APPENDIX B: INFRASTRUCTURE OPPORTUNITIES ASSESSMENT

- SeaTac City Center Area Transportation and Utility Infrastructure Analysis Needs Assessment and Opportunities (Toole Design)

SeaTac City Center Area

- Transportation and Utility Infrastructure Analysis: Needs Assessment and Opportunities

TOOLE DESIGN

Transportation Infrastructure Analysis

Process:

- Reviewed adopted transportation, utility, and general community plans and policy statements (including but not limited to, the Comprehensive Plan and the Transportation Master Plan)
- Identified existing demand generators and limitations in the transportation system's functionality within the City Center Plan area
- Highlighted possible limitations in, and opportunities for the transportation system's functionality *in the future*

TOOLE DESIGN

Transportation Infrastructure Analysis

Focus areas:

- Transportation demand generators: employment and residential centers, and key destinations
- Threats to the transportation system's functionality: turn restrictions, mega block developments, congested corridors, and lack of multi-modal facilities

Purpose:

- Develop understanding of the transportation network's functionality and future growth opportunities and challenges

TOOLE DESIGN

Transportation Infrastructure Key Takeaways: Major Themes

- **Gap between Policies & Implementation:** Policies from adopted plans do not match current space allocations and infrastructure for pedestrians, bicyclists, and transit riders within the Right of Way which indicates current City goals have not yet been implemented through public investment or private development
- **Existing Barriers:** The existing disconnected and restricted transportation system within the City Center Area limits the flow of motor vehicle traffic and creates barriers to vehicle and pedestrian connections in the area, and potentially barriers to redevelopment
- **Future Opportunities:** Redevelopment opportunities should consider access to and from the parcels, circulation within developments to manage growing congestion, and improvements to vehicle and pedestrian connections throughout the City Center Area

TOOLE DESIGN

Transportation Infrastructure Key Takeaways: Existing Network Highlights

Gap between Policies & Implementation:

- A **well-connected network** for motor vehicle and pedestrian traffic in the City Center Area, and **residential areas** served by **public transit** and a **network of sidewalks**
- **Comfortable, regular crossings** and **access points at convenient intervals** for motor vehicles and pedestrian traffic within the Area

Existing Barriers:

- **Congested and irregular motor vehicle connections** due to: frequent turn restrictions along International Blvd. and limited driveway entrance options into larger scale parcels, regular congestion at intersections, and a lack of internal circulation on larger parcels, and connections between developments
- **Restricted and uncomfortable pedestrian connections** due to: wide, auto-oriented intersections; limited crosswalks between bus stops, and a lack of internal circulation on larger parcels, and sidewalk / pathway connections between developments

Future Opportunities:

- **Megablocks** impede connectivity, add pressure to the existing limited network, and limit the access to existing and future redevelopment opportunities
- **Site access and internal circulation limitations** restrict access to and through the sites for all modes (e.g. loading, visitors, and neighborhood connections), and encourage growing congestion on the few East-West routes in the Area

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Gap between Policies and Implementation: Policy Highlights

Documents reviewed:

- City of SeaTac 2017 Comprehensive Plan
- City of SeaTac 2015 Transportation Master Plan
- Puget Sound Regional Council 2013 Growing Transit Communities Compact
- City of SeaTac 1999 City Center Plan

Focus areas:

- Transportation, Community Design, Utilities, and Land Use elements

Purpose:

- Identify gaps between the City's adopted policies and existing conditions within the City Center area

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Gap between Policies and Implementation: Comprehensive Plan Takeaways

The City Center Area's existing transportation network conditions do not currently reflect the Comprehensive Plan's policies. For example, the Comprehensive Plan's policies support:

- A **well-connected network** for motor vehicle and pedestrian traffic in the City Center Area, and **residential areas** served by **public transit** and a **network of sidewalks.**
- **Comfortable, regular crossings** and **access points at convenient intervals** for motor vehicles and pedestrian traffic within the Area.

Policies in the Comprehensive Plan include best practices that support recommended and allowed land uses in the Area, and can be used to guide the City Center Area Plan's discussions and planning efforts.

TOOLE DESIGN

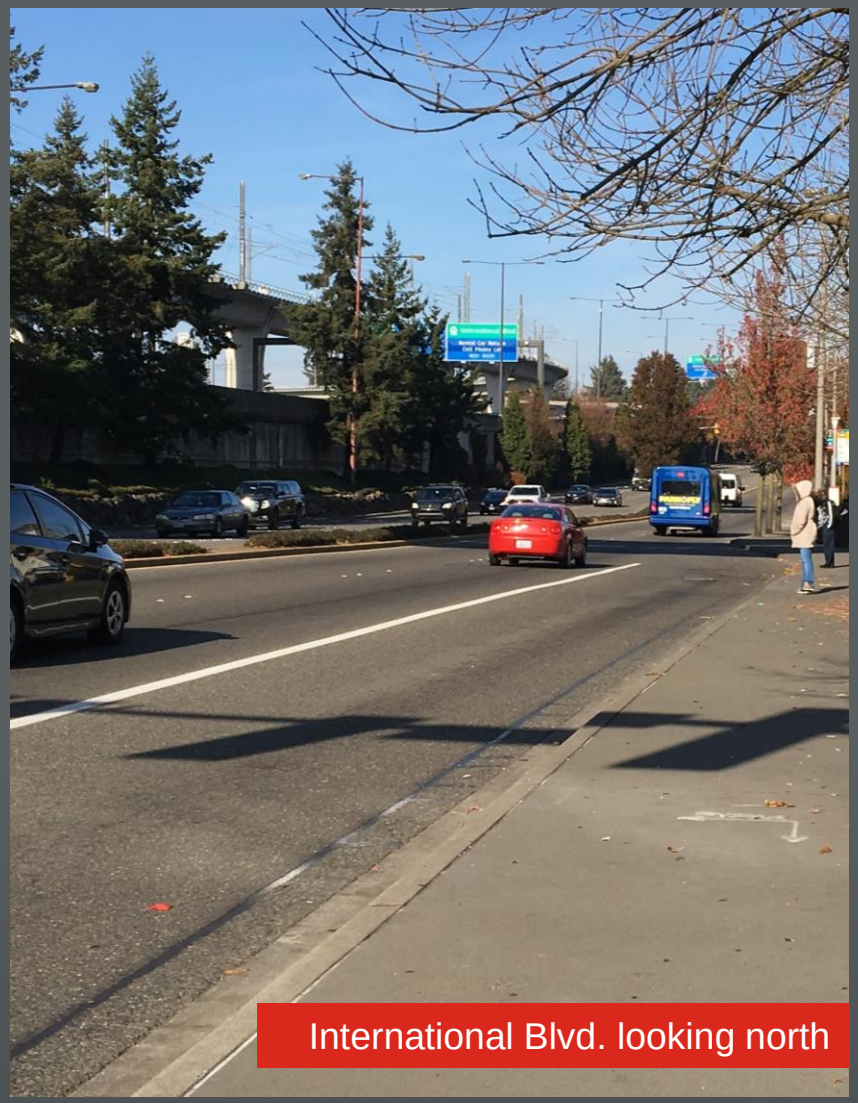
Gap between Policies and Implementation: Comprehensive Plan Examples

- **Transportation Element**
  - 4.1: For the benefit of SeaTac's residents, businesses, and visitors, promote the safe and efficient transport of people and goods by implementing and maintaining an integrated multi-modal transportation system that also supports and encourages alternative and active transportation modes.
  - 4.4D: Serve the City's residential areas with transit and well-connected networks of sidewalks and bicycle paths.
  - 4.5B: Work with King County Metro to enhance transit service in SeaTac, especially east-west connections to the Urban Center and to connections with BRT routes.
- **Community Design Element**
  - 7.2I: Provide safe methods such as signalized crossings…for people to cross major streets at regular and convenient intervals.
  - 7.2J: Encourage pedestrian and bicycle connections through large blocks.
- **Utilities Element**
  - 6.1B: Coordinate with utilities on provision of basic service.
  - 6.1C: Require new development to connect to sanitary sewer.
- **Land Use Element**
  - 2.1A: …focus the majority of SeaTac's commercial and residential growth and redevelopment into three distinct complete communities within designated Urban Center.
  - 2.1C: Promote development that reduces block sizes in the Urban Center…and provides a network of connected local streets to facilitate pedestrian circulation and transit accessibility.

TOOLE DESIGN

International Blvd. at S. 176th St.

International Blvd. at S. 176th St.



International Blvd. looking north

Existing photos of motor vehicle access barriers

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International Blvd. at S. 188th St.

International Blvd. at S. 170th St.

International Blvd. at S. 180th St.

International Blvd. at S. 176th St.

S. 180th St. looking north

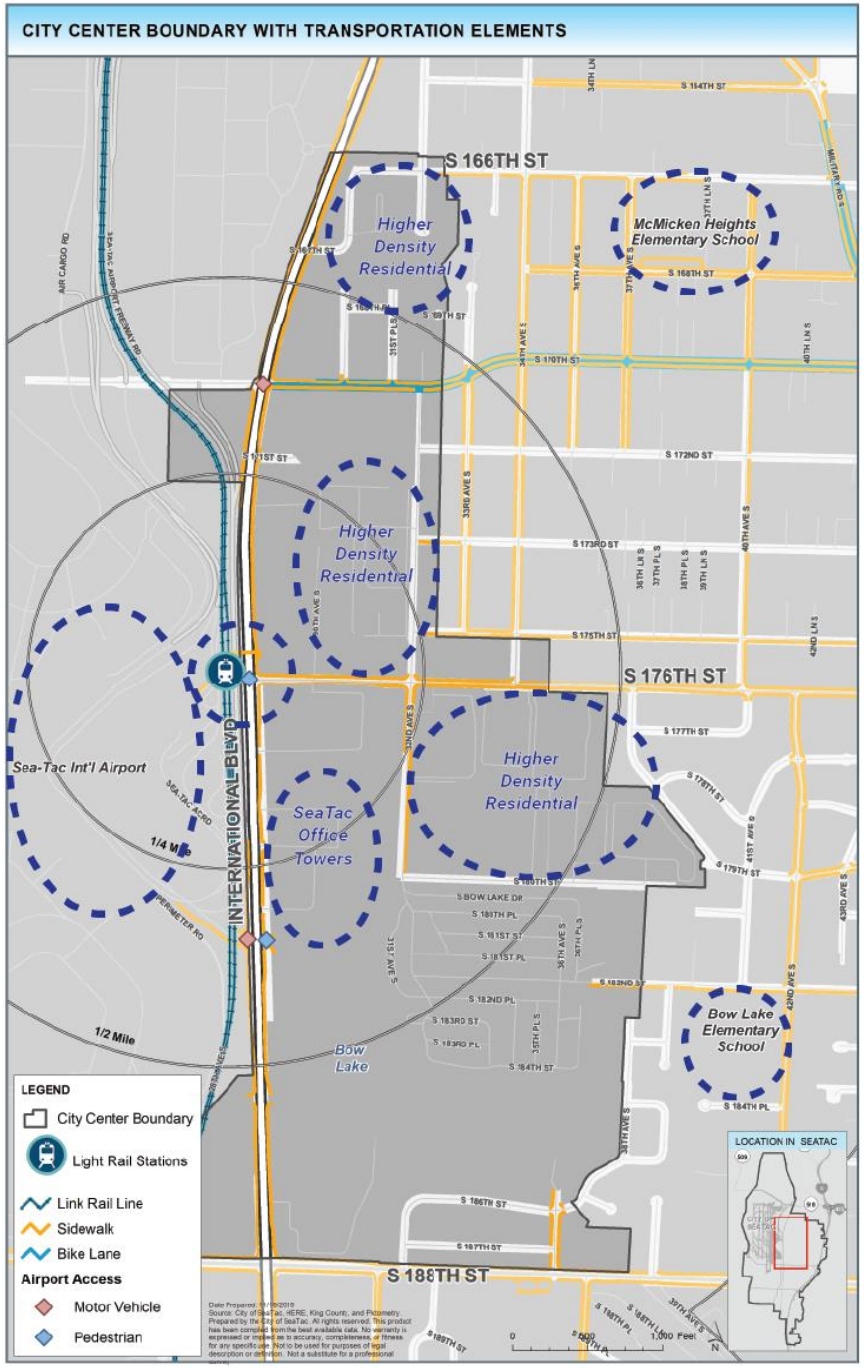
Existing photos of pedestrian crossing conditions and access barriers

TOOLE DESIGN

Existing Barriers:
Transportation Network Demand Generators

Existing demand generators for motor vehicle and pedestrian traffic:

- Sea-Tac Int'l Airport
- SeaTac/Airport Link Light Rail Station and Transit Center (includes RapidRide bus stops & plazas)
- SeaTac Office Towers
- Higher Density Residential:
  - Between S. 166th St. & S. 168th St.; between S. 170th St. & S. 176th St. and, between S. 176th St. & S. 184th St.
- McMicken Heights & Bow Lake Elementary Schools (outside but adjacent to the City Center Area)



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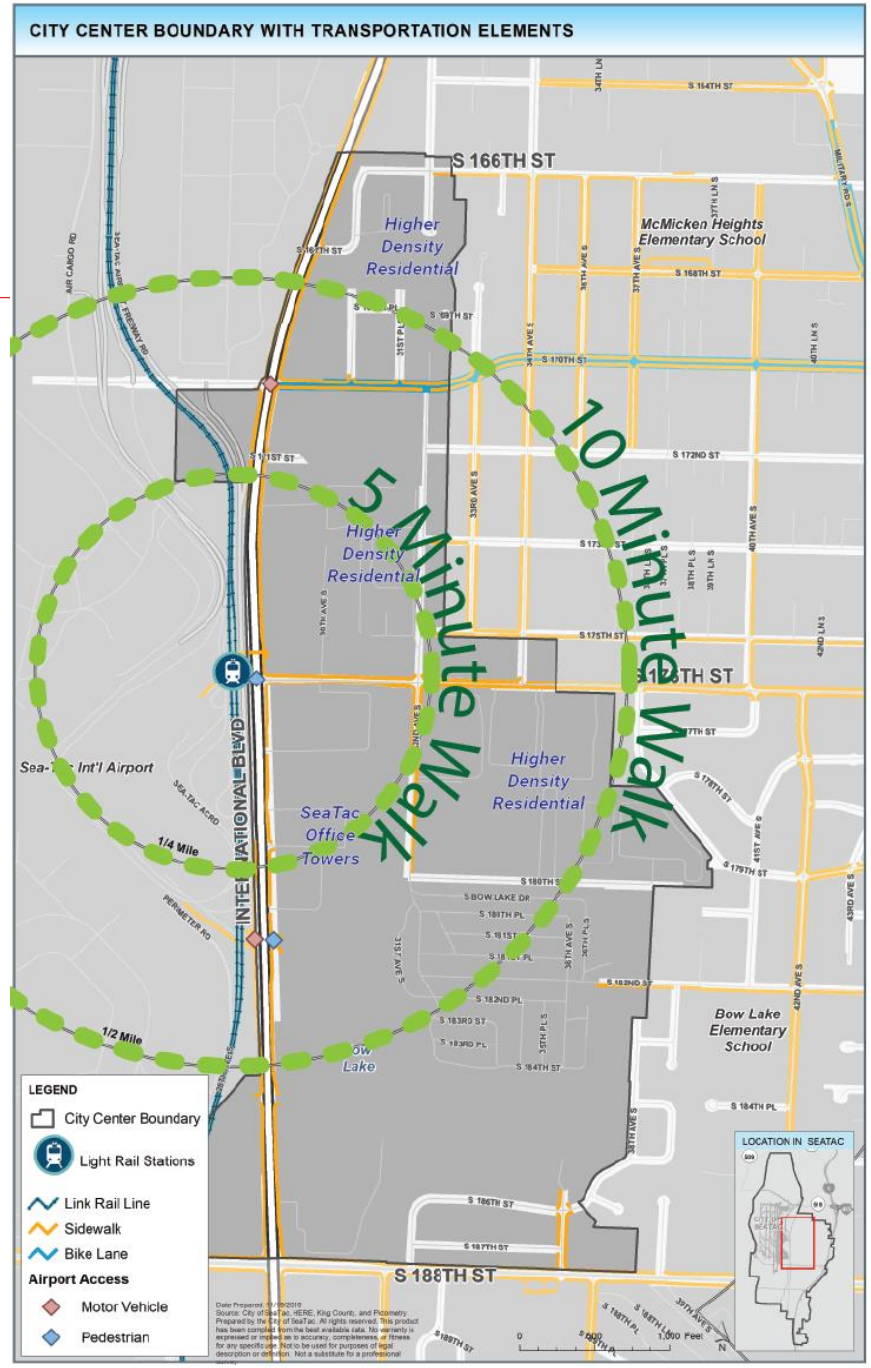
Existing Barriers:
Transportation Network Demand Generators

Quarter-mile and half-mile radii shown on the map highlight generators within a 5 minute and 10 minute walk distance, respectively, of the SeaTac/Airport Link Light Rail Station and Transit Center.

- Over half of the SeaTac Center City Area is within the 10 minute walk shed. The 10 minute walk shed includes the Sea-Tac Int'l Airport, the SeaTac/Airport Link Light Rail Station and Transit Center, the SeaTac Office Towers, and multiple clusters of higher density residential parcels.

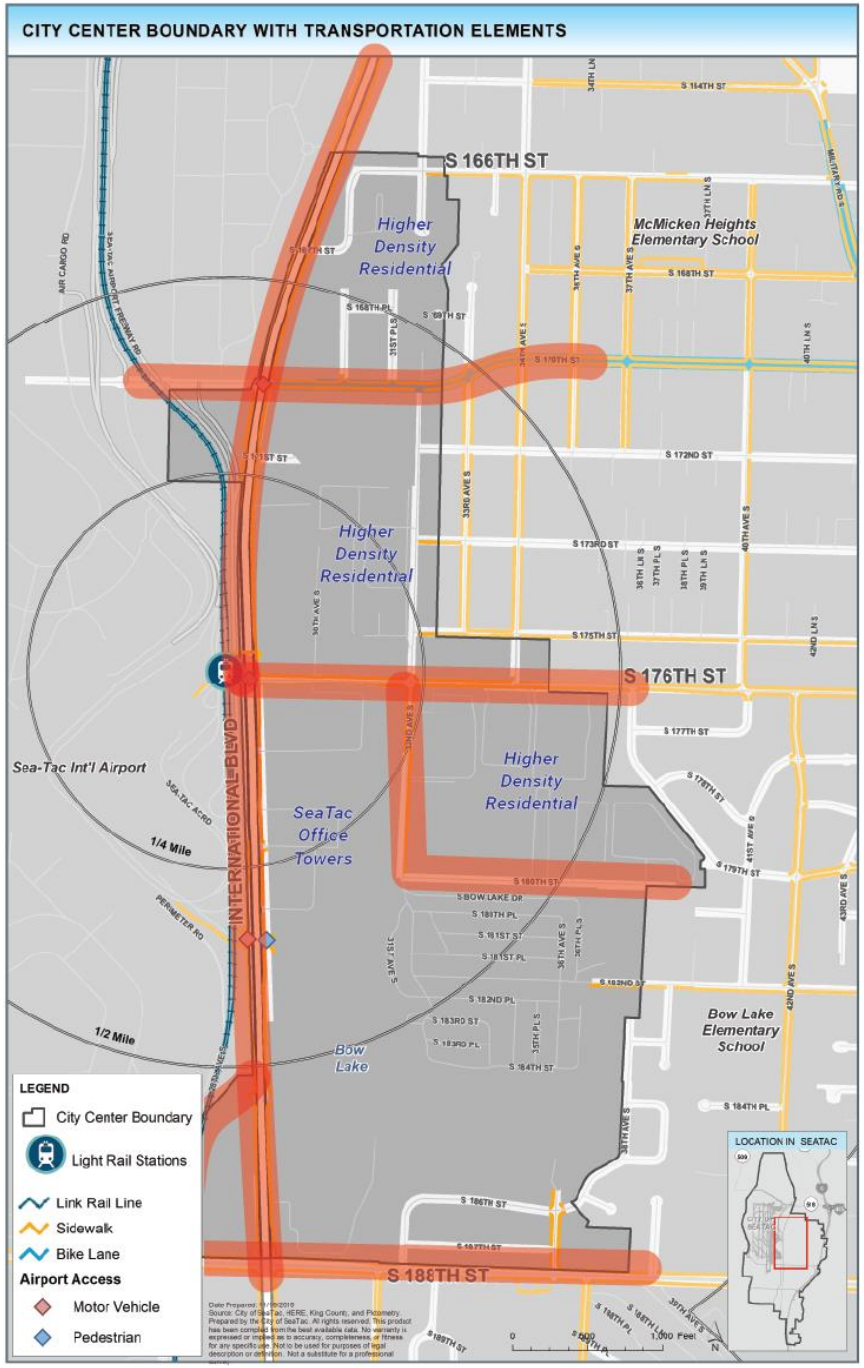
Existing transportation barriers within the 10 minute walk shed limit access for motor vehicles and pedestrians to the SeaTac/Airport Link Light Rail Station and Transit Center. Addressing these barriers may generate significant access and mobility gains as the parcels are within a 10 minute walk of a key regional transportation resource.



TOOLE DESIGN

Existing Barriers:
Motor Vehicle Traffic

- The **key routes** for motor vehicle traffic include **International Blvd.,** the main north-south route in the area, and the **connecting through arterials and access roads to motor vehicle destinations**:
  - S. 170th St., S. 176th St., 32nd Ave. S. to S. 180th St., S. 182nd St., Arrivals Dr., Air Cargo Rd., and S. 188th St.
- Motorists primarily use International Blvd. to access the Sea-Tac Int'l Airport, and destinations within SeaTac and nearby cities in South King County.
  - International Blvd. is not a key route for regional motor vehicle traffic, such as for those traveling to Downtown Seattle.
    (SeaTac Station Area Action Plan Market Analysis and Development Considerations, 2005)
- The restricted key routes network puts pressure on the area's limited connecting streets, and increases congestion at intersections along International Blvd.

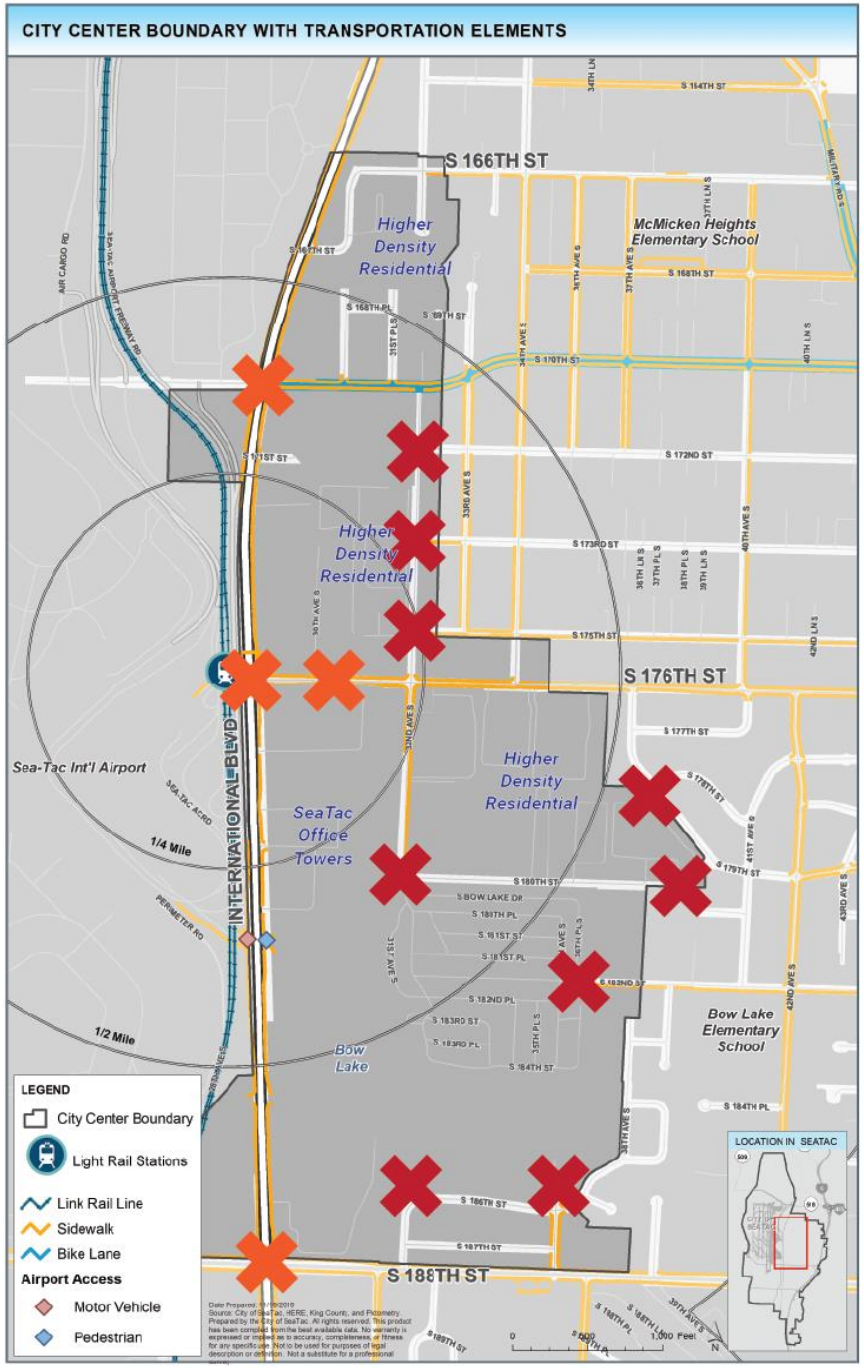


TOOLE DESIGN

Existing Barriers: Motor Vehicle Traffic

Barriers for motor vehicle traffic in the City Center Area push traffic onto connecting routes, increase congestion at intersections, and generate longer travel times and distances:

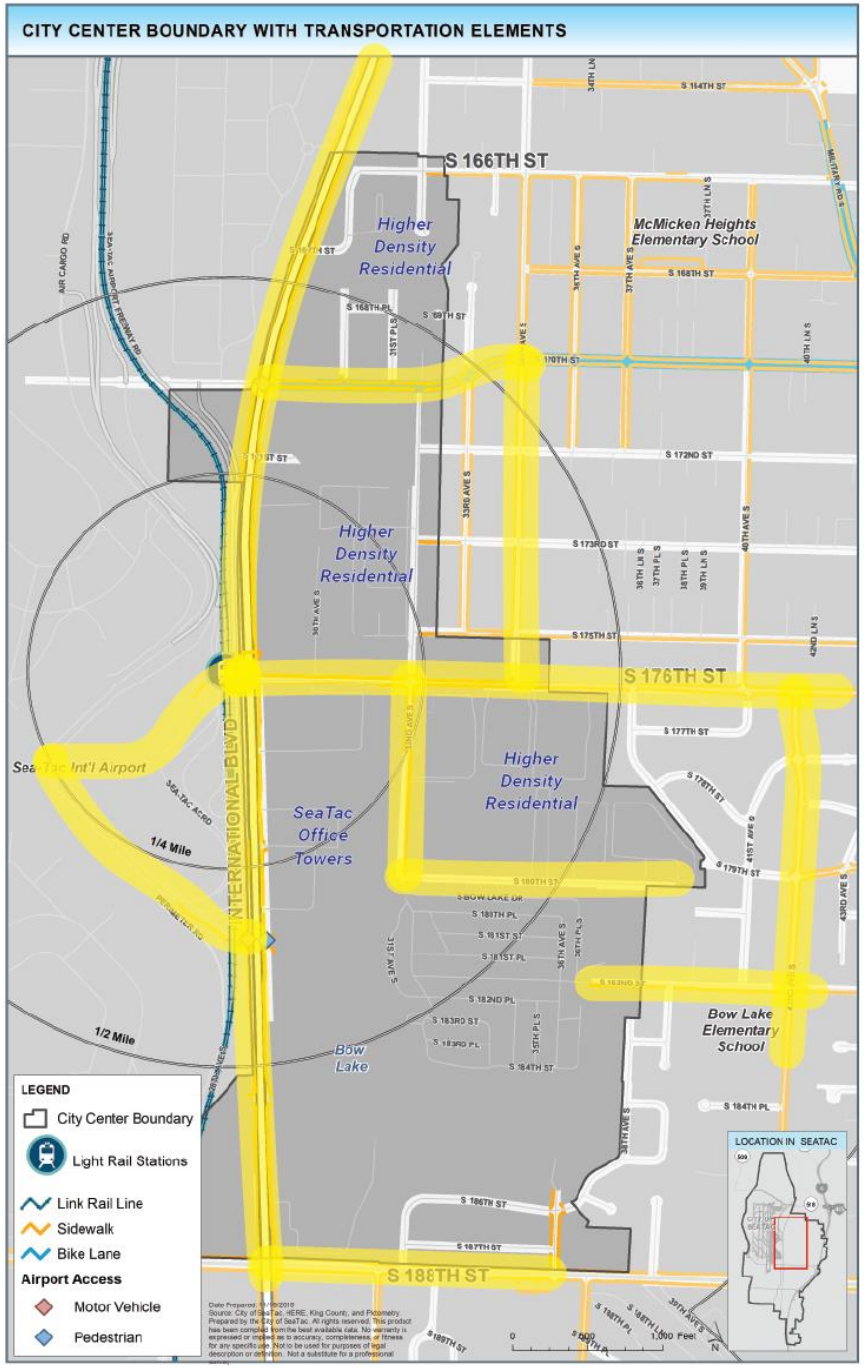
- **Turn restrictions** along International Blvd. and **limited driveway entrance options** into **larger scale parcel.**
- **Congestion at intersections**: International Blvd. and S. 170th St., bollards added in middle of S. 176th St. to prevent left turns into Kiss & Ride lot and related queuing problems on International Blvd.
- **Lack of internal circulation on larger parcels**, and connections between developments: SeaTac Office Center, and the Bow Lake Retirement Community.
- **Infrequent connecting streets** caused by dead-ends and fences / gates, and large scale developments.



TOOLE DESIGN

Existing Barriers: Pedestrian Traffic

- The **key routes** for pedestrian traffic include **International Blvd.,** the main north-south route in the area, and the **connecting through arterials and access roads to pedestrians destinations**:
  - S. 170th St., S. 176th St., 32nd Ave. S. to S. 180th St., 34th Ave. S., 40th Ave. S., S. 182nd St., and S. 188th St.
- Pedestrian traffic is pushed to auto-oriented roadways (e.g. International Blvd., and S. 176th St.) where the Area's limited pedestrian facilities are located.
  - Pedestrians experience extended wait times at intersections, long crossing distances, and few pedestrian amenities to support pedestrian trips in the Area.

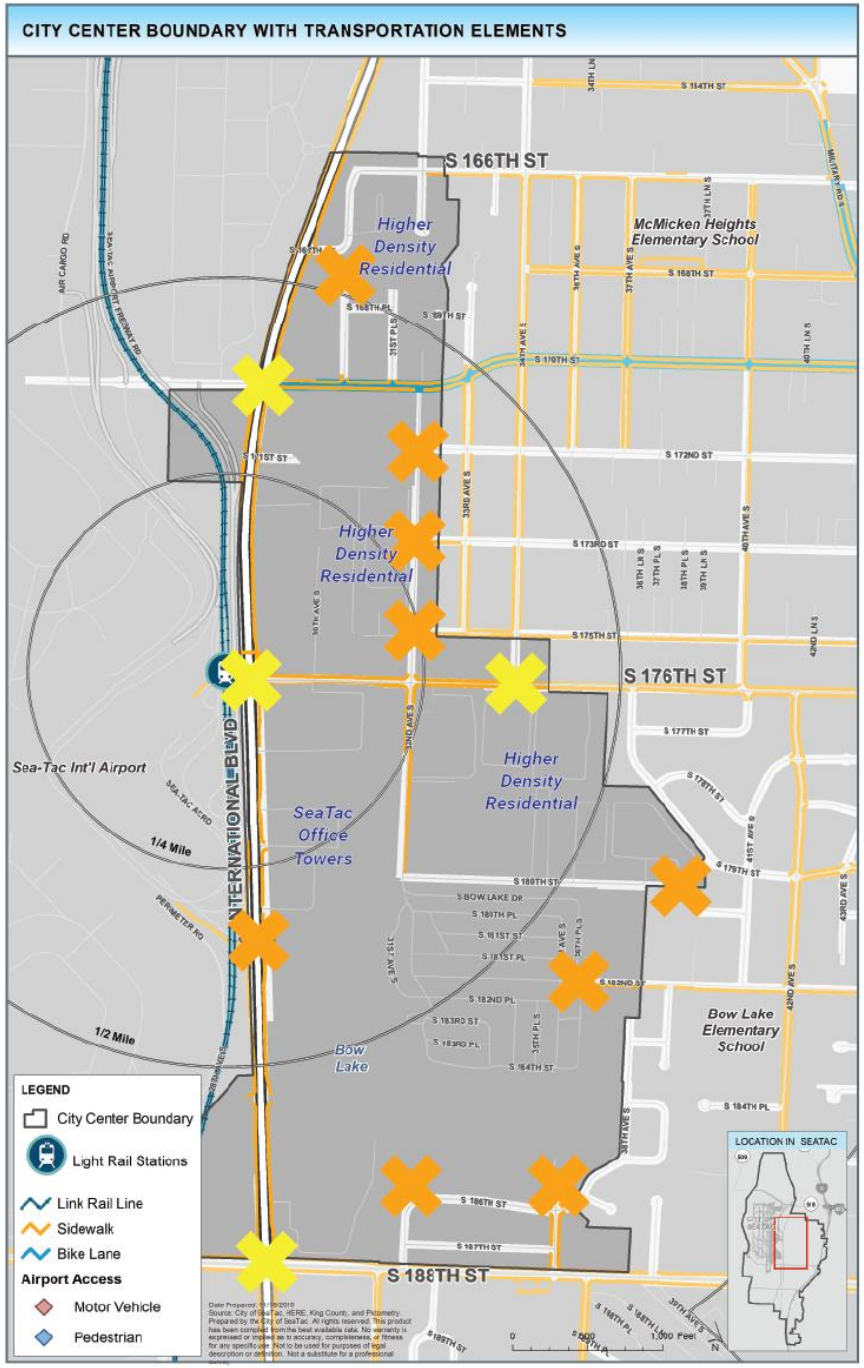


TOOLE DESIGN

Existing Barriers:
Pedestrian Traffic

Barriers for pedestrian traffic in the City Center Area restrict opportunities for walking trips, encourage short-distance trips by motor vehicles, and limit opportunities for community members without regular access to a motor vehicle:

- **Wide, auto-oriented intersections** (e.g. International Blvd. and S. 176th St.), and **lack of crosswalks between bus stops** (e.g. 34th Ave. S. and S. 176th St.)
- **Short pedestrian crossing cycles** at intersections: International Blvd at S. 182nd St.
- **Few pedestrian access options between the City Center Area and the Sea-Tac Int'l Airport**
- **Lack of internal circulation on larger parcels**, and **sidewalk / pathway connections between developments** – especially for east/west connections: e.g. the Higher Density Residential Communities between S. 170th St. and S. 184th St.



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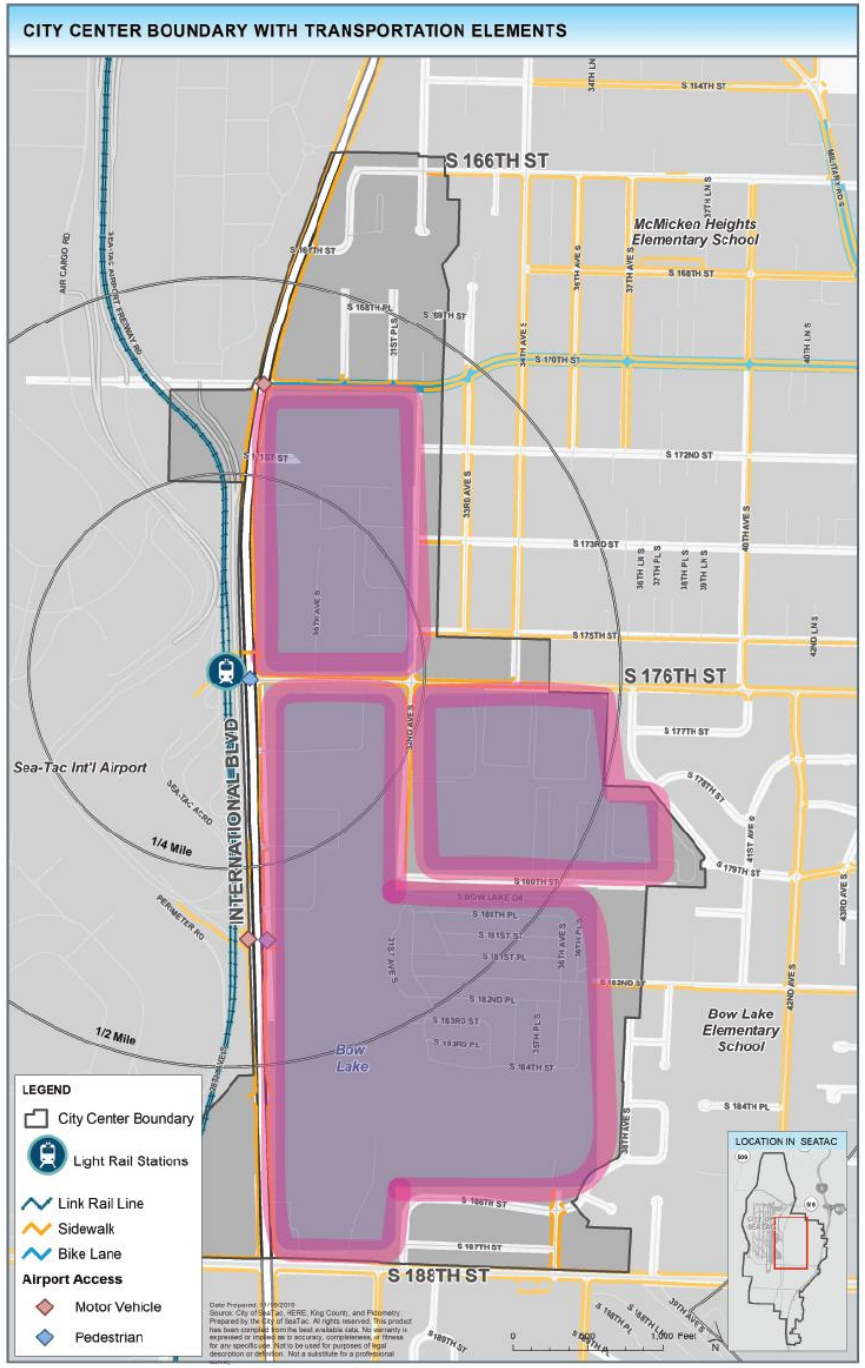
Future Opportunities: Limitations in the Existing Transportation Network

Mega-block developments in the Area, and a lack of internal circulation and mid-block connections within the developments are threats to the Area's existing transportation system, and to future redevelopment opportunities.

- Economic analyses for the Area identify transit-oriented development (TOD) opportunities, which have not yet been realized. TODs require walkable sites with access to multiple modes of transportation and connection points, which are limited on mega-block development sites.
- Mega-block developments limit the permeability of S 176th St. and International Blvd, two key routes for Area community members, employees, and visitors (including those using Sea-Tac Int'l Airport) to shop, work, and play in the Area.



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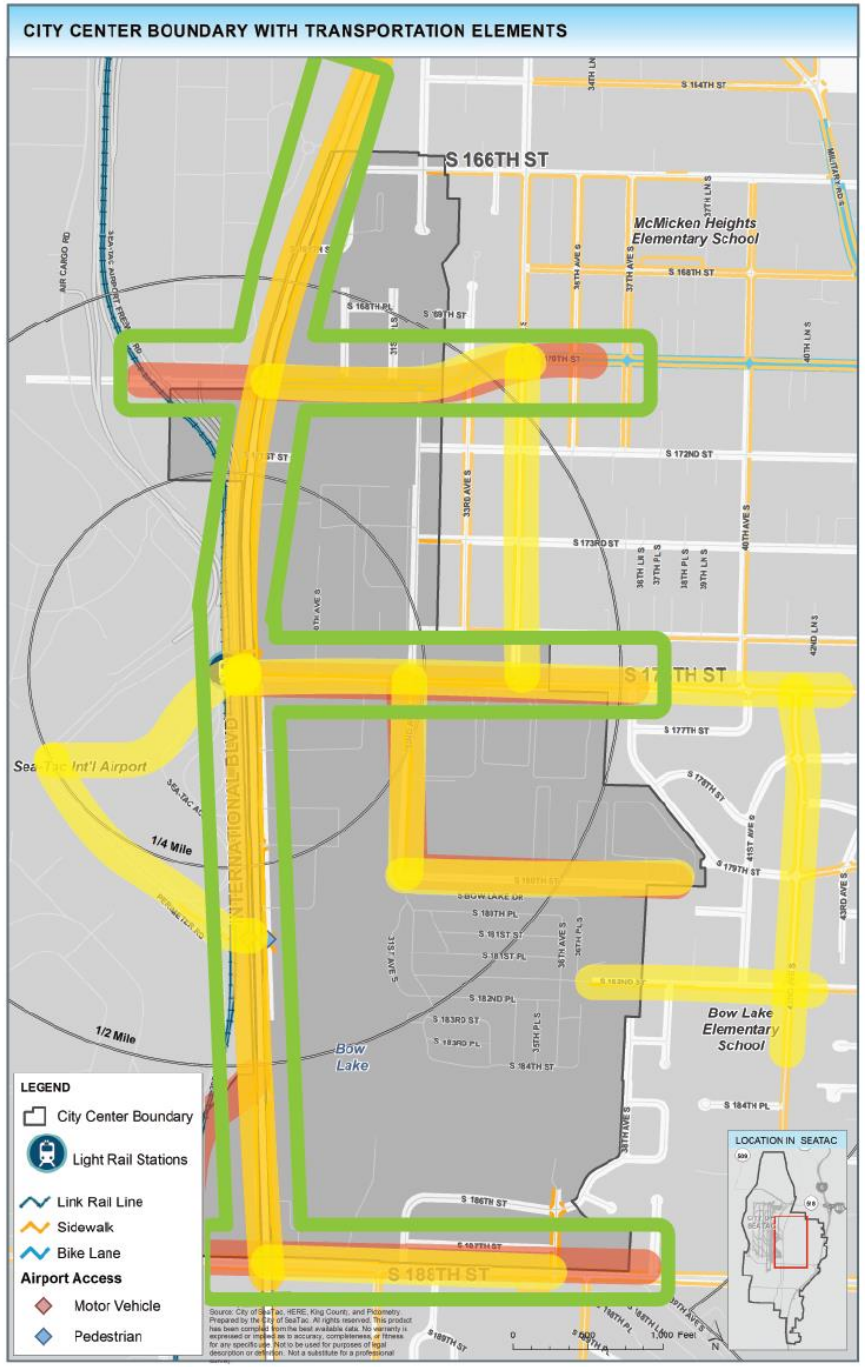
Future Opportunities: Limitations in the Existing Transportation Network

Gaps in the access network generate additional stressors on the Area's existing transportation system, especially on the few connected key motor vehicle and pedestrian traffic routes that serve the Area.

- Gaps are due to **turn-restricted entrances** into mega-block developments**, few internal circulation elements** for motor vehicle drivers and pedestrians, and **private gates and fences**.
- **Access to and through the sites for all modes** (loading, visitors, workers and neighborhood connections) is critical for managing rising congestion due to economic growth in the Area.



TOOLE DESIGN

Future Opportunities:
Limitations in the Existing Transportation Network

- **Existing threats** to the transportation system's functionality include: turn restrictions, mega block developments, congested corridors, and lack of multi-modal facilities.
- **Future Opportunities** that would support the area's transportation system include**:**
  - Redeveloped parcels that include **access to and from the parcels**;
  - **Circulation within developments** to manage growing congestion; and,
  - Improvements to **vehicle and pedestrian connections** throughout the City Center Area.

TOOLE DESIGN

Future Opportunities: Ways to Improve the Existing Transportation Network

Expand access to and within potential future demand generators (e.g. airport expansion, new office / hotel / multi-family developments):

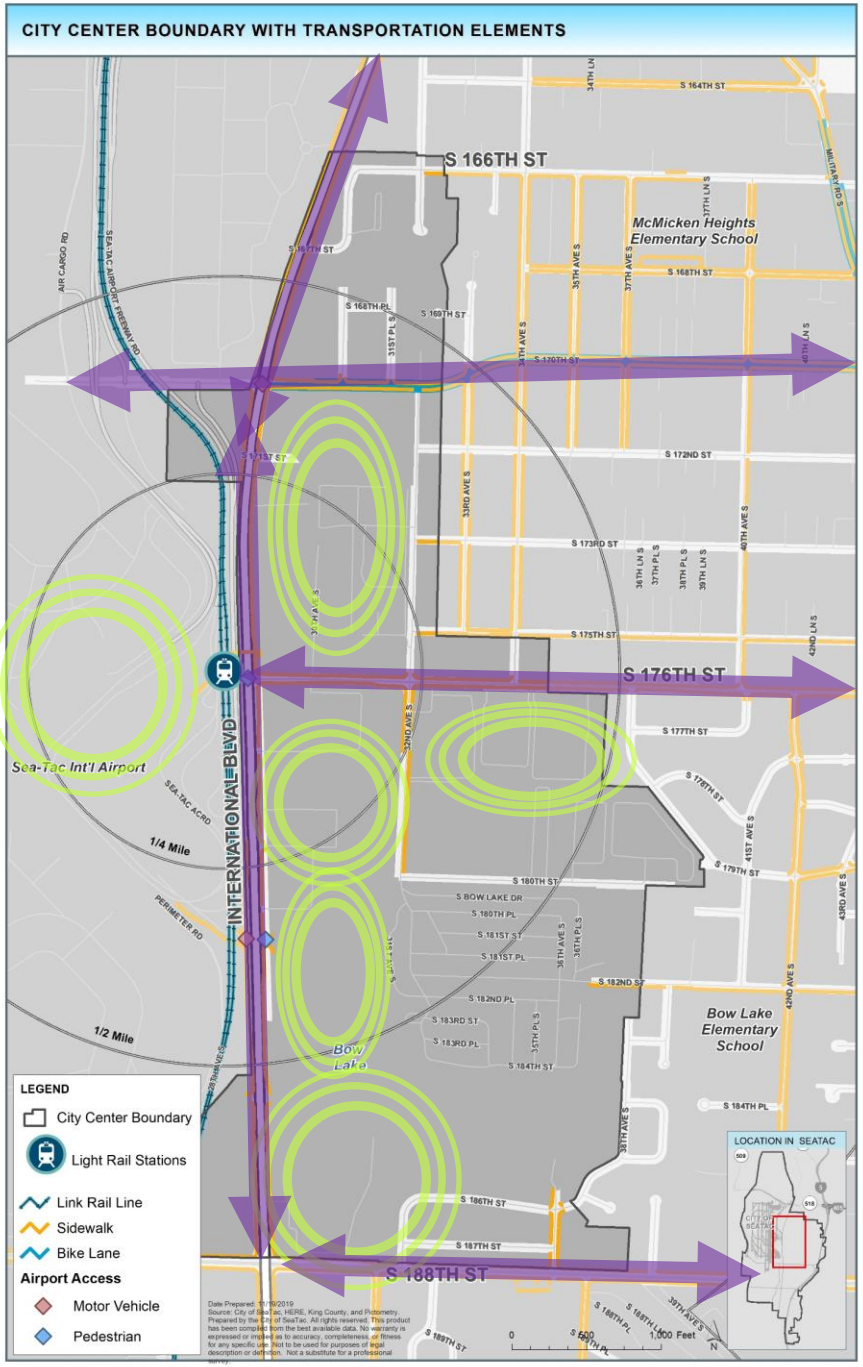
- Entrance options, driveway and curbspace management (loading and drop-off zones), and internal circulation patterns.

Look for opportunities to **increase connectivity to the local transportation network** to ease traffic demands on major routes, and facilitate multi-modal movements to and from demand generators:

- Service drives, connected pedestrian network, strategic on-site parking locations.

Strengthen the existing access grid through streetscape improvements:

- Congestion management, intersection improvements, transit services, and connections to the local pedestrian network.



TOOLE DESIGN

Future Opportunities: Key Existing Transportation Network Opportunities

Motor Vehicle Traffic:

- Increase mobility for all modes and manage rising congestion
- Encourage internal circulation options during parcel redevelopments

Pedestrian Traffic:

- Address pedestrian network gaps and create districtwide pedestrian connections along public roads and internal circulation networks
- Identify places and opportunities for people who live, work, and visit SeaTac to comfortably walk

TOOLE DESIGN

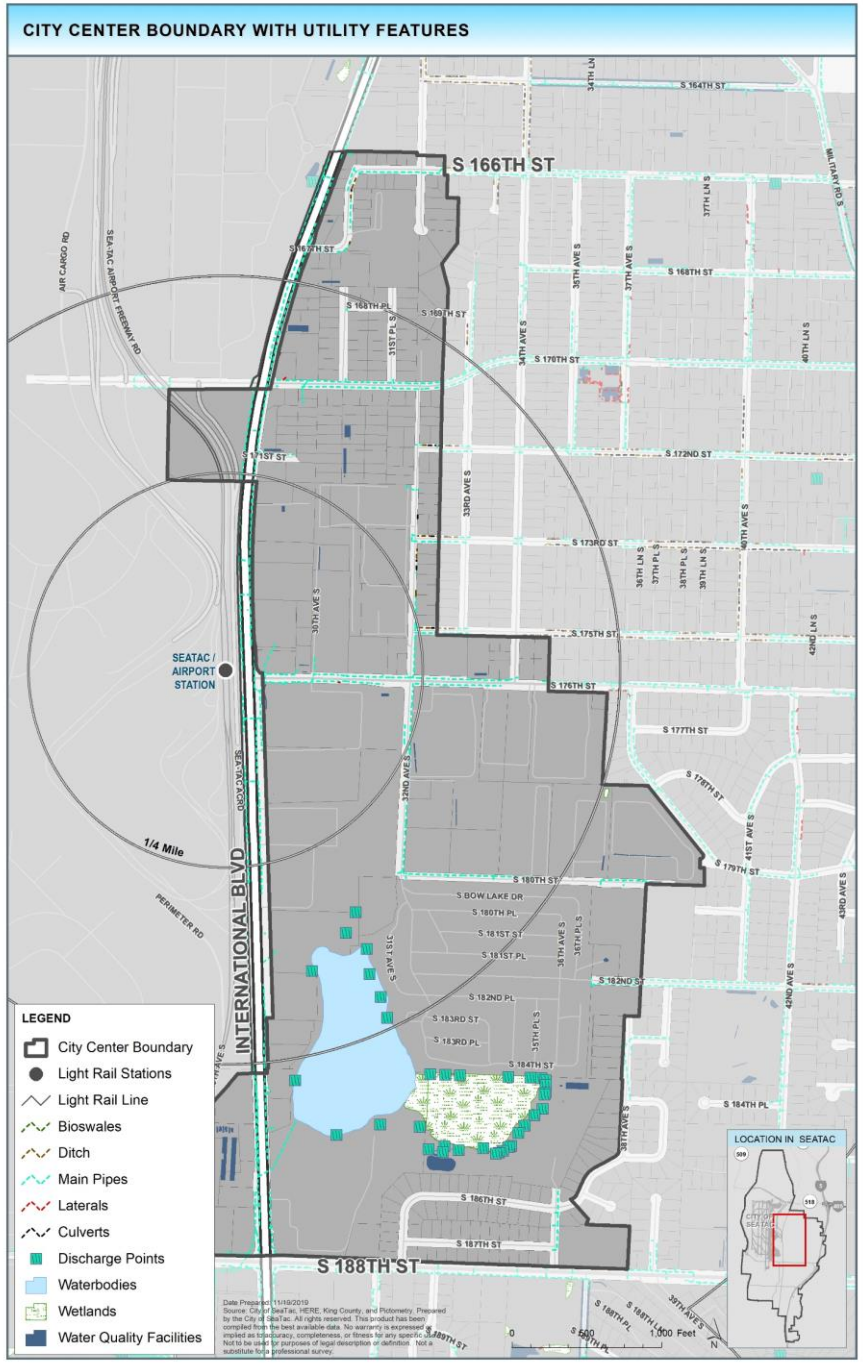
Future Opportunities:
Recommended Next Steps

- Improve **conditions for all modes** on current street network, especially for access to parcels and transit (light rail, rapid ride and bus)
- Strengthen **circulation** and **wayfinding** to light rail station kiss and ride for all modes
- Coordinate **mid-block, multi-modal access and connections** during redevelopment.
- Prepare **policies addressing modern transportation options** related to ride-hailing, ride-sharing, food delivery, autonomous vehicles and other transportation services and localized operations
- Implement a **catalytic streetscape project** in the Area that encourages motor vehicle traffic flow, creates pedestrian connections, and removes access barriers to transit services

TOOLE DESIGN

Utility Infrastructure
Key Findings and Issues

- 7 utility providers in the area, including 2 sewer districts, require service and capacity coordination by the City
- Redeveloped properties need to meet the City's current stormwater standards
- Areas adjacent to, and uphill of, the City Center plan are unsewered and may require development and utility coordination by the City



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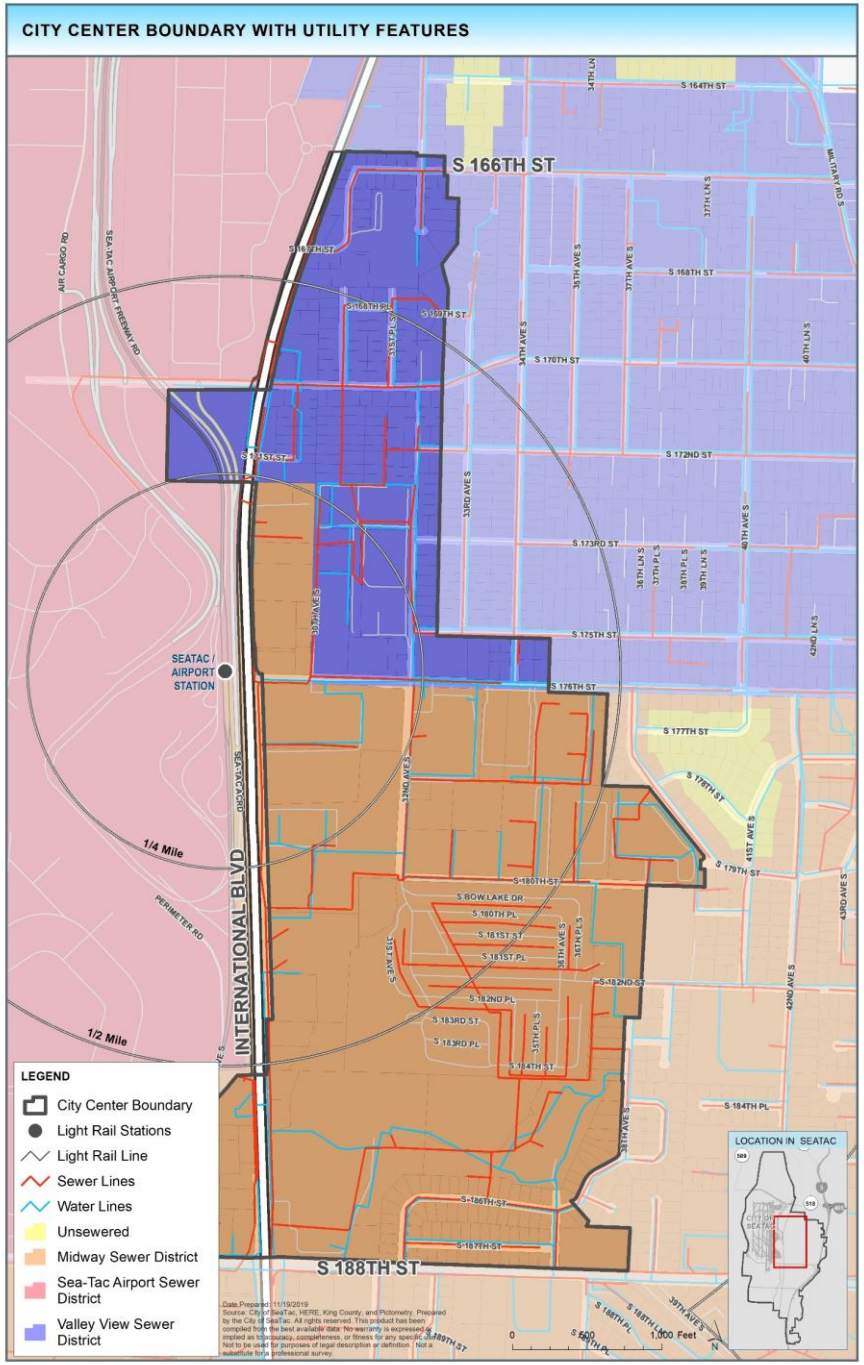
Utility Infrastructure Opportunities

- Coordinate system capacity and maintenance needs between the City's utility providers
- Update sewer system's capacity to handle more frequent heavy rain events
- Expand sewer service to unserved areas adjacent to the City Center area



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