



**AMATS: Seward Highway to Glenn Highway
Connection
Planning & Environmental Linkages Study
State Project No.: CFHWY00550
Federal Project No.: 0001653**

DRAFT Purpose and Need Statement

May 2022

This planning document may be adopted in a subsequent environmental review process in accordance with 23 USC 168 Integration of Planning and Environmental Review and 23 CFR 450 Planning Assistance and Standards.

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by DOT&PF pursuant to 23 USC 327 and a Memorandum of Understanding dated November 3, 2017, and executed by FHWA and DOT&PF.

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Acronyms and Abbreviations

AMATS	Anchorage Metropolitan Area Transportation Solutions
CFR	Code of Federal Regulations
DOT&PF	Alaska Department of Transportation and Public Facilities
EAST	<i>East Anchorage Study of Transportation</i>
H2H	Highway to Highway
EIS	Environmental Impact Statement
FMS	<i>Freight Mobility Study</i>
GSD	Greenway-Supported Development
JBER	Joint Base Elmendorf-Richardson
LRTP	Long Range Transportation Plan
LTS	Level of Traffic Stress
LUP	Land Use Plan
MOA	Municipality of Anchorage
MTP	Metropolitan Transportation Plan
MVMT	Millions of Vehicle Miles Traveled
NEPA	National Environmental Policy Act
NHS	National Highway System
PEL	Planning and Environmental Linkages
POA	Port of Alaska
STRAHNET	Strategic Highway Network
USC	U.S. Code

1. Introduction

The Central Region of the Alaska Department of Transportation and Public Facilities (DOT&PF), in conjunction with the municipal Anchorage Metropolitan Area Transportation Solutions (AMATS), is conducting a Planning and Environmental Linkages (PEL) Study to identify and evaluate options to improve transportation mobility, safety, access, and connectivity between the Seward Highway, near 20th Avenue, and the Glenn Highway, east of Airport Heights Drive. The project will also identify ways to improve access to and from the Port of Alaska (POA) to the highway network.

PEL studies represent a collaborative and integrated approach to transportation decision-making that considers environmental, community, and economic goals and impacts early in the transportation planning process and uses the information, analysis, and products developed during planning to inform the environmental review process. The PEL process reduces duplication, shortens the project delivery timeline, and refines the level of effort for future environmental review processes.

DOT&PF and AMATS have undertaken this PEL Study to examine transportation problems associated with the National Highway System (NHS) in the study area. This PEL Study is a multimodal subarea study. The planning products and decisions from this PEL Study may be used as part of the transportation project development process consistent with the National Environmental Policy Act (NEPA) and 23 United States Code (USC) 168 and 23 Code of Federal Regulations (CFR) 450.212 and 450.318. Specifically, this PEL Study will generate the following planning products that can be used in subsequent NEPA processes:

- Purpose and need and goals and objective statement(s);
- General travel corridor and/or general mode(s) definition (e.g., highway, transit, or a highway/transit combination);
- Preliminary screening of alternatives and elimination of unreasonable alternatives;
- Basic description of the environmental setting; and
- Preliminary identification of environmental impacts and environmental mitigation.

The purpose of this document is to present a draft purpose and need statement for the Seward-Glenn Mobility PEL Study that may be adopted or incorporated by reference by a relevant agency during a later environmental review process. The reader should note that this draft purpose and need document presents a summary of several relevant documents that provide the foundation upon which it is built. For additional information, the reader should consult the following technical reports prepared for this PEL Study, which are available on the project web site at <http://sewardglennmobility.com/>:

- *Draft Origin-Destination Study Report*, May 2022
- *Draft Travel Demand Modeling Report*, May 2022
- *Draft System Performance Memorandum*, May 2022
- *A Basic Description of the Environmental Setting Report*, March 2022

1.1 PEL Study Description

The Seward-Glenn Mobility PEL Study will identify and evaluate options to improve transportation mobility, safety, access, and connectivity between the Seward Highway, near 20th Avenue, and the Glenn Highway, east of Airport Heights Drive. The PEL Study will also identify ways to improve access to and from the POA to the highway network.

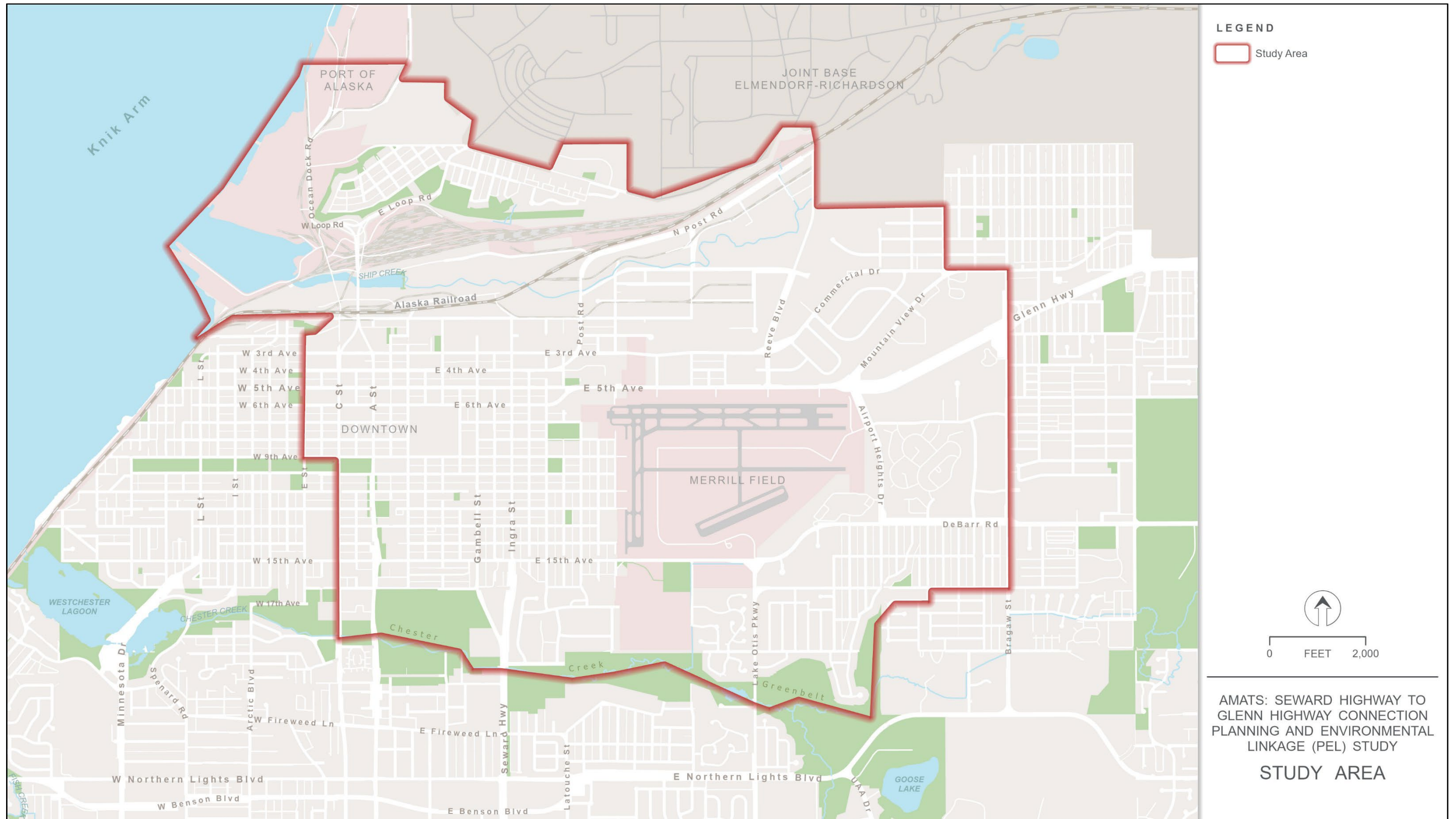
The PEL Study will build on past work in the area to develop long-term solutions to safety, access, connectivity, and freight needs. It will result in an implementation plan that describes how the study recommendations can be phased, funded, and implemented given competing statewide transportation priorities. Specific tasks include planning, environmental studies, traffic forecasting, travel demand modeling, developing a Purpose and Need Statement, alternatives development, cost estimating, implementation phasing, and public involvement.

Once the final PEL Study is complete, a project (or components of the overall plan) may move forward for additional environmental review and engineering design through the NEPA process should funding become available. The results of the study may also feed into a subsequent update of the *AMATS Metropolitan Transportation Plan (MTP) 2040*, potentially updating needed improvements, cost estimates, and timing and phasing of improvements.

1.2 Study Area

The study area generally follows Bragaw Street on the east, Chester Creek on the south, C Street on the west, and Joint Base Elmendorf-Richardson (JBER) on the north. It includes areas where potential transportation improvements could be developed between the Glenn and Seward Highways and to and from the POA. The study area is broad enough to also gauge how traffic levels on parallel routes may be affected. The study area is shown on Figure 1.

Figure 1. Study Area



1.3 Metropolitan Transportation Planning Factors

Any federal-aid-funded planning effort must show that it has adhered to the requirements in 23 CFR 450, Planning Assistance and Standards, with consideration of the federally required planning factors. To support this PEL Study process, DOT&PF and AMATS propose to use the federal metropolitan planning factors (23 CFR 450.306) as a framework to inform the study and guide decision-making. The PEL Study team will consider the following factors as goals in developing the project's Purpose and Need Statement, alternative screening criteria, alternatives, and recommendations:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase accessibility and mobility of people and freight;
5. Protect and enhance the environment; promote energy conservation; improve the quality of life; and promote consistency between transportation improvements, and state and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation;
8. Emphasize the preservation of the existing transportation system;
9. Improve the resiliency and reliability of the transportation system, and reduce or mitigate stormwater impacts of surface transportation; and
10. Enhance travel and tourism.

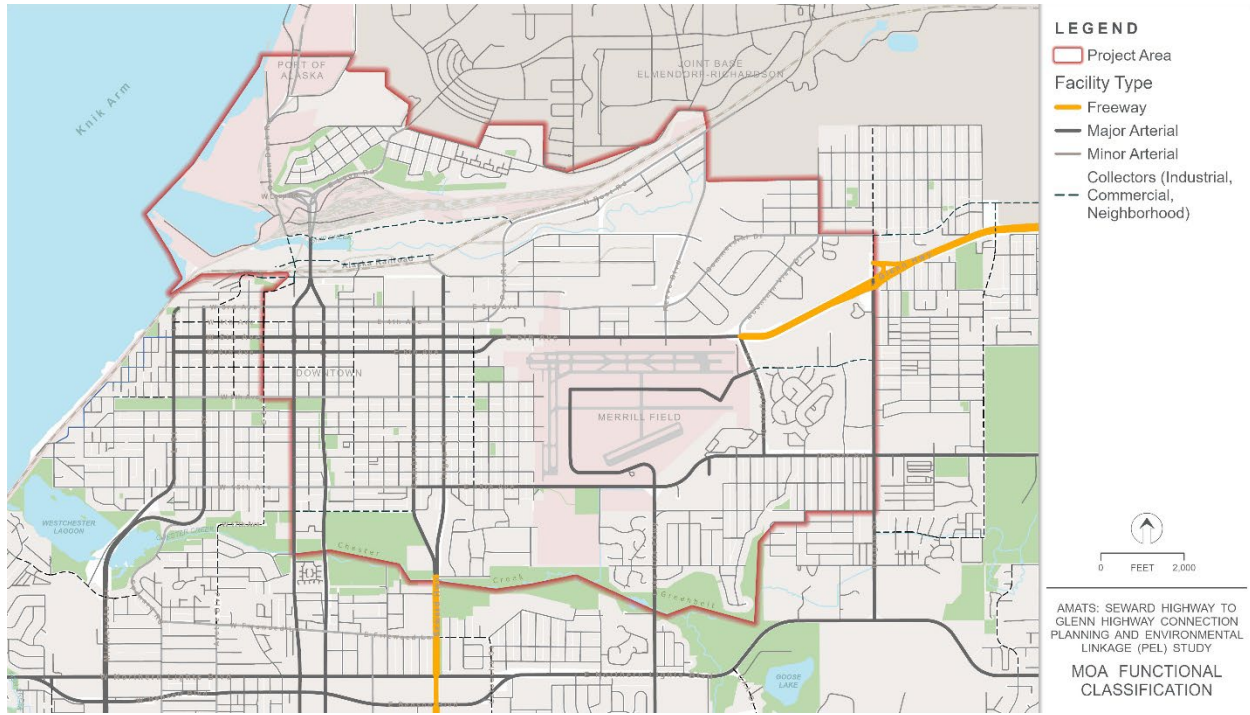
As described in 23 CFR 450.306(c), the degree of consideration and analysis of these factors will be based on the scale and complexity of the issues and needs to be addressed in the study area but will include transportation system development, land use, employment, economic development, human and natural environment (including Section 4(f) properties as defined in 23 CFR 774.17), and housing and community development.

1.4 Project History

The Seward and Glenn Highways were constructed during the 1940s and terminated at the edges of developed Anchorage (approximately 15th Avenue to the south and Bragaw Street to the east). By the late 1960s, Anchorage's population had grown by expanding to the east and south, as had the population of the Matanuska-Susitna Valley communities to the north. These increases in local and regional population caused increased traffic on roads and highways in Anchorage that accessed major employment, commercial, and industrial centers. In response to the increasing travel demand and in order to improve travel efficiency to developing residential and industrial areas southward, the Seward Highway was upgraded to a four-lane freeway with frontage roads (AMATS 1976). Similarly, the Glenn Highway was upgraded to a six-lane freeway to accommodate growth to the north and east. The existing arterial connections

between the two highways (Gambell and Ingra Streets, and 5th and 6th Avenues) have not been upgraded to a freeway; they remain as arterial streets (see Figure 2).

Figure 2. Municipality of Anchorage Functional Classification



Source: MOA 2014a

As a result of the continued population growth and urban development patterns, congestion on the existing arterial connection continued to increase. To address the problem, the existing arterial streets were widened, and one-way couplets were built to handle the traffic shortly after the 1964 earthquake (Gambell-Ingra Street and 5th-6th Avenue couplets).

Connecting the Seward Highway to the Glenn Highway was discussed as early as 1972 in the *Anchorage Long Range Transportation Plan* (LRTP). In 2001, AMATS conducted the *East Anchorage Study of Transportation* (EAST) (HDR 2001). At that time, it was determined that connecting the Seward and Glenn Highways was important to solving traffic congestion in the Anchorage Bowl.¹

In 2005, a Seward Highway to Glenn Highway Connection (Highway to Highway, or H2H) project was adopted as part of the *Anchorage Bowl 2025 LRTP* (AMATS 2007). DOT&PF started an environmental impact statement (EIS) process for the H2H project, but the EIS was canceled in 2010. In 2020, recognizing the continuing need to address transportation in this corridor, this PEL Study was included as part of the AMATS MTP 2040.

¹ See Section 3 – Project Status of the *System Performance Memorandum* for a discussion of the transportation planning history of the study area and the concept of connecting the two highways.

When the project area was last studied in detail in 2010 during the H2H EIS, the Knik Arm Crossing project and a viaduct roadway connecting Gambell and Ingra Streets to the POA were still in the adopted transportation plan. Since then, economic conditions are vastly different, and growth and land use development patterns are now subject to a newly adopted land use plan map. For these reasons, traffic patterns and congestion levels are anticipated to be different than those identified in the H2H EIS that was canceled in 2010. This PEL Study is reexamining the transportation system needs in light of these changes to develop improvements that address existing needs.

1.5 Relationship to the Metropolitan Transportation Plan

The MTP 2040 includes this PEL Study as a short-term project (MTP #129) described as follows: “The intent of this PEL is to define a vision for the future of this connection, identify environmental and resource concerns and opportunities in the study area, and use the information to develop reasonable alternatives through consultation with the affected agencies and the public” (AMATS 2020). According to the MTP 2040, the purposes of the PEL Study are “Safety (Vision Zero High Injury Network Corridor), Congestion, Access, Connectivity, and Freight (Regional Truck Route).” The MTP 2040 also identifies the following federal performance areas as being relevant: “Injuries & Fatalities, Performance of the National Highway System, Freight Movement/Economic Vitality, and Environmental Sustainability.”

Additionally, MTP 2040 includes longer-term projects (MTP #214 and #316), which are described as follows:

Construct [a] freeway connection between Seward Highway/20th Avenue and 13th Avenue with freeway access and egress ramps onto Ingra/Gambell Streets near the northern termini of the project. Reconstruct Ingra Street/Gambell Street and construct separated grade crossings of the freeway to reconnect portions of the east-west street system. Construct an interchange at Airport Heights Drive and Glenn Highway Intersection. Project would include non-motorized improvements and consider adjacent land use.

Similar to the MTP project #129 describing the PEL Study, the MTP 2040 describes the following purposes for the Seward-Glenn connection projects: “Safety (Vision Zero High Injury Network Corridor), Congestion, Access, Connectivity, and Freight (Proposed Regional Truck Route)” (AMATS 2020). Additionally, the MTP 2040 reiterates that the projects are intended to address the following federal performance areas: “Injuries & Fatalities, Performance of the National Highway System, Freight Movement/Economic Vitality, and Environmental Sustainability.”

Based on these project descriptions from the MTP 2040, the following MTP 2040 goals and objectives are identified as particularly relevant to the purpose and needs of the study area:

- 5B. Preserve and improve air quality to maintain the health and welfare of citizens.
- 5E. Coordinate transportation and land use decisions to support livable northern communities.

- 5F. Minimize adverse impacts on existing communities, such as neighborhood through-traffic movements, speeding, noise, and light pollution, etc.
- 5G. Minimize and mitigate impacts on the natural environment, such as water resources, fish and wildlife habitat, watersheds and wetlands, and parklands.
- 5I. Match street design to the use and character of the community/neighborhood through Complete Streets, recognizing that characters may vary from primarily commercial to primarily residential and from primarily urban to primarily rural.

Both the Federal Planning Factors and the relevant MTP Goals and Objectives are considered in the Purpose and Need Statement below.

2. Purpose and Need

This section describes the purpose and need for improvements in the study area. The “purpose” states why the project is being proposed and articulates the positive outcomes that are intended. The “need” describes the key problems to be addressed and explains the underlying causes of those problems.

2.1 Purpose

The purpose of the PEL Study is to improve mobility,² accessibility,³ and safety for people and goods traveling by all modes on or across the roadway system connecting the Seward Highway, the Glenn Highway, and the Port of Anchorage. The intent is to (1) maintain the functionality of the National Highway System,⁴ (2) meet the local travel needs of residents who must safely travel across or along those roadways, and (3) improve neighborhood connections.

2.2 Needs

This section describes the needs (problems) proposed to be solved through the development of the PEL Study. Each section starts with a statement of the need followed by discussion and information supporting that need. Readers are reminded that these needs are derived and summarized from supporting technical studies, which may provide additional information, mapping, and data analysis.

² Mobility is defined as “The ability to move or be moved from place to place”

(<https://www.fhwa.dot.gov/planning/glossary/index.cfm>).

³ Accessibility is defined as “The ease of reaching valued destinations, such as jobs, shops, schools, entertainment, and recreation” (<https://ops.fhwa.dot.gov/publications/fhwahop12004/glossary.htm>).

⁴ The NHS includes the Interstate Highway System as well as other roads important to the nation’s economy, defense, and mobility. These are highways in rural and urban areas that provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility (https://www.fhwa.dot.gov/planning/national_highway_system/).

2.2.1 Conflicting Travel Functions

Serving competing regional and local travel functions on the highway network in the study area leads to conflicts that reduce mobility, safety, and accessibility for all users.

The current highway system provides conflicting and competing travel functions in the Glenn and Seward Highway corridor within the study area. These roadways are classified and designed in a way that focuses on moving large volumes of traffic at higher speeds through the corridor. However, access is not controlled through the corridor, and there are numerous intersections and uncontrolled driveways. The “highways” are composed of arterial streets that traverse local neighborhoods and also serve important local travel functions, including property access and mobility for shorter, local trips.

Regional Travel Functions. The Seward and Glenn Highways in the study area provide important regional connecting links between major employment centers,⁵ residential areas, and the POA.⁶ As regionally important facilities that are part of the NHS⁷ (see Figure 3), these roadways are intended to serve long-distance travel and are focused on mobility and travel efficiency. The NHS is an interconnected system of routes that serve important national functions: security, commerce, and travel. The NHS consists of interstate highways; principal arterial routes; the Strategic Highway Network (STRAHNET); major strategic highway connectors; and routes connecting to major intermodal facilities such as airports, ports, and ferry terminals. NHS routes in Alaska are typically managed and maintained by DOT&PF.

These facilities also carry a good portion of truck freight and are part of the Regional Truck Route (see Figure 4) identified in the *Anchorage Freight Mobility Study*⁸ (AMATS 2017). The

What is the National Highway System?

According to the Federal Highway Administration, the National Highway System (NHS) consists of roadways important to the nation’s economy, defense, and mobility. The NHS includes the following subsystems of roadways (note that a specific highway route may be on more than one subsystem):

- **Interstate:** The Eisenhower Interstate System of highways retains its separate identity within the NHS.
- **Other Principal Arterials:** These are highways in rural and urban areas that provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility.
- **Strategic Highway Network (STRAHNET):** This is a network of highways that are important to the United States’ strategic defense policy and that provide defense access, continuity, and emergency capabilities for defense purposes.
- **Major Strategic Highway Network Connectors:** These are highways that provide access between major military installations and highways that are part of STRAHNET.
- **Intermodal Connectors:** These highways provide access between major intermodal facilities and the other four subsystems comprising the NHS.

⁵ For a description of Anchorage employment centers, see Sections 2.1.2 and 2.4.2 of *A Basic Description of the Environmental Setting Report*.

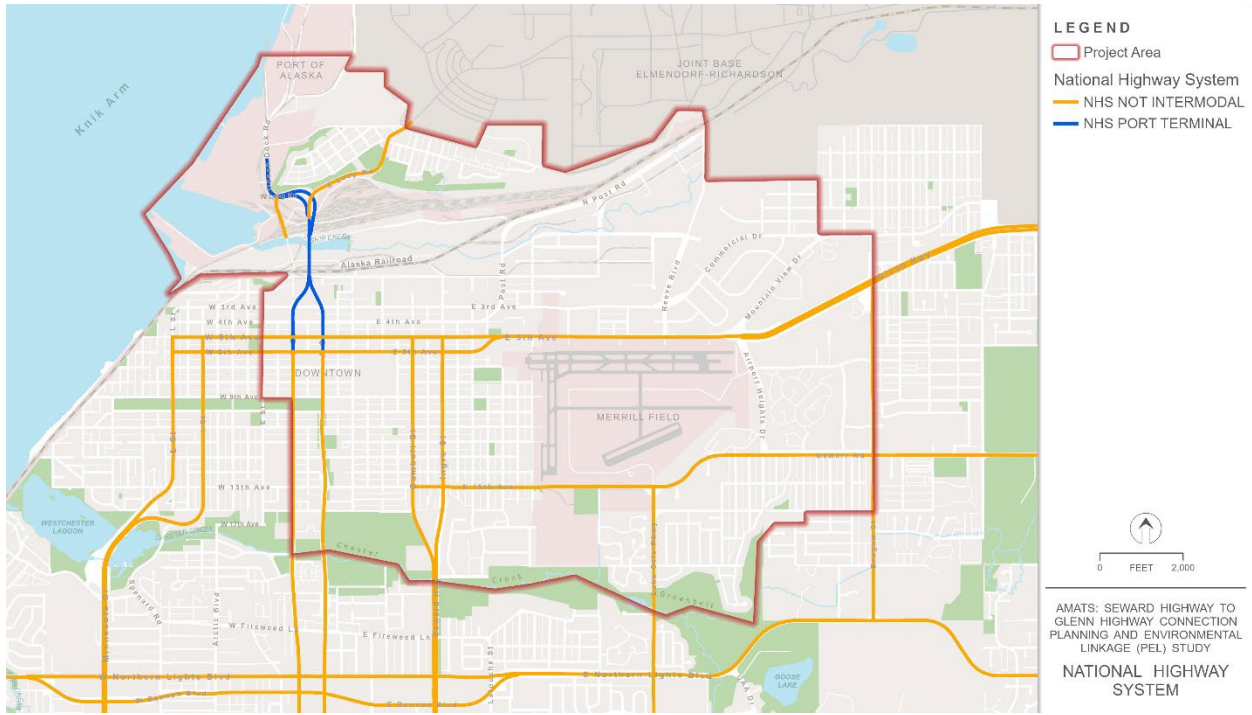
⁶ POA activity is described in Section 2.4.2 of *A Basic Description of the Environmental Setting Report*.

⁷ The NHS in Anchorage is described in Section 4 of the *System Performance Memo*.

⁸ See Section 8 of the *System Performance Memo* for a discussion of the regional truck route.

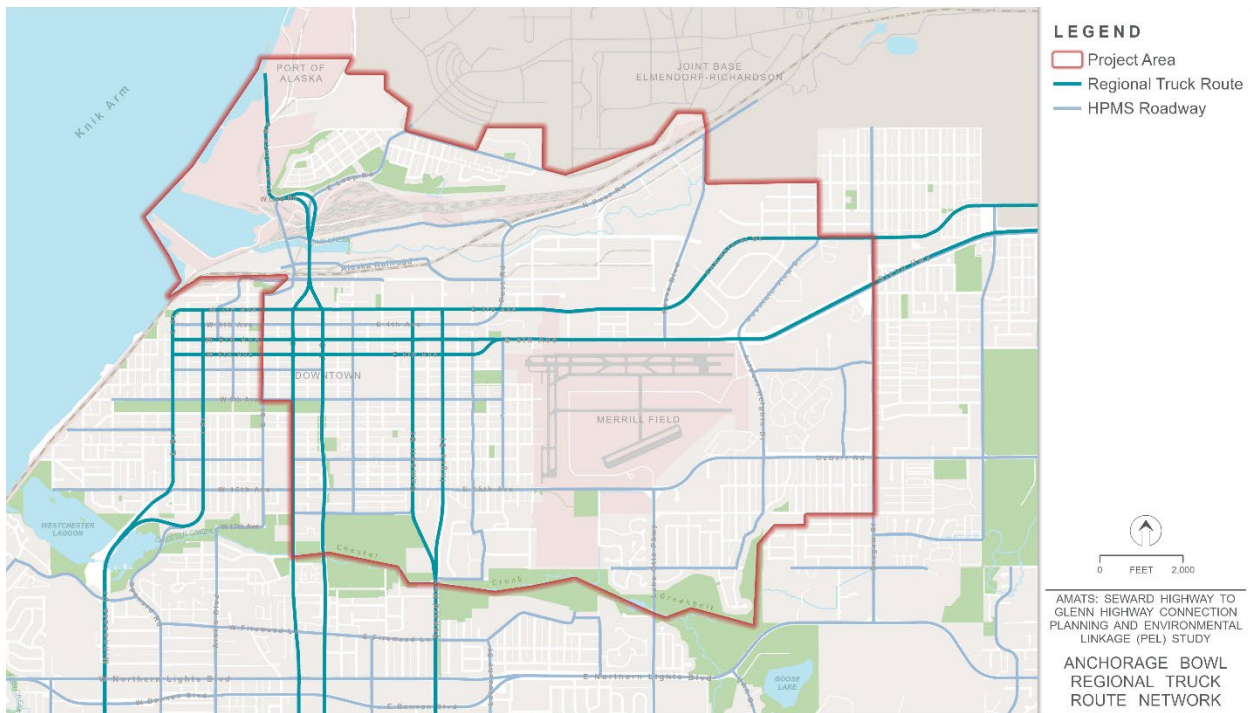
reason this is particularly relevant to the study area is the due to the POA and Ship Creek industrial area (including the Alaska Railroad yard).

Figure 3. National Highway System



Source: DOT&PF n.d.

Figure 4. Anchorage Bowl Regional Truck Route Network



Source: AMATS 2017

The POA, located at the head of Cook Inlet directly north of Downtown Anchorage, is primarily a receiving port. Inbound cargo spans the full range of goods, materials, and equipment needed by consumers and businesses in the Municipality of Anchorage (MOA) and most of the rest of Alaska.

Port of Alaska. The POA is a major asset to the regional economy. Fifty-five percent of the waterborne freight and 90 percent of all refined petroleum products that enter the state arrive through the POA (AMATS 2017). While some of the freight and petroleum stays in the Anchorage area, much is destined for other parts of the state. In 2020, tonnage through the POA was 4,704,374 tons (POA 2021). Approximately 35 percent of that was composed of vans, flats, and containers (POA 2021)

Most freight is brought to the POA via container ship. Ships are off-loaded, and the containers may be hauled by truck tractor either to the destination of consumption or to a warehouse facility off port premises, where they are off-loaded and redistributed in smaller trucks or consolidated for tractor transport (AMATS 2017). A substantial number of trucking, transfer, and consolidating firms are located in the Ship Creek industrial area north of Downtown and within the study area. Additionally, the Alaska Railroad Corporation operates a trailer-on-flat-car facility at its main yard in the Ship Creek basin, which is used to load and unload container vans arriving from the port. The freight is then moved by rail, predominantly to Fairbanks and nearby military bases.

The Ship Creek area remains one of MOA's major warehousing and transportation-related industrial areas and continues to play a critical role in the shipment and distribution of goods to the MOA and the rest of the state. However, the bulk of outdoor storage facilities and warehousing, as well as manufacturing/processing plants and construction yards, has gravitated from the Downtown-Ship Creek basin area to the rail/highway industrial corridor between the New Seward Highway and Arctic Boulevard, south of International Airport Road. This places most truck traffic to or from the POA onto the New Seward Highway, Gambell-Ingra Streets, and A-C Streets. Some truck traffic also uses the L Street-Minnesota Drive connection.

According to the *Freight Mobility Study* (FMS), the POA generates significant amounts of freight traffic that uses downtown streets due to limited or lack of access to the highway system. The C Street/Port and Ocean Dock Road intersection is critical because it is the single, primary access point for trucks traveling to and from the POA. Other freight movement problem areas are shown on Figure 5.

Objective 1.1 of the FMS

Minimize conflicts between freight, transit, and passenger vehicles and non-motorized travelers to reduce vehicle, pedestrian, and bicyclist crashes and reduce and/or eliminate road versus rail conflicts.

The FMS identified the following potential improvements for regional roadway and intersection locations to potentially increase the efficiency for freight movements, improve safety, and reduce congestion on the transportation system in the study area:

- Address traffic signal/intersection geometry issues at C Street and Ocean Dock Road.
- Develop infrastructure that can accommodate a 53-foot-long trailer. Most of the existing roads are constructed and built to accommodate 40-foot-long trucks.

Figure 5. Freight Movement Problem Areas



Source: AMATS 2017

Stakeholders also indicated that the Ingra-Gambell Street/5th-6th Avenue intersections are problematic because they cannot accommodate double trailers.

Improved Port Access was identified in the FMS as an immediate (0–10 Years) high-priority project. Other recommendations in the study area included:

- 3rd Avenue Improvements
- Ingra/Gambell Street Improvements
- Whitney Road Upgrade
- Ocean Dock Road and Terminal Road Intersection
- C Street/Ocean Dock Road Access Ramp
- 3rd Avenue, 6th Avenue Couplet/E Street Conversion Reconnaissance Study
- Ocean Dock Road Alignment near POA Entrance
- Ingra-Gambell Couplet Extension – 3rd Avenue to Whitney Road
- Seward Highway to Glenn Highway Connection – Phase III
- Glenn Highway Alternative Facility

Because of the importance of the Seward and Glenn Highways for regional travel and freight distribution, traffic levels are among the highest in the state. Table 1 shows traffic on these routes at selected locations. Data for the years 2010 through 2019 are reported; traffic count data for 2020 are not included in this analysis because COVID-19-related conditions resulted in lower than typical traffic volumes.

Table 1. Historical Traffic Counts, 2010–2019

Location	Year ^a									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Glenn Highway (Airport Heights to Bragaw)	47,089	48,230	47,836	47,958	48,166	50,416	50,450	48,304	48,484	49,423
5th Avenue (just east of Medfra Street)	50,404	47,474	47,266	48,096	48,305	44,270	50,852	49,845	N/A	47,803
Ingra Street (between 12th and 14th Avenues)	22,150	N/A	N/A	N/A	N/A	22,656	22,918	20,475	20,193	21,306
Gambell Street (between 12th and 14th Avenues)	21,008	19,543	18,873	19,553	19,141	16,635	18,298	17,747	17,491	19,187
Seward Highway at Ingra and Gambell Streets	52,206	51,113	49,085	47,565	50,037	51,490	51,446	49,074	47,977	48,503

Source: DOT&PF n.d.

Notes: N/A = not applicable

^a Data for 2020 are excluded due to the changes in traffic due to COVID-19-related conditions.

In summary, the NHS in the study area provides several critical regional linkages, including (1) connecting residential areas to employment centers for people on their daily commutes,⁹ (2) connecting the POA¹⁰ and the Ship Creek industrial area to the highway network for truckers distributing containers to communities throughout the Alaska road system, and (3) connecting JBER to the highway network to allow efficient deployment throughout Alaska should the need arise. These roadways have been designed as high-capacity roadways with relatively high travel speeds. In the study area, however, the “highways” are composed of arterial streets that traverse local neighborhoods and also serve important local travel functions, including property access and mobility for shorter, local trips. Conflicts with local traffic reduce the functionality of the NHS for regional travel.

⁹ The origin-destination report provided details on the origins and destinations of travelers using the Seward and Glenn Highways.

¹⁰ The POA is a National Strategic Seaport. See Section 8 of the *System Performance Memo* for a discussion of the port’s strategic importance. See Section 2.4.2 of *A Basic Description of the Environmental Setting Report* for a discussion of the importance of the POA to the economy and freight movement.

Local Travel Functions. Local travelers face barriers associated with wide streets, high vehicle travel speeds, and high traffic volumes in trying to get across the NHS facilities. This is a particular issue for people walking and biking, which are prevalent travel modes in the Fairview neighborhood.

Currently, sidewalks along Gambell and Ingra Streets are 4 feet to 6 feet wide, have no buffer from the roadway, and have utility poles placed in the travel way of the sidewalk. Current MOA standards require a 7-foot buffer from the road for snow storage and a minimum 5-foot width. There are no existing bicycle accommodations on the corridor. While the Chester Creek multi-use trail intersects the Seward Highway near 20th Avenue, there are poor or nonexistent bicycle connections north into Fairview.

The *Gambell Street Redevelopment Plan* (CH2M HILL, Inc. 2013) evaluated pedestrian environment along Gambell Street and identified a number of issues. According to that plan, pedestrian level of service is a function of the width of the sidewalk; directional volume of motorized vehicles; number of through lanes of traffic; width of outside lane, shoulder, bicycle lane, and parking pavement; average running speed of motorized vehicle traffic; and right-turn-on-red and permitted left turns. The study found that there are several conditions that degrade the pedestrian level of service, including the following:

- The sidewalks are disrupted by electrical transmission lines and light poles, and are generally in poor condition.
- There is no shoulder between the sidewalk and outside vehicle travel lanes.
- There are driveways along the corridor that interrupt the pedestrian traversing the existing sidewalk system.
- The majority of the sidewalks along the corridor are not up to Americans with Disabilities Act standards and in particular are difficult for pedestrians to navigate in winter conditions.

The *C Street/Ocean Dock Road Access Ramps Reconnaissance Study* (DOT&PF 2018) also noted several conditions that negatively impact non-motorized users in the Port area. The study noted that the C Street bridge is narrow enough to make passing others on the sidewalk uncomfortable (DOT&PF 2018). Other problems include vehicles failing to yield to pedestrians and bicyclists at crosswalks, lack of crosswalks at some locations, and non-motorized users traveling in areas where pedestrian and bicycle travel is prohibited (DOT&PF 2018).

The *Non-Motorized Plan* (AMATS 2021) identifies bicycle Level of Traffic Stress (LTS), which is a way to assess the comfort and connectivity of a bicycle network. It considers the impacts of posted speed limits, street width, and the presence and character of bicycle lanes. The *Non-Motorized Plan* (AMATS 2021) assessed LTS for the AMATS area; the results are shown on Figure 6. Roads in the study area that have higher levels of stress for bicycles include Gambell Street, Ingra Street, and 5th Avenue.

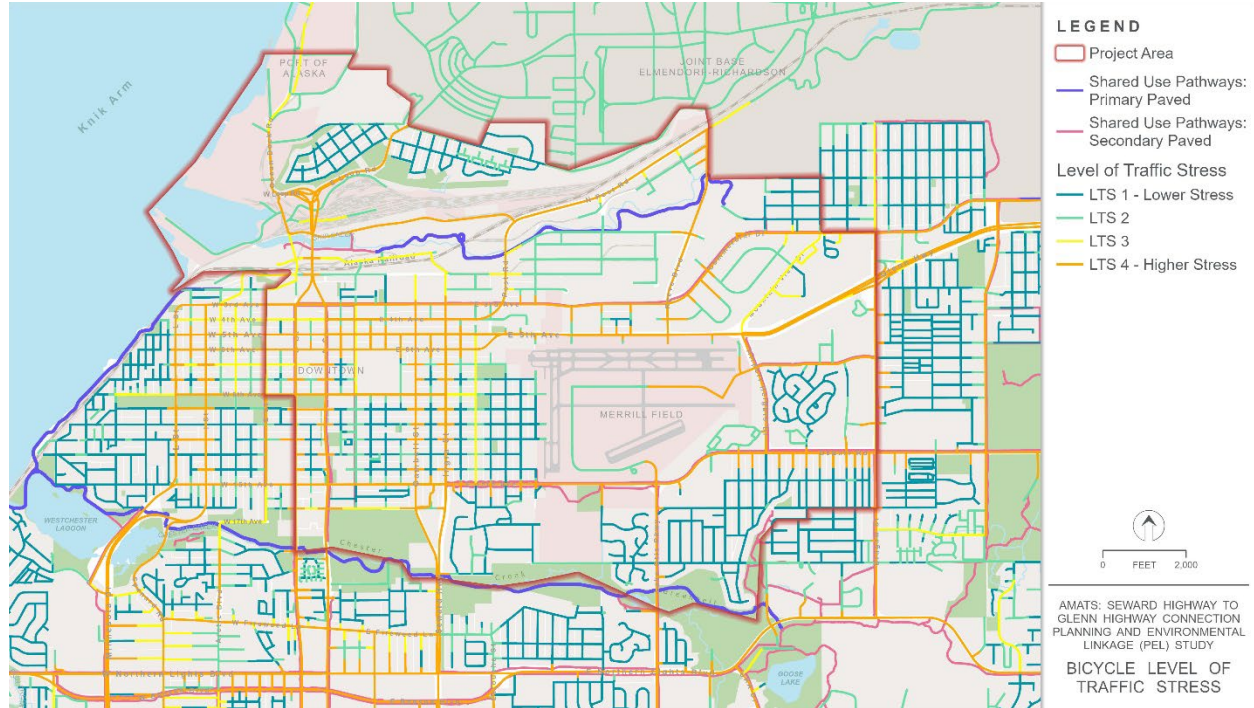
One of the issues is that the Seward and Glenn Highways are serving multiple uses and functions throughout the study area that conflict, given the original design and construction.

Freight, NHS functions, transit, bicycles, and pedestrians are all using and crossing a facility that has an auto-oriented design.

Figure 4 shows freight routes in the study area while Figure 7, Figure 8, and Figure 9 show the planned pedestrian system, planned bicycle system, and the existing transit routes in the study area, respectively. Figure 10 combines these functions with the existing road network to show how many functions each are expected to support. Glenn Highway/5th Avenue is expected to serve five different functions (regular vehicle traffic, transit, freight, pedestrians, and bicyclists). Ingra and Gambell Streets serve four (regular vehicle traffic, freight, pedestrians, and bicyclists). The variety and overlap of the varying multimodal functions make it more challenging to meet the transportation needs of any user group.

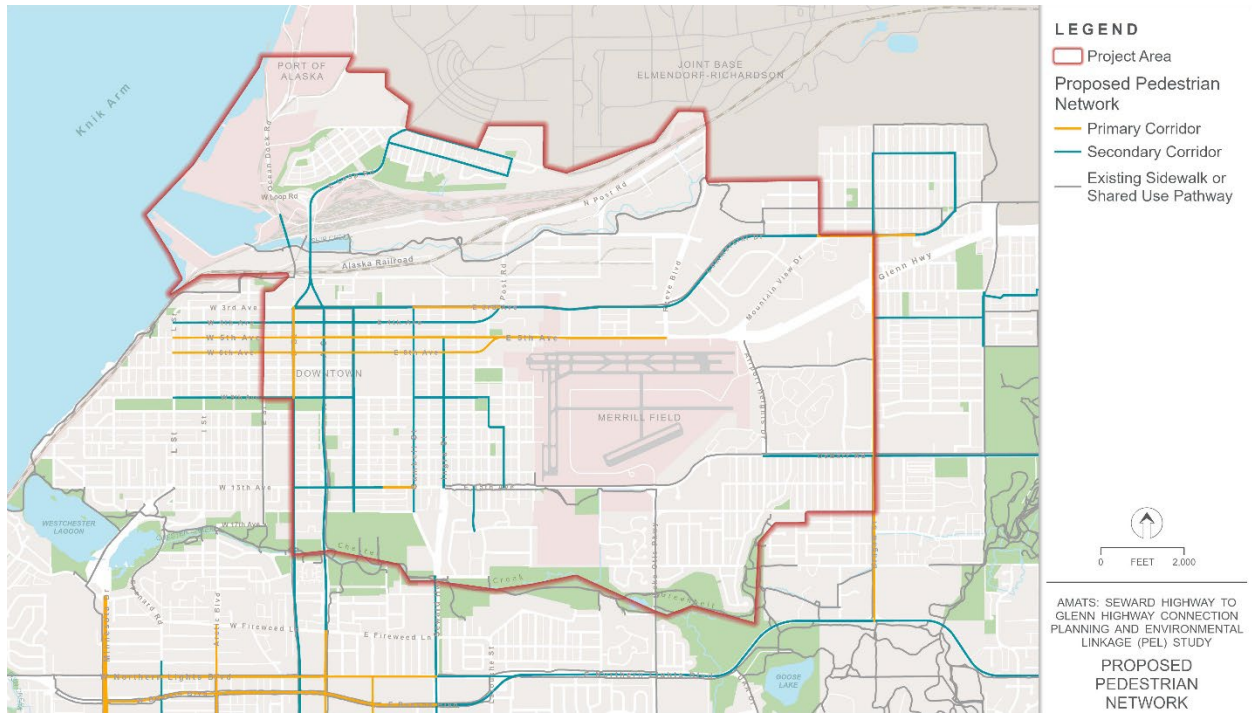
In summary, connectivity of facilities for walking and bicycling—modes that are critical to the local neighborhoods—are deficient and not consistent with recently adopted development plans. The wide streets and heavy traffic volumes on the existing arterial streets that comprise the highways (see Figure 3) make travel across and along these roads difficult and uncomfortable for bicyclists, pedestrians, and vehicle users, adversely affecting travel within and between adjacent neighborhoods. The neighborhood most adversely affected is Fairview. Residents in Fairview tend to have lower incomes and make a greater percentage of their trips using non-motorized modes or transit than other areas of Anchorage. As NHS facilities and freight routes, the regional needs and local needs are in conflict, given the auto-oriented design.

Figure 6. Bicycle Level of Traffic Stress



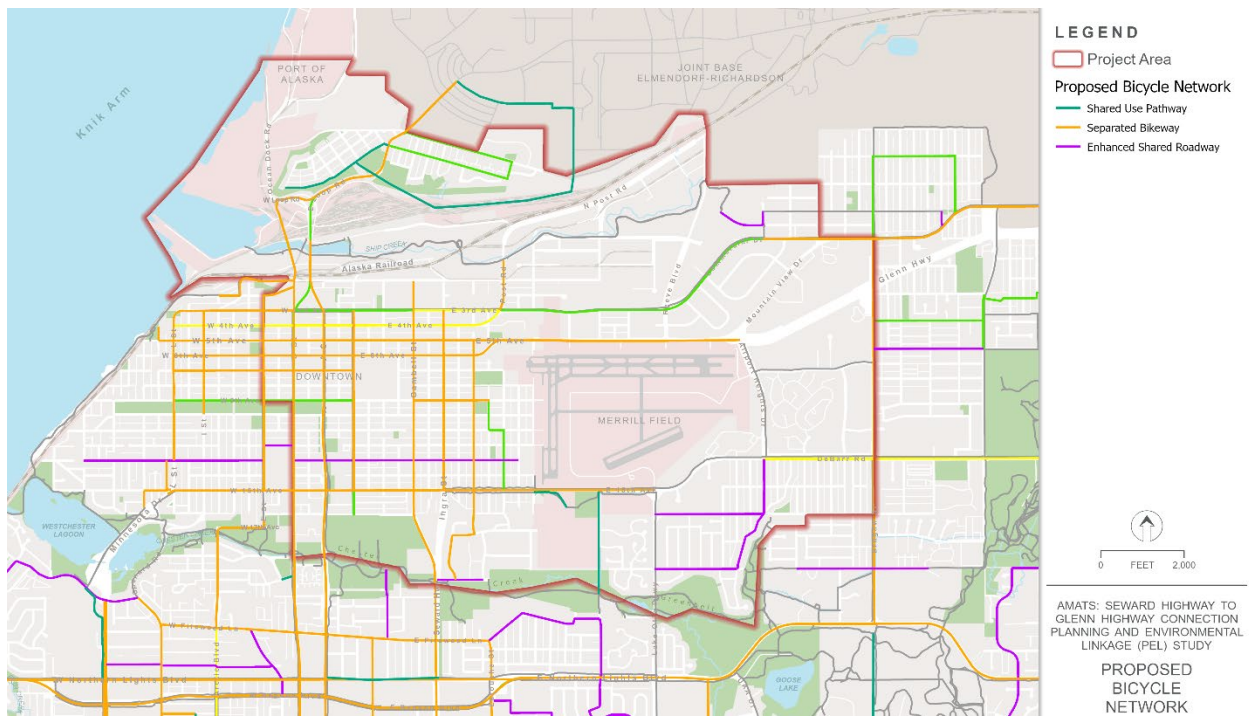
Source: MOA 2021

Figure 7. Proposed Pedestrian Network



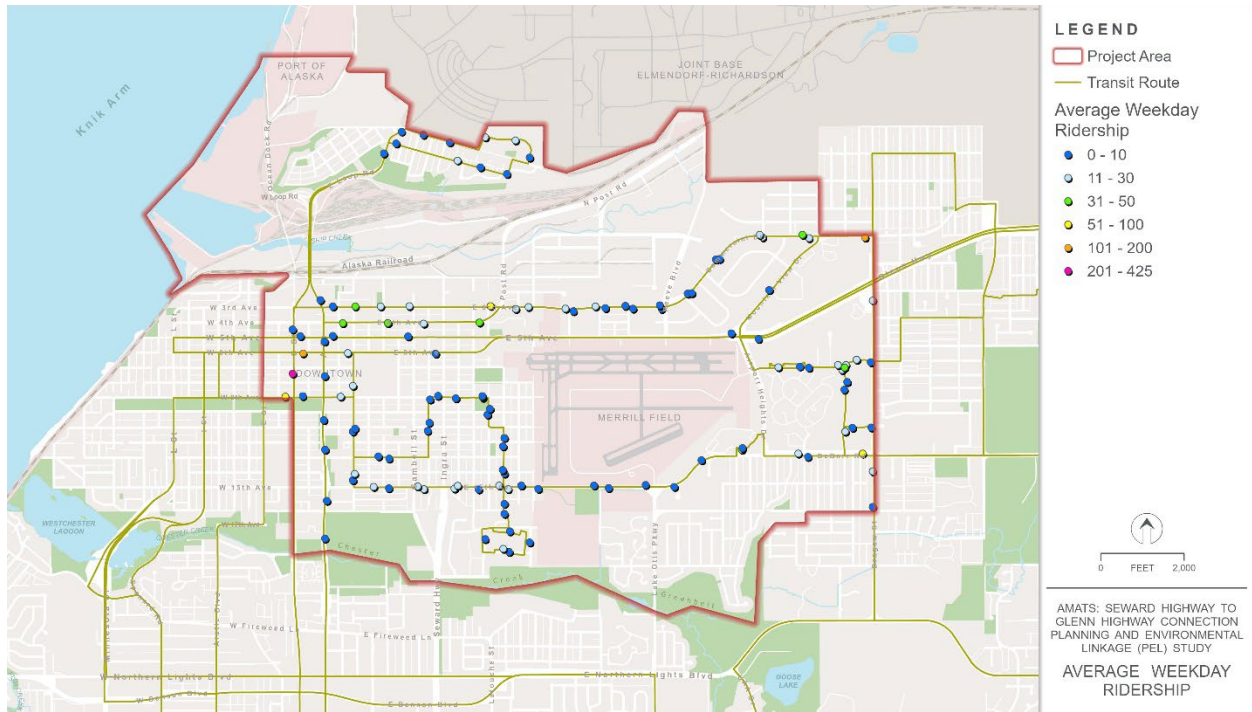
Source: AMATS 2021

Figure 8. Proposed Bicycle Network



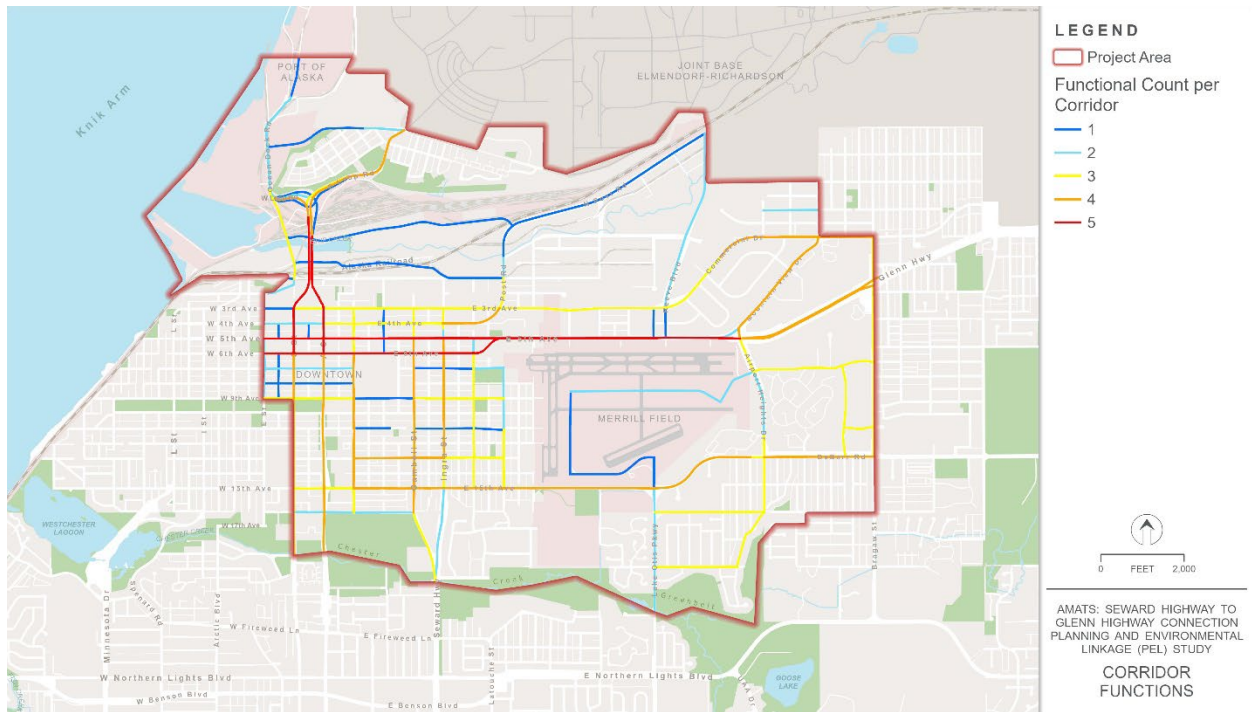
Source: AMATS 2021

Figure 9. Transit Routes



Source: MOA

Figure 10. Functions by Corridor



Source: HDR

2.2.2 Safety

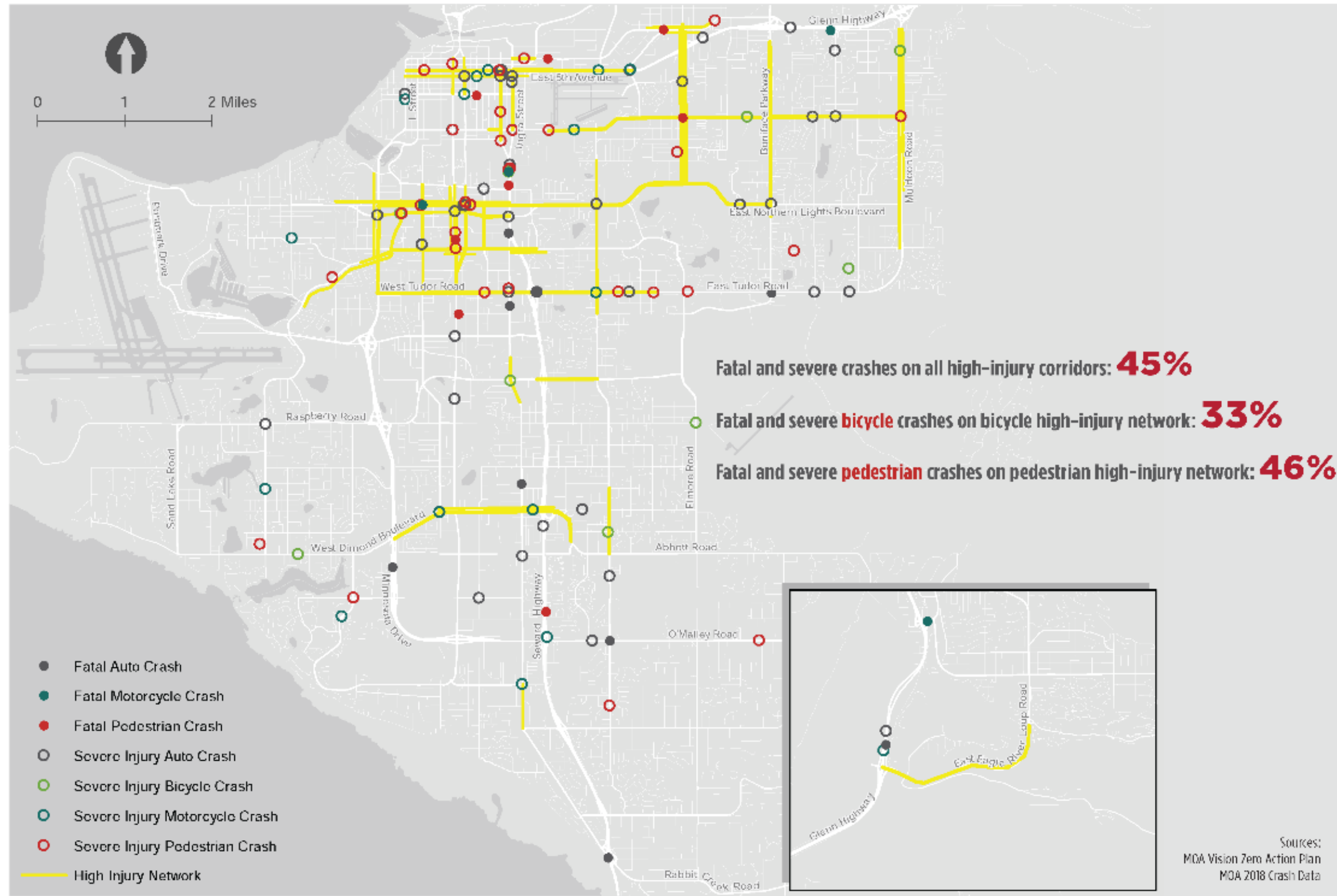
Crashes for vehicles and people walking and bicycling are elevated at several study area intersections.

Vehicle Crashes

The *2018 Vision Zero Action Plan* (MOA 2018) identified a high-injury network that shows where severe and fatal injury crashes are most concentrated within Anchorage (see Figure 11).

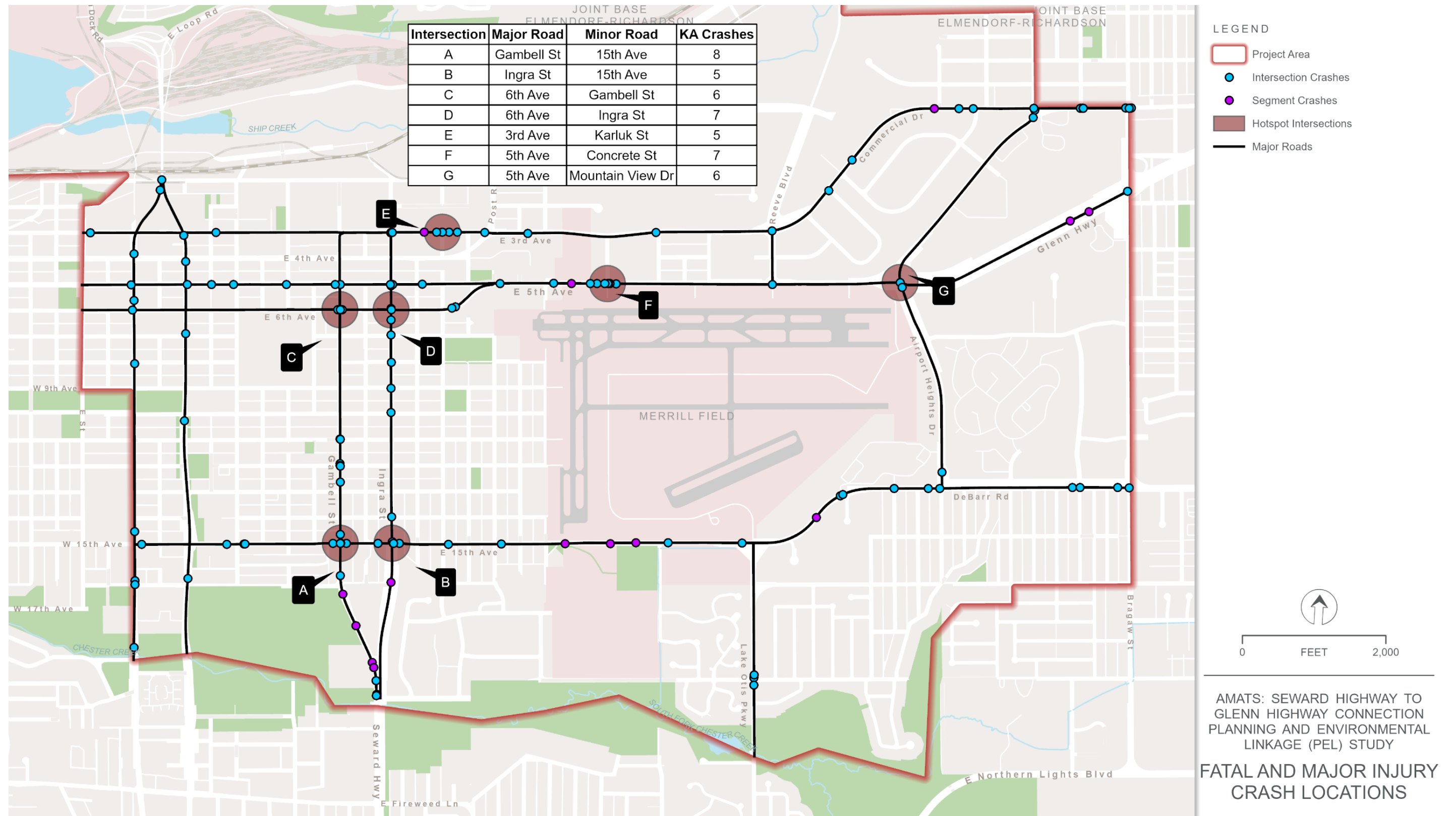
In the study area, 19 fatal and 136 major injury crashes occurred between 2008 and 2017. Of the combined 155 fatal and major injury crashes, 141 (91 percent) occurred at intersections, as shown on Figure 12. Based on this information, seven hotspot intersections were identified. A hotspot intersection was defined as an intersection with five or more fatal and major injury crashes occurring within the 10-year study period. The intersection with the highest number of fatal and major injury crashes (eight) is 15th Avenue and Gambell Street. The next highest are 6th Avenue and Ingra Street, and 5th Avenue and Concrete Street, each of which experienced seven crashes.

Figure 11. High Injury Network



Source: AMATS 2021 (adapted from the 2018 Vision Zero Action Plan [MOA 2018])

Figure 12. Fatal and Major Injury Crashes, 2008–2017



Note: KA stands for fatal and serious injury crashes based on the KABCO scale for crash severity.

Fatal and major injury crash rates on road segments in the study area are shown on Figure 13. The segment with the highest crash rate is Ingra Street between 5th and 6th Avenues (145.7 fatal and major injury crashes per million vehicle miles traveled [MVMT]). The intersections at the start and end of this segment (Ingra Street/5th Avenue and Ingra Street/6th Avenue) have some of the highest numbers of crashes in the study area. The crash rate on this segment is more than double the next-highest segment (6th Avenue between Gambell and Ingra Streets) (see Table 2).

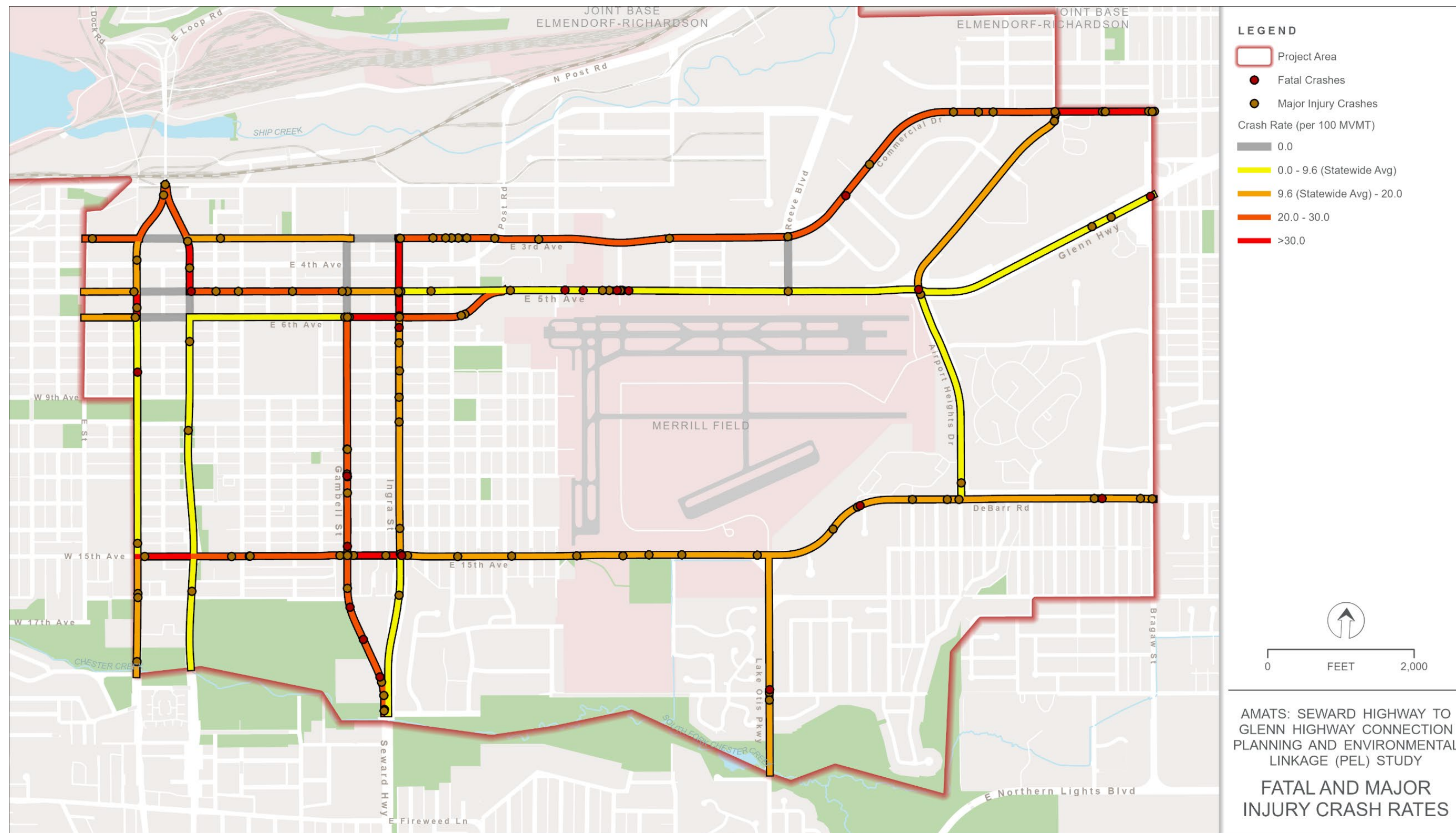
While two intersections on the Glenn Highway/5th Avenue have a high crash frequency, the crash rates along this corridor do not exceed the statewide average (9.6 MVMT). This is due to the high traffic volumes along this corridor.

Table 2. Segment Crash Rates on the Seward/Glenn Corridor

Segment	Crash Rate (per 100 MVMT)
5th Avenue (from E Street to C Street)	13.9
5th Avenue (from C Street to A Street)	0.0
5th Avenue (from A Street to Gambell Street)	20.4
5th Avenue (from Gambell Street to Ingra Street)	13.8
5th Avenue (from Ingra Street to 6th Avenue)	8.3
5th Avenue (from 6th Avenue to Reeve Boulevard)	8.6
5th Avenue (from Reeve Boulevard to Airport Heights Drive)	3.7
Glenn Highway (from Airport Heights Drive to Bragaw Street)	5.2
6th Avenue (from E Street to C Street)	16.5
6th Avenue (from C Street to A Street)	0.0
6th Avenue (from A Street to Gambell Street)	4.0
6th Avenue (from Gambell Street to Ingra Street)	67.8
6th Avenue (from Ingra Street to 5th Avenue)	20.1
Gambell Street (from 3rd Avenue to 5th Avenue)	0.0
Gambell Street (from 5th Avenue to 6th Avenue)	0.0
Gambell Street (from 6th Avenue to 15th Avenue)	20.3
Gambell Street (from 15th Avenue to Chester Creek)	25.0
Ingra Street (from 3rd Avenue to 5th Avenue)	59.9
Ingra Street (from 5th Avenue to 6th Avenue)	145.7
Ingra Street (from 6th Avenue to 15th Avenue)	15.8
Ingra Street (from 15th Avenue to Chester Creek)	2.4

Notes: The statewide crash rate is 9.6 MVMT. Cells highlighted in blue are above the statewide rate.

Figure 13. Fatal and Major Injury Segment Crash Rates, 2008–2017



location and design have resulted in disinvestment in area residential and commercial development.

Planning Vision

This section provides a review of adopted land use and transportation plans that express a vision for the development future along the Seward and Glenn Highways through the study area. Each plan reflects that roadway design changes are desired as a means of catalyzing redevelopment, reducing the barrier created by the current highway design (thereby improving community cohesion), and improving the quality of life of residents in the area by creating better bicycle and pedestrian connections; improving safety; and creating more livable, complete streets. In summary, the Seward and Glenn Highways through the study area, designed and constructed decades ago, are no longer consistent with the vision embodied in the adopted plans.

Anchorage 2040 Land Use Plan (LUP). The 2040 LUP includes a “Greenway-Supported Development” (GSD) overlay along the Ingra Street corridor, from 3rd to 15th Avenue, and connecting the Chester Creek Greenbelt on the southern end. The plan describes a GSD as a location where new development will incorporate natural open spaces and pedestrian routes that focus on catalyzing new infill and redevelopment projects to enhance new construction and property values by attracting more uses, housing, businesses, and employment. A key element of the GSD feature in the 2040 LUP is redevelopment of existing built areas in designated Mixed-Use Centers and Main Street Corridors. For GSDs to most effectively catalyze redevelopment and alternative access modes, they should connect to existing pedestrian corridors and trails (MOA 2017).

Fairview Neighborhood Plan. One of the top five priorities identified for the Fairview Neighborhood Plan (MOA 2014b) is the resolution of long-standing transportation system impacts related to the effects that the Seward and Glenn Highways through Fairview have had on development and livability. The plan identifies the following issues:

The extension of Gambell Street southward to the New Seward Highway heralded the loss of the Fairview Main Street atmosphere. The transformation into a strip commercial corridor was strengthened when the one-way couplet was implemented. As traffic volumes increased on Ingra Street, adjoining properties began to feel the impact as families relocated to less congested and safer parts of town. Most dwellings transitioned into rental units with high turnover rates. In the early 2000s, the Fairview Community Council advocated for and succeeded in installing intersection barriers to discourage Downtown commuters from cutting through Fairview.

The plan “calls for a resolution of the transportation, land use, and planning issues related to this corridor to enable the redevelopment of Gambell Street, amenities that would enhance the community and encourage investment, and provide clarity for property owners as to the future of their lands” (MOA 2014b:2).

The plan includes the Seward to Glenn Highway Connection project as one of its implementing actions, and indicates that the project should (MOA 2014b:58):

Maintain the integrity of Fairview, by following a cut and cover approach, creating a greenway connection between Ship and Chester Creek with a Hyder Street alignment or alternatives that reduce impact on the neighborhood, while providing needed neighborhood street and pedestrian improvements that support mixed-use and other land-use redevelopment and development identified on the approved land-use plan map.

The plan also calls for the implementation of the *Gambell Street Redevelopment and Implementation Plan* (CH2M HILL, Inc. 2013). The *Fairview Neighborhood Plan* (MOA 2014b) was adopted by the Anchorage Assembly in 2014.

Gambell Street Redevelopment and Implementation Plan. This plan was prepared for Gambell Street between 3rd and 20th Avenues to improve the efficiency, appearance, and business/pedestrian friendliness of the major thoroughfare (CH2M Hill, Inc. 2013). Related to livability, the plan has the following objectives:

- Provide an attractive environment for all users on the corridor
- Enhance the visual, aesthetic, and functional landscape of the corridor
- Promote economic development along the corridor that is in line with the community's vision
- Provide opportunities for recreation and open space

Metropolitan Transportation Plan 2040.¹² MTP 2040 (AMATS 2020) describes the following purposes for the project: "Safety (Vision Zero High Injury Network Corridor), Congestion, Access, Connectivity, and Freight (Proposed Regional Truck Route)." Additionally, the project is intended to address the following federal performance areas: "Injuries & Fatalities, Performance of the National Highway System, Freight Movement/Economic Vitality, and Environmental Sustainability." The plan envisions separating the regional traffic from the local traffic by depressing the freeway as a means of reducing the conflicting travel functions. As envisioned, the depressed freeway would have lidded sections where parks or other community-enhancing features could be developed to help revitalize neighborhood development and provide improved connectivity and cohesion across the NHS facility. Gambell and Ingra Streets are also proposed to be reconstructed as part of the project to better facilitate local travel. See more about this plan in Section 1.5.

¹² MTP 2040 identifies the project as a freeway connection between Seward Highway/20th Avenue and 13th Avenue, with freeway access and egress ramps onto Ingra/Gambell Streets near the northern termini of the project. It would reconstruct Ingra/Gambell Streets and construct separated grade crossings of the freeway to reconnect portions of the east-west street system. It would construct an interchange at the Airport Heights Drive and Glenn Highway intersection. The project would include non-motorized improvements and consider adjacent land use. A major purpose of this PEL Study is to re-investigate the project's purpose and need, and determine if a highway connection is still the appropriate solution to the identified needs.

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