical area may by resolution propose creation of a mass transit district, if that city has a local transit system and if the governing body finds that areawide mass transit needs cannot be met by local transit operation; and

WHEREAS the City Council of Portland is the governing body of the most populous city in that area designated and published by the United States Bureau of the Budget as the Portland, Oregon-Washington Standard Metropolitan Statistical Area; and

WHEREAS the City of Portland is served by a local transit system operated by the Rose City Transit Company; and

WHEREAS adoption of this resolution has been preceded by a public hearing, after notice of the same as required by law for regular consideration of other resolutions by the City Council; now therefore, be it

RESOLVED that the City Council of Portland hereby makes the following findings:

(1) The Rose City Transit Company has operated under a franchise agreement by the City Council and has, from time to time, requested and been permitted increases in passenger fares;

(2) Each increase in passenger fares has been followed by a decrease in bus passengers and has contributed to an increase in the use of private passenger vehicles., coupled with the demand for more and wider freeways and arterial streets to accommodate the high volume of traffic;

(3) Rose City Transit Company filed with the city Council a request for an increase in passenger fares to 40 cents, claiming that the company is not making a reasonable operating profit from the present 35-cent fare;

(4) Passenger fares above the 35-cent level presently charged by said transit company will result in additional loss of patronage and will result in severe financial disadvantage of people who rely upon the local transit system as their only means of transportation;

(5) Said transit company has from time to time reduced the frequency of bus runs on its routes, thereby imposing a further hardship on many passengers who rely upon the local transit system as their only means of transportation;

(6) Other Oregon cities within the Portland metropolitan area are served by three other transit companies with routes terminating in downtown Portland;

(7) Neither Rose City Transit Company nor the said three other transit companies have followed an adequate schedule for the replacement of buses, and most of the buses operated by these companies are at least 15 years old, causing a greater inconvenience from bus breakdowns, a greater discomfort to passengers and more pollution of the air, than would be caused by the operation of newer buses;

(8) The needs of the Portland metropolitan area for an economical and efficient mass transit system cannot be met by local transit operation;

(9) There is a need for the creation of a mass transit district in the standard metropolitan statistical area; and be it further

RESOLVED that this resolution is addressed to the Honorable Tom McCall, Governor of the State of Oregon, and is intended to comply with the provisions of Section 3, Chapter 643, 1969 Oregon Session Laws; and be it further

RESOLVED that the Governor hereby is requested to appoint members of the board of directors of a mass transit district pursuant to said Chapter 643, said mass transit district to have as its geographic boundaries the non-contiguous boundaries of Clackamas, Multnomah and Washington Counties; and be it further

RESOLVED that the City Auditor hereby is directed to deliver a duplicate original of this resolution to the Governor in Salem, Oregon, personally or by certified mail without undue delay.

Adopted by the Council October 1, 1969. Auditor of the City of Portland.

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How life moves