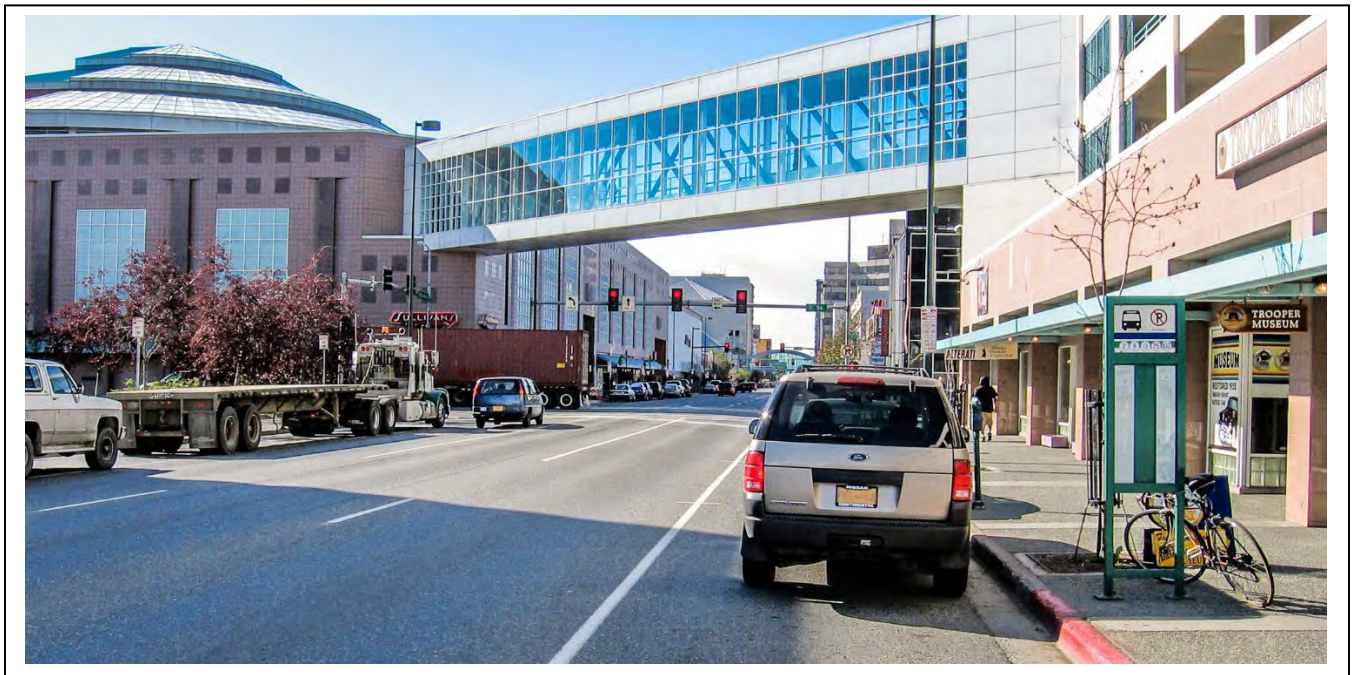


Downtown Streets Engineering Study

Purchase Order 2024000187

Built Environment Research

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Prepared For:
Municipality of Anchorage

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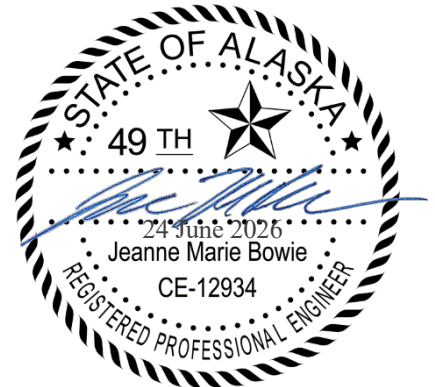


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Abbreviations

AMATS	Anchorage Metropolitan Area Transportation Solutions
DOT&PF	Alaska Department of Transportation and Public Facilities
FHWA	The Federal Highway Administration
MOA	Municipality of Anchorage
NHS	National Highway Service
NMP	Non-Motorized Plan
PGDHS	<i>A Policy on Geometric Design of Highways and Streets</i>
KE	Kinney Engineering

1 Introduction

The Downtown Streets Engineering Study is a recommendation of the *Our Downtown Anchorage Downtown District Plan 2021*, approved by the Anchorage Assembly April 2023. The study includes the area bounded by N Street on the west, Ingra Street on the east, 10th Avenue on the south, and Ship Creek to the north, as shown in Figure 1.

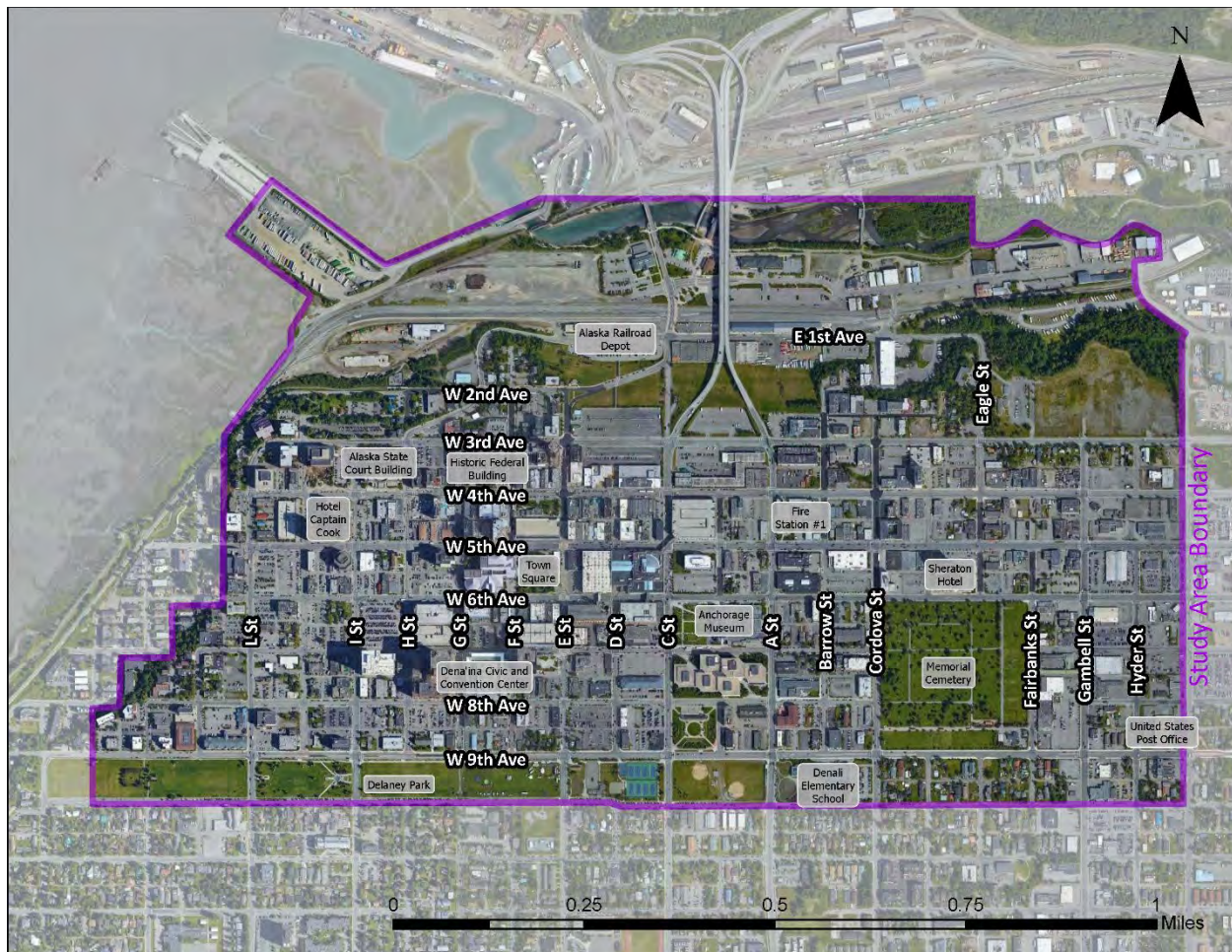


Figure 1: Downtown Streets Engineering Study Area Boundary

The desired outcomes of the Engineering Study include:

- Determine optimal ownership, operation, uses, and treatments to streets, sidewalks, and trails as proposed in the *2007 Downtown Plan*.
- Evaluate how the system is being used and by whom (including understanding travel to and from, within, and through downtown).
- Evaluate speed reductions; street conversions from one-way to two-way; street closures; bike boulevard connecting Ship Creek, Tony Knowles, and Chester Creek trails; transit

circulator route; coordinated parking strategy; secure bicycle parking; street ownership transfer; and truck traffic.

- Propose changes to the Design Criteria Manual and Title 21, if identified as a need.
- Update classification of downtown streets.
- Establish a Downtown Streets Capital Improvement Program (DTCIP). Provide information on how the street system should be changed, managed, and upgraded; provide timelines and cost estimates; identify the agencies responsibilities for project oversight.

This report describes background research that has been completed to support these outcomes.

2 Downtown Street Designations and User Types

The downtown Anchorage Street network serves passenger vehicles, pedestrians, and bicycles. Downtown streets are critical for moving freight and are essential to People Mover buses and Valley Transit buses. Every summer, downtown experiences an influx of tourists which increases pedestrian and bus volumes. On occasion, downtown streets are temporarily closed to host events such as the Running of the Reindeer and the ceremonial start of the Iditarod.

To make downtown Anchorage more accessible and connected for pedestrians, bicycles, and transit, multimodal transportation treatments have been identified through planning documents and stakeholder input.

2.1 Designations

Engineers and planners assign functional classifications to roads based on the desired use of the road within a network. Factors that can impact a roadway’s functional classification include route length, access points, speed limit, route spacing, traffic volumes, and number of lanes.

The Municipality of Anchorage (MOA) and Alaska Department of Transportation and Public Facilities (DOT&PF) each have assigned functional classifications to downtown Anchorage streets. Additionally, several streets have a National Highway System (NHS) designation. Figure 2 shows each agencies classifications on a map, and Table 1 and Table 2 summarize the same information. Streets classified as “local” by the DOT&PF and “other” by the MOA are not included in the tables.

Between the two agencies, many streets have similar classifications. However, under the DOT&PF, classifications can be assigned on a block-by-block basis. For example, L Street is classified as a major collector between 3rd Avenue and 4th Avenue and as a minor collector between 4th Avenue and 5th Avenue. Additionally, in the study area, the highest classification assigned by the MOA is major arterial, while the DOT&PF classifies parts of Gambell Street, Ingra Street, 5th Avenue, and 6th Avenue as interstate.

NHS roads are important to the economy, mobility, and national defense. NHS roads tend to favor vehicular traffic over other modes or transport. More information about NHS road designations is in Appendix C: NHS Context and Applications.

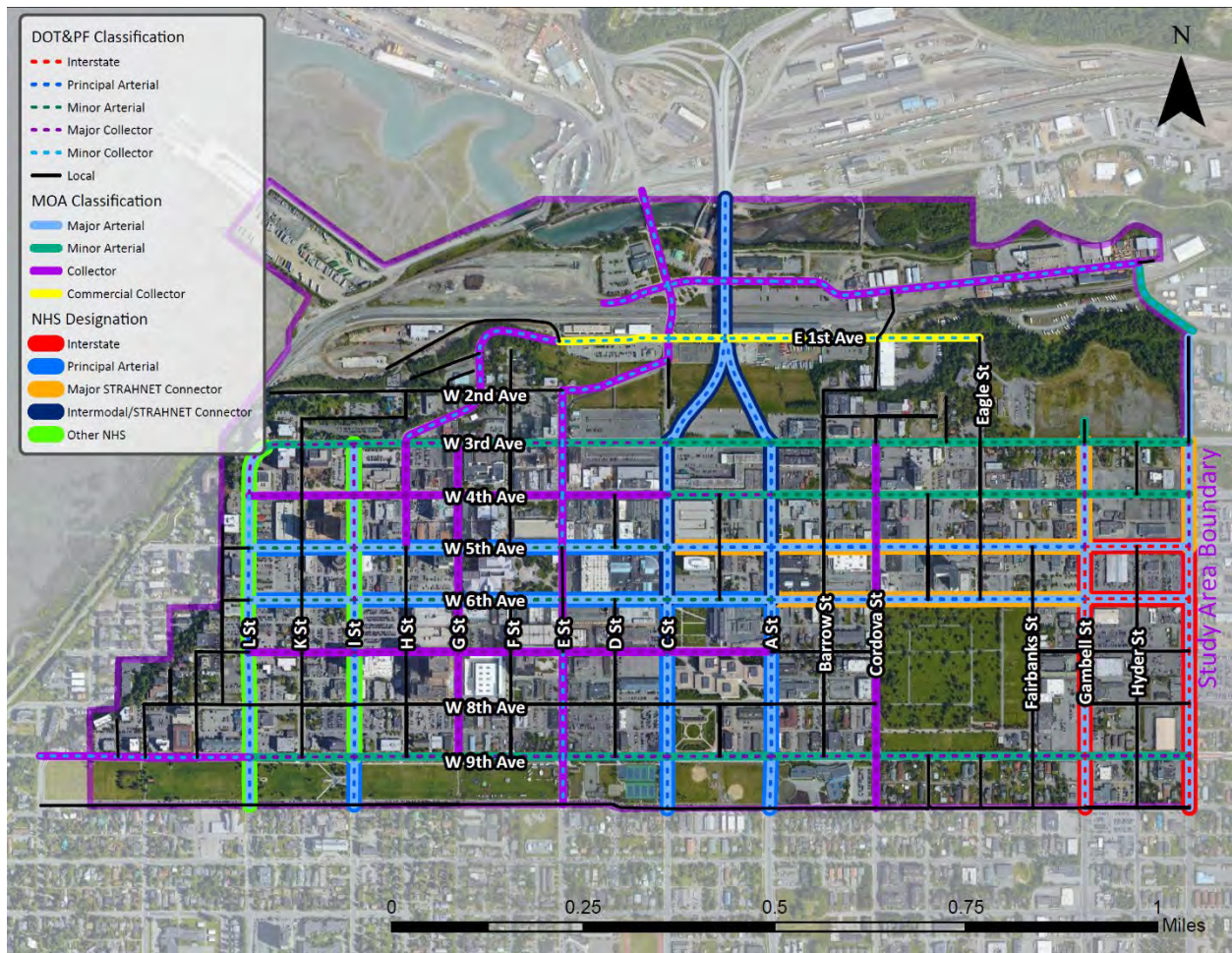


Figure 2. Functional Classifications of Downtown Anchorage Streets

Table 1. Functional Classification of West-East Oriented Streets in Downtown Anchorage

	North Extent	South Extent	MOA Classification	DOT&PF Classification	NHS Designation
L Street	3rd Avenue	4th Avenue	Major Arterial	Major Collector	Other NHS
	4th Avenue	5th Avenue		Minor Collector	
	5th Avenue	10th Avenue		Principal Arterial	
I Street	3rd Avenue	6th Avenue	Major Arterial	Major Collector	Other NHS
	6th Avenue	10th Avenue		Principal Arterial	
H Street	3rd Avenue	5th Avenue	Collector	Major Collector	
G Street	3rd Avenue	9th Avenue	Collector	Major Collector	
E Street	2nd Avenue	5th Avenue	Collector	Minor Collector	
	7th Avenue	10th Avenue		Minor Collector	
N C Street	1st Avenue	3rd Avenue	Collector	Minor Collector	
Port Access Road	Whitney Road	3rd Avenue	Major Arterial	Principal Arterial	Intermodal/STRAHNET Connector
C Street	3rd Avenue	6th Avenue	Major Arterial	Principal Arterial	Intermodal/STRAHNET Connector
	6th Avenue	10th Avenue			Map-21 Principal Arterial
A Street	Whitney Road	6th Avenue	Major Arterial	Principal Arterial	Intermodal/STRAHNET Connector
	6th Avenue	10th Avenue			Map-21 Principal Arterial
Cordova Street	1st Avenue	10th Avenue	Collector	Major Collector	
Gambell Street	3rd Avenue	5th Avenue	Major Arterial	Major Collector	Major STRAHNET Connector
	5th Avenue	10th Avenue		Interstate	Interstate
Ingra Street	3rd Avenue	5th Avenue	Major Arterial	Major Collector	Major STRAHNET Connector
	5th Avenue	10th Avenue		Interstate	Interstate

Table 2. Functional Classification of North-South Oriented Streets in Downtown Anchorage

	West/North Extent	East/ South Extent	MOA Classification	DOT&PF Classification	NHS Designation
Ship Creek Avenue	C Street	Ingra Street	Collector	Minor Collector	
1st Avenue	L Street	Ingra Street	Collector	Minor Collector	
2nd Avenue	E Street	C Street	Collector	Minor Collector	
3rd Avenue	L Street	A Street	Minor Arterial	Major Collector	
	A Street	Ingra Street		Minor Arterial	
4th Avenue	L Street	A Street	Collector	Major Collector	
	A Street	C Street		Minor Arterial	
	C Street	Ingra Street	Minor Arterial		
5th Avenue	L Street	C Street	Major Arterial	Minor Arterial	Map-21 Principal Arterial
	C Street	Gambell Street		Principal Arterial	Major STRAHNET Connector
	Gambell Street	Ingra Street		Interstate	Interstate
6th Avenue	L Street	A Street	Major Arterial	Minor Arterial	Map-21 Principal Arterial
	A Street	C Street		Principal Arterial	Major STRAHNET Connector
	C Street	Gambell Street			
	Gambell Street	Ingra Street		Interstate	Interstate
7th Avenue	L Street	A Street	Collector	Major Collector	
9th Avenue	L Street	Ingra Street	Minor Arterial	Major Collector	

2.2 Motorized Vehicles

Existing infrastructure makes travel to downtown Anchorage most convenient for motorized vehicles, resulting in most people traveling to downtown by motorized vehicles. Figure 3 shows one-way streets and traffic volumes in the study area. The major routes accessing downtown Anchorage are one-way couplets: L Street and I Street, C Street and A Street, and Gambell Street and Ingra Street all run north-south, connecting south Anchorage and the Seward Highway with downtown. 5th Avenue and 6th Avenue run east-west, connecting downtown with east Anchorage and the Glenn Highway.

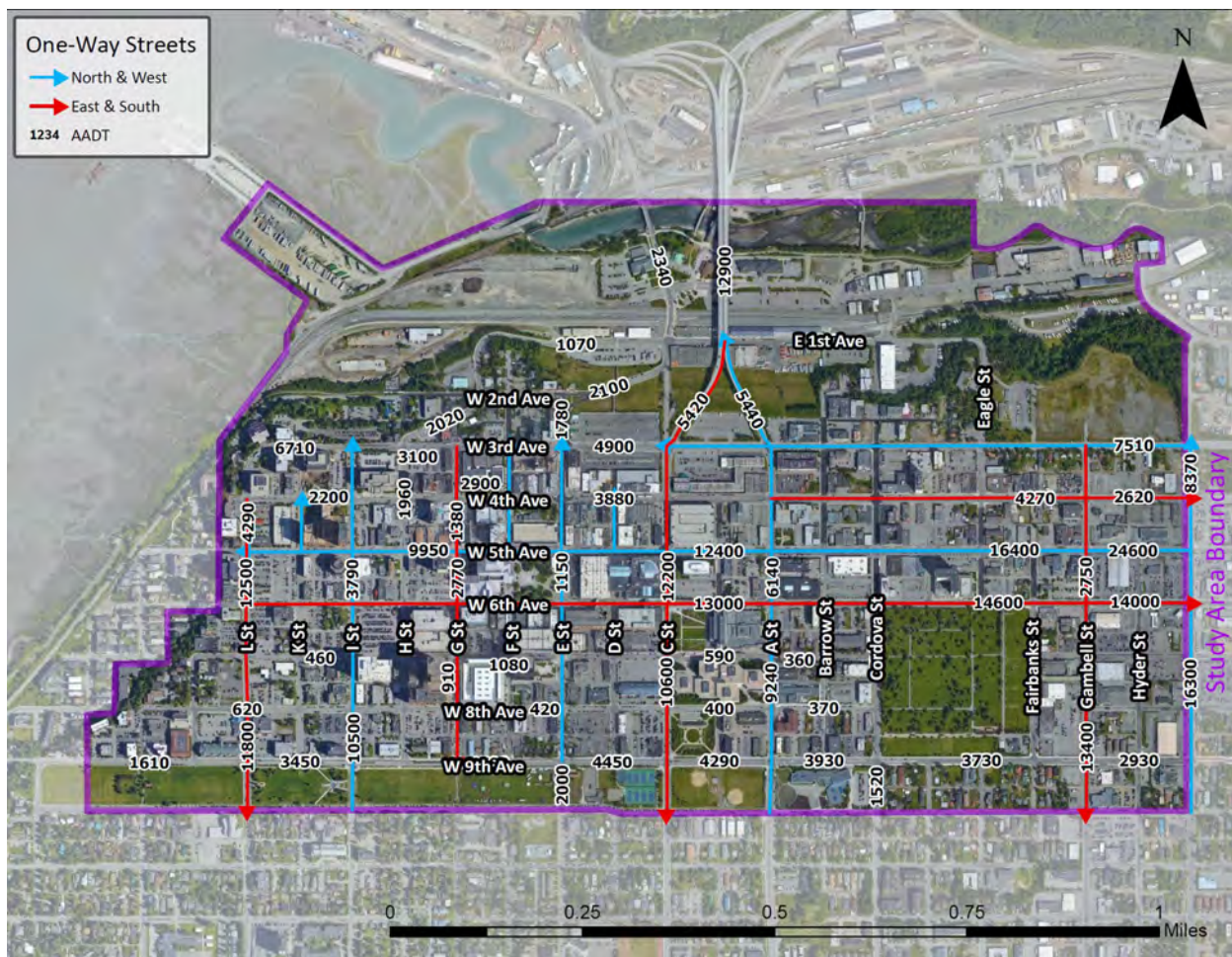


Figure 3. Downtown Street Volumes and Travel Directions

2.2.1 Curb Space

On-street parking is permitted on most downtown streets. Anchorage Community Development Authority (ACDA) manages on-street parking in the study area. Figure 4 shows metered parking

spaces within the study area. Streets without meters are a mix of free parking and no parking. Surface level parking lots and parking garages are also available.

The *Anchorage Downtown Comprehensive Plan* (2007) identified underutilized surface level parking lots as a planning challenge. Underutilized parking lots contribute to undesirable pedestrian environments and can show a lack of investment in a community. Additionally, parking studies indicate that driving members of the public perceive parking garages as unsafe and prefer to park on-street near their destination. Despite the amount of underutilized surface level lots, there is a perception of a lack of parking within downtown Anchorage.

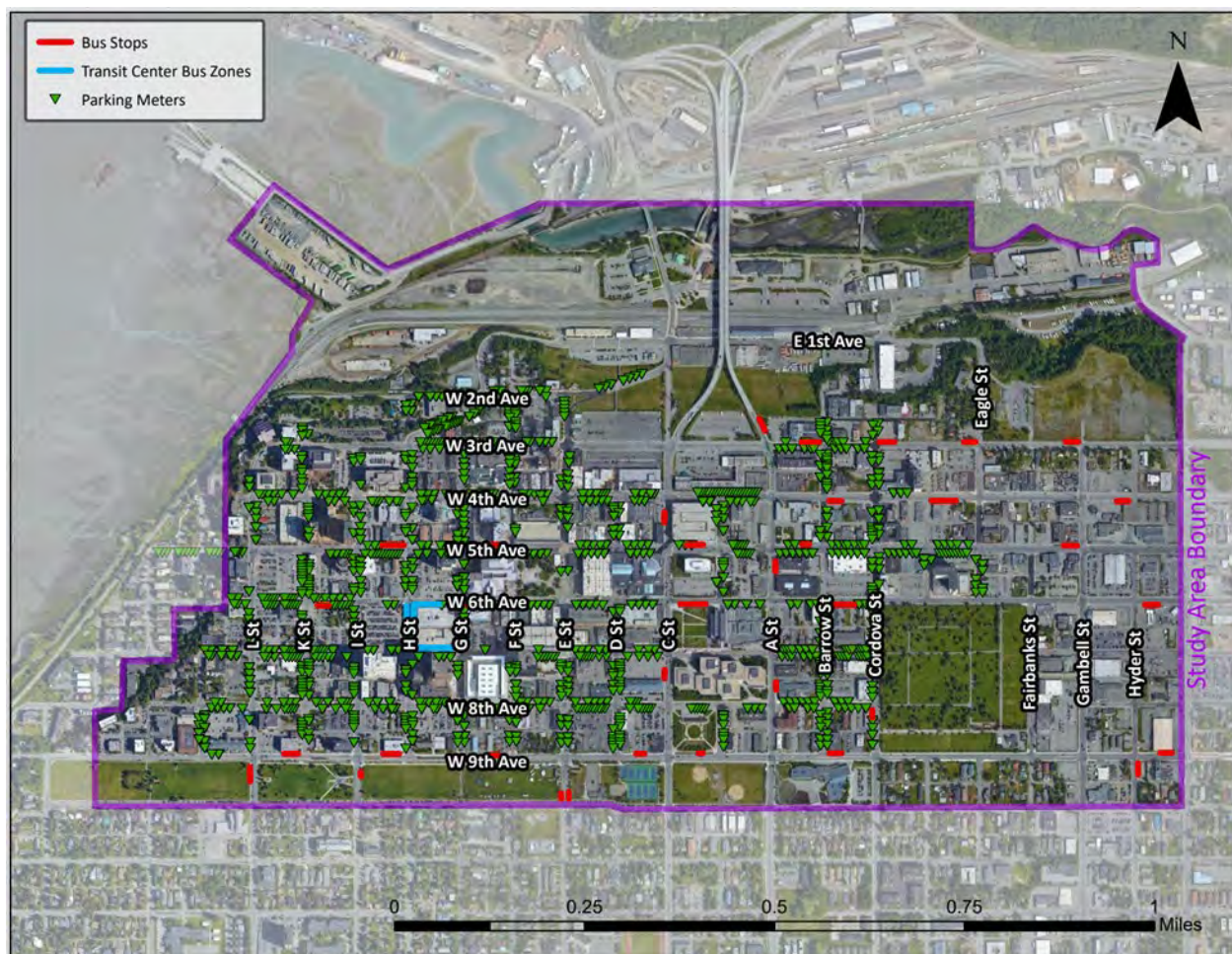


Figure 4. Metered Parking and Bus Stops in Downtown Anchorage

On-street metered parking is limited to two hours, three hours, or ten hours and is enforced Monday through Friday between 9 AM and 6 PM (excluding holidays). Parking permits are available in six zones downtown. Overnight on-street parking is prohibited during winter months to allow snow removal.

On-street parking, freight loading zones, passenger loading zones, and bus zones compete for curb space. Additionally, during summer months, tour operators are able to rent out curb space in some areas. Similarly, during construction activities downtown, contractors may rent metered spaces for staging or long term parking of construction equipment.

2.2.2 Seward Highway to Glenn Highway Planning and Environmental Linkage Study

The Seward Glenn Planning and Environmental Linkages study being conducted by the DOT&PF is evaluating connecting the Seward Highway and Glenn Highway. A Seward Highway to Glenn Highway connection could impact travel behavior and traffic flows going to or through downtown. The study is also exploring improving vehicular access between the Port of Alaska and the highway network. .

2.3 Bicycles

Bicycle network treatments are discussed in the following reports.

- *2021 AMATS Non-Motorized Plan*
- *Our Downtown Anchorage Downtown District Plan 2021*
- *Fairview Neighborhood Plan*

In Anchorage, bicycles are prohibited from riding on sidewalks within business districts (13 AAC 02.400). Much of the area within the Downtown Streets Engineering Study area falls within the definition of business zone. A local advocacy group, Bike Anchorage, has identified bike friendly streets within downtown. However bicycle infrastructure is limited to two single blocks of bicycle lanes on E Street and Cordova Street and some bicycle boulevards on segments of 3rd Avenue, 10th Avenue, and Cordova Street.

Bicycle infrastructure needs are listed and prioritized in the *2021 AMATS Non-Motorized Plan* (NMP). *Our Downtown Anchorage Downtown District Plan 2021* (Our Downtown) also identifies some needs, but in less detail and needs are not prioritized. *The Fairview Neighborhood Plan* calls for bicycle accessibility and connectivity to two greenbelts. Specifics are not provided.

Figure 5 shows existing bicycle infrastructure and identified bicycle infrastructure needs. Most needs in the NMP are identified as high or medium priority, and most needs are identified as separated bike ways in contrast to Our Downtown's call for bike lanes.

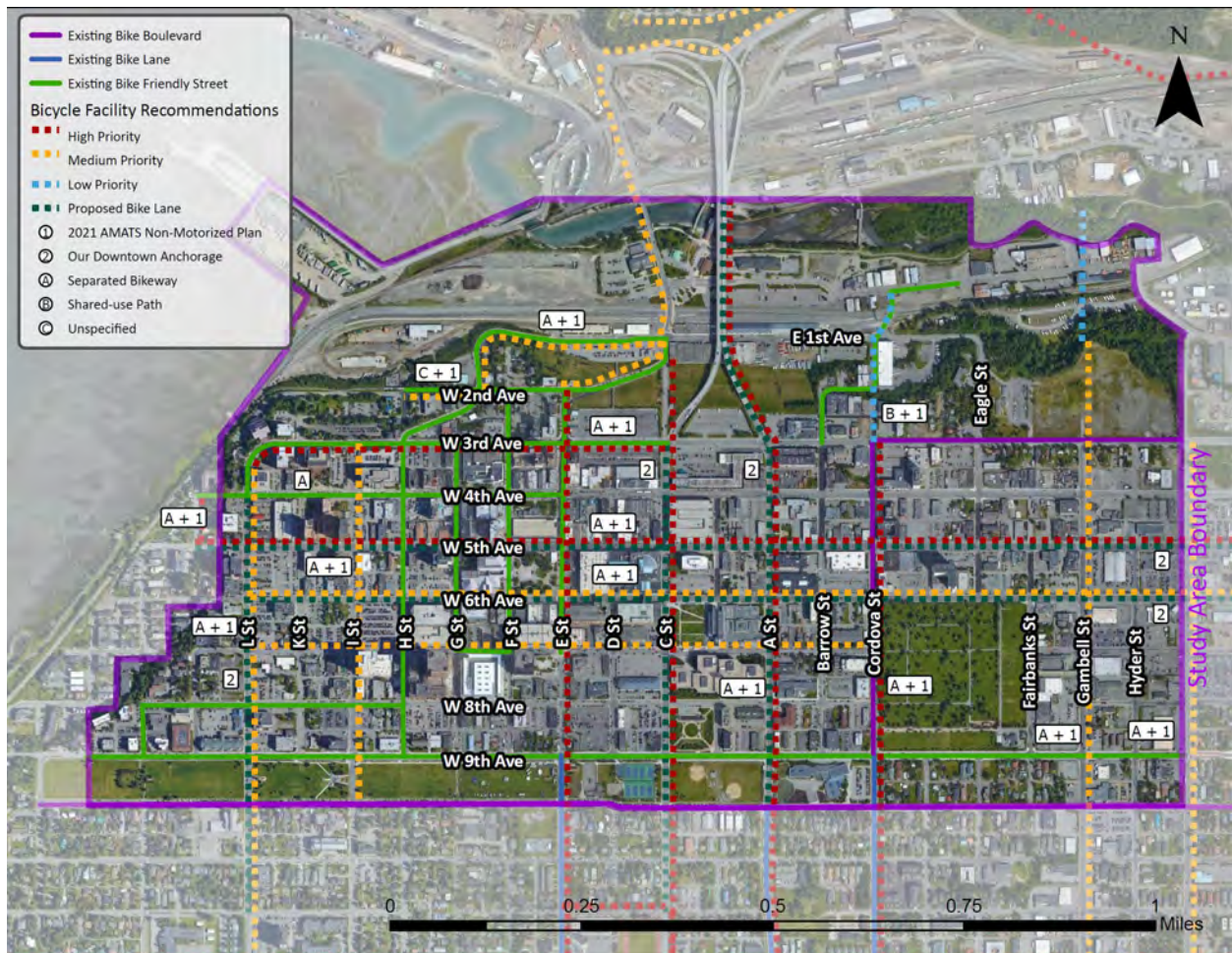


Figure 5. Existing and Proposed Bicycle Infrastructure.

2.4 Pedestrians

Pedestrian facility treatments are discussed in the following reports.

- *2021 AMATS Non-Motorized Plan*
- *Our Downtown Anchorage Downtown District Plan 2021*
- *Fairview Neighborhood Plan*
- *Reimagining D Street | Area Wide Planning Study*

In the downtown area, 22 percent of residents do not own vehicles. These residents must instead walk, bike, use transit, or rely on others for rides.

Sidewalks exist on both sides of nearly all streets in the downtown engineering study area. The NMP identifies corridors with safety concerns and corridors for pedestrian treatments. Corridors

identified as needing pedestrian treatments are prioritized by need for pedestrian safety, demand, equity, and connectivity to transit. Figure 6 shows safety corridors and prioritized corridors. A two-block segment of Hyder Street is the only segment without sidewalk on the safety concern corridors.

The *2023 Reimagining D Street | Area Wide Planning Study* presents a revitalization strategy for the D Street District, the area bounded between 6th Avenue and 9th Avenue and between E Steet and C Street. The plan calls for widened sidewalks and modified crossings within the D Street District. Pedestrian treatments overlap with low-priority pedestrian corridors on 9th Avenue and C Street.

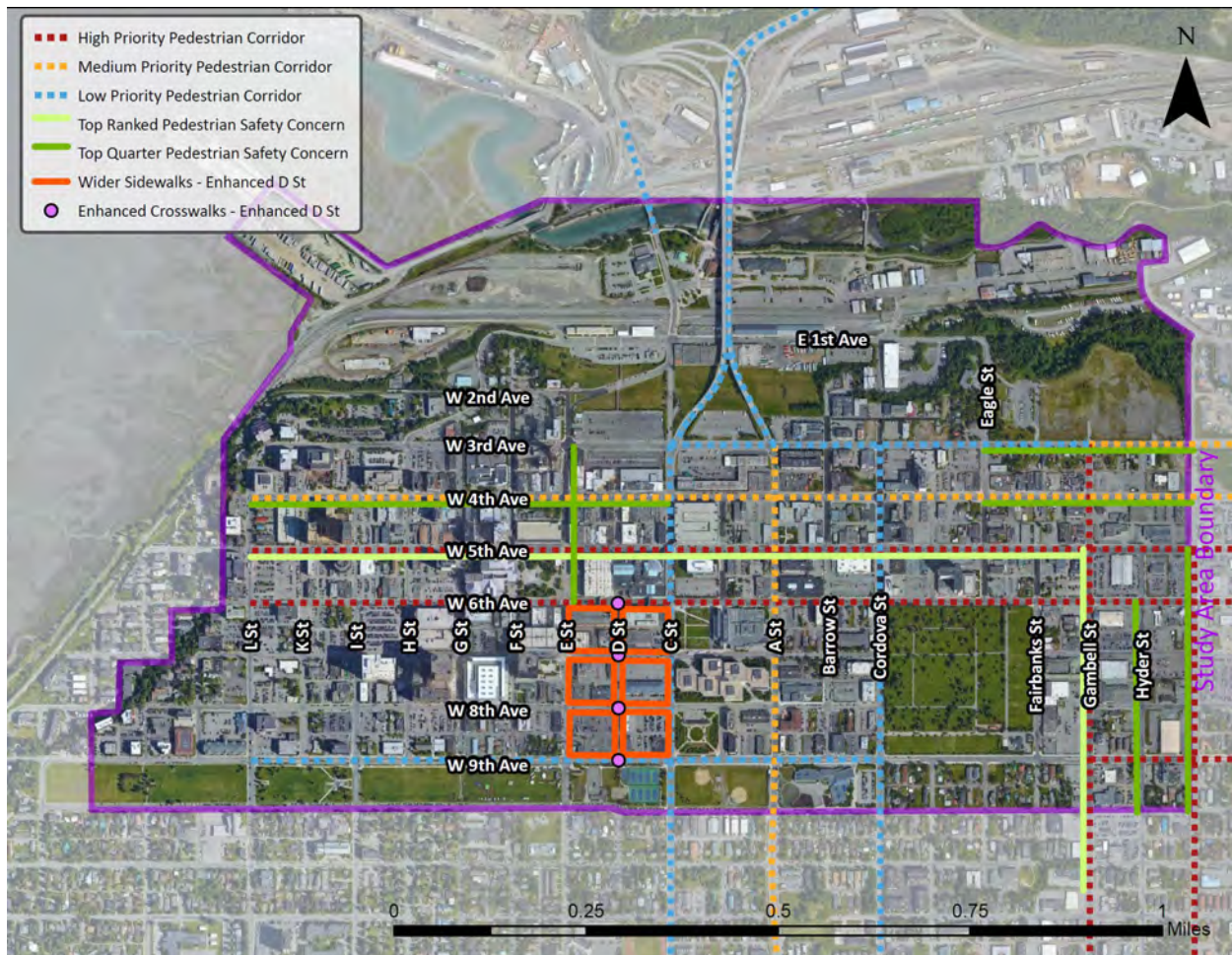


Figure 6. Pedestrian Network Needs and Safety Corridors

2.5 Freight

The Port of Alaska is the state's primary inbound cargo handling facility. Most road connections between the Don Young Port of Alaska northwest of downtown, Anchorage, and the rest of the state on the road system travel through downtown.

A truck route map, Figure 7, was adopted from the 2017 *AMATS Freight Mobility Study*. Except when no other access is available, the municipal code of Anchorage prohibits commercial vehicles with a gross weight of 11,000 pounds or greater from local and residential collector streets.

Major arterials are defined as northbound and southbound truck routes. Eastbound and westbound truck routes are limited to 3rd Avenue, 4th Avenue between C Street and Ingra Street,

and two two-block segments of 9th Avenue. Post Road, one of two port accesses for double load trucks, feeds into Ingra Street and Gambell Street via 3rd Avenue and 4th Avenue.

Active transportation and traffic calming treatments could impact truck routes. Reducing access may increase travel time and costs for some truck routes and reduce robustness of the truck route network unless new routes are defined and streets modified accordingly.

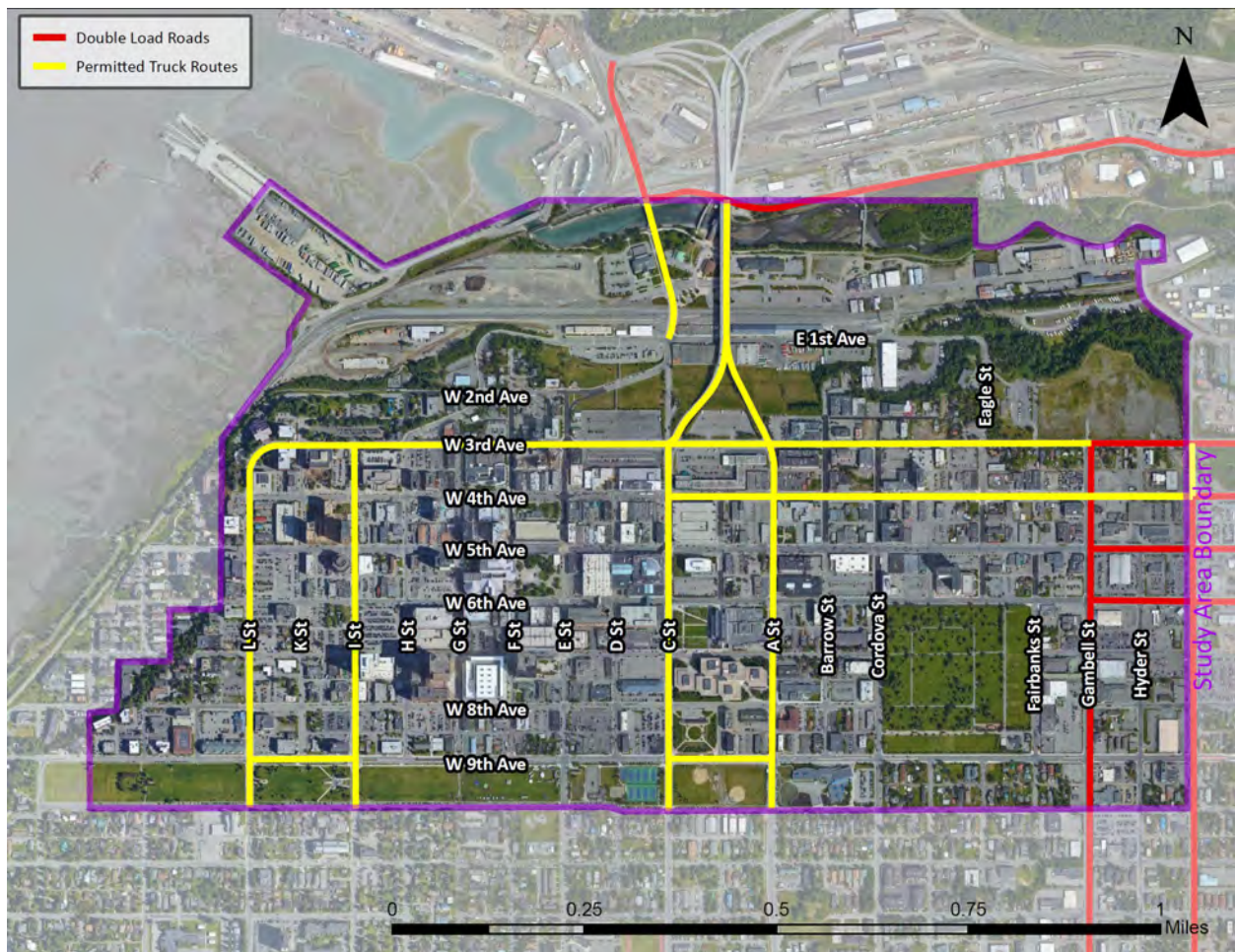


Figure 7. Downtown Anchorage Truck Routes.

The Seward Highway to Glenn Highway Planning and Environmental Linkage Study is exploring improving access, including for freight vehicles, between the Port of Alaska and the highway network.

2.6 Transit

The People Mover transit center is on the corner 6th Avenue and H Street. Its indoor waiting area and customer service counter closed in August 2020 and there are no plans to reopen it to the public. People Mover manages curb space on 7th Avenue, H Street and 6th Avenue for transit vehicles. Curb is painted red and/or No Parking signs are installed to prevent the general public from parking in bus zones.. Design standards from the Anchorage Design Criteria Manual give minimum pull-out bus stops lengths between 100 feet and 130 feet depending on a stop's location on a block.

Downtown is served by ten People Mover routes shown in Figure 8 Seven routes stop at the Transit Center and three at City Hall.

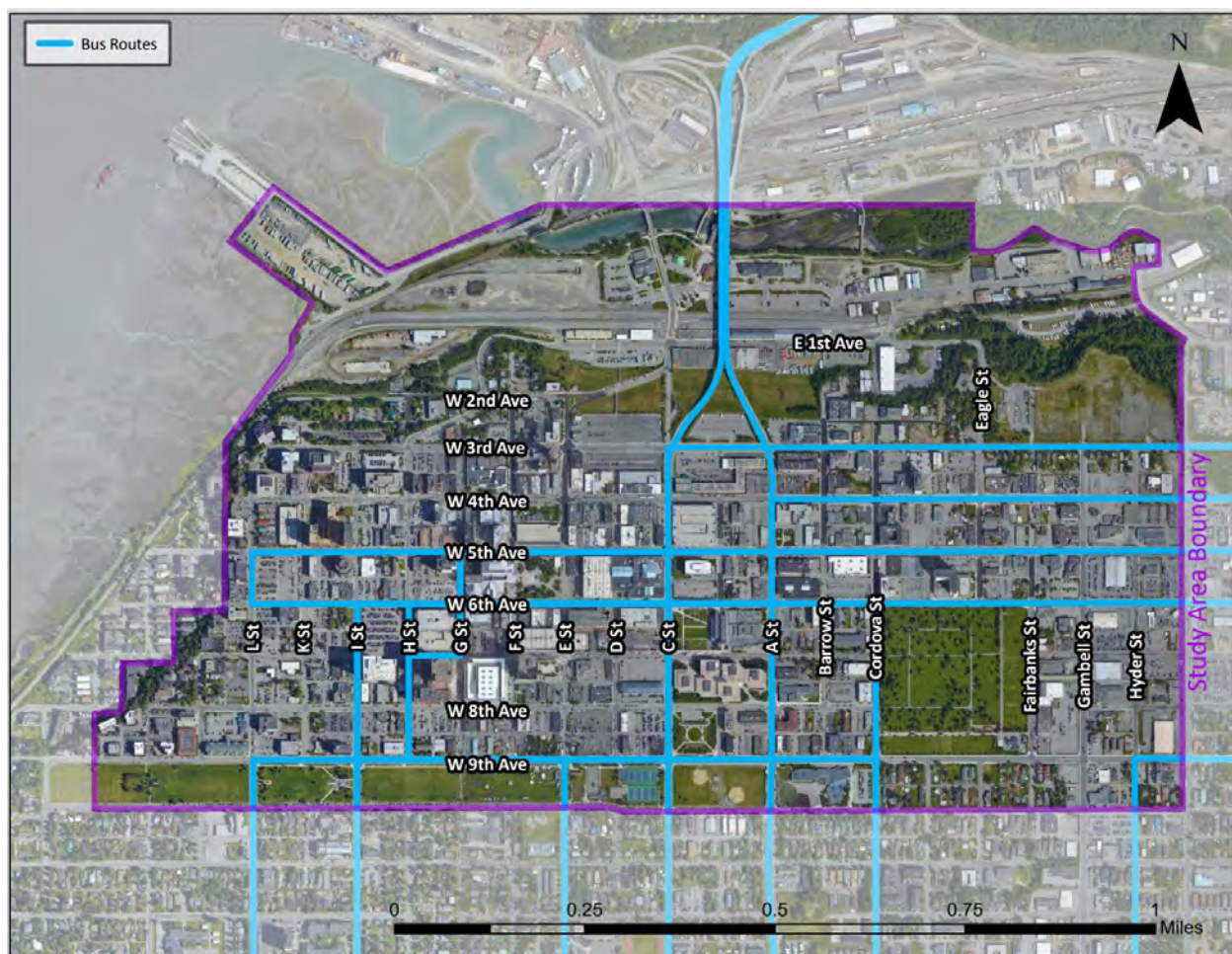


Figure 8. Streets With Bus Routes in Downtown Anchorage

An ongoing study will determine if the People Mover Transit Center should be relocated. Relocating the transit center would impact routing.

Additional transit services include Valley Transit and Interior Alaska Bus Line. Valley Transit provides passengers with transit service between the Valley Transit Park and Ride in Wasilla and the west side of H Street south of 6th Avenue in Anchorage. Year-round, Interior Alaska Bus Line connects Tok and Anchorage, stopping at 6th Avenue and G Street. They make weekly trips on Mondays, Wednesdays, and Fridays.

2.7 Tourism

During the summer months, downtown Anchorage experiences an influx of tourists and an increase in activity. Tour operators use buses to shuttle tourists to and from downtown destinations, increasing the number of large vehicles on the streets.

Tour operators also use the Egan Center, on 5th Avenue between F Street and E Street, as a hospitality center. Visitors may arrive or depart by bus from the Egan Center with luggage. Luggage can be stored at the Egan Center. The alley behind the Egan Center is essential for the operation of the hospitality center, and also serves as the freight entrance for other activities at the Egan Center.

Downtown Anchorage is also host to the Alaska Railroad Train Depot, several hotels, and other visitor attractions and services. To accommodate tour buses, operators may purchase permits from ACDA to reserve curb space for boarding and alighting of tourists. Parking meters at reserved locations are hooded, informing the general public that the curb space is unavailable for parking.

Despite being able to reserve curb space, events like trains arriving at the rail depot and offloading up to 2,000 visitors in a short period of time force tour buses to circulate downtown while waiting for an available passenger loading space.

Our Downtown calls for a summertime trolley service to increase transportation and circulation options downtown.

[waiting for information about tour bus routes to map]

2.8 Special Uses

The MOA, Anchorage Downtown Partnership, and other groups use downtown roads for special events on a non-regular basis. There are not rules or restrictions about what roads may be closed for special events. Each closure request is evaluated on a case-by-case basis. As a guiding principle, except for legacy events, 5th Avenue, 6th Avenue, Ingra Street, and Gambell Street are

not fully closed for special events. When 5th Avenue and 6th Avenue are fully closed for a special event, traffic is rerouted to 3rd Avenue and 9th Avenue.

There is at least one annual event that occurs on the A Street/ C Street corridor north of 3rd Avenue. The event takes place during a weekend evening, and thus has minimal impact on port operations.

While the MOA issues special use permits, DOT&PF reviews permit requests and provides their approval for any closure.

3 Utilities

Utilities in downtown Anchorage are shown in Figure 9. Chugach Electric, Alaska Communications, GCI, ENSTAR Natural Gas, and Anchorage Water and Wastewater utility provide services in the area. Most utilities are routed in alleys and are underground. Fairbanks Street, Gambell Street, and Hyder Street have overhead electric and communications lines. Overhead street light power drops exist sporadically across the area.

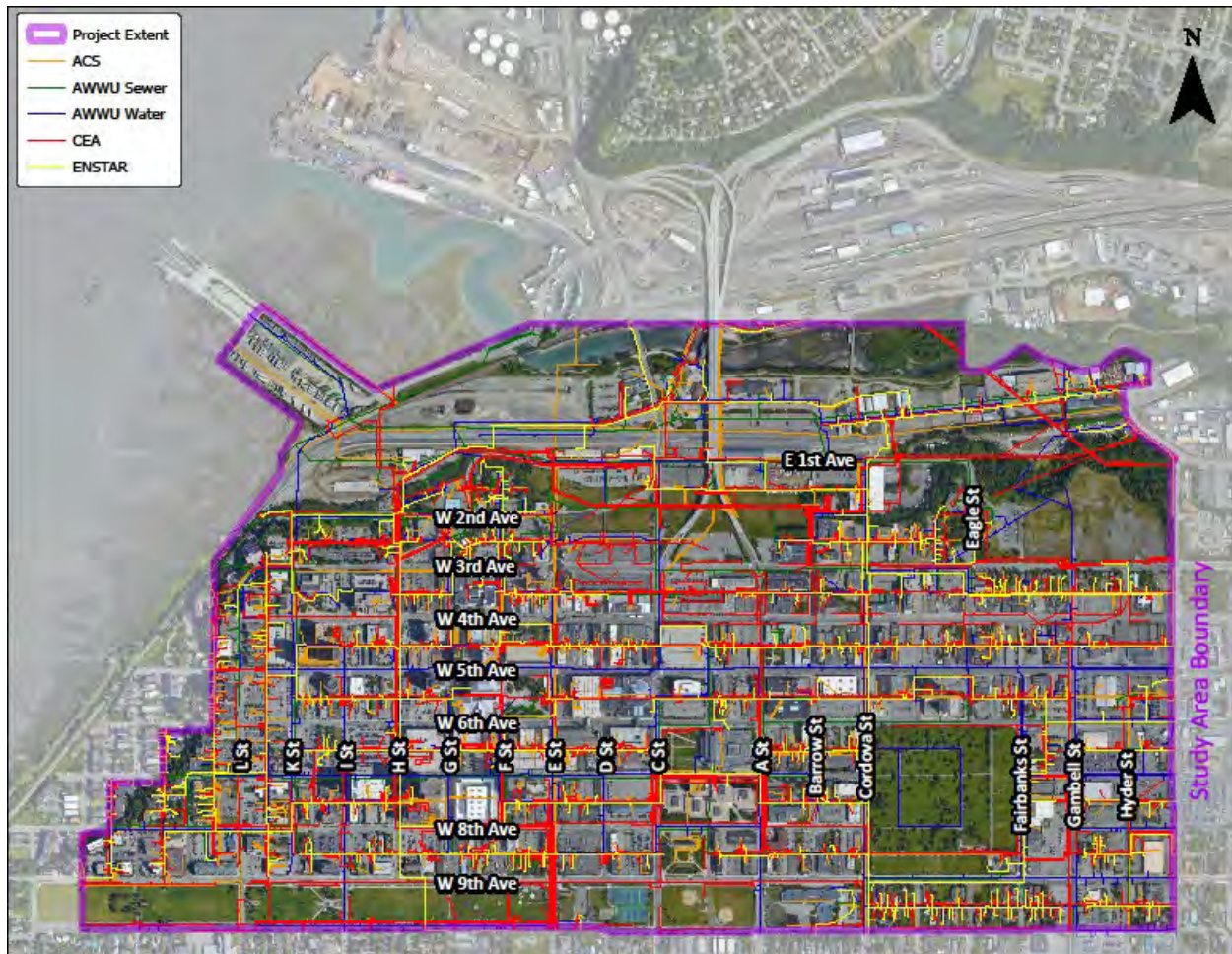


Figure 9. Downtown Anchorage Utilities

4 Downtown Street Design Criteria

The downtown street network contains municipal streets, state streets, and streets with an NHS designation. The ownership of the street and the source of treatment funding determine which design manual(s) need to be consulted and the order in which they must be consulted.

Design Criteria provide an explanation of which design manuals should be used and in what order they should be used in based on street ownership, funding source, and NHS designation.

Design criteria worksheets, prepopulated where appropriate, for local streets, collector streets, minor arterials, and major arterials are provided in Appendix B: Design Criteria.

The following manuals are referenced in the design criteria worksheets.

A Policy on Geometric Design on Highways and Streets, 2011

A Policy on Geometric Design on Highways and Streets (PGDHS) is published by the American Association of Traffic and Highway Officials (AASHTO). The PGDHS provides design guidance; however, agencies may adopt the PGDHS as a standard design document. Alaska DOT&PF has adopted the 2011 PGDHS as a design standard. The MOA states AASHTO standards should be met.

The PGDHS is updated on an irregular basis. An updated version of the PGDHS, allowing for greater flexibility in design, was released in 2018. A subsequent version is in the process of being drafted.

Alaska Highway Preconstruction Manual

The Alaska DOT&PF's *Alaska Highway Preconstruction Manual* (HPCM) is the state's design manual for developing and designing road projects in Alaska. The HPCM covers both federally funded projects and state-funded projects.

Alaska Traffic Manual

The *Alaska Traffic Manual* provides standards and guidance on the traffic control devices such traffic signs, street markings, and traffic signals. It is a supplement to the Federal Highway Administration's *Manual on Uniform Traffic Control Devices* (MUTCD). The most recent version was released in 2016 and is based on the 2009 MUTCD.

Anchorage Design Criteria Manual

The *Anchorage Design Criteria Manual's* (DMC) purpose is to provide traveled ways that are consistent, predictable, safe, and reliable, through the range of private development, municipal, and state roads to seamlessly integrate past, present, and future vehicular ways, pedestrian and bicycle ways, drainage, traffic operations, maintenance, and enforcement. The standards also

ensure that safety concerns are addressed consistently and adequately. Consistency in all areas of the design effort results in a more cohesive road system within the Municipality.

Anchorage Metropolitan Area Transportation Solutions (AMATS) Non-Motorized Plan Ch. 7

The *AMATS Non-Motorized Plan*, adopted in November 2011, provides a vision of a connected network within Anchorage that enables pedestrians and cycles to travel throughout the city during all seasons. Chapter 7 of the Non-Motorized plan pulls from national, state, and local design guidance to describe how its vision can be achieved.

Bikeway Selection Guide

The Bikeway Selection Guide is decision support tool published by the FHWA. The guide summarizes advantages and disadvantages of different bicycle treatments and provides context-driven treatment selection guidance.

Downtown Lighting and Signals Upgrade Design Framework Sect. 2.1

Section 2.1 of the *Downtown Lighting and Signal Upgrade Design Framework* describes how roadways and facilities should be illuminated. The framework states roadways should be designed for high pedestrian activity.

Guide for the Development of Bicycle Facilities

The *Anchorage Design Criteria Manual* refers designers to *The Guide for the Development of Bicycle Facilities*, published by AASHTO, when designing roads with bicycle facilities. The guide provides geometric, striping, and signing guidelines for meeting bicycle travel and operations needs and the needs of other highway users. Signal guidelines are not published with the guide.

The Manual on Uniform Traffic Control Devices, 11th Edition

The MUTCD 11th Edition was released in December 2023. Chapter 4H of MUTCD provides national standards and guidance on bicycle signals. Each new MUTCD is modified to meet Alaska's needs and published as the *Alaska Traffic Manual* supplement. The most recent version of the Alaska Traffic Manual, adopted in 2016, is based on the 2009 MUTCD.

National Association of City Transportation Officials Design Guides

The National Association of City Transportation Officials (NACTO) publishes design guides to build safer, more accessible, and more equitable transportation networks. Each NACTO design guide has a specific focus. NACTO design guides that may be relevant to the Downtown

Anchorage Study include the *Urban Street Design Guide*, *Urban Bikeway Design Guide*, and *Transit Street Design Guide*.

Anchorage Municipal Code Title 21.11.070.D

Title 21, Land Use Planning, of the Anchorage Municipal Code of Ordinances, also known as Title 21, The Zoning Ordinance, or the Land Use Ordinance, provides provisions related to the planning and development of the Municipality of Anchorage.

Chapter 11 Section D, Pedestrian-Oriented Frontage Standards includes sidewalk width standards for downtown Anchorage.

Title 23, United States Code

Title 23, United States Code covers various aspects of highways including the NHS and interstates. Section 103 touches on the NHS and interstate system. Section 103 states that, “in Alaska highways on the interstate system shall be designed in accordance with such geometric and construction standards as are adequate for current and probable future traffic demands and the needs of the locality of the highway.”

5 NHS Route Constraints and Flexibility

NHS roads are important to the economy, mobility, and national defense. Historically, NHS roads have focused on facilitating the safe and effect movement of vehicular traffic, but not the movement of other modes of transportation. Figure 10 shows NHS roads in downtown Anchorage.

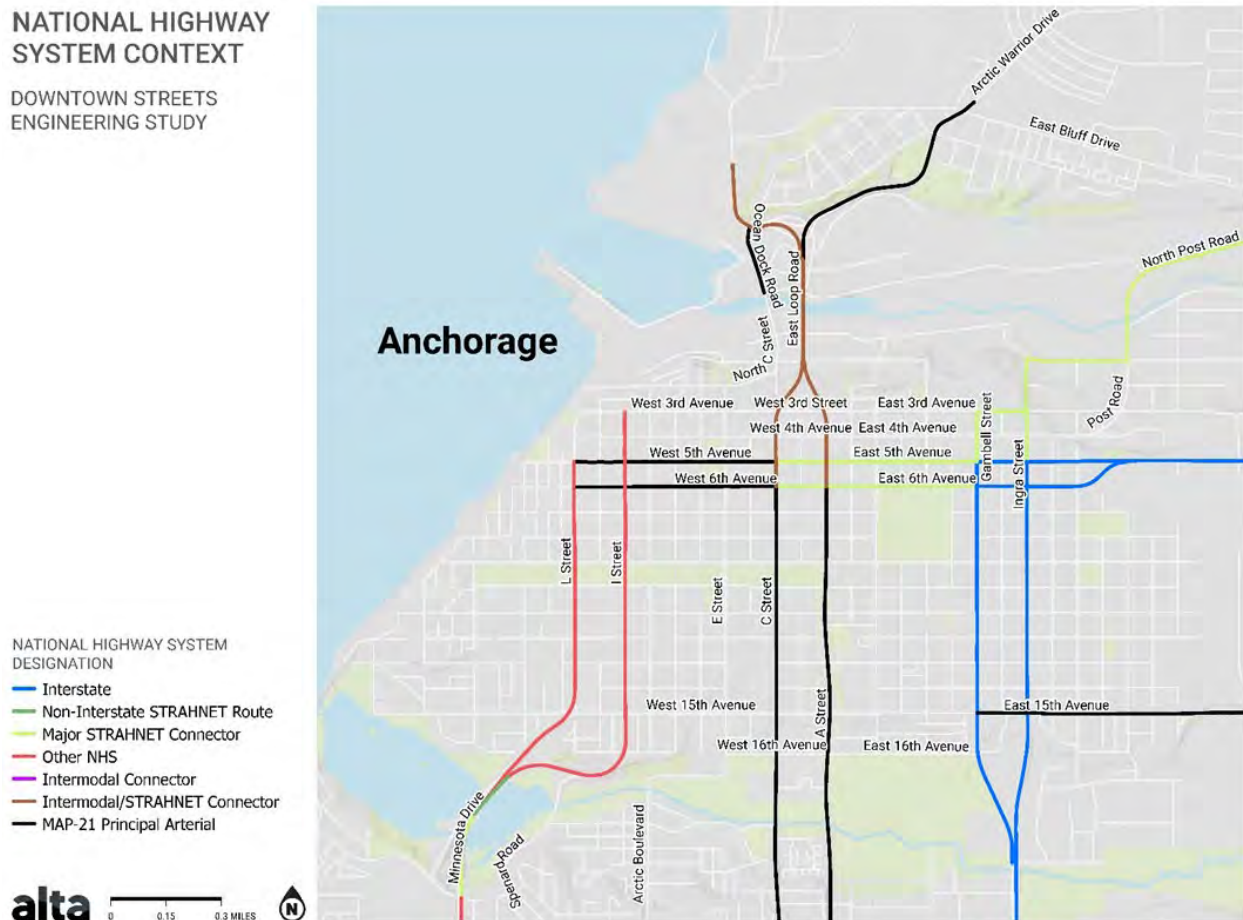


Figure 10. NHS Designated Roads in Downtown Anchorage (Source: Alta)

In 2012, the FHWA added about 220,000 miles of road to the NHS. The added roads, including parts of 5th Avenue, 6th Avenue, C Street and A Street, have a MAP-21, or Moving Ahead of Progress in the 21st Century, designation.. The FHWA has issued guidance on removing the NHS designation from roads with a MAP-21 designation. Roads with a STRAHNET designation are critical to Department of Defense operations.

Recent changes in federal rules grant state DOTs greater authority in determining how to meet federal standards on some NHS roads. In 2022 code regulating NHS roads was amended to allow

AASHTO 2018 PGDHS standard to be applied. However, if a state, like Alaska, has not adopted the 2018 PGDHS, then local design standards apply.

A memorandum summarizing the National Highway System (NHS) and how it impacts the constraints and flexibility of downtown Anchorage streets findings is in Appendix C:NHS Context and Applications.

This memo identifies several winter cities with single-snowfall typical maximums similar to Anchorage that have implemented pedestrian and bicycle infrastructure. The cities have published case studies, design guidelines, and other materials about design for pedestrians and bicycles during the winter months. A summary of the cities and associated resources is in Appendix D: Precedent Document.

6 Downtown Streets Right-of-Way Ownership

Detailed findings describing the ownership of key downtown routes can be found in Appendix E: Right-of-Way Ownership.

In summary, unless public ROW is created by deed, there is no document vesting ownership in a government entity or agency. In the case of key downtown routes, after statehood, DOT&PF conducted traffic studies, obtained ROW using federal funding, and was the primary agency maintaining the listed corridors.

- I Street and L Street
- A Street and C Street
- Gambell Street and Ingra Street
- 5th Avenue and 6th Avenue

Since their original construction, AKDOT&PF and MOA have upgraded these corridors using federal funds. The streets are classified as interstates, principal arterials, and minor arterials. They are also NHS routes and hold varying levels of importance to strategic defense.

Relinquishment of the ROW from DOT&PF to MOA of the high classification routes under consideration (such as 5th and 6th Avenues) would likely be a costly and lengthy procedure, even if both parties support the change. After relinquishment, MOA would still be required to meet FHWA maintenance and management processes. Whether or not the MOA chooses to pursue relinquishment, the metropolitan planning process (of which this study is a part) can be used to expand pedestrian and bicycle infrastructure using local or federal funds.

Appendix A: Review of Planning Documents

Introduction

Adopted planning documents were reviewed to determine the existing planning efforts underway in Downtown Streets project area.

Our Downtown Anchorage Downtown District Plan (MOA – 2021)

The 2021 Our Downtown Anchorage Downtown District Plan (Our Downtown) sets goals to provide a connected street and trail system that accommodates pedestrians, bicycles, and cars with a comfortable connection between the street, sidewalk, and buildings in downtown Anchorage. The plan incorporates community feedback with respect to street conversions, street treatments, coordinated parking strategy, speed limit reductions, and signal timing changes to decrease traffic speeds proposed in the 2007 Downtown Plan. The plan identifies the overarching goals for the downtown area:

1. Create a downtown for all
2. Jump-start development
3. Be economically sustainable
4. Provide more housing downtown
5. Increase connectivity
6. Activate the ground-floor environment
7. Provide a clear, sensible regulatory framework

Transportation-related recommendations from the 2007 Downtown Plan were intended to make downtown a more pedestrian, bicycle, transit-friendly, and safe place. Our Downtown builds on the 2007 Downtown Plan with two transportation system priorities. The first is optimizing multi-modal access to and within Downtown. The second is creating a place that is enjoyable and safe for walking, biking, and using public transit. The priorities indicate This multi-modal system should continue to serve local automobile trips and provide tour bus access. Efforts should be made to minimize the impacts from cut-through traffic and freight movements in Downtown.

Non-Motorized Plan (AMATS – 2021)

The 2021 AMATS Non-Motorized Plan (NMP) provides the vision and goals for all modes of all-season, non-motorized travel in the planning area. The NMP’s vision statement is “Anchorage is a world-class northern city that has an integrated network of routes accessible for people of all ages and abilities to walk, roll, or glide safely on shared use pathways and streets.” Goals and objectives, used to track progress, are presented in the plan. The goals set in the NMP are:

1. Increase the use of non-motorized system

2. Promote and improve health and quality of life
3. Increase safety and security
4. Optimize maintenance for all seasons
5. Connect communities through all modes to all destinations
6. Measure non-motorized use and assets
7. Build community through education and involvement

The NMP provides design guidance based on national, state, and local guidelines and recommends that facilities meet local guidelines when possible. Guidance for maintenance and operations for these facilities is also included, with a focus on winter season maintenance requirements.

Projects are prioritized based on the NMP goals and objectives with input from agency staff, advisory groups, and public involvement. The NMP-recommended bicycle projects in the downtown area, with assigned priorities are:

High Priority:

- Separated bikeway on West 3rd Avenue between C Street and L Street.
- Separated bikeway on East 5th Avenue between Karluk Street and M Street.
- Separated bikeway on C Street between West 2nd Avenue and Klatt Road.
- Separated bikeway on Cordova Street between East 15th Avenue and East 3rd Avenue.
- Shared Used Pathway Study on Cordova Street between and East 3rd Avenue and Ship Creek Greenway.
- Separated bikeway on E Street between West 15th Avenue and West 2nd Avenue.
- Separated bikeway on Gambell Street between East 15th Avenue and East 3rd Avenue.

Medium Priority:

- Separated bikeway on West 1st Avenue between C Street and H Street.
- Separated bikeway on East 6th Avenue between Karluk Street and L Street.
- Separated bikeway on East 7th Avenue between Cordova Street and L Street.
- Separated bikeway on Christensen Drive/ 1st Avenue between C Street and 2nd Avenue.
- Separated bikeway on I Street between West 10th Avenue and West 3rd Avenue.
- Separated bikeway on Ingra Street between East 6th Avenue and East 3rd Avenue.
- Separated bikeway on Ingra Street between East 6th Avenue and East 13th Avenue.
- Separated bikeway on L Street between West 13th Avenue and West 3rd Avenue.

Priority pedestrian corridors identified in the NMP:

High Priority:

- 5th Avenue between L Street and Reeve Boulevard
- 6th Avenue between L Street and East 5th Avenue
- East 9th Avenue between Gambell Street and Latouche Street
- Gambell Street between East 16th Avenue and East 3rd Avenue
- Ingra Street between East 5th Avenue and East 15th Avenue

Medium Priority:

- 4th Avenue between L Street and East 3rd Avenue/ Post Road
- A Street between West 3rd Avenue and West Fireweed Lane
- East 3rd Avenue between Gambell Street and Post Road

Low Priority:

- 3rd Avenue between Gambell Street and C Street
- 9th Avenue between L Street and Cordova Street
- C Street between West 3rd Avenue and West 15th Avenue
- C Street between West 15th Avenue and West 9th Avenue
- Cordova between St East 3rd Avenue and East 16th Avenue

Top Quarter Pedestrian Safety Concern:

- 3rd Avenue between Eagle Street and Ingra Street
- 4th Avenue between L Street and C Street
- 4th Avenue between Eagle Street and Ingra Street
- E Street between 3rd Avenue and 6th Avenue
- Hyder Street between 9th Avenue and 14th Avenue
- Ingra Street between 5th Avenue 15th Avenue

Top Ranked Pedestrian Safety Concern

- 5th Avenue between L Street and Gambell Street
- Gambell Street between 5th Avenue and 16th Avenue

Downtown Signals & Lighting Reconnaissance Study (KE – 2018)

The 2018 Downtown Lighting and Signals Upgrade Reconnaissance Study evaluates the downtown traffic signal and street lighting systems and recommends treatments to infrastructure that does not meet current safety and design standards found in the Alaska Traffic Manual and the MOA Design Criteria Manual. A Design Framework (KE, 2020) for the downtown district was completed to assist designers in unifying the look and feel of the downtown district for users. Specific guidelines are provided for lighting, traffic signals, and any associated electrical system components. The framework also provides design guidance for civil treatments (e.g., sidewalk treatments, curb bulbs, on-street parking, and raised intersections) that can be completed concurrently with the lighting and signal upgrades. The 2018 Downtown Lighting and Signals Upgrade Reconnaissance Study lists 21 prioritized treatments based on the number of poor and fair elements on a block.

1. 4th Avenue between L Street and A Street
2. 3rd Avenue between L Street and Barrow Street
3. 4th Avenue between A Street and Ingra Street
4. 6th Avenue between L Street and Cordova Street
5. 5th Avenue between L Street and Cordova Street
6. F Street between 3rd Avenue and 5th Avenue
7. E Street between 2nd Avenue and 4th Avenue
8. Ingra Street between 3rd Avenue and 10th Avenue
9. L Street and I Street between 3rd Avenue and 10th Avenue
10. A Street and C Street between 3rd Avenue and 10th Avenue
11. West Spot Fix Project
12. 7th Avenue between L Street and Cordova Street
13. G Street between 5th Avenue and 7th Avenue
14. 5th Avenue between Cordova Street and Ingra Street
15. East Spot Fix Project
16. 2nd Avenue between H Street and 1st Avenue
17. 3rd Avenue between Barrow Street Ingra Street
18. 8th Avenue between L Street & Cordova Street
19. 6th Avenue between Cordova Street and Ingra Street
20. Infill lighting (Blocks with no lighting)
21. Infill lighting (Blocks with utility only lighting)

2023 Reimaging D Street Area Wide Planning (Stantec – 2023)

The 2023 Reimaging D Street Area Wide Planning (AWP) Study presents a plan to redevelop the six-block area D Street District between E Street and C Street and between 6th Avenue and 9th Avenue, the plan presents a mixed-used development. The document presents a district

framework plan (DFP), which breaks down the development into four components. The Transportation / Streetscape component is the most relevant to the Downtown Streets Engineering Study. Treatments include widened sidewalks, narrower lanes, way finding signage, modified intersections, landscaping, and a festival corridor. Treatments as summarized in the AWP are listed below.

- C Street - Widen the sidewalk (on the west side of the right-of-way), add trees/landscaping, and install wayfinding signage.
- D Street - Transform the corridor into a “Festival Street” where segments can be closed to motorized vehicles to host events/community gatherings. Enhance intersections and crosswalks. Widen sidewalks and add a pedestrian shelter on the west side of the right-of-way. Add angled parking to the east side of the right-of-way, and add pavers/decorative pavement to travel lanes. Add gateway features/signage to each end of the corridor on D Street.
- 6th Avenue - Construct an enhanced intersection at D Street with crosswalks and decorative pavement. Add street parking, widen sidewalks (on the south side of the right-of-way), and add tree/ landscaping along the curb.
- 7th Avenue - Widen sidewalks (as feasible), narrow travel lanes (for traffic calming), retain parallel street parking stalls, add trees/landscaping, and construct mid-block pedestrian crossings.
- 8th Avenue - Widen sidewalks (as feasible), narrow travel lanes (for traffic calming), retain parallel street parking stalls, add trees/landscaping, and construct mid-block pedestrian crossings.
- 9th Avenue - Construct enhanced intersections at C Street and D Street with crosswalks and decorative pavement. Widen the sidewalk (on the north side of the right-of-way) and add trees/ landscaping. Install wayfinding signage depicting Downtown destinations.
- Alley Treatments - Reconstruct alley pavement (to serve infill projects) and add lighting/safety elements.

Anchorage Freight Mobility Study (AMATS – 2017)

The 2017 Anchorage Freight Mobility was drafted to prepare Anchorage’s freight network for future growth. The study contains an updated local freight map which includes primary truck routes, double load routes, and secondary truck routes. The study identifies several freight generators in or adjacent to downtown including the Port of Anchorage, Alaska Railroad Anchorage Rail Yard, Suburban Propane, and Merrill Field. Additionally, the study identifies several challenges to freight routes in downtown, below.

- North C Street and Ocean Dock Road Intersection (multiple RR Crossing)
- Whitney Road (size, turning movements, no shoulders, trail/pedestrian/fishing concerns)
- School Bus storage area (use not ideally suited, some compatibility concerns)
- 3rd Avenue & Ingra/Gambell treatments (connects to the Ship Creek/Port Area)
- C Street & 5th/6th Avenue Intersections - (turning movements)
- 3rd Avenue: Post Road and Reeve Blvd. (capacity treatments)

Appendix B: Design Criteria

Project Name:		Downtown Streets Engineering Study	
☒ New Construction/Reconstruction		☐ Reconstruction (3R) ☐ Other:	
Project Number:		☐ NHS ☐ Non NHS	
Functional Classification:	Local		
Design Year:		Present ADT:	
Design Year ADT:		Mid Design Period ADT:	
DHV:		Directional Split:	
Percent Trucks:		Equivalent Axle Loading:	
Pavement Design Year:		Design Vehicle:	City-Bus
Terrain:	Level	Number of Roadways:	
Design Speed/Posted Speed:	30/25 MPH		
Width of Traveled Way:	11 ft		
Width of Shoulders:	Outside:	3.5 ft	Inside:
Cross Slope:	2% max		
Superelevation Rate:	6%		
Minimum Radius of Curvature:	275 ft		
Minimum K-Value for Vertical Curve:	Sag:		Crest:
Maximum Allowable Grade:	7%		
Minimum Allowable Grade:	0.3%		
Stopping Sight Distance:	200 ft		
Lateral Offset to Obstruction:	Not applicable to local urban streets		
Vertical Clearance:	N/A		
Bridge Width:	N/A		
Bridge Structural Capacity:	N/A		
Passing Sight Distance:	N/A		
Surface Treatment:	T/W:		Shoulders:
Side Slope Ratios:	Foreslopes:		Backslopes:
Degree of Access Control:			
Median Treatment:			
Illumination:	High ped levels: Avg Illuminance = 0.9 foot-candles, Uniformity = 6.0, Veiling luminance = 0.4		
Curb Usage and Type:	20-ft radius curb return from edge of pavement or back of curb, 30-ft radius when intersecting collector		
Bicycle Provisions:	Design for all classes of riders. See additional bicycle facility sheet		
Pedestrian Provisions:	11.5 ft min sidewalk abutting street curb		
Misc. Criteria:	See additional below		

Proposed - Designer/Consultant:	_____	Date:	_____
Accepted - Engineering Manager:	_____	Date:	_____
Approved - Preconstruction Engineer:	_____	Date:	_____

Shaded criteria are the *FWHA 2 controlling criteria for roads with speed limits below 50 mph*. For NHS routes only, these criteria must meet the in the Green Book (*AASHTO A Policy on Geometric Design of Highways and Streets*). For all other routes, these criteria must meet minimums established the minimums established in the *Alaska Highway Preconstruction Manual*. Otherwise a Design Exception must be approved by FHWA.

Design Criterion marked with a " # " do not meet minimums and have a Design Exception(s) and/or Design Waiver(s) approved. See Appendix __ for Design Exception/Design Waiver approval(s) and approved design criteria values.

Parking Lane Width:	7 ft
Pedestrian Facility Illumination:	High ped levels: Avg Horizontal Illuminance = 1.0 foot-candles, Uniformity = 4.0, Vertical luminance = 0.5
Intersection Sight Distance:	
Case	# Additional Lanes C I ISD
B1 Left turn from minor road	0 ##### ft
B2 Right turn from minor road	0 ##### ft
B3 Crossing maneuver from the minor road	0 ##### ft
D Intersections with traffic signal control	First stopped vehicle should be visible to first stopped vehicle at each approach
E Intersections with all-way stop control	First stopped vehicle should be visible to first stopped vehicle at each approach
F Left turns from the major road	0 ##### ft

Project Name:		Downtown Streets Engineering Study	
☒ New Construction/Reconstruction		☐ Reconstruction (3R) ☐ Other:	
Project Number:		☐ NHS ☒ Non NHS	
Functional Classification:	Collector		
Design Year:		Present ADT:	
Design Year ADT:		Mid Design Period ADT:	
DHV:		Directional Split:	
Percent Trucks:		Equivalent Axle Loading:	
Pavement Design Year:		Design Vehicle:	City-Bus
Terrain:	Level	Number of Roadways:	
Design Speed/Posted Speed:	45/35 MPH		
Width of Traveled Way:	11 ft		
Width of Shoulders:	Outside:	5 ft	Inside:
Cross Slope:	2% max		
Superelevation Rate:	6%		
Minimum Radius of Curvature:	660 ft		
Minimum K-Value for Vertical Curve:	Sag:		Crest:
Maximum Allowable Grade:	7%		
Minimum Allowable Grade:	0.3%		
Stopping Sight Distance:	360 ft		
Lateral Offset to Obstruction:	Where establishing a full-width clear zone in an urban area is not practical due to right-of-way constraints		
Vertical Clearance:	N/A		
Bridge Width:	N/A		
Bridge Structural Capacity:	N/A		
Passing Sight Distance:	N/A		
Surface Treatment:	T/W:		Shoulders:
Side Slope Ratios:	Foreslopes:		Backslopes:
Degree of Access Control:			
Median Treatment:			
Illumination:	High ped levels: Avg Illuminance = 1.2 foot-candles, Uniformity = 4.0, Veiling luminance = 0.4		
Curb Usage and Type:	30-ft radius curb return from edge of pavement or back of curb		
Bicycle Provisions:	Design for Class A riders. See additional bicycle facility sheet.		
Pedestrian Provisions:	11.5 ft min sidewalk abutting street curb		
Misc. Criteria:	See additional below		

Proposed - Designer/Consultant:	_____	Date:	_____
Accepted - Engineering Manager:	_____	Date:	_____
Approved - Preconstruction Engineer:	_____	Date:	_____

Shaded criteria are the *FWHA 2 controlling criteria for roads with speed limits below 50 mph*. For NHS routes only, these criteria must meet the in the Green Book (*AASHTO A Policy on Geometric Design of Highways and Streets*). For all other routes, these criteria must meet minimums established the minimums established in the *Alaska Highway Preconstruction Manual*. Otherwise a Design Exception must be approved by FHWA.

Design Criterion marked with a " # " do not meet minimums and have a Design Exception(s) and/or Design Waiver(s) approved. See Appendix __ for Design Exception/Design Waiver approval(s) and approved design criteria values.

Parking Lane Width:	7 ft
Pedestrian Facility Illumination:	High ped levels: Avg Horizontal Illuminance = 1.0 foot-candles, Uniformity = 4.0, Vertical luminance = 0.5
Intersection Sight Distance:	
Case	# Additional Lanes C/ISD
B1 Left turn from minor road	0 ##### ft
B2 Right turn from minor road	0 ##### ft
B3 Crossing maneuver from the minor road	0 ##### ft
D Intersections with traffic signal control	First stopped vehicle should be visible to first stopped vehicle at each approach
E Intersections with all-way stop control	First stopped vehicle should be visible to first stopped vehicle at each approach
F Left turns from the major road	0 ##### ft

Project Name:		Downtown Streets Engineering Study	
☒ New Construction/Reconstruction		☐ Reconstruction (3R) ☐ Other:	
Project Number:		☐ NHS ☐ Non NHS	
Functional Classification:	Minor Arterial - Class IIA		
Design Year:		Present ADT:	
Design Year ADT:		Mid Design Period ADT:	
DHV:		Directional Split:	
Percent Trucks:		Equivalent Axle Loading:	
Pavement Design Year:		Design Vehicle:	WB-20, City-Bus
Terrain:	Level	Number of Roadways:	
Design Speed/Posted Speed:	35/30 MPH		
Width of Traveled Way:	11 ft		
Width of Shoulders:	Outside:		Inside: 11 ft TWLTL
Cross Slope:	2% max		
Superelevation Rate:	6%		
Minimum Radius of Curvature:	380 ft		
Minimum K-Value for Vertical Curve:	Sag:		Crest:
Maximum Allowable Grade:	5%		
Minimum Allowable Grade:	0.3%		
Stopping Sight Distance:	250 ft		
Lateral Offset to Obstruction:	In an urban environment the right-of-way is often limited and, in most cases, it is not practical to establish		
Vertical Clearance:	N/A		
Bridge Width:	N/A		
Bridge Structural Capacity:	N/A		
Passing Sight Distance:	N/A		
Surface Treatment:	T/W:		Shoulders:
Side Slope Ratios:	Foreslopes:		Backslopes:
Degree of Access Control:			
Median Treatment:			
Illumination:	High ped levels: Avg Illuminance = 1.7 foot-candles, Uniformity = 3.0, Veiling luminance = 0.3		
Curb Usage and Type:	40-ft radius curb return from edge of pavement or back of curb, 30-ft radius when intersecting collector		
Bicycle Provisions:	Design for Class A riders. See additional bicycle facility sheet.		
Pedestrian Provisions:	11.5 ft min sidewalk abutting street curb		
Misc. Criteria:	See additional below		

Proposed - Designer/Consultant:	_____	Date:	_____
Accepted - Engineering Manager:	_____	Date:	_____
Approved - Preconstruction Engineer:	_____	Date:	_____

Shaded criteria are the *FWHA 2 controlling criteria* for roads with speed limits below 50 mph . For NHS routes only, these criteria must meet the in the Green Book (*AASHTO A Policy on Geometric Design of Highways and Streets*). For all other routes, these criteria must meet minimums established the minimums established in the *Alaska Highway Preconstruction Manual* . Otherwise a Design Exception must be approved by FHWA.

Design Criterion marked with a " # " do not meet minimums and have a Design Exception(s) and/or Design Waiver(s) approved.
See Appendix __ for Design Exception/Design Waiver approval(s) and approved design criteria values.

Pedestrian Facility Illumination:	High ped levels: Avg Horizontal Illuminance = 1.0 foot-candles, Uniformity = 4.0, Vertical luminance = 0.5
Intersection Sight Distance:	
Case	# Additional Lanes Cr ISD
B1 Left turn from minor road	0 ##### ft
B2 Right turn from minor road	0 ##### ft
B3 Crossing maneuver from the minor road	0 ##### ft
D Intersections with traffic signal control	First stopped vehicle should be visible to first stopped vehicle at each approach
E Intersections with all-way stop control	First stopped vehicle should be visible to first stopped vehicle at each approach
F Left turns from the major road	0 ##### ft

Project Name:		Downtown Streets Engineering Study	
☒ New Construction/Reconstruction		☐ Other:	
Project Number:		☐ NHS ☐ Non NHS	
Functional Classification:	Major Arterial - Class IIIC		
Design Year:		Present ADT:	
Design Year ADT:		Mid Design Period ADT:	
DHV:		Directional Split:	
Percent Trucks:		Equivalent Axle Loading:	
Pavement Design Year:		Design Vehicle:	WB-20, City-Bus
Terrain:	Level	Number of Roadways:	
Design Speed/Posted Speed:	55/45 MPH		
Width of Traveled Way:	12 ft		
Width of Shoulders:	Outside:		Inside:
Cross Slope:	2% max		
Superelevation Rate:	6%		
Minimum Radius of Curvature:	1065 ft		
Minimum K-Value for Vertical Curve:	Sag:		Crest:
Maximum Allowable Grade:	4%		
Minimum Allowable Grade:	0.3%		
Stopping Sight Distance:	495 ft		
Lateral Offset to Obstruction:	In an urban environment the right-of-way is often limited and, in most cases, it is not practical to establish		
Vertical Clearance:	N/A		
Bridge Width:	N/A		
Bridge Structural Capacity:	N/A		
Passing Sight Distance:	N/A		
Surface Treatment:	T/W:		Shoulders:
Side Slope Ratios:	Foreslopes:		Backslopes:
Degree of Access Control:			
Median Treatment:			
Illumination:	High ped levels: Avg Illuminance = 1.7 foot-candles, Uniformity = 3.0, Veiling luminance = 0.3		
Curb Usage and Type:	40-ft radius curb return from edge of pavement or back of curb, 30-ft radius when intersecting collector, m		
Bicycle Provisions:	Design for Class A riders. See additional bicycle facility sheet.		
Pedestrian Provisions:	11.5 ft min sidewalk abutting street curb		
Misc. Criteria:	See additional below		

Proposed - Designer/Consultant:	_____	Date:	_____
Accepted - Engineering Manager:	_____	Date:	_____
Approved - Preconstruction Engineer:	_____	Date:	_____

Shaded criteria are the *FWHA 2 controlling criteria* for roads with speed limits below 50 mph . For NHS routes only, these criteria must meet the in the Green Book (*AASHTO A Policy on Geometric Design of Highways and Streets*). For all other routes, these criteria must meet minimums established the minimums established in the *Alaska Highway Preconstruction Manual* . Otherwise a Design Exception must be approved by FHWA.

Design Criterion marked with a " # " do not meet minimums and have a Design Exception(s) and/or Design Waiver(s) approved.
See Appendix __ for Design Exception/Design Waiver approval(s) and approved design criteria values.

Pedestrian Facility Illumination:	High ped levels: Avg Horizontal Illuminance = 1.0 foot-candles, Uniformity = 4.0, Vertical luminance = 0.5
Intersection Sight Distance:	
Case	# Additional Lanes CrISD
B1 Left turn from minor road	0 ##### ft
B2 Right turn from minor road	0 ##### ft
B3 Crossing maneuver from the minor road	0 ##### ft
D Intersections with traffic signal control	First stopped vehicle should be visible to first stopped vehicle at each approach
E Intersections with all-way stop control	First stopped vehicle should be visible to first stopped vehicle at each approach
F Left turns from the major road	0 ##### ft

Roadway Classification:		Local	Collector	Minor Arterial	Major Arterial
Design Speed, MPH:		30/25	45/35	35/30	55/45
Preferred Bikeway Type:	Traffic Volume: 0-6,000vpd	Bike lane (buffer preferred)	Separated bike lane or shared use path	Separated bike lane or shared use path	Separated bike lane or shared use path
	Traffic Volume: >6,000vpd	Separated bike lane or shared use path	Separated bike lane or shared use path	Separated bike lane or shared use path	Separated bike lane or shared use path

Facility	Width, ft	Posted Speed,	Volume, vpd	Roadway setback, ft	
Yield Roadway	12				
Bicycle Boulevard		Max 25	3000 Max		
Buffered Bicycle Lanes	7				
Protected Bicycle Lanes	Lane: 5, Buffer: 3				
Signed Route					
Paved Shoulders	Min 4				
Advisory Shoulder	6, min 4				
Bicycle Lane	6 preferred, min 4				
Sidepath	8-12, min 8 in constrained conditions			min 5 or barrier	

Appendix C: NHS Context and Applications

To: Kinney Engineering

From: Alta Planning + Design

Date: June 12, 2024

Re: National Highway System Context & Applications | Anchorage Downtown Streets Engineering Study

Introduction

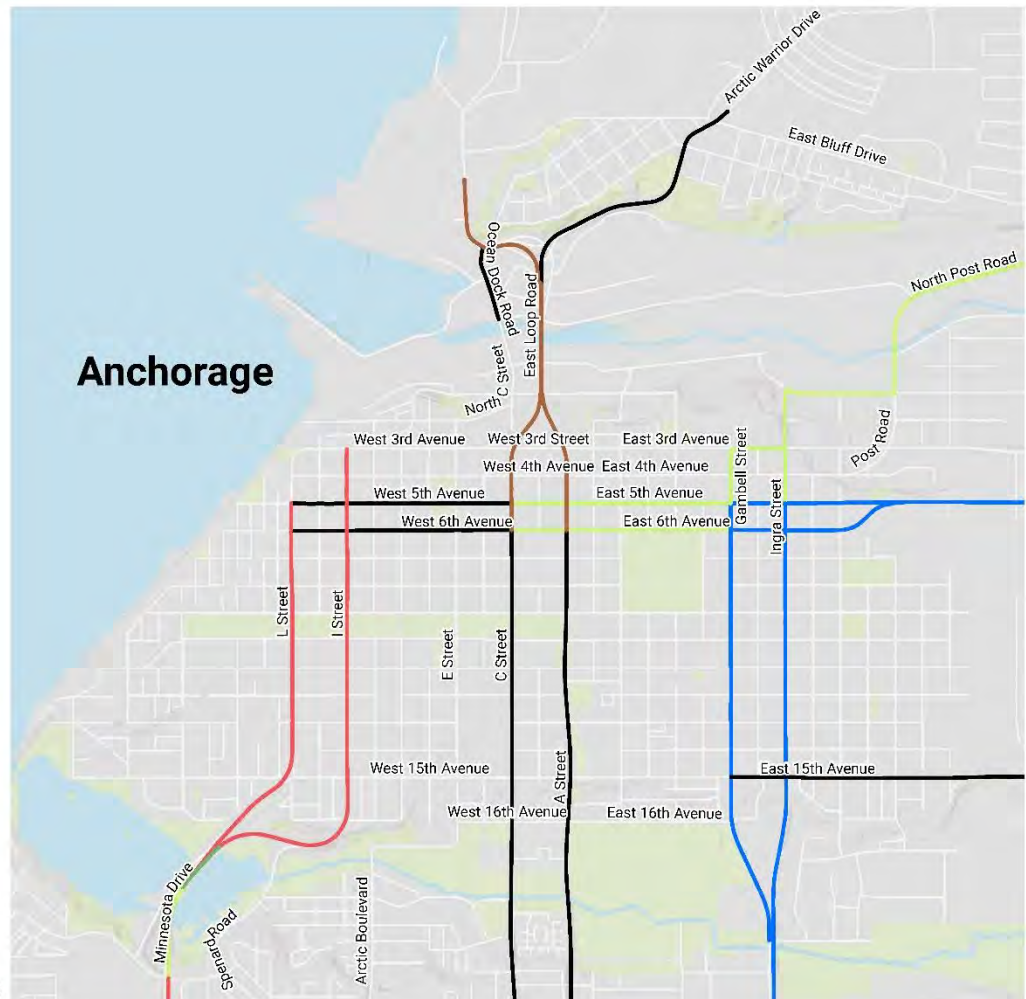
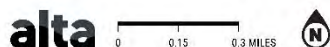
The National Highway System (NHS) designations were developed in the 1990s and include the Interstate Highway System and other roads important to the economy, mobility, and national defense. Many NHS-designated roads travel through the center of downtowns in both urban and rural areas. Some of these roads also serve as crucial spines for the delivery of goods. Several National Highway System (NHS) facilities travel through downtown Anchorage, as shown in the map below.

NATIONAL HIGHWAY SYSTEM CONTEXT

DOWNTOWN STREETS ENGINEERING STUDY

NATIONAL HIGHWAY SYSTEM DESIGNATION

- Interstate
- Non-Interstate STRAHNET Route
- Major STRAHNET Connector
- Other NHS
- Intermodal Connector
- Intermodal/STRAHNET Connector
- MAP-21 Principal Arterial



NHS classifications historically have been oriented towards efficient and safe travel of cars and trucks. They did not tend to foster street environments that are safe and comfortable for all users, including pedestrians and bicyclists. However, recent changes in the way that federal rules are applied have acknowledged and prioritized the importance of the aesthetic, historic, and community context of NHS roads. Recent amendments to federal rules have increased flexibility and enabled state DOTs greater authority in determining how to meet federal standards.

This is great news for Anchorage. The changes in NHS rules provide options for the Municipality of Anchorage and the Alaska Department of Transportation and Public Facilities (AKDOT&PF) to collaborate on the development of standards for Anchorage’s downtown streets.



Sixth Avenue in downtown Anchorage carries through traffic from West to East.

Coordination

This work builds upon prior plans and work to develop downtown including *Our Downtown*, the 2020 *AMATS Non-Motorized Plan*, the *AGNEW::BECK* study, the *Seward to Glenn Connection Planning and Environmental Linkages (PEL) Study*, the 2007 *Comprehensive Plan*, the 2020 *Land Use Plan*, the 1996 *Areawide Trails Plan*, and the *Anchorage Design Criteria Manual*. *Our Downtown* (2021) stated that 22% of residents of the downtown core did not own a car at the time the survey was administered. This makes providing comfortable multimodal transportation options in downtown Anchorage especially important.

Anchorage Bicycle Network

The *AMATS Non-Motorized Plan* (2020) provided a recommended network for pedestrians and bicyclists that are located partly on each of the downtown NHS streets with the highest average annual daily traffic (AADT) in the downtown area. Since effective bicycle networks serve the majority of bicyclists, who are typically “interested but concerned” and do not feel comfortable riding amidst vehicle traffic, Anchorage will need to find ways to develop the low stress bicycle facilities that the *AMATS Non-Motorized Plan* recommends on some downtown NHS roads.

Context and Evaluation of NHS Designations

The NHS designations were developed in the 1990s and include the Interstate Highway System and other roads important to mobility, national defense, and the economy. NHS roads can be owned and maintained by states or local governments. The NHS is governed by United States Code and has been impacted by legislation in the last 10 years.

The section of United States Code that governs the NHS is the US Code of Federal Regulations (CFR), Title 23. Title 23 NHS standards specify that projects shall be safe and adequate to accommodate types and volumes of traffic for the following 20-year period. Section 625 designates standards, policies, and specifications.¹

CFR Title 23, Section 109 sets design criteria that are approved by the USDOT Secretary in cooperation with state DOTs. Projects using federal funds are also required by Section 109 to consider aesthetic values, community cohesion, and cost savings. CFR Title 23 Part 658 provides guidance related to freight that operates without permits based on size and weight; appendices A, B, and C are relevant.²

In 2012, Moving Ahead for Progress in the 21st Century (“MAP-21”) significantly expanded the NHS by about 60,000 miles. This addition to the NHS is referred to as the “expanded” or “enhanced” NHS. The Federal Highway Administration (FHWA) has provided guidance for states to request to remove these new NHS designations if desired, noting that there is no deadline for these requests.³

A few years later, the 2015 Fixing America’s Surface Transportation Act (FAST Act) amended the above-mentioned CFR Title 23, Section 109 to provide additional flexibility and direction related to NHS roads considering community context. Section 1404 addresses design flexibility, allowing a local government to seek approval from the State DOT to use a roadway design that is locally preferred on an NHS facility.⁴

In 2016, FHWA provided even more flexibility by stating that for projects on lower-speed NHS roads with design speeds of less than 50 mph, just two of the ten controlling criteria (design speed and design loading structural capacity) are subject to FHWA design exception approval. This improves overall design flexibility of NHS roads.⁵

Most recently, Title 23, Section 625 was amended in 2022 to specify that the then-newly revised AASHTO 2018 Green Book design standards apply to NHS facilities. However, relevant state (or local guidance depending on road ownership) takes precedence. The background of Section 625 also notes that “State DOTs and local agencies should select design values based on factors including the context of the facility, needs of all project users, safety, mobility, human and natural environmental impacts, and project costs.”⁶

¹ <https://www.fhwa.dot.gov/design/standards/231116.cfm>

² <https://uscode.house.gov/view.xhtml?req=%22federal-aid+highway+act%22&f=treesort&fq=true&num=1&hl=true&edition=prelim&granuleId=USC-prelim-title23-section103>

³ https://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/section1122.cfm

⁴ <https://www.fhwa.dot.gov/design/standards/231116.cfm>

⁵ <https://www.fhwa.dot.gov/design/standards/160505.pdf>

⁶ <https://www.govinfo.gov/content/pkg/FR-2022-01-03/pdf/2021-28236.pdf>

Classifications Review

Alta's analysis included a review of functional classifications and traffic counts referencing AKDOT&PF classification maps and FHWA NHS classification maps. These are summarized in the charts below and the map at the beginning of this document.

Classifications, East-West NHS Network					
	<i>L Street to I Street</i>	<i>I Street to C Street</i>	<i>C Street to A Street</i>	<i>A Street to Gambell St.</i>	<i>Gambell Street to Ingra Street and Karluk Street</i>
5th Avenue – AKDOT&PF Functional Classification	Minor Arterial	Minor Arterial	Principal Arterial	Principal Arterial	Interstate
5th Avenue – NHS Classification	MAP-21 Principal Arterial		Major STRAHNET Connector		Interstate
6th Avenue – AKDOT&PF Functional Classification	Minor Arterial	Minor Arterial	Minor Arterial	Principal Arterial	Interstate
6th Avenue – NHS Classification	MAP-21 Principal Arterial		Major STRAHNET Connector		Interstate

North-South Network, Classifications						
	<i>L Street</i>	<i>I Street</i>	<i>C Street</i>	<i>A Street</i>	<i>Gambell Street</i>	<i>Ingra Street</i>
3rd Avenue to 5th Avenue – AKDOT&PF Functional Classification	Major Collector/ Minor Collector	Major Collector	Principal Arterial	Principal Arterial	Major Collector	Major Collector
3rd Ave. to 5th Avenue– NHS Classification	Not NHS	“Other” NHS	Intermodal/ STRAHNET Connector	Intermodal/ STRAHNET Connector	Major STRAHNET Connector	Major STRAHNET Connector
5th Avenue to 6th Avenue – AKDOT&PF Functional Classification	Principal Arterial	Major Collector	Principal Arterial	Principal Arterial	Interstate	Interstate
5th Avenue to 6th Avenue – NHS Classification	“Other” NHS	“Other” NHS	Intermodal/ STRAHNET Connector	Intermodal/ STRAHNET Connector	Interstate	Interstate
6th Avenue to 15th Avenue – AKDOT&PF Functional Classification	Principal Arterial	Principal Arterial	Principal Arterial	Principal Arterial	Interstate	Interstate
6th Avenue to 15th Avenue – NHS Classification	“Other” NHS	“Other” NHS	MAP-21 Principal Arterial	MAP-21 Principal Arterial	Interstate	Interstate

Alta also reviewed Average Annual Daily Traffic (AADT) in downtown Anchorage using AKDOT&PF data.⁷ Traffic counts are one factor that can influence the opportunity for reallocating existing vehicle road space to other modes, which may be required if multimodal infrastructure is implemented on NHS roads in downtown Anchorage.

Traffic counts on Anchorage's downtown streets are as follow:

- **1,000 AADT or less:** G Street, Eagle Street, Medfra Street, 7th Avenue, and 8th Avenue.
- **2,000 to 4,000 AADT:** 4th Avenue and 9th Avenue, between L Street and Ingra Street.
- **8,000 to 10,000 AADT:** 5th Avenue and 6th Avenue, between L Street and C Street.
- **10,000 to 15,000 AADT:** 5th Avenue and 6th Avenue, between C Street and Cordova Street.
- **13,000 to 25,000:** Seward Highway connection (5th Avenue and 6th Avenue east of Gambell Street; Gambell and Ingra Streets south of 6th Avenue).

Considering measurements like AADT and Level of Service (LOS) on the NHS, a 2016 FHWA memo (updated in 2018) clarified that "FHWA does not have regulations or policies that require specific minimum LOS values for projects on the NHS," and that "use of the Highway Capacity Manual for the operational analysis of projects on the NHS is not required if another traffic analysis method is determined to be more appropriate to fully identify and evaluate the performance and impacts of the proposed project alternatives."⁸ This means that even on NHS roads with relatively high AADT, the FHWA does not specify minimum LOS values for NHS roads and could allow a Multimodal Level of Service (MMLOS) to be used in place of traditional LOS measures.

Multimodal NHS Project Case Studies

In many states, DOTs are partnering with local governments to provide infrastructure to slow traffic, improve sight distance, and increase safe and comfortable pedestrian and bicycle access on NHS roads. Alta researched bicycle and pedestrian infrastructure projects that have been implemented on several NHS roads.

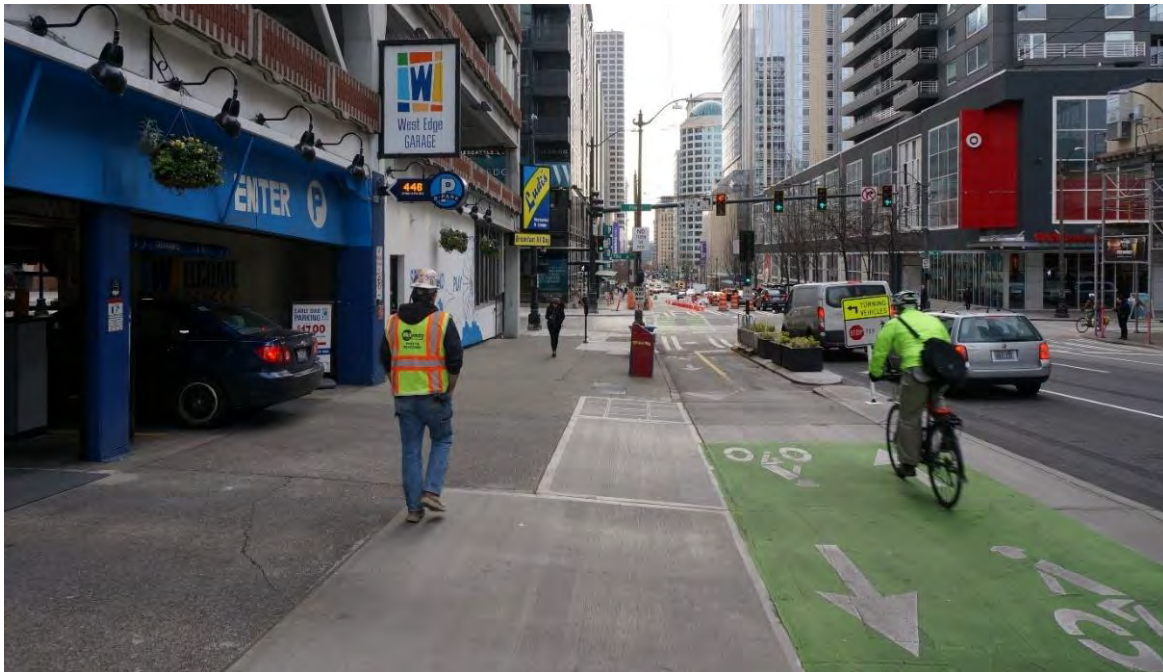
Second Avenue Bikeway (Seattle, Washington)

The City of Seattle completed construction of a protected bicycle lane on Second Avenue in early 2018. Second Avenue is an NHS facility designated as a MAP-21 Principal Arterial. The project provided a route designed to be comfortable for people of all ages and abilities. The context of Second Avenue is that it is a downward-sloping road through an area of downtown that is densely developed with hotels and office buildings. The bikeway provides a new north-south connection and increased connectivity to the bicycle network in Seattle.

⁷ Traffic counts from the Alaska Traffic Monitoring Program have slightly higher vehicle counts on arterials.

⁸ FHWA Informational Memo: Level of Service on the National Highway System.

<https://www.fhwa.dot.gov/design/standards/160506.pdf>



Second Avenue bikeway improvements (Seattle, WA).

Downtown Pedestrian Infrastructure (Waterbury, Connecticut)

Waterbury, Connecticut installed a safety project on Grand Street, a MAP-21 Principal Arterial that travels through the center of the City's downtown. The City installed a demonstration project built using temporary, low-cost materials to shorten crossing distances, narrow travel lanes to 11.5', and provide no-parking areas to improve site distances at corners. The Waterbury project, especially early outreach to community members and businesses, could be a model for Anchorage. The project is found to have decreased vehicle speeds by 11%. Early community engagement was an essential part of project success, including work with businesses in relation to parking removal.

Marin Boulevard, Hoboken and Jersey City, New Jersey

The City of Hoboken completed the construction of a bikeway in 2023 that provides a low-stress north-south connection between Hoboken and Jersey City on Marin Boulevard, an NHS Intermodal Connector. This provides a connection to a preexisting bikeway constructed in 2010 on another NHS Intermodal Connector. The Marin Boulevard protected bikeway runs through a dense urban environment and includes high-visibility traffic-separated curbs, and flexible bollards. This effort was largely influenced by the City's Vision Zero work. The Marin Boulevard project provides a new connection between Hoboken and Jersey City to the South, thereby providing a comfortable biking option.

Other Examples

In addition to the preceding case studies, there are many examples of NHS roads that have been altered to accommodate multiple modes safely and comfortably. The table below provides a list of examples of NHS roads with multimodal facilities. The table is far from exhaustive. However, it provides a diverse set of examples from across the country that illustrate the multimodal possibilities and design flexibility available on the NHS.

The “Infrastructure” columns are marked with checkmarks where there are notable accommodations for that mode. While the table may not capture all types of multimodal infrastructure, the infrastructure examined generally includes:

- **Bicycle** infrastructure such as bike lanes, buffered bike lanes, or separated bike lanes.
- **Transit** infrastructure such as bus/streetcar bulbs, dedicated transit lanes, or boarding islands.
- **Pedestrian** infrastructure such as curb extensions, enhanced crossings, or median islands.

Multimodal NHS Roads					
Roadway Information			Infrastructure		
<i>Jurisdiction</i>	<i>Street</i>	<i>NHS Designation(s)</i>	<i>Bicycle</i>	<i>Transit</i>	<i>Pedestrian</i>
Albany, NY	Delaware Ave	MAP-21 Principal Arterial			✓
Albany, NY	Madison Ave	MAP-21 Principal Arterial	✓		
Asheville, NC	Broadway St	MAP-21 Principal Arterial			✓
Bellingham, WA	E Chestnut St	MAP-21 Principal Arterial	✓		✓
Bellingham, WA	W Chestnut St	Intermodal Connector	✓		✓
Bellingham, WA	Meridian St	Intermodal Connector & Other NHS			✓
Baltimore, MD	W Centre St	MAP-21 Principal Arterial	✓		
Baltimore, MD	W 28th St	MAP-21 Principal Arterial	✓		✓
Baltimore, MD	E Pratt St	Other NHS	✓	✓	
Duluth, MN	W Superior St	MAP-21 Principal Arterial		✓	✓
Milwaukee, WI	E North Ave	MAP-21 Principal Arterial	✓		
Milwaukee, WI	N Farwell Ave / N Prospect Ave	Other NHS	✓		
Milwaukee, WI	N Broadway	Intermodal Connector		✓	
Missoula, MT	S 6th St	MAP-21 Principal Arterial	✓		✓
Missoula, MT	Brooks St	MAP-21 Principal Arterial	✓		
Plattsburgh, NY	City Hall Pl	MAP-21 Principal Arterial	✓		✓
Pittsburgh, PA	Stanwix St	MAP-21 Principal Arterial	✓		✓
Pittsburgh, PA	Liberty Ave	MAP-21 Principal Arterial		✓	✓
Portland, ME	Bedford Ave	MAP-21 Principal Arterial	✓		✓
Portland, OR	NW Broadway	MAP-21 Principal Arterial & Intermodal Connector	✓		
Portland, OR	NW 6th Ave	Intermodal Connector		✓	✓
Portland, OR	NE Grand Ave	MAP-21 Principal Arterial		✓	✓
Portland, OR	NE Martin Luther King Blvd	MAP-21 Principal Arterial		✓	✓

Multimodal NHS Roads					
Roadway Information			Infrastructure		
<i>Jurisdiction</i>	<i>Street</i>	<i>NHS Designation(s)</i>	<i>Bicycle</i>	<i>Transit</i>	<i>Pedestrian</i>
Rochester, NY	E Main St	MAP-21 Principal Arterial & Intermodal Connector	✓		✓
Seattle, WA	9th Ave N	MAP-21 Principal Arterial	✓		
Seattle, WA	Westlake Ave N	MAP-21 Principal Arterial		✓	
Seattle, WA	Roy St	Other NHS	✓		
Seattle, WA	S Jackson St	MAP-21 Principal Arterial		✓	✓
Spokane, WA	W Riverside Ave	Intermodal Connector		✓	✓
Tampa, FL	E Jackson St	MAP-21 Principal Arterial	✓		✓

Smart Growth America Demonstration Projects

Smart Growth America developed a program to train local agencies and state DOTs to collaborate to address safety on state-owned roads. Cohorts worked to implement quick-build projects. Results on these projects came from “strong leadership and clear intent from state DOT decision makers,” including all parties working together in the face of challenges. Work in Soldotna, AK clarified that for success, AKDOT&PF will need to coordinate internally, and provide clear decision-making responsibility to one or two staff members, and communicate the names of those staff members to all parties. Recommendations are provided here: <https://smartgrowthamerica.org/soldotna-ak-CLSA/>

Next Steps

There are a couple of options for the Municipality of Anchorage and AKDOT&PF to foster safe, comfortable, and attractive infrastructure on NHS facilities in downtown Anchorage.

1. Work within existing classifications to implement pedestrian and bicycle infrastructure.

For NHS facilities owned by AKDOT&PF, apply existing AKDOT&PF design guidance to make desired multimodal improvements. If needed and justified, apply for design exceptions from FHWA for the ability to use design standards that differ from AKDOT&PF standards, such as the National Association of City Transportation Officials (NACTO) Design Guide or other standards. AKDOT&PF would need to lead any design exception applications.

For NHS facilities owned by the Municipality of Anchorage, desired local standards or the 2018 AASHTO Green Book may be used in NHS roadway design provided that the project does not include federal funds. For projects without federal funds, but that are on Anchorage-owned rights-of-way, the Municipality of Anchorage may use its own design standards or standards adopted by reference, such as those published by the NACTO.

However, when an NHS project includes federal funds, AKDOT&PF standards preempt local design standards. The order of design guidance precedence is listed below for different funding scenarios.

Order of design guidance precedence **with** federal funds (when the higher number standard no longer applies, the municipality can apply the lower number):

1. Alaska Preconstruction Design Manual
2. 2018 AASHTO Green Book
3. Municipality of Anchorage standards

Order of design guidance precedence **without** federal funds:

1. Municipality of Anchorage standards
2. Alaska Preconstruction Design Manual OR 2018 AASHTO Green Book

2. Reclassify or remove NHS designations from select downtown streets.

If the desired roadway design cannot be achieved within the constraints of existing NHS designations, initiate a collaborative process to reclassify or remove NHS designations. This option is complex, requires input from multiple interested and knowledgeable parties, and ultimately requires AKDOT&PF concurrence. The USDOT document *Highway Functional Classification Concepts, Criteria, and Procedures (2023)*⁹ offers a process for changing roadway classifications.

If this option is pursued, outcomes may be better if the Municipality of Anchorage owns the right-of-way or is willing to engage in a process to acquire the right-of-way. This is because the removal of an NHS designation does not remove state standards. State standards will still apply on state facilities because removing a highway from the NHS does not change state ownership. The state standards would therefore apply to state facilities despite the removal of NHS designations. Those standards could then impede the installation of some types of facilities to serve bicyclists and pedestrians unless the state obtains a design exception.

Removal of NHS designation on a facility will also result in most of those facilities becoming ineligible for funding under the National Highway Performance Program

(<https://www.fhwa.dot.gov/specialfunding/nhpp/>). The NHPP provides federal funding for NHS the construction and improvement of NHS facilities and supports state performance targets. If the Municipality pursues removal of an NHS designation and USDOT removes the NHS designation from a facility, the option for that facility to be federally funded under the NHPP will likely become unavailable.

In any of the above cases, the Municipality must proactively develop partnerships and support both internally and at AKDOT&PF surrounding the design of NHS roads in downtown Anchorage. This may include:

- Gaining a comprehensive understanding of AKDOT&PF processes.
- Referring to other state DOTs and cities that have implemented successful multimodal NHS projects to find guidance.
- Clarifying the line of internal AKDOT&PF decision-making to provide clear direction, ensure AKDOT&PF staff are well-versed in the reasons that downtown facilities be treated differently, ensure that AKDOT&PF staff

⁹ <https://www.fhwa.dot.gov/planning/processes/statewide/related/hwy-functional-classification-2023.pdf> (pg. 35)

understand the adopted policy guidance documents which call for different road designs downtown, and ensure staff time is increased to respond to projects with complex design considerations.

- Develop clear channels of communication and anticipate potential constraints.
- Address staff reservations that are related to design.
- Educate staff on the possibilities for design flexibility.

Appendix D: Precedent Document

APPENDIX:

PRECEDENT GUIDANCE

version 2024-04-22



AI Image created with "anchorage urban street, 8' wide sidewalk, people walking on sidewalk, 8' wide bike lane, bikes on bike lane, good traffic flow"



Overview

1



Precedent Assessment

“Design for winter, and summer will take care of itself.”

In the precedent review, the initial focus was on finding winter city communities that share similarities to Anchorage in terms of snow. Their experience and available resources best apply to Anchorage, as they were created under similar conditions to ours. Further development of this Appendix will add sections that look to other locations to examine additional options for our use, including the potential need for their transformation to meet our unique context.

Climate

Precedent areas will ideally have similar single-snowfall typical maximums, allowing direct comparison of how cities and residents manage, remove, and are prepared for snow. Precedents should also have a similar potential for prolonged snowfall or multiple storm events that can illustrate outcomes when a location’s management strategies are stressed. Lastly, typical temperatures should be similar due to the impact of thaw/freeze on the ability to drive over snow and difficulty in removal. The winter of 2023-24 in Anchorage exhibited how thaw/freeze can make streets unnavigable except at low speeds. In this review of precedent, we identify that Anchorage’s climate does present unique challenges in the face of this thaw/freeze potential.

Data and Economy

The areas we have used for precedent vary in population. The precedents each include population, area, density, gross domestic product, and other information as relevant. This information can be used to understand better each location’s context and temper its level of direct relevance. A key metric within this is population density and the ability of locations to maintain their infrastructure and manage snow.

Culture and Advantage

Review of these precedent areas needs to recognize how well-ingrained attitudes may be. There are locations where interacting with winter is a part of life and other locations where winter is something to be controlled as much as possible. An essential recognition within this is that some residents may be at a disadvantage in winter, such as not being able to afford warm clothing or a winter-friendly vehicle. These residents are the most impacted when there are inadequate transit or non-motorized facilities or snow affects the function of these facilities.

Transportation Metrics

Precedent locations need to move traffic. When traffic flows are high, adjacent neighborhoods are impacted significantly. Placemaking and neighborhood health require a high level of permeability for movement in all directions. When a street becomes convenient to motorists as a transportation corridor, it becomes impermeable. When placemaking and livability are reemphasized, motorist convenience is reduced. A goal in the planning we’ve reviewed is to place a higher emphasis on livability and broader ideas for moving people than just increasing vehicle capacity.

Anchorage, Alaska

Project Area Resources

The following are a selection of existing resources that provide requirements and guidance for the project area, in addition to extensive background information that provides essential context for this project to implement existing planning and community goals.

Our Downtown: Anchorage Downtown District Plan 2021

Our Downtown was a multi-year, multi-step project to update and implement the Anchorage Downtown Comprehensive Plan, including amending its zoning regulations, in order to meet Downtown's contemporary needs for growth and revitalization.

Link: [Our Downtown 2021](#)

2021 AMATS Non-Motorized Plan

The Non-Motorized Plan (NMP) provides the vision for a network of facilities for non-motorized travel within the Anchorage Metropolitan Area Transportation Solutions (AMATS) Planning Area to help residents travel safely and efficiently without the need of a motor vehicle. The NMP merges planning efforts for on-street bicycle facilities, pedestrian sidewalks, and non-motorized shared-use pathway.

Link: [2021 AMATS Non-Motorized Plan](#)

Roger Brooks Downtown Assessment

Anchorage was assessed in 2022, to provide an unbiased overview of Anchorage from the visitor's perspective. This included local marketing efforts, signage, attractions, critical mass, retail mix, ease of getting around, customer service, visitor amenities (parking and restrooms), resident amenities and quality of life, overall appeal, and the community's ability to attract overnight visitors.

Link: [Presentation Video](#)

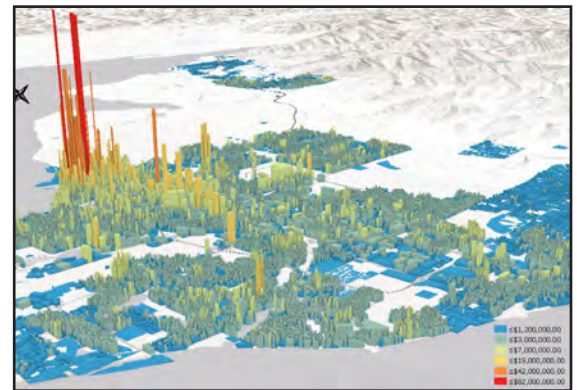
Link: [Presentation Slideshow](#)

Link: [Downtown Assessment Report](#)

Seward-to-Glenn PEL

This current study will identify and evaluate options to improve safety, livability, regional travel between the Seward and Glenn Highways, and local travel within the surrounding neighborhoods. Currently, the two controlled access freeways are connected through the study area by slower speed arterial roads. The project will also identify ways to improve access between the Port of Alaska and the highway network.

Link: [Seward-to-Glenn PEL Project Website](#)



Taxable Value Per Acre (MOA Planning)

Location Characteristics:

• Population:	291,247
• Area (sq.mi):	78.8
• Density (#/sq.mi):	3,696
• Year Est'd: 1	920
• Elev (ft):	102
• Latitude:	61°13'00"N
• GDP:	\$27.809 billion
• Climate:	Subarctic

Fairview Neighborhood Plan

The Plan is intended to serve as a tool to aid in the orderly growth and development of the Fairview neighborhood. It guides future public and private improvements in the area, provides a base of information for neighboring entities, is a tool to foster continued health and vitality of the neighborhood, and guides proposed redevelopment projects.

Link: [2014 Fairview Neighborhood Plan](#)



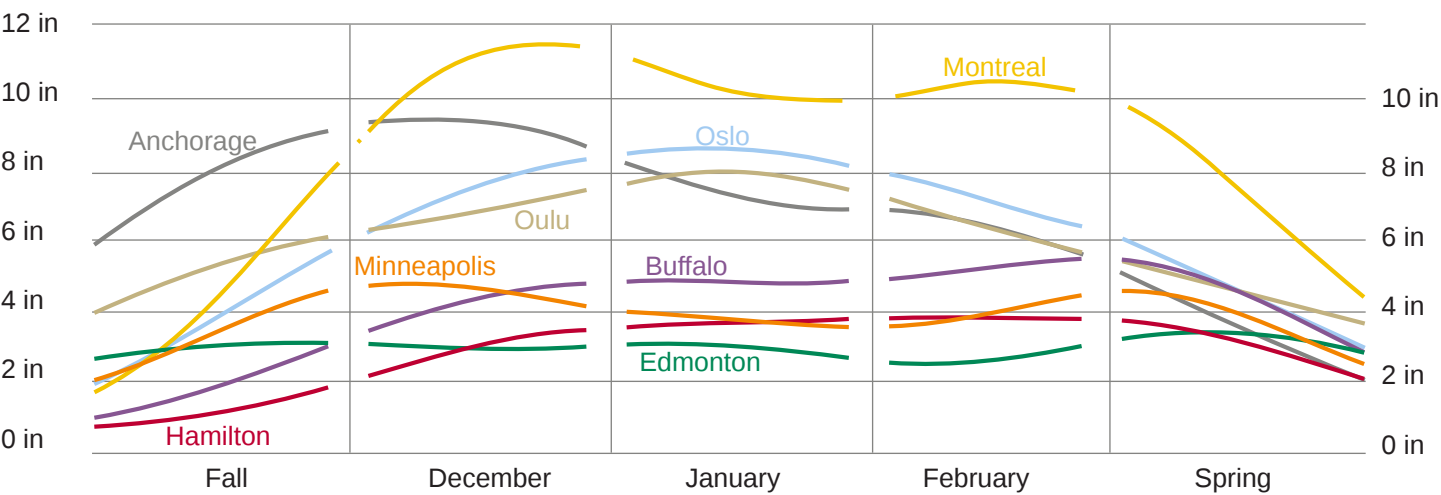
Precedent

2

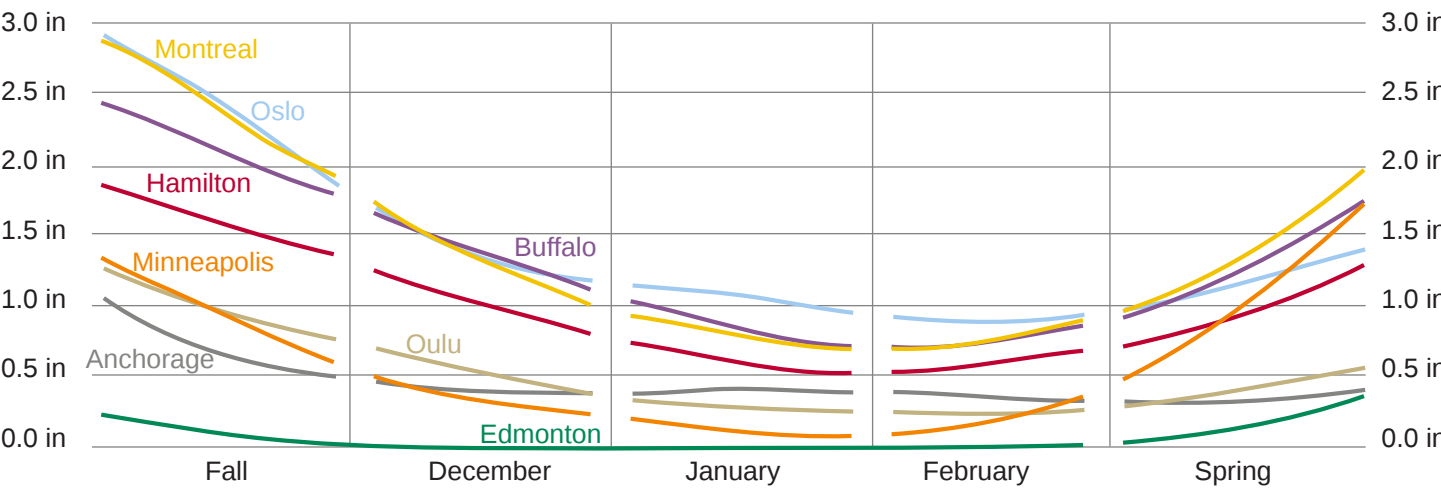


Precedent Winter Comparisons

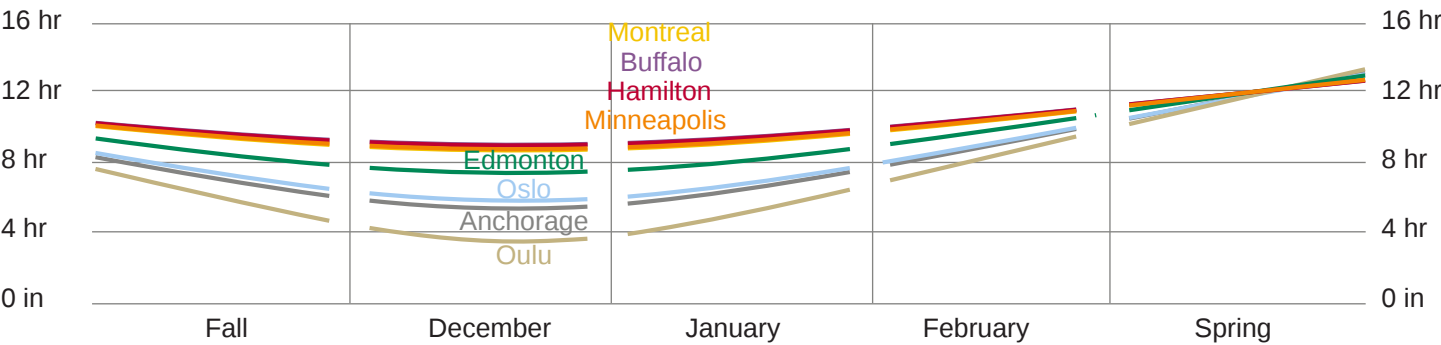
Average Monthly Snowfall in the Winter



Average Monthly Rainfall in the Winter



Average Monthly Sunshine in the Winter



Montreal, Quebec, Canada

Resources

Reinvent Montreal Transportation plan

Montreal's 2008 Réinventer Montréal Plan de transport refers to building streets "plus conviviales," or more friendly, which is the French term for Complete Streets. Translated quote: "In the context of an anticipated increase in the number of cyclists and pedestrians, it is essential to work to make the streets more welcoming and more user-friendly, where each user can travel safely."

Link: [Transportation Plan Website](#)

Green Neighbourhoods: Guide to sustainable street planning in Montreal

The City of Montreal's 2013 "Quartiers Verts: Guide d'aménagement durable des rues de Montréal" includes numerous references to "Rues Conviviales" (Complete Streets). The guide is intended as a resource for neighbourhoods to use in transitioning to a sustainable public realm and to serve as a means of standardizing Complete Streets designs in Montreal (p. VI).

The guide promotes Complete Streets as a means of ensuring streets are designed with all users and modes in mind, with a particular emphasis on accommodating seniors, children and disabled people, and that street design promotes cycling, walking and transit use. The guide includes a wide variety of Complete Streets examples, neighbourhood maps, and design strategies for traffic calming, street greening, and prioritizing walking, cycling and transit.

Link: [Guide to Sustainable Street Planning in Montreal \(French\)](#)

2019 Case Studies

Fourteen case studies were conducted by Montreal Urban Ecology Centre's analyzing Complete Street transformations across the province of Quebec. At least six were within Montreal. Note that the link below provides access to case studies across Canada.

Link: [Complete Streets for Canada Case Study Website](#)



Old Montreal (www.ruta-patagonia.com/Tour-Detalle)

Location Characteristics:

▪ Population:	1,791,508
▪ Area (sq.mi):	141.2
▪ Density (#/sq.mi):	12,691
▪ Year Est'd:	1642
▪ Elev (ft):	101.7
▪ Latitude:	45°30'32"N
▪ GDP:	\$221.9 billion CDN

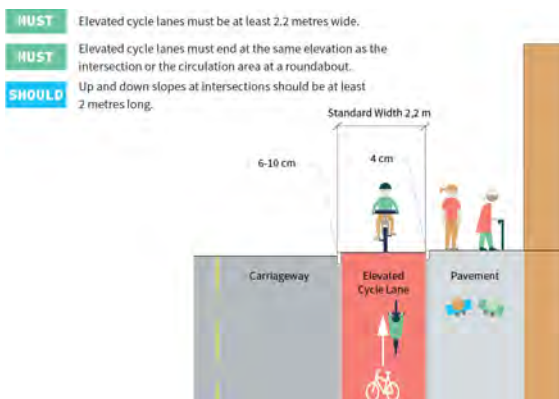
Oslo, Norway



Oslo (boomers-daily.com/2022/02/19/winter-walks-oslo-capital-of-norway-4k/)

Location Characteristics:

Population:	717,710
Area (sq.mi):	164.5
Density (#/sq.mi):	4,360
Year Est'd:	1048
Elev (ft):	357.6
Latitude:	59°54'48"N
GDP:	\$70.97 billion Euro



Design direction for elevated cycle lanes

Resources

Car-free Livability Programme

Oslo's Car-free Livability Programme came about after a public survey revealed gaps in service for pedestrians and cyclists along with a public desire for a more pleasant urban environment. The Programme focused small pedestrian and bicycle infrastructure improvements in Ring 1, the central downtown area. The goal of the Programme was to place people highest on the list of transportation priorities over cars. The Programme also included art and landscaping as enhancements for "livable" streetscapes. Over the course of the program, the city tested out several different pilot projects for functionality and made the successful versions permanent. The city also slowly and systematically removed street parking and replaced it with bike and pedestrian facilities, while maintaining off-street parking lots and parking structures.

The approach to change was slow and intentional and focused on a continuous feedback loop from the public.

Link: [Car-Free Livability Program](#)

'Action Plan for Increased City Life 2018-2027'

In a planning effort directly Linked to the Car-free Livability Programme but intended to apply more widely across the city, the Action Plan for Increased City Life set about defining what the citizens of Oslo found valuable about urban life (urban economics, art and culture, mobility, people, architecture, innovation, and nature) and then set strategies for enhancing those qualities. Note that, despite the sub-arctic climate, the word "snö" does not appear at all in the document, though winter is mentioned several times as a limiting factor for high quality urban life.

Link: [Action Plan for Increased City Life 2018-2027](#)

Street Design Manual for Oslo

The Street Design Manual for Oslo was a direct result of the proceeding Car-free 'Livability Programme; and the Action Plan for Increased City Life 2018-2027.' Commissioned by the municipal government of Oslo, and led by landscape architects, the Street Design Manual is a mandatory planning and design handbook that is applicable to all street projects in Oslo, whether it is a new street or a street renovation. The manual firmly places priority on pedestrian and active transportation modes over vehicular circulation and includes green infrastructure solutions for stormwater runoff.

Link: [Street Design Manual for Oslo](#)

Oulo, Finland

Resources

Programme for the Promotion of Walking and Cycling

As part of a strategy to promote a fiscally conservative approach to transportation planning that reduced government spending by reducing traffic fatalities and carbon emissions and improving public health, the Finnish government published the Programme for the Promotion of Walking and Cycling in 2018. By promoting walking and cycling over use of personal vehicles for short trips, they anticipated that they would “achieve a savings for society in the billions of euros.”

The program includes strategies for the development of infrastructure and land use that promotes walking and cycling along with guidelines for legislation and identification of responsible parties. Guidelines for implementation focus on providing high-quality networks of protected cycling and walking routes that are made up of “mixed traffic,” or Complete Streets, in transportation corridors with lower speeds (<30km/hr) and separated pathways for higher speed corridors.

Winter Maintenance

Several Finnish cities have made improvements to their transportation corridors to promote walking and cycling based on the Programme, but Oulu has garnered international attention for their unique approach to winter biking. Oulu’s success as a winter city that promotes a complete streets approach to transportation planning is rooted in its maintenance priorities. Bike routes and sidewalks are cleared of snow first and vehicular lanes last. Recognizing that even a few inches of snow is enough to present challenges for bikes and elderly pedestrians or people who use mobility devices, the sidewalks and bike paths are well graded and smooth year-round.

Link: [Winter Cycling in Oulu](#)



Oulu winter cycling innovations: signs and signals projected onto snow (oulu.com/en/living/mobility/cycling/)

Location Characteristics:

▪ Population:	212,738
▪ Area (sq.mi):	82.7
▪ Density (#/sq.mi):	2,572
▪ Year Est'd:	1605
▪ Elev (ft):	49.2
▪ Latitude:	65°00'51"N
▪ GDP:	N/A



Pedestrian path of 8'4", cycleway of 13'4", and total width of 21'8". Since the total width is without curbs to allow the snowplough to treat the entire surface. Winter clearing produces a level surface of snow.

Buffalo, New York



Rochester, NY. (www.strongtowns.org/journal/2020/2/25/the-trouble-with-bike-infrastructure-in-snowy-cities)

Location Characteristics:

• Population:	276,486
• Area (sq.mi):	40.38
• Density (#/sq.mi):	6,846
• Year Est'd:	1832
• Elev (ft):	600.4
• Latitude:	42°53'11"N
• GDP:	\$84.673 billion



Union Street Cycle Track in Rochester. A resource for urban cyclists, but during five months of winter, it's covered with snow.

Resources

Buffalo Bicycle Master Plan Update

The city of Buffalo's complete streets program focuses primarily on bike infrastructure. The Buffalo Bicycle Master Plan Update from 2016 serves as its main guide for complete street construction and renovations. It is not as holistic an approach as some of the other guiding documents discussed here but it is a good resource for bike infrastructure design. The Master Plan includes guidelines on the planning and implementation of bike infrastructure and an extensive section of design guidelines for different types of bike facilities. While it may lack the information on pedestrian or public transit improvements that is included in other complete streets guides, the Buffalo Bicycle Master Plan was selected for inclusion in this study because of its thorough discussion of snow clearing operations for non-motorized transportation facilities in the Appendix E - Winter Bikeway Maintenance section.

Link: [Buffalo Bicycle Master Plan](#)

Appendix E - Winter Bikeway Maintenance

Appendix E consists of a white paper that examines best practices for winter bikeway maintenance based on case studies gathered from cities with similar climates. The paper includes examples of different strategies for snow clearing and winter maintenance from places like Salt Lake City, Oulu, Chicago, Minneapolis, and Vienna, all of which have cold climates with lots of snow.

Topics include snow-clearing, de-icing, traditional practices vs. new innovations like application of hot sand, and clearing prioritizations. Like the Oulu guide, the authors of Appendix E recommend prioritizing the clearing of bikeways as soon as possible after snowfall and clearing them down to the pavement instead of grooming them. 'Primary bikeways should be cleared first, providing the best access to the greatest number of people possible following a heavy storm event.'

Link: [Buffalo Bicycle Master Plan - Appendix E](#)

Minneapolis, Minnesota

Resources

Minneapolis 2040: Policy 17

“The City’s Complete Street Policy creates a modal hierarchy in the public right of way. The Policy prioritizes walking and pedestrians first, followed by bicycling and taking transit, and lastly driving motor vehicles. This policy framework guides all transportation-related decisions and encompasses all elements in the public right of way. The Complete Streets Policy vision is to improve the environment, the health and safety of residents, and support and strengthen the local economy.”

City of Minneapolis Street Design Guide

The City of Minneapolis Street Design Guide requires a complete street approach for all road projects. It defines street typologies and makes specific design recommendations for each typology that address all modes of travel.

Interestingly, the typical sections for roads and lanes in the design guide are much narrower than typical Anchorage construction. Recommendations for streets that average 5,000 to 20,000 ADT are only required to have one vehicle travel lane in either direction and the lanes are specified at 10' unless it is a freight route, in which case 11' width is acceptable. This allows for much more room in the ROW for active transportation infrastructure.

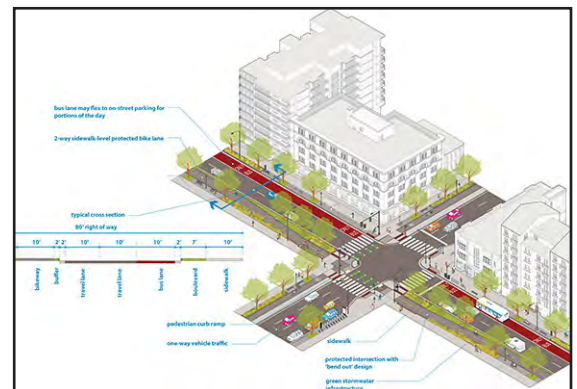
Link: [City of Minneapolis Street Design Guide](https://sdg.minneapolismn.gov/design-guidance/)



Street Design Guide. (sdg.minneapolismn.gov/design-guidance/intersections/bikeway-intersection-design/queue-boxes)

Location Characteristics:

▪ Population:	425,096
▪ Area (sq.mi):	54.0
▪ Density (#/sq.mi):	7,870
▪ Year Est'd:	1850
▪ Elev (ft):	866.1
▪ Latitude:	44°58'55"N
▪ GDP:	\$277.6 billion



Downtown core street guidance

Hamilton, Ontario, Canada



(Hamilton Complete Streets Design Guidelines)

Location Characteristics:

- Population: 597,010
- Area (sq.mi): 431.3
- Density (#/sq.mi): 1,384
- Year Est'd: 1846
- Elev (ft): 397.0
- Latitude: 43°15'24"N
- GDP: \$37.0 billion CDN



Establishing pedestrian zones

Resources

Hamilton Complete Streets Design Guidelines

Published in June of 2022, the Hamilton Complete Streets Design Guidelines are notable for its “Outside In” approach that promotes design that is flexible and responsive to the context of the corridor. It includes overarching guidelines for the planning and implementation of complete street designs, a description of the major elements of complete streets, and then discusses Hamilton streets’ typologies and options for intersection treatments.

The Guidelines also include a decision making flow chart for use during design that addresses things like limited ROW width, other site specific issues, prioritization of uses within the corridor, and adjacent land uses.

Link: [Complete Streets Design Guidelines](#)

Complete Street Audit Tool

The city of Hamilton has published an interactive spreadsheet to help guide decision making during municipal project planning that is based on their Complete Streets Design Guidelines. The spreadsheet allows the planner to enter data on the existing conditions and compare the existing conditions to the desired complete streets outcome for that street typology. The results for each street provide a useful resource for project prioritization.

Link: [Complete Street Audit Tool \(Excel\)](#)

Edmonton, Alberta, Canada

Resources

Winter City Design Guidelines

This document provides a strategic tool for providing developers, architects, engineers and planners with a framework for their projects, identifying the City's intentions in terms of what kinds of development and what levels of quality it deems acceptable.

Link: [Winter City Design Guidelines/](#)

Complete Streets Design and Construction Standards

Edmonton's Complete Streets Design and Construction Standards manual approaches complete streets with the idea that some modes of transport will inevitably be prioritized over others, but the prioritization process will depend on the corridor context. Streets in popular shopping areas will prioritize pedestrians while streets in low-density or more rural areas might prioritize through vehicular traffic. With this in mind, the manual includes an entire section titled "Design Process, Trade-offs and Evaluation." It also includes design requirements for complete streets, recommended street sections for the various street typologies, construction specifications, and standard drawings.

Link: [Complete Streets Design and Construction Standards](#)

132nd Ave

132nd Ave is currently undergoing a major renovation based on the complete streets principals. 132nd Ave is a collector street with a typical 4-lane street section with narrow sidewalks. The renovation will add different features along the length of the corridor that promote safety and enhance active transportation use such as raised crosswalks, protected bike lanes, vegetated medians, and on-street parking. Note: the design materials for this project name property owners as responsible for clearing snow off of the sidewalks during the winter instead of relying on the municipality snow clearing operations to do so.

Link: [Project Website](#)



Complete streets design for 132nd Ave. (www.edmonton.ca/sites/default/files/public-files/132Ave_Draft_Design_Booklet)

Location Characteristics:

Population:	1,087,172
Area (sq.mi):	264
Density (#/sq.mi):	4,108
Year Est'd:	1795
Elev (ft):	2116.1
Latitude:	53°32'04"N
GDP:	\$91.57 billion CDN

State of Ohio



A photo from the MORPC Complete Streets story map.
(Image source: <https://storymaps.arcgis.com/stories/7cbf7c1ea77b43aeb3e186003731ca3b>)

Resources

Mid-Ohio Regional Planning Commission Complete Streets Policy and Resources

Acting as a central planning hub for the communities of central Ohio, the MORPC has a web-based resource center for complete streets policy guidelines and planning and design resources. All projects completed with federal funding, using MORPC as the pass-through funding agency, are expected to comply with the MORPC complete streets policy, which was recently updated in 2021. The MORPC relies on other agencies, such as NACTO and FHWA, for design guidelines and details, but they offer a MORPC Complete Streets Equipment Library that allows users to Borrow count equipment and other tools for collecting data for complete streets projects.

Link: [MORPC Complete Streets Policy and Resources](#)

MORPC Complete Streets story Map

The MORPC Complete Streets Story Map is an interactive tool that educates users about complete streets. It is “a companion to the tools and resources of the 2020-2050 Active Transportation Plan. It includes context and additional information for practitioners to assist with decision-making for roadway design projects.” It covers information like the definition of active transportation, a description and discussion of traffic stress, design considerations for complete streets, and Links to other planning and design resources.

Link: [MORPC Complete Streets Story Map](#)

Appendix E: Right-of-Way Ownership

ROW Research Report: A history of major road corridors serving downtown Anchorage and options for increased local control

June 11, 2024

Introduction

Next year will mark 50 years since the City of Anchorage and the Greater Anchorage Area Borough merged to form the Municipality of Anchorage. Many residents may not be aware of the complex history of local government and the financial and administrative challenges to provide community infrastructure including road construction and maintenance.¹ To understand the current road maintenance scheme in Anchorage, it will be helpful to briefly explain the factors that contributed to it, including a review of what a public ROW is and how DOT&PF and MOA exercise authority over ROW on behalf of the public.

Who “Owns” Public Road Rights of Way (ROW)?

In Alaska, there are multiple ways that a public ROW is established. ROW can be created by deed, by plat, by statute, by Public Land Order (PLO) and by public use. It is not unusual for a road corridor in Alaska to contain all these sources of ROW – what matters is whether the public has sufficient rights to use the land. Government can assert and defend those rights for the public.

Unless the ROW is created by deed, there is no distinct title document vesting ownership in a government entity or agency. The term “ownership” is often used interchangeably with “jurisdiction.” For purposes of this planning effort, who “owns” the ROW is not as relevant as who manages the ROW. Within municipalities with road powers, the management authority of roads generally resides with the local government, but there are exceptions, as we see in Anchorage.

State-maintained and managed public ROW in Alaska has its origins before statehood. Across the Territory of Alaska, the Alaska Road Commission (ARC) and the Bureau of Public Roads (BPR) constructed roads within and across cities and towns.² This much needed support for public infrastructure was key to Alaska’s progress. The pattern and extent of settlement was intertwined with the development of roads. A similar patchwork of local and state-maintained roads is seen in other communities such as Palmer, Wasilla, Fairbanks, and Nome.

Decades after statehood, DOT&PF still maintains and manages most of the routes inherited from ARC and BPR, channeling federal funding to improve traffic flow and safety within and between communities. The purpose of this report is to give a brief history of major corridors within or serving the study area: 5th/6th Avenue (Glenn Highway), Ingra/Gambell (Seward Highway), the A/C Street corridor (specifically, the Port Access) and the I/L Street corridor (Minnesota Drive). To do that, we need to step outside the Downtown Streets study area and look at the bigger picture of road development.

Anchorage's road system: then and now

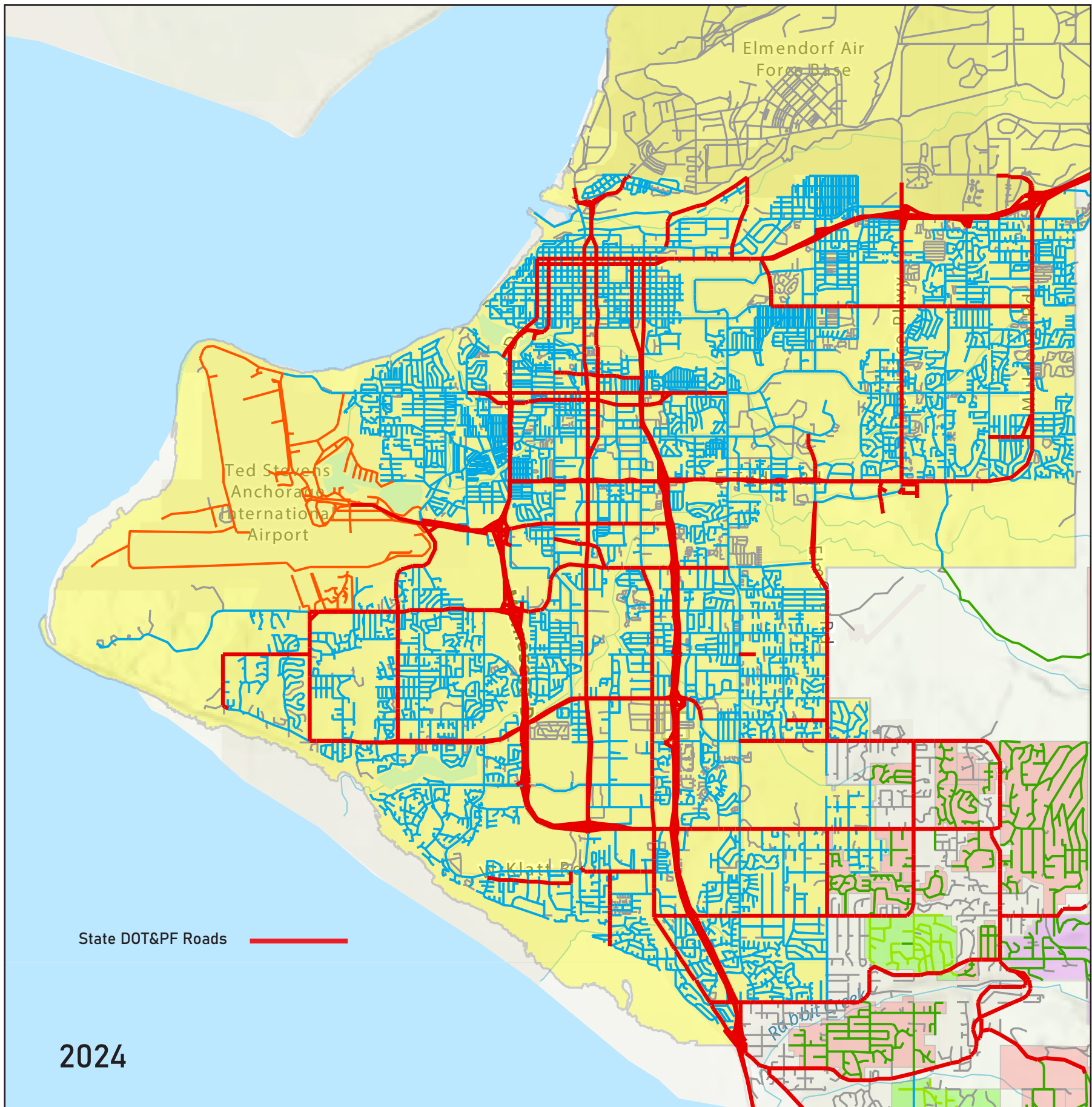
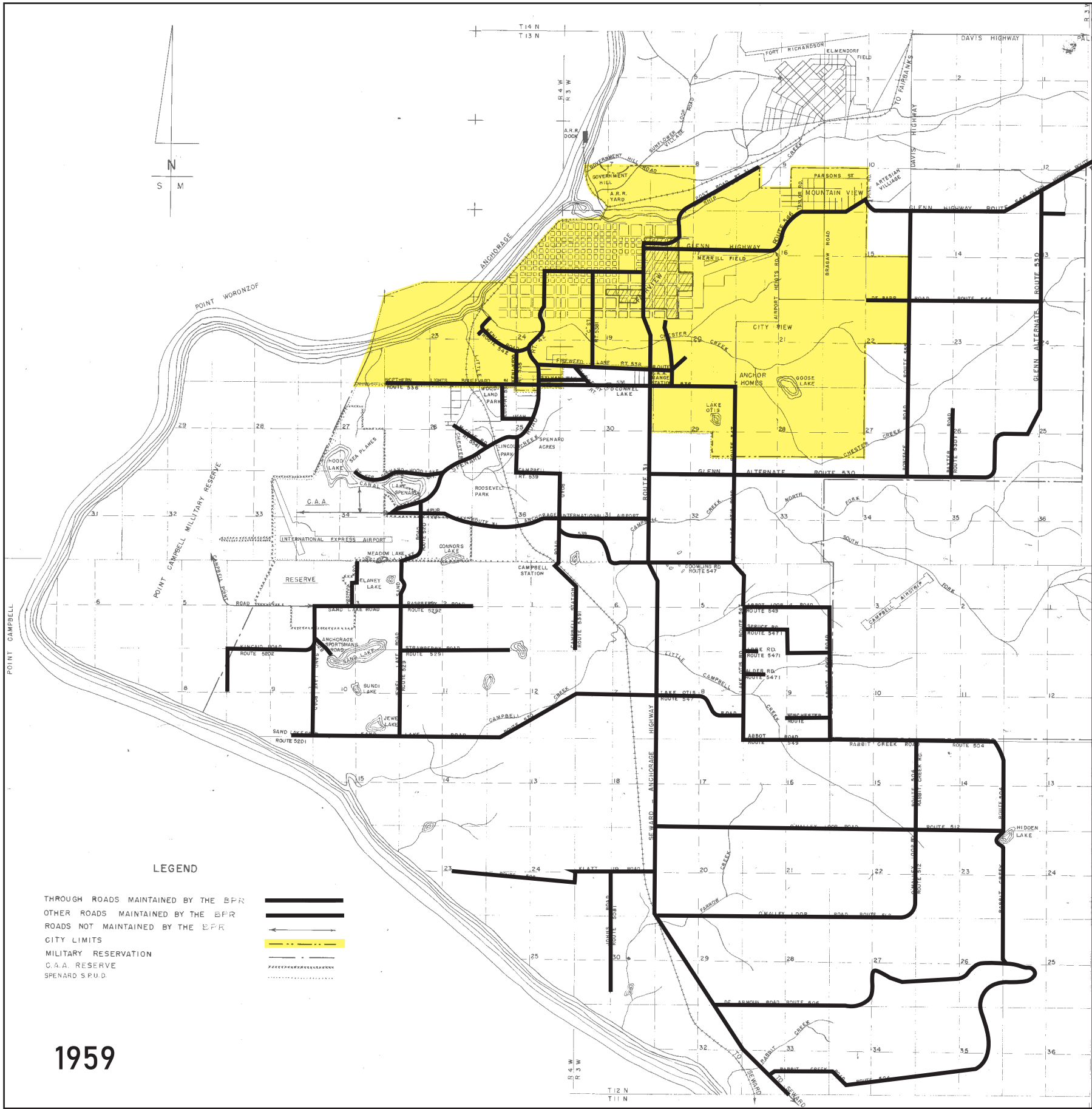
The history of Anchorage's present road system is inseparable from that of the ARC/BPR. In many respects, how our early infrastructure was built and by whom is tied to our long tenure as a U.S. Territory. No other state or territory has an agency like the Alaska Road Commission in its past, and rarely has a government agency done so much with so few resources. Many books, articles and documentaries on the ARC are available for an in-depth review³, but only a summary is necessary to frame this discussion.

In the lower 48 states, road construction was the responsibility of local or state government, although in some cases, private companies built toll roads. The first Federal Road Act of 1916 established regular appropriations for road construction to be allocated among the states. The Territory of Alaska was excluded from the federal-aid apportionment though forest highways were regularly funded by these Acts. The 1921 Federal Highway Act expanded the funding structure and established the early Federal Aid Highway System of primary and secondary roads that were eligible for federal matching funds. 1921 saw the last of the lower 48 states admitted to the Union - it would be 35 more years before Alaska gained the benefit of the federal-aid system of highway funding.

ARC funding was appropriated annually by Congress and could only be described as meager until WWII made Alaska's geographic location an important crossroads and a focus of military spending. In the 1940s, the Glenn Highway was extended from Palmer to the Richardson Highway, a rail link built to Whittier, and a road link built around Turnagain Arm to complete the Seward Highway. The influx of military personnel and private citizens brought thousands of people to Anchorage. Most of the population lived outside Anchorage city limits and petitioned the ARC to build roads to serve their homesteads or subdivisions. The extent of the buildout is clear from reports and historic maps prepared through the years by ARC and BPR.

For example, the graphic on the following page compares the Anchorage road system at statehood to today's network. The figure left is based on a 1959 BPR map that reflected road names and route numbers listed on the first Federal-Aid Highway System tabulation for Alaska. Anchorage city limits is highlighted in yellow on the BPR map. The figure right was generated from the MOA GIS online database as of April 2024.⁴





In 1959, the Glenn Highway (Route 42) and Seward Highway (Route 31) were well-established, and “C” Street Extension already existed. The intersection of Spenard Road and Anchorage International Airport Road was the official start of Route 42, following Spenard Road to the west side of the townsite between L and N Street and continuing along 9th Avenue to meet the Seward Highway. Significant improvements in traffic capacity and highway safety occurred soon after this map was completed.

In the 1950s, the City of Anchorage Planning Commission prepared both a Street Plan and a General Highway Plan through two specialized committees organized for transportation planning purposes.⁵ The 1955 Street Plan identified an alternate route for Spenard Road and a viaduct over C Street to serve Government Hill and Elmendorf AFB. Both plans recognized that without federal or territorial funding, the recommended improvements could not be constructed.

In 1956, BPR became the federal manager of the Alaska Highway System, and the Territory of Alaska was included in the federal-aid system for the first time. The Territorial Legislature created the Alaska Highway and Public Works Department in 1957 to plan and manage the projected federal expenditures for highways. Under the same law, communities of 5,000 people or more were required to prepare a local highway master plan as a resource to plan funding priorities. The provisions of that territorial law survive today in Alaska Statute (A.S.) 19.20.080, Municipal master highway plan. The Anchorage Area Preliminary Highway Plan, published in October 1957, again identified the C Street viaduct and the Spenard Road relocation as important corridors that would improve safety and traffic flow.⁶

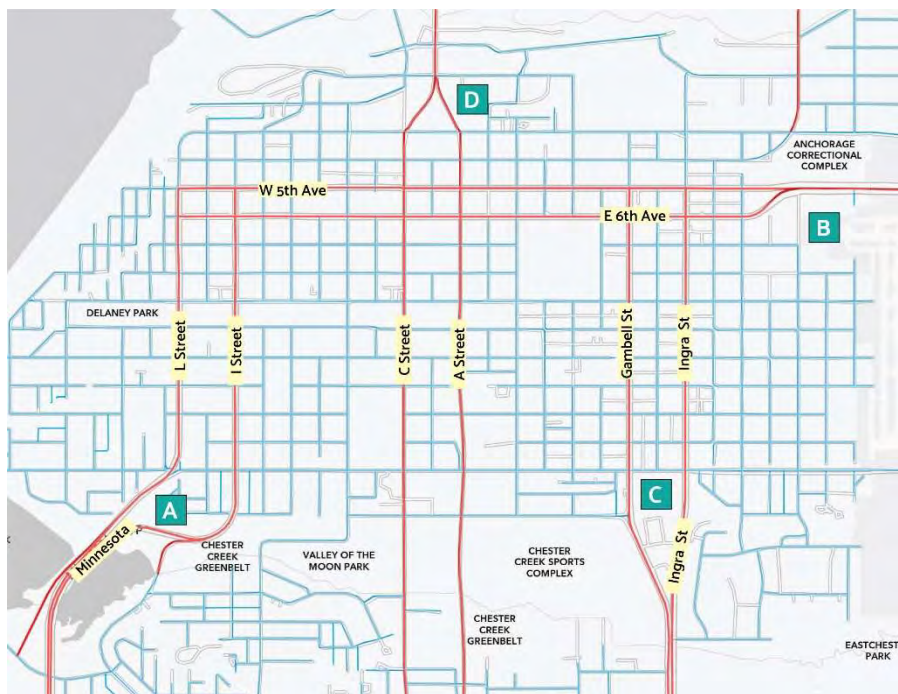
The Official Street and Highway Plan published November of 1963 reported that the one-way couplet design for 5th & 6th Avenues, I & L Streets and Gambell and Ingra Streets was now part of the Federal Aid Primary System plan. The Minnesota Drive bypass and a viaduct across Ship Creek was to be built by the State with Federal funds.⁷

Early municipal highway plans guided the construction of the following major projects in and adjoining the Downtown Streets study area (see graphic next page). DOT&PF acquired ROW for these projects using federal-aid funds.

- A. Hillcrest, aka Spenard Thruway (Minnesota Drive) widened Minnesota Drive and constructed the connection through Westchester Lagoon to the I/L Street corridors in the Anchorage Townsite. Construction was underway in 1967 and completed two years later with a cost of \$3.65 million. Related upgrades to 5th, 6th, I and L Streets were under contract in 1968 and completed in 1969 for a project cost of \$595,000. An agreement between the City and DOT&PF related to this project was signed in 1968, providing for management of parking, traffic control devices and encroachments.⁸
- B. The Fifth-Sixth Avenue Couplet project acquired ROW to widen 6th Avenue and construct a connection from Sixth Avenue to Fifth Avenue between Gambell and Medfra Street. The contract was issued in 1966 and finished that year for a cost of \$315,000.⁹
- C. The Ingra from Fifth to Gambell Couplet project acquired and constructed a connecting corridor to Ingra Street northbound. The project began in 1966 and was completed in 1967 for a contract cost of \$1.64 million.¹⁰



- D. The ROW for the A/C couplet serving the Port of Anchorage and Elmendorf AFB was acquired in the early 1970s and constructed in two phases from 1973-76. The first phase cost \$10.8 million.¹¹



1969 route mapping describes each federal aid route and gives a tabulation of construction projects. The major corridors in the Downtown Streets study area were already constructed in some form in 1969, with only the Port Access in its current configuration yet to be built.¹²

These corridors have been improved for vehicular users for decades using federal funds administered by DOT&PF and matching funds primarily from the state, but also from MOA. The investment in the major corridors is reflected in their functional classifications, which are the highest categories in the system: Interstate, Principal Arterial and Minor Arterial. They are now National Highway System (NHS) routes¹³ with varying levels of strategic importance. Federal Highway Administration (FHWA) mapping of the NHS System for Anchorage shows that the A/C couplet serving the Port has a higher strategic importance than the 5th/6th and I/L Street corridors to the west of the couplet¹⁴ because intermodal access is one of the key features of a strategic NHS route.

Federal funding has clearly had a significant impact on the Anchorage road system, but as the community has grown and changed, current road designs have come into conflict with a new vision for downtown Anchorage.

MOA options for more local control over downtown streets

Decades ago, traffic studies focused on alleviating congestion and getting traffic in and out of downtown Anchorage. “Downtown” was the destination, but now many residents live and work outside of the townsite. How many travelers driving through Anchorage’s downtown could use a

different route, while supporting all the people who want to park, work, shop and dine in historic Anchorage? A new traffic pattern may make a change of status for 5th/6th Avenue an obvious choice - routing “through” traffic elsewhere so the corridor accommodates vehicular, pedestrian and bicycle transport as the emphasis. MOA already performs all winter maintenance on state-owned roads within the Downtown Streets study area and maintains the sidewalks and some streetlights on state-owned roads. If MOA wanted the 5th & 6th Avenue arterial routes reconfigured to accommodate more pedestrian and bicycle traffic, how would that be accomplished? Two options are apparent:

Option 1: Use the metropolitan planning process to implement a new vision for the study area.

Over the last 4 decades, federal transportation policy has evolved beyond vehicle-only corridors to shared corridors that support bicycle and walking activities. In just the last few years, shared corridor planning has become a standard for implementation nationwide. The Bipartisan Infrastructure Law (BIL) of 2021 emphasized roadway safety for all users, including bicyclists and pedestrians. In response, FHWA has encouraged all states to adopt the “Complete Streets” approach to planning and constructing surface transportation.¹⁵

According to FHWA, “A Complete Street is safe, and feels safe, for all users. FHWA is focused on supporting transportation agencies to plan, develop and operate equitable streets and networks that prioritize safety, comfort, and connectivity to destinations for all people who use the street network.” AMATS already has an approved Complete Streets policy¹⁶, and DOT&PF is currently developing its own policy.¹⁷ The Downtown Streets plan will play an integral role in emphasizing what the community wants in future transportation planning for all the routes within and serving the city center of Anchorage. The Complete Streets approach could be a way to implement this new vision.

Deficiencies in pedestrian and bicycle facilities in downtown Anchorage were documented in AMATS MTP 2040 and continue as MTP 2050 is in the review stage. By evaluating the most critical needs for improvement and identifying those corridors that are of highest priority, the Downtown Streets plan can recommend projects that may be included in the next AMATS TIP plan. Project nominations open in 2026 for the next TIP.

The added advantage to using the metropolitan planning process is that federal funds can be used to plan, design and construct bicycle and pedestrian infrastructure. FHWA has identified funding sources on their “Complete Streets” website, including a link to a detailed matrix of pedestrian and bicycle infrastructure funding opportunities.¹⁸

Option 2: Request relinquishment of the selected corridor, which means a conveyance of all DOT&PF’s interest in the corridor to MOA for continued transportation purposes.¹⁹

The advantage to relinquishment is that MOA would get full control of the corridor, but that control would come with additional cost. Improvement projects along the corridor may still be funded by federal dollars, but priority funding is not guaranteed. All maintenance (including summer season repairs) and property management duties will become MOA’s responsibility.

A key task of ROW property management is the control of non-highway uses within the ROW corridor. According to DOT&PF's Alaska ROW Manual, "Any non-highway use within the ROW, except for a mailbox or a newspaper box attached to a mailbox, is considered to be an encroachment." Currently, DOT&PF manages encroachments, driveways and business signs that are allowed by both state law and FHWA regulations through a permit process. The management of outdoor advertising along Alaska's highways is also a function of DOT&PF. Any encroachments, driveways and business signs not authorized will be removed by DOT&PF, with few exceptions. Property owners are notified and given an opportunity to remove an encroachment unless it constitutes a safety hazard. Failure to manage non-highway uses of the ROW violates state law and FHWA regulations and may result in sanctions such as a freeze of federal highway funds.

Disposal of any ROW interest, which includes both the transfer of ROW to another government agency as well as vacation of ROW, is also regulated by both DOT&PF's ROW Manual (Chapter 9.10) and FHWA regulations at 23 CFR 620, Subpart B. FHWA concurrence is required if federal funds were used to acquire the interest identified for disposal.

The advantage to DOT&PF of relinquishing a highway corridor is the immediate release of the financial burden of their portion of maintenance costs, however, past discussions with FHWA indicate that DOT&PF will not be relieved of responsibility for enforcing FHWA regulations or maintenance deficiencies, even if the transfer to a municipality occurs.²⁰ In other words, FHWA will hold DOT&PF responsible for all management or maintenance of a relinquished road. This is not an unexpected conclusion. DOT&PF's management responsibilities are outlined in the April 2015 Stewardship and Oversight (S&O) Agreement with FHWA.²¹ Nothing in this agreement implies that local governments can assume DOT&PF's role. FHWA regulations clearly state that maintenance duties of State highway departments may be delegated to other governments, but the department will still be responsible for maintenance.²² The DOT&PF Maintenance and Operations (M&O) Manual²³ provides the guidelines for maintenance that may be expected if a road transfer or relinquishment occurs.

Cities and municipalities are not lining up with applications for relinquishment of state-maintained roads for a reason. MOA will have to convince DOT&PF that relinquishment is in DOT&PF's best interest, and that MOA will manage the ROW and maintain the roadway according to DOT&PF and FHWA requirements in the S&O Agreement and M&O Manual.

FHWA regulations allow relinquishment of a highway facility.²⁴ Contracts with Local Public Agencies (LPAs) are allowed under Chapter 2.4.1 of the DOT&PF ROW Manual and Road Transfers are addressed in a single paragraph under Chapter 9.10.9. Road transfers/relinquishments are accomplished using a Memorandum of Understanding (MOU), the terms of which will be negotiated between DOT&PF and MOA. Unfortunately, there is no detailed State of Alaska procedure for relinquishment in writing. Twenty years ago, DOT&PF drafted a Local Agency Procedures Manual, but it was not approved. Since that time, each request for relinquishment by local government has been dealt with on a case-by-case basis and there are no instances of such a high classification route as 5th or 6th Avenue that have been completed.



For example, an agreement between DOT&PF and the City and Borough of Juneau (CBJ) was signed in 2012 for “planning, design, construction and ownership” of Shell Simmons Drive in Juneau. This route is on the NHS system for Alaska and is classified as a major collector, but the segment involved is only 800 feet in length.²⁵ Of particular interest is Section VI. CBJ’s Right-of-Way, Operations and Maintenance Obligations which thoroughly addresses the duties CBJ agreed to assume, in compliance with DOT&PF and FHWA directives. The transfer has not been completed, as it is still shown as a state route in DOT&PF’s GIS mapping.

Although relinquishment of a corridor is possible, it is clearly time-consuming. Assuming the original CBJ agreement took a year to negotiate, nearly 12 years have passed since it was signed. If MOA seeks relinquishment on some of the Downtown Streets, the result may be no more control or options than it has at the present time, but with the added costs of DOT&PF and FHWA maintenance and management requirements.

Summary

The network of state-maintained roads has largely been in place since statehood with some substantial improvements in vehicular traffic capacity and efficiency constructed with federal funds. Like many federal grants, the money brings significant responsibility that is not easily circumvented.

The community can still make its voice heard. The Downtown Streets plan can take this opportunity to envision what the city center will look like, with or without changes to the status of 5th & 6th Avenues and other major corridors.



Endnotes and References

¹ See Chapter 10 of Imagining Anchorage: the making of America's northernmost metropolis for an excellent explanation of this history (full citation below).

² Three agencies were responsible for road planning and construction in the territorial years. The Bureau of Public Roads (BPR) constructed roads and trails in the National Forests (about 5% of Alaska) and the Alaska Road Commission (ARC) constructed roads and trails outside the forests. The Territorial Board of Road Commissioners did not have a construction division, but it did select projects and contribute funds to ARC for construction. The Federal-Aid Highway Act of 1956 abolished the ARC, and its functions, duties and authority were transferred to the BPR in the U.S. Department of Commerce. At statehood, the Secretary of Commerce transferred the highway system, as well as real property such as highway maintenance stations, to the State of Alaska.

³ See Alaska Roads Historic Overview, prepared for Alaska DOT&PF, February 2014 for content and references to other sources of information on ARC and BPR.

⁴ Sources for Map Exhibit: 1) BPR Map No. 225, "Anchorage Vicinity Map", latest Revision 7/24/1959, from CRDOT&PF map collection 2) Federal-Aid Primary Highway System as approved February 26, 1957, from Record Group 30, Records of the BPR, National Archives and Records Administration (NARA), Washington, D.C. and 3) pdf generated from MOA online database April 2024.

⁵ Anchorage Area General Highway Plan, August 1954 and Preliminary Anchorage Street Plan, February 1955, prepared by the City Planning Commission, Highway Planning Committee and Street Planning Committee, scanned from originals in the CR DOT&PF Planning Library.

⁶ Anchorage Area Preliminary Highway Plan, prepared by City Planning Commission, Highway Planning Committee, October 1957, scanned from original document in the CR DOT&PF Planning Library.

⁷ Official Street & Highway Plan, Plan Report No. 1963-2, City Planning Commission, Anchorage, Alaska, scanned from original document in CR DOT&PF Planning Library.

⁸ Project Plans for ROW AK Proj. No. F-042-1(22)/Construction AK Proj. Nos. F-042-1(26) and F-042-1(28) and State of Alaska Department of Highways Project Annual Report, 1967 and 1968 from Central Region (CR) DOT&PF collection.

⁹ Project Plans for ROW/Construction AK. Proj. No. F-042-1(15) and State of Alaska Department of Highways Annual Report, 1966 and 1967 from CR DOT&PF collection.

¹⁰ Project Plans for ROW AK Proj. No. F-031-2(20)/Construction AK Proj. F-031-2(21) and State of Alaska Department of Highways Annual Report, 1966 and 1967 from CR DOT&PF collection.

¹¹ Project Plans for ROW AK Proj. No. F-042-1(23)/Construction AK Proj. F-042-1(47) and AK Proj ALF-042-1(62) and State of Alaska Department of Highways Annual Report, 1964 and 1974 from CR DOT&PF collection.

¹² See 1968 DOH Road Inventory mapping for FAP 42-1, Section A (2 sheets), FAP 31-2, Section B, and FAS 539 from CR DOT&PF map collection, latest revision October 1969.

¹³ From State of Alaska National Highway Systems Maps, April 2006: *"The National Highway System (NHS) is an interconnected system of routes that serve important national functions, e.g., security, commerce, and travel. The NHS is comprised of Interstate and defense routes, other principal arterial routes, and routes connecting to major intermodal facilities such as airports, ports, and ferry terminals. With a few exceptions, all NHS routes in Alaska are owned by ADOT&PF."*

¹⁴ Map of National Highway System: Anchorage, AK, FHWA October 1, 2020, downloaded from https://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/alaska/anchorage_ak.pdf

¹⁵ See <https://highways.dot.gov/complete-streets> for more details on FHWA Complete Streets resources.

¹⁶ AMATS Complete Streets Policy, available online at https://www.muni.org/Departments/OCPD/Planning/AMATS/Documents/Complete_Streets/20230928_Complete%20Streets%20Policy_Revision_Tracked_Changes.pdf

¹⁷ See <https://dot.alaska.gov/stwdplng/completestreets/> for progress on the State of Alaska's Complete Streets policy.

¹⁸ Pedestrian and Bicycle Funding Opportunities matrix, downloaded from https://www.fhwa.dot.gov/environment/bicycle_pedestrian/funding/funding_opportunities.pdf

¹⁹ ADOT&PF Alaska Right-of-Way Manual, Chapter 12: Definitions, latest revision February 2022, available online at <https://dot.alaska.gov/stwdpplng/dcsrow/> and FHWA regulations at 23 CFR 710.105 Definitions, available online at <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-H/part-710/subpart-A/section-710.105>



²⁰ Excerpt from email from Elizabeth Hoffman, FHWA Alaska Division to John F. Bennett, NR DOT&PF Chief ROW Agent, dated 7/14/2011 states “If the relinquishment is a rural major collector or higher, the facility would need to be maintained in perpetuity. If the relinquishment is a local or rural minor collector, the facility would need to be maintained for the 20 years (road facility) design life or 75 (bridge facility) design life. The FHWA would hold DOT&PF accountable for ensuring that the local government continues to meet the requirements for maintenance and keeping the ROW clear of encroachments.”

²¹ Stewardship and Oversight Agreement on Project Assumption and Program Oversight by and Between Federal Highway Administration, Alaska Division and the Alaska Department of Transportation and Public Facilities, available online at <https://www.fhwa.dot.gov/federalaid/stewardship/agreements/ak.pdf>

²² See 23 CFR 1.27 at <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-A/part-1/section-1.27>

²³ DOT&PF M&O manual, available online at https://dot.alaska.gov/stwddes/research/assets/pdf/ak_maint-ops_hb.pdf

²⁴ See 23 CFR 620 Subpart B - Relinquishment of Highway Facilities at <https://www.ecfr.gov/current/title-23/chapter-I/subchapter-G/part-620>

²⁵ Memorandum of Agreement Between the City and Borough of Juneau & Alaska Department of Transportation and Public Facilities for Juneau-Yandukin Drive/Shell Simmons Drive Pavement Rehabilitation (Glacier Hwy to Egan Dr) (Federal Project #NH-000S(806) ~ State Project #68045), signed 8/20/2012.

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