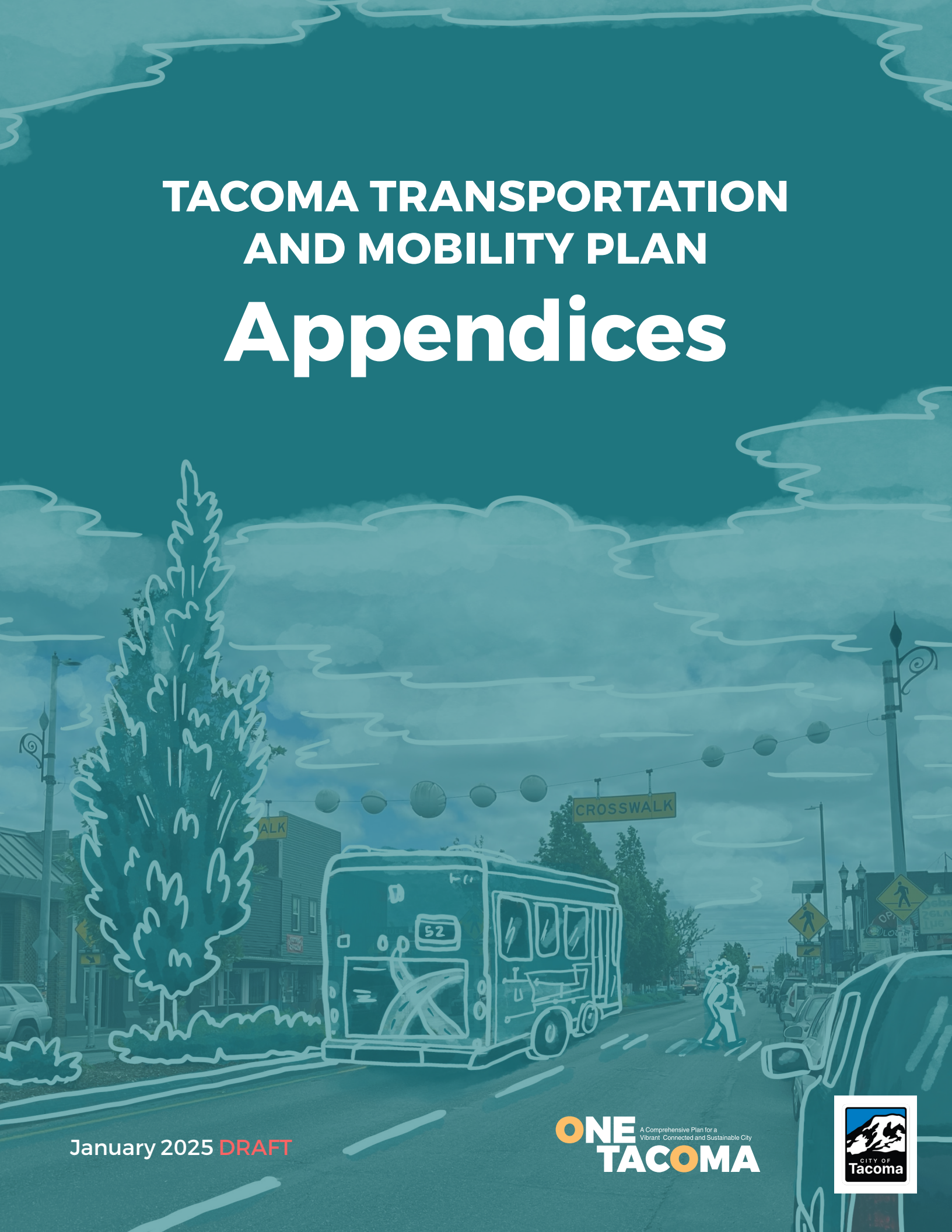
TACOMA TRANSPORTATION AND MOBILITY PLAN

Appendices



January 2025 DRAFT

ONE TACOMA
A Comprehensive Plan for a Vibrant Connected and Sustainable City

CITY OF Tacoma

Appendix B: Modal and Functional Elements

B

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PEDESTRIAN ELEMENT

Purpose

Walking and Rolling in Tacoma

Tacoma envisions a pedestrian-friendly future – with a complete, accessible and connected pedestrian network that welcomes people of all ages and abilities to walk and roll. In this future, Tacomans choose to walk and roll for most of their short trips – because it allows people to connect with their neighbors and community and offers a comfortable and convenient way to get to school, work, transit, parks, and our favorite local businesses.

Tacoma is committed to this vision, but the City still has a long way to go to make it a reality. The pedestrian network is far from complete and significant barriers exist. Barrier curbs, missing link sidewalks, and unimproved and inaccessible crossings make Tacoma's pedestrian network difficult to navigate, particularly for people with disabilities, youth, and older adults. Additionally, not all neighborhoods face the same challenges when walking and rolling. Many neighborhoods do not have easy access to everything they need to thrive, both because things like grocery stores, schools, parks, and local businesses may not be in close proximity and the routes to get there are not safe or accessible.

Walking and Rolling
Pedestrians include people:

- Walking
- Using assistive mobility devices, like wheelchairs
- Using human-powered modes, like skateboards, roller skates, or scooters

Throughout this plan, the terms "pedestrian" or "walking and rolling" will be used to encompass all these active ways of traveling.

Building a complete pedestrian network with connected sidewalks, accessible curb ramps, and frequent safe crossings will help Tacoma meet some of our most important goals as a community: those relating to safety, equity, access, and climate. When pedestrians are prioritized through infrastructure design and investments, policies and programs, the City is helping build a healthy, livable, and thriving Tacoma.

The Importance of Walking and Rolling

What role does walkability have in people's daily lives?

We are all pedestrians. Whether pushing a stroller, using a mobility device, skateboarding to school with friends, or walking from a parking spot to a store entrance – we all rely on pedestrian infrastructure to get where we're going.

- **Equity and Accessibility:** Walking and rolling are the most accessible and affordable modes of transportation – available to people of all ages and abilities – no driver's license, bike purchase, or transit pass required. There cannot be an equitable transportation system that does not center the needs of pedestrians.
- **Safety:** When a community is safe and accessible for pedestrians – it opens up the city. Young people gain independence as they are able to walk and roll to school, their first job, or to visit friends and family. Seniors are able to maintain social connections, meet their daily needs, and better age in place.
- **Connectivity:** Pedestrian networks connect to key destinations, including transit stops, neighborhood retail centers, daily necessities like work and school, and other amenities. Frequent safe and accessible crossings connect across roadways and complete sidewalk networks knit together neighborhoods, making the choice to walk and roll convenient for addressing daily needs.
- **Social Fabric:** When people walk and roll, they chat with neighbors, look out for each other, notice the poster for an upcoming event, or call 311 to request that the overgrown bush blocking the sidewalk gets trimmed. These small acts of connection strengthen the social fabric and improve social and emotional well-being.
- **Economy:** Local businesses thrive when customers and employees can easily access them – and when they are located in places where people want to linger. It is easier to be enticed by the smells of a bakery or drawn in by a shop's window display when walking or rolling.
- **Climate:** Transportation is the leading contributor to greenhouse gas emissions in Tacoma. In the Puget Sound region, 23% of trips are one mile or less.[1] When there is safe, accessible, and connected pedestrian network – people are able to walk and roll for more of these short trips.

[1] Puget Sound Regional Council. 2021 Household Travel Survey. https://psrcwa.shinyapps.io/travel-study-stories/.

What are specific outcomes that emerge from this element done well?

As Tacoma plans for a future as a walkable city, the vision is of a safe, equitable, connected, and inviting community, with spaces for people to walk and roll throughout the city.

- **Safer Streets:** A well-designed pedestrian network improves safety by reducing traffic crashes involving pedestrians, with features like well-marked crosswalks, adequate lighting, and traffic calming measures. Prioritizing neighborhoods with the greatest safety and access disparities ensures a more equitable transportation system.
- **Improved Mental and Physical Health:** A safe, connected pedestrian environment enhances physical health by encouraging regular walking, which reduces the risk of chronic diseases such as obesity, diabetes, and heart disease. Additionally, walking in a well-designed pedestrian-friendly area can improve mental health by reducing stress, increasing social interactions, and providing access to green spaces, which are known to have calming effects.
- **Enhanced Quality of Life:** Pedestrian-friendly streets are visually interesting and inviting, with a public realm that features a mixture of different building facades, integrated art features, and spaces to stop and rest; land uses support interesting retail and amenity destinations. Special events and permanent car-free spaces help to re-imagine how typical auto-dominated spaces can be more people centered. Walkable environments also promote a healthier lifestyle and a greater sense of well-being among residents, contributing to a more vibrant and livable community
- **Environmental Benefits:** Walking is zero emission. Reduced reliance on cars in a walkable city leads to lower air pollution and greenhouse gas emissions. This contributes to a healthier environment and supports sustainable urban development practices. As Tacoma experiences the impacts of climate change, streets and trails have green features like tree cover and green infrastructure, providing shady and cool places to walk during extreme heat and benefiting our ecosystems.
- **Economic Growth:** Pedestrian supportive environments attract more foot traffic to local businesses, boosting the local economy. Increased pedestrian activity can lead to higher sales, more job opportunities, and attract further investment and tourism to the area. The Urban Land Institute found that half of Americans rate walkability as a high, or their top, priority when choosing where to live.
- **Greater Inclusivity:** An accessible pedestrian network ensures that all residents, including those with disabilities or mobility issues, can navigate the city safely and comfortably. Features like ADA-compliant curb ramps, tactile paving, and audible crossing signals make public spaces more inclusive. This inclusivity fosters a sense of belonging and ensures that everyone can participate fully in community life.

Universal Design

The City of Tacoma works to incorporate Universal Design principles into the way we design the transportation network. Universal Design is about creating an environment that is accessible for all thus ensuring that what we design for the built environment is not only equitable but empowers people to participate in their community. There are seven basic principles to Universal Design, developed by the Center for Universal Design at North Carolina State. The principles are summarized below. (Official wording can be found at https://design.ncsu.edu/research/center-for-universal-design)

- Equitable Use: Same access for all users; equal access at a minimum
- Flexibility in Use: The design accommodates a wide range of abilities
- Simple and Intuitive Use: Use of the design element is easy to understand and use regardless of ability and experience
- Perceptible Information: The design element effectively communicates information using a variety of formats to all users
- Tolerance for Error: The design minimizes hazards and provides fail-safe features
- Low Physical Effort: The feature can be used efficiently and comfortably
- Size and Space for Approach and Use: A feature is usable and accessible regardless of a person mobility, size, and ability.

What groups or communities have specific needs and/or require special consideration?

- **People with Disabilities:** Accessible infrastructure is crucial for individuals with mobility, vision, or cognitive impairments. Features like curb ramps, tactile paving, and audible signals help ensure safe and independent navigation of sidewalks and crossings.
- **Children:** Children are more vulnerable due to their smaller stature and developing awareness of traffic risks. Well-designed sidewalks and crossings with clear visibility and shorter crossing distances can improve safety for young pedestrians.
- **Older Adults:** Seniors may have slower walking speeds and limited mobility, making extended crossing times and smooth, obstacle-free sidewalks essential. Accessible design enhances both their safety and independence.
- **Caregivers with Strollers:** Parents or caregivers pushing strollers require wider sidewalks and smooth surfaces to navigate safely. Curb ramps and crosswalks with longer signal times also make crossings easier for this group.

- **Nighttime Pedestrians:** Individuals walking after dark require well-lit sidewalks and crossings to ensure visibility and safety. Street lighting and reflective markings help reduce the risk of crashes in low-light conditions.
- **Frequent Transit Users:** Many transit users rely on safe and convenient pedestrian routes to access bus stops and stations. Well-maintained sidewalks and easily accessible crossings near transit hubs improve their overall transit experience.
- **Low-Income Residents:** Many low-income individuals rely on walking as their primary mode of transportation. Safe, accessible, and well-maintained sidewalks and crossings are critical for equitable access to essential services like public transportation, schools, and healthcare.
- **Non-English Speakers:** Language barriers can make it harder to understand traffic signals or signage. Clear visual cues, consistent signage, and universally recognized symbols can improve safety for non-English-speaking pedestrians.
- **Unhoused Individuals:** Unhoused individuals often rely on walking as their primary mode of transportation and may use sidewalks as temporary living spaces. Ensuring sidewalks are accessible, safe, and free of obstructions is critical. Additionally, improvements should consider how to balance pedestrian safety and access with the needs of those using public spaces for shelter, offering humane solutions that don't criminalize unhoused populations.
- **People most at risk of street harassment or targeted violence due to their race, ethnicity, gender identity, sexual orientation, religion or other elements of their identity:** Many community members face greater threats of street harassment or targeted violence while walking or rolling. Good street design can support community safety from interpersonal violence by enhancing visibility, increasing the number of people who use public space, and strengthening community connections.

Specific Needs to Support Individuals with a Disability

People with Reduced Mobility: Sidewalks must be wide, smooth, and free of obstructions to ensure accessibility for those with mobility issues. Curb ramps are essential for navigating street crossings and changes in elevation, making movement safer and more manageable. Shorter crossings reduce the distance and time needed to cross streets, thereby enhancing safety. Clear and predictable pathways help individuals using mobility devices navigate the area efficiently, promoting independence and ease of movement.

People Who are Blind or Have Low Vision: For people with low vision, tactile paving provides sensory cues that assist with navigation. Audible and vibrotactile signals at crosswalks offer sound and vibration-based indicators for safe crossing. High-contrast markings improve the visibility of pathways and signage, making it easier to distinguish important features. Consistent lighting throughout the area reduces shadows and enhances visibility, ensuring a safer and more navigable environment at all times.

People who are Deaf-Blind: Tactile wayfinding, braille signage, and route finding and other information that can be converted to refreshable displays and screens are crucial for effectively communicating with people who are deaf-and blind and aiding their navigation. Vibrating signals at crosswalks deliver tactile cues indicating when it's safe to cross, enhancing safety. Guide paths that are clearly defined and can be navigated by touch offer a reliable means for moving through the environment.

People who are Hearing Impaired: For individuals with hearing impairments, visual signals such as flashing lights at crosswalks and pedestrian signals that display ‘walk’ and ‘don’t’ walk symbols are essential. Clear signage provides visual information about routes and safety instructions, ensuring they can navigate safely.

People with Cognitive Disabilities: Simple and clear signage is vital for individuals with cognitive disabilities, as it provides easily understandable information about routes and destinations. Predictable routes, clearly marked and easy to follow, help reduce confusion and enhance navigation.

People with Mental Health Conditions: Creating calm environments with minimal loud noises and chaotic elements can significantly reduce stress for people with mental health conditions. Safe spaces where individuals can rest and feel secure provide necessary respite. Clear, consistent wayfinding with well-marked paths reduces confusion and anxiety, making navigation less stressful and more intuitive.

Neurodiverse Individuals: Predictable patterns and clearly marked pathways help reduce unpredictability, making the environment more navigable. Inclusive design that considers various sensory and cognitive needs enhances comfort and accessibility for all users, ensuring a welcoming and accommodating space. Examples of a low-stress environment include soft lighting as opposed to harsh florescent lighting, avoiding the use of redundant signage or elements that may create confusion or stress, minimizing street noise with landscaping separating pedestrians and vehicles, and providing resting places that offer a reduction in sensory input where people can regroup and recuperate.

Context

Tacoma Context

A complete pedestrian network allows people walking and rolling to safely and accessibly travel along and across streets. While Tacoma has almost 1,002 miles of existing sidewalk, the City's existing pedestrian network is disjointed and challenging to navigate due to the poor condition of existing sidewalks, missing link sidewalks, and limited safe and accessible crossing opportunities. These issues are particularly stark for people with disabilities as well as the youngest and oldest members of our community.

The City has a long-time policy foundation prioritizing pedestrians, and there is strong community support for building safe and accessible places to walk and roll. As Tacoma looks to the emerging opportunities, trends, and challenges, there is an opportunity to prioritize the build out of the pedestrian network and do so in a way that centers safety and equity.

Missing Link Sidewalks

The City of Tacoma envisions a complete network where, with very few exceptions, every street in Tacoma has sidewalks on both sides of each street.[2]

Tacoma has approximately 371 miles of missing link sidewalks. Of these, approximately:

- 20.2% of missing link sidewalks are along arterials
- 78.3% of missing link sidewalks are along residential streets

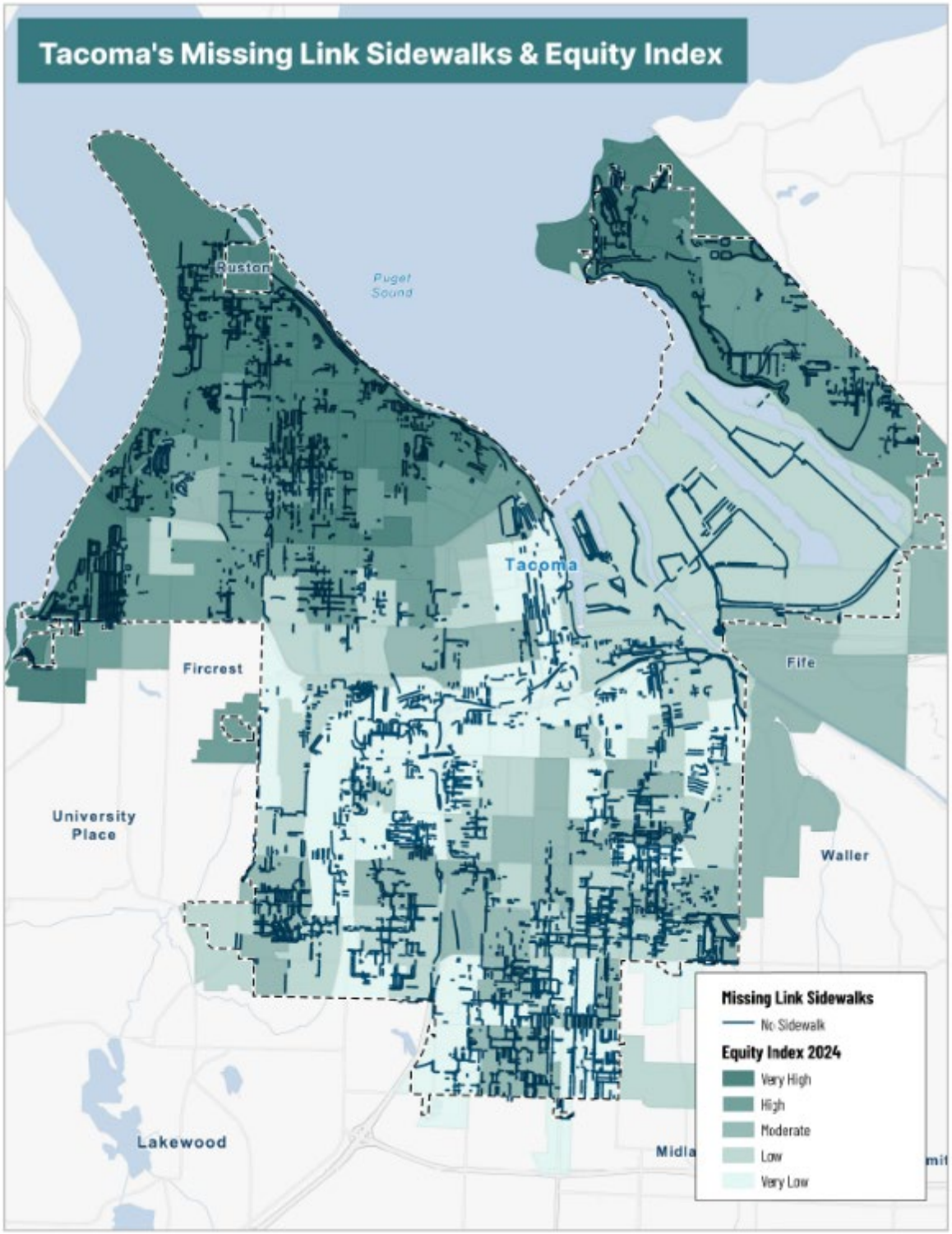
The below table is an equity analysis of current arterial sidewalk gaps as of 2023.

Table 1 Arterial Missing Link Sidewalk by Equity Index Opportunity Area

Equity Index	Miles of Missing Sidewalk	Percentage of Total Missing Sidewalk
Very Low	12 miles	20%
Low	28 miles	45%
Moderate	5 miles	8%
High	11 miles	17%
Very High	19 miles	30%

[2] Exceptions include limited access roads and on and off ramps (where pedestrian infrastructure must be planned across, but not necessarily along every route) and areas with significant engineering and environmental challenges where pedestrian access may be focused on one side of the corridor (i.e. Schuster Parkway).

Figure 1. Tacoma's Missing Link Sidewalks (as of 2023)



Frequent, Safe and Accessible Crossings

To be safe and accessible – a pedestrian crossing must have curb ramps, signals must be ADA-compliant, and the type of crossing must be appropriate for the traffic speeds and volumes. Crossing frequency also matters. When there are long distances between accessible or improved crossings – pedestrians must choose between crossing somewhere less safe or going significantly out of their way. Pedestrian crossing treatments are summarized in Figure 2.

Figure 1. Pedestrian Crossing Infrastructure

Unfit or Unsafe Sidewalks

When a section of sidewalk has been identified as unfit or unsafe, the City inspects the sidewalk and sends a letter to the adjacent property owner asking them to fix any unfit or unsafe sidewalk. While funding has been limited, the City has been working to support property owners by offering cost-sharing and fully covering the cost of sidewalk repair for low-income residents.

What are key **opportunities** for Tacoma to advance walking and rolling?

- **Many short trips and more to come**: In the Puget Sound region, 23% of trips are one mile or less.[3] As Tacoma continues working towards a housing and land-use context that supports 15-minute neighborhoods through initiatives like Home in Tacoma, this percentage will continue to increase.
- **Transit investments:** In Tacoma, 85% of transit trips start as pedestrian trips.[4] Sound Transit is making significant investments in improving active transportation access to existing and planned high-capacity transit, including the South Tacoma Sounder Station, Tacoma Dome Station, and planned Portland Avenue Tacoma Dome Link Extension Station – with over $65 million in planned investments.
- **Regional collaboration**: There is a growing commitment to regional collaboration on projects that enhance pedestrian safety and accessibility – from the multi-jurisdictional partnership that spurred the spuyaləpabš trail to the interagency agreement that has led to a preliminary design for continuous sidewalks and bike improvements on Orchard Street. Pedestrian trips don't start and end at jurisdiction borders.
- **ADA Self Evaluation and Transition Plan:** The City of Tacoma received a federal Safe Streets and Roads for All Grant which will support the update of Tacoma's ADA Self-Evaluation and Transition Plan. This plan will offer a significant opportunity for data collection and prioritization of Tacoma's accessibility needs.
- **Community Support:** Community engagement consistently demonstrates community interest in walking and rolling in Tacoma. In nearly all recent city engagement efforts – such as Home in Tacoma, Vision Zero, neighborhood planning efforts – improving walkability is often a top priority.

[3] Puget Sound Regional Council. 2021 Household Travel Survey. https://psrcwa.shinyapps.io/travel-study-stories/.

[4] Puget Sound Regional Council. 2023 Household Travel Survey.

What **emerging trends** will affect pedestrians today and in the future?

- **Advances in ADA best practices:** Best practices for designing streets that are safe and accessible for people with disabilities are continually evolving. Designers are increasingly prioritizing accessibility from the outset, integrating innovative solutions such as a broader range of tactile pavers. However, the lack of clear guidance on implementing new treatments, including those outlined in the Public Rights-of-Way Accessibility Guidelines (PROWAG), can result in inconsistencies across the region and nation.
- **Emergent sidewalk policy models:** Communities across the US are grappling with how to pay for the construction and maintenance of sidewalks. From the "Denver Deserves Sidewalks" ordinance in Colorado to Oakland's point-of-sale sidewalk repair program, the City can learn from the experiences of other jurisdictions as we seek solutions for sustainably funding the construction and maintenance of pedestrian infrastructure.
- **Growth and Re-development**: Tacoma remains poised for significant new residential growth, and many new pedestrian facilities (sidewalks, curb ramps, and multi-use trails) will be developed as part of these projects.
- **Technology:** Cities are increasingly adopting smart technology to enhance walkability. This includes using sensors and data analytics to monitor pedestrian traffic, adaptive traffic signals that respond to real-time conditions, and apps that help residents navigate urban spaces. These technologies can make walking more convenient and safer by improving infrastructure management and user experience. Technology-based solutions must be carefully implemented to ensure equitable access and safety benefits.
- **Equitable Transit-Oriented Development:** ETOD incorporates pedestrian-friendly infrastructure such as wide sidewalks, safe crossings, and mixed-use developments that integrate residential, commercial, and recreational spaces, making daily amenities accessible by walking and rolling.

What **challenges** will affect walking and rolling today and in the future?

- **Larger Vehicles:** In the U.S., vehicles are becoming heavier and taller, with SUVs, trucks, and vans being approximately 45% more likely to cause pedestrian fatalities. These larger vehicles pose an even greater risk to children and shorter individuals. Additionally, freight vehicles, which are also increasing in size, introduce further

safety challenges in urban areas, particularly at intersections and along corridors shared with pedestrians and cyclists.[5]

- **Systemic Underinvestment:** Tacoma's pedestrian network has experienced decades of underinvestment, resulting in a fragmented system that will require over $1 billion to fully complete. This substantial backlog places considerable pressure on current budgets as the city works to address years of neglect and bring the network up to modern standards.
- **Safety:** Between 2019-2023, there have been 105 pedestrians killed or seriously injured in traffic collisions in Tacoma. Eighty-one percent of these collisions took place on arterials. Seventy percent took place in low or very low opportunity areas, according to the City's equity index. While Tacoma has a Vision Zero goal to eliminate collisions that cause serious injuries or deaths by 2035, significant resources will be needed to achieve this goal.
- **Cost of Improvements:** An increasing number of grant programs are centering safety, equity, and multimodal projects, but funding pedestrian-focused projects remains difficult. The high cost per mile of sidewalk projects makes it challenging to successfully compete for grant funds, particularly for spot improvements or small sections missing link sidewalk that are not contiguous.
- **Right-of-Way:** Sidewalks and curb ramps frequently require work within the right-of-way, such as removing improperly placed private fences, obtaining easements for construction, or acquiring right-of-way for necessary infrastructure. While essential for ensuring projects are executed correctly, these processes increase the cost, complexity, and duration of the work.
- **Sidewalk Responsibility:** Unlike the funding model for road construction and maintenance, the City of Tacoma places the responsibility for building and maintaining sidewalks on individual property owners. This approach has resulted in inconsistencies in sidewalk coverage across the city and has contributed to a significant maintenance backlog, as many property owners lack the financial resources to adequately maintain their sidewalks.
- **Topography:** Tacoma has a diverse terrain with many steep hills. Steep hills present challenges for pedestrians, making walking physically demanding, particularly for the older adults, people with disabilities, and those with health issues. The increased effort required to walk or roll up or down steep inclines can deter individuals from choosing walking or rolling as a mode of transportation, reducing overall walkability.

[5] **"Vehicles with higher, more vertical front ends pose greater risk to pedestrians." Insurance Institute for Highway Safety. 11/14/23.** https://www.iihs.org/news/detail/vehicles-with-higher-more-vertical-front-ends-pose-greater-risk-to-pedestrians

BICYCLE ELEMENT

Purpose

Bicycling in Tacoma

Tacoma is committed to becoming a bike-friendly city, where safe, comfortable, and connected bike routes support community cohesion, enhance well-being, and enable community members of all ages and abilities to meet their needs. In Tacoma's bike-friendly future, choosing this affordable, healthy, and environmentally friendly mode of transportation is seamless, supported by robust infrastructure, comprehensive programs, and forward-thinking policies that ensure bicycling is both accessible and enjoyable.

Bicyclists include people riding:

- Bicycles
- Tricycles
- Adaptive bicycles
- E-bikes

Throughout the TMP the term "bicycle" is used to include all of these active ways of getting around.

In Tacoma people using electric motorized foot scooters and electric personal assistive mobility devices (EPAMDs) are also allowed to use bicycle facilities and paved shared use paths. While not bicycles, they benefit from many of the policies and projects in this section

Tacoma has made notable progress toward realizing a bike-friendly vision, yet there remains significant work ahead. The current bicycle network is fragmented. Many neighborhoods and key destinations lack provisions for bike travel altogether. To meet Tacoma's safety, equity, and climate goals, it is essential to develop a connected bike network that is safe and accessible for individuals of all ages and abilities, alongside implementing supportive policies and programs to address disparities within the transportation system.

The Importance of Bicycling

What role does bikeability have in people's daily lives?

For some Tacomans, bicycling serves as a critical lifeline, providing the only means of reaching work, school, or services. For others, it offers an opportunity to connect with friends and their neighborhood while enjoying the outdoors. Some choose to ride out of a commitment to health or environmental sustainability. Whether riding by choice or necessity, people need a bikeable city to experience safety, mobility, exploration, and a sense of community.

- **Advancing Safety:** Creating a safe environment for bicyclists ensures that individuals can safely reach their destinations while meeting their daily needs. . Prioritizing bicyclist safety advances Tacoma's Vision Zero goals, ultimately saving lives. It also allows youth and other vulnerable groups to ride safely, fostering community and enjoyment.
- **Equity and Access:** Cars often come with higher costs for purchase, maintenance, and operation, making bicycling a practical and more affordable alternative. Residents in low and very low opportunity neighborhoods in Tacoma face limited access to diverse transportation options. In Tacoma, the median household income for zero-vehicle households is $23,400, compared to the citywide median income of $79,085. In the Puget Sound region, lower-income households are more likely to rely on active transportation modes and transit. Additionally, the City's highest crash corridors are concentrated in these same neighborhoods, presenting a dual challenge of fewer transportation options and higher safety risks. Developing bicycle infrastructure supports low-income residents, immigrants, refugees, and people of color, enabling greater access to transportation and addressing current safety disparities.
- **Connectivity:** A connected, bikeable Tacoma enables residents to access jobs, school, transit, parks, and other daily destinations, maintain a healthy lifestyle, and connect with their community.
- **Climate and Air Quality:** Supporting and incentivizing bicycling helps meet Tacoma's Climate Action Plan goals to significantly reduce greenhouse gas emissions by 2050, which is why completing the City's bike network by 2050 is a key action of the plan. Additionally, air quality impacts communities differently. The more people are bicycling on the streets, the more they can contribute to reducing pollution from transportation.
- **Community Cohesion:** Bicycling through a neighborhood brings many rewards in regard to recreation, community connections, and mental health. Bicycling with

family and friends can invoke happiness that is critical in making Tacoma a joyous place to be.

What are specific outcomes that emerge from this element done well?

A bikeable Tacoma is one where people ride because bicycling feels safe, convenient, comfortable, and joyous.

- **Low Stress Infrastructure:** Tacoma constructs context-appropriate, low-stress bicycle infrastructure treatments on each identified street, creating a network of shared use paths, separated bicycle lanes, and neighborhood greenways. Safe bicycling infrastructure recognizes people bicycling as vulnerable road users and supports their mobility not just along a block, but through challenging intersections.
- **Safety and Equity Prioritized:** Tacoma builds out the bicycle network using a data-based approach that prioritizes equity and safety. This prioritization invests safety infrastructure where people bicycling are most at risk of injury often due to historical redlining-based disinvestment and recognizes that people of diverse identities bicycle.
- **Convenient:** People use the well connected and maintained network to get from where they live to their everyday destinations, from commuting to work or school, connecting to transit, getting to parks and libraries, to running errands, heading to social engagements, and recreating. The convenience of these facilities, and the land use that supports it, has kept up with the growing demand to bicycle around Tacoma. This convenience makes it easier for Tacomans to live out their values and contribute to a healthier environment.
- **Comfortable:** From a three-year old on a scoot bike with their adult, to the 12-year-old riding to school with a friend, to the eighty-year-old on their e-bike or trike, people of all ages and abilities feel comfortable bicycling in Tacoma. Bicycles, tricycles, and adaptive bicycles can easily maneuver between each other and other road users.
- **Intuitive:** All people on bicycles can comfortably navigate the network with the support of intuitive signage and facility design. People on bicycles are provided clear direction on their priority and movements at intersections and along corridors.
- **Joyous and Vibrant:** Art and community spaces weave through and connect bicycle routes in Tacoma that celebrate bicycling, invite social connection through bicycling, and promote bicycling as a joyful, healthy, and community-endorsed way to move around Tacoma.

What groups or communities have specific needs and/or require special consideration?

- **People with Disabilities:** Inclusive bike infrastructure must accommodate individuals with disabilities, including those using adaptive bikes or handcycles. This involves designing wider lanes, providing accessible bike parking, and ensuring bike-sharing programs offer adaptive options. Additionally, parked bikes and scooters need to remain clear of accessible pedestrian routes to keep them ADA-compliant and unobstructed, ensuring safe and equitable access for all users.
- **BIPOC Communities:** Black, Indigenous, and People of Color who ride bikes may face unique challenges, including concerns about safety and discrimination. Ensuring equitable access to bike infrastructure in communities of color, addressing racial disparities in bike safety and enforcement, and fostering inclusive bicycling programs can help create a more welcoming and supportive environment for all bicyclists.
- **Families with Children:** Families with children need safe, separate bike lanes that provide a secure environment for young riders. Additionally, routes should connect to schools, parks, and recreational areas, encouraging family-friendly biking and promoting physical activity from an early age. Consideration should also be given to infrastructure and bike parking that accommodates cargo bikes and bike trailers.
- **Commuters:** Daily commuters, including those who bike to work or school, require safe, connected, and efficient routes that link residential areas to major employment and education centers. Employers and educational institutions need to provide secure and covered bike parking is essential to protect bikes from theft and weather, ensuring convenience and reliability for daily use.
- **Youth and Older Adults:** Youth and older adults need special consideration for biking due to their unique physical and skill-related needs. Youth often require new skill development for safe cycling, including learning traffic rules and handling bikes confidently, while older individuals may need training to adapt to e-bikes, which can help support accessiblity. Both groups benefit from separated bike lanes, shared use paths, and low volume, traffic-calmed streets to ensure a safe riding environment. Promoting physical health through biking is crucial, as it supports cardiovascular health and mobility in older adults and fosters fitness and independence in youth.
- **Unhoused Individuals:** Unhoused individuals often rely on active transportation modes, such as biking, as their primary means of mobility due to limited access to other transportation options. Constructing bike infrastructure with their needs in mind creates safe, accessible routes that connect them to essential services, shelters, and employment opportunities. Additionally, considering secure and convenient bike parking and storage is crucial, as their possessions are often transported by bicycle.

Context

Tacoma Context

A safe and comfortable bike network relies on connected bikeways that enable cyclists of all ages and abilities to navigate streets and reach desired destinations seamlessly. While Tacoma has made progress in accelerating the development, improving the design quality, and strategically prioritizing bikeways with a focus on safety, equity, and connectivity, significant work remains to fully achieve this vision. Many areas still lack the infrastructure necessary to provide comprehensive, safe, and accessible routes throughout the city.

Existing Bikeways

As of January 2025, Tacoma has approximately 60 miles of on-street bikeways and 22 miles of shared-use path. Best practices in bikeway design have evolved rapidly with an increased focus on creating all ages and abilities facilities with greater separation from vehicles.

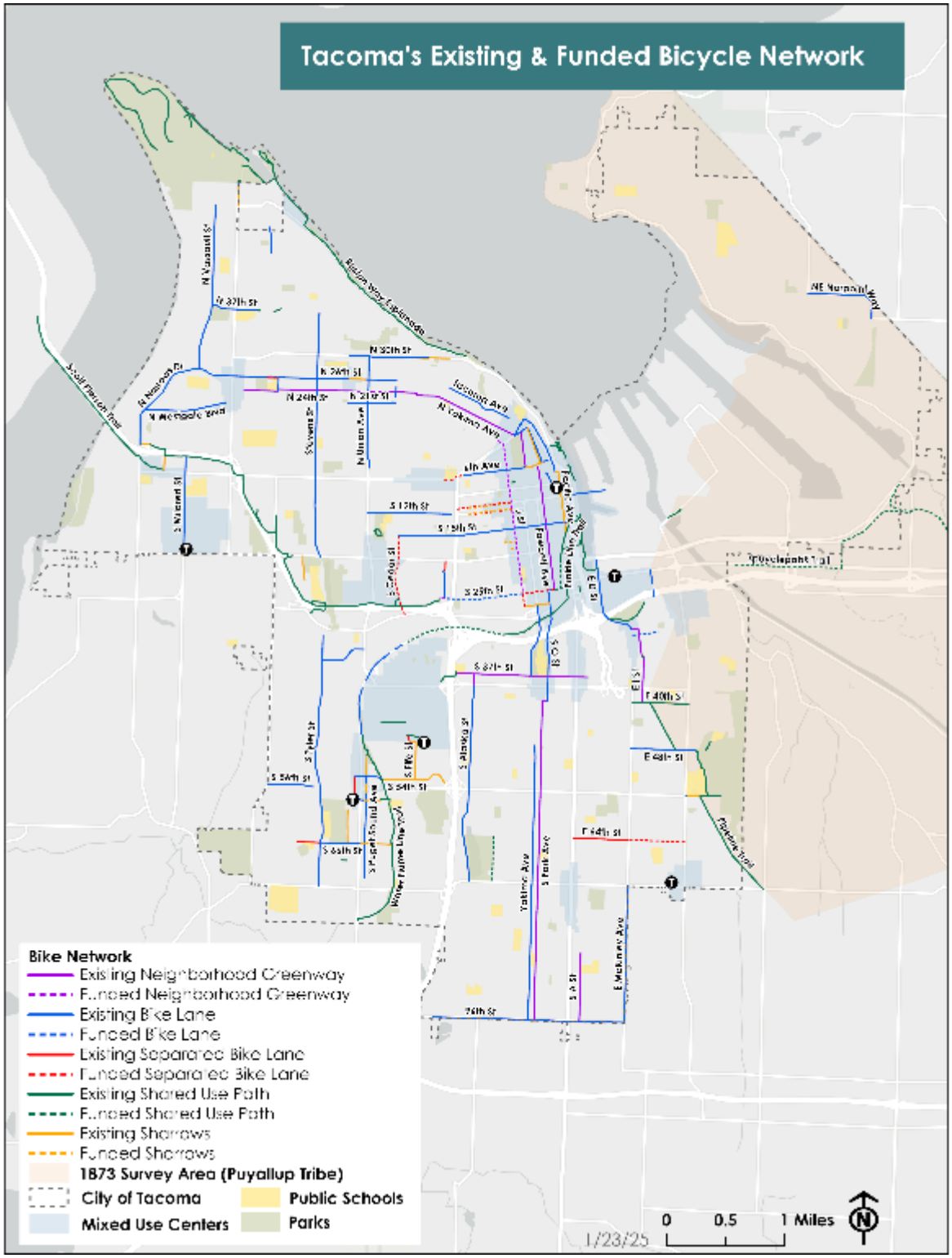
Most of Tacoma's existing bike routes were built ten or more years ago and the quality of these older facilities varies widely. In order to create a safe and comfortable bike network Tacoma will need to both expand the existing network, while looking for opportunities to improve existing facilities.

Figure 3: Bicycle Facility Types

Bikeway Type	Existing Mileage	Definition	Example Photo
Shared Use Paths	22	Paved trails provide shared space for people walking, rolling, and bicycling. They are fully separated from vehicular traffic, but may be adjacent to roads.	
Separated Bike Lanes	1	These bike lanes include vertical separators (concrete curbs, plastic curbs with delineators, or parked cars) between bicyclists and moving traffic. They can be one-way or two-way and can be at street or sidewalk level.	 
Neighborhood Greenways	12	Streets with traffic calming to reduce traffic speeds and volumes. Safety improvements make it easier for pedestrians & bicyclists to cross busy streets. Bikes and cars use the full lane.	
Bike Lanes	41	Painted bike lanes delineate on-street space for bikes. A painted buffer can be used to provide additional horizontal separation from moving traffic.	
Sharrows	6	Shared lane markings (also known as sharrows) reiterate that bikes and cars both use the full lane. "Sharrows" can be used as wayfinding to help connect bike routes	

HIGHER ← LIKELY LEVEL OF COMFORT FOR ALL AGES & ABILITIES → LOWER

Figure 4: Tacoma's Existing and Funded Bicycle Network (as of January 2025)



Wrap-Around Supports
A safe and connected bike network is vital for enabling Tacomans to ride safely and comfortably, but infrastructure alone is not enough. Complementary measures, such as education and encouragement programs and secure bike parking at destinations, are essential. Tacoma is committed to providing these comprehensive supports to facilitate and enhance bicycling for its residents.

- **Education:** Tacoma's Safe Routes to School program provides bicycling education for youth and their families through events such as bike rodeos and the installation of traffic gardens, where children can practice riding safely. The "Tacoma Mobility" social media channels inform the community about existing and planned bike routes, available resources, upcoming events, and opportunities for involvement. Education and outreach at community events further publicize the City's active transportation initiatives, collect community feedback, and provide educational resources.
- **Encouragement:** The City supports a variety of programs that celebrate existing riders and encourage all Tacomans to give bicycling a try, from annual Bike Month events each May to Walk & Roll to School days at local schools.
- **Bike Parking:** The City installs free bike racks in the public right-of-way and has installed over 360 bike racks citywide through this program. Secure bike parking is required as part of new developments, and these requirements were recently strengthened to better align with best practices.

While there are many successes to celebrate, limited funding and staffing have created challenges in developing the type of sustainable, high-impact programs needed to significantly move the needle on reducing barriers to bicycling. Programs like e-bike incentives, adult learn-to-ride programming, and grants to retrofit existing buildings with high-quality long-term bike parking would make a significant difference in addressing the barriers that prevent some people from bicycling.

What are key **opportunities** for Tacoma to advance biking?

- **Tacoma has a bikeable footprint to support short trips:** The city spans roughly 10 miles in both width and length, encompassing numerous neighborhood business districts, libraries, community centers, parks, and schools, creating a diverse network of community amenities. In the Puget Sound region, 23% of trips are one mile or less and 63% are five miles or less.[2] As Tacoma continues working towards a housing and land-use context that supports 15-minute neighborhoods through initiatives like Home in Tacoma, we expect this percentage to continue to increase.
- **Transit investments:** Regional and local transit agencies are working to grow transit service in Tacoma. Sound Transit is investing a planned $65 million dollars in significant active transportation access improvements to existing and planned high-capacity transit, including the South Tacoma Sounder Station, Tacoma Dome Station,

and Portland Avenue Tacoma Dome Link Extension stations. These planned improvements will enhance bike access to transit to help Tacomans and visitors go further by combining bikes and transit.

- **Tacoma is a growing city:** With projected growth, new and existing residents will increase the demand to get around by bicycling. As the city grows to welcome more residences and businesses, development can bring in additional improvements such as improved bike parking per the updated Tacoma Municipal Code and impact fee revenues to support active transportation capital projects.
- **Creating a bike culture:** In Tacoma, 21% of residents report having ridden a bike in the last 30 days.[6] However, 41% of Tacoma residents said they would bike if there were protected bike lanes or shared use paths that connected them where they need to go.[7] This interest shows an immense opportunity to create safe and convenient routes throughout the city.
- **Building the next generation of bike riders**: The City of Tacoma, Tacoma Public Schools, WSDOT, and community partners are investing in teaching youth how to get around safely by bike. The WSDOT funded statewide Let's Go in-school bike education is being piloted within Tacoma Public Schools and the city's Safe Routes to School program funds and implements dozens of events each year with partners about bicycling safety and fun. The city's Safe Routes to School program funded the first on-school traffic gardens in 2024 to incorporate creativity and traffic safety education into play and support the Let's Go lessons.
- **Bike infrastructure supports a local economy**: Tacoma's neighborhood business districts and downtown are working hard to recover from economic recession. As these business districts employ various strategies to support local business owners and enhance vitality, a well-connected and thoughtful bike network can boost local sales and support a more resilient economy.[8]
- **Rapidly evolving field:** Bikeway and facility design has rapidly evolved since Tacoma's 2015 Transportation Master Plan. Numerous design guides endorsed by WSDOT have emerged with recommendations for context appropriate facilities, including the WSDOT Active Transportation Programs Design Guide. These resources

[6] Puget Sound Regional Council. 2021. Household Travel Survey. https://psrcwa.shinyapps.io/travel-study-stories/

[7] Puget Sound Regional Council. 2021. Household Travel Survey. https://psrcwa.shinyapps.io/travel-study-stories/

[8] Liu, Jenny H. and Shi, Wei. Understanding Economic and Business Impacts of Street Improvements for Bicycle and Pedestrian Mobility – A Multicity Multiapproach Exploration. NITC-RR-1031/1161. Portland, OR: Transportation Research and Education Center (TREC), 2020

can support city practitioners in planning and designing innovative and recommended bicycle facility design.

- **Expanding state and federal funding**: More agencies are requiring multimodal, safety-focused projects that consider the needs and modes of the most vulnerable road users. Tacoma has been competitive in such applications and should continue to pursue grants that incorporate active transportation safety. Additionally, WSDOT will launch an e-bike incentive program, providing cash rebates to purchase e-bikes in the coming years.

What **emerging trends** will affect biking today and in the future?

- **Growth of E-bikes:** The rapid rise of e-bikes has opened up bicycling for more people, especially in hilly cities like Tacoma. However, the high purchase cost and safe storage of these expensive (and often heavy) bikes are barriers to ensuring e-bikes are accessible to everyone.
- **Bike Share and Micromobility:** Tacoma first piloted a shared micromobility and bike share program in 2018 and between 2018-2023, riders travelled over 750,000 miles on shared e-scooter and bikes. While shared micromobility brought mobility benefits, it also brought challenges, from property damage to equitable distribution across the city. The City of Tacoma does not currently have a bike or scooter share program as it assesses next steps for shared micromobility.
- **Green Biking Routes:** Incorporating green infrastructure, such as neighborhood greenways and bike paths through parks and natural areas, promotes biking by offering scenic and pleasant routes. These green corridors not only improve the biking experience but also contribute to urban sustainability by reducing heat islands and improving air quality.
- **Decline in Youth Obtaining Driver's License:** Data is showing that fewer young people are obtaining driver's licenses. This decline is influenced by factors such as the high costs of car ownership, increased availability of alternative transportation options, and environmental concerns. As a result, more young people may turn to bicycling as a convenient, cost-effective, and environmentally friendly mode of transportation.

What **challenges** will affect biking today and in the future?

- **Interstate-5 and State Routes:** Interstate-5 has divided Tacoma, creating significant challenges for bike connectivity, especially in the southern areas. Existing crossings prioritize vehicle travel, with high speeds, multiple lanes, inadequate ADA-accessible routes, missing pedestrian crossings, and no protected bike facilities. State routes contribute similarly, featuring high-speed, multilane configurations that lack essential bike and pedestrian infrastructure. Addressing these gaps is vital for creating a safe, connected bike network in Tacoma.
- **Cost of All Ages and Abilities Infrastructure:** Safe all ages and abilities bikeways provide a cost-effective solution to some of our community's most pressing challenges. While building these bikeways often requires securing significant funding before construction can start, the costs of our current transportation system are frequently embedded in existing practices or borne directly by families and individuals affected by traffic injuries and fatalities.
- **Underinvestment:** Tacoma has a rich bicycling history going back to the late 1800s. The City has not consistently prioritized safety and access for people bicycling in the years since then. Less than one third of the full bikeway network envisioned in the 2015 Transportation Master Plan has been built, and much of the City's existing infrastructure would need upgrades to be considered all ages and abilities facilities.
- **Re-Allocating Space:** Devoting space for safe bike lanes frequently requires repurposing existing auto-dominated space, which can lead to a reduction in parking spots and vehicle lanes. While these bike projects enhance mobility, improve safety, and align with Tacoma's goals and policies, changing the status quo can be hard. Integrating bike infrastructure with built environment, including navigating driveways and mail delivery routes can be complex as well.
- **Maintenance:** Constructing new all ages and abilities bikeways presents a significant funding challenge, as does maintaining both existing and new infrastructure. The City's maintenance budgets have not kept pace with growing needs. Infrastructure that supports biking, such as traffic diverters and protected intersections, poses additional maintenance challenges and often requires specialized equipment.

TRANSIT ELEMENT

Purpose

Transit in Tacoma

Transit plays an essential role in Tacoma's transportation system. To deliver its transportation goals, Tacoma needs a frequent and reliable transit network that provides access to jobs, schools, healthcare, and essential non-work destinations. Transit is the backbone of Tacoma's multimodal transportation system and helps to mitigate the impacts of automobile travel as the city grows, improve air quality and reduce emissions, and to ensure all travelers have a reliable, affordable means to traverse the city and connect to the region.

Pierce Transit delivers bus service in Tacoma and surrounding Pierce County communities. Sound Transit is the regional provider of express bus, commuter rail, and light rail services. The City of Tacoma plays a critical role in ensuring transit is reliable and accessible through management of streets and signal systems, provision and maintenance of safe pedestrian and bicycle access to bus stops, rail stations, and transit centers, and through a range of other programs that encourage use of transit and non-motorized travel. Tacoma collaborates with its transit agency partners to ensure service offerings align with the city's current needs and to plan for transit that supports planned land use growth.

Tacoma has a diverse and layered set of transit offerings designed to respond to its natural setting and local and regional land use patterns. In addition to Pierce Transit's multiple countywide services, Sound Transit, Amtrak, and WSDOT all provide transit services connecting Tacoma with other cities in the region.

Table 2. Public Transportation Operators in Tacoma

Operator	Service	Description
Pierce Transit	Fixed Route Bus	31 bus routes on set schedules, plus additional regional express bus routes
	SHUTTLE	SHUTTLE is a ride-request transportation service providing door-to-door rides for qualifying persons with disabilities anywhere within ¾-mile of a bus route
	Rideshare	Provides vehicles for three or more occupants to share a commute, reducing travel by single-occupancy-vehicles
	Runner	On-demand public transportation that allows customers to book rides from a smartphone within dedicated microtransit zones, providing flexible rides and transit connections in the areas of Joint Base Lewis McChord, Parkland/Spanaway/Midland, Ruston Way, and Port of Tacoma Tideflats
Sound Transit	Sounder Commuter Rail	Commuter rail from Seattle to Tacoma
	T Line	Street running light rail that connects downtown Tacoma to the Tacoma Dome Station and the Hilltop Neighborhood
	Link Light Rail (Future)	Tacoma Dome Link Extension will extend light rail to Tacoma with an expected opening of service in 2035
WSDOT/Washington State Ferry System	Point Defiance - Tahlequah Ferry	This passenger and auto ferry connects Point Defiance to Tahlequah, WA on the southern tip of Vashon Island
Amtrak	Amtrak Cascades	Runs from Vancouver, BC to Eugene Oregon, connections Tacoma to Portland and Seattle

The Importance of Transit

What role does transit play in people's daily lives?

Transit can make it easier for all residents to move around Tacoma and is the backbone of a multimodal transportation system that provides a choice of travel options, safe and reliable journeys, and optimizes the use of limited street space.

- **Supports a Connected City:** A mix of transit services including fixed route, high-capacity, on-demand and shuttles help people travel throughout the City no matter what context their trip begins or ends in. Seamless transfers between modes expand the reach of the network and the travelers who rely on it to get where they need to go.
- **Eases Congestion:** Transit is the most space efficient mode that offers safe, reliable, weather protected mobility for people of all abilities. Transit can get a higher number of people where they need to go and ease congestion from single-occupancy

vehicles. An effective transit network will ensure ease of movement for customers and give people a reliable way to get to their destination on time.

- **Access for all Community Members:** A robust transit network gives everyone in the city the ability to move freely, including people who don't drive or have limited access to a vehicle, young people and older adults, and low-income households. Reducing barriers to movement for different users of the system makes for more equitable mobility outcomes.
- **Connects to Jobs and Key Destinations:** Transit connects people to local businesses, employees to their jobs, and residents of Tacoma to the broader region. It gets people to where they need to go to meet their daily needs, like grocery stores, schools and daycare centers, and to destinations that bring people together to create community, like parks, places of worship, and cultural centers.
- **Reduces Cost Burden:** Having good alternatives to driving can help reduce household transportation costs, alleviating transportation cost burden. Money not spent on car ownership can go towards meeting other household needs and is more likely to be invested in the local economy.
- **Built Environment that is Better for People:** Transit-oriented communities are friendlier for people, with development at a more human-scale, improved walkability, better connections to other modes, and support a more vibrant public realm. Transit investment can also spurn more housing development, which can improve housing affordability.
- **Healthcare Access:** Transit plays a big role in connecting people to care. On demand paratransit gets people to doctors' appointments, transit connects people to hospital, clinics, and urgent care.
- **Better Health Outcomes:** Social determinants of health are non-medial factors which influence health outcomes. Transit-usage and living in a community that is more transit oriented can contribute to better health outcomes. People that use transit will most likely take an active trip to and from the stop or station. Transit-oriented communities are more walkable, bikeable, and help people live a more active lifestyle.
- **Improved Air Quality:** Reduced drive-alone trips and the electrification of transit vehicles contributes to better environmental quality. Reduced GHG emissions and improved air quality have significant health benefits for Tacoma residents.

What are specific outcomes that emerge from this element done well?

Transit supports a thriving community, delivering better economic outcomes and a more people-centered built environment. It contributes towards making Tacoma a healthier and more sustainable place to live.

- **Frequent, Reliable Network:** A network of frequent and reliable services that gets people to where they need to go, when they need to travel. Streets that prioritize transit travel, particularly where travel demand is high and the most people are impacted if buses are stuck in traffic.
- **Ease of Movement**: Improved affordability, accessibility and reliability for all travelers in Tacoma. All residents in Tacoma can get to where they need to go, regardless of whether they have access to a car or not.
- **Reduced Environmental Impact:** Reduced congestion, vehicle miles travelled (VMT), a lower single-occupancy vehicle trip rate, lower greenhouse gas emissions (GHGs).
- **Transportation Behavior and Mode Shift:** People in Tacoma use transit. The transit systems have healthy and growing ridership, with an increased uptake in transit use as the system becomes an increasingly attractive option.
- **Affordable, Connected Community:** Transit that helps accommodate planned land use growth and infill development, while helping to ease pressures created by job and population growth, like traffic congestion or housing affordability.
- **Safe and Enjoyable Experience:** Safe, affordable and reliable transit, which allows people across the city, no matter where their trip begins or ends. Safe and comfortable transit waiting areas, where people are protected from the weather, have readily accessible and easy to understand information about their trip. More walkable urban realm, spaces that people can enjoy and be proud of.

What groups or communities have specific needs and/or require special consideration?

- **Individuals with a Disability:** People with reduced mobility, including those using wheelchairs or other mobility devices. People with reduced mobility depend on transit vehicles that can accommodate their needs, and various ways to access information on their transportation options.
- **Low-Income Households:** Low-income households may be eligible for reduced fare travel. People without access to traditional banking will need options to purchase fare that with cash.
- **Elders and children:** Young people, children and older adults are more likely to rely on transit to make essential trips. Ensuring transit is easy and safe for them to use helps make the system better for everyone.
- **People with limited English proficiency and people with low technology literacy:** These users of the transit system need access to information that is not limited by language or technology barriers (e.g., doesn't require use of a smart phone or personal computer).
- **Marginalized Communities:** People living in equity priority neighborhoods and those who have been harmed by transportation projects in the past.
- **Transit-Dependent Riders:** People who rely on transit to get where they need to go have a greater stake in transit connecting them to the destinations they access for work and to meet daily needs.

Context

Transit In Tacoma

Transit plays a vital role in connecting people to opportunities while maximizing travel capacity on the city of Tacoma's streets.

In 2022, transit made up 5.3 percent of all commute trips in the City of Tacoma (American Community Survey, US Census), making it the fourth most popular mode of commuting in the city. A majority (69 percent) of people commuted via drive alone, followed by 12 percent working from home, and 9 percent carpooling. Tacoma's level of commuting is higher than both the county and state. More people work from home and drive less than the rest of the county, however, the city has slightly lower levels of work from home and higher levels of drive alone trips than the state.

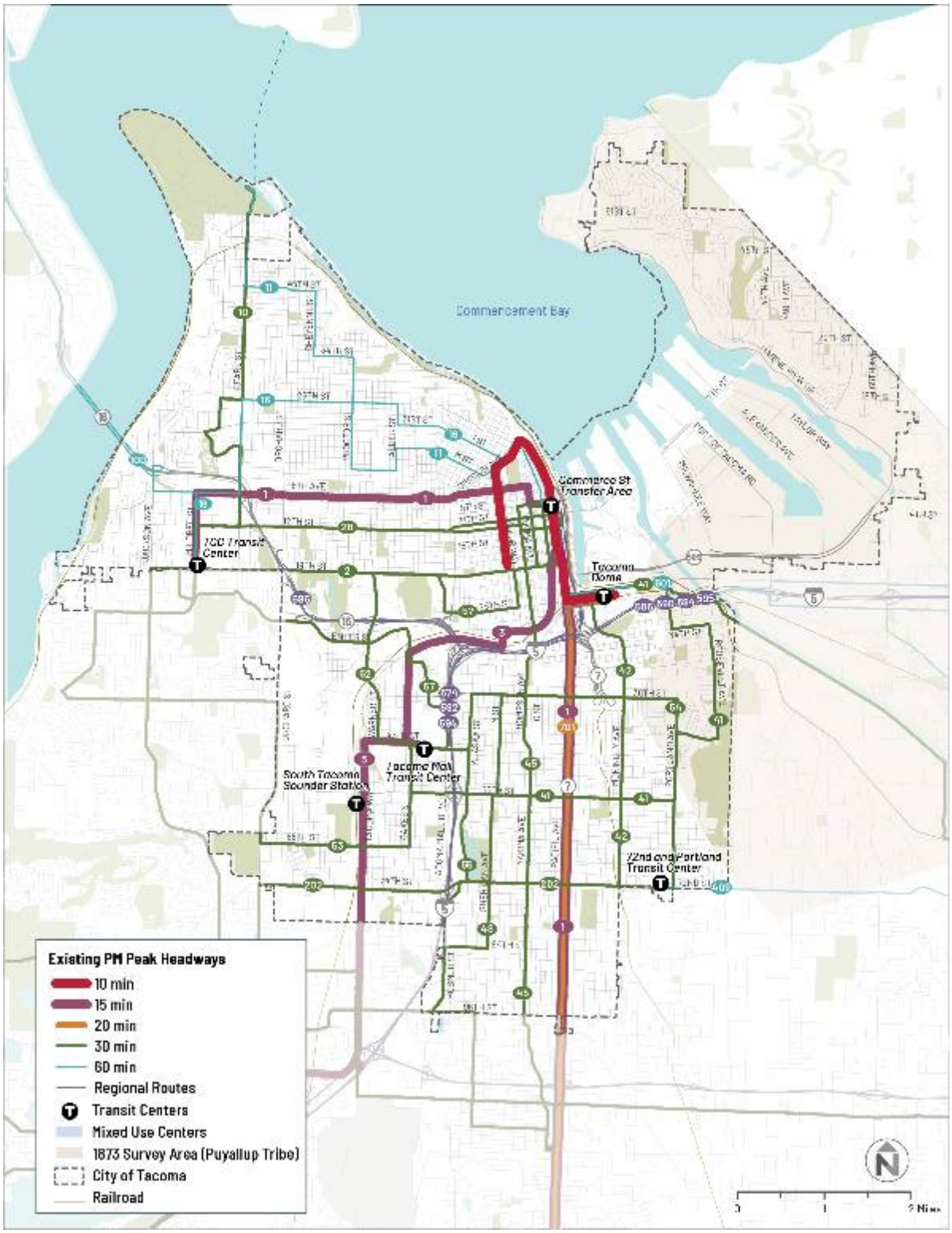
Table 3 Mode of Travel to Work (2022 ACS Data)

	Drive Alone	Carpool	Transit	Taxi	Motor-cycle	Bicycle	Walk	Other	Work From Home
City of Tacoma	**69.2%**	**9.2%**	**5.4%**	**0.03%**	**0.16%**	**0.45%**	**2.4%**	**1 %**	**12.1%**
Pierce County	72.7%	9.9%	2.9%	0.1%	0.1%	0.3%	2.2%	0.9%	10.9%
Washington State	65.9%	8.9%	4.6%	0.1%	0.2%	0.7%	0.9%	0.9%	15.5%

Funding for public transit in Pierce County comes in part from sales tax revenue authorized by voters in 1979, 0.6 percent of sales tax in the county goes toward transit. In 2011 Pierce Transit put forward a ballot measure to raise this tax to 0.9 percent to maintain transit service levels as the cost of operations grew. The ballot measure failed, resulting in service cuts and a contraction of the service area boundary the following year. In 2022 the sales tax revenue covered about half of Pierce Transit's operating budget, with most of the rest coming from regional transit service agreements (22.9 percent), operational grants (19.4 percent), and passenger fares (2.9 percent).

Figure 5 shows peak and midday transit headways in Tacoma displayed over the City's equity priority areas map, illustrating that relatively few parts of the city have high-frequency service throughout the day. The inability for Pierce Transit funding sources to keep up with continuous increases in operational costs is a major challenge for transit in Tacoma.

Figure 5 Pierce Transit Routes at PM Peak Service Levels



Despite these challenges, Pierce Transit ridership has increased in recent years, growing from around 5.5 million trips in 2022 across all services (bus, Rideshare, SHUTTLE, and Runner)9 to nearly 6.8. million trips in 2023 but still have not rebounded to pre-pandemic levels (Table 4).

Table 4. Pierce Transit Annual Ridership

Annual Ridership	Bus	Rideshare	SHUTTLE	Runner	Total
2022	4,946,334	382,751	211,890	5,620	5,546,595
2023	6,096,759	412,042	262,611	15,787	6,787,199
2019 (Pre-Pandemic)	*8,376,889*	*712,437*	*291,142*	*(no service)*	*9,380,468*

While the City does not run the buses or light rail trains in Tacoma, it does play an important role in ensuring transit is a safe, reliable, and viable mode of travel. Among the ways Tacoma supports transit today or plans to support transit through the implementation of this plan are:

- **Transit capital projects**: Tacoma owns and operates many of the streets that transit runs on and can play a role in delivering transit spot improvement projects, such as bus lane markings, traffic signal upgrades, improved access to transit stops and stations, better lighting, and enhancements to bus stops.
- **Transit funding**: Tacoma does not directly fund transit services or transit capital projects today, but it can look to peer cities in the Puget Sound region for examples of how local funding measures are helping to bolster transit service levels through funding partnerships.
- **Improving transit access**: Tacoma supports access to transit by prioritizing bicycle and pedestrian improvements near transit stations, bus stops, and multimodal hubs.
- **Transit reliability**: Tacoma can grow its role in planning, designing, and implement bus priority treatments, an increasingly common practice for peer agencies in the Puget Sound.
- **Station Area Planning and Permitting**: Tacoma works with transit partners, such as Sound Transit, on access and land use planning, development review, and permitting for Link light rail station areas.
- **Regional transit coordination**: Tacoma partners with Pierce Transit, Sound Transit, and other neighboring agencies to track that regional investments benefit Tacoma, and that local investments align with regional travel needs.

[9] Pierce Transit, 2022 Annual Report 2022 Annual Report > Pierce Transit

What are key **opportunities** for Tacoma to improve transit?

- **Define a clear vision, goals, and guidelines for transit in the city of Tacoma that set expectations for and help gain commitments from partners**: These could include aspirational service goals (e.g. every resident live within a quarter mile of high frequency transit service), policies defining transit modal priority (e.g. establishing a multimodal level of service standard), guidelines for operating on the city's right-of-way, and transit-supportive evaluation criteria for future projects.
- **Identify and pursue new sources of funding for transit:** Tacoma can play a key role in funding transit, including use of local funding sources for transit-supportive capital improvements and new opportunities to consider local measures that support increased service levels.
- **Create transit-oriented, walkable neighborhoods that include affordable housing.** The City of Tacoma's Affordable Housing Action Strategy, including initiatives like Home in Tacoma (HIT)—which updates city zoning to allow for middle housing by replacing single-family zoning with Urban Residential zoning—should generate transit-supportive densities while also increasing affordability within the city.
- **Service integration and restructuring** that leverage catalytic high-capacity transit projects like the Tacoma Dome Link Extension, Tacoma Community College extension of the T Line and potential future High Speed Rail investments. These investments will create opportunities to restructure Pierce Transit bus services, redeploying duplicative services to improve headways in Tacoma. Tacoma's Frequent Transit Network helps guide the city in working with Pierce Transit on future service changes.
- **Broader access improvements to system: connecting people to transit and** ensuring safe, easy connections between transit modes.
- **Climate initiatives:** Build on increasing public awareness of climate change to educate and excite people about the role transit can play in reducing transportation emissions and promoting sustainable travel.
- **Collaborate with transit partners on strategic long-range planning:** as well as project-level visioning, engagement, environmental review, construction, and crucially, all phases of design to advocate for Tacoma's desired transit vision, goals, and guidelines.
- **Cultivate a culture of transit:** acknowledging that Tacoma's current travel options favor cars, through education regarding co-benefits, experiential opportunities, and TDM programs.
- **Increase City staff capacity and expertise around transit**: which may include supporting educational opportunities or hiring new staff.

What **emerging trends** will affect transit today and in the future?

- **Changing travel needs:** Where, when, and how people travel is changing due to increases in telecommuting, e-commerce, and distance learning. This may require transit agencies to change the way they provide service (e.g. expanding midday service and providing more on-demand options), to match the needs of their riders.
- **Integration of people-centered transportation policies:** in the last decade, initiatives like Vision Zero, an initiative to end traffic related deaths, Complete Streets, which envisions a balanced use of streets, fare free transit for youth, and creating walkable, dense places, all work to help create transit-friendly communities and streetscapes.
- **Growing momentum for change around climate and housing policy:** Better transit service supports renewed efforts to decarbonize the transportation sector and reduce individual vehicle miles traveled. In addition, WA House Bill 1181 and new city housing policies could lead to transit-supportive land uses that could increase transit mode share.
- **Increasing costs for U.S. Infrastructure projects:** As policies like Buy America (which requires certain federally funded capital projects to source materials and labor from American vendors when realistically possible), supply chain issues, and rapid inflation drive up costs for new capital investments, Tacoma and its partners will have to think critically and strategically about how to implement and fund capital transit investments.
- **Reducing gas tax revenue:** As passenger vehicles become more fuel efficient, the gas tax will become less lucrative. The state of Washington is exploring replacing or supplementing this tax with other price-based mechanisms and tools.
- **Zero-emission transportation technology:** Across the transportation sector, vehicle manufacturers are exploring zero-emission technology. Challenges associated with supply and costs of technology could impact fleet electrification.
- **High Speed Rail planning:** Long term talks about a potential high speed rail line connecting Portland, Oregon to Vancouver, British Columbia may influence station locations and other transit amenities in Tacoma.
- **Accommodating population and job growth trends:** Explore creating capacity through mode-shift instead of roadway capacity to accommodate this growth.
- **Focusing growth along transit-oriented neighborhoods**: There is a tremendous opportunity to link new transit investment with housing and economic development. Increasing awareness of the need for mixed-use development, elimination of parking minimums, and more demand to live in vibrant, walkable communities creates momentum for more transit-oriented neighborhoods.

What **challenges** will affect transit today and in the future?

- **Interagency collaboration:** The City of Tacoma has many partners it must coordinate and align with to successfully implement a quality transit system. Interagency and jurisdictional collaboration between city, county, state, and transit agencies can delay projects as multiple players may have competing priorities or interests. Tacoma's primary transit provider is mandated to provide service across the county, as the largest city in the county, Tacoma sometimes has different needs than the rest of the county. Tacoma should work with transit agencies to provide enhanced service where the city would like to grow.
- **Workforce shortages:** Staff constraints on both Tacoma and transit agencies make it hard to plan for and deploy quality transit services. Nationwide, recruitment for new bus operators and mechanics has been challenging. In addition, an ever-aging transit workforce has only compounded the problem, resulting in unwanted service cuts.
- **Limited revenue and funding:** Local transit funding has not kept pace with increasing service delivery cost and population growth. With limited funds trade-offs and decisions have to be made about where to invest transit funding to have the biggest impact. For example, balancing demand for resources for electrification verses need to expand transit presents a challenging trade-off between two, goal-aligned areas of investment.
- **Undefined role of city leadership in transit planning:** The City of Tacoma would like to play a stronger role in shaping transit within its jurisdiction and needs a clearer path forward.
- **Need for coordinated strategy on long range transit planning:** In tandem with the interagency collaboration, clearly defined roles and responsibilities are needed to help shepherd a unified and coordinated strategy for a long-range transit vision in the region. This would provide a "north star" for all agencies to work toward and help with prioritizing limited funds.
- **Lack of density near high-capacity transit corridors*:*** Existing land uses are not conducive to high-capacity transit. High-capacity transit should align with areas where Tacoma wants to grow and should be the go-to mode of transportation for higher density, transit-oriented areas.

Tacoma's **Frequent Transit Network** Vision Methodology

Frequent, reliable transit service is the foundation of a mobility system that ensures Tacoma travelers have a safe, reliable, and affordable option to move about the city and connect to the region. A frequent bus network with long hours of operation is essential if Tacoma is to meet its climate goals and address transportation-related inequities.

This section describes Tacoma's vision for a Frequent Transit Network that would provide freedom for people moving around the city to simply "show-up and go". However, meeting this vision requires substantially more operating resources (e.g. funding, bus operators, mechanics, and coaches) than are available to Pierce Transit today. The goal is to present a vision that Tacoma can work toward by partnering with Pierce Transit and potentially developing local source funding.

The Frequent Transit Network has two primary components: (1) aspirational frequency targets and (2) targets for service span (hours of operation). These aspirational targets are illustrated by arterial street segments and don't relate directly to the current Pierce Transit Route network (that is to say FTN service levels could be achieved through various future service configurations).

FTN corridors are classified into three categories:

- **10-Minute Headways:** Service every 10 minutes from before 6 AM to 7 PM on weekdays, and 15-minute or better service in the evenings with continued service every 30 minutes until midnight. These corridors would be prime candidates for future night owl (all night services). The vision is for Tacoma's best transit corridors to allow people to "show up and go" throughout the day and into the late evening. This is a target level for Stream BRT corridors.
- **15-Minute Headways or Better**. 15-minute service from before 6 AM to 7 PM and 30 to 60-minute service until midnight every day. This is a high frequency category for critical local corridors.
- **20-Minute Headways or Better**. 20-minute service from 6 AM to 7 PM, with 60-minute service through 10 PM every day.

The FTN was developed using a data-driven approach to prioritize where Tacoma invests and advocates for improved transit frequency. Segments of the street network where Pierce Transit buses and Sound Transit light rail operate were assigned a Frequent Transit Network target based on various data inputs, including:

- **Current Land Use and Travel Patterns (2023)**
  - Population Density
  - Employment Density
- **Transit Ridership Propensity Factors**
  - Future Population and Employment Density (2050, Aligned with Comprehensive Plan)
  - Future Population Density
  - Future Employment Density
  - Future Pop/Emp by Centers and Corridors
- **Transit Service and Performance (2023 for Pierce Transit and Sound Transit)**
  - Annual Transit Boardings
  - Daily Weekday Boardings
  - Average and Peak Loads
  - Future Ridership Potential
  - Ratio of Service Deployed to Land Use Density
- **Transit Expansion and Connectivity**
  - Connections to Link Light Rail and Sounder Commuter Rail
  - Center-to-Center Connections
- **Equity Index Score based on Tacoma Equity Index**

Transit Capital Investment Corridors

Along with frequent service, reliable travel and arrivals are among the most important factors when people choose whether to use transit services. Today, most Pierce Transit buses operate in mixed traffic along their routes. As the City grows and traffic congestion worsens, buses are increasingly delayed. As the street owner and operator, the City has the authority to create dedicated lanes for transit and to adjust operation of the signal systems to give buses priority at congested intersections. Organized along a corridor as a series of investments, these types of strategies can improve the transit customer experience and bolster transit mode share. Combined with branded buses and enhanced stations, these improvements can shape Bus Rapid Transit corridors (such as the Stream system envisioned by Pierce Transit). But those broader investments are not needed to bring meaningful travel time savings and reliability improvements to customers.

This section prioritizes corridors where Tacoma and its transit partners should consider capital investments that prioritize transit reliability. Corridors are tiered by investment level based on the extent of identified transit priority needs and importance of supporting transit performance, climate, and equity goals. These corridors were identified because they:

- Support access and integration with regional investment, such as future Link light rail (Tacoma Dome Station service opens in 2035)
- Function as the most critical to support climate targets
- Support access to opportunity
- Improve transit reliability on key corridors included in the Frequent Transit Network
- Provide key connections between designed growth centers and corridors identified in the Comprehensive Plan and Home in Tacoma initiative.

Priority Transit Corridor Classifications designations are:

- **Tier 1 Transit Corridor**: Highest-level arterial transit need, continuous transit priority, potential future light rail corridor
- **Tier 2 Bus Corridor**: Merits corridor-level investment programming, significant transit priority need
- **Tier 3 Bus Corridor:** Incremental or spot-location improvements

Priority transit corridors were developed though a data-driven assessment that included evaluation of existing transit performance, corridor travel conditions, and projections of future land uses, transit need, and corridor congestion.

Figure 6. Data used to identify priority capital investments

Data	
Ridership	Average Weekday Boardings Project Future Ridership Demand
Existing Service and Conditions	Service Levels (Weekday Peak, Weekday Midday, Saturday Midday) Span of Service (Weekday, Weekend) Daily Transit Trips Best-Case Weekday Headway Midday Weekday Headway Daily Service Hours/Mile Midday and Peak Congestion/Delay
Demographics	Population Density (Existing) Population Density (Future) Employment Density (Existing) Employment Density (Future) Zero Vehicle Households Transit Propensity Index Tacoma Equity Index (Access to Opportunity)

FREIGHT ELEMENT

Purpose

Goods Movement in Tacoma

Tacoma's identity as "Grit City" is deeply tied to its industrial heritage and freight movement, which have been integral to the city's economic success and cultural fabric. From its origins as a key port city in the late 19th century to its position today as a hub for global trade, Tacoma's freight network has supported local industries and connected the city to the world. As Tacoma continues to grow and evolve, the city's freight system remains a vital component of the economy, ensuring that essential goods reach businesses and residents efficiently. The vision for Tacoma's freight network is one that balances economic vitality with the health, safety, and well-being of the community.

While freight is essential to Tacoma's economy, it also presents significant challenges that must be addressed to maintain community livability. Traffic congestion from large trucks can strain the city's roadways, contributing to delays and reducing safety for all road users. Noise and air pollution from freight vehicles disproportionately affect neighborhoods near industrial areas, especially those with vulnerable populations. These challenges highlight the need to plan and manage freight movement in a way that supports economic activity without compromising the quality of life for Tacoma's residents.

The objective of the Freight Element is to ensure that freight movement continues to support the city's economy while minimizing negative impacts on the community and environment. By promoting sustainable practices, optimizing routes, and incorporating advanced technologies like Intelligent Transportation Systems (ITS), Tacoma seeks to create a system that is efficient, safe, and environmentally responsible. This element will guide Tacoma's approach to balancing freight needs with community health and livability, ensuring that as the city grows, it remains a place where both industry and residents can thrive.

The Importance of Freight Delivery

What role does mode/element have in people's daily lives?

Freight and goods delivery support Tacoma's economy and everyday life, ensuring that essential items, ranging from food and medicine to consumer goods and raw materials, reach businesses and residents. As Tacoma continues to grow and evolve, managing freight and goods delivery in ways that prevent harm will protect community health and vitality while supporting the City's economic strength.

- **Employment:** As a major port city, the import and export of goods provide jobs to residents of Tacoma who work to deliver these products. This includes positions in shipping, logistics, warehousing, and truck driving, creating a significant employment sector in the local economy.
- **Retail and Groceries:** Trucks and rail deliver fresh produce, groceries, clothing, electronics, and other consumer goods to local stores and supermarkets. This ensures that shelves are stocked with a variety of products for consumers to purchase daily, contributing to the convenience and variety that residents enjoy.
- **E-commerce Deliveries:** With the rise of online shopping, freight transportation, particularly through trucks and delivery vans, plays an important role in getting purchased items to consumers' doorsteps quickly and reliably.
- **Manufacturing:** Freight networks support local industries by delivering raw materials to factories and transporting finished products to distribution centers and markets. This logistical support is crucial for the smooth operation and economic viability of manufacturing businesses in Tacoma.
- **Urban Development:** Land use planning and development shape the need for freight by determining the placement of warehouses, distribution centers, and transportation hubs. These decisions influence traffic patterns, economic opportunities, and the overall layout of the city.
- **Noise and Pollution:** Freight activities can lead to increased noise levels and air pollution, affecting residents' quality of life. Addressing these environmental impacts is essential for creating a livable urban environment while maintaining the benefits of a robust freight network.

What are specific outcomes that emerge from this element done well?

Efficient and reliable goods movement, reducing transportation costs for businesses and enhancing economic competitiveness. The success of freight does not come at the expense of safety or livability.

- **Safe Integration with Other Modes:** Freight safely intersects with and/or shares the road with other modes in Tacoma, reducing the risk of crashes and ensuring safe traffic flow for all road users.
- **Strong Economy:** The movement of goods to support local and national economies, helps businesses operate efficiently and maintain their supply chains, thereby boosting economic activity.
- **Employment Opportunities**: Developing and maintaining infrastructure that supports jobs in logistics, warehousing, and transportation contributes significantly to the local economy and job market, providing stable employment for residents.
- **Attracting Investment:** Integrating freight considerations into urban planning leads to better-designed infrastructure that accommodates the needs of residential, commercial, and industrial zones which improves overall urban efficiency and makes Tacoma an attractive place to run a business that relies on logistics.
- **Minimizing Environmental Impact:** Lower emissions through the use of green technologies, optimized routing, and consolidation of freight leads to a reduction in the urban carbon footprint.
- **Balanced Industrial Sector:** A strong industrial sector balances economic growth, environmental stewardship, and safety by mindfully interfacing with all modes of travel, keeping people, goods, and services moving efficiently while preserving quality of life.

What groups or communities have specific needs and/or require special consideration?

- **Puyallup Tribe of Indians:** The Puyallup Tribe of Indians has historical and cultural ties to the land and waterways of Tacoma, which are often impacted by freight activities. Including them in freight planning ensures that their rights, environmental concerns, and cultural heritage are respected and protected.
- **Environmental and Public Health Organizations:** Environmental and public health organizations advocate for sustainable practices and the well-being of the community. Their involvement helps to prevent and mitigate the environmental and health impacts of freight activities, such as pollution and noise, working towards a balanced approach to economic development and public health.
- **Low-income and Marginalized Communities:** These communities often face disproportionate impacts from freight activities, including higher exposure to pollution and noise. Including these communities in freight planning helps to develop equitable solutions that address their specific needs and improve their quality of life.
- **Port of Tacoma:** The Port of Tacoma is a central hub for freight activities, playing a pivotal role in the local and regional economy. Their involvement is essential to align freight planning with operational realities and to ensure efficient, sustainable, and coordinated logistics and transportation systems.
- **Surrounding Jurisdictions and WSDOT:** Surrounding jurisdictions are affected by freight traffic and infrastructure developments that extend beyond Tacoma's borders. Collaborative planning with these areas ensures coherent regional strategies, reduces traffic congestion, and optimizes the use of shared resources and infrastructure.

Context

Tacoma Context

Freight transportation plays a pivotal role in the City of Tacoma's economic landscape. The Port of Tacoma, a major hub for international trade, significantly contributes to the region's economy by handling millions of tons of cargo annually, supporting over 43,000 jobs in Pierce County alone. Tacoma also boasts over 10 million square feet of warehouse and distribution space. Additionally, much of the area is part of the ancestral lands of the Puyallup Tribe and is an important location for cultural traditions, the practice of tribal treaty rights, and essential government facilities.

Land use guides where freight travels in Tacoma and the region. Tacoma has two designated regional manufacturing/industrial centers (MICs):

- **Port of Tacoma MIC:** The Port of Tacoma MIC includes about 2,400 acres of land in the Tacoma Tideflats, a hub of manufacturing, warehouse, and maritime operations that's also home to various nonport companies.
- **South Tacoma MIC:** The South Tacoma MIC includes about 650 acres of land zoned for industrial uses. Types of businesses operating in the South Tacoma MIC include food-processing, metal-working and finishing, painting and coating, plastics, general manufacturing, auto sales, vehicle maintenance and repair, retail and commercial and businesses associated with rail maintenance and operation.

Port of Tacoma

The Port of Tacoma is a critical component of the Northwest Seaport Alliance, a partnership with the Port of Seattle, making it one of the largest container ports in North America. It handles between 9 and 13 million tons of cargo annually, with significant trade links to Asia, particularly China, Japan, and South Korea. The Port's operations support over 43,000 jobs in Pierce County and contribute nearly $3 billion in labor income, handling more than $25 billion of commerce, highlighting its vital role in the regional economy.

While freight and delivery vehicles are accommodated on streets throughout Tacoma, a major generator of freight volumes in Tacoma is the Port which handles over 3 million TEUs (twenty-foot equivalent units) of cargo annually. The complex nature of the Tideflats area results in a variety of transportation opportunities and constraints. Transportation challenges include interactions between rail and roads, bridge conditions, and congestion.

I-5 is the primary artery through the area, carrying over 190,000 daily vehicles. SR-509, which traverses the Tideflats, carries 30,000 vehicles per day. The Port is served by three main interchanges with I-5 at Port of Tacoma Road, 54th Avenue East, and Portland Avenue. Trucks rely on all three interchanges to access the shipping terminals within the Port.

A key regional connection is River Road East (SR-167). This principal arterial travels along the west side of the Puyallup River and connects I-5 with the SR-167 freeway in Puyallup. The SR-167 Completion Project will close a gap in the state's highway system by completing the unfinished SR-167 between Puyallup and the Port of Tacoma, linking the Port of Tacoma and the manufacturing and industrial areas in Pierce County.

South Tacoma MIC

The South End and Nalley Valley areas of Tacoma are hubs of manufacturing and industrial activities, playing a strong role in the region's economy. This area is referred to as the South Tacoma MIC. Nalley Valley, historically known for its food processing plants and other heavy industries, has evolved to accommodate modern manufacturing facilities and large-scale distribution operations. The South End complements this industrial landscape with a mix of light manufacturing, warehousing, distribution centers, logistics, and support services, creating an economic ecosystem that contributes significantly to Tacoma's industrial output and employment.

The proximity to the Port of Tacoma enhances the logistical advantages of these areas, facilitating efficient import and export activities. South Tacoma Way hosts a large commercial and retail area with many auto-related businesses and serves as a major arterial connection between South Tacoma, the Port of Tacoma, and the neighboring city of Lakewood to the south. Additionally, the presence of major transportation arteries, such as I-5 and SR-16, provides strong connectivity for freight movement.

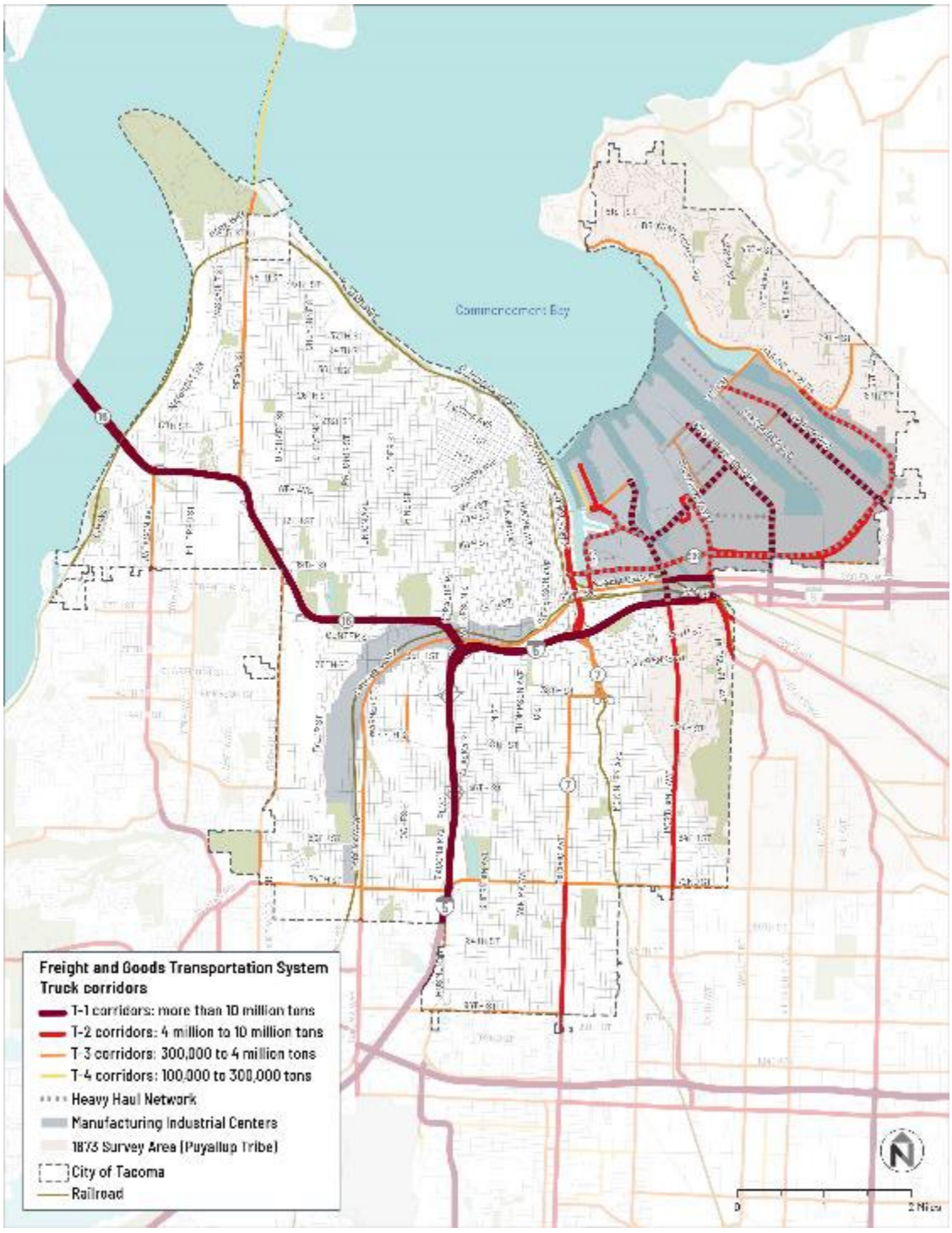
Freight Corridors

The City has designated a network of “Heavy Haul Routes” that identifies those routes that carry the highest volumes of truck traffic . All designated heavy haul routes are located within or immediately adjacent to the Port of Tacoma.

The State designates truck corridors based on the tonnage they accommodate:

- T-1: more than 10 million tons per year
- T-2: 4 million to 10 million tons per year
- T-3: 300,000 to 4 million tons per year
- T-4: 100,00 to 300,000 tons per year
- T-5: at least 20,000 tons in 60 days and less than 100,000 tons per year

Figure 7. WSDOT Roadway Freight Corridor Classifications for the City of Tacoma



What are key **opportunities** for Tacoma to advance freight?

- **Green Technologies:** To support climate goals, the Port is investing in green technologies, such as electrifying its fleet and optimizing logistics to reduce emissions and enhance safety. These initiatives aim to balance economic growth with environmental sustainability and community well-being.
- **Community Engagement and Stakeholder Collaboration:** Engaging with the community and stakeholders can ensure that freight initiatives are well-supported and address local needs. Holding regular consultations through public meetings or stakeholder groups allows Tacoma to gather input and feedback from residents and businesses on freight-related issues and proposals.
- **Data Sharing Platforms:** Data sharing platforms provides information between different stakeholders, including public agencies and private logistics companies, to enhance coordination and efficiency.
- **Freight Model Development:** Tacoma is developing a long-range forecast for freight. This model will be referenced for analyzing current and future freight operational efficiencies and capital planning within and between the regional manufacturing/industrial zones in Pierce County and South Sound agencies.
- **Adaptive Signals:** These signals adjust in real-time to traffic conditions, reducing congestion and minimizing delays for freight vehicles. By prioritizing freight traffic at key intersections, adaptive signals can ensure smoother and more predictable travel times, improving the reliability of supply chains. Additionally, this technology can help reduce fuel consumption and emissions by minimizing stop-and-go driving, contributing to more sustainable freight operations.

What **emerging trends** will affect freight delivery today and in the future?

- **Dynamic Routing:** Dynamic routing leverages real-time data and advanced algorithms to optimize delivery routes on the fly. Unlike traditional static routing, which relies on predetermined paths, dynamic routing continuously analyzes factors such as traffic conditions, weather, road closures, and delivery time windows to adjust routes in real-time. Dynamic routing offers cost savings and increased operational flexibility, allowing them to respond swiftly to unexpected disruptions and changes in demand.
- **E-Commerce:** The rise of e-commerce is reshaping the freight industry, driving increased demand for fast and flexible logistics solutions. As consumers increasingly turn to online shopping, the volume of parcels and goods requiring transportation has surged, necessitating more frequent and smaller shipments. This trend puts pressure on freight carriers to optimize last-mile delivery, ensuring timely deliveries while navigating urban traffic and residential delivery challenges. E-commerce has also prompted the construction of more fulfillment centers in urban areas creating tension between community and freight delivery.
- **Sustainability Initiatives:** Sustainability initiatives are becoming increasingly prominent in the freight industry, driven by the need to reduce environmental impact and comply with stricter regulatory standards. In 2019 the Port of Tacoma adopted a Clean Truck initiative where all trucks serving the Port's international container terminals must have an active RFID tag and have a 2007 (or newer) engine. The Clean Truck Program requirements reduce diesel particulate matter emissions by up to 90% per truck.
- **Smart Signal Systems:** These systems utilize real-time data, artificial intelligence, and interconnected sensors to optimize traffic signal timings, thereby reducing congestion and improving flow for freight vehicles. By prioritizing freight traffic at critical intersections and adjusting signals dynamically based on current traffic conditions, smart signal systems help to minimize delays and fuel consumption, leading to more predictable and faster delivery times.
- **Freight and Bus Lanes:** A freight and bus lane is a dedicated lane on an arterial street that is exclusively reserved for use by transit and freight vehicles. This lane helps to streamline the movement of goods and public transportation. An example of this is in San Francisco where the city has designated bus lanes that allow for certain freight vehicles to use them during off-peak hours.

What **challenges** will affect freight delivery today and in the future?

- **Multimodal:** As Tacoma's transportation system continues to evolve into a multimodal transportation system, integrating freight movement with active transportation and transit presents challenges. Manufacturing and industrial areas, which are often dominated by large trucks and heavy vehicles, can create physical and safety barriers to pedestrians, bicyclists, and transit users. Additionally, the lack of multimodal infrastructure in these areas limits transportation options for workers and creates barriers for the surrounding neighborhoods, reinforcing car dependency.
- **Network Impacts:** Network impacts, such as the closing of the Fishing Wars Memorial Bridge, can significantly disrupt freight operations. Such closures force freight traffic to reroute, often leading to increased travel times, higher transportation costs, and congestion on alternative routes. These disruptions can affect delivery schedules, strain logistics networks, and potentially lead to delays in the supply chain.
- **Growth and Density:** Increasing urbanization can lead to more vehicles on the road, causing congestion that delays freight deliveries, complicating logistics, and impacting efficiency. As Tacoma density increases and the populations grows, the demand for goods will rise, leading to higher volumes of freight traffic in already congested urban areas. This congestion adds travel delay and increases the difficulty of navigating streets and limited parking spaces, particularly for large delivery trucks.
- **Truck Staging and Parking:** As economic growth increases, the Port of Tacoma may lack sufficient space and facilities to accommodate the high volume of trucks waiting to load or unload cargo, leading to congestion and delays. The shortage of designated parking areas forces drivers to wait in unsafe or unauthorized locations, creating traffic bottlenecks and causing safety hazards.
- **Freight Routes and Distribution Centers in Underinvested Communities:** Communities located near freight routes face equity challenges, particularly concerning health, environmental, and social impacts. These areas often experience higher levels of air pollution and noise due to the constant movement of trucks, leading to adverse health outcomes such as respiratory issues. These negative effects disproportionately affect low-income and minority communities, which are more likely to be situated near major transportation corridors.

AUTO AND STREETS ELEMENT

Purpose

Using Tacoma's Street Network

Streets are the backbone of the transportation system, serving all modes of travel including automobiles, trucks, transit, bicycles, and pedestrians. While the current reliance on automobiles is recognized, the city's approach is to redesign streets as spaces that support all users—creating a street system that prioritizes safety, sustainability, and multimodal transportation. By enhancing infrastructure for transit, walking, and biking, Tacoma aims to gradually shift away from automobile dependency, promoting a more connected and livable urban environment with a variety of safe and connected multimodal travel options.

The prominence of automobiles in accessing work, education, healthcare, and leisure is largely due to past transportation and land use policies that prioritized car travel. Over time, this focus has shaped Tacoma's streets and influenced how residents interact within the built environment. While automobiles can provide convenience, this approach has contributed to increased greenhouse gas emissions, heightened congestion, and compromised safety for non-vehicle users.

Tacoma is committed to providing safe and reliable streets for those who need to drive—such as emergency responders, freight operators, service providers, and individuals who rely on a car —while also fostering a shift toward multimodal transportation. The Auto Element emphasizes enhancing road safety and efficiency for all modes of travel, ensuring that every journey, regardless of how it's made, can be completed safely and without incident.

Tacoma streets will be designed to be no wider or faster than necessary. Rather than aiming to eliminate congestion or provide free-flow travel conditions, Tacoma's goal is to create a safe environment for all road users, while managing congestion effectively. By achieving these goals, Tacoma aims to reduce fatalities and serious injuries, improve street conditions, lower greenhouse gas emissions through mode shift, and create a more connected community.

The Importance of Streets

- **Access to Employment and Services:** Access to a vehicle is often necessary for reaching employment, healthcare, and shopping, especially in areas lacking local services, with limited public transportation options, or at times when personal safety could be a concern. This dependency highlights the need for improving and diversifying transportation options while addressing land use and community safety.
- **Quality of Life:** The convenience and flexibility of driving contribute to the quality of life for many Tacoma residents. However, reliance on cars also leads to traffic congestion, noise pollution, and reduced community cohesion. By promoting transit and active transportation modes, Tacoma can reduce congestion, minimize environmental impacts, enhance community connectivity, and improve overall public health and quality of life for its residents.
- **Social Equity:** Driving plays a role in social equity and mobility within Tacoma. Many community members cannot drive or have limited access to personal vehicles, leading to disparities in transportation options, particularly in a car-centered environment. Enhancing multimodal transportation can provide equitable access to essential services and opportunities for all community members.
- **Economic Cost:** Driving entails various economic costs, including vehicle ownership, maintenance, fuel, and insurance. Reducing these costs for individuals by providing affordable and efficient alternatives to driving is important. Investing in public transportation and active transportation options will lower the overall economic burden on residents while promoting a more sustainable transportation system.
- **Traffic Safety and Public Health** Driving behaviors directly affect traffic safety and public health in Tacoma. In 2023 alone, Tacoma reported over 4,000 traffic crashes with 139 of those crashes resulting in a fatality or serious injury. These crashes not only result in loss of life and severe injuries, cause emotional and financial strain on the victims and their families, but they also come with a high societal cost.

What are specific outcomes that emerge from this element done well?

- **Decrease in Fatal and Serious Injury Crashes**: By prioritizing safety of all road users, Tacoma can significantly reduce the number of fatal and serious injury crashes. This outcome is achieved through measures like improved road design and enforcement of traffic laws through automated enforcement cameras.
- **Improved Air Quality:** Promoting electric vehicles, designing multimodal streets, and strengthening public transit helps decrease the amount of pollutants released into the atmosphere. Additionally, implementing commute trip reduction programs that encourage carpooling, remote work, and transit and active transportation options can further decrease the number of single-occupancy vehicles on the road.
- **Land Use and Transportation:** Supporting healthy land use practices leads to enhanced community connectivity and livability. By promoting mixed-use development, compact urban growth, and accessible green spaces, Tacoma will create vibrant neighborhoods where residents live, work, and play in close proximity. This reduces the need for long commutes, encourages walking and biking, and fosters a sense of community.
- **Streets That Connect Rather Than Divide:** Effective street design can transform roads into spaces that unite communities rather than creating barriers. Tacoma has many streets seen as significant barriers including SR-509, SR-7/Pacific Avenue, and Portland Avenue. By prioritizing safety and inclusivity, streets can encourage social interaction, support local businesses, and create vibrant, cohesive neighborhoods.
- **Maintained:** Modernizing and maintaining streets, sidewalks, bike lanes, and bridges improves safety, accessibility, and usability for all users, including drivers, pedestrians, and cyclists. Well-kept infrastructure reduces risks such as vehicle damage, pedestrian falls, and unsafe cycling conditions, while enhancing the reliability and resilience of the transportation network.

What groups or communities have specific needs and/or require special consideration?

- **Emergency Services**: Emergency services require clear routes to respond quickly to incidents. Streets should be designed to facilitate emergency responders passing on the left or using center turn lane along with strategic placement of emergency vehicle preemption systems at traffic signals to facilitate rapid and safe passage for fire trucks, ambulances, and police vehicles.
- **Transit Providers:** Streets should be 11' wide on transit priority routes and have turning radii to accommodate buses. On routes with enhanced transit or rapid transit, dedicated lanes and prioritized signal timing supports timely and efficient public transportation.
- **Refuse:** Refuse collection services require streets that can accommodate large garbage trucks with access to residential and commercial areas either by curb or alley. Adequate turning space is also necessary.
- **Commercial Drivers**: Road infrastructure should support the weight and size of commercial vehicles, with reinforced pavement and ample turning radii to accommodate larger trucks when necessary to support the land use. Delivery and freight drivers need designated loading zones and routes to efficiently transport goods.
- **Vulnerable Road Users:** Pedestrians and bicyclists require streets designed with their safety in mind. Features like frequent and well-marked crosswalks, lighting, separated bike lanes, and pedestrian refuge islands help improve safety and reduce crashes. Traffic calming measures, such as speed humps and curb extensions, help to slow down drivers.

Context

Tacoma Context

Tacoma's transportation landscape is shaped by a classification of streets, traffic patterns, and infrastructure characteristics. Understanding how the existing street network functions and supports various modes of transportation is crucial for planning. By examining current conditions and data, present usage, and projected growth, we can see the critical role of streets in connecting communities, facilitating commerce, and supporting mobility for all.

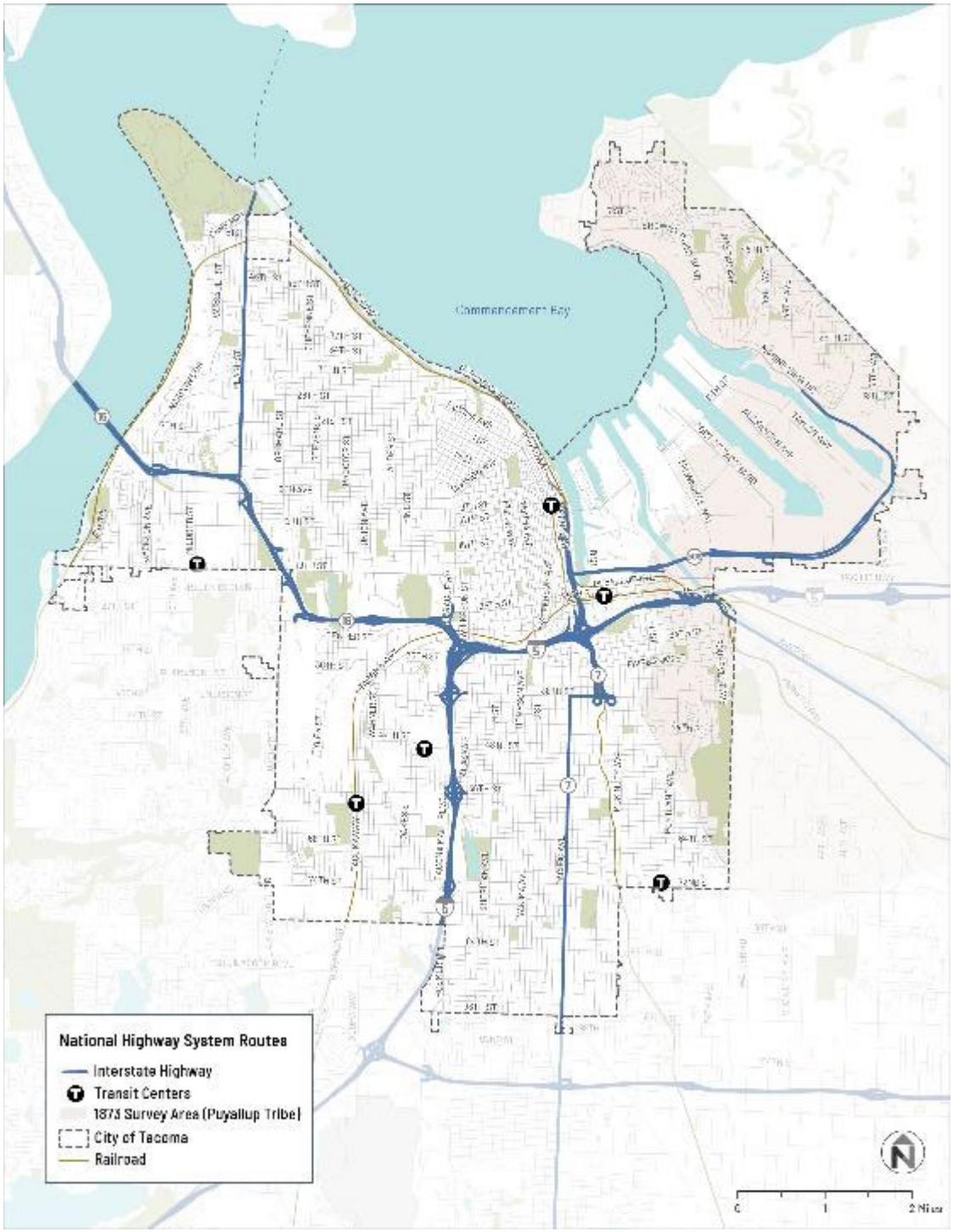
National Highway System and Functional Classification

The National Highway System (NHS) is a network of highways within the United States, including the Interstate Highway System and other roads necessary for the nation's economy, defense, and mobility. For Tacoma, the NHS includes major routes such as Interstate 5, which is integral for regional connectivity, economic activities, and access to the Port of Tacoma. The WSDOT operates and maintains the regional freeway system and shares jurisdiction on state routes, such as SR-7/Pacific Avenue.

Interstates and State Routes

- Interstate-5 (I-5): This major north-south route runs through Tacoma, connecting the city with Seattle to the north and Portland, Oregon, to the south.
- Interstate 705 (I-705): A spur route that branches off from I-5, providing direct access to downtown Tacoma, the Tacoma Dome, and the waterfront area.
- State Route 16 (SR-16): This route begins in Tacoma, connecting the city to the Kitsap Peninsula via the Tacoma Narrows Bridge. It is a key westbound corridor for traffic heading towards Gig Harbor and beyond.
- State Route 167 (SR-167): Also known as River Road within Tacoma, this route connects the city to Puyallup and the broader Kent Valley, serving as an important arterial for both commuter and freight traffic.
- State Route 509 (SR-509): This route runs parallel to I-5 on the east side of Tacoma, providing an alternate north-south connection and serving industrial areas and the Port of Tacoma.
- State Route 7 (SR-7, Pacific Avenue): This route connects downtown Tacoma with Spanaway and other communities to the south. SR-7 serves as a major arterial for local traffic and regional connectivity.
- State Route 163 (SR-163, Pearl Street): This route begins at an interchange with SR 16 in Tacoma and travels north through Ruston to Point Defiance, where the designation continues onto the MV Chetzemoka ferry to Tahlequa on Vashon Island.

Figure 8. National Highway System Routes



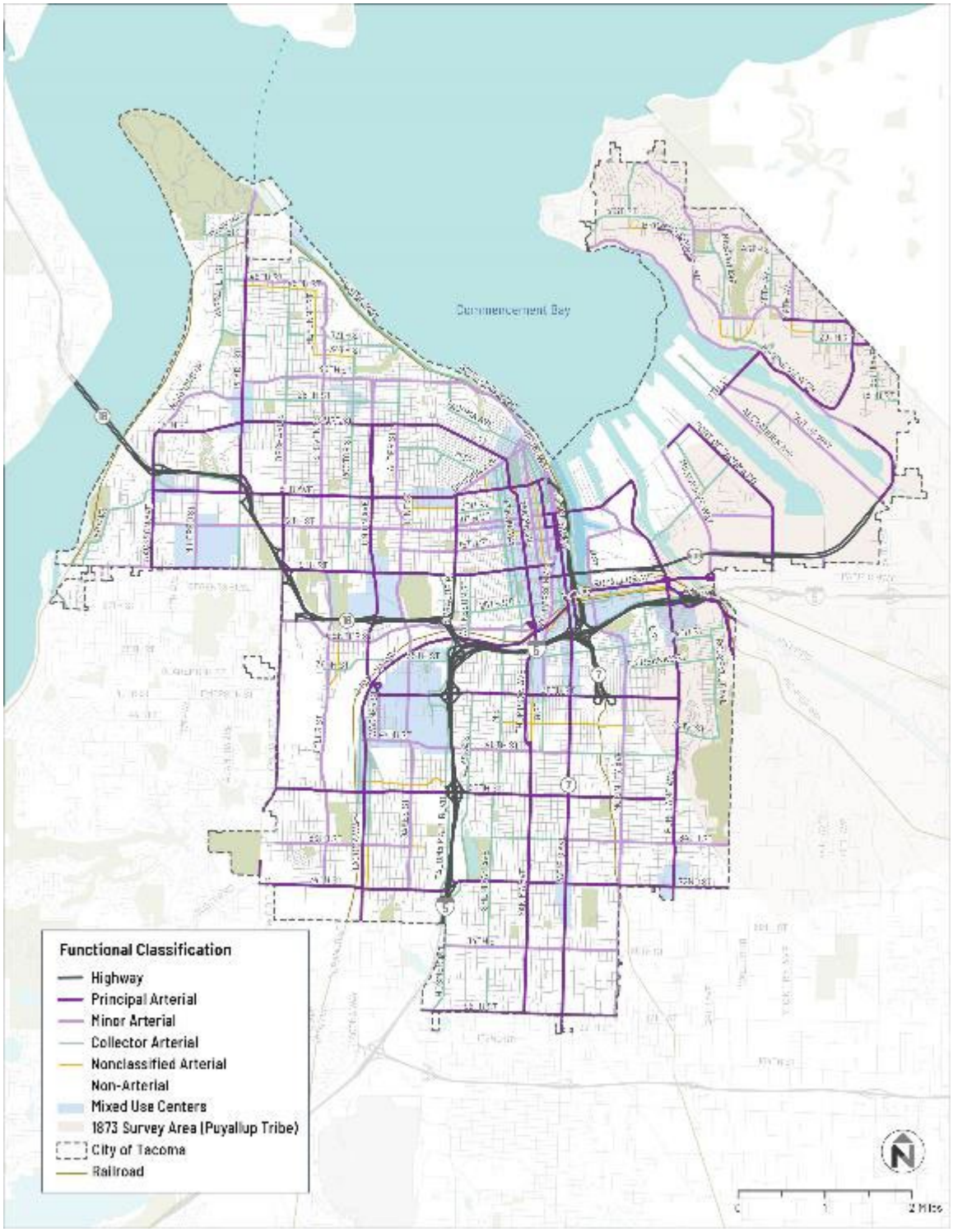
Functional Classification

Tacoma has a mature and well-connected street network. The City classifies streets according to a hierarchy of function, from most intensive uses to least intensive uses called functional classification. Functional classification groups streets and highways into classes according to their role in the network. The functional classification of each roadway guides the roadway design and cross section. More information about Tacoma's functional classification can be found in the City's Right-of-Way Design Manual.

There are five main classes of streets in Tacoma:

- **Principal Arterial:** Accommodate higher volumes of traffic for extended distances throughout the City and have a high level of access control.
- **Minor Arterial:** Similar to principal arterials but are not expected to accommodate as much use and therefore permit more access options than principal arterials.
- **Collector Arterial:** Connect commercial, industrial, and residential areas to other arterials of all types and have some restrictions on access control.
- **Non-classified Arterials:** Have features, or an intended function, that do not align with, or span various elements of, the other classifications.
- **Local Streets (Non-Arterials):** Provide direct access to abutting land uses and are designed to convey non-arterial traffic, including active transportation modes, to higher classification streets.

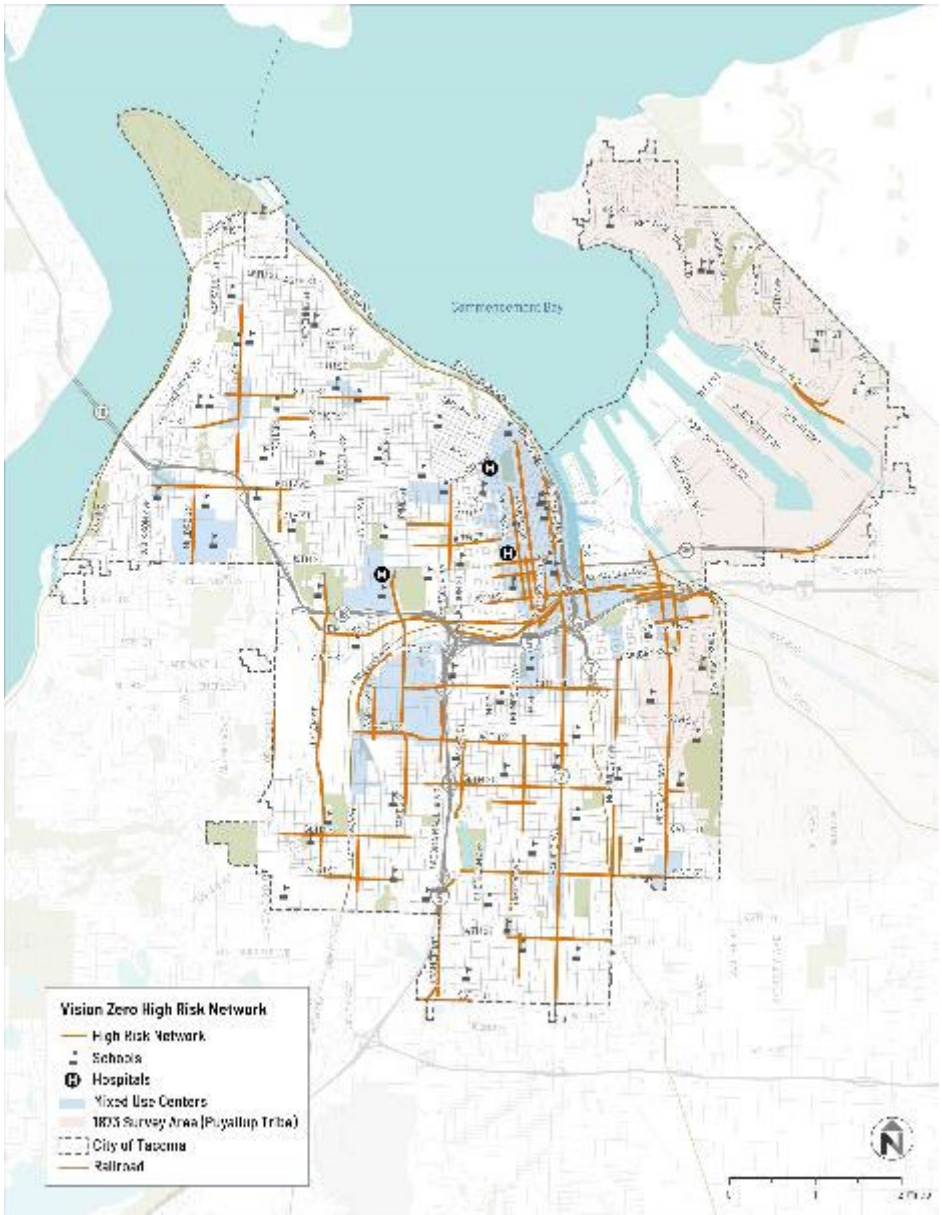
Figure 9. Functional Classification



Vision Zero High-Risk Network

In 2020, the Tacoma City Council passed Resolution 40559, committing to Vision Zero and the goal of eliminating traffic fatalities and serious injuries in the City of Tacoma by 2035. A Vision Zero Action Plan was created in 2022 that included a High-Risk Network Map – streets where improvements should be prioritized based on the prevalence of past crashes as well as risk of future crashes.

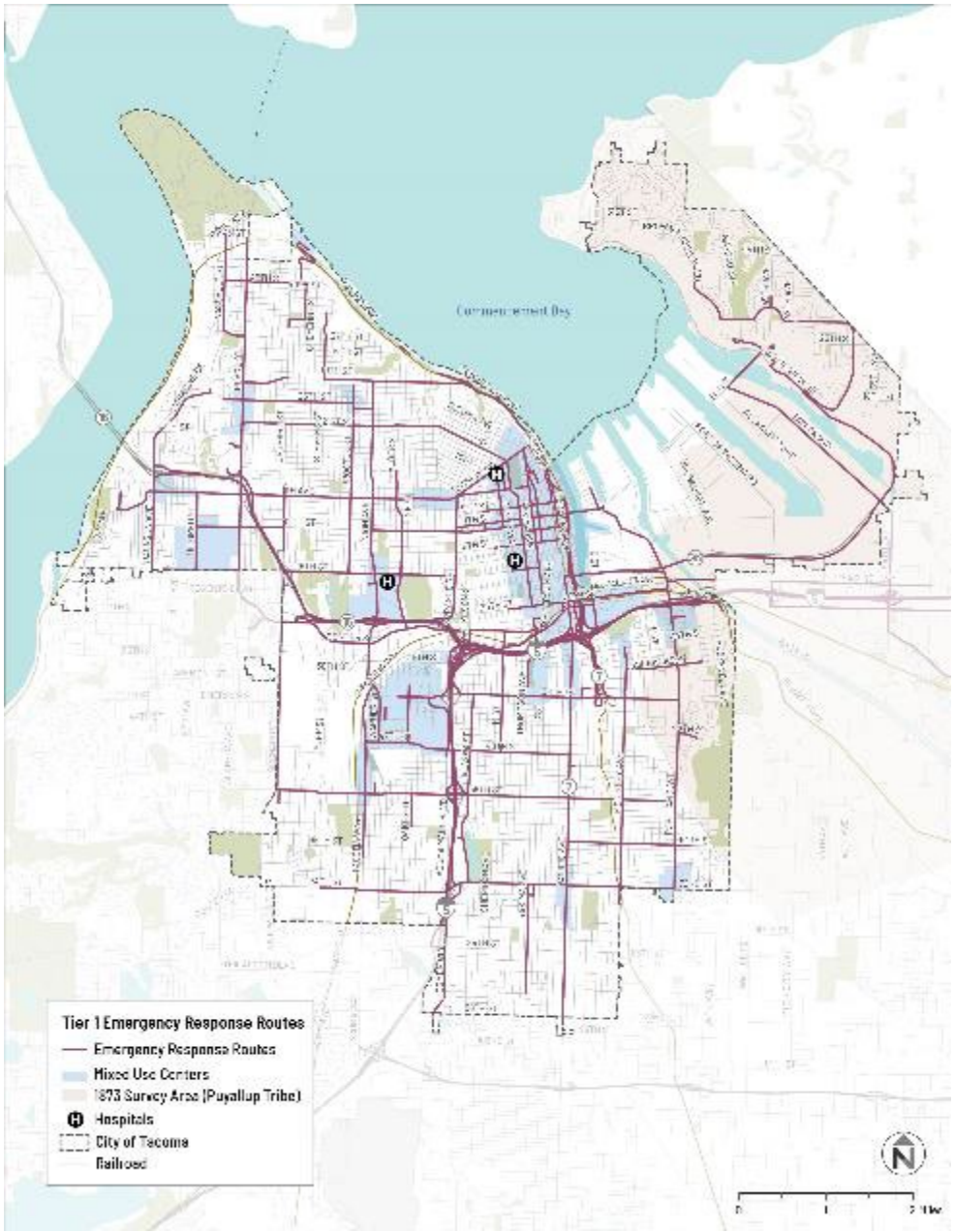
Figure 10. Vision Zero High-Risk Network



Tacoma Emergency Response Routes

Analysis from the Tacoma Fire Department has identified Tier 1 streets – those used to reach more than 300 responses per year or provide critical connectivity to hospitals. Redesign of Tier 1 streets should consider impacts to emergency response times with designs that support the ability of emergency response vehicle to navigate around or through vehicular traffic.

Figure 11. Tier 1 Emergency Response Routes



What are key **opportunities** for Tacoma to advance safety and sustainability with the street network?

- **Land Use:** Almost half of vehicle trips are less than five miles, but many people choose to drive even short distances due to a lack of safe alternatives for walking or biking. By promoting 15-minute neighborhoods—where daily needs like groceries, schools, and parks are within a short, safe walk or bike ride—cities can reduce the reliance on cars and create safer, more accessible environments. Thoughtful land use planning that shortens distances between homes, work, and services helps people feel comfortable using active transportation, improving safety and reducing exposure to crashes.
- **Prioritizing the High Risk Network**: By focusing Tacoma's Vision Zero High Risk Network and streets included in the Puyallup Tribe of Indians Safety Plan, Tacoma can make substantial progress in reducing injuries and fatalities, creating a safer environment for all road users. These corridors are often characterized by high traffic volumes, speeds, and crash rates. Improving, and sometimes completely redesigning, these corridors reduce the likelihood of crashes and encourages safer driving behaviors.
- **People-Centered Streets:** A people-centered street system prioritizes the safety, comfort, and convenience of pedestrians, bicyclists, and public transit users. Elements include wide sidewalks, separated bike lanes, and dedicated bus lanes to ensure safe and efficient movement for all users. Features like curb extensions, raised crosswalks, and pedestrian islands enhance safety at intersections, while street trees and green spaces improve the aesthetic and environmental quality of the street.
- **Upgrading Traffic Signals**: Intersections are critical points in the street network where various modes of travel converge. Upgrading traffic signals with Accessible Pedestrian Signals (APS), Leading Pedestrian Intervals (LPI), bicycle signals, and bicycle detection can significantly enhance safety and efficiency. APS ensures accessibility for visually impaired pedestrians, while LPIs reduce conflicts with turning vehicles by giving pedestrians a head start. Bicycle signals and detection improve safety and flow for cyclists, creating a more inclusive intersection for all users.
- **Transportation Demand Management:** Effective transportation demand management (TDM) strategies can optimize the use of existing transportation infrastructure and reduce congestion. This involves promoting transit and active transportation modes, as well as implementing policies like carpooling incentives and congestion pricing. TDM helps balance the demand and supply of transportation resources, improving overall system efficiency.
- **Green Infrastructure:** The integration of natural elements into the street system can help to manage stormwater, reduce urban heat islands, and enhance biodiversity. The

City of Tacoma became the first "Green Roads Community" in June 2014. With an average pavement rating index that is well below the average for an equivalent city of its size, the City of Tacoma must look at a sustainable approach to rebuilding its roads.

What **emerging trends** will affect driving and the street system today and in the future?

- **Autonomous Vehicle:** Autonomous vehicles (AVs) require precise road markings and signage and signage to operate safely. Their integration into Tacoma's transportation system could impact vulnerable road users necessitating enhanced safety measures. Additionally, while AVs may reduce congestion through optimized traffic flow, they could also increase vehicle miles traveled, posing new challenges for urban mobility.
- **Vehicle to Vehicle Communication:** Vehicle-to-vehicle (V2V) communication is a growing trend aimed at improving road safety and traffic efficiency by allowing vehicles to exchange information such as speed, position, and road conditions in real-time. To prepare and support this technology, Tacoma will need to invest in advanced infrastructure and 5G networks.
- **Video Analytics:** Video analytics provide real-time data and insights into traffic patterns, behaviors, and incidents. This technology helps identify dangerous intersections, monitor compliance with traffic laws, and detect near-miss collisions. By analyzing video footage, Tacoma can implement targeted interventions, such as adjusting signal timings or adding traffic calming measures, to enhance safety. Tacoma has begun piloting its use through the Vision Zero program.
- **Safety Over Speed:** As part of Vision Zero, Tacoma lowered the residential speed limit from 25 MPH to 20 MPH, and the speed limit in four neighborhood business districts from 30 MPH to 25 MPH. When the opportunity is presented, Tacoma will redesign streets for a lower posted speed limit, and construct traffic calming measures and improve signal operations to encourage compliance to the posted speed limit.

What **challenges** will affect driving today and in the future?

- **Rise in Fatal and Serious Injury Crashes:** Despite Tacoma's adoption of Vision Zero in 2020, fatal and serious injury crashes have continued to rise. The community frequently voices concerns about speeding and aggressive driving behaviors, with traffic calming requests being among the most common submissions in the City's 311 system. Although modifying the built environment to influence driver behavior is the most effective and proactive solution, it is both costly and time-consuming to implement.

- **Connected Street Network:** Tacoma's fragmented street network and limited east-west corridors in South and East Tacoma hinder travel flow and multimodal connections. This connectivity limitation was highlighted in the Tacoma Mall Sub-Area Plan that included the goal of having a maximum 600-by-600 foot-block scale in area that have limited to no street connectivity. Balancing property owner negotiations and neighborhood concerns with the need for better connectivity will be a challenge.
- **Climate Impacts:** Climate change will bring more frequent flooding, heat-related damage, and rising sea levels, impacting Tacoma's roads. Additionally, increased greenhouse gas emissions will continue to degrade air quality. According to Tacoma's 2030 Climate Action Plan, transportation accounted for 19% of Tacoma's energy use and 44% of its emissions, resulting from the use of gasoline and diesel for personal vehicles, commercial vehicles, city buses, and freight.
- **Cost of Maintenance and Modernization:** Aging infrastructure requires costly maintenance and modernization. Upgrades to signal equipment and rising material costs will further strain budgets, while equitable funding distribution remains a challenge. Cities in Washington, including Tacoma, rely heavily on gas tax revenues for infrastructure improvements. However, the shift to electric vehicles and more fuel-efficient cars is reducing these revenues. The WTSC has recommended transitioning from gas taxes to per-mile assessments, but this change presents complexities and has not yet been fully implemented.
- **Heavier and Bigger Autos:** The average size and weight of vehicles have increased significantly. The average weight of passenger vehicles has risen to about 4,300-4,500 pounds, reflecting the trend towards larger and heavier vehicles, especially SUVs and trucks. Larger vehicles cause more road wear and tear, increasing maintenance demands, and cause more damage when striking a fixed object. They also pose greater safety risks to pedestrians and bicyclists.
- **Trade-Offs In Transitioning to a Multimodal Transportation System:** Transitioning from an autocentric transportation system to a multimodal one can be challenging for a community. Reducing on-street parking will limit available parking options and may lead to unsafe parking situations. Increased congestion and traffic diversion to residential streets can frustrate drivers and neighborhoods. However, these growing pains are necessary for the city's health, safety, and well-being.

CURB MANAGEMENT ELEMENT

Purpose

Curb Space in Tacoma

The curb is where mobility and access intersect. Curb management balances overlapping demands in a way that aligns with people's needs as well as citywide goals: separating vehicle traffic and pedestrians, providing ADA accessibility, allowing transit passengers to depart and arrive comfortably, reserving areas for loading of passengers and goods, providing parking for autos and bikes, creating space for shared mobility, and making space for public interaction and human connection. Curb management policies ensure these transitions are seamless and optimized for the diverse needs of specific communities and neighborhoods.

Traditionally, decisions on how best to manage the curb space, such as parking designation and time regulations, have been based on the adjacent building and road segment, assuming cars are the primary mode of transportation. Past policy and program elements reflect the complex and deeply entrenched system of automobile dependence. This approach often results in inefficient management and overbuilding of parking supply, leading to increased single-occupancy vehicle ownership, traffic growth, higher housing costs, and barriers to smart growth and efficient transit services.

As Tacoma grows in population and accommodates different forms of transportation, the need for strategic curb management becomes increasingly important. Additionally, the pandemic has shifted consumer preferences, increasing demand for curbside pickup, outdoor dining and gathering places, and other services. To meet these evolving needs, Tacoma must adopt flexible and innovative curb management strategies that balance the diverse demands on curb space and ensure that a wide variety of users can safely coexist on Tacoma's streets. This will ensure the efficient and equitable use of public spaces, enhancing mobility and supporting the city's growth and development.

The Importance of Curb Management

What role does curb management have in people's daily lives?

The everyday interactions with curb space highlight its vital role in supporting the routines and well-being of the community, ensuring that urban environments are functional, accessible, and enjoyable for all residents. Proper curb management not only enhances efficiency and safety for users, supports area businesses, and economic development efforts, but it can also foster a sense of community and belonging.

- **Parking:** Finding a convenient curbside parking spot near a destination reduces the stress of parking, making errands and visits to local businesses smoother and efficient.
- **Loading and Unloading:** When delivery trucks have designated curb zones, it facilitates packages and groceries arriving on time without causing congestion or safety issues.
- **Public Transportation:** Accessible bus stops and rideshare pick-up/drop-off points at curbsides means people can catch a ride to work, school, or appointments, making commutes more affordable and reducing the need for a personal car.
- **Pedestrian Access:** Sidewalks and crosswalks for safe and efficient walking and rolling routes.
- **Bicycling:** Dedicated bike lanes and bike-sharing stations at curbs make it easy and safe to bike to work, run errands, or enjoy a leisurely ride.
- **Outdoor Activities:** Curbside areas for outdoor dining, community events, and pop-up markets provide inviting spaces for people to enjoy meals, socialize, and participate in local activities, enriching their daily urban experience.

What are specific outcomes that emerge from this element done well?

Curb space influences the character of the community by shaping how people interact with their environment. Efficiently managed curbs can foster vibrant, accessible, and safe public spaces, supporting economic vitality and social activities, which in turn promotes a sense of community and livability.

- **Better Compliance:** Implementing regulations to enhance safety and compliance is crucial. Ensuring access to fire hydrants and adopting measures like intersection daylighting (restricting parking near intersections) improve sightlines for pedestrians and roadway users, reducing crashes and enhancing safety.
- **Economic Development:** Promoting access and activity at the curb supports economic development. Well-managed curb space draws more customers, clients, and visitors, benefiting local businesses and enhancing the area's economic vitality.
- **Equitable Access:** Offering more equitable access among different users results in an improved level of service for everyone. This includes bus stops, passenger loading zones (pick-ups and rideshare), parking spots, pedestrian walkways, and bike lanes, ensuring that all users can efficiently and safely utilize the curb space.
- **Designated Spaces:** Identifying designated spaces for different modes of transportation ensures efficient use of curb space. This helps reduce conflicts between different users and promotes a smoother flow of traffic and activity.
- **Public Space Activation:** Creating activity spaces such as parklets, open streets, and streeteries enhances community engagement and vibrancy. These spaces encourage social interactions and provide additional amenities for residents and visitors.
- **Improved Mobility:** Improving pedestrian crossings and increasing safety for all users is a key outcome of effective curb management. This includes making intersections safer and more accessible, thereby enhancing overall mobility in the area.

What groups or communities have specific needs and/or require special consideration?

- **ADA Community:** Individuals with disabilities require accessible parking for both their personal vehicles and shuttle services. They also need safe, unobstructed access and crossing points.
- **Rideshare Users:** Passengers using rideshare services need safe and convenient zones for pick-up and drop-off.
- **Delivery Personnel:** Workers delivering small packages, such as e-commerce and food goods, as well as those handling large freight, need specific areas to load and unload efficiently.
- **Customers, Clients and Visitors:** Visitors to downtown and business districts benefit from consistent and easy to understand parking regulations which supports area businesses.
- **Micro-Mobility and Bicycle Users:** Riders of e-scooters, e-bikes, and bicycles need designated lanes and parking spaces for safety and convenience.
- **School Bus and Transit Users:** Students and public transit passengers require safe loading zones for school buses.
- **Special Event Attendees and Mobile Retail Customers:** Community members attending special events or patronizing food trucks and mobile retailers need designated spaces for these activities.
- **Emergency Responders:** Firefighters, paramedics, and police officers need access to curb space during emergencies.
- **Service Providers:** Various workers, including delivery and maintenance personnel, need dedicated zones to carry out their tasks effectively.

Context

Tacoma Context

An effectively managed curb is one that maximizes the use of available space while minimizing congestion, safety hazards, and conflicts between users. A coordinated system relies on a suite of tools and plans that outline operating concepts, techniques, and practices, enabling continuous access for people between land use and the transportation network. Shortly after the adoption of the 2015 Transportation Master Plan, Tacoma recognized the value in leveraging parking management as a tool to advance the sustainability goals of Tacoma 2025 and set the foundation for strategically managing the parking supply in the downtown area. Over time the downtown parking system has matured and tools for managing the curb has broadened outside of the downtown area.

Setting the Foundation

In the mid-2000s, Tacoma recognized a need to align parking policy and practices with the goals of the Destination Downtown Plan (2001) and the Downtown Tacoma Economic Strategic Plan (2008) to be progressive in establishing an economic and cultural center of the South Sound. At that time Downtown Tacoma was experiencing a renaissance period; a cultural and economic rebirth recovering from a long period of disinvestment. Between 2001 and 2008, more than 4,000 new residents made Downtown their home. The area also saw an increase in private commercial investment in Class 'A' office spaces which brought an increase of employment population. Congestion also grew. In the space-limited downtown urban area, Tacoma perceived the proliferation of allocating space to on-site parking hindered investments in higher and better uses. Therefore, a key strategy for advancing the rebirth of downtown Tacoma was to reduce dependency on the single occupancy vehicle while maintaining access and mobility through alternative transportation options. The Downtown Element of the Comprehensive Plan (2008) established the goal of adopting flexible parking management strategies to mitigate the amount of capital investment necessary for automobile infrastructure and leverage opportunities for economic development.

The vision set forth the motion to adopt best practices for municipal parking management. As a result, Tacoma developed an effective parking management strategy that would allow decision makers to avoid building or requiring new parking until the existing parking inventory was efficiently used.

An integrated parking plan was developed in 2008. A key consideration of the plan was consolidating the management of off-street, on-street and parking enforcement elements under one centralized workgroup. Typically, management of various components of parking

exists across several departments in other municipalities. This often presents a challenge for the management system and strategies to be viewed comprehensively.

Tacoma was at the forefront of following best practices by restructuring the management of the parking system, establishing the Integrated Parking Plan and incorporating community stakeholders into decisions regarding the operations of the public parking supply. The Parking Services work group was fully integrated in 2010 with the roll out of the on-street parking meter system. Currently the Parking Services workgroup is a fully embedded section within the Transportation Division of the Public Works Department.

As part of the 2010 on-street meter implementation, the City established a stakeholder work group that helped inform the City on various perspectives throughout downtown and how to best align best parking practices to support economic development. The Parking Technical Advisory Group, or PTAG, is instrumental in assisting the City in developing parking policies to better manage the City's public parking supply.

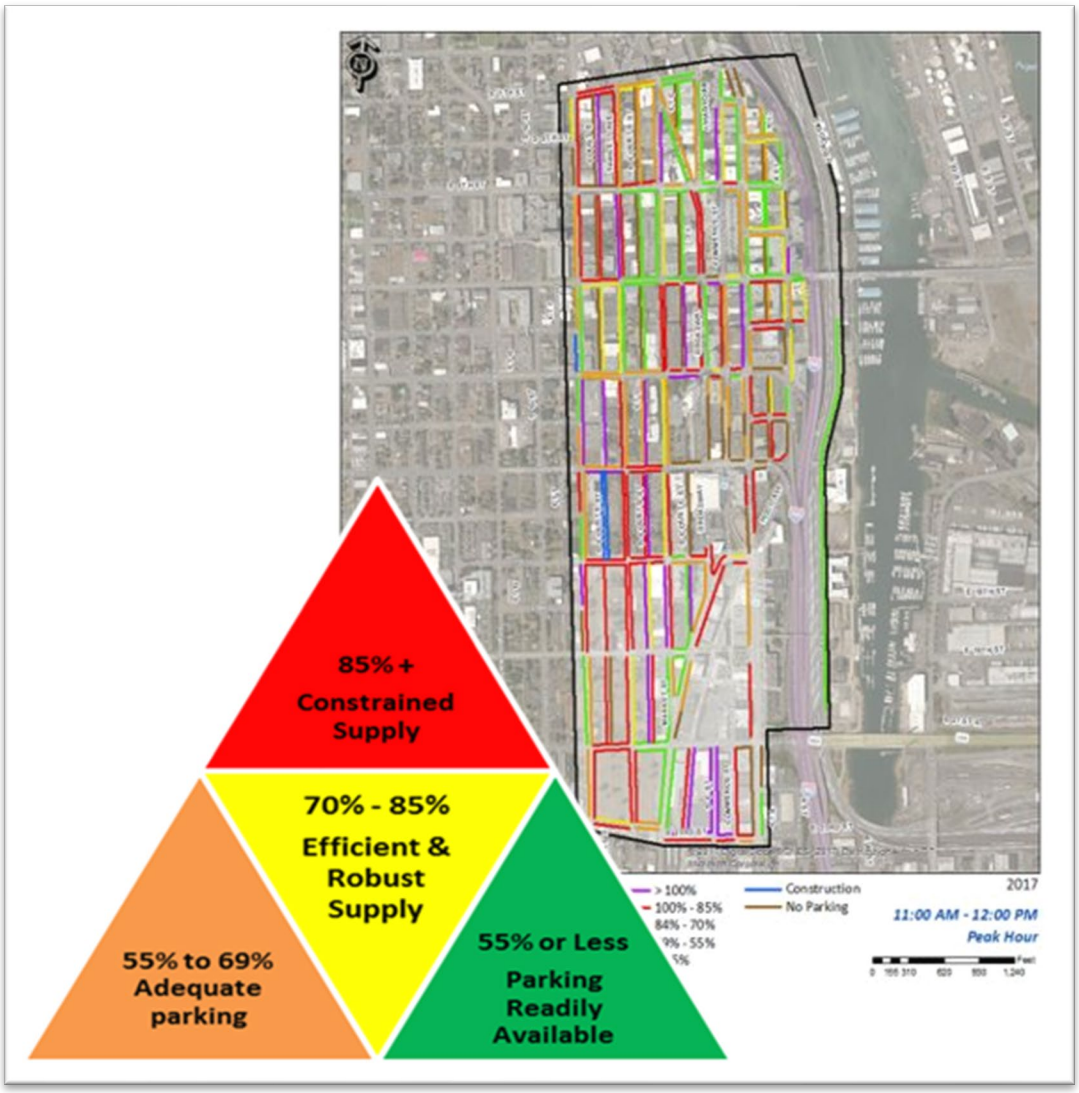
In 2012, the PTAG approved the implementation of an Integrated Parking Plan, emphasizing the interconnected nature of various elements within the Parking System. Among other things, the plan underscored the role of the on-street meter system in regulating curb usage to prioritize downtown's primary users—customers, clients, and visitors. The plan continues to guide the City's parking system in both operational and strategic approaches to downtown parking management.

Over the last several years, the performance results of the parking system have been monitored and strategies have been adjusted on an ongoing basis. Occupancy data is used as a key indicator to determine the practical capacity. Practical capacity is the occupancy level or number of vehicles that can be parked in an area before it becomes difficult for a driver to a find a space. Different thresholds are used to determine what types of decisions should be made.

- 85%: When occupancies routinely reach or exceed 85 percent in the peak hour, the supply is said to have reached practical capacity.
- 70-85%: This is the ideal threshold where there is a greater chance of being able to find one or two stalls on a block.

Anything below that level conveys something is not working, such as rates driving away users, the controls are too restrictive, or the demand just is not there.

Figure 12. Example of Downtown Parking Occupancy Study (2017)



Looking Forward: The Future of Parking and Community Collaboration: City curbs have never been busier. In the wake of the pandemic, urban areas have seen the number of home deliveries and associated transportation vehicles skyrocket. As people have started travelling again, more people are on the roads with more options for means of transport. More vehicles, from last mile delivery trucks to e-scooters to on-demand shuttle services are fighting for curb space.

Over a decade ago the Integrated Parking Plan was set up with the scope of maximizing the use of the right of way under the vein of efficiently managing vehicle storage within dedicated parking space. The scope needs to be broadened to look beyond vehicle storage and view the entire curbside area alongside streets, including managing different uses depending on the location and time of day. The urban landscape of Tacoma is under a major transformation.

Curb management will continue to play a vital role in the future of community engagement opportunities as well as the success of important modern amenities and sustainability efforts. However, in the coming years, the utilization of parking spaces and how the adjacent curb could be used differently will continue to evolve, driven by partnerships that prioritize sustainability, innovation, and community well-being.

Diversifying Uses Beyond Vehicle Storage: This calls for leading the charge on making curb space more productive, diverse and recreational in order to provide the greatest amount of access to serve the highest number of people. The Integrated Parking Plan's approaches may be outdated with terminologies referring to parking terms (stationary, act of leaving vehicles), however the concept of active regulation and allocation of all uses of the curb space is still relevant.

Broadening the Application of Parking Management: The parking management tools established over a decade ago were set up with a focus on being applied to the downtown environment. The demand is growing for applying managing tools as a solution to the competing needs outside of the downtown such as business districts, commercial nodes and mixed-use areas. Tacoma is diverse with 54 square miles of landscape composed of various neighborhoods and districts where no two are alike. Tacoma recognizes that curb management is not a one-size-fits all model. Every area is unique with its own set of challenges, demand and profile of travelling behaviors. Therefore, management for area calls for tailored approaches that are flexible to the needs

What are key **opportunities** for Tacoma to advance curb management?

- **Curb Management Framework:** A proper curb management framework balances competing needs while focusing on activating and maximizing use of the right-of-way. By implementing dynamic and adaptive strategies, Tacoma can improve traffic flow, enhance safety for all users, and reduce congestion and emissions, leading to more sustainable and efficient urban environments
- **Equitable Transit Oriented Development:** Equitable Transit Oriented Development (ETOD) creates a connection between neighborhoods, resources, and transit. ETOD encourages the use of public transit, theoretically reducing the need for parking as residents, shoppers, and employees opt for transit, commute by single-occupancy vehicles less often, and own fewer vehicles. However, ETOD can also increase density, potentially putting pressure on parking facilities. Strategic curb management can address these tensions by providing more access and options, ensuring that the increased density does not compromise mobility and accessibility.
- **Sustainable Practices:** Designate specific curb areas for different transportation modes, such as bike lanes, bike and micro-mobility parking, transit stops, rideshare zones, and delivery spots, to enhance accessibility and safety. Installing EV chargers at curbside locations presents an opportunity to promote sustainable transportation. EV chargers should be placed in locations that do not compromise the city's commitment to public transit and cycling, promoting a balanced and eco-friendly curb management approach.
- **Dynamic Curb Use:** Implementation of flexible curb zones that change function based on real-time demand and time of day. These zones can serve as loading/unloading areas during peak hours, convert to parking spaces during off-peak hours, and transform into pedestrian plazas or parklets when needed, maximizing the utility of curb space.
- **Updated Land Use Codes:** Revise and update codes to promote concepts such as adaptive reuse, parking in-lieu of fees, shared parking, level of service requirements and contingency planning.
- **Integrated Parking Approach:** Off-street parking access and availability have a strong interplay with how the curb space in the area can function. Strategies on how to leverage existing built supply and how to properly manage that supply will allow for more options to be considered at the curbside.

What **emerging trends** will affect curb management today and in the future?

What emerging trends are expected to influence policy or require new types of programs or investments?

- **E-Commerce and Freight:** There continues to be an increased demand for curb space due to the rise of e-commerce and last-mile delivery services. Allocating dedicated loading zones and utilizing technology for scheduling and managing deliveries can reduce double-parking and improve traffic flow.
- **Remote Work:** With fewer daily commuters, the demand for long-term employee parking new workplaces has decreased. Curb space can be repurposed for more dynamic uses such as outdoor dining, temporary retail spaces, and multimodal needs. Conversely, there has been an increase in residential parking and delivery activity, prompting a shift in curb space usage from commuter parking to residential delivery and service zones.
- **Autonomous Vehicles, Robot and Drone Deliveries**: These technologies will require designated zones for drop-offs, pick-ups, and deliveries, and potential investment in smart infrastructure and adaptive curb management strategies to accommodate these advancements. Additionally, policies will need to address social equity and safety to support an efficient and inclusive urban environment.
- **Smart Technology Integration:** Implement smart parking meters and sensors to monitor curb usage in real-time, facilitate dynamic pricing, optimize space allocation, and improve enforcement. Utilize payment apps, QR codes, permits, and occupancy sensors to enhance efficiency, and increase the efficacy of ticketing through parking reservations and automated enforcement systems.
- **Focused Data Collection and Evaluation:** Data informs policy makers of the efficacy of the policies and how behaviors may or may not be changing. Strong curb side management policies should include not only hard data, but end user perspective so that that treatments implemented align with the needs of the community and have the desired results. Data should be collected not only from the curbside activities, but also existing off-street parking supply.
- **Vehicle Electrification**: With over 80 makes and models of electric vehicles now available and more jobs in clean energy than fossil fuels nationwide, transportation electrification is rapidly advancing. The City of Tacoma encourages increase electric vehicle (EV) use City-wide as part of its commitment to address climate change. Infrastructure support for EV charging stations in public parking areas is essential, along with incentives for businesses to install them.

What **challenges** will affect curb management today and in the future?

What challenges must the TMP policies, programs, and project investments address?

- **Finite Resource:** Curb space in urban areas is a limited and highly sought-after resource, creating significant challenges in its allocation and management. With the rise of e-commerce and food delivery services, the demand for curbside loading and unloading zones has increased dramatically, often exceeding the available space and creating unsafe situations. Balancing the diverse needs of various users, such as public transit, cyclists, pedestrians, and utilities, complicates curb space management further.
- **Cultural changes and consumer preferences:** Curbside activities and the need to support businesses and user needs evolves over time. Creating a framework that allows for the curb space to be adapted to the changing needs of consumers and businesses will be increasingly important as new products and technologies become available.
- **Behavior Change:** Changing long-established habits and routines of drivers and businesses can difficult and is often met with resistance. Many users are accustomed to convenient curbside access and may challenge changes that limit parking or alter loading zones. Encouraging compliance with new regulations, such as designated loading times or areas, can be difficult without extensive education and enforcement efforts.
- **Parking Minimums:** Reducing and/or eliminating parking minimums for new developments creates an increase pressure on-street as often those tenants/residents are not immediately shifting to a different travel mode and are still driving their cars. This can result in a challenging and unsafe parking environment.
- **Idling:** Curbside congestion leads to higher emissions from idling vehicles, contributing to air pollution. The environmental impact of poorly managed curbside areas is a growing concern, as increased vehicle emissions negatively affect air quality and contribute to climate change. Addressing these environmental impacts is a critical challenge in curbside management

PUBLIC REALM AND ACTIVATION ELEMENT

Purpose

Tacoma's Public Realm

The City of Tacoma aims to inspire social interaction, build community, and reimagine a city where streets can be safely shared by pedestrians, multimodal forms of transportation, art, and new forms of placemaking that celebrate Tacoma's unique heritage and creative community. As the population in Tacoma continues to grow, public spaces become increasingly important. The Public Realm and Activation Element focuses on activating streets, sidewalks, alleys, and trails as a way to create vibrant, inclusive, and safe spaces for people to experience.

Public Realm: Areas that are open and accessible to everyone, such as streets, sidewalks, and trails.

Activation: The process of transforming underutilized or passive spaces into vibrant, engaging areas that encourage social interaction, economic activity, and community engagement. A commitment to activation embraces strategies that range from the planned and sanctioned to the informal and ephemeral.

Tacoma's public right-of-way already faces multiple and sometimes competing demands including vehicle traffic, bicycle lanes, transit facilities, pedestrians, parking, street trees, utilities, sidewalk cafes, and public art. Balancing these demands with community uses will be challenging and may require new approaches to street design and management. Additionally, opportunities for people to access the public realm beyond functional and utilitarian purposes are limited, with most of these spaces concentrated in Very High or High Opportunity Areas as identified by Tacoma's Equity Index Map. This uneven distribution leaves many communities without accessible and inviting public spaces for recreation, social interaction, and community gathering.

The public right-of-way is a valuable asset which operates as a network of transportation conduits, primarily used for human movement. The City of Tacoma's objective is to strike a balance between the many needs of the right-of-way while committing to connect people to people and people to places. When reimagined with community-building in mind, these spaces can serve as multifunctional plazas, festival streets, farmers markets, cafes, block parties, and places where people freely and openly congregate together.

The Importance of Public Realm and Activation

What role do public spaces have in people's daily lives?

Public spaces are essential to the urban form of every city. They serve as a social utility promoting democracy, inclusion, and social cohesion.

- **Social Interaction Opportunities**: The public realm serves as gathering points for daily social interactions, where people can connect, participate in community events, eat outside, and listen to music. These spaces provide opportunities to connect with neighbors and build stronger community bonds.
- **Safe and Accessible Transportation**: Well-designed public spaces provide safe and accessible pathways for walking, rolling, and cycling. This makes it easier for individuals to commute, run errands, and enjoy leisurely walks without relying on cars.
- **Comfortable Spaces:** Comfort in the public realm is enhanced by features like trees that provide shade, benches that offer places to rest, and well-placed lighting that improves visibility and safety. Well-designed spaces foster a sense of security and relaxation, making the public realm a welcoming part of daily life.
- **Placemaking and Public Art:** Public spaces are beautified with art installations that reflect the community's culture and history. Public art and placemaking help build a sense of belonging and make everyday experiences in the city more meaningful and enjoyable. Features, such as murals, sculptures, and interactive installations, create visual interest, foster a sense of pride, and invite people to pause, gather, and connect with their surroundings.
- **Economic Life:** The public realm provides spaces where people can grab coffee at a local café, enjoy a meal outside, or pick up fresh produce at a farmers market. Street fairs and bustling sidewalks offer convenient opportunities to shop for unique gifts and connect with local vendors and businesses, turning everyday errands into enjoyable experiences.

What are specific outcomes that emerge from this element done well?

- **Increased Physical Activity:** Activation encourages more walking and cycling, reducing sedentary lifestyle-related issues like heart disease and diabetes. Physical activity also boosts mental health by lowering stress and anxiety, improving mood, and leading to a more physically and mentally healthy community.
- **Improved Safety:** Activated spaces and multimodal options encourage more people to walk, bike, and gather, increasing visibility and passive monitoring in public areas. This heightened presence of people helps improve safety, deter crime, and create a sense of security, making streets feel more welcoming and lively for everyone.
- **Economic Benefits:** Vibrant public spaces boost local business revenues by attracting more customers. Increased foot traffic helps support local economies and can lead to further business investments in the area.
- **Enhanced Social Interaction:** Activating public spaces fosters stronger community identity and bonds, reduces feelings of loneliness, and supports resilience urgently needed for community health. These areas become hubs for community events, gatherings, celebrations, as well as enhancing social cohesion and community spirit.
- **Climate Resilient Streets:** Increased tree canopy in right-of-way helps to improve air quality, reduce urban heat islands, and increase urban biodiversity, contributing to a healthier environment. Green infrastructure manages stormwater by absorbing rainwater, reducing runoff, and enhancing groundwater recharge, creating more resilient and sustainable urban spaces.
- **Expanded Public Realm:** Streets are transformed for use in farmers markets, block parties, and festivals, providing dynamic and engaging community spaces. Restaurants and cafes benefit from expanded outdoor dining experiences, enhancing urban livability.

What groups or communities have specific needs and/or require special consideration?

- **Unhoused Neighbors:** Public spaces provide a space for rest for individuals experiencing homelessness. Public spaces should have access to water, restrooms, and shade. Events in public spaces can include support and resources to provide assistance.
- **Children, Young People, and Seniors:** Designing inclusive public spaces fosters intergenerational interactions and enhances community well-being. Additionally, considering the needs of children, young people, and senior citizens promotes equity, as these age groups are more likely to rely on public spaces for recreation, socialization, and daily activities.
- **Individuals with a Disability:** Feeling safe is crucial for all users, including individuals with disabilities. This entails providing smooth, level surfaces for easy navigation, wide sidewalks, curb cuts, tactile paving for the visually impaired, and ramps that are thoughtfully integrated with the design of any stairs. Additionally, it is important to consider individuals with a service animal by creating public spaces that are accessible and accommodating for dogs, providing facilities such as designated relief areas and safe pathways that allow for comfortable and independent movement throughout the public realm.
- **Marginalized Communities:** Marginalized communities require special considerations due to historical exclusion and resource disparities. Additionally, marginalized communities may face higher levels of targeted violence or police surveillance, which can impact their comfort and willingness to engage in public spaces. Addressing safety concerns through community-driven solutions is essential.

Context

Tacoma Context

Tacoma, like many urban cities, faces the challenge of creating a public realm that fosters community and prioritizes people over vehicles. In many cities, a significant portion of the public realm is dedicated to automobiles. According to the National Association of City Transportation Officials (NACTO), streets and parking lots often occupy up to 30-50% of urban land. Reallocating even a fraction of this space to pedestrians, cyclists, and public activities can have profound benefits. Cities that have implemented such changes report increased foot traffic, higher retail sales, and improved public health. For example, the Newark Avenue Pedestrian Plaza in Jersey City saw a significant boost in local business and community engagement after a $7 million transformation into a permanent pedestrian-friendly space.

Effective public spaces serve as "third spaces," distinct from home (first space) and work (second space), which are crucial for community building and mental health. According to Project for Public Spaces, these third spaces are essential for community engagement, providing venues for socializing, cultural activities, and civic participation. Tacoma and Pierce County have been facing a significant youth mental health crisis, particularly exacerbated by the COVID-19 pandemic. A report from the Tacoma-Pierce County Department of Health highlights a troubling increase in emergency department visits for anxiety and depression among youth. The data showcases the need for sustained support and innovative solutions to support the mental well-being of Tacoma's youth. Enhancing public spaces through placemaking can be one way to contribute to improving youth mental health by providing safe, engaging, and supportive environments.

Additionally, Tacoma's urban tree canopy currently covers about 20% of the city's land area, one of the lowest in the Puget Sound region. The City aims to increase this to 30% by 2030, recognizing the multiple benefits trees provide, such as cooling urban areas, improving air quality, and enhancing the livability of neighborhoods. Programs like Grit City Trees and the recent Urban Forestry Ordinance are crucial steps toward achieving these goals, and while continued densification and redevelopment are themselves important climate mitigation and transportation demand management strategies, the relative importance of the public right-of-way for increasing tree canopy becomes more urgent. By planting more streets trees and climate resilient vegetation, Tacoma can enhance its tree canopy, contributing to a healthier, more sustainable urban environment

Activating streets involves transforming them into lively, pedestrian-friendly areas. This can include pop-up markets, street fairs, public art installations, and outdoor performances. It may involve design considerations and provision of infrastructure elements necessary to support street activations. Programs like Tacoma’s Downtown to Defiance event that closed

Schuster Parkway and Ruston Way to cars exemplify successful street activation by temporarily closing streets to cars, allowing pedestrians, cyclists, and community activities to flourish. Such transformations encourage physical activity, reduce pollution, and enhance the overall quality of urban life.

Community building is at the heart of placemaking. When residents actively participate in shaping their environment, it fosters a sense of ownership and belonging. Tacoma's Neighborhood Planning Program and Neighborhood Councils play a critical role in this process by engaging residents in the planning and improvement of their communities. By involving community in decision-making, these programs help create spaces that reflect the community's identity and needs.

Enhancing Tacoma's public realm through street activation and placemaking is much more than aesthetic improvements; these design approaches improve the very function of our streets to support a healthier, more connected community. By prioritizing people over vehicles and fostering inclusive, vibrant public spaces, Tacoma can build a city where residents feel more connected, engaged, and mentally healthy. This vision requires collaboration among city staff, local organizations, and the community to ensure that every resident benefits from a well-designed, accessible public realm.

What are key **opportunities** for Tacoma to advance the Public Realm and Activation?

- **Public Art:** Public Art tells the stories of neighborhoods and communities, contributing to Tacoma's sense of collective history, placemaking, and pride. The City of Tacoma's Municipal Art Program[10] includes artworks that are large and small, permanent and temporary, collaborative and individual, historical and contemporary - larger scale works can be incorporated via Percent for Art into major capital projects, and smaller scale pieces can engage community members in surprising and unexpected places, such as street corners and traffic medians. Multi-use public spaces encourage collaboration and provide ample opportunity for different community partners, groups, and individual artists to present performance pieces and temporary art installations.
- **Business Community Partnerships:** Business groups, like the Downtown Tacoma Partnership and Neighborhood Business Districts, can collaborate with the city and organizers to coordinate event logistics, market and promote closed street events, or

[10] In March of 2000, the City of Tacoma reinstated the Municipal Art Program that dedicates 1% of construction costs from public capital projects to the creation of public art.

host pop-up events and food stalls. By actively participating in and supporting public space activation, businesses can strengthen their ties to the community, fostering a sense of shared investment and collaboration in improving public spaces. Creating and supporting Business Improvement Areas can help with partnerships.

- **The Community:** Tacoma's strong sense of local pride can drive enthusiastic participation and support for public realm initiatives, cultivating a shared commitment to improving and celebrating communal spaces. Tacoma's vibrant creative scene can inspire innovative approaches to designing and programming public spaces, making them more engaging, inclusive, and reflective of the community's unique character.
- **Leverage private investment in private development:** Large scale private development approvals granted by the City as part of regular permit reviews and construction are often the best opportunity to newly-dedicate the "last increment" of right-of-way for pedestrian facilities and a robust public realm. Through a partnered effort of Public Works, Planning and Development Services, and Tacoma Public Utilities, those dedications of right of way for sidewalks, pedestrian space, and related proportionate investments by private development can be identified and implemented as a requirement of development approvals.
- **Enhanced Public Transit Stops:** Through partnerships with Pierce Transit and Sound Transit, the City can improve bus and transit users' experience with shelters, seating, real-time information, and beautification efforts to make public transportation more attractive, safe, and convenient. These facilities can include artistic elements and landscape to make transit more prominent, inviting and integrated into the community.
- **One-Way Streets:** Converting a street to a one-way configuration can create more space for wider sidewalks, outdoor seating, street tree planting and green stormwater infrastructure, fostering a more inviting and vibrant environment in Tacoma's Growth Centers. Additionally, it's easier to implement other urban design features that promote community engagement and local business activity.

What **emerging trends** will affect Public Realm and Activation today and in the future?

- **Streateries, Parklets, and Curbside Cafes**: To support Tacoma businesses in meeting physical distancing requirements during COVID-19, the City launched the Curbside Café and Market Pilot Program. These curbside cafés and markets, also known as streateries or parklets, are similar to sidewalk cafés but are located in parking spaces within the right-of-way. The program was highly successful, leading to a strong interest in making it permanent and expanding its scope.
- **Shared Streets (Woonerfs)**: Streets designed to prioritize pedestrians and cyclists, with cars allowed but at very low speeds. This concept, which originated in the Netherlands, has been spreading globally. While the City has not yet fully implemented traditional Dutch-style woonerfs, community engagement has shown a desire to redesign streets downtown and neighborhood business districts to prioritize non-motorized users.
- **Slow Streets Initiatives**: As part of its Vision Zero program, Tacoma reduced the default residential (non-arterial) speed limit from 25 MPH to 20 MPH, recognizing that a lower speed limit is ideal in areas where pedestrians, bicyclists, and drivers frequently interact. To further promote adherence to this lower speed limit, Tacoma plans to create a prioritized investment strategy for traffic calming infrastructure. Key streets for these improvements include school walking routes, greenways, and streets near parks. This initiative aligns with broader Slow Streets efforts, aiming to create safer, more multimodal-supportive environments throughout the city.
- **School Streets:** Tacoma's 2023 Safe Routes to School Action Plan includes an action of exploring School Street demonstrations to improve safety and reduce traffic congestion around schools. By creating car-free zones during drop-off and pick-up times, Tacoma aims to prioritize the safety of children and encourage walking and cycling. These initiatives help reduce air pollution, increase physical activity among students, and create a stronger sense of community.
- **Night Markets and Street Fairs**: Tacoma has a rich tradition of hosting night markets and street fairs, which contribute to local economic growth and community engagement. Events like the Tacoma Night Market bring together local vendors, food trucks, and cultural performances, creating vibrant public spaces that attract both residents and visitors. These events support local entrepreneurs and artisans, strengthen community ties, and offer unique cultural experiences. As Tacoma continues to look for innovative ways to revitalize its public spaces, night markets and street fairs remain a key strategy for boosting the local economy and fostering community spirit.

What **challenges** will affect Public Realm and Activation today and in the future?

- **Maintenance and Upkeep:** Green infrastructure, such as bioswales, rain gardens, and permeable pavements, requires regular maintenance to remain effective. Resources, processes, and commitment to enforcement of private parties' responsibilities must be identified for ongoing upkeep to maintain these facilities in good working order and prevent these features from becoming neglected.
- **Community Buy-In:** Gaining support from local residents and businesses is important. There may be resistance to change, particularly where people are accustomed to street space priority given to parking or access to their homes or business for deliveries.
- **City Processes and Program Requirements:** Activating the public realm is challenged by sometimes confusing city processes, including permitting and regulatory compliance, as well as liability concerns related to safety, insurance, and legal risks.
- **Accessibility Barriers:** Activating streets and the public realm can pose challenges for accessibility when temporary structures or events obstruct pathways, making it difficult for people with disabilities to navigate. Additionally, if proper accessibility features such as ramps, tactile paving, and clear signage are not incorporated, these public spaces may exclude individuals with mobility impairments or visual impairments.
- **Transit and Emergency Access:** Events that fully close a street can hinder emergency services by delaying response times due to detours and reduced access to certain areas. Additionally, closing a street can disrupt transit routes and access points, potentially making it more difficult for transit users, especially those with disabilities, to reach their destinations or navigate alternative routes.
- **Caring for Unhoused Neighbors:** Caring for unhoused neighbors presents challenges when activating the public right-of-way, as public spaces often become de facto shelters for those without stable housing. Balancing the need to create inviting and vibrant public spaces with compassion and support for unhoused individuals requires thoughtful design, inclusive policies, and the integration of social services. Successful activation of the right-of-way should prioritize humane solutions that consider the needs of all community members, including those experiencing homelessness.