State of the Cities

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Washington's interconnected infrastructure





State of the Cities

Washington's interconnected infrastructure

Introduction

Washington's infrastructure system is a complex network of interconnected parts that supports the daily workings of our communities, provides the foundation for a thriving economy, and sustains urban and rural development as our state's population grows.

Cities are working hard to maintain and improve our piece of this important statewide system, while also balancing a variety of competing priorities. City officials understand their communities' needs and unique challenges and are responding through creative and resourceful action. They are also looking ahead and planning for a sustainable future through fiscally sound, equity-driven, and environmentally focused practices.

However, we cannot do this work alone. Productive and reliable partnerships between cities and state-level actors are essential to successfully maintain our shared infrastructure and transportation systems.

In this year's *State of the Cities* report, AWC looks at city infrastructure across Washington to examine the present condition of our infrastructure systems, how cities are overcoming barriers to improvement, and what more can be done to support the statewide network.

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Acronym index

ARPA	American Rescue Plan Act
AWC	Association of Washington Cities
ccs	AWC City Conditions Survey
BIL	Bipartisan Infrastructure Law
САР	Climate Action Plan
CERB	Community Economic Revitalization Board
DWSRF	Drinking Water State Revolving Loan Fund
WWDRF	Wastewater State Revolving Loan Fund
FMSIB	Freight Mobility Strategic Investment Board
GHG	Greenhouse gas
IRA	Inflation Reduction Act
IIJA	Infrastructure Investment and Jobs Act
JTC	Joint Transportation Committee
ΜΡΟ	Metropolitan Planning Organization
PFAS	Perfluoroalkyl substances
PFOS	Polyfluoroalkyl substances
PWAA	Public Works Assistance Account
PWB	Public Works Board
REET	Real Estate Excise Tax
RTPO	Regional Transportation Planning Organization
TBD	Transportation Benefit District
ТІВ	Transportation Improvement Board
WSBO	Washington State Broadband Office
WSDOT	/ashington State Department of Transportation

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Washington State Department of Transportation

Chapter

City infrastructure, statewide system

City infrastructure is an integral part of the statewide network, providing local service as well as continuity across the system.

Local infrastructure allows Washingtonians to travel from one corner of the state to another, transition from state highway to county road, and eventually on to city streets as they reach their final destinations. Infrastructure keeps water flowing from its source to our homes and buildings and onward to wastewater treatment systems, where it emerges ready for reuse. And many cities provide the basic infrastructure for the nationwide broadband services that keep us connected.

Yet most Washingtonians don't distinguish between a bridge owned by the city, and one owned by the county or state. They may not know that their municipal bus route links up to the regional transit system or that their private internet provider relies on the fiber-optic cables owned and installed by the city. The state's infrastructure system is interconnected and, when functioning well, provides seamless service from one area to another. Operations and maintenance often take place behind the scenes, where users don't see the complex and integrated nature of the system.

Let's bring city infrastructure systems to light by looking at the basic functions they serve, how cities fund them, and what it takes to operate and maintain these essential services.

Washington's cities and towns manage a set of capital facilities to provide fundamental public services for their residents, businesses, and visitors. This includes: streets, bridges, drinking water and wastewater treatment facilities, stormwater collection, and culverts.

The sophistication and scale of the capital facilities for the state's largest cities are different from those of its smallest. But cities of all sizes are responsible for providing infrastructure that ensures safe drinking water, supports a vibrant economy, and sustains a healthy natural environment.



Utility systems

Cities plan, design, and construct utility systems that provide reliable services at affordable rates. The most common utilities are drinking water, sewer, and

stormwater—all of which are examined in this report. A minority of cities also operate electric and natural gas, and even privately owned utilities must use city rights-of-way.



Broadband

The **4th utility**

Although it is rarely provided by cities, broadband service is sometimes referred to as the fourth utility. High-speed internet is widely considered an essential service in today's

connected world.

While most cities provide their own drinking water, sewer, and stormwater systems, these services are sometimes provided by another city, special purpose district, or private entity. Likewise, some city utilities provide services to residents and businesses outside their jurisdictions.



Drinking water

Cities supply millions of Washingtonians with safe, reliable drinking water. Providing this life-sustaining service requires an adequate water supply, treatment that meets rigorous water quality standards, and extensive distribution systems to reach homes and businesses.

City water is monitored, analyzed, filtered, and disinfected, then distributed through miles of pipe to residential, commercial, and industrial consumers.

Emerging contaminants such as PFAS and PFOS in sources of drinking water present new and difficult challenges for municipal drinking water systems. These forever chemicals have been used for decades in hundreds of industrial and consumer products to repel water, oil and grease, and extinguish fires. Due to their widespread and longterm use, national surveys have shown that most Americans have some level of PFAS in their blood.

Given that PFAS do not break down easily and are still being manufactured, the compounds may remain in water supplies for years to come. Federal and state rules now require public water systems to test and notify for up to six types of PFAS (out of over 9,000 known), however, the U.S. Environmental Protection Agency's 2023 target date to establish a maximum enforceable contaminant level for PFAS in drinking water systems may bring additional future requirements.

Cities own & operate utilities

Most cities manage their own utilities

Cities operate a utility they do not own

Cities contract with a third party to operate the utility Wastewater

Wastewater systems ensure that human waste and grey water generated by residences, businesses, and institutions are collected and sent to a city or regional treatment facility before being released into the environment. This fundamental service preserves the natural environment and protects public health.

Wastewater treatment systems vary significantly. They are complex, costly, and must evolve continuously to meet state and federal requirements. City wastewater systems include a facility that processes, disinfects, and treats the collected effluent before discharging it into waterways. The Washington State Department of Ecology issues wastewater discharge permits that restrict the level of pollutants and establishes monitoring and reporting requirements. The treatment process also produces a byproduct from the solids that acts as an important soil amendment, called biosolids. Biosolids can be either land-applied on farm or forest land or further treated and sold for landscape and garden compost.



Stormwater

When rain or snow falls on "pervious" surfaces—those in which water can percolate through to the soil—it can be absorbed by plants or soak into the ground. As the stormwater percolates through layers of vegetation and earth, organic materials filter out contaminants. However, when rain or snow hits roofs, parking lots, streets, and other "impervious surfaces," it collects pollutants. Stormwater runoff includes automotive fluids, fine rubber particles, trace metals, and settled air pollutants. Recent studies have shown greater damage to salmon from the chemicals in tires than was previously known.

Under state law, cities must manage and control stormwater runoff. The requirements vary depending on the size and location of the city.

Stormwater has been identified as one of Washington's fastest growing sources of water quality problems. As our state experiences significant storm events with greater frequency and intensity, the challenge of managing stormwater quantity and pollution impacts increases. Cities recognize the need to both manage flooding from stormwater and to mitigate pollution in our waterways. They work hard to do so. However, as research continues to inform evolving standards, and management becomes more stringent, cities may need assistance to meet permitting requirements and timelines.



Note: or 27,150 gallons of potential runoff for 1 acre of pavement

Culverts

Washington's infrastructure system includes thousands of culverts, which help to channel flowing water under

roads or through subterranean waterways. Many of the state's culverts were not sufficiently designed to account for fish migration, resulting in obstruction of fish passage, the loss of critical habitat required for spawning and early life stages, and interference in cultural traditions and livelihoods for many Washington tribes.

In 2018, the U.S. Supreme Court upheld an injunction requiring Washington to fix its fish-blocking culverts by 2030. The Legislature continues to wrestle with this daunting funding commitment, though it has allocated approximately \$3 billion to support the ongoing removal of state-owned barriers. Yet the problem also exists at the local level. While the state has obligated billions to address its culverts, cities have nearly 1,300 barriers in the same streams and have received limited funding support. The estimated cost to repair city-owned fish-blocking culverts is over \$2.5 billion. The removal of state-owned culverts only solves part of the problem. On average, there are two downstream and five upstream local culverts associated with each state barrier.

Transportation

A city street is more than just a paved surface where people drive vehicles and move goods. The most obvious components are the sidewalks, streetlights, crosswalks, and parking. However, transportation

infrastructure also includes multimodal options, such as bike paths, wheelchair accessible ramps, transit services, and rail crossings. Signage, striping, and painting are part of a complete street network too. What's more, city streets must be designed to accommodate the heavy weight of delivery trucks and freight vehicles, more of which travel through cities now than ever before. Both put enormous stress on streets and accelerate their deterioration.



Moving below ground, streets provide rights-of-way for water lines, sewer lines, stormwater drainage, and electrical cables. This underground network of infrastructure, while invisible to the naked eye, makes city street systems even more complex and costly.

From a statewide perspective, nearly every trip begins and ends on a city or county road. City streets comprise more than 17,000 centerline miles, over which 39.4 million daily vehicle miles are traveled. Statewide, the city transportation network covers 25% of vehicle travel on over 36,000 lane miles of streets. Cities are also responsible for 740 bridges and for some operation and maintenance of state highways within our jurisdictions. This includes highway illumination, cleaning and snow plowing, stormwater facility maintenance, and traffic enforcement.

Washington's location in the Pacific Northwest gives the state an advantage in domestic and international trade; we are one of the most trade-reliant states in the nation. This contributes to a strong local economy that cities help to maintain and want to see grow. However, with that comes increased truck and train freight traffic—especially for cities near regional ports and railroad terminals. Freight traffic may be a small portion of overall traffic in the state, yet it significantly contributes to the deterioration of city streets. With no user fees for streets, freight and delivery trucks travel on city streets paid for largely by residents. Freight trains also pass through cities, creating traffic problems and pressures on city governments to build overpasses and underpasses.



Broadband

Only one city in Washington manages a municipalityowned broadband network, serving as the internet provider for its community. However, many cities own and maintain a network of fiber-optic cables and partner with one or more internet service providers where residents can secure a connection.

These cities, through forward-thinking policies and planning, often lay fiber in concert with other construction that includes road repair or paving projects, with the goal of connecting new development to an existing community. This "dig once" approach is an efficient and practical use of city resources.

While Washington's cities and towns have the authority to provide retail broadband, many choose to work collaboratively with their local public utility district and/or port to bring connectivity to their communities. Installing the physical infrastructure represents a costly initial investment. Add to this the need for adequate city staff and other resources to establish the service and manage it long-term—including daily operations and periodic maintenance—and it becomes clear why most of Washington's cities lack the capacity and revenue base to sustain such a service.

Nevertheless, broadband policy has been an increasing priority in Washington, and nationwide, as the COVID-19 pandemic highlighted and exacerbated already inequitable access to high-speed internet services. Given the heightened focus on broadband at the federal level, and increased funding available through the BIL, local leaders are looking seriously at what they can do to lower the barriers to access for their residents, and to increase connectivity and digital literacy. In 2020, local governments were the largest application pool for the PWB Broadband Construction loan program. In 2021, local governments were the largest share of awardees for the PWB's federal loan cycle.



City infrastructure funding

City infrastructure funding typically comes from two sources:

- 1. General fund: Used to account for nearly all city revenues and expenditures; and
- 2. Enterprise funds: Used for city services like utilities that are generally self-supporting.

Capital expenditures are normally paid for with a variety of long-term sources, including bond issues and other debt, grants, and dedicated sources such as the local real estate excise tax, but they are often subsidized with contributions from the general fund. Cities are required by law to balance their annual budgets so that expenditures do not exceed revenues. While this is a prudent policy, it means reported city expenditures do not reflect the current conditions of its infrastructure systems, nor do they capture the amount of unmet need to maintain and expand that system.



Sales and

use taxes

Property

taxes



Business & utility taxes Taxes from three main sources make up most of a city's general fund revenues. In 2021, Washington's 281 cities earned 75% of their general fund revenues from property, sales and use, and business and utility taxes. As a result, infrastructure needs often compete with other city services for funding.

Moreover, growth of the property tax, which makes up more than 20% of cities' tax revenue, is capped at 1% per year and cannot keep pace with inflation, which has typically been about 3% per year. This creates a structural deficit, due to the gap between the cost of providing services and the

revenue available to pay for those services. This is a key reason for local governments' ongoing struggle to generate sufficient funding that provides basic services and maintains critical infrastructure systems.

In addition to bond and debt financing, cities use local revenue-raising options granted by the state for infrastructure projects. These options help cities piece together financing for capital projects. However, many local options are restricted by laws governing how a tax is levied, and by how much and where the funds may be used. Thus, local taxing options

are helpful for cities to augment financing for projects, but each option alone is still not enough to meet the financial need.

Finally, cities also rely on the state and federal governments for help to fund infrastructure improvements, whether through financing or direct distributions. Normally, this makes up less than 10% of a city's budget but has increased recently to approximately 13% due to federal stimulus funding provided during the COVID-19 pandemic. There are a handful of grant and low-interest loan programs available to local jurisdictions, each with different criteria and designed for different purposes. Cities struggle to generate sufficient funding that provides basic services *and* maintains critical infrastructure systems.



On the traditional infrastructure side, one of the most important sources of assistance for capital improvements in cities is the PWAA (managed by the PWB), a revolving loan fund that offers low-interest financing for infrastructure projects at the local level. Unfortunately, due to the state's continual diversions and chronic underfunding of the account, it has not been fully funded since 2009. Of no less importance to local jurisdictions, the TIB funds high-priority city and county transportation projects through its grant programs. See the chart below for a list of vital funding programs for cities.

Cities must apply for external funds through a competitive process, which requires adequate staff, time, and expertise—resources that our state's smallest cities often lack. Federal funds have stringent requirements and matching thresholds that can create further barriers to access. Moreover, these dollars do not represent a sustainable source of funding for cities, as they are not a dedicated local or shared revenue source. They are a one-time source of support that contributes to a patchwork of other funding resources cities use to finance essential projects.

Funding sources ava	ailable to cities	for capital	projects

General fund revenues	Enterprise fund	Bond & debt financing	Dedicated local options	Grants
 Property taxes Retail sales and use taxes Business & utility taxes State-shared revenues 	 Utility rates and fees Charges and fees 	 State and federal low-interest loans General obligation bonds Revenue bonds Other bonds 	 REET Mitigation and development fees Local improvement districts TBDs Impact fees Levy lid lift 	 State and federal grants



Utility funding

Utility systems are generally funded as proprietary activities, requiring that the service be self-supporting. User fees and charges are accounted for within the utility fund and, ideally, provide a stable revenue source.

The term "self-supporting" can be misleading. Proprietary funds are an effective management tool, but fees often cannot cover all capital needs, especially as populations grow and construction and maintenance costs increase. Many city councils struggle to strike a balance between affordable user rates and sufficient revenues to fund capital maintenance and upgrades. This is especially true in small cities and rural areas which lack economy of scale to spread expensive capital and operating costs across a large base of utility users.

The COVID-19 pandemic adversely impacted cities' utility revenues, with 64% of survey respondents reporting losses in 2021 due to residents' economic hardship and the Governor's utility shutoff moratorium, which ran from March 1, 2020 to September 30, 2021. Most cities provided

Grant and loan programs essential for financing local infrastructure projects in Washington

- Public Works Board
- Community Economic Revitalization Board
- Washington State Broadband Office
- Community Development Block Grant Program funds
- Drinking Water State Revolving Loan Fund (Department of Health)
- Wastewater State Revolving Loan Fund (Department of Ecology)
- U.S. Department of Agriculture rural development loans

direct utility assistance to customers throughout the pandemic, and some will receive reimbursements from the state through funding from the Department of Commerce's residential utility arrearages grant program. However, with limited state funding available, there is not enough to reduce arrearages for all local governments in need.



Transportation funding

Cities largely finance their transportation systems on their own:

- About 13% comes from state resources in the form of direct distributions, grants, and loans;
- 8% comes from federal sources; and
- Nearly 80% originates from a city's general fund.

In the city's general fund, only about 5% comes from local transportation revenue sources, such as a city's TBD, while the rest is unrestricted, meaning the funds are not restricted to use on transportation spending. As a result, road and bridge maintenance projects must compete for priority with public safety, parks and recreation, and other city operations. In 2021, only 9% of cities' general fund expenditures went towards transportation funding, compared to 41% for public safety, 21% for general government functions, and 12% for culture and recreation.



Given this lack of a dedicated transportation funding source, cities must take a piecemeal approach to paying for their transportation capital expenditures. They rely on a variety of revenue sources, such as REET, impact fees, SEPA mitigation, and state and federal grant and loan programs.

However, the limited nature of these revenue sources means cities must rely heavily on support from state programs like the TIB and WSDOT Local Programs to complete critical transportation projects. In 2022, cities depended most upon general fund revenues and support from the Transportation Improvement Board for transportation project funding.

Primary ways cities finance local transportation



Source: 2021 AWC City Conditions Survey, 121 responses

WSDOT local programs dollars and TBD revenue made up the third and fifth most widely used sources of project funding.

The state government collects a state gas tax (motor vehicle fuel tax) of 49.4 cents per gallon. Of that, it distributes 2.96 cents per gallon of the gas tax revenues to cities on a per capita basis. This funding source generally represents only about 5% of a city's transportation budget. The gas tax has remained at 49.4 cents per gallon since 2016, despite a sharp increase in inflation—limiting the buying power of the revenue it generates. This is compounded by the increased use of fuel efficient and electric vehicles, which make the tax a diminishing source of public dollars for maintaining the state's transportation system.

Across the state, different jurisdictions share responsibility for delivering transportation services and providing facilities. Cities, counties, transit agencies, metropolitan planning organizations, and regional transportation planning organizations all play a part. This network relies on a blend of funding mechanisms including federal, state, regional, and local sources. Given this makeup, the entire system must rely on statewide coordination to function efficiently and effectively.



Chapter

The current state of infrastructure in Washington

Local leaders are working hard to provide their communities with essential utility services and transportation infrastructure, while balancing competing priorities such as public safety, fire response, and other constituent demands. Cities face a long list of challenges to maintain their infrastructure systems while the needs of those same systems continue to grow. Principally, they struggle to meet the demands of their aging infrastructure, growing populations, and the impacts of climate change, while facing funding constraints, a hostile economic environment, and new realities in the workplace.

Aging infrastructure

The infrastructure systems of Washington's cities are nearing or exceeding their expected service age and need critical preservation and maintenance. For example, the drinking water distribution systems and production and storage facilities in most of Washington's cities are three decades old or older. Their sewer collection and treatment systems are similarly aged. In this year's CCS, 79% of respondents report that the condition of their infrastructure systems is currently a "major" concern. In a separate survey of city infrastructure funding needs, respondents indicated that nearly 70% of projects in need of funding are for repair and replacement of existing systems, while 30% are for new projects. Roads were identified as the biggest area in need of funding, followed by wastewater/stormwater infrastructure, drinking water infrastructure, and bridges.

According to the American Society of Civil Engineer's 2019 Infrastructure Report Card, Washington's infrastructure is rated at a C. Within that score, roads, drinking water, and wastewater infrastructure are all rated at a C-, with stormwater rated a D+. According to the report, "Washington State will need approximately \$11.73 billion over the next 20 years to keep up with the growing demand and aging transmission, distribution, treatment, storage, source, and other related [drinking water] infrastructure. Deferred capital reinvestment and emerging infrastructure resiliency demands are contributing to the growing funding needs."

Broadband supports many essential services, including healthcare, emergency services, education, and commerce, as well as city infrastructure. However, residents of many towns and cities struggle to access a reliable internet connection. Moreover, according to an analysis by the NLC, low-income residents and residents of color are still less likely to have reliable access to high-quality, in-home connections and enabling technology. While reliable access remains a challenge, progress is being made. Not only have cities such as Anacortes stepped up to provide their own service to the community, legislators recently started investing state and federal dollars, as well as enacting meaningful policy to support access. Efforts include expanding digital equity, increasing minimum speeds, and allocating funds to CERB, PWB, and WSBO. These three broadband infrastructure funders recently conducted a statewide needs assessment. That assessment resulted in 84 recommended projects that would construct over 5,400 miles of fiber with an estimated total cost of nearly \$650 million.

Washington's overall infrastructure needs are estimated to be **more than \$222 billion**.



Each of Washington's cities is responsible for anywhere from two to 1,677 lane miles of the state's roads. While they are working consistently to manage these miles, most face maintenance and preservation backlogs and lack adequate funding to address the need. The estimated amount to preserve city lane miles varies greatly and depends on their state of repair. According to a 2019 JTC study, "while it may cost around \$1 million to preserve a mile of pavement in a state of good repair, costs can balloon to \$4-5 million if the pavement reaches a state of failure." In total, this means that the overall estimated funding gap for preservation is \$900 million to \$1.1 billion.

Disparate impacts

The impacts of long-term underinvestment in transportation and infrastructure in Washington are often felt most among communities of color and other underrepresented populations. Historical policies of redlining, as well as constructing highway systems through the middle of neighborhoods populated with black, brown, and indigenous residents, also contribute to present day disparities. For example, inequitable health outcomes due to increased exposure to areas of industry and traffic congestion (and therefore greenhouse gases), and lack of access to health-promoting amenities are widely documented. Most transportation systems were designed to be automobile-centric and consequentially, leave low-income individuals, seniors, and people with disabilities behind to walk, bike, rely on public transit systems, or remain stranded in a transit desert. Wealth gaps can further increase disparities between people of color and non-Hispanic whites, as it can be easier for white residents to purchase a car, giving them increased access to jobs and subsequent higher employment rates.

A growing population

Over the last decade, approximately 80% of the state's population growth has taken place in cities. There are over 900,000 more city residents in 2022 than in 2010, totaling 5.1 million. Washington's statewide population is approximately 7.8 million, 66% of whom live in cities and towns.

This growth is not expected to stop. Washington's overall population will likely increase by about 2 million people, reaching 9.75 million in 2050. Given that people choose to live in cities, most of the projected growth will continue to take place there. Such growth adds additional strain on already under-resourced street and utility systems. New residents may mean an uptick in revenues as a city's tax base grows. However, the price of development and expansion represents costly initial investments and ongoing maintenance. Washington added 46,500 housing units in 2021 alone, for which cities provided much of the basic infrastructure.

Long-term climate effects

Climate-influenced events are increasing in frequency, intensity, and severity. Cities large and small are experiencing impacts related to climate change. These events can add significant risks and costs to city operations, finances, and local economies, with disparate impacts for vulnerable populations. These climate events can also increase municipal responsibilities and services, both operationally and financially. Despite stretched resources, cities are responding by pursuing policies that reduce GHG emissions, adapting systems for changing climate circumstances, and providing incentives for an economy based on clean energy. These efforts increase the pressure on city budgets already stretched thin by numerous competing priorities.

The state's 2022 Move Ahead Washington transportation funding package makes sustainability and climate resilience a priority by investing historic amounts of state dollars in multimodal transportation, public transit, and electric vehicle infrastructure. While these policies are laudable and support the state's transportation system, the package overlooks (and even distracts attention from) the long-standing need for the preservation and maintenance of existing roads, for which there is a significant and growing backlog. Cities will need to spend an estimated \$20 to \$28 billion to maintain and improve their transportation assets over the next ten years.

City of Othello

Population 8,549

Like many cities across the American West, Central Washington's Othello is confronting the challenge of a long-term water shortage. The city draws its drinking water from the lower Wanapum Basalt aquifer, situated in the Columbia Basin, where groundwater levels have been declining for decades. The Western Regional Climate Center has described the area as the "lowest and driest section of Washington."

With a fast-growing population (a 46% increase from 2000 to 2020) and as home to two of the world's largest potato processing plants, Othello has been using water faster than the aquifer can recharge it. The city's wells have been drilled ever deeper into the earth, with pumps working harder and harder to keep up with demand.

When the city's two primary groundwater pumps failed in 2015, city leaders realized that not only did they not have enough storage capacity for the town, they were overly dependent on groundwater and needed to diversify their supply.

Committed to finding a long-term solution, Othello partnered with regional state legislative leaders, the Governor's Office, and the state departments of Commerce, Health, and Ecology to develop a strategy to secure its water supply and sustain projected growth for the next 75 years. The process, involving a great deal of cooperation, permitting, and outside funding, eventually led to the city's water aquifer storage and recovery project. As part of this multi-phase, multi-year project, the city is currently testing a process that involves taking an outside source of water—in this case from an irrigation canal running next to an existing city well—treating it and pumping it into the aquifer via the well.

Othello's mayor said, "We're all working together toward solutions to become a model for the rest of the state in areas that are experiencing declining groundwater."

Economic environment and workplace changes

Washington's cities and towns face a list of growing needs at a historically challenging time across the country and globe. With record inflation and corresponding economic downturn, supply chain issues and materials shortages have caused rising construction costs and project delays. This has hit city budgets hard, impeding their ability to deliver services to their communities.



- 1. Rising inflation impacts to bids and materials costs
- 2. Age and state of water and wastewater infrastructure and facilities
- 3. Supply chain issues
- 4. Cost of necessary non-transportation infrastructure investments
- 5. Significant federal grant/loan requirements

As a result of the shifting workplace trends during the COVID-19 pandemic, many cities are experiencing higher-than-normal turnover and workforce shortages. What's more, the department most impacted by these resignations and retirements is the public works department. 73% of CCS respondents indicate they are struggling to recruit and fill vacancies, with public works being the most difficult department to staff. This is supported by a recent analysis conducted by the NLC, which reports that infrastructure jobs are harder to fill than jobs in other industries. Loss of city workers across departments means fewer city clerks and engineers with intimate knowledge of the community and much-needed technical expertise and training. This lack of expertise and institutional knowledge can impact a city's ability to acquire available funding and deliver on projects. 76% of survey respondents indicated the biggest barrier in seeking federal funds is a lack of city staff and resources to search for funding and apply.

Funding constraints

Consistently, cities identify infrastructure as their top priority. However, they face multiple barriers to obtaining adequate funding to keep their infrastructure systems safe and effective. Needs often outpace existing financing tools. On average, city revenue only covers up to 25% of the cost of infrastructure projects. After accounting for the city's contribution, state and federal funding sources do not meet the remainder of the funding need, according to 71% of respondents. In recent years, this has been exacerbated by the COVID-19 pandemic, where many cities experienced significant revenue losses. In 2021, 62% of survey respondents reported revenue losses due to the pandemic.

Of the 40% of respondents for whom expenses are outpacing revenues in 2022, relying on operating reserves and cancelling or postponing capital projects are the top two courses of action cities plan to take in response. This leads to an increase in overall costs long-term, as the price tag on deferred projects compounds, impacting how quickly cities can adequately respond to demands.

For water infrastructure, federal assistance to local governments has continued to decline in real dollars over the course of decades (despite a recent influx in federal funds provided via the American Rescue Plan Act and the Bipartisan Infrastructure Law). Instead, local governments must spend more of their own funds for improvements. However, the funding for these projects is largely collected from ratepayers and municipal bonds, meaning the cost burden ultimately falls on community members and ratepayers.

In many cities, improvement efforts are halted by the limited funds available at the state level, such as the PWAA or decreasing direct distributions from the gas tax. Yet state funding support is the most effective way to mitigate both infrastructure deterioration and city budgetary constraints. However, during the 2022 legislative session, cities received inadequate state funding for city street preservation and maintenance and no direct distribution in the transportation budget. The

same year, the state made additional diversions from the PWAA. This severely limited the PWB's ability to meet the growing demand for infrastructure funding aid. In FY22, applicants requested a total of \$205 million for 65 infrastructure projects across Washington. Available funds were fully expended to award just \$118.5 million to 41 of these projects, falling far short of the need.

With competing demands, increased costs, and limited resources, cities are faced with the challenge of

prioritizing needs. This often results in diminished or delayed investments in preservation and maintenance, leading to more emergency fixes, increased need for full replacement, and greater expenses in the future.

These postponed investments have a statewide impact, as infrastructure affects the economy over the long term. The public capital assets that infrastructure provides create a flow of services that many businesses, organizations, and residents rely upon. When this infrastructure is compromised, so too is the flow of services and the overall integrity of the system. Infrastructure contributes to economic growth in both the short and long term, but just as easily can slow growth when the system is not maintained.

In the recent PWAA construction and pre-construction cycles, applicants requested funding for **65 projects**:

Total funding request: Total funding available:

Unmet need:

\$205 million \$118.5 million

\$86.5 million

A historic time for federal infrastructure funding

Over the last fifty years, as the nation's infrastructure system continued to age and the need for replacement and repairs steadily increased, federal funding assistance gradually declined, leaving local governments to shoulder most of the burden. In November 2021, this trend changed with the passage of the IIJA, also known as the BIL. A five-year spending plan (FY 22-26), the BIL will distribute \$400 billion each year for transportation, infrastructure, broadband, and climate resiliency projects across the country. It invests billions of dollars into existing federal and state grant and loan programs, expanding their scope and modifying requirements to increase accessibility. BIL also establishes dozens of new funding and competitive funding programs, several of which will directly benefit cities.

Washington is expected to receive an estimated \$5.443 billion in federal-aid highway funding and an estimated \$1.79 billion in transit formula funding over the five-year life of the bill. The state's DWSRF and WWSRF, an essential avenue through which Washington's local governments receive federal and state funding for water infrastructure, were significantly increased through the BIL. For instance, the DWSRF is expected to increase to approximately \$890 million over the five years, well above the program's traditional allocations.

ARPA has also proven to be an essential source of infrastructure funding support for local governments in Washington. In March of 2021, ARPA was passed to provide nearly \$2 trillion in federal relief funds to support individuals, businesses, and local governments across the country. Washington state received approximately \$1.2 billion in funding for local municipalities. Among the several allowable uses of the funds, local government investments in water, sewer, and broadband infrastructure were permitted. The rate of recovery from the pandemic among state and local economies was faster than forecasted. As a result, many jurisdictions used the flexibility in the Treasury Department guidelines for ARPA to make transformative investments in their communities. A once-in-a-city-lifetime opportunity, this allowed many cities across Washington to fund infrastructure projects they could not otherwise afford.

In a 2022 AWC survey on ARPA spending, water infrastructure investments represented the second to top spending area for ARPA funds. Some updated their aging sewer systems; others extended their utilities to new development areas in town, investing in economic development efforts that will help to sustain the community long-term. Cities indicated a primary reason for choosing to spend ARPA dollars on infrastructure projects was it allowed them to make much-needed system improvements without raising user rates. They thus avoided passing the cost burden along to ratepayers.

This is an exciting time in the infrastructure world, with lots of momentum for change and engagement at every level, and with potential results that could improve statewide and even nationwide infrastructure systems. Washington's local leaders are taking advantage of the numerous federal funding opportunities currently available. 85% of survey respondents indicated their city staff are tracking BIL funding opportunities and 67% are either considering applying or are already in the process of applying for federal infrastructure funds. Still, many Washington cities and towns will not directly benefit from the BIL. Federal grant requirements are more stringent and time consuming than those of the state. They almost always have a 20% matching threshold, which is often too high for small and underresourced jurisdictions. In 2022, 54% of city survey respondents report having diverted existing or dedicated city revenue to fund federal match requirements for transportation projects, taking dollars away from other essential spending needs. Searching and applying for federal funds, not to mention managing awarded funds, requires staff time and expertise, both of which are lacking in local governments across Washington, especially at this time of increased staff shortages and higher turnover rates.

Cities face structural challenges to accessing needed funding, along with costly and burdensome application requirements. The top three barriers for cities in seeking federal funds are:

- 1. A lack of city staff and resources to seek funding and apply (76% selection rate)
- 2. Overly burdensome federal requirements (60% selection rate)
- 3. Lack of city staff and resources to manage awarded funds (47% selection rate)

To lower the burden on applicants, some of the BIL programs have fewer, or less onerous, requirements and federal agencies are providing more technical assistance and outreach than ever before. This supportive, systems approach embedded in the legislation will certainly help local governments access one-time federal dollars. Ultimately, however, the BIL is not a long-term solution to the structural deficits facing local governments. There is simply more funding need than there are sustainable funds, and as a result, many cities will continue to struggle to address their infrastructure demands.

Position your city to take advantage of the federal funding opportunities. Start preparing now to:

- Actively seek out funding sources through the <u>BIL guidebook</u>, the <u>BIL rural playbook</u>, and state and federal program webpages.
- Contact program staff at both the state and federal levels to build relationships, learn about their priorities, and prepare for future funding opportunities.
- Look for ways to partner with others in your community and region to increase your city's ability to compete for funds.
- Consider bundling your project with others. Some programs accept applications for bundled projects to address infrastructure challenges shared across regions or a state.
- Use ARPA funding to "set the table" for future projects with planning and design.
- Complete the <u>grants.gov</u> registration process in advance. It usually takes two to four weeks and is required before submitting a grant application.



Every community is unique, but addressing infrastructure challenges is a top priority for all of them. For the past four years, Washington's cities and towns have identified infrastructure and transportation as among the top priorities in their communities. Having consistently recognized this need, local leaders are working hard—and smart—to overcome the barriers they face and close the gap for residents. They do this by prioritizing infrastructure projects, making good use of available funding resources, partnering with others in the state where possible, and planning ahead to build sustainability and resilience into their systems.



Municipal officials are stretching the value of every dollar available for infrastructure from local, regional, state, and federal authorities. They're working hard to keep their communities safe, their residents healthy, and to support the vitality of the local economy. City leaders recognize that infrastructure is the lifeblood of the economy and are investing in city infrastructure to support economic development locally and beyond. Infrastructure investments have direct implications for economic stabilization and can produce a short-term multiplier effect rate as high as 2.2%, particularly during recessions. Cities own a significant share of the state's critical infrastructure and play a vital role in its economic wellbeing.

Cities also rely on the federal government and private partners to simply maintain existing infrastructure. Given long-standing structural deficits, a single local infrastructure project is often funded by a variety of sources to cover the full cost. Despite this, obtaining sufficient infrastructure funding remains an elusive goal. For instance, in 2020, more than 60% of

City of Battle Ground

Population 20,743

Heading into 2020, the City of Battle Ground had two large municipal infrastructure projects on the horizon: a drinking water source project and a parallel force main for the sewer utility. Together they totaled an estimated \$40 million in costs. While the need for the projects was not immediate, both were part of the city's long-term strategic plan and budget. Like most cities, Battle Ground had other infrastructure needs to tend to, as noted in the city's capital improvement plans. Juggling

these various priorities and seizing the opportunity to use its ARPA allocation for long-term benefit, city leaders chose to invest its ARPA dollars in the improvement plan's priority projects. This meant it could avoid drawing down current fund balances and reserve more for larger, long-term projects. Such strategic use of available funding will position the city to better meet its future infrastructure needs, and will ultimately benefit Battle Ground's residents by alleviating the capital burden on ratepayers.

cities applied to receive a PWAA loan, yet 33% of applicants still reported that unmet infrastructure funding was a major problem facing their communities.

Nevertheless, city leaders are supporting their priorities by using as much available funding for infrastructure projects as they can. Recently this has manifested through using ARPA allocations to local jurisdictions. Among the several allowable uses of the funds, local government investments in water, sewer, and broadband infrastructure were permitted by the Treasury Department. Many jurisdictions took advantage of the opportunity to make transformative investments into their infrastructure systems. This allowed cities across Washington to fund infrastructure projects they could not otherwise afford. Water infrastructure investments represented the second top spending area for ARPA funds reported by survey respondents.

Many jurisdictions across the state also plan to make use of the numerous opportunities now available through the BIL. In a recent AWC funding needs assessment, 67% of respondents are either considering applying or are in the process of applying for BIL funding, while 25% report having applied already. Among those cities considering applying, the top five categories of projects in need of funding are:

- Roads
- Wastewater/stormwater infrastructure
- Drinking water infrastructure
- Bridges
- EV infrastructure

The majority of city infrastructure needs are for repairs or replacement of existing infrastructure (69%), as opposed to new projects (31%). Approximately 70% of CCS respondents reported that they also have new projects in need of funding, indicating that cities are doing more than just maintenance and repair when possible. They're looking ahead and building for the future.

Cities of Spokane and Airway Heights

Population 229,000 and >10,000,

respectively

Located in the West Plains area of Spokane, the Spokane International Airport (SIA) system serves communities outside the city through intertie agreement. A 2015 study conducted in the West Plains area found that the SIA pressure zone lacked sufficient storage capacity to meet existing and future demand. Two years later, the City of Airway Heights discovered

firefighting foam contaminants (PFAS) in its wells, a crisis that adversely impacted thousands of residents. Thanks to the intertie agreement between the two cities, Spokane stepped in to supply Airway Heights with clean water. However, this placed a high demand on Spokane's system and put the city at risk of failing to supply adequate water for fire control during peak usage.

With financing help from the Public Works Board and the state's Drinking Water Revolving Loan Fund, Spokane is constructing an additional 4.5 million gallon storage reservoir for the SIA pressure zone. As a result, the city will ensure water service to residential and commercial customers in the West Plains area, provide adequate storage for current demands and future growth around the airport, and maintain the availability of emergency service through intertie.

In 2022, following the Legislature's direction, the JTC contracted a consultant to conduct a study of transportation equity in Washington's cities and towns. The purpose of the study is to educate city and state officials on the impacts of current and historic city transportation investments on designated populations, describe tools and methods that cities can use to assess transportation equity in their own jurisdictions, and provide recommendations on tools and best practices to improve, diversify, and expand city transportation investments leading to more equitable distribution of transportation benefits and impacts. The final report was submitted to the Legislature in December 2022.

City leaders are not only dedicated to completing critical infrastructure projects, they are committed to working together with regional and state partners to meet their communities' needs. 71% of respondents indicated they are willing to partner with another entity, such as their county, MPO, or RTPO, to submit a competitive application for federal funds. They recognize the value of partnership and collaboration for the benefit of their residents and those across the region. This is a relatively recent and innovative approach in the infrastructure world, and is heavily encouraged in recent legislation, such as the BIL and IRA.

Cities also recognize the need to prioritize transportation and infrastructure investments for all community members, especially those who are historically marginalized, such as communities of color and low-income populations. More and more local leaders are applying an equity lens to their transportation policies and planning and engaging in targeted community outreach with these populations.

Finally, cities are prioritizing sustainability and climate resilience through resourceful, future-oriented decision-making. Dozens of local jurisdictions across Washington have adopted climate action plans or have incorporated elements of a CAP into other city plans, policies, and codes, such as comprehensive plans or emergency management plans. Identifying and preparing for risks and costs is at the heart of resiliency and sustainability efforts for cities. Thus, risk management, cost impact analysis, and adaptation and mitigation strategies are currently the most prevalent measures cities are taking to build resilience in their communities. Energy, transportation, and water infrastructure planning and construction are undergoing significant changes in response to climate change. The demand for clean energy, coupled with climate-related impacts to roads and water systems, are changing how local jurisdictions plan and deliver infrastructure and services. These factors raise serious and immediate concerns regarding managing assets, upgrading existing systems, and building new infrastructure to meet tomorrow's needs.

Each city's approach in responding to and preparing for climate change impacts is as unique as the community itself. Some cities are preparing for significant infrastructure changes resulting from flooding and surface water management, while others are upgrading aged infrastructure. Still others are responding to sea level rise in coastal communities. They are strengthening their resilience by getting more zero-emission vehicles on the roads, transitioning to clean energy where possible, improving energy efficiency, and cutting harmful emissions.

City of Cheney

Population 13,255

In Eastern Washington, the City of Cheney sits over a basalt aquifer from which it draws its municipal water through a handful of wells. Water demand has been a historical problem for the city as the aquifer, a finite source of water, has been slowly drawing down. The city, forced to find a solution, got creative.

In 1994, Cheney transitioned from its wastewater treatment lagoon system to a new advanced wastewater treatment and

reclamation plant that discharges its treated effluent into 100 acres of constructed wetlands. Since the plant began operation, the long-term hope was to take a portion of treated effluent for water reuse purposes. In 2007, a study concluded that 1 million gallons of water could be provided for reuse purposes while maintaining the viability of the wetlands. Recognizing that the city's water source was slowly diminishing, the city conducted an engineering report in 2016 to study the feasibility of water reuse for the municipality. The report recommended treating the city's wastewater effluent to Class A reuse water in order to provide it for irrigation on park and playfield green spaces. The program is known as the "Cheney Purple Pipe to Parks and Playgrounds Project." Design of the reuse project was completed in 2019 and anticipates construction completion in 2026. This approach to water reuse systems is gaining popularity around the country as sustainability and climate resilience become top priorities.

The city hasn't stopped there. In 2022, Cheney installed solar panels at the wastewater plant to save on the cost of electricity. As a result, staff estimate saving the city \$6,000 to \$7,000 a year in costs that would otherwise be passed on to ratepayers. Cheney also sells biosolids compost, known as eco green compost, from its wastewater plant to the public, the revenue from which goes towards the cost of operations.

In addition to all this, the city of Cheney is in the process of building a pre-treatment facility and is searching for funding to connect Cheney's schools and parks to the treatment plant. As they look ahead, city leaders would like to continue to expand reuse capacity so they can cut back the use of water for irrigation and meet domestic demand, which is increasing as the city grows. Though it is a clear leader in how cities can build climate resilience and a sustainable water management system, Cheney continues to push forward and serve as a model for innovative municipal infrastructure.

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Cities and action

Despite the myriad challenges facing city infrastructure systems, cities are stepping up to provide reliable services through creative solutions. Many cities have taken unique and innovative approaches in providing critical infrastructure needs to their constituents while growing the local economy, expanding access, and integrating climate resilience.

City of Pasco

Population 77,108

Aiming to grow the local economy, attract new agricultural-industrial processors, lessen the burden on the municipal wastewater system, and foster environmental sustainability, the City of Pasco developed a process water reuse facility in collaboration with the Port of Pasco. Built in 1995. this 40-acre facility currently receives agricultural processor wastewater from six food processors. The facility then pretreats that water, stores it during winter months, and



uses it to irrigate 16 fields of crops. Through this process, over a billion gallons of processor wastewater is pumped through the water reuse facility annually. Biosolids are also screened out and used for other agricultural purposes.

The facility not only supports water reuse and attracts additional agricultural processors to the region, it has also helped to reduce the wear and tear on the municipal wastewater treatment plant by redirecting a peak flow of 8.5 million gallons per day of agricultural wastewater away from the municipal plant to the process reuse facility. This has also helped to raise the capacity available in the municipal facility and the sewer collection systems.

What else should cities do to support critical infrastructure needs?

Thoughtful design, guality construction, and diligent maintenance are key to ensuring these systems continue to support statewide growth and vitality. So, what can be done to improve city infrastructure systems? Good city stewardship of local infrastructure is at the heart of wellfunctioning capital systems and service delivery for residents, businesses, and tourists. Below are recommendations cities should consider.



City action

 Address depreciation of capital assets annually. Setting aside funds for depreciated assets when budgets are tight can be difficult. However, cities should address depreciation of capital assets on an annual basis as budgets are developed, much like operation and

maintenance funds that are set aside. These reserve funds would allow cities to be proactive in funding future capital replacements and make cities better able to respond to unforeseen emergencies.

- Employ good maintenance practices. Maintaining an existing infrastructure system is always the most cost-effective way to ensure its longevity.
- Fully consider costs to prevent spikes in user utility rates. Utility system upgrades, meeting new regulations, and making major repairs to systems are expensive. Cities should consider current and forecasted cost increases when setting utility rates and adjust as needed. While system failures can't be anticipated, cities can help prevent large increases in user rates by making annual adjustments that reflect costs.
- Consider opportunities to leverage federal funding (see federal funding section). Many programs like the DWSRF and WWSRF provide low-interest and principal forgiveness loans to support drinking water compliance.
- Start planning for climate resilience now. The impacts of climate change vary from one community to the next, depending on a range of factors. Most climate events and associated risks can be anticipated, and plans made to prepare for them. Risk identification and assessment is the first step in the process. Climate action plans generally consist of three elements:
 - Adaptation: preparing for events such as wildfires, floods, landslides, sea level rise and emergency management preparedness;
 - o Mitigation: reducing GHG emissions; and
 - Economic impacts: identifying economic vulnerabilities and green economic development opportunities.

Cities should also consider how to engage their residents on the issue, to ensure citizen participation and stakeholder involvement.

- Apply an equity lens on local infrastructure and transportation policies to examine disparities within your community. Correcting for historical inequities takes intentional work and commitment from city leadership. Some municipalities have developed an equity index which they use to inform all policy and budgetary decisions. Investing in transportation systems can reduce disparities and increase opportunities for job accessibility, healthcare options, education, and more. Here are several steps for achieving equitable transportation goals, adapted from recommendations by the Urban Institute:
 - Define transportation equity in partnership with historically excluded residents.
 - Include meaningful community engagement with low-income residents and communities of color in transportation decisions.
 - Coordinate with land use, zoning, and housing groups to ensure that transportation investments increase equity, rather than exacerbate disparities.
 - Collect better data to track transportation equity and work with partners to create tools that help make transportation decisions with equity a key consideration.

City of Olympia

Population 55,382

The City of Olympia won a Smart Climate Change Strategies Award in 2021 from the Governor's Office for its efforts to address community climate impacts in its new transportation master plan. The plan bridges the goals and policies of the city's comprehensive plan and annual capital facilities plan, all examined through a climate lens with the aim of preserving green space and reducing carbon emissions. The plan builds in accessibility, technology adaptation, infrastructure demand, and social equity. It also explores the



technological changes on the horizon that may alter how residents move around the city, from delivery robots on sidewalks to autonomous vehicles. It examines maintenance practices and considers the connections between transportation and social equity, seeking ways for the system to enhance service to the most vulnerable.

Strong city advocates

Clear priorities and good relationships with legislative leaders are needed to guarantee cities have strong infrastructure systems. Here are some steps cities can take to advocate for local infrastructure needs:

- Establish a working relationship with your legislators. Part of your job as a local elected official is to make sure legislators understand how their decisions in Olympia affect your city and community members. This requires year-round contact. Your legislators may not have a background in city issues, so this frequent contact will help educate them. The relationship you cultivate with legislators will facilitate a stronger city-state partnership.
- Talk about the state of your budget. The impacts of state budget decisions on your city's day-to-day operations are not always clear to legislators. Be sure to share the opportunities and challenges related to issues such as growth, fiscal shortfalls, public safety, infrastructure, COVID-19, and economic development. Give specific examples of how

City of Mossyrock Population <800

Like many other municipalities, the City of Mossyrock applied its ARPA allocation to pay for multiple infrastructure projects in need of funding. The dollars went toward a stormwater drain repair, normally an extremely costly project for this community of nearly 800 residents. In response to recent growth in the area, the city also used the funds to expedite a waterline project to supply a new development with water utilities. This allowed the city to delay raising utility

rates for its users, many of whom are retirees whose household budgets would be adversely impacted.

actions by the state influence your budget—positively or negatively. Thank them and ask about the state's fiscal challenges. By doing this, you can remind them of the importance of addressing both state and local needs.

- Communicate strategically. Communicate what your city needs early and often. Frame your city's issues in a way that legislators can understand and remember. Talk about specific bills or budget priorities and tell stories about real impacts on your constituents.
- Leverage your role as a community leader. As a local elected, you are in a unique position to represent your community to your legislators. Create consequences for your legislators' decisions—good or bad. Publicly thank legislators who have helped your city be successful. Be candid about those who have not accomplished as much. You owe it to residents to share how much or how little support you have received from specific representatives in Olympia.
- Talk publicly about why cities and the state need each other. You and your legislators have the same constituents. Make sure they know how decisions made in the capitol affect people at home. This is a powerful way to create accountability.

A strong city-state partnership to improve all of Washington's infrastructure is critical. An expanded state role will lead to a robust state and local economy, quality of life, and environmental protections. Below are recommendations on state actions that would support local infrastructure needs.



State action

 Increase funding assistance through existing infrastructure grant and loan programs. State programs like the PWAA, TIB, FMSIB, and others are vital to city infrastructure projects and public safety. State assistance programs for infrastructure projects that attract economic development

are also important to cities. Without meaningful investments in these programs, many infrastructure projects will not get done.

City of Waitsburg

Population <1,200

Built in the 1930s and fed by gravity, the sewer system in the City of Waitsburg presents unique challenges to the municipality. The city recently made significant upgrades to the system, constructing 15 new manholes and relining roughly 4,000 linear feet of sewer. The changes will benefit the city for years to come and allow it to provide better service to users as issues arise over time. With a price tag of \$660,000, the project represents a sizable amount for this small community.

Making the best use of available funds, local leaders strategically relied on the city's ARPA allocation, which will cover much of the project's costs. This has helped Waitsburg complete major infrastructure improvements that it otherwise could not do on its own and marks the highest investment in repairs to the sewer collection system in the city's history.

- The PWAA has been the victim of several fund sweeps over the years to pay for other state priorities. However, a sunset of diversions is scheduled to occur at the end of fiscal year 2023. The Legislature should allow these diversions to sunset and avoid further transfers to other non-local infrastructure or non-infrastructure-related accounts.
- Provide local governments with greater fiscal flexibility with existing resources. Since 2001, annual property tax increase has been capped at 1%, which prevents it from keeping pace with inflation and population growth. The 1% limit on annual increases has significantly strained city budgets. Repealing and replacing this cap with something designed to keep pace with economic and inflationary pressures will allow cities greater flexibility in addressing maintenance needs.
- Fixing only state-owned culverts will make the state's culvert investment incomplete at best and ineffective at worst. Cities cannot afford to tackle this costly problem on their own. For meaningful impact, a comprehensive approach is essential.

Local infrastructure systems such as water and sewer utilities, streets, bridges, and broadband make up the foundations of desirable communities and a thriving economy, today and into the future. A productive city-state partnership that provides durable city infrastructure is needed to support strong cities in Washington and a great state.



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