

Greater Duwamish Manufacturing and Industrial Center Subarea Plan

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Seattle
Office of Planning &
Community Development

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Overview

The Greater Duwamish Maritime and Industrial Center (MIC) is Seattle's largest industrial area and one of the oldest and most important industrial areas in Washington State. The Duwamish MIC spans nearly 4,000 acres of land. The Duwamish River runs from south to north through the MIC and empties into Elliott Bay a rare, natural deep-water port on Puget Sound. This area is a hub for industries and shipyards that support the vitality of maritime activities on Puget Sound, and internationally significant cargo, container, and industrial seaport operations.

The Duwamish MIC is home to a significant seaport. Seaport operations and related industrial activities play a vital role in the Seattle and Pacific Northwest economy, contributing thousands of jobs and millions of dollars in revenues and state and local taxes to the region. Seaport facilities are found primarily on Harbor Island and along the Duwamish River.

Major railroad facilities that connect to and service port operations are vital for the transport of goods and passengers through the region. The two major railyards in the MIC are the BNSF SIG Yard in the SODO area and the Union Pacific Argo Yard. Other major rail facilities include the Amtrak Maintenance Facility and Sound Transit's Link Light Rail Operations and Maintenance Facility. Much of the Duwamish MIC is a former tide flat area that provided favorable conditions for the establishment of rail lines and industrial facilities in Seattle during the late 1800s and early 1900s.

There is a significant presence and history of the aerospace industry in the Duwamish MIC. The south edge of the MIC is adjacent to the Boeing campus and original headquarters. The Seattle portion of Boeing Field (King County International Airport) is located within the Duwamish MIC. Despite and the evolution of the aerospace industry, a wide variety of aerospace suppliers and technology companies continue to operate in the Duwamish MIC and adjacent areas to the south of it.

In addition, seaport operations, rail, and aerospace, the Duwamish MIC is also home to a variety of miscellaneous heavy industrial uses like cement and steel materials processing, recycling, logistics, and food and beverage processing. Many of these operations rely on marine access on the Duwamish Waterway, direct connection to rail lines, and efficient connections to the interstate highway system. In inland areas the Duwamish MIC includes distribution centers, small manufacturers, construction businesses, offices, and industrial supply companies that also rely on convenient access to the interstate highway system via direct connections to I-5.

The Duwamish MIC is adjacent to and has important relationships with the vibrant Georgetown and South Park communities that straddle both sides of the Duwamish River and are partially outside of the MIC boundaries. The interface of these communities and the needs of their residents related to economic activities within the MIC is an important aspect of this plan, particularly topics of environmental justice and how functions in the MIC can be more sustainable and resilient.

The SODO section of the Duwamish MIC is located north of S. Lucille St./Denver Ave. S./S. Dawson St. and contains a unique and complex mix of land uses. SODO is home to key maritime facilities along the Duwamish River and Elliott Bay. This area includes the area commonly referred to as the stadium district (see Stadium Area Overlay District discussion in the land use chapter, page 21) that is home to large scale stadiums for Seattle's professional football, baseball, and soccer teams as well as smaller event venues like WAMU Theater and Showbox SODO. The SODO section of the MIC

is close to downtown Seattle and is serviced by two light rail transit stations. It is more heavily influenced by proximity to non-industrial land uses than many other portions of the MIC.

This subarea plan for the Duwamish MIC complements and is grounded in citywide Comprehensive Plan land use policies for industrial areas and features specific goals and policies tailored to the Duwamish MIC's unique characteristics. Informed by the recently completed Industrial and Maritime Strategy, this plan aims to sustain and enhance the industrial vitality of the Duwamish MIC, ensuring its ongoing significance as a key economic asset to the city and region.

Seaport Activity and Policies

One of the factors behind Seattle's strong economy is the city's role in importing and exporting goods. Not only do the workers who move cargo in and out of the shipping terminals make good wages, but exporting goods made in the Seattle area brings additional money into the regional economy. Port of Seattle owns various waterfront properties across the city for maritime operations. Under a port development authority and a partnership between the Port of Seattle and Port of Tacoma, The Northwest Seaport Alliance (NWSA) manages the container, breakbulk, auto and some bulk terminals in the Duwamish MIC and the Tide flats MIC in Tacoma. In addition to Port of Seattle lands, there are private maritime businesses located and operating in the Duwamish MIC, fulfilling a full economic spectrum of the maritime cluster.

Among the Comprehensive Plan elements providing policy guidance to the Duwamish MIC, is the Container Port Element. The Container Port element establishes a set of goals and policies that are meant to sustain the vitality of the port and complement policies in the land use element, the economic development element, the transportation element, and the climate element. This subarea plan provides enhanced policy guidance to help ensure that local land use, transportation, economic development, public service and environmental decisions are made in consideration of this long-term and widespread economic contribution – providing for the industrial lands and transportation systems to ensure that the seaport continues to function effectively alongside the vibrant city waterfront.

Citywide Industrial and Maritime Strategy

In 2019, the City began a planning process that led to the creation of the Industrial and Maritime Strategy. The Industrial and Maritime Strategy was a major re-evaluation of and recommitment to the long-term health and vitality of the MICs by the City. The strategy recognized that the MICs function as part of a holistic and linked industrial and maritime economy and cultural ecosystem, and that they share many of the same issues and challenges. The process culminated in July of 2023 when the City Council adopted a set of new and amended policies in the Comprehensive Plan. The City adjusted the boundaries of the two designated Manufacturing and Industrial Centers in the city, including both the Greater Duwamish MIC and the Ballard Interbay Northend Manufacturing and Industrial Center (BINMIC), and adopted a new set of industrial zones into its Land Use Code to implement the future vision for growth and development within each MIC.

Advisory Council

The Industrial and Maritime Strategy was informed by the deliberations of a Maritime and Industrial Strategy Advisory Council with members appointed by the Mayor, which was charged with a mission to develop a blueprint for the future of industrial land in Seattle with a focus on providing equitable access to high-quality, family-wage jobs and entrepreneurship opportunities. Stakeholders considered five categories of issues including land use, transportation, environmental sustainability, workforce development, and public safety. The Advisory Council included representation from citywide stakeholders and stakeholders from four neighborhood subareas including Ballard, Interbay, SODO/Stadium District, and Georgetown/South Park. The Advisory Council represented a diverse range of interests including maritime and industrial businesses, labor, residents of adjacent neighborhoods, developers, City Council, and industry groups. In May 2021, the Advisory Council recommended 11 broad strategy statements. Consensus on the strategy statements represented approval by over 85% of voting members.

Data Collection and Analysis

The Industrial and Maritime Strategy process included extensive data collection and analysis. This included an economic analysis of employment, analysis of development feasibility for various types of buildings, and a complete array of environmental analyses of policy options within an Environmental Impact Statement (EIS). The EIS included transportation modelling for freight movement, general purpose traffic, and non-motorized modes of travel in and near the MICs, as well as analysis of land use impacts from future land use regulatory scenarios. The EIS also studied environmental elements with an emphasis on future climate change impacts including potential for sea level rise.

This subarea plan for the Duwamish MIC builds on the recently completed Industrial and Maritime Strategy process as it is recent and directly relevant. Much of the analysis and data in the subarea plan is leveraged from work completed for the Industrial and Maritime Strategy. Most of the land use policies that were added or amended through the Industrial and Maritime Strategy process relate specifically to industrial land within the city's two MICs and will achieve many of the goals and aspirations for the Duwamish MIC. Therefore, this Duwamish MIC subarea plan builds substantially on the Industrial and Maritime Strategy while focusing on topics and issues that are unique to the Duwamish MIC.

Community Engagement

In addition to the Advisory Council, the Industrial and Maritime Strategy featured broad-based community engagement. City staff conducted direct engagement to groups including residents of neighborhoods adjacent to industrial areas, labor leaders, environmental groups, and others. The process featured direct in-person and written survey engagement with BIPOC youth to collect their input about access to careers in industrial and maritime sectors. The City received roughly 150 comments on the Industrial and Maritime Strategy Draft Environmental Impact Statement (EIS) and included an extended comment period for the adjacent residential communities of Georgetown and South Park. Community and stakeholder input informed and shaped the final legislation transmitted to the City Council.

The City Council process included 5 committee briefings and a public hearing before Council took final action.

Equity

As part of the Industrial and Maritime Strategy process, the City used a Racial Equity Toolkit (RET) to identify inequities in the previous policy framework for industrial lands and to identify ways the Industrial and Maritime Strategy could furthermore equitable outcomes. The RET includes engagement with under-represented groups and a set of questions to guide the development, implementation, and evaluation of policies and initiatives to address impacts on racial equity. The RET focused on the following racial equity outcomes for industrial and maritime areas including for the Duwamish MIC

- Improve equitable access to living wage jobs
- Remove disparities related to environmental health impacts
- Assist communities to enable them to prosper in place
- Improve safety and health for workers

The RET was prepared concurrently with the Industrial and Maritime Strategy to help identify benefits and/or burdens of the strategies that the Advisory Committee was considering and to identify ways to advance opportunity or minimize harm. Engagement to supplement the RET included direct outreach to BIPOC youth to identify barriers to entry to industrial and maritime sectors, particularly as they may be disproportionately experienced by women and people of color. This engagement informed the workforce strategy focus in the Industrial and Maritime Strategy. The RET also included a focus on residential communities that are adjacent to industrial lands (including several racially diverse neighborhoods), the disproportionate impacts they have faced, and how the proposed strategies could mitigate or address those impacts.

Equity concepts from the Industrial and Maritime Strategy are incorporated in this Duwamish MIC subarea plan. A focus on equity is included in every element of the subarea plan. A discussion of environmental justice is included in the Environment and Open Space element. Policies that further equity or address environmental justice are found in the Land Use element (DLU.4), Transportation element (DT.4), Economy element (DED.2), and Environment and Open Space element (DEN.4).

Subarea Plan Organization

The Duwamish MIC subarea plan includes a vision statement and the following chapters: Land Use, Transportation, Economy, Environment and Open Space, and Public Services. Each chapter begins with a profile of existing conditions, then a discussion of key issues or opportunities that are specific to the Duwamish MIC. Following these sections are Duwamish MIC goals and policies. Goals are statements about the desired future outcome or objective for Duwamish MIC consistent with the vision statement. Policies are the principles that the City and its partners will use to guide decision-making to implement the goals.

Duwamish MIC subarea plan policies fall into two categories:

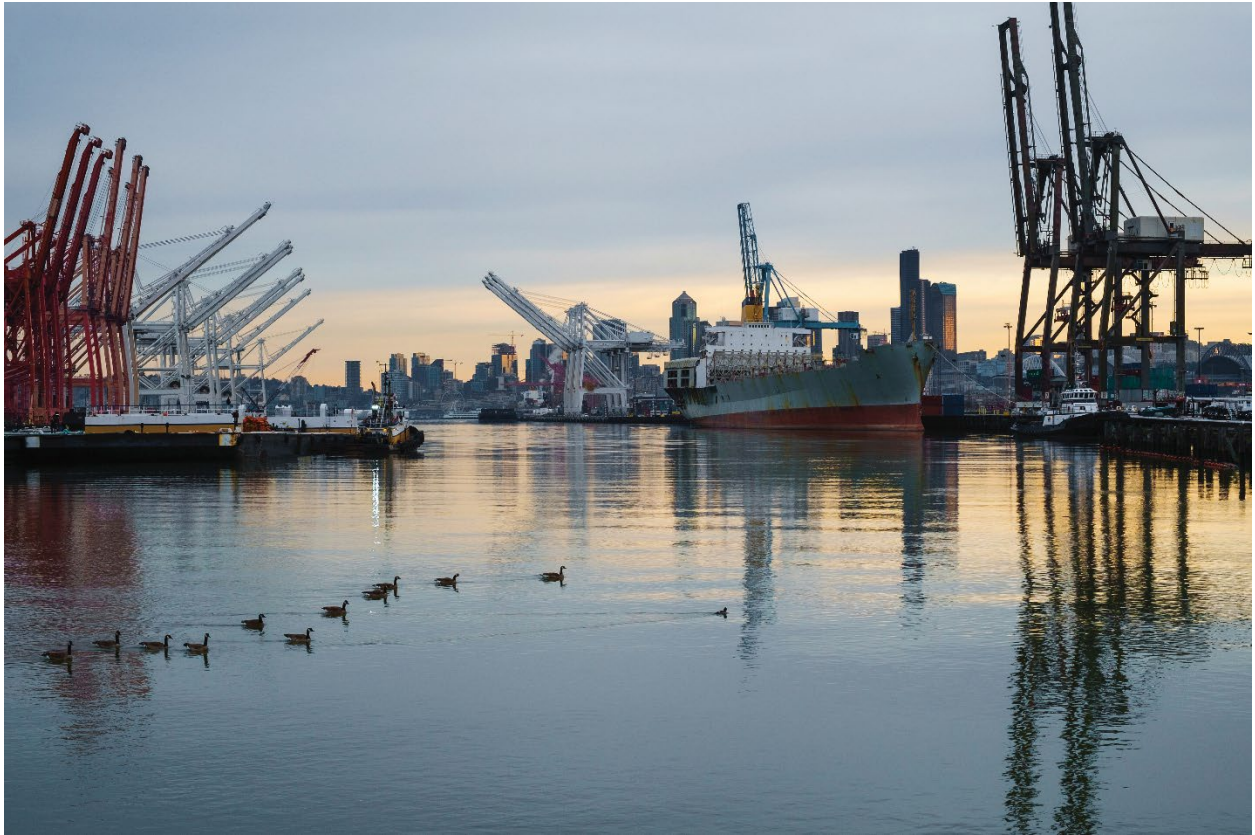
- Industrial and maritime policies included in the Citywide Policies section of the One Seattle Plan that advance a Duwamish MIC plan goal.
- Unique policies that are specific to the Duwamish MIC.

For each Duwamish MIC goal citywide policies are summarized first along with a discussion of relevant citywide regulations and programs that will help implement the vision advanced by those policies. Following citywide policies, regulations, and programs, Duwamish MIC-specific policies are discussed.

DUWAMISH
Manufacturing/Industrial Center



VISION



The Duwamish MIC is home to a major container port that serves as a gateway to international markets and is an important regional source of employment.

Regional Role of Manufacturing and Industrial Centers (MICs)

According to the Puget Sound Regional Council's (PSRC) Regional Centers Framework, MICs preserve land for family-wage jobs in basic industries and trade and provide areas where employment may grow in the future. MICs form a critical regional resource that provides economic diversity, supports national and international trade, and offers higher than average wages, often without advanced degree. PSRC's VISION 2050 calls for the recognition and preservation of existing centers of intensive manufacturing and industrial activity and the provision of infrastructure and services necessary to support these areas. Vision 2050 contains Multicounty Planning Policies (MPPs) specifically about MICs including:

- MPP-RGS-10 Focus a significant share of employment growth in designated regional manufacturing/industrial centers.
- MPP-DP-50 Protect industrial zoning and manufacturing/ industrial centers from encroachment by incompatible uses and development on adjacent land.
- MPP-EC-22 Maximize the use of existing designated manufacturing/industrial centers by focusing appropriate types and amounts of employment growth in these areas and by protecting them from incompatible adjacent uses.
- MPP-T-25 Ensure the freight system supports the growing needs of global trade and state, regional and local distribution of goods and services.

As one of only ten designated MICs in the four county Central Puget Sound Region, the Duwamish MIC plays an important role in providing accessible high-wage jobs critical to the economic health of Seattle and its surroundings. Nearly 7,000 industrial jobs are currently located in the Duwamish MIC and there are approximately 18,000 jobs in total here. The Duwamish MIC is an important employment location that serves both current and long-term regional economic objectives.

The vision statement and the goals and policies in this Duwamish MIC subarea plan are intended to guide future growth and change in the Duwamish MIC in manner that is consistent with VISION 2050.

Greater Duwamish MIC Vision Statement

The Greater Duwamish Manufacturing and Industrial Center is a pillar of Seattle's economy, offering a wide array of well-paying jobs to residents of Seattle and the region. With a diverse economy and unique locational advantages for the maritime and industrial sectors, the Duwamish MIC is envisioned now and into the future as:

- Home to a significant and well-functioning container Port that is well supported by transportation infrastructure connecting it to the region and nation
- A hub for innovation in industrial, aerospace, and maritime sectors
- A home to employers offering good access to well-paying and stable jobs that are accessible to workers without traditional four-year college degrees and to community members with a wide variety of lived experiences and backgrounds
- A place with transit access within the subarea and nodes of Transit Oriented Development that is appropriate for an industrial area – including a mix of innovative technology businesses and light industrial businesses in dense multi-story formats
- A place with healthy and safe transition areas between industrial and non-industrial districts containing uses and activities that support both
- A district that benefits from public and private investments to enhance infrastructure necessary to sustain existing and emerging industrial uses
- A hub for companies committed to environmental stewardship
- An industrial center that harmoniously integrates with its very urban neighboring mixed use and residential communities – especially the South Park and Georgetown neighborhoods
- A stable maritime and industrial center that is successful and viable for the very long term, and evolves to meet future challenges
- An economic asset to the City of Seattle and the region that provides stable conditions for companies to produce and export goods and services, and to meet regional needs for logistical and support functions
- A rich maritime economic sector supporting international and domestic cargo flows
- A transportation hub with updated transportation infrastructure, a growing power grid and safe operating environment
- A place where transportation flows safely and efficiently on well-maintained roads and bridges with a foundation of freight mobility for cargo moving by trucks or trains (*POS/LDW*)

- A close-in industrial area that supports the urban and residential centers of the city

LAND USE



Figure 3: Ariel view of the Duwamish MIC, showing the Duwamish waterway and view of the downtown skyline. Image credit, Port of Seattle.

Land Use

Goals and policies in the Land Use chapter guide land use and development in the Duwamish MIC. It aligns with industrial land use and container port policies in the Citywide Policies section of the Comprehensive Plan, and regional goals and criteria for Manufacturing and Industrial Centers. In general, both the City and regional policies prioritize land uses in MICs that will support vibrant and stable industrial activities and protect these activities and lands from conflicts with non-industrial uses. The Land Use chapter strives to achieve these priorities while also addressing the complexities of the Duwamish MICs location within one of the most highly urbanized and highest density areas in Washington. The goal statements in the Land Use chapter balance the need for stability and predictability for industrial and maritime uses while providing pathways for growth, change, and investment that are characteristics of a dynamic major city like Seattle.

Duwamish MIC Land Use Overview

The Puget Sound Regional Council established designation criteria for MICs as part of the adoption of a Regional Centers Framework in 2018. The Duwamish MIC was first designated regionally in 1994. Review of the Duwamish MIC conditions today relative to the newly established criteria frames key issues for the Duwamish MIC. This plan seeks to guide future growth and development in a way that will achieve all criteria within the planning time horizon. The discussion that follows identifies many of the key land use features, challenges, opportunities, and policies addressing PSRC criteria. Two key criteria for MIC designation address industrial zoning and industrial jobs:

Industrial Zoning: The regional criterion for MICs is for at least 75% of land area to be in a core industrial zone. Currently, all the land in the Duwamish MIC is in a core industrial zone.

Industrial Jobs: The regional criterion for MICs is for at least 50% of existing employment within the MIC to be in industrial sectors. Currently, 66% of jobs in the Duwamish MIC are industrial jobs.

The Greater Duwamish MIC covers 3,792¹ acres of land (4,096 acres if submerged land is included) extending from the Stadium Transition Area overlay District and Harbor Island at the mouth of the Duwamish River south to the Seattle City limits with some noncontiguous areas near South Park. These shoreline adjacencies sustain a critical concentration of regionally significant maritime activities and container port facilities of national significance

The Duwamish MIC can be considered to have two distinct geographic sections. The SODO section of the MIC is the area north of S Lucille St., or S Dawson St. stretching to the northern boundary of the MIC at the edge of downtown Seattle and including lands along the shores of the Elliott Bay and the stadium district. The Georgetown and South Park portions of the MIC is south of the SODO section and includes portions of the King County Airport and lands along the banks of the Duwamish River and land near the Georgetown and South Park communities. The east, the Delridge, and Westwood/Highland Park neighborhoods.

¹ Acreage excludes submerged parcel areas and rights of way. Total acreage if these two categories of land are included is 4,096 acres.

North section of Duwamish MIC

The Northern section of the Duwamish MIC includes all the area within the Duwamish MIC north of South Lucille and S Dawson Streets. Within this area, there is a concentration of major maritime installations and terminals at and around the Duwamish River shoreline and Elliott Bay. From east to west this includes:

- West Seattle: The Port of Seattle recently completed Terminal 5's modernization investment, including the largest container cranes on the west coast (NWSA choice of words?). Nucor Steel Seattle operates as the largest recycler and only steel mill in Washington, located in West Seattle, transforming scrap metal into rebar and other steel products for local infrastructure like bridges and buildings, emphasizing environmental stewardship with low emissions, hydroelectric power, and being a significant local employer and community partner. It relies on road and rail access and has been in operation since 1905.
- Harbor Island hosts a large-scale bulk petroleum storage and distribution terminal and major shipyard terminals of Vigor Shipyards and Vane Brothers
- as well as Port of Seattle Terminal 18. Pier 17 provides rail to barge transfer facility and various smaller water-dependent private businesses
- along the eastern shore are Terminal 25, Terminal 30 and Terminal 46. Other marine activity includes the Coast Guard base, which is a homeport of arctic icebreakers and other vessels. Terminal 46 is currently in use for break bulk and other industrial tenants.

Terminals 5 and 18 feature on-dock rail, which ensures international containers can proceed directly to their inland destination without using city arterials.

The northern half of the Duwamish MIC also includes significant investments in private and public rail facilities. The BNSF SIG Yard and the Union Pacific Argo Yard host intermodal transfers whereby containers are transferred between ships and trains via short-haul trucking called drayage. Other rail-related facilities include the Amtrak maintenance facility, and direct rail industrial spurs to industries.

The presence of rail and marine infrastructure supports a cluster of logistics focused businesses in SODO and other businesses dealing in heavy materials that are dependent on rail and/or marine infrastructure. Examples are numerous and include Ash Grove Cement, Alaskan Copper, Nucor Steel, Alaska Marine Lines, MacMillan Piper, and Republic Services (a refuse transfer station and recycling facility). Rail and marine terminals have been a fixture in the area for at least 100 years. Food production and distribution facilities are also present and active in the area, including the Franz Bakery facility and Charlie's Produce distribution warehouse.

The northernmost edge of the MIC, in the area around the stadiums is home to Seattle's professional football, soccer, and baseball stadiums as well as other event venues, such as the WAMU theater and Showbox SODO. These facilities draw large volumes of visitors to a range of events. The stadiums are integrated functionally with Pioneer Square, Downtown, and Chinatown-International District (CID) to the north. In the stadium district there is a more consistent presence

of open spaces and sidewalks than in other parts of the MIC. The WOSCA site is a notable vacant piece of land. It is approximately 5 acres located between the stadiums and SR 99 infrastructure and Terminal 46. The site was used historically as construction staging by WSDOT and is currently undergoing a master planning process led by WSDOT and the City of Seattle.

This northern part of the MIC hosts large public utility operations that occupy expansive swaths of land. The King County Metro Central Base is west of the stadiums, the Sound Transit Operations and Maintenance Facility is south of S Forest Street, and the Seattle City Light South Service Center is to the south of Spokane Street. Throughout the SODO portion of the MIC there are numerous craft businesses and activities, especially along the 1st Avenue S corridor to the south of the stadiums. This corridor includes businesses that are designed to attract visitors and customers. Examples include Macrina Bakery, Westland Distillery, Filson, and others. There is a significant cluster of auto-oriented sales and service business along the Airport Way corridor. In blocks to the south of S Holgate Street large-sized auto dealerships for Honda, Toyota, and Mercedes Benz are present. The general vicinity also includes multiple auto maintenance and repair shops.

South Portion of the MIC

Georgetown is situated on the east bank of the Duwamish River. The riverfront contains numerous heavy industrial operations including cement, materials, recycling/refuse handling and logistics companies that rely on barging and water access, as well as the Ardagh glass manufacturing facility. Other notable shoreline uses include the Army Corps of Engineers offices at Diagonal Ave. S. Georgetown's industrial uplands between the Union Pacific Argo Rail Yard and E. Marginal Way S. contain a high concentration of logistics and warehousing activities. Many of these buildings are characterized by warehouse structures with loading docks and bays and large access areas for truck turning. The Prologis Georgetown Crossing facility is a new warehouse and distribution center constructed in 2017, notable because it includes multiple levels of stacked warehouse space. Interspersed among logistics operations there is a wide variety of small and medium sized industrial supply businesses, small offices, manufacturers, and makers including the Equinox Studios campus, along with South Seattle College. The area also contains multiple breweries and distilleries including Georgetown Brewing at the east end of Lucille Street. Boeing's campus and the King County International Airport / Boeing Field are located at the south edge of industrial Georgetown and extend south outside of Seattle's city limit on both sides of E Marginal Way. The airport averages 180,000 takeoffs and landings each year. The airport serves small commercial passenger airlines, cargo carriers, private aircraft owners, helicopters, corporate jets, and military and other aircraft. It is also home to various Boeing Company operations.

The MIC surrounds two residential neighborhoods areas in Georgetown—the Van Asselt district between Ellis Avenue S and Corson Avenue S and a roughly four-block residential district between S Homer Street and S Fidalgo Street. Both areas include townhomes, single family, and multifamily housing, including new construction. Residents of these areas are in close proximity to the surrounding industrial activities. The MIC also surrounds blocks of commercially zoned land along 4th Avenue S and Lucille Street, and the S Albro Place corridor that contains a variety of retail and service uses.

South Park is situated on the west bank of the Duwamish River. Industrial lands that surround South Park, which is a mixed-use neighborhood with a core area that is a designated Neighborhood

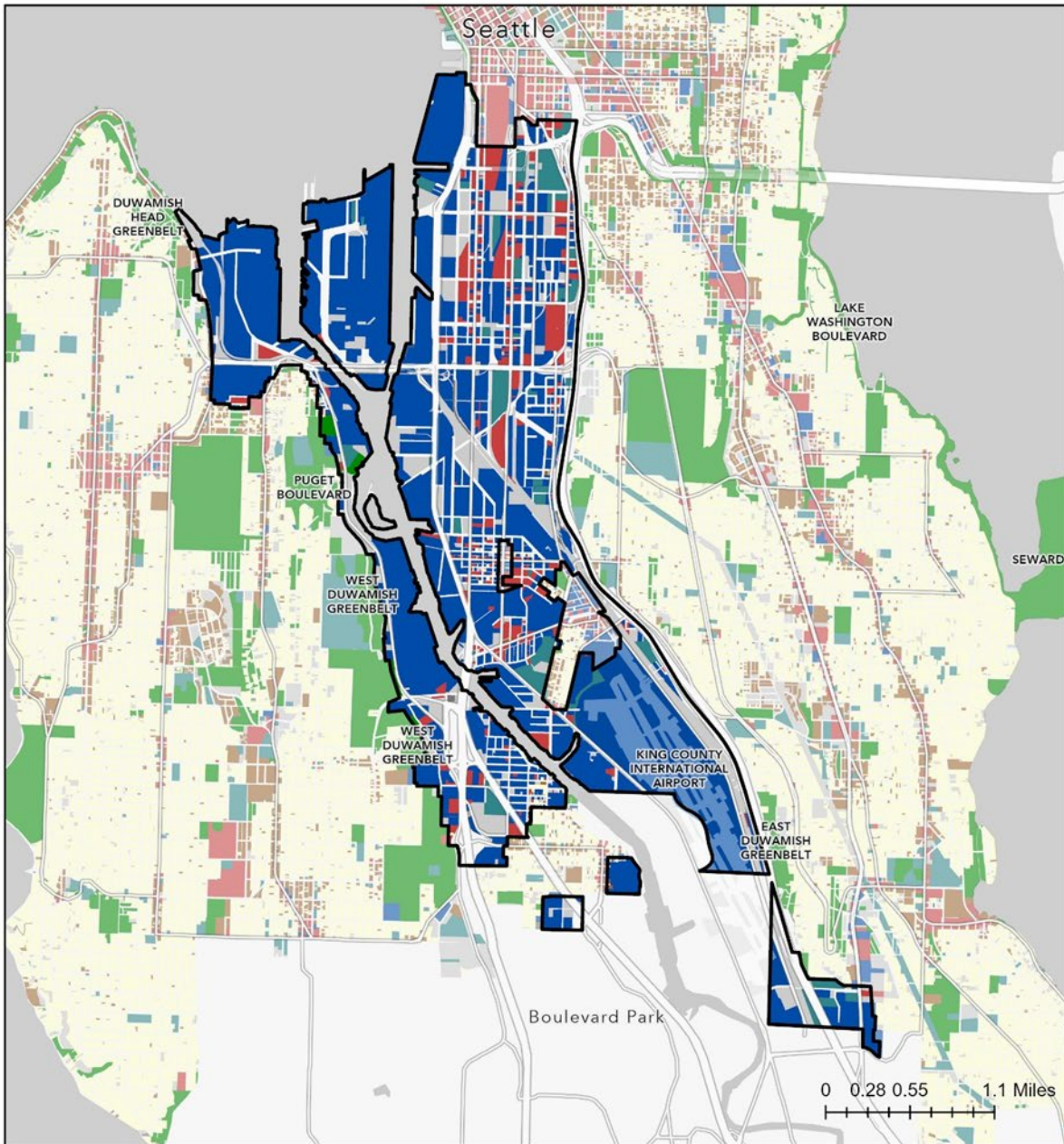
Center in the Comprehensive Plan. Like Georgetown’s riverfront, the South Park riverfront contains numerous heavy industrial operations that rely on marine transport including the Duwamish Shipyard, materials handling and logistics companies, and marine services. Riverfront operations south of State Route 509 are on smaller shoreland parcels, while operations north of SR 509 are on shoreland parcels 20 acres or larger. Upland uses in the area that is north of South Park include a variety of distribution and logistics activities, small manufacturing, construction related businesses, small offices, and marine and industrial supply companies. This mix of light and heavy industrial uses closely borders the north edge of South Park. Lands near the SR 509 ramps at S Cloverdale Street and S Holden Street contain large footprint uses of the South Transfer Station and the First Student bus parking yard, as well as Waste Management services. Portions of the MIC to the south of South Park flank the offramps of SR99 at 14th Avenue S. A high concentration of land uses here are transportation oriented, including distribution and warehousing, materials supply and building materials. Many structures have loading docks and truck access and circulation. Other land uses include union hall offices and the currently vacant Boeing Radiation Effects Lab and Boeing South Park facilities, which closely border South Park.

Overall Land Use Summary

The table below breaks down land uses in the Duwamish MIC by land use category, which is also shown on the land use map, below. Industrial land use accounts for 72% of all acreage in the Duwamish MIC².

Duwamish MIC Land Use by Acre		
Land Use	Net Acres	Percent
Commercial/Mixed Use	268.5	7.08%
Easement	.4	0.01%
Industrial	2746	72.41%
Major Institution and Public Facilities/Utilities	195	5.14%
Multi-family	3.1	0.08%
Parks/Open Space	15.5	0.41%
Reservoirs/Water Bodies	4.1	0.11%
Single Family	8.0	0.21%
Unknown	29.3	0.77%
Vacant	522.4	13.78%
Total	3,792	100%

² King County Assessor land use classifications are used for this analysis. The king County Assessor’s Office classifies railroad terminal and marine terminals as utilities. Both the Port of Seattle, the Union Pacific and BNSF railroads have significant facilities in the Duwamish MIC and are reclassified from utility uses to industrial uses in this analysis.



Greater Duwamish Manufacturing Industrial Center



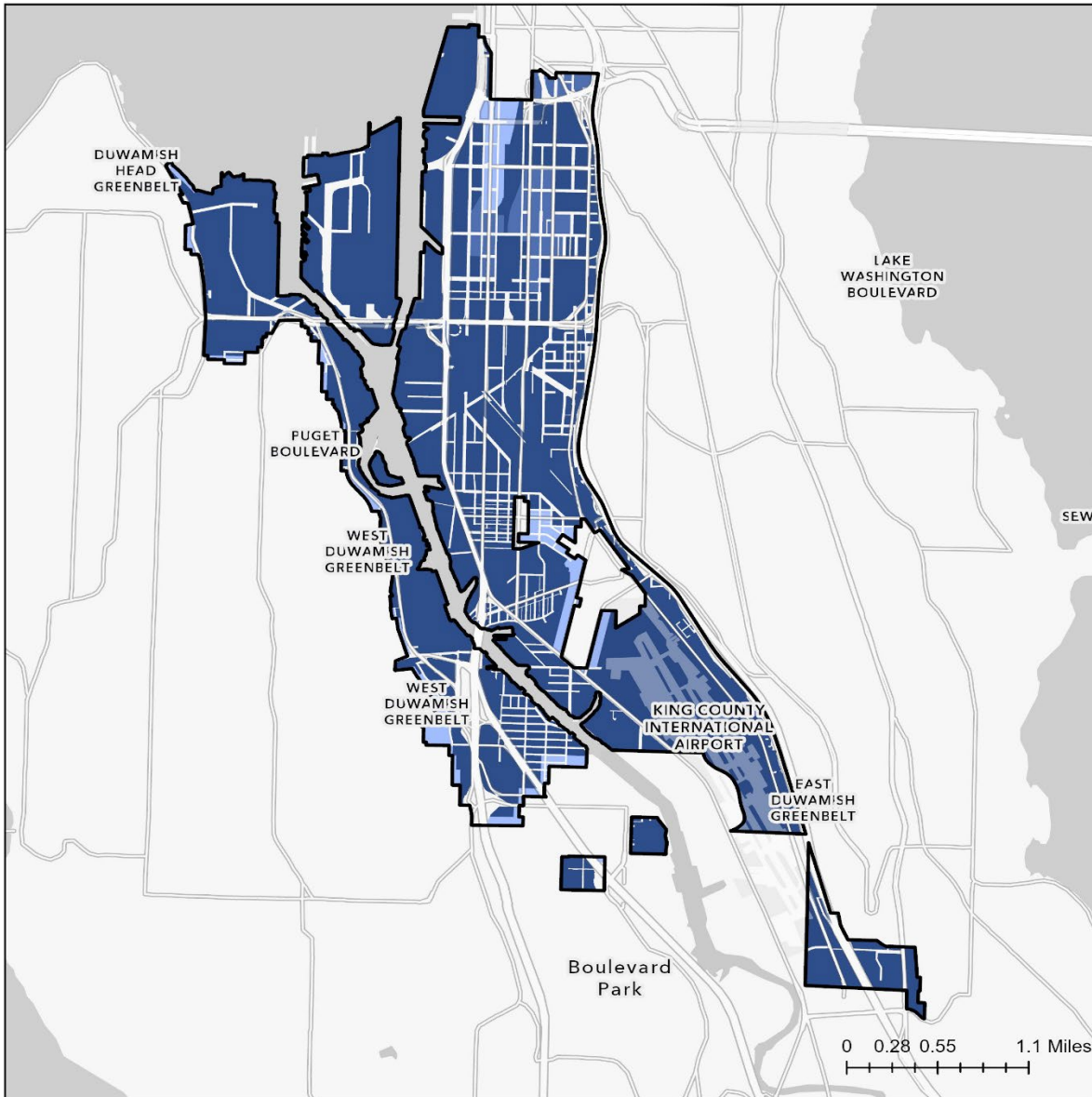
Existing Land Use *



* per King County Assessments present use code aggregated to 10 categories by City of Seattle

Map of Land Uses in the Greater Duwamish MIC.

Greater Duwamish Manufacturing Industrial Center



Greater Duwamish Manufacturing Industrial Center



Land Use Zoning



Zoning Map for the Greater Duwamish MIC

Land Use Regulations

The 2023 Industrial and Maritime Strategy legislation establishing new industrial zones for Seattle address current policy issues pertaining to the City’s industrial land. Seattle’s Land Use Code was updated in July of 2023 to establish three new core industrial zones (see zoning map on page 18), and all land within the Duwamish MIC is within one of the three zones:

- *Maritime, Manufacturing, and Logistics zone (MML)*: The MML zone is for well-established industrial areas with a focus on core industrial and maritime activities like manufacturing, warehousing, shipping, and logistics. These areas have strong truck, rail, and maritime infrastructure. The zone ensures long-term predictability for landowners, businesses, and investors, reinforcing the area's industrial character. It also prevents speculative development by setting standards that limit nonindustrial projects, such as big retail stores, and outright prohibits mini storage facilities, which were previously allowed in the Duwamish MIC. Most (92%) of the Greater Duwamish MIC is zoned MML.
- *Industry and Innovation zone (II)*: The purpose of the II zone is to promote transit-oriented development that is appropriate within an industrial area near existing or planned light rail stations. It is designed to accommodate and promote a blend of economic innovation, emerging industries, light industrial uses, and high-density commercial employment near transit stations anchored by industrial uses. The II zone covers a small portion (3%) of the MIC.
- *Urban Industrial (UI)*: The Urban Industrial (UI) zone aims to cultivate lively neighborhoods that accommodate a blend of local manufacturing, production, arts, and a distinct sense of community. This zone promotes the objective of establishing seamless connections between core industrial zones and nonindustrial areas. Given its proximity to nonindustrial spaces and businesses, the UI zone has the potential to attract customers from nearby neighborhoods. Additionally, it incorporates measures to ensure the safe movement of both pedestrians, cyclists, and freight. The UI zone comprises the remaining 5% of land in the MIC.

Duwamish MIC Zoning by Acre		
Core Industrial Zones	Acres	Percent
Maritime Manufacturing and Logistics Zone (MML)	3,492.94	92%
Industry and Innovation (II)	126.63	3%
Urban Industrial (UI)	173.92	5%
Total	3,792	

The 2023 Industrial and Maritime Strategy legislation establishing new industrial zones for Seattle addressed current policy issues pertaining to the City’s industrial land. Significant policy changes in the new zones included:

- Decreasing the maximum size of permitted non-industrial uses with the intention of limiting future incompatible development in core industrial areas (MML zone)
- Prohibiting new mini-storage warehouses (all industrial zones)

- Establishing an incentive structure to require a quantity of bona-fide industrial space constructed to a minimum standard, as a condition for development of office or commercial space in transit-oriented development (II zone)
- Establishing a system of ancillary uses in transition areas to encourage location of public-facing retail, tasting room or brewery spaces co-located with production uses (UI zone)
- Increasing the standard for landscaping, tree planting, and pedestrian infrastructure with new development (UI zone)
- New development standards to reduce impacts apply within a 1,500-foot buffer from residentially zoned and development properties for heavy manufacturing uses.

Land Use – Key Issues and Opportunities

Many issues and opportunities facing industrial land in Seattle are shared between both MICs in Seattle and are addressed in Citywide Policies section of the Comprehensive Plan, land use regulations, and other City initiatives. This Duwamish MIC plan builds on those citywide approaches to address key land use issues and opportunities that are specific to this area and are discussed below:

- **Sound Transit:** Sound Transit Link Light Rail station locations, both existing and planned, create ongoing pressures to change industrial land use designations to accommodate traditional TOD with residential components. Existing stations are the Stadium District station and the SODO station. With development of the West Seattle/Ballard light rail extension, two potential stations – one in Delridge and one in the Dearborn area -- will be added within the Duwamish MIC.

Encroaching Residential Uses: New housing development surrounded by land within the MIC has the potential to perpetuate conflicts between residential and industrial uses in the MIC.

- **Reconnect South Park:** Reconnect South Park is an early-stage evaluation of long-term options for the State Route 99 corridor between S Holden Street and Tukwila International Boulevard. Alternatives range from full decommissioning of SR 99 to targeted measures such as new overhead crossings. Potential corridor changes could add new usable industrial land through adjustments to former right-of-way and ramp areas. Associated infrastructure upgrades could improve access, visibility, and site protection for nearby industrial properties while maintaining existing zoning and land use. This potential new industrial land represents an opportunity for a major innovative employment and economic development project including workforce training, green infrastructure, and cutting-edge technology.
- **Seaport Cargo/Container Port.** Seattle’s container and cargo port facilities are in the Duwamish MIC and are a backbone of economic activity in the MIC and the city overall. Policies and actions to ensure land use compatibility, transportation investments, workforce development programs providing access to living wage jobs, and measures to advance environmental stewardship are critical to maintaining the health of the Container Port and the maritime sector.
- **Stadium Activity.** The city’s professional football/soccer and baseball stadiums are major drivers of economic activity in the city and region. However, the temporary surges of activity and visitors they generate during event times can be disruptive to the operation of other uses in the MIC.
- **WOSCA Site.** The WOSCA site is a major redevelopment opportunity that is in public ownership in a key location in SODO within the Stadium Transition Overlay District. Redevelopment of this 5-acre site will occur under the guidance of the Washington State Department of Transportation. Land use jurisdiction remains with the City of Seattle and the Comprehensive Plan calls for industrial redevelopment of this site (Policy LU 13.26).

Land Use- Goals and Policies

Goal DLU.1 Water-dependent maritime uses and associated infrastructure on the shores of the Duwamish River and Elliot Bay, which are of exceptional value to the city and the region, remain viable and protected for the very long term.

DLU.1 Existing citywide policies, regulations and programs

Goal DLU.1 is advanced through citywide goals and policies in the Container Port and Shoreline Areas element of the Comprehensive Plan. A critical purpose of land use in the Duwamish MIC is supporting maritime cargo and other industrial maritime uses and making sure suitable land is available (CP 1.1 and CP 1.2) Specific policies Shoreline Areas element address prioritizing retention and expansion of water dependent and water related businesses on appropriate shorelines (SA 37), designation of appropriate land adjacent to deep water for industrial uses that require such conditions (SA 38), and identification and designation of land for water-dependent businesses and industrial uses such as cargo-handling facilities, tug and barge facilities, ship building and repair, and support for the fishing industry (SA 40). These policies are implemented in part through the Shoreline Master Program which designates land for water dependent industrial uses and establishes use and development regulations for parcels within 200 feet of the shorelines of the Duwamish River and Elliott Bay.

DLU.1 Duwamish MIC-Specific Policies

- DLU 1.1 Protect encroachment of non-industrial uses near shorelines by applying the Maritime Manufacturing and Logistics zone generally to shoreline adjacent parcels plus a buffer area generally consisting of a minimum of one or two city blocks.
- DLU 1.2 Avoid siting major new land uses that could disrupt the functionality of critical rail and truck infrastructure links to container port facilities and other water-dependent uses.

Goal DLU.2: Predictable land use policies result in continued industrial activity in the Duwamish MIC.

DLU 2 Existing citywide policies, regulations, and programs

As part of the Industrial and Maritime Strategy the City adopted comprehensive plan policies and regulations intended to prioritize industrial land for industrial uses that apply to the Duwamish MIC. These included:

- **Limits on removing industrial land from Manufacturing and Industrial Centers.** Policy LU 13.3 in the Land Use element limits opportunities to remove land from MICs to major updates of the Comprehensive Plan (every 10 years) or as part of a City-led comprehensive evaluation of industrial land uses. The intent of this policy is to reduce speculation that leads to industrial displacement and to prevent establishment of new adjacent incompatible land uses through piecemeal removal of lands from the MICs.

- **Size of use limits.** Development regulations place restrictions on the maximum size of use of incompatible land uses such as large format retail operations within MICs. These regulations were initially adopted in 2007 and updated in 2023 to place tighter limits on incompatible uses. Additionally, ministorage facilities are prohibited in MICs (SMC 23.50A.008).

DLU.2 Duwamish MIC-Specific Policies

DLU 2.1 Avoid changes to zoning and land use regulations or other City-led initiatives that adversely effect operations at major legacy industrial installations in the Duwamish MIC, such as manufacturing facilities and heavy materials processing plants.

Goal DLU.3: High-capacity transit lines in the Duwamish MIC support transit-oriented development and employment density that is compatible with industrial activity.

DLU.3 Existing citywide policies, regulations, and programs

The Duwamish MIC is the the location of two Sound Transit Link light rail stations (Stadium and SODO) and will be the location of up to two additional stations (Delridge and Dearborn). Comprehensive Plan policies (LU13.7) and development regulations (SMC 23.53A) address the unique challenges of leveraging the benefits of high capacity transit within an industrial land use context. The Industrial and Maritime Strategy established a new zone, the Industry and Innovation (II) zone (discussed above) for areas surrounding future stations. This zone requires ‘bonafide’ industrial land uses (SMC 23.50A.120) built to industrial standards (23.50A.120.A.2) as a condition for allowance of commercial uses on the same site through an incentive system. The goal of this zone is to achieve employment density in proximity to stations. Residential uses are not permitted in the II zone. Other standards include requirements for transportation demand management programs, parking maximums, and street types that can safely accommodate both pedestrian and freight movement.

DLU.3 Duwamish MIC-Specific Policies

- DLU 3.1 Maintain Industry and Innovation zoning in the vicinity of the SODO and Stadium stations in order to promote industrial transit oriented development and high density employment in proximity to transit, and consider applying Industry and Innovation zoning around potential future light rail stations in the Duwamish MIC.
- DLU 3.2 Encourage new innovative forms of industrial transit oriented development that include structures with a combination of industrial uses and activities on the ground floor and dense employment and technology uses in upper floors.
- DLU 3.3 Pursue partnerships with other public agencies and economic development organizations to advance a concept for an industrial transit oriented development demonstration project in the Duwamish MIC adjacent to a light rail station, which

supports industrial uses and has a public-facing component to highlight the economic and social value of industrial uses to a broad audience.

DLU 3.4 Consider a onetime adjustment to Duwamish MIC boundaries once Link light rail station locations for the West Seattle Link Extension are finalized. A one-time adjustment that removes land from the MIC should only occur if at least one of the following conditions is met:

- Station construction and guideway alignment isolate small areas of industrial land from the remainder of the MIC.
- create a defined area separate from the remainder of MIC and a boundary adjustment would advance other City led planning initiatives and/or Centers Plans.
- Boundary adjustments can be accommodated and result in no net loss of viable industrial land.

Goal DLU4: Healthy transitions exist between core industrial areas and nonindustrial areas.

DLU 4 Existing citywide policies, regulations and programs

Comprehensive Plan policies (LU 13.7, LU 13.12, LU 13.23, and LU 13.25) and development regulations (SMC 30.010) include establishment of the Urban Industrial (UI) zone within MICs. The UI zone provides a transition between core industrial areas and nonindustrial areas. The intent of this zone is to create a healthier transition to nonindustrial areas, minimize impacts of heavy duty industrial uses on nonindustrial areas, and accommodate a growing sector of low-impact industrial uses with public facing components such as breweries and makers spaces. Street improvement standards for these areas also require full street improvements, street trees, and a street type that allows for the safe movement of pedestrians and freight. In the Duwamish MIC this zone is found on the areas adjacent to Georgetown and South Park and along 1st Avenue from Royal Brougham Way to S Lander Street.

DLU.4 Duwamish MIC-Specific Policies

- DLU 4.1 Enhance accessibility of public facing uses in the Urban Industrial zone to residents of Georgetown and South Park and to other visitors, particularly those arriving on foot.
- DLU 4.2 Promote dialogue between community organizations in Georgetown and South Park and industrial and economic development focused organizations in the MIC, including information sharing about the needs and aspirations of both stakeholder groups.
- DLU 4.3 If changes to transportation infrastructure as part of Reconnect South Park occur, explore potential for making land available for potential new investment and development, encourage a revitalized use of land with a mix of industrial and non-industrial uses consistent with the intent of the Urban Industrial zone.

Goal DLU5: Industrial and maritime uses operate effectively in the north portion of the MIC and are coexistent with vibrant sports and entertainment uses and related businesses in the stadium district.

DLU 5 Existing citywide policies, regulations, and initiatives

SMC Section 23.74.004 establishes the Stadium Transition Overlay District (STAOD) and contains specific zoning and development standards for the area. The STAOD addresses large sports facilities and allows uses complementary to them. It is intended to contribute to a safer pedestrian environment for those attending events and permits a mix of uses, supporting the pedestrian-oriented character of the area as well as the surrounding industrial zone, while minimizing conflicts with industrial uses. Within the overlay district, use provisions and development standards are designed to create a pedestrian connection with downtown, discourage encroachment on nearby industrial uses to the south, and create a pedestrian-friendly streetscape. Allowing a mix of uses, including office development, restaurants, lodging, residential uses, and maker uses and arts, is intended to encourage redevelopment and to maintain the health and vibrancy of the area during times when the sports facilities are not in operation.

- DLU 5.1 Encourage a broader mix of uses and a stronger orientation to retail and entertainment uses within the STAOD than in other parts of the MIC, including lodging, but do not allow any residential uses and do not amend codes to enable even limited residential uses or residential uses under conditions.
- DLU 5.2 Plan for the eventual redevelopment of the WOSCA site and work with partners to create an innovative master plan for site reuse. Features of the master plan should include:
- Minimum component of industrial and maritime uses, including a strong maritime focus and potential inclusion of a new Washington State Ferries headquarters
 - Dense overall economic activity and employment
 - A component of uses and designs that relate to and support the stadium district
 - A safe and pleasant walking environment on 1st Ave. S.
 - Integration with transit and very low SOV trip generation
 - Highly sustainable utility infrastructure and aggressive use of green building
 - A pleasant network of trails and walkways for internal circulation
 - Abundant greenery, native landscaping, and habitat restoration

TRANSPORTATION



The SODO Sound Transit Station can be an important transportation connection for workers in the Duwamish MIC.

Transportation – Background and Existing Conditions

Multi-modal transportation infrastructure is critical to Duwamish MIC's continued vitality. Vehicle transportation infrastructure facilitates efficient movement of freight, public transit provides access to jobs, and bike and pedestrian facilities provide safe non-motorized movement throughout the area. A multi-modal transportation network reduces reliance on single occupancy vehicles thereby advancing the City's climate goals.

The Seattle Transportation Plan (STP), a 20-year blueprint to modernize and adapt Seattle's streets to meet our needs today and tomorrow, was adopted in April 2024. It guides how Seattle will provide mobility throughout the city to promote movement of freight and workers to and within the Duwamish MIC. The STP includes six overarching goals and numerous policies ("key moves") to advance the goals. The Transportation element of this Duwamish MIC plan draws heavily from the STP.

Duwamish MIC Subarea Freight Network

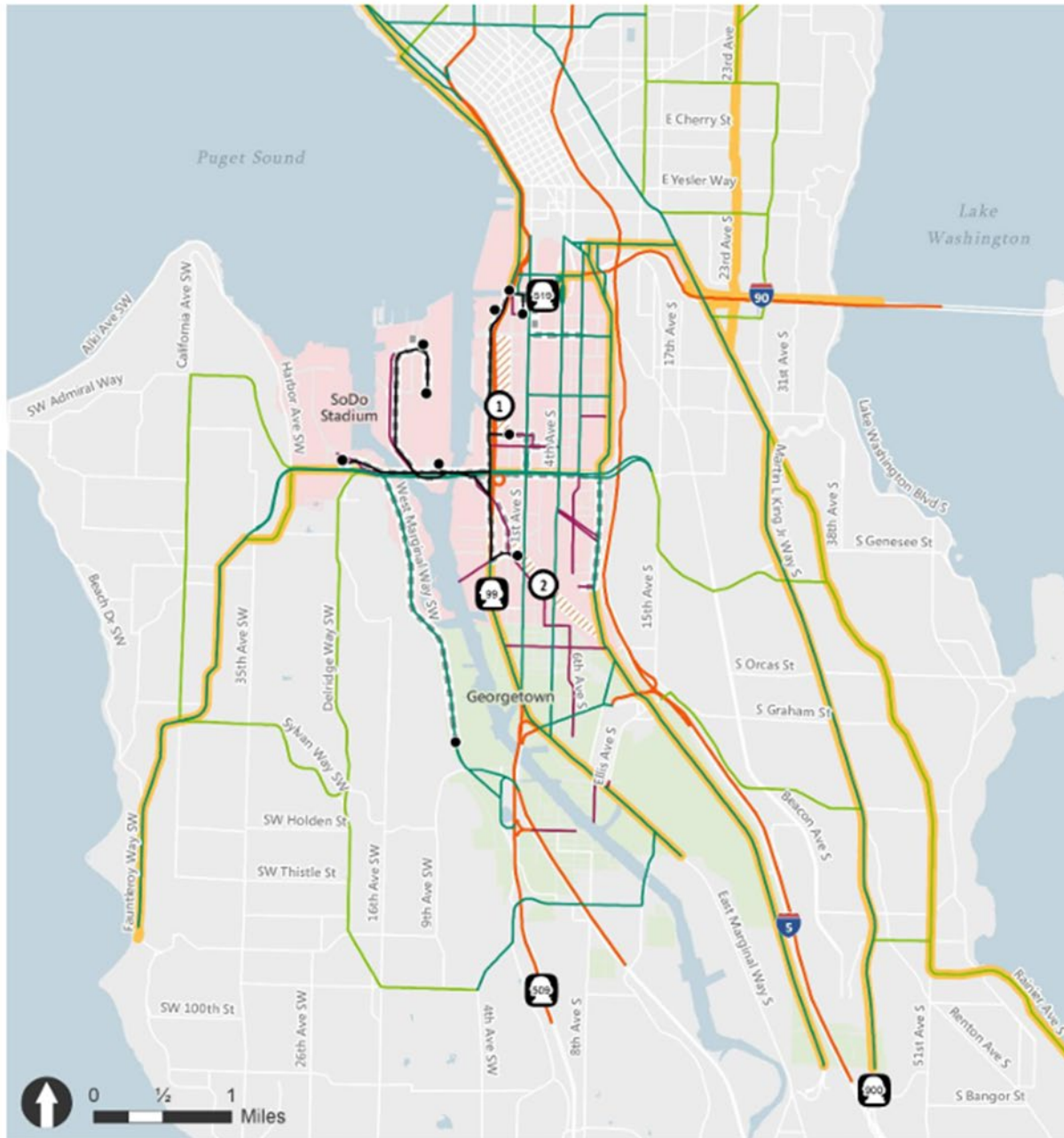
While freight is allowed to drive on all arterials when necessary to reach their destination, an effective network for freight movement is a critical component for a designated Manufacturing and Industrial Center. The STP identifies a citywide network for freight movement. The freight network designations indicate key routes that trucks use to access the Port, key freight designations, and the regional highway system. This network uses four designations based on truck volumes, land use connections, network connectivity, and roadway classifications. The freight network designations indicate key routes that trucks use to access NWSA/Port of Seattle facilities, freight destinations, and regional highways. Limited access facilities are connected to major truck streets and, to a lesser degree, to minor truck streets. First-/last-mile connectors are primarily accessed by major and minor truck streets and are located within the MICs. The freight network map for the Duwamish MIC is on the following page.

Designated Major Truck Streets within the Duwamish MIC include West Marginal Way SW, East Marginal Way S, 1st Ave S, 4th Ave S, 6th Ave S, Airport Way S, S Royal Brougham Way, S Atlantic Street, S Holgate Street, S Lander Street, S Spokane Street, and S Michigan Street. The traffic study conducted as part of the Industrial and Maritime Strategy Environmental Impact Statement did not identify any gaps in the freight network but found that over the next 20 years increased demand by all vehicular traffic could weaken the reliability of the freight network.

Rail also plays an important role for freight movement in the Duwamish MIC. Two Class 1 railways operate in the MIC – the BNSF Railway and the Union Pacific. In addition, Amtrak has a maintenance yard in the SODO area of the MIC. The MIC includes several local rail spurs that provide direct rail service to businesses and to Port of Seattle facilities.

As the city continues to grow, so does the demand for freight transport. This includes the delivery of urban goods and services in a range of forms, from heavy duty commercial trucks to medium-duty delivery vans to light-duty trucks. With limited rights-of-way (ROWs), the future of freight movement for urban goods will rely on using existing available roadway lane capacity to maximize safety and efficiency.

Duwamish MIC Freight Network Map



Freight Network

- Major
- Minor
- Industrial
- Limited Access

Terminal & Rail Yard Gate

- Terminal & Rail Yard Gate
- Seaport Intermodal Connector
- Over-Legal Route
- ▬▬▬ Heavy Haul Street
- ▨▨▨ Balmer Yard Intermodal Facility

Industrial Lands Subareas

- Georgetown
- SoDo Stadium

Intermodal Facility

- 1 ▨▨▨ BNSF SIG
- 2 ▨▨▨ Union Pacific ARGO



Map Date: September 2022

Duwamish MIC Transit Network

The Duwamish MIC and surrounding neighborhoods are served by King County Metro and Sound Transit public transit including local, rapid, and express fixed route bus services as well as light rail. King County Metro operates a fixed route bus system that includes several bus routes that provide direct service within the Duwamish MIC. These are:

- Link Light Rail.
- Route 60. Connects the Georgetown/South Park portion of the Duwamish MIC with Westwood Village, Beacon Hill, and First Hill/Capitol Hill with frequent bus service.
- Route 21. Provides frequent service between West Seattle, the Duwamish MIC, and downtown Seattle.
- Route 50. Provides frequent service running from the northern half of West Seattle through the Duwamish MIC, across Beacon Hill to Othello station.
- Route 101. Provides frequent service from Renton, through the Duwamish MIC, to downtown Seattle.
- Route 124. Provides frequent service between the Tukwila Sound Transit light rail station through the Duwamish MIC to downtown Seattle.
- Route 131/132. Provides frequent service from Burien through White Center, the Duwamish MIC, to Downtown Seattle.
- Route 150 provides frequent service connecting South Lake Union and downtown Seattle to south King County via the SODO busway.

The Metro transit routes provide connections to Sound Transit Express and Community Transit buses that provide service from outside the city. Existing Sound Transit Link light rail stations in the Duwamish MIC (SODO Station and Stadium Station) can be accessed by Metro routes 50, 101, 131/132, and 150. Sounder commuter trains that provide service from King Street Station north to Everett and south to Tacoma can also be accessed from the Duwamish MIC via bus connections.

Planned future expansion of Sound Transit's Link light rail has important implications for the Duwamish MIC. The West Seattle Link Extension (WSLE) will add 4.1 miles of light rail service from SODO Station to Alaska Junction. One new station will be in the Duwamish MIC in the Delridge neighborhood adjacent to Nucor Steel and another (as part of the Ballard Link Extension) will be in the Duwamish MIC in the Dearborn area (just south of Chinatown/International District). Service is currently estimated to start in approximately 2032.

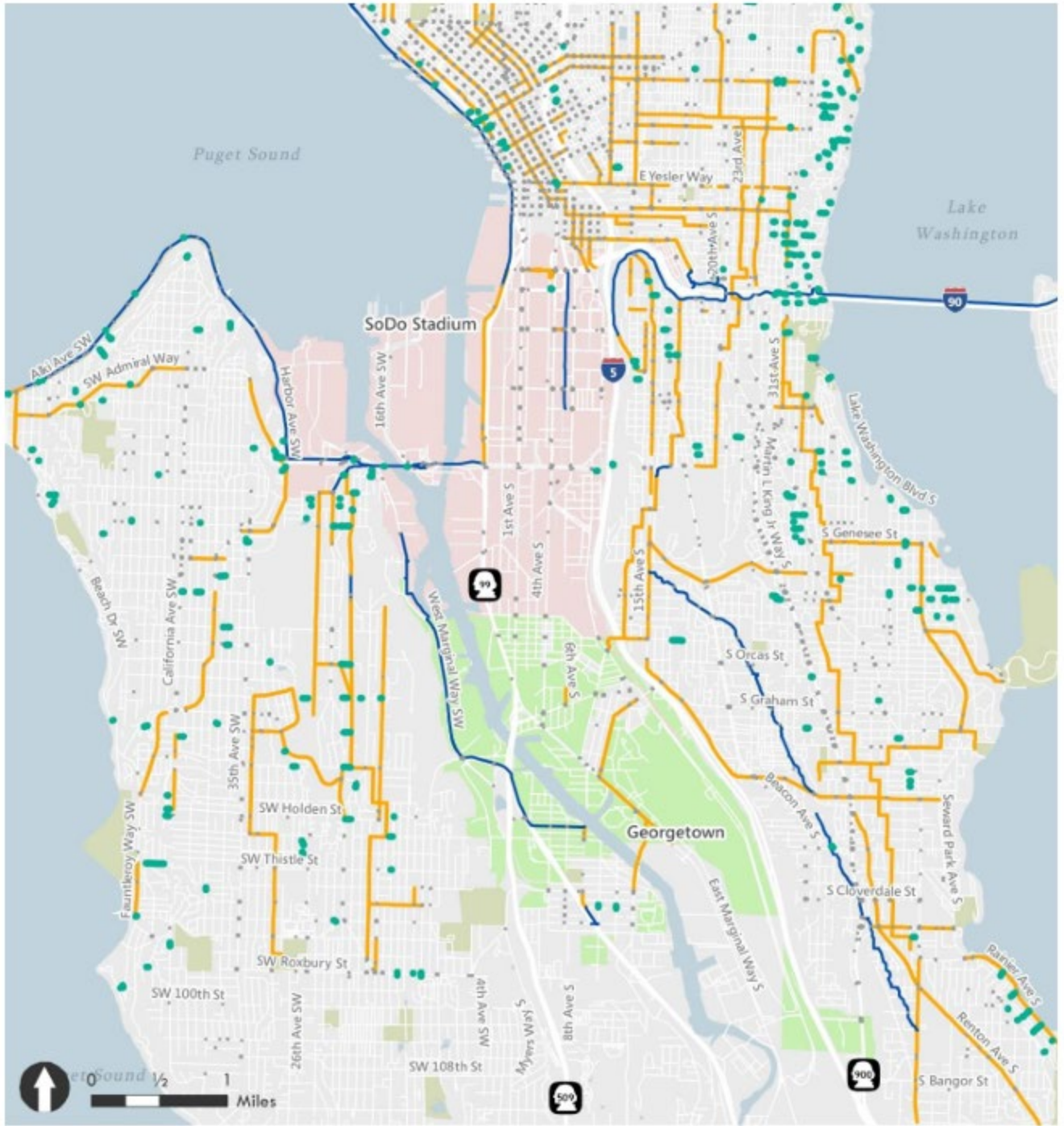
Active Transportation Network

The active transportation network consists of pedestrian and bicycle facilities. In the northern portion of the MIC, the pedestrian network is generally complete north of the West Seattle Bridge, with sidewalks on both sides of many arterial streets. Marked crosswalks and curb ramps exist at

the major intersections within the area, along the north/south corridors of 1st Avenue, 4th Avenue, 6th Avenue, and Airport Way. However, the major east/west corridors in the area are spaced about half a mile apart, which limits crossing options and increases travel distances for people looking to cross the street between these intersections. South of the bridge, sidewalks only exist along E Marginal Way, 1st Avenue S, and 4th Avenue S, with very limited marked crossings. West of the waterway on Harbor Island and Terminal 5, sidewalks exist on portions of 16th Ave SW and along the lower Spokane Street Bridge, but the only marked crosswalks are at the port access intersections along the Spokane Street Bridge.

Throughout the Duwamish MIC there are limited bicycle facilities but additions in recent years have improved bicycle connectivity. The Georgetown to Downtown safety project includes a new protected bike lane connecting Georgetown to Downtown on Airport Way S. and 6th Ave. S. The East Marginal Way Corridor Improvement Project was completed in 2025. It extends along E Marginal Way S from S Atlantic St to 1st Ave and includes separated facilities for people walking biking and rolling. Sharrows are present along 1st Ave S and S Lander St but the Lander St overpass has a multiuser trail on the northern side. The multi-use SODO Trail provides a bicycle connection between the SODO and Stadium Link Light Rail stations and there are bike lanes along E Marginal Way S connecting the Elliott Bay Trail and the Alki Beach Trail and a recently completed Duwamish Trail along W Marginal Way S.

The southern portion of the MIC has a less dense pedestrian network than the northern portion, with sidewalks on both sides of the streets along the arterials such as Airport Way S, Ellis Avenue S, and S Michigan Street. Sidewalks also exist in the residential neighborhood located between Corson Avenue S and Ellis Avenue S. A recently constructed multiuse trail connects the South Park and Georgetown neighborhoods. The Duwamish River Trail runs along the west side of the MIC providing a north-south route along the west side of the river from the Stadium District to South Park. Bicycle sharrows exist on some local streets and separated bike lanes are present on Ellis Avenue S and E Marginal Way S. Connections across the Duwamish Waterway are limited for all users: there is a shared use facility running alongside the 1st Avenue Bridge and sidewalks are provided on both sides of the South Park (16th Ave S Bridge).



- Marked Crosswalk
- Industrial Lands Subareas
- Stairway
- Georgetown
- Multi-use Trail
- SoDo Stadium
- Bicycle Lane
- Public Land

BERK
Map Date: June 2021

Future Projects and Funding

The Seattle Transportation Plan (STP) guides future transportation funding, including local, state, and federal funding. The STP provides a list of potential transportation system investments for the next 20+ years. This project list is used to create a long-term funding strategy to build the projects, implement the programs, and maintain the transportation assets that the Duwamish MIC and all of Seattle need. Appendix A lists freight projects identified in the STP (STP Freight Element Appendix A) that are directly relevant to this Duwamish MIC plan. It should be noted that the project list includes all freight related projects serving both the BINMIC and the Duwamish MIC (and some outside the MIC boundaries).

The Seattle Department of Transportation (SDOT) routinely seeks Federal Railroad Administration (FRA), Federal Highway Administration (FHWA), Federal Transit Administration (FTA), and other federal grants available to address freight improvements. The City pursues grants that align project delivery timelines with federal funding opportunities. This includes advancing entire corridor improvements that can be constructed in partnership with public and private sector partners to raise investment for complex freight projects.

In November 2024 the City of Seattle passed an eight-year \$1.55 billion local transportation levy to maintain and modernize Seattle's transportation infrastructure. The levy includes \$45 Million dedicated specifically to freight and goods movement. Other major components of the levy, including Bridges & Structures and Street Maintenance & Modernization, will benefit transportation infrastructure in the Duwamish MIC as well. The City will prepare and publish eight annual levy delivery plans that set a framework for improvements across the city, with an emphasis on safety, infrastructure, and community-driven projects. A levy oversight committee monitors budgets, tracks progress on projects, and makes sure the funds are used as promised to Seattle voters.

Transportation- Key Issues and Opportunities

Several key issues and opportunities for the transportation network in the Duwamish MIC are highlighted below. These inform the plan's goals and policies.

- **Maintaining a Safe, Effective, and Efficient Freight Network:** For both MICs in Seattle, the freight network is an essential component of ongoing viability and vitality. Freight connections between the two MICs, to the regional highway system, and last mile connections to industrial uses and shoreline maritime uses are all critical to the ongoing success of the MICs and must be maintained and enhanced as the city continues to grow. Freight and Bus lanes may offer an additional tool once results of pilot studies are complete.
- **Integrating the Sound Transit West Seattle Link Extension (WSLE) and Ballard Link Extensions (BLE):** The Duwamish MIC is planned to add two new transit stations (Dearborn and Delridge) in addition to the two existing (Stadium and SODO) stations. These stations can be an asset to the MIC by providing alternatives to general-purpose vehicle trips that interfere with freight movement in key corridors. However, the WSLE also creates risk for the Duwamish MIC due to potential for disruption during construction, displacement of water dependent industrial uses at the Duwamish River crossing, and potential for market pressure competing with industrial land uses near the light rail stations.

- **Reconnect South Park:** Reconnect South Park is a study analyzing how future SR 99 corridor configurations could affect regional and local freight movement. Maintaining consistent freight access and predictable operations, avoiding new routing constraints, and supporting the continued efficiency of industrial activity in the corridor.
- **Safe active transportation:** Throughout the MIC, bicycle facility additions in recent years have improved bicycle connectivity, especially given safety projects such as Georgetown to Downtown, Georgetown to South Park, West Marginal Way trail completions and e Marginal Way Corridor Improvement (North). The Duwamish MIC has safety challenges according to data about past collisions and faces the future potential for collisions between trucks, autos, and rail and vulnerable users, such as people walking, biking, or riding scooters. However, the City has safety programs that are aimed at reducing the number of collisions - which have potential to benefit both the safety of active transportation users and the reliability of the transportation system for all automated modes.

Transportation- Goals and Policies

Goal DT.1: Existing constraints and weak points in the Duwamish MIC transportation network are addressed and improved by the 2044-time horizon of the subarea plan.

DT.1 Existing Citywide Policies, Regulations, and Programs

The Comprehensive Plan Transportation element contains policies to enhance the freight network connecting the MICs to the regional transportation network (T 6.1, T 6.2, and T6.3). The Container Port Element has policies to defend the freight network as well as improve them and address freight bottlenecks (CP 1.6) The STP identifies key moves that will help address constraints and weak points in the Duwamish MIC transportation network. The STP places a high priority on improvements to the active transportation network (Key Move PG2); supports access to jobs, freight movement and growth in deliveries (Key Move PG4. The STP has eight additional elements that focus on different parts of the transportation network. Elements with a clear connection to Duwamish MIC Goal DT.1 include the *Freight and Urban Goods Movement Element* and the *Transit Element*. These elements have numerous implementation strategies directly addressing Goal BT.1.

In addition to transportation investments by the City and its partners, new development will also contribute to transportation improvements consistent with recently adopted land use code changes. New Urban Industrial and Industry and Innovation zones include requirements for development to make contributions to sidewalks, pedestrian lighting, and non-motorized infrastructure.

DT.1 Duwamish MIC-Specific Policies

DT1.1 Integrate an innovative and comprehensive transportation approach when planning for potential partial or full closure of S. Holgate Street across the railway tracks. Address quality alternatives for freight movement and strive to provide safe and comfortable connections for people walking and rolling in the same general location.

DT1.2 Continuously maintain and upgrade the designated heavy haul network. As improvements are made place a high priority on freight and safe infrastructure for people walking and rolling and place a relatively lower priority for general-purpose vehicle traffic on these routes.

DT1.3 Strive to improve last mile connections for pedestrians and non-motorized travelers between major employers and the SODO Sound Transit Station.

DT1.4 Monitor and improve safety at at-grade rail crossings.

DT1.4 Develop typologies in Streets Illustrated that provide specific concept designs for street improvements that can be implemented in conjunction with new development in Urban Industrial and Industry and Innovation zoned areas in the vicinity of the SODO Sound Transit Station.

Duwamish MIC Goal DT.2: High efficiency use of limited rights of way achieves a well-functioning transportation network for freight and all other modes to and through the Duwamish MIC.

DT.2 Existing citywide policies, regulations, and programs

The STP identifies many key moves and implementation strategies, especially within the *Freight and Urban Goods Movement*, and the *New and Emerging Mobility* elements, that advance Goal DT.2. Particularly relevant are strategy F40 about expanded use of digital technologies for vehicle loading/unloading, F42 concerning real-time information, and F36 exploring implementation of dedicated freight (truck-only) lanes and freight-and-bus (FAB) lanes (pilot study to be complete in 2027). The STP also includes direction to “work with employers and property managers to provide sustainable transportation options, education, and incentives for shift workers, non-peak hour commuters, small business employees, and workers in MICs.”

The demands on the transportation system have changed and will continue to change as the population grows. CP 1.9, 1.10, and 1.11 outline planning strategies to proactively check-in on the freight network and make sure that it operates as necessary for maritime cargo to move and international trade to occur in the Duwamish MIC.

Recently adopted land use regulations will also advance Goal DT.2. The Industry and Innovation zone requires employers with 50 or more employees to develop a transportation demand management plan at the time of new development and limits the amount of parking for private vehicles that may be included in new development (see SMC 23.54.015.C.5).

DT.2 Duwamish MIC-Specific Policies

DT2.1 Strive to achieve a mode split goal of no more than 50% of trips by single-occupant vehicles.

DT 2.2: Design and implement last mile connections from Duwamish MIC transit stations and stops - anticipating arrival of future Link light rail – that make trips to industrial and non-industrial jobs a convenient option for workers.

DT 2.3: Expand use of Transportation Demand Management (TDM) strategies beyond those required of employers in the Industry and Innovation zone.

Duwamish MIC Goal DT.3: The Duwamish MIC’s shoreline and maritime uses have strong intermodal connections to freight and rail that connect to local, regional, and national distribution networks.

Existing citywide policies, regulations, and programs

The Transportation element of the Comprehensive Plan includes policies that support the maintenance and improvement of intermodal freight connections (T5.7) and the Container Port element includes policies addressing access to intermodal facilities (CP1.6, CP1.7, CP 1.8). The STP also advances goal DT.3, stating: “Preserve and enhance access to employment and mobility for freight and goods movement—especially east-west connections—between MICs, neighborhoods, accessing ports and working waterfronts, inter-modal facilities, and other key destinations.”

Duwamish Goal DT.4: The Duwamish MIC has a network of safe multi-modal trails and pedestrian pathways that harmoniously co-exist with vehicle and freight circulation.

DT.4 Existing citywide policies, regulations, and programs

The City has a Vision Zero policy that aims to reduce the number of fatalities and serious injuries to zero by 2030. Recent examples of actions that further the Vision Zero goal include widespread reductions in speed limits along city streets and the introduction of leading pedestrian intervals (timing signals to give people walking a head start before the vehicles receive a green light) to make pedestrians more visible to vehicles. SDOT also regularly studies intersections and corridors that have been identified by the community or through collision data review as needing safety improvements. The City will continue to monitor traffic safety and take any necessary steps to address areas of high need particularly to protect the most vulnerable users.

DT.4 Duwamish MIC-Specific Policies

DT 4.1 When designing transportation improvements provide dedicated facilities to separate vulnerable users from motorized traffic and freight whenever possible.

DT 4.2 Add design elements to the Duwamish MIC transportation system that make vulnerable users more visible to truck and auto drivers, including:

- Signals to make crossing roadways easier,
- Rapid flashing beacons to alert drivers to people crossing the street,
- Curb bulbs or extensions to shorten crossing distances, and
- Protected and buffered bicycle lanes and multi-use trails.

DT 4.3 Connect and enhance the quality of multi-modal trails in and through the Duwamish MIC in a manner that does not impact freight access to industrial and maritime uses. (see also Environment and Open Space element).

ECONOMY



In addition to its thriving maritime sector, the Duwamish MIC provides employment opportunities across a wide variety of industrial sectors.

Economy – Background and Existing Conditions

The Duwamish MIC is a critical regional resource that provides economic diversity for Seattle, supports national and international trade, and provides a variety of family-wage jobs that are accessible to a wide range of workers. It is an employment location that serves both current and long-term regional economic objectives. Six economic sectors that are important to the Duwamish MIC's existing and future economy are highlighted in the following sections.

The Duwamish MIC is supported by strong economic development organizations. The SODO Business Improvement Area (BIA) has its offices near the center of the area at S. Lander St. The mission of the SODO BIA is to advocate for a safe, clean, connected, and engaged SODO for the benefit of property owners, businesses, tenants, employees, and patrons of the SODO district. In 2025 the Sound Industrial Alliance was established as a nonprofit 501c (4) organization dedicated to strengthening Seattle's manufacturing, maritime, logistics, and industrial sectors. Both organizations are highly active in economic matters of the Duwamish MIC and are a strong asset for the area.

Maritime Sector

The maritime sector is a key component of PSRC's regional economic strategy and is among Washington's oldest and most diverse economic sectors. In 2018, the central Puget Sound region employed 26,000 workers across fishing and seafood processing, shipyards, recreational boating, water transportation, maritime logistics and shipping, and support services.

Key factors that may have an impact on maritime sector growth include:

- Major international container port facilities operated by the Northwest Seaport Alliance/Port of Seattle
- New maritime innovations, such as advanced metering of mechanical and fuel systems, the electrification of ferry fleets, and clean energy technologies tied to maritime projects and vessels
- The Northwest Seaport Alliance/Port of Seattle 5-year investment plan.

Maritime activity in the Duwamish MIC includes a significant concentration of maritime installations and terminals along and around the Duwamish River shoreline and Elliott Bay. This includes Harbor Island, with major shipyard terminals, Vigor Shipyards and Vane Brothers, Port of Seattle Terminals 5 and 18 that handle container cargo. Terminal 5 recently completed a major modernization. Terminals 5 and 18 feature on-terminal rail. Other maritime uses in the Duwamish MIC are located closer to Georgetown on the east bank of the Duwamish River and consist of numerous heavy industrial operations including cement, materials, recycling/refuse handling, and logistics companies that rely on barging and water access,

The South Park riverfront is a location for numerous heavy industrial operations that rely on land and marine transport including the Alaska Marine Lines (AML), materials handling and logistics companies, and marine services.

Transportation and Logistics Sectors

Statewide, the Global Trade & Supply Chain Management System directly employed 94,000 workers in 2017, including jobs in warehousing, logistics, intermodal operations, and freight forwarding. In the Duwamish MIC this sector provides approximately 8,200 jobs.

Two significant rail yards – the BNSF SIG Rail Yard and the Union Pacific Argo Yard – are in the Duwamish MIC. The Stacy Yard hosts transloading—a practice whereby containers are transferred from ships via short-haul trucking and loaded onto trains. The Union Pacific Argo Yard tracks bisect the MIC and carry train traffic to destinations north and south. Other rail-related facilities include the Amtrack maintenance facility and several lines providing direct rail connectivity to logistics businesses.

The presence of rail and marine infrastructure supports a cluster of logistics focused businesses in the Duwamish MIC and other businesses dealing in heavy materials that are dependent on rail and/or marine infrastructure. Examples are numerous and include Ash Grove Cement, Alaskan Copper, Nucor Steel, Alaska Marine Lines, Pasha Logistics, and Republic Services (a refuse transfer station and recycling facility). Rail and marine terminals have been a fixture in the area for at least 100 years.

Construction and Utilities Sectors

In 2018, the construction and utilities sectors employed 34,400 workers in Seattle, including self-employed workers. The sector is reliant on industrial lands as a location for assembly areas, production space, headquarter offices, and vehicle and equipment storage. In the Duwamish MIC this sector accounts for approximately 9,700 jobs.

Aerospace & Supply Chains

The Duwamish MIC has a long history as a location that supports the aerospace industry, with Boeing’s original headquarters located in south King County. The presence of the King County International Airport adjacent to the Duwamish MIC supports aerospace-related companies. The aerospace sector is a source of many well-paying jobs and has a large industrial lands footprint. Recent estimates of aerospace employment in the Duwamish MIC exceed 6,000 jobs.

Key factors that may have an impact on growth in the aerospace sector include:

- Business (and employment) cycles impacted by aircraft demand across the globe
- Composites and other fuel-saving technologies as important and growing elements of new aircraft
- Continued access to the Port of Seattle, providing a competitive advantage to aerospace and the supporting supply chain
- Strong investment in research and development for aerospace, including space and unmanned systems which support the broader industry

Food & Beverage Production Sectors

Industrial lands are increasingly home to small- and medium-scale food and beverage production. The Duwamish MIC is home to numerous wineries, breweries, and distilleries that require the predictability of industrial zoning to continue operations.

The food and beverage processing and manufacturing industry in industrial areas is forecasted to grow at 2.5% per year on average, adding roughly 3,400 jobs by 2044. Breweries, wineries, and frozen and canned food production are some of the largest sectors in the food and beverage cluster, which currently provides approximately 2,700 jobs in the Duwamish MIC.

Information and Computer Technology (ICT) Sector

The ICT sector³ is an important part of the business mix in the Duwamish MIC. Integration of information technology is happening in all fields, including industrial processes. The line between industrial and non-industrial activities is not as clear as it was in the past. ICT includes the following subsectors:

- **ICT Business Services:** A range of business-to-business activities from repair services to custom programming and Internet Services & Publishing: Web hosting and data processing
- **Manufacturing:** The semiconductor industry and many smaller electronics and communications equipment firms
- **Software:** Computer software and game design and production
- **Telecommunications Services:** Installation, maintenance, and service provision of broadband and mobile utilities and technologies

Numerous ICT companies are based in the Duwamish MIC and vicinity and include a high concentration of employees. Several innovative technology companies related to maritime activity were supported by the Washington State Maritime Blue initiative and are examples of businesses that are extensively engaged in ICT intellectual property creation that also have a direct link to maritime and industrial sectors.

Overall Industrial and Non-Industrial Employment

The Duwamish MIC is a mature industrial center, and future job growth will result from redevelopment of existing land. Overall, there is a low building vacancy rate in the Duwamish. The proportion of industrial jobs in the Duwamish MIC is 66% of all employment. With continued growth of existing sectors and growth of emerging industries, there will be an estimated 12,000 additional industrial jobs and total job growth of 19,340 jobs by 2044.

³ developed by CAI in the Washington Technology Industry Association ICT Economic and Fiscal Impact Study, February 2015.

Duwamish MIC Employment by Sector		
Employment Sector	Employment	Proportion of All
Construction	9,752	14.6%
Manufacturing	12,541	18.7%
Other Industrial	4,750	7.09%
Transportation, Distribution &	8,204	12.25%
Warehousing & Wholesale	8,928	13.3%
Total Industrial Employment	44,175	65.9%
Total Non-Industrial	22,793	34.0%
Total Employment	66,968	100%

Economy- Key Issues and Opportunities

Several key issues and opportunities for the economy in the Duwamish MIC are highlighted below. These inform the goals and policies in this plan.

- **Expanding light rail.** West Seattle Link Extension has important implications for the Duwamish MIC economy. Good transit access is attractive to employers particularly in ICT, Cleantech, and other office uses. Locations near new light rail stations will have very good access to the region’s growing population and economy.
- **Potential conflict between industrial and residential uses:** New and existing residential uses in areas adjacent to the Duwamish MIC have the potential to result in conflicts between residents and legacy industrial uses.
- **Maritime innovations.** Extensive innovation is taking place in maritime and ocean-related fields. Advancements are occurring related to the transition of fleets and vessels to cleaner fuels, wind and wave energy technologies, and related to ocean biology and climate. The Duwamish MIC is well-positioned to capture economic growth related to maritime innovation.

Economy – Goals and Policies

Goal DED.1: Strong manufacturing and other industrial sectors and the jobs they provide are present and increasing in the Duwamish MIC.

DED.1 Existing citywide policies, programs, and regulations

Policies in the Land Use element of the Comprehensive Plan advance the goal of supporting and retaining manufacturing and industrial jobs and businesses in the MIC and are complimentary to Economic Development Goal DED.1. As part of the Industrial and Maritime Strategy both the Comprehensive Plan and the City’s zoning code were amended to strengthen policies and regulations to prevent industrial displacement in the MICs, and included:

- Limits on removal of land from MICs (Policy LU 13.3)
- Limits on the size of use of nonindustrial uses (SMC 23.50A.018)
- Prohibition of new ministorage warehouses (SMC 23.50A.040)
- A zoning framework that provides for the majority of land in the Duwamish MIC to be in a core industrial zone.
- Noise ordinance amendment to support operation of shoreline businesses

Additionally, the Comprehensive Plan’s Economic Development element includes policies on retaining and supporting key economic sectors, including maritime and industrial. Relevant policies address supporting industrial and maritime structures through workforce development programs and regional partnerships (ED 2.1 and ED 2.2).

DED.1 Duwamish MIC-Specific Policies

- DED 1.1 Work with non-government partners and other government agencies to do broad public education about the value of maritime and industrial activities for the Seattle and regional economy.
- DED 1.2 Ensure that major public works projects are designed to preserve functionality and operation of maritime and industrial operations, in addition to serving new transportation demands.
- DED 1.3 Establish regular communications and dialogue between government agencies and longstanding industrial and maritime businesses in the Duwamish MIC so the needs and challenges of continued operation in a legacy location are understood.

Goal DED.2 Equitable access to the living wage jobs is provided in the industrial and maritime sectors.

DED.2 Existing citywide policies, regulations, and programs

The Economic Development element of the Comprehensive Plan contains numerous policies addressing MIC workforce development goals. These include policies to promote access by traditionally marginalized communities to living wage jobs (ED 4.1), expand internships and apprenticeships (ED 4.4), and reduce barriers to training programs (ED 4.7). The City provides direct financial support to workforce development through programs including ANEW Construction Pre-Apprenticeship Training Programs, Seattle Colleges District Work and Learn Ecosystem, and Maritime Blue.

DED.2 Duwamish-Specific Goals and Policies

DED 2.1 Promote and raise awareness of maritime sector careers at vocational training programs, high schools, and middle schools.

DED 2.2 Establish information sharing between labor and trade organizations and local government so that high quality data about the composition and demographics of the industrial and maritime workforce are collected and tracked over time.

Goal DED.3 The Duwamish MIC is home to new and emerging subsectors of the industrial and maritime economy.

DED.3 Existing citywide policies, programs, and regulations

Policies in the Economic Development element of the Comprehensive Plan have a strong emphasis on supporting innovation and growth in emerging fields. Key policies address supporting regional partnerships to sustain and grow maritime and manufacturing sector jobs (ED 2.2), promoting linkages between industry clusters and research institutions (ED 2.3), and improving the ability of industry clusters to transfer technology (ED 2.5).

DED.3 Duwamish MIC-Specific Goals and Policies

DED 3.1 Continue to work with stakeholders specify to support maritime sector innovations to ensure a thriving and modern container port operation.

Goal DED.4 The Greater Duwamish MIC includes a blend of Information Computer Technology (ICT) and traditional industrial and maritime employers and other dense employment uses located near high-capacity transit.

DED.4 Existing citywide policies, regulations, and programs

The Land Use element in the Comprehensive Plan (see LU 13.7) advances goal DED.4 by establishing the policy basis for the Industry and Innovation zone. The intended function of the Industry and Innovation zone in the Seattle Municipal Code (SMC 23.50A) is to be a “transit-oriented area characterized by modern industrial buildings that supports a mix of economic innovation and emerging industries, and commercial development, characterized by high employment density.” The Comprehensive Plan supports application of the II zone within an approximately one-half mile distance from existing or future light rail stations and that have a high

potential to attract new investment in buildings and infrastructure that supports dense, technological employment (LU 13.3). The zone includes incentives that allow for development of non-industrial space contingent on provision of bona-fide industrial space in the same building.

DED.4 Duwamish MIC-Specific Policies

DED 4.1 Work with industry, trade, and economic development organizations to promote the concept of employment campuses in light rail station areas that include a mix of industrial and non-industrial uses.

ENVIRONMENT AND OPEN SPACE



The Duwamish River provides a variety of open spaces and shoreline restoration projects in the Duwamish MIC.

Environment and Open Space – Background and Existing Conditions

This element addresses several subject areas related to the natural environment and open spaces. Environmental stewardship is part of the Duwamish MIC vision. Environmental policies for the Duwamish MIC recognize that it is important that new development and redevelopment projects contribute to the rehabilitation and health of the Duwamish MIC's natural environment.

Water and Sea Level Rise

Water bodies located in the Greater Duwamish MIC include the Duwamish River, Wolfe Creek, Longfellow Creek, and Puget Creek. In addition, much of the SODO portion of the MIC was historically a tidal flat intermittently submerged with the changing tides.

The Duwamish River originates at the confluence of the Green and Black Rivers near Tukwila and flows northwest for approximately 12 miles, splitting at the southern end of Harbor Island to form the East and West Waterways before discharging into Elliott Bay. The Duwamish River extends through both the SODO/Stadium and Georgetown/South Park areas. It was straightened and channelized beginning in 1913 as the Duwamish Waterway. The downstream portion of the Duwamish River serves as a major shipping route for bulk and containerized cargo. A portion of the lower Duwamish River is maintained as a federal navigation channel by the Corps of Engineers.

Longfellow Creek is approximately 3.5 miles in length and is a tributary discharging into the Duwamish River in the SODO/Stadium area. It is one of the four largest streams in the city of Seattle with a watershed size of 2,685 acres. The creek originates in the Roxhill Park neighborhood, flows north along the valley of the Delridge neighborhood of West Seattle, and then flows into the Duwamish. Puget Creek is in the SODO/Stadium area on the eastern side of West Seattle and drains into the Duwamish River.

The shoreline of the SODO/Stadium area surrounding the Lower Duwamish River and the mouths of Longfellow Creek and Puget Creek is vulnerable to sea level rise. Sea levels in Elliott Bay have been monitored since 1899. Sea levels have risen by 0.68 feet over the past 100 years. By comparison, recent work by the UW Climate Impacts Group (Miller et al. 2018) provides central to high-end estimates of future sea level rise of an additional 2.3 to 5.1 feet by 2100. Sea level rise projections apply to tidally influenced water bodies including Puget Sound, Elliott Bay, and the Duwamish River and may also affect water levels near the outlets of creeks.

The groundwater flow system is common to both the Georgetown/South Park and SODO/Stadium areas. Groundwater is generally a regional discharge due to its low elevation and surface water outlet at Elliott Bay. Groundwater is typically five to 15 feet below the ground surface. Tidal influence is present within 300 to 500 feet of the river where groundwater may fluctuate several feet and may rise in elevation because of sea level rise. Groundwater flow is generally to the Duwamish River (Hart Crowser, 1998). A recent summary of shallow groundwater wells by USGS showed contamination for all classes of chemicals selected for research. Contaminants researched and confirmed were petroleum hydrocarbons (oil and gasoline), heavy metals (arsenic, zinc, and copper), polychlorinated biphenyls (PCBs), and phthalates (USGS 2019).

Plants and Animals

The Duwamish is a heavily urbanized area that includes streets, parking lots, commercial and industrial properties, and railroad rights of way. Over the last 150 years, urban development has eliminated most native vegetation. Small pockets of native vegetation remain within protected park and green belt areas, protected shorelines, and undeveloped steep slopes. Additional vegetation exists as street trees and related streetscape vegetation in the rights of way and in private yards. The Duwamish MIC can be broken down into the following landscapes:

- approximately 68% hardscape
- approximately 22% vegetation
- approximately 10% water

The MIC contains a variety of fish and wildlife habitats and species. Terrestrial animals in the MIC are generally limited to those well adapted to living in a highly altered urban landscape. Examples include birds and mammals that tolerate or benefit from human disturbance, urban habitat features, and trash, such as various gulls, crows, coyotes, racoons, and opossums. Both marine and freshwater environments are present, resulting in substantial diversity for aquatic species. Elliott Bay and the Duwamish River are designated as critical habitat for endangered Chinook salmon. Elliott Bay is also designated critical habitat for several other species of fish, and its deeper waters are critical habitat for the Southern Resident orcas. Shallow nearshore marine areas in Elliott Bay, East Waterway and West Waterway include bull kelp beds which are important habitats for many species of fish and wildlife.

Soils and Geology

Land in the Duwamish MIC is dominated by or with some history of artificial fill. These areas tend to contain alluvial or sandy soil conditions that could be subject to greater movement and/or liquefaction during major earthquake events. Known soil or geologic issues in the Duwamish MIC are:

- Steep slopes along the west side of Harbor Island
- Known areas of historical artificial fill
- Nearly all the MIC being prone to liquefaction
- Three historical landfills: the West Seattle Landfill along Harbor Avenue SW (with 1,000-foot methane buffer), an unnamed landfill that straddles 6th Avenue South, and the South Park landfill located south of the South Transfer Station (with 1,000-foot methane buffer)
- One peat-settlement-prone area near the far southeast corner of the MIC, just west of State Route 99

The methane buffer in the West Seattle and South Park landfills is meant to allow for methane gas monitoring and mitigation. Landfills and other areas containing solid waste, refuse, or artificial fill soils, or lands substantially modified by humans can be challenging to develop due to poor or unpredictable soil characteristics. Landfills may be unable to support the weight of buildings or structures, and methane mitigation and monitoring may be required on and within 1,000 feet of landfills.

Wastewater and Combined Sewer

The Duwamish MIC has a combination of partially separated, combined sewer, and separated sewer systems. The installation of the combined sewer system is older; most pipes date back to the late 1800s and early 1900s. The partially separated system is more recent, with most pipes installed in the 1960s. During wet weather, combined wastewater and stormwater flows in combined sewer systems can exceed the system's capacity. Flow from the Greater Duwamish MIC is conveyed from either the West Duwamish Interceptor or the southern portion of Elliott Bay Interceptor via the Duwamish and Interbay Pump Stations to West Point.

Stormwater

Stormwater runoff from impervious surfaces in the Duwamish MIC is collected and conveyed from streets and properties, through the stormwater collection system. A portion of the system is managed by the Port of Seattle's Marine Stormwater Utility and much of the water is conveyed to receiving water bodies by Seattle Public Utilities' (SPU) storm drain system. The combined and partially separated systems are described in the wastewater discussion, above. The stormwater drainage system within the partially separated areas includes a series of catch basins running along main drainage lines to take surface water runoff from roadways. In some areas, stormwater flows from these lines are conveyed back into the combined sewer system. In other areas, stormwater flows continue within the drainage system and discharge at outfalls to Elliott Bay or Duwamish Waterway.

Environmental Justice

City of Seattle's Racial and Social Equity Index combines data on race, ethnicity, and socioeconomic and health disadvantages to identify neighborhoods with large proportions of priority populations as residents. The Georgetown and South Park neighborhoods adjacent to the Duwamish MIC are among the highest disadvantaged areas of the city. Residents of these areas are more likely to be priority populations, and they may be exposed more often to safety risks when walking and biking (see transportation element) more often than residents of other areas. Another primary equity and environmental justice concern is the impact of emissions associated with industrial activities and high-volume freight heavy roadways on nearby vulnerable communities

The city's industrial areas, including the Duwamish MIC, are likely to be more vulnerable to heat island effects that are increasingly dangerous due to climate change. A sizeable proportion of land in the Duwamish MIC is impervious surfaces, and tree canopy in the city's industrial areas is generally lower than many other parts of the city. Similarly, industrial areas are more vulnerable to sea-level rise than many other parts of the city because they are low-lying and adjacent to water bodies.

Exposure to the environmental justice impacts described in this element are present not only for residents in the vicinity, but also for members of priority populations who are employees in Duwamish MIC and work regularly in the area.

Open Space

The Duwamish MIC includes a variety of open spaces including ones that are shoreline-related and upland. The Duwamish Longhouse is located on west bank of Duwamish River south of Harbor Island, overlooking the Duwamish River Valley, near the village called Haapoos, a major archeological site. The Longhouse is among a cluster of open spaces that are some of the only remaining vestiges of natural shoreline conditions along the lower Duwamish River. Kellogg Island and Haapoos Village Park and shoreline Habitat together comprise an approximately 60-acre natural area owned by the Port of Seattle. Adjacent to the north of this green space is Herring’s House Park, a 6.5-acre open space owned by the City of Seattle Department of Parks and Recreation. The Duwamish Longhouse is directly across W Marginal Way from these open space resources. More greenbelt land owned by Seattle Parks is behind the longhouse in the wooded and sloping areas of Pigeon Point Park, the West Duwamish Greenbelt and Puget Park. Duwamish Tribal Services hosts community gatherings and meetings at the longhouse and is seeking to expand the facility to support the social, cultural, and economic survival of the Duwamish Tribe. The organization intends to display artifacts and to create interpretive exhibits and tours to maximize its cultural and recreational public use.

The tables below inventory parks and open spaces in the Greater Duwamish MIC. These include shoreline parks, trails, street ends, and waterways that provide water access, view access, and boat launches. In total there are 65 acres of parks and public open spaces within the MIC. The MIC also has pedestrian, bike, and multiuse trails including segments of regional trail systems.

Parks

Parks in the Duwamish MIC	
Seattle Parks	Size (Acres)
Haapoos Village Park	9.11
Hearings House Park	6.5
Longfellow Creek Greenspace	.48
Bridge Gear Park	.17
Terminal 18 Park	.92
Jack Block Park	6.3
Sbaqwah Park	9.1
Jack Perry Memorial Park	1.1
West Duwamish Green Belt	6.82

Trails

Trails and Multi-Use Paths in the Duwamish MIC	
Trails	Trail Length (Miles)
Alki Trail	2.4
3 rd Ave W	0.01
Duwamish River Trail	0.7
Portside Trail	0.6
SODO Trail	1.0
SW Spokane Bridge	0.4
Duwamish River Trail	1.8

S Portland St	0.4
West Marginal NB Way S	0.5

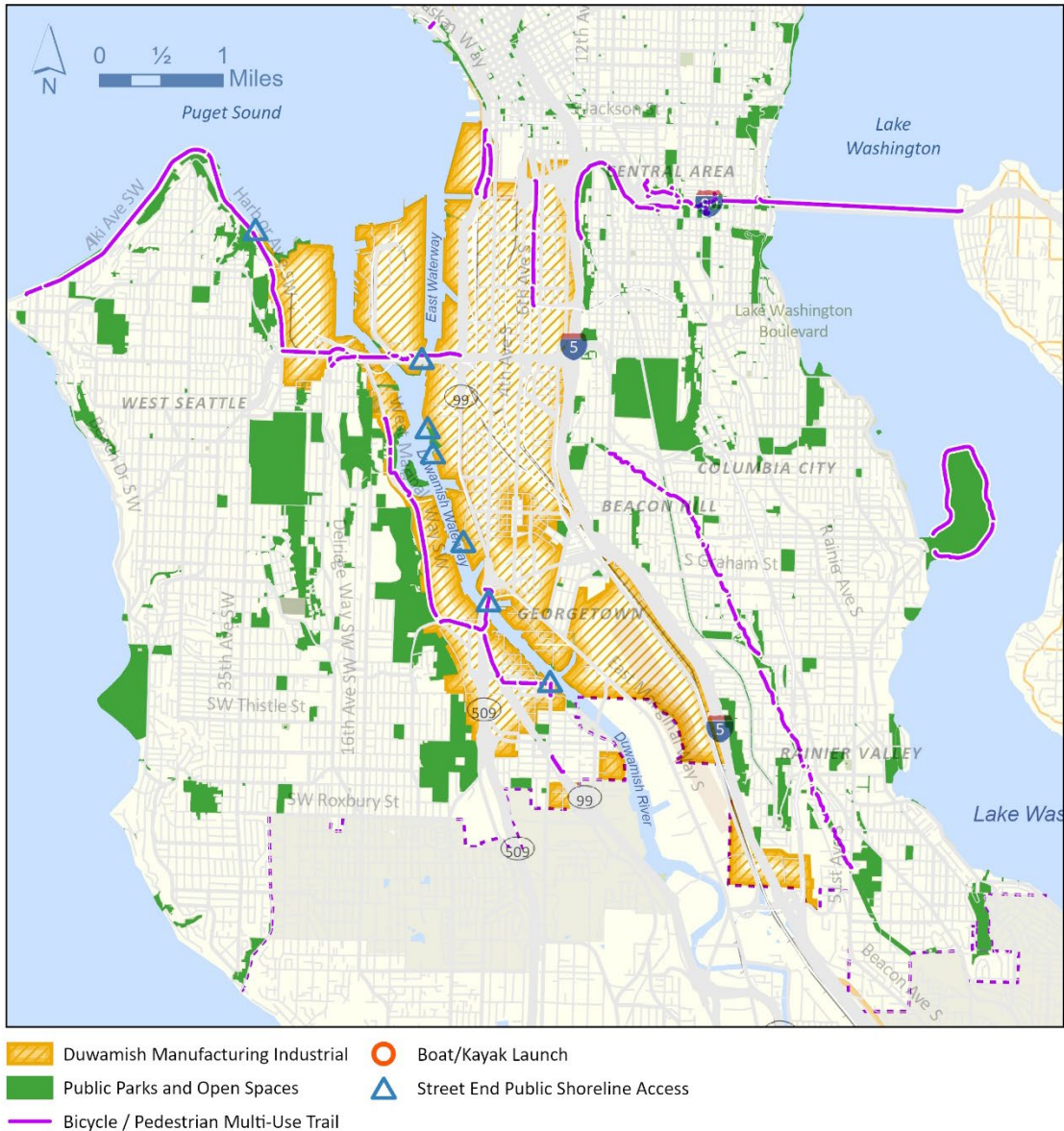
Shoreline Access Points

Shoreline Access Points in the Duwamish MIC	
Shoreline Access Point	Access Type
East Marginal Way S and S Spokane Sr St	View Only
Spokane St—W Sea B Rp and West Seattle Br Eb	View Only
SW Edmunds St and West Marginal Way SW	View Only
Diagonal Ave S and East Marginal Way S (Port of	View Only
SW Alaska St and West Marginal Way SW	View Only
East Marginal Way S and S Idaho St	View Only
16th Ave SW and SW Lander St	View Only
Harbor Ave SW and SW Bronson Way	View Only
West Marginal Turn Rd and SW Spokane St	View Only
Klickitat Ave SW and Dead End (Port of Seattle)	View Only
26th Ave SW and Dead End 1	View Only
Chelan Ave SW and West Marginal Way SW	View Only
5th Ave S and S Fontanelle St	View Only
7th Ave S and S Holden St	View Only
1st Ave S and SW Michigan St	Water access
1st Ave S and SW Michigan St	Boat/Kayak Access
East Marginal Way S and S Fidalgo St	View Only
10th Ave S and S Kenyon St	View Only
S Riverside Dr and Dead End 1	View Only
8th Ave S and S Portland St	View Only

The 2017 Seattle Parks and Recreation Gap Analysis Update identified gaps in parks inside and outside of Urban Villages, Urban Centers, and Manufacturing and Industrial Centers defined as areas at greater than 10-minute walk to a park. This gap analysis identified the entire Duwamish MIC as a ‘gap outside of urban villages’ meaning there was no real pedestrian connectivity to parks and other open space resources in the MIC.

In 2025, the SODO BIA prepared the SODO Green Space Plan. It outlines a vision for a healthy, safe, efficient, and resilient future for the benefit of all businesses, employees, and visitors. The plan emphasizes the potential for green infrastructure to be integrated into industrial spaces without disrupting freight and business operations. The plan focuses on opportunities for the addition of street trees, greening under overpasses, addition of dog parks, greening of underutilized spaces, and greening of roofs and walls of privately held buildings.

Map of Parks, Trails, and Street Ends in the Duwamish MIC



Environment and Open Space- Key Issues and Opportunities

- Environmental justice.** Exposure to environmental pollutants, risks from sea level rise and other risks from climate change are higher for populations in the Duwamish MIC and areas adjacent to the Duwamish MIC than for many other locations within Seattle.
- Lack of Green Space and Open Space.** The City's open space gap analysis and the 2025 Green Space Plan prepared by the SODO BIA both identify a lack of green space and open space in the MIC. Although there are not many residents in the MIC it is still important to

provide green and open spaces for employees and visitors and to support habitat, ecological functions, and overall environmental health.

- **Water Quality.** The Duwamish River and Longfellow Creek are each listed as impaired water bodies for fecal coliform bacteria, temperature, pH, and dissolved oxygen. Water quality treatment at redevelopment sites will reduce fecal bacteria and other pollutant impacts.
- **Duwamish Waterway Super Fund Site.** The last five miles of the Duwamish River towards Elliott Bay is one of the most polluted rivers in the country! In 2001, the US Environmental Protection Agency (EPA) declared it the Lower Duwamish Waterway Superfund Site. Superfund is the name of a federal law that requires the nation's most toxic sites to be identified and cleaned up. While the final stages of cleanup are scheduled to be completed in 2026, ongoing monitoring and source control will be necessary on a continuous basis.
- **Contamination and fill:** Contaminants have been detected in shallow groundwater within the Duwamish MIC, and there are also three former landfills. Many areas have historical fill soils or other liquefaction prone soils. These pollutants and soil conditions present a challenge to redevelop and increase the cost of new buildings relative to other areas of the city. In some cases, expensive cleanup may be required. Tidal flooding from sea level rise, coast storms, and rising groundwater levels could also mobilize contaminants.
- **Sea Level Rise.** The shoreline surrounding the Lower Duwamish River and the mouths of Longfellow Creek and Puget Creek and significant portions of Georgetown and South Park are vulnerable to sea level rise (portions of the areas identified as Georgetown and South Park are in the Duwamish MIC). The Duwamish Valley, particularly the industrial portion of South Park, is the area most vulnerable to sea level rise-related coastal flooding in Seattle. With ongoing global climate change and sea level rise (SLR), existing flooding issues and other climate hazards in the Duwamish Valley will worsen and increasingly impact critical industries, jobs and residents. The legacy of industrial contamination in this area means that increased flooding can also contribute to recontamination of the Duwamish River, perpetuating health risks for people and wildlife.
- **Bike Trail Connectivity.** The quality of bike connections in the bike network that serves the Duwamish MIC is very important because the flat geography makes it a desirable route for bicycle riders. While important improvements have been made during recent years, continuing to achieve future trail enhancements and completions that are harmonious and safe with the movement of freight is an important issue for the Duwamish MIC. Achieving future trail enhancements and completions that are harmonious with the movement of freight is an important issue for the Duwamish MIC.

Near Shore habitat corridors. Shoreline and nearshore aquatic and marine habitat provide an important migratory corridor for anadromous fish such as Chinook Salmon. The Duwamish MIXC includes shoreline modifications which can create impediments to migration, including overwater cover, piling, and bulkheads. The impacts of these features which are often essential for water dependent uses should be minimized and offset with restoration actions.

Environmental and Open Space- Goals and Policies

Goal DEN.1: Promote the rehabilitation of critical/environmentally sensitive areas.

Den.1 Existing Citywide Policies, Programs, or Regulations

The Shoreline Element of the Comprehensive Plan has numerous citywide goals and policies that promote the rehabilitation of environmentally sensitive areas. Key policies address the restoration and enhancement of natural areas and ecological processes (SA P1), requiring no net loss of shoreline ecological function (SA G10), protection of environmentally critical areas in shoreline districts (SA P26), consideration of the Lower Duwamish Watershed Restoration Plan (SA P28), and identifying areas that have potential for shoreline habitat restoration (SA P33). Additionally, the City's Shoreline Master Program (SMP) and its Critical Areas Ordinance support the preservation and protection of shoreline habitat and water quality. Specifically, the SMP limits the types of activity that can happen in or over water and restricts activities that would compromise shoreline habitat.

DEN.1 Duwamish-Specific Policies

DEN 1.1 Work with property owners to encourage natural shoreline restoration options on the Duwamish River and Elliott Bay when major upgrade or redevelopment of shoreline properties is pursued.

Goal DEN2: Stormwater management in the Duwamish MIC uses innovative and effective stormwater management measures.

DEN.2 Citywide Policies, Programs, or Regulations

The Seattle Stormwater Code (SMC Title 22, Subtitle VIII) requires redevelopment projects in the Greater Duwamish MIC to implement on-site stormwater management measures to infiltrate, disperse, and retain stormwater runoff to the maximum extent feasible. Where the developed site's stormwater flow rates or pollutant generation potential is expected to exceed the allowable thresholds, flow control and/or water quality treatment measures are required. As a result of these requirements and given that much of the existing development predates modern stormwater requirements, it is expected that there will be a reduction in uncontrolled flow rates and an increase in water quality in the MIC over time. On public rights-of-way resources for stormwater runoff and pooling are limited.

The 2021 Stormwater Code also includes incentives for retrofitting existing development, such as opportunities for property owners to reduce their drainage rate if they install flow control and/or treatment facilities designed per the Code, which can include reducing impervious surfaces. Comprehensive Plan policies in the Climate and Environment element and the Container Port element promote treating stormwater runoff from roadways and high pollutant surfaces using green infrastructure (CE 13.2) and working with stakeholders to advance stormwater management measures for existing marine industrial properties (CP 1.18).

DEN.2 Duwamish-Specific Policies

DEN 2.1 Seek increased resources for addressing stormwater runoff on streets within the MIC.

Goal DEN3: The Duwamish MIC includes a high-quality network of open spaces and trails that coexist harmoniously with industrial and maritime activities.

DEN.3 Existing citywide Policies, Programs, and Regulations

Both the Comprehensive Plan and zoning regulations enacted as part of the Industrial and Maritime Strategy address open space. The Comprehensive Plan includes a policy to provide public access and improve street ends to enhance public access (P 1.14). Street ends are an important open space resource in the Duwamish MIC with improvements that provide shoreline viewing and/or direct water access.

New industrial zoning classifications include standards for frontage improvements, tree planting, and pedestrian lighting that will provide space for pedestrian activity (SMC 23.50A):

- The Industry & Innovation zone includes standards for frontage improvements (sidewalks, pedestrian lighting, etc.), trees and landscaping, and maximum limits on size of vehicle parking areas. Application of this zone in the Duwamish MIC will help create a safer and more walkable environment near existing and future transit such as the area in the vicinity of 4th Ave S/6th Ave S and S Lander Street.
- The Urban Industrial zone incorporates development standards requiring open space and green factor landscaping, as well as standards for frontage improvements (sidewalks, pedestrian lighting, etc.) Application of this zone in the Duwamish MIC is found in industrial areas adjacent to South Park and Georgetown.

DEN.3 Duwamish Specific Policies

DEN 3.1 As part of the update of the Streets Illustrated right-of-way improvement manual, include street types that provide safety and comfort for pedestrians in the Industry and Innovation and Urban Industrial zones while maintaining the streets' principal role for freight movement.

DEN 3.2 Continue to connect and enhance the quality of multi-modal trails in and through the Duwamish MIC in a manner that does not impact freight access to industrial and maritime uses.

DEN 3.3 Use publicly owned remnant spaces for open space and other activities that can serve nearby residents and workers in the Duwamish MIC.

GOAL DEN. 4: vulnerable populations living near or working in the Duwamish MIC are not negatively impacted by activities in the MIC.

DEN.4 Existing citywide policies, programs, and regulations

The Climate and Environment element of the Comprehensive Plan contains goals and policies that seek to minimize impacts on vulnerable populations. Specific policies pertain to reducing water quality pollution (CE 13.2) and preserving native vegetation and limiting on impervious surface (CE 13.2). Other policies focus on community-based climate resilience including policies that prioritize partnerships and actions that reduce disproportionate impacts on vulnerable populations (CE 8.1), and on working towards achieving racial and social equity in health outcomes (CE 8.5).

In addition, the City of Seattle adopted the 2013 Climate Action Plan (CAP), 2018 Climate Action Strategy, and the 2017 Preparing for Climate Change report. (The Climate Action Plan is currently being updated.) These plans and studies support City actions that will increase climate resilience. The CAP provides for community equity in planning for climate impacts with priority given to actions that help vulnerable populations mitigate potential impacts.

Development regulations could also result in improvements that mitigate environmental justice disparities within neighborhoods with histories of long-term underinvestment. This is true for Industry and Innovation and Urban Industrial zoned areas because those zones have development standards requiring frontage improvements such as sidewalks, pedestrian lighting, and street trees—all of which could be beneficial in progress toward more safe, connected, and accessible neighborhoods.

DEN.4 Duwamish MIC-Specific Policies

DEN 4.1 Support development of a continuous line of protection using public streets and rights-of-way, parks and public facilities.

DEN 4.2 Work with property owners along the shoreline to identify coordinated public/private investments to make efficient use of SLR protection investments.

GOAL DEN. 5: Reduce the amount of air pollution and greenhouse gas emissions that are generated by activities in the Duwamish MIC.

DEN.5 Existing citywide policies, regulations, and programs

The City's 2013 Climate Action Plan (CAP) and the 2018 Climate Action Strategy include strategies and actions that seek to contribute to limiting atmospheric warming to 1.5 degrees Celsius. The strategies and actions focus on road transportation and building energy, which comprise most local emissions, both in the city and the Duwamish MIC.

- All buildings with 50,000 square feet or more of non-residential space (excluding parking) must comply with the Building Tune-Ups requirement every five years (SMC 22.930). Building Tune-Ups involve assessment and implementation of operational and maintenance improvements to achieve energy (and water) efficiency, which helps to reduce GHG emissions.
- The Port of Seattle's increasing shore power availability at terminals to reduce maritime emissions.

- Washington State Energy Code: Development in the MIC would be subject to the requirements of the Washington State Energy Code, which regulates the energy-use features of new and remodeled buildings.

Additionally, the Industry and Innovation zone adopted as part of the 2023 Industrial and Maritime Strategy anticipates significant employment density in proximity to light rail stations consisting of industrial and commercial space. This zone allows 5 square feet of commercial space for every 1 square foot of industrial space with bonus allowances for height and total floor area. The intent is to promote transit-oriented development around transit stations in industrial areas. It requires large new development that will have 50 or more employees to prepare Transportation Demand Management plans for their workforce. These requirements and incentives will result in new development with lower total GHG emissions per job.

The Comprehensive Plan advances goal DEN.5 with policies in the Transportation element. Key policies include support for a shift to electrification and clean fuels (T 4.5) and promotion of electric freight vehicles and expansion of charging stations for industrial fleets (T 4.6).

The Seattle Transportation Plan further addresses goal BEN.5 with a strategy to “collaborate with private sector partners on pilots and programs that accelerate the shift of freight trips to more sustainable low- and zero emissions vehicles, such as electric cargo bikes to replace a portion of last-mile deliveries made by larger vans and trucks in densely developed areas.”

DEN.5 Duwamish MIC-Specific Policies

- DEN 5.1 Encourage investment in new structures with flexible modern light industrial spaces in areas near frequent transit service, especially new structures that meet current energy codes that have high energy performance compared to many existing industrial structures that were built before modern energy codes.
- DEN 5.2 Consider implementing a green building standard through requirements or incentives for new development in industrial areas.
- DEN 5.3 Encourage the use of electricity, rather than natural gas, to serve industrial processes and space heating needs.
- DEN 5.4 Provide safe, convenient last mile connections for people within the Duwamish MIC, especially from regionally serving transit to job sites, including by walking, biking, shuttle, and micromobility.
- DEN 5.5 Leverage ST3 station access funds for future sidewalk and bike facility investments on routes to and from the future Link light rail stations at SODO and Delridge locations.
- DEN 5.6 Expand electric transportation and marine infrastructure, including expansion of electrical shore power and charging infrastructure for heavy duty equipment and freight.
- DEN 5.7 Provide assistance to operators of vessels in the fishing fleet and maritime companies based in Elliott Bay to transition over time to alternative fuels with fewer emissions.
- DEN 5.8 Work toward achieving a mode split goal of no more than 50% of employment related trips to Duwamish MIC to be by single-occupancy vehicle.

GOAL DEN.6: Promote innovative green building practices in design, materials selection, construction, and maintenance.

Den.6 Existing citywide policies, regulations, and programs

Changes to development regulations occurring through implementation of the Industrial and Maritime Strategy include application of Seattle Green Factor to new industrial buildings and incentives in the Industry and Innovation zone to use mass timber for construction.

DEN.6 Duwamish MIC-Specific Policies

DEN 6.1 Promote incorporation of Green Stormwater Infrastructure (GSI) into new development in the Duwamish MIC, especially near shorelines.

DEN 6.2 Incentivize and encourage mass timber construction in the Duwamish MIC.

PUBLIC SERVICES



Seattle Fire Station 14 serves the Duwamish MIC, Photo credit Basetti Architects.

Public Services – Background and Existing Conditions

The Public services discussed in this element include fire, police, school, and library services. The primary providers of these services are the Seattle Fire Department (SFD), the Seattle Police Department (SPD), the Port of Seattle Police Department (POSPD), Seattle Public Schools (SPS), and the Seattle Library System (SLS). Emergency services and school services are provided according to a citywide strategy and operational plans, which are summarized below. Due to the citywide nature of provision for these services, Duwamish MIC-specific goals and policies are limited. Note that stormwater and sanitary sewer services are addressed in the Environment and Open Space element.

Fire & Emergency Services

The Seattle Fire Department provides fire and rescue response, fire prevention and public education, fire investigation, and emergency medical services (EMS) throughout the city, including the Duwamish MIC. Emergency medical services include basic life support (BLS) and advanced life support (ALS). SFD also has specially trained technical teams that provide technical and heavy rescue, dive rescue, tunnel rescue, marine fire/EMS response, and hazardous materials response. SFD provides emergency response services through five battalions consisting of 33 fire stations (plus Battalion 3/Medic One at Harborview Medical Center) strategically placed around the city to maximize coverage and minimize response time.

A variety of ladder trucks, fire engines, fireboats, aid cars (BLS), medic units (ALS), and other specialty teams are housed at stations serving the study area. Ladder trucks and fire engines are staffed by teams of four personnel while aid cars are staffed by teams of two personnel. Medic One at Harborview Medical Center also provides the city with ALS activities that, in the past, could only be performed by licensed physicians. In addition to responding to medical emergencies, medic units respond to all working fires, hazardous materials, and rescue responses citywide. All SFD stations are staffed 24 hours a day, seven days a week, by four separate shifts of firefighters.

Marine fire response is provided by Station 5 on Seattle's Waterfront. Fire boats at this station are prepared to respond to ship fires, marina fires, water rescues, and other water related emergencies. Lands in the Duwamish MIC are served by the stations and associated equipment and staffing as summarized below:

- SODO: The SODO/Stadium area is in the service area of stations 5, 10, 13, 14, 27, 29, and 36. Together these stations house two fire boats, six fire engines, two ladder trucks, three aid cars, and several specialty units, including SFD's Hazardous Materials Team, Rescue One (Technical Rescue Team), REHAB1, DECON1, Marine 1, and PT520.
- Georgetown/South Park: The Georgetown/South Park area is in the service area of stations 11, 26, 27, and 33. Together these stations house four fire engines, one medic unit (ALS), REHBA1, and DECON1.

Facilities

In 2003, a Fire Facilities and Emergency Response Levy was approved by Seattle voters. The levy provided funding for major facility improvements across the Seattle Fire Department including upgrades, renovations, or replacements of 32 neighborhood fire stations (including stations serving

the Duwamish MIC), construction of a new training facility, establishment of emergency preparedness facilities, renovation of the Chief Seattle Fireboat (located at the Seattle Waterfront), and construction of 2 new fireboats (Department of Finance and Administrative Services 2021). New facilities were built with excess physical capacity.

Seattle's Capital Improvement Plan (CIP) includes funding for new stations and general maintenance to facilities system-wide. Annual budgets in recent years included added funding to enhance SFD operations in several areas including emergency responses, diversity recruitment, dispatch training, and IT system upgrades. The department's strategic plan sets forth goals and related strategies and action steps to address challenges and to support the Department's mission. One of the goals is to maintain quality equipment, apparatus, facilities, and technology.

Police

The Seattle Police Department, Port of Seattle Police Department, and Burlington Northern Santa Fe Railroad Police provide police services in the Duwamish MIC.

Seattle Police Department

The Seattle Police Department (SPD) provides police protection services. Its primary duties include foot, car, and bike patrols, harbor patrols, 911 calls, investigations, traffic enforcement, parking enforcement, homeland security, and specialty units such as Special Weapons and Tactics (SWAT), gang, bomb/arson, and canine units. The Department is divided into five precincts, each with a police station that serves as the base of operations for that precinct. The Duwamish MIC portion is in the North and West precincts. Precincts are further divided into smaller geographic areas called sectors and beats (there are three beats per sector, e.g., Ocean Sector is divided into beats O1, O2, and O3). Individual patrol officers are assigned responsibility based on beats.

Port of Seattle Police Department

The Port of Seattle Police Department (POSPD) provides the primary law enforcement service to the Port's seaport properties. Port of Seattle Police patrol more than 30 miles of waterfront property, piers, marinas, cargo and cruise ship terminals and are the primary first responders for all reported crimes and incidents within its jurisdiction. The Department's Waterfront Office is located at Terminal 30 (2715 East Marginal Way South, Building A-5).

The POSPD consists of commissioned police officers and non-commissioned personnel—including 911 communications specialists who receive and coordinate all calls for service for both the Port of Seattle Fire and Police Departments and the Burlington Northern Santa Fe Railroad Police. The Department also has several specialized units, including a Marine Patrol Unit, and a Dive Team

The Transportation Security Administration, as an agency of the federal Department of Homeland Security, oversees the security efforts for all Port properties. Currently, the U.S. Coast Guard maintains responsibility for shoreline security for the Port. TSA provides support to the Coast Guard in its maritime security efforts and focuses primarily on passenger security and intermodal connectivity to ports. In partnership with the Coast Guard, TSA administers the Transportation

Worker Identification Credential program, which is required for workers who need access to secure areas of the nation's maritime facilities and vessels.

BNSF Railway Police

The BNSF Railway Police provide police services along the BNSF railway within the MIC. Systemwide, BNSF Police's jurisdiction is 32,500 miles long and 100 feet wide, crisscrossing hundreds of local and state jurisdictions along the way. BNSF Police analyze statistical data to discover crime trends, use K-9 units and proactive uniformed patrol to combat trespassing and cargo thefts, and actively participate with SPD and the Port of Seattle Police Department to investigate crimes committed on railroad property.

Performance

In 2020, SPD received approximately 343,100 calls for service citywide, 100,000-130,000 calls lower than each of the previous 4 years. Total calls were likely lower in 2020 due to the COVID19 pandemic. In 2019, SPD received 461,328 calls for service—approximately 66% of these were dispatched calls and 34% were on-view incidents. Total calls for service increased by 5% from 2016 through 2019.

SPD tracks average response time for priority one calls by precinct and sector. Citywide, SPD has met its seven-minute response time target in each of the last five years. Median response times within different precincts and sectors vary. Response time information for Duwamish MIC areas is summarized below:

- **SODO/Stadium:** The SODO/Stadium Subarea is in Sector O of the South Precinct and Sector W of the Southwest Precinct, and is primarily within the boundaries of beats W1, O1, and O2 (a small portion is also in sectors K and F). Calls for service increased by 32% in these three beats from 2016 to 2019 with the greatest increases in Beat O2 (66%). The average response time decreased by 6% in Sector O and by 1% in Sector W from 2016 to 2020. However, as noted above, median response time in Sector W increased by 59 seconds from 2019 to 2020, likely in part because of the closure of the West Seattle High-Rise Bridge to all vehicle traffic on March 23, 2020. The Department met its seven-minute response time target in Sector O and fell short of meeting its target in Sector W from 2016 to 2018 and in 2020 (the Department met its target in Sector W by 1 second). Interbay Dravus and Interbay Smith Cove areas: The Interbay parts of the Duwamish MIC are in Sector Q in the West Precinct. The Department met its seven-minute response time target in Sector Q from 2016 to 2020, with median response times of 6:30 and 6:37 in those years respectively.
- **Georgetown/South Park:** The Georgetown/South Park Subarea is in Sector O of the South Precinct and Sector F of the Southwest Precinct, and is primarily within the boundaries of beats F1, F3, O2, and O3 (a small portion is also in Sector S). Calls for service increased by 43% in these four beats from 2016 to 2019 with the greatest increases in beats O2 (66%) and O3 (62%). The average response time decreased by 6% in Sector O and increased by 3% in Sector F from 2016 to 2020. Median response time in Sector F increased by 59 seconds from 2019 to 2020, likely in part because of the closure of the West Seattle High-

Rise Bridge to all vehicle traffic on March 23, 2020. The Department met its seven-minute response time target in sectors O and F from 2016 to 2020.

Micro-Community Policing Plans

The Seattle Public Safety Survey collects data at the micro-community level about perceptions of crime and public safety, and police-community interactions. The top five public safety concerns in 2020 within the Duwamish MIC were police capacity, property crime, and homelessness. MCPP priorities for each subarea are summarized below:

- SODO: The SODO/Stadium Subarea includes the following MCPPs by precinct: West Precinct: Pioneer Square and Chinatown/International District South Precinct: SODO and Georgetown Southwest Precinct: Commercial Duwamish and Commercial Harbor Island. The top five public safety concerns in these MCPPs as identified in the 2020 Seattle Public Safety Survey included homelessness, police capacity, property crime, and drugs and alcohol. Other top five concerns varied by MCPP: respondents in the West Precinct included violent crime, respondents in the Southwest Precinct included traffic safety, respondents in Georgetown included community and public safety capacity,
- Georgetown/South Park: The Georgetown/South Park Subarea includes the Georgetown and South Beacon Hill MCPPs in the South Precinct and the Commercial Duwamish and South Park MCPPs in the Southwest Precinct. The top five public safety concerns in these MCPPs as identified in the 2020 Seattle Public Safety Survey included homelessness, property crime, police capacity, and community and public safety capacity. Drugs and alcohol were among the top five concerns in Ballard South while traffic safety was among the top five in Fremont.

Port of Seattle Police Performance

In 2020, the Port of Seattle Police Department's patrol team responded to 106,463 calls for service jurisdiction wide (airport and seaport properties), including 55,000 self-initiated contacts (area checks, subject contacts, traffic stops, and checkpoint alarm checks).

Schools and Libraries

It operates 106 schools and employs over 7,500 staff including over 6,000 educators that are school based. There are no public schools in the Duwamish MIC. There is one private school in Ballard. There are schools in proximity to industrial zones outside of the Duwamish MIC. For the few residents in the study area, they would attend a variety of schools based on the service areas. Schools are generally discouraged from being located in industrial zones by the city's policies and zoning.

The Seattle Public Library system offers 27 locations. As of 2020, they provide access to millions of print materials, media, e-books and streaming and downloadable media. The system also offers virtual classes, events, and activities including classes and to learn skills, find job resources and make social connections. There are no libraries in the Duwamish MIC. The Seattle Industrial zones prohibit libraries.

Schools and libraries serving each subarea are summarized below:

- SODO: There are no public or private schools or libraries in the subarea. The study area is served by Wing Luke Elementary and Mercer Middle School. The Puget Sound Community School, a private institution, lies on Dearborn Street in the International district and serves students between 11 and 18 years old (6-12 grades). North of the subarea lies the International District / Chinatown Library on Eighth Avenue S.
- Georgetown/South Park: There are no schools or libraries in the Georgetown/South Park Subarea. The MIC surrounds the Georgetown Urban Center/Village which contains the historic Concord International school and the South Park Library. The Georgetown/South Park Subarea is served by Concord International, Sanislo, and Wing Luke Elementary Schools and Mercer and Denny Middle Schools.

Public Services- Key Issues and Opportunities

- **In-Water Fire/EMS and Police Services:** Seattle’s harbors and waterways support a variety of in-water commerce, transportation and recreational activity that present unique public safety demands.
- **Public safety challenges in industrial areas:** During Industrial and Maritime Strategy outreach, some community members, employees, and property owners expressed concerns that crime and street disorder in industrial areas felt heightened compared to many other parts of the city, and that an increased public safety presence was needed because there were fewer residents present during nighttime hours. Some community members also said that homeless encampments and storage of personal property in vehicle parking areas were more prevalent in industrial areas compared to some other parts of the city.

Goal DPS.1 A network of waterborne emergency and police services keeps all the commercial, recreational, and transportation activities on Seattle’s waterways safe.

DPS.1 Duwamish MIC-Specific Policies

DPS 1.1 Support the ongoing presence of a range of shoreline public safety facilities and maintain industrial lands in waterfront areas as a measure to maintain space for these services.

Goal DPS.2 Ensure that crime protection for community members and for properties in industrial areas is provided at a level that is consistent with other mixed-use and residential areas of the city.

DPS.2 Duwamish MIC-Specific Policies

DPS 2.1 Establish strong and regular communications between property owners and businesses, and local law enforcement to coordinate approaches to prevent and deter crime.

Appendix A

Freight Project List

APPENDIX A: FREIGHT PROJECTS

The table below lists freight network projects within the Manufacturing and Industrial Centers as well as those outside of the MICs. A functioning freight network requires capital investments outside the MICs as freight connects to the regional transportation system.

Projects 1 through 5 are large catalyst projects that will require multiple funding partners to implement.

Omitted FMP project numbers represent projects completed since adoption of the Freight Master Plan.

Table 5: Freight Projects

FMP No.	Project Name	Project Description
1	Ballard Bridge Project	Replace structure to increase capacity and improve access.
3	SODO Rail Corridor Grade Separation	Improve access to manufacturing and industrial center and Port of Seattle facilities. May include non-motorized grade separation to increase safety and reduce modal conflicts.
4	4 th Ave S Viaduct Replacement (4 th Ave S grade crossing over Union Pacific Railroad Argo Yard)	Replace the viaduct structure spanning the Union Pacific Railroad (UPRR) yard at the conclusion of its service life, which is expected to occur within the 20-year planning timeframe (by 2035). The new structure will increase vertical clearance above the railroad tracks to improve safety and rail operations. Columns and pier walls will be removed to increase and optimize rail yard functionality and operations.
5	1 st Ave S Viaduct Replacement (Grade crossing over Union Pacific Railroad Argo Yard)	Replace the existing viaduct structure spanning the Union Pacific rail yard at the end of its useful life span

6	<p>BINMIC Truck Route Improvements (Area bounded by W Dravus St, W Nickerson St, NW Market St, and Fremont Ave N)</p>	<p>This project will evaluate truck freight movements to identify projects to address geometric and operating challenges for trucks. The projects will be focused on readily implementable improvements with primary consideration given to safety and freight connectivity. They may include signal timing adjustments, additional signage or wayfinding, larger intersection turn radii, lane width adjustments, and joint use of bus lanes.</p> <ul style="list-style-type: none"> Phase I: Collect data on needs through a detailed assessment of truck volumes, truck sizes, and over-dimensional truck activity. Build from the forecasts developed in the Freight Access Project and work with stakeholders to identify and prioritize specific truck route projects. Phase II: Implement top priority projects given funding availability and opportunities. Develop a long-term budget and funding strategy to implement remaining projects.
7	<p>15th Ave W Spot Improvements at W Dravus St and W Emerson St</p>	<p>This project addresses turn radii issues for trucks and enhanced multimodal operations through small-scale geometric and intersection operational improvements along 15th Ave W.</p> <p>Trucks of all sizes experience challenges traveling on the elevated structures at W Emerson St and W Dravus St. 15th Ave W, W Emerson St, and W Dravus St are vital connections for freight traveling to and from the Ballard-Interbay-Northend Manufacturing/Industrial Center (BINMIC). This project includes two components to implement changes at these locations.</p>
		<ul style="list-style-type: none"> The W Emerson St ramp over 15th Ave W serves trucks going to and from W Nickerson St. This component includes moving the centerline on the ramp to provide a greater turning radius for trucks and making adjustments to the stop bars channelization at the intersection on the west side of the ramp. W Dravus St is used by trucks of all sizes, including over-legal vehicles unable to pass underneath the bridge on 15th Ave W. Northbound trucks have particular difficulty turning left onto W Dravus St from the off-ramp. This component of the project includes upgrading signal timing and hardware at the ramp terminals to ensure vehicle queues on the bridge clear to

		allow trucks adequate space to turn at the intersection. This project can be bundled with Ballard Bridge Access improvements.
8	15 th Ave NW/ NW Market St Intersection Improvement	Improve southeast corner curb radius, which would impact existing signal equipment.
9	15 th Ave W/ Elliot Ave	Reconstruct and make operational/ ITS improvements to 15th Ave W/Elliott Ave W.
10	Dynamic message signs along 15 th Ave NW corridor (Ship Canal to Holmon Rd NW)	Install dynamic message signs to provide travel conditions on major freight corridors prior to connecting to major truck streets.
11	NW Leary Way at NW 46th St or NW 45th St (NW 46th St to Shilshole Ave NW)	Intersection operations should be evaluated and treatments considered to improve access to/from NW 46th Street or NW 45th St. Type of improvements to be coordinated with outcomes of the BINMIC Truck Route Improvements.
12	W Emerson St/21st Ave W/W Commodore Way Corridor Improvements	Reconstruct the existing intersection at 21st Ave NW and W Commodore Way to improve truck safety and mobility and improve bike/ped/truck facilities on W Emerson Place and 21st Ave W.
13	NW Market St / Leary Way NW / N 36th St Improvements	Reconstruct and make operational/ITS improvements to Leary Way NW corridor to facilitate freight movement. This project would coordinate specific truck operational improvements with the BINMIC Truck Route Improvements.
14	Mobility improvements along NW Market St	Restrict left turns at non-critical intersections to improve east/west mobility for freight.

	between 8th Ave NW and Stone Way N	
16	Intersection Improvements at 4th Ave N, Westlake Ave N, Dexter Ave N, and Nickerson St	Evaluate the intersection of 4th Ave N, Westlake Ave N, Dexter Ave N, and Nickerson St to improve freight mobility.
17	Intersection Improvements at 6th Ave NE and NE 40th St	Eliminate the height restriction and turning movement conflicts on 6th Ave NE at the Burke-Gilman Trail bridge.
18	3870 Montlake Blvd NE - Montlake Blvd NE height restriction	Eliminate the height restriction on Montlake Blvd NE at the pedestrian bridge connecting UW to the Alaska Airlines Arena.
19	Ballard Bridge Access and Seismic Improvements	Address capacity constraints for bikes and pedestrians and seismic improvements to the Ballard Bridge.
20	7th Ave NE/ NE 40th St Intersection improvements	Reconfigure intersection to facilitate turning and crossing movements at 5-leg intersection.
21	Integrated corridor management system on N 85th St between 15th Ave. NW/Holman Rd NW and I-5	Implement Integrated Corridor Management (ICM) and provide the opportunity for freight to avoid congestion on a given facility when it is present. Consider dynamic message sign and/or push out data on I-5 conditions and back-ups. Implement additional permanent surface street data collection.
22	ITS Improvements N 85th St from Aurora Ave N to I-5	Install traffic signal control improvements (either traffic adaptive or responsive) to provide consistent travel times on freight corridor. Implement additional detection to provide congestion information.
23	Dynamic message signs along 25th Ave NE corridor (Ship Canal to Montlake Blvd NE / NE 75th St)	Install dynamic message signs to provide travel conditions on major freight corridors prior to connecting to Major Truck Streets

24	ITS improvements Aurora Ave N	Modify signal timing on northbound Aurora Ave N to improve freight traffic during the morning peak.
25	W Galer St Interchange Ramp	Construct ramp to improve access over BNSF mainline tracks and storage yard.
26	Nickerson St / W Nickerson St Reconstruction	Reconstruct Nickerson St and improve freight movement alternatives in the Ballard Interbay-Northend Manufacturing/Industrial Center.
27	Denny Way ITS (Denny Way from I-5 to Western Ave.)	Update signal timing, vehicle detection, CCTV cameras, dynamic message signs, and fiber communications to improve traffic flow and provide enhanced traveler information along Denny Way from I-5 to Western Ave.
29	I-5 Connector ITS (areas surrounding I- 5)	Installation of CCTV cameras along streets that provide Center City access to I-5/I-90 to provide congestion monitoring of traffic interchanging with the freeway.
30	ITS upgrades on Boren Ave from Howell St to S Jackson St (Rainier Ave S to Denny Way)	Upgrade all signals in Major Truck Street corridor to current standards and improve north-south mobility in center city.
31	East Marginal Way S Corridor Reconstruction and Safety Enhancements (S Spokane St to S Michigan St)	Reconstruct a core freight route to heavy haul vehicle standards, add safety and advanced management systems and incorporate separate bicycle and pedestrian facilities while maintaining freight efficiency. Central Segment: S Spokane St to Diagonal Ave S; South Segment: Diagonal Ave S to S Michigan St. (Project is projected may be completed in 2025.)
32	East Marginal Way S / 8th Ave S / S Myrtle St Intersection Improvements	Improve intersection geometry, revise signalization, upgrade drainage, rehabilitate pavement at railroad tracks, and install streetscaping. Project should be coordinated with Next Generation ITS.

33	<p>East Marginal Way S/ S</p> <p>Hanford St Intersection</p> <p>Improvements</p>	<p>Upgrade the signal, lengthen the northbound right-turn lane, improve the railroad crossing pavement, and evaluate the need for railroad crossing gates at the</p> <p>Whatcom track crossings. The project also includes rebuilding the intersection and its approaches to Heavy Haul route requirements. This project will also more clearly delineate parking on the southeast corner of the intersection. (Project is projected to be completed in 2024 with Project 31: East Marginal Way S Corridor Reconstruction and Safety Enhancements.)</p>
35	<p>Duwamish Local Freight</p> <p>Access Improvements (S</p> <p>Holden St/ 5th Ave S/ S</p> <p>Kenyon St/ 8th Ave S)</p>	<p>Reconstruct roadway with drainage, curb, sidewalks, and landscaping. Coincides with W Duwamish Trail construction and, Seattle Public Utilities drainage substation proposal.</p>
36	<p>S Spokane St Freight- only Lanes Pilot</p>	<p>Pilot project to design, implement, and evaluate freight-only lanes on the corridor. The first phase of the project would determine project limits and identify design options, and new infrastructure needed to implement the pilot. The second phase would implement modifications to roadway channelization for truck-only lanes,</p>
35		<p>install signal and signage upgrades, and provide ITS equipment such as variable message signs and detection equipment. The project would evaluate time-of-day operations, while providing a contingency for allowing all traffic to use the lanes in the event of an incident on the upper bridge.</p>
37	<p>S Holgate St Rail Crossing</p> <p>Improvements (S Holgate</p> <p>St from Occidental Ave S to</p> <p>4th Ave S)</p>	<p>Reconstruct the pavement to Heavy Haul route requirements, and improve channelization, signage, and pedestrian and bicycle environment.</p>

38	S Atlantic St Corridor Reconstruction (S Atlantic St - Alaskan Way to 1st Ave S)	Reconstruct and make operational ITS improvements.
39	S Spokane St ITS Upgrades (Chelan Ave SW to S Airport Way)	Install ITS equipment along the corridor to collect and provide real-time travel time information for trucks and the general public. Specific equipment would include Bluetooth readers and dynamic message signs installed along the corridor to collect and disseminate travel time information between S Airport Way and Chelan Ave SW, including access to Port Terminal 5. An additional project component, which has not yet been evaluated for cost, may be to improve the signal system at the intersection of Chelan Ave SW at the western terminus of the corridor.
40	SW Spokane Pl Reconstruction	Reconstruct and make operational/ITS improvements to SW Spokane Pl.
42	Railroad Crossing Delay Warning System (S Holgate St, S Spokane St, and S Horton St)	Install ITS equipment to monitor and inform the public of road closures due to train activity and provide alternative routing options via of dynamic message signs that display real-time information to drivers at key locations.
43	S Hanford Reconstruction	<p>Improve access to the Main Seattle International Gateway (SIG) Yard. Examine the feasibility of installing a traffic signal and other potential changes to facilitate traffic flow in the area. If or when warranted, a traffic signal at the Main SIG entrance could alleviate congestion and allow for improved truck access to the yard.</p> <p>This project also rebuilds the segment of Hanford St between the East Marginal Way S and 1st Ave S to Heavy Haul route standards, including new pavement at railroad crossings. It may include rail crossing gates or other devices, if needed.</p>
44	S Michigan St ITS Improvements (East	Update signal timing, vehicle detection, CCTV cameras, dynamic message signs and fiber communications to improve traffic flow and provide enhanced traveler information along S Michigan St

	Marginal Way S to Corson Ave S)	
45	West Marginal Way SW/ Chelan St SW Intersection Improvement	Intersection signal operational improvements for freight. There is another study underway to improve access for cyclists. (Expected project completion in 2024)
46	W Marginal Way SW Reconstruction	Reconstruct and make operational/ITS improvements to West Marginal Way SW.
47	1st Ave S Bridge ITS	SDOT and Port of Seattle partnership to determine best mode to disseminate route information to area trucking industry. Provide information and advance warnings about bridge openings during peak travel times for freight based on historical statistics and real-time information.
48	Airport Way S / S Edmunds St intersection improvement	Monitor and evaluate for future signal warrants and address geometric issues.
49	S Bailey St Channelization and Operational Improvements (S Michigan St to Carleton Ave S)	Improvements for the eastbound left-turn movement to access the I-5 ramps, including a review of signal operations and channelization changes.
50	16th Ave S and East Marginal Way S Intersection Improvements	Improve northbound right-turn curb radius.

51	S Lucile St Reconstruction (S Airport Way to SR 99)	Reconstruction and make operational/ITS improvements.
52	S Massachusetts St Rebuild (access road - Colorado Ave S to 1st Ave S)	Reconstruct S Massachusetts St to improve safety and access to North SIG Yard, while maintaining two-way operations. Seek to provide separated travel lanes for general purpose and truck traffic. Provide improved truck access/operations at the 1st Ave S / S Massachusetts St intersection.
53	Diagonal Ave S / S Oregon St / Denver Ave S Reconstruction (East Marginal Way (SR 99) to Union Pacific Argo Yard)	Rebuild existing truck route facility.
54	S Dallas Ave / 14 th Ave S Intersection Improvement	Improve curb radius for northbound and westbound turning movements.
55	West Seattle Bridge access to Port Terminal 18 and Terminal 5	Provide access improvements from the West Seattle Bridge to Terminal 18 and/or Terminal 5 from West Seattle Bridge.
57	SODO Phase 1 ITS (SODO area)	Provide advanced warning for railroad closures to minimize queuing as well as improve traffic monitoring capabilities for major haul routes in the SODO area.
58	S Holden St Reconstruction	Reconstruct and make operational/ITS improvements to S Holden St.
59	1st Ave S Reconstruction	Reconstruct and make operational/ITS improvements to 1st Ave S.

60	6th Ave S Reconstruction	Reconstruct and make operational/ITS improvements to 6th Ave S.
61	Duwamish Ave S Reconstruction/East Marginal Way Grade Separation Reconstruction	Reconstruct and make operational/ITS improvements to Duwamish Avenue S, Duwamish Ave Bridge and S Spokane St.
62	Harbor Island Access Improvements	Reconstruct and make operational/ITS improvements to 11th Ave SW, SW Florida St, 16th Ave SW and Klickitat Ave SW. Project does not include non-City right of way (T18 access portions).
63	SW Klickitat Way Reconstruction	Reconstruct and make operational/ITS improvements to SW Klickitat Way.
65	4th Ave S Reconstruction and ITS Implementation	Reconstruct and make operational/ITS improvements to 4th Ave S.
66	S Industrial Way	Reconstruct and make operational/design improvements to S Industrial Way.
67	Citywide Small Spot Improvement Program	Freight spot improvement program to help trucks move more quickly at key bottlenecks.
68	Integrated Corridor management on WSDOT operated facilities <ul style="list-style-type: none"> • NB SR 99 at SW 103rd St • SB SR 99 at N 145 St • I-5 at NE 145th St • Northgate Way between 	Implement integrated corridor management (ICM) by establishing relationships with other jurisdictions to install dynamic message signs ahead of major connections between I-5, SR 99 and SR 522 that would provide the opportunity for freight to avoid congestion on a given facility when it is present. Install dynamic message sign and/or push out data on I-5 conditions and back-ups. Implement additional permanent surface street data collection.

	SR 99 and SR 522	
New	Railroad Crossing Program	Maintain and update Rail crossings in coordination with railroads (Class I and Short line).
New	Railroad Removal Program	Remove identified unused rail to upgrade street pavement.
New	Freight Program (vs. Freight Spot Improvement Program)	Planning, design, research, and program management.