

# 2035 METROPOLITAN TRANSPORTATION PLAN



ANCHORAGE BOWL • CHUGIAK-EAGLE RIVER



Anchorage Metropolitan Area Transportation Solutions

**Executive Summary**  
**May 2012**

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This publication was released by the Anchorage Metropolitan Area Transportation Solutions, the Municipality of Anchorage, and the Alaska Department of Transportation & Public Facilities for the purpose of public information. This report was funded in part through grant(s) from the U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration. The views and opinions of the authors expressed herein do not necessarily state or reflect those of the U. S. Department of Transportation.



# OVERVIEW

Every four years Anchorage Metropolitan Transportation Solutions (AMATS) is responsible for conducting a public review of the Anchorage metropolitan area transportation system to determine how the system will evolve during the next 20+ years.

The AMATS 2035 Metropolitan Transportation Plan (MTP) is the culmination of a broad-based community effort devoted to matching transportation facilities and services to the needs of our community through 2035. The MTP is based on future community building and livability expectations, forecasts of economic conditions, travel behaviors and needs, reasonable funding, and desired performance of the system. This MTP combines two previously separate transportation system plans (Anchorage Bowl and Chugiak-Eagle River) within the Anchorage metropolitan area into one MTP recognizing the differences in the socio-economics, travel patterns, environmental characteristics, and physical locales within the unique Anchorage Bowl and Chugiak-Eagle River neighborhoods and subareas.

**Time for a Transportation Plan Checkup**

Like a regular check-up at the doctor, the Metropolitan Transportation Plan (MTP) update is a check-up for decision-makers and citizens to assess what is or is not working within the system of roads, sidewalks, bus routes, and trails that we use to get around. The update also provides a look at how the community is growing and reviews the transportation system to see if it needs to be adjusted to reflect changing conditions.

This important transportation plan update will guide almost \$4 billion in transportation network improvements between 2012 and 2035—from new road connections, additional buses, sidewalks, bike lanes, trails, to better streets and improved intersections. Everyone uses these—whether we ride our bikes, walk to school, take a bus to work, drive a truck to supply the local grocery store, or head out of town for the weekend.

Transportation shapes our community and our daily lives in profound and lasting ways. What we plan for and invest in today will affect the health of everything from our children to the economy and environment for years and generations to come. By planning ahead, our community provides ways to get around, eases commuters, saves gas, and reduces transportation costs.

As the major hub for goods, services and tourism, Anchorage transportation also plays an important role in the State of Alaska. People and goods need to move into and out of Anchorage as well as around town.

The check up is done and the results are included in the MTP. We need you to review the results in the document, provide a "second opinion" and comment on the recommendations for treatment!

**We've accomplished a lot in the last four years (2006-2010)! It's all in the numbers.**

- 14 – Major roadway projects completed
- 8446 – Jobs created or maintained (construction, design and maintenance)
- 13 – Additional vanpools on the Glenn Highway between 2007 and 2010
- 930 – Daily commuters using vanpools on the Glenn Highway
- 930 – Fewer single occupancy vehicles on the Glenn Highway
- 8 – Miles of pathway/trail improvements
- 35 – Miles of new sidewalks
- 31 – Miles of new bicycle facilities
- 103 – Million Dollars Spent on roads, bicycle and pedestrian facilities, intersections and pavement rehabilitation including Connect Anchorage projects (See map for project locations)

...and it all happened because we planned and prioritized it first!

**Anchorage Accomplishments**

**Eagle River Accomplishments**

**Who is updating the plan?**

The local metropolitan transportation planning organization, Anchorage Metropolitan Area Transportation Solutions (AMATS), is a partnership of representatives from the Municipality of Anchorage, State of Alaska, Alaska Department of Transportation and Public Facilities, Alaska Department of Environmental Conservation, and Alaska Statewide Transportation Planning Board. AMATS is a non-profit, 501(c)(3) organization. The plan is updated every four years. The plan is updated by the AMATS Board of Directors, which includes representatives from the Municipality of Anchorage, the State of Alaska, and the Alaska Department of Transportation and Public Facilities.

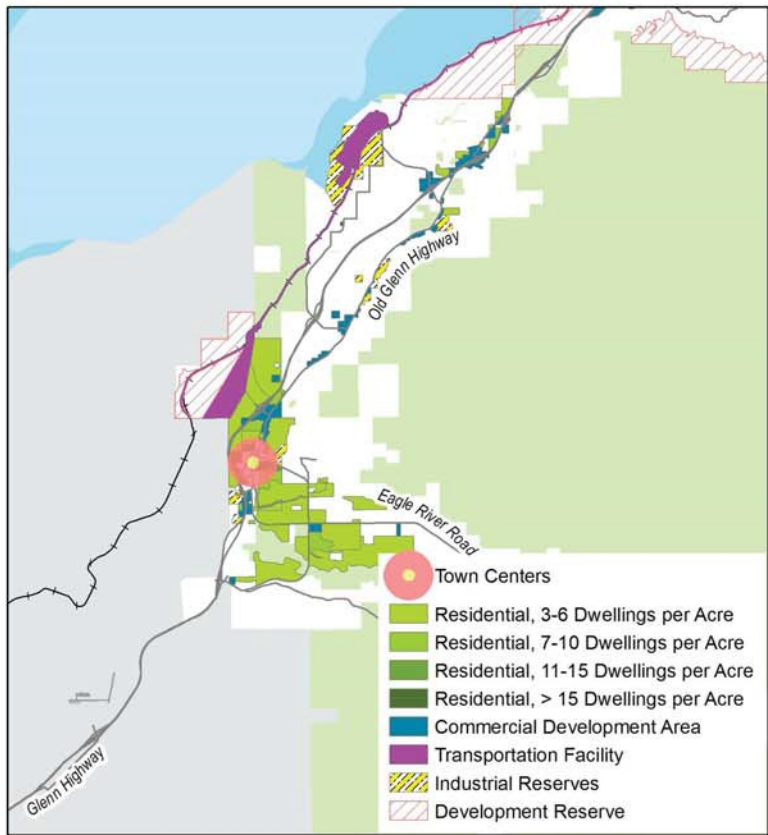
More than 65,000 new residents and 44,500 new jobs are expected in the Anchorage metropolitan area by 2035, in addition to the 280,000 residents and 163,700 jobs that are here today. This growth, along with increased statewide economic activity, will create additional demands on our region's transportation system and the need for making effective public investments. The MTP addresses how current travel demands, plus those anticipated from this expected growth, can be accommodated through better operation and management of the existing transportation facilities and services coupled with strategic investments for additional capital improvements and operations and maintenance (O&M) services. The MTP will serve as the long-range, multimodal transportation plan for the region; thoughtfully guiding the expenditure of available funds to methodically develop, maintain, and improve the system over time.

## GUIDANCE

The adopted comprehensive plans for the Anchorage Bowl and Chugiak-Eagle River areas will guide the growth and development in our community. The comprehensive plans have been developed through a rigorous public involvement process to reflect the unique characters of neighborhoods and subareas within the Anchorage metropolitan area. Figures ES-1 and ES-2 illustrate the land use framework plans for the Chugiak-Eagle River and Anchorage Bowl, respectively.

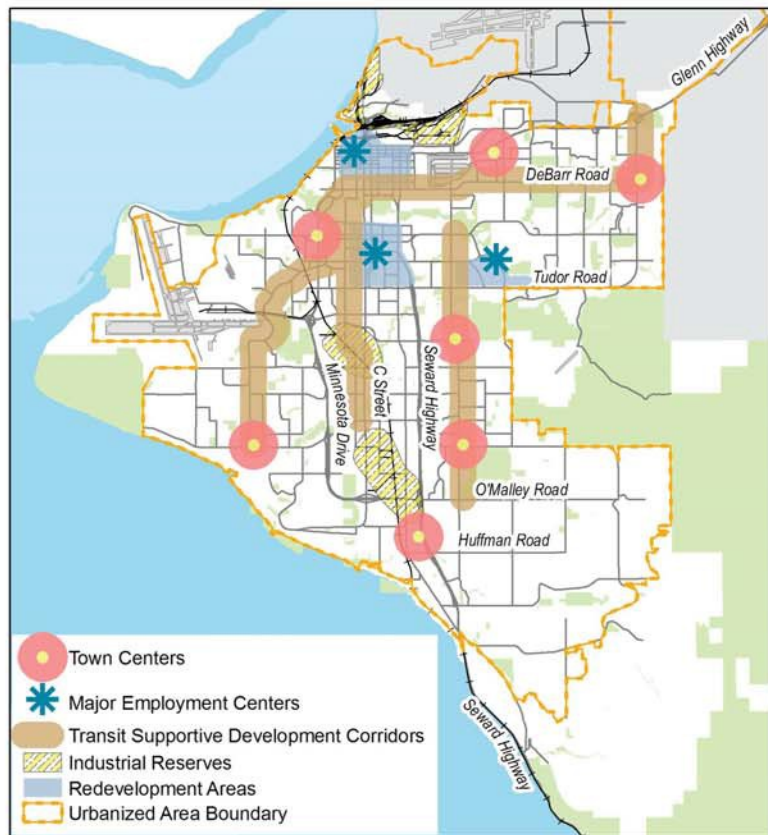
The vision for the MTP was built on earlier planning efforts that represented extensive public involvement and contained statements of values that are still closely held by the community. Thus, the goals of the MTP are directly derived from the goals contained in the predecessor documents, the 2027 Long Range Transportation Plans (LRTPs) for the Anchorage Bowl and Chugiak-Eagle River. Care has been taken to merge the goals from these plans into one cohesive set that will be consistently applied and carry the region forward to the new horizon year of 2035. The MTP includes a set of transportation projects, programs, and strategies that best meet the eight goals described below.





Source: Chugiak-Eagle River Comprehensive Plan Update, 2006

Figure ES-1 Land-Use Policy Ares in the Chugiak-Eagle River Comprehensive Plan



Source: Anchorage 2020 Comprehensive Plan

Figure ES-2 Land-Use Policy Ares in the Anchorage Bowl Comprehensive Plan

## AMATS 2035 MTP GOALS

**Goal 1:** Ensure development of a balanced transportation network for people, goods, and services that provides an acceptable level of service, maximizes safety, minimizes environmental impacts, provides a variety of transportation choices, and supports planned land use patterns.

**Goal 2:** Provide a transportation system that moves people and goods safely and securely throughout the community.

**Goal 3:** Develop an attractive and efficient transportation network that considers the cost of building, operating, and maintaining the system; the equity of all users; public health impacts; community values; and social justice.

**Goal 4:** Develop a transportation system that supports a thriving, sustainable, broad-based economy by locating and using transportation infrastructure and facilities to enhance community development.

**Goal 5:** Establish community connectivity with safe, convenient, year-round automobile and non-automobile travel routes within and between neighborhoods, commercial centers, and public facilities.

**Goal 6:** Improve access to goods, jobs, services, housing, and other destinations while providing mobility for people and goods in a safe, affordable, efficient, and convenient manner.

**Goal 7:** Provide a transportation system that provides viable transportation choices among various modes.

**Goal 8:** Design and maintain a transportation system that respects the integrity of the community's natural and built environment and protects scenic vistas.

Professional staff of the agencies responsible for implementing the MTP established supporting objectives that provide further direction on how these goals will be achieved. Specific, quantifiable transportation system performance measures also were established and used as evaluation criteria for identifying feasible solution strategies, selecting the preferred solution for each regional need, and prioritizing the resulting list of projects and programs for funding and implementation.

## GROWTH & CHANGE Our

nation and the Anchorage metropolitan area have been affected by a significant economic recession since 2008. Concerted efforts are being made toward a full recovery and renewed growth and economic vitality. The Alaska economy has been slowed, but not hit as hard as the rest of the United States because major resource development (energy/minerals/fishing) and support services have stayed strong. The Port of Anchorage and Ted Stevens Anchorage International Airport (TSAIA) have continued to grow as major hubs for international and regional freight goods.

Locally, actions led to the implementation of more than 20 projects from the 2027 LRTPs, improving transportation facilities within the Anchorage metropolitan area and stimulating additional economic activity. Meanwhile, other local and regional planning efforts have brought about the need to update the AMATS transportation plan. This MTP builds on the successes of the previous transportation plans and incorporates the recommendations of recent planning efforts. It also accounts for the impacts of the recession on regional population and employment projections and on the availability of funding to provide a safe and effective multimodal transportation system.

## Yesterday (Past)

The 2027 LRTPs for the Anchorage Bowl and Chugiak-Eagle River were prepared during a time of rapid national and regional economic expansion. Forecasts of future population and employment were prepared prior to the events that have led to the current recession. Thus, a new forecast was necessary to adjust for these economic impacts while also looking to a new horizon year of 2035.

Revenues to fund transportation have not kept pace with the costs to adequately provide, operate, and maintain the transportation system. This shortfall has grown worse due to the economic recession and will limit what can be accomplished, unless other funding is identified.

Transportation issues are also considered in other recent plans, such as the following:

- Destination Downtown: Anchorage Downtown Comprehensive Plan (December 2007)
- People Mover Route Restructure Plan Update (October 2009)
- Hillside District Plan (April 2010)
- Eagle River Central Business District and Residential Core Transportation Study (January 2011)



The findings and recommendations of these plans, many of which have been or are being implemented, contain information developed since the 2027 LRTPs. An updated multi-modal transportation plan is needed that considers these new plans and community insights.

### Today (Present)

Natural resources, energy, tourism, national defense, and international freight movements continue as significant contributors to the regional economy. Several of these economic sectors have stayed strong and the others are beginning to recover. Meanwhile, our region continues to be strategically located for purposes of national defense, providing homes to many in the military and their families.

Demands on the regional transportation system also are increasing. Vehicle miles traveled on regional roadways continue to rise and ridership on PeopleMover (the regional transit provider) is up 8 percent since 2007. During the same period, participation in annual “Bicycle to Work Day” promotions has increased by more than 80 percent.

Agencies and elected leaders are taking action, having implemented 21 projects (see Figures ES-3 and ES-4) that were recommended in the 2027 LRTPs. These projects brought needed improvements to regional connectivity for all modes

and increased efficiency of personal and freight goods movements. In addition, delay to regional travelers was reduced on key corridors. More than \$100 million of spending on transportation projects was invested in the local economy and resulted in adding more than 4,300 construction related jobs.

### Tomorrow (2035 Future)

Several factors have profound effects on how the transportation system is used, how well it meets our travel needs, and what improvements will be necessary to achieve our regional goals. Chief among these are the current development patterns, the existing network of multimodal transportation facilities and services, and the choices of where and how future growth will occur. An examination of these factors and their influence on travel demands in 2035 has produced a range of needs that have been systematically assessed to produce a set of planned projects and programs for near-term and long-range implementation.

### Demographics

Citizens continue to express their desire to grow in accordance with the adopted comprehensive plans, expand economic opportunity, and protect the natural, historical, and built amenities of the region. The Southcentral Alaska region

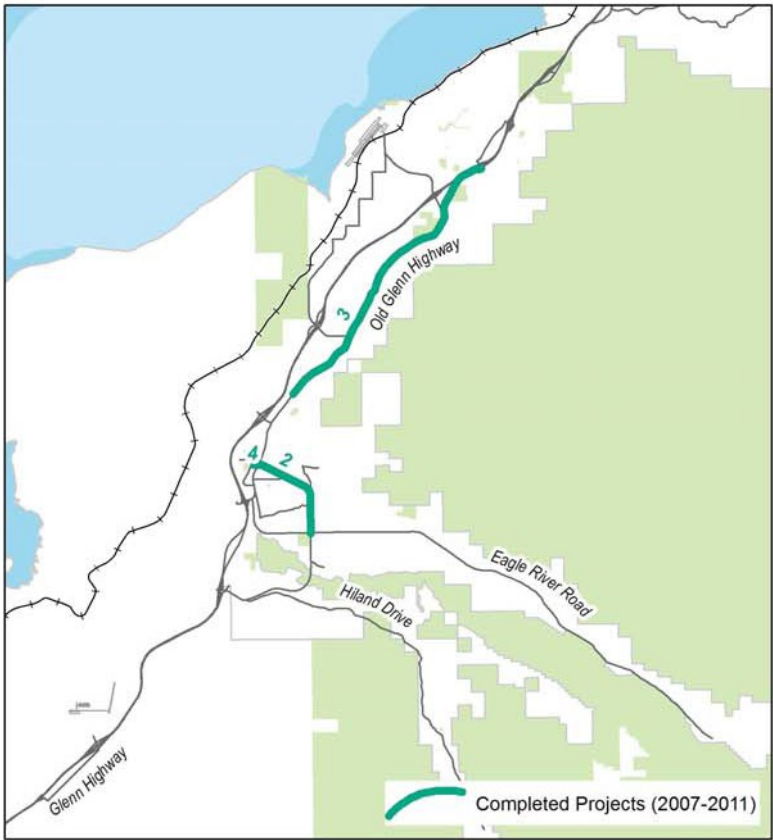


Figure ES-3 Completed Projects Since 2007 – Chugiak-Eagle River

Source: MOA

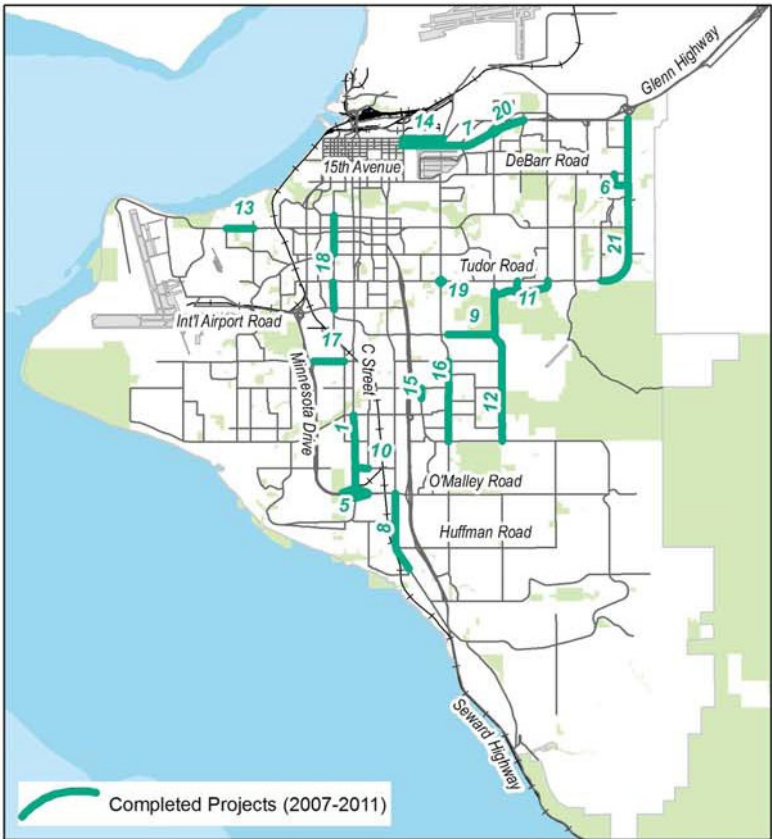


Figure ES-4 Completed Projects Since 2007 – Anchorage Bowl

Source: MOA

Note: Muldoon Road improvements (Project 21) are not anticipated to be completed until 2012.

consisting of the metropolitan area and the Matanuska-Susitna (Mat-Su) Borough is expected to continue to grow as the primary urbanized region in Alaska, with population projected to exceed 500,000 by 2035 (see Figure ES-5).

Other important expectations about future growth in the metropolitan area include the following:

- Metropolitan area residents will increase by 65,200 people, of whom 37,640 will live in the Anchorage Bowl and 27,560 will reside in Chugiak-Eagle River. Table ES-1 shows the projected household growth by planning area for the metropolitan area
- Anchorage Bowl employment growth will continue, representing more than 70 percent of the regional employment. Table ES-2

shows the projected employment growth by planning area within the metropolitan area

- The Mat-Su Borough will continue to gain a larger share of regional households, accounting for nearly 50 percent of the total household growth between 2007 and 2035
- This growth in population and employment, including the locations of growth, relates directly to future transportation needs. The 2035 picture reveals these broad trends:
  - An urban region encompassing the metropolitan area and the Mat-Su Borough
  - Continuation of Anchorage's role as the dominant population and employment center for the region and Alaska
  - Increasing shares of metropolitan area population

Figure ES-5 Regional Population Growth

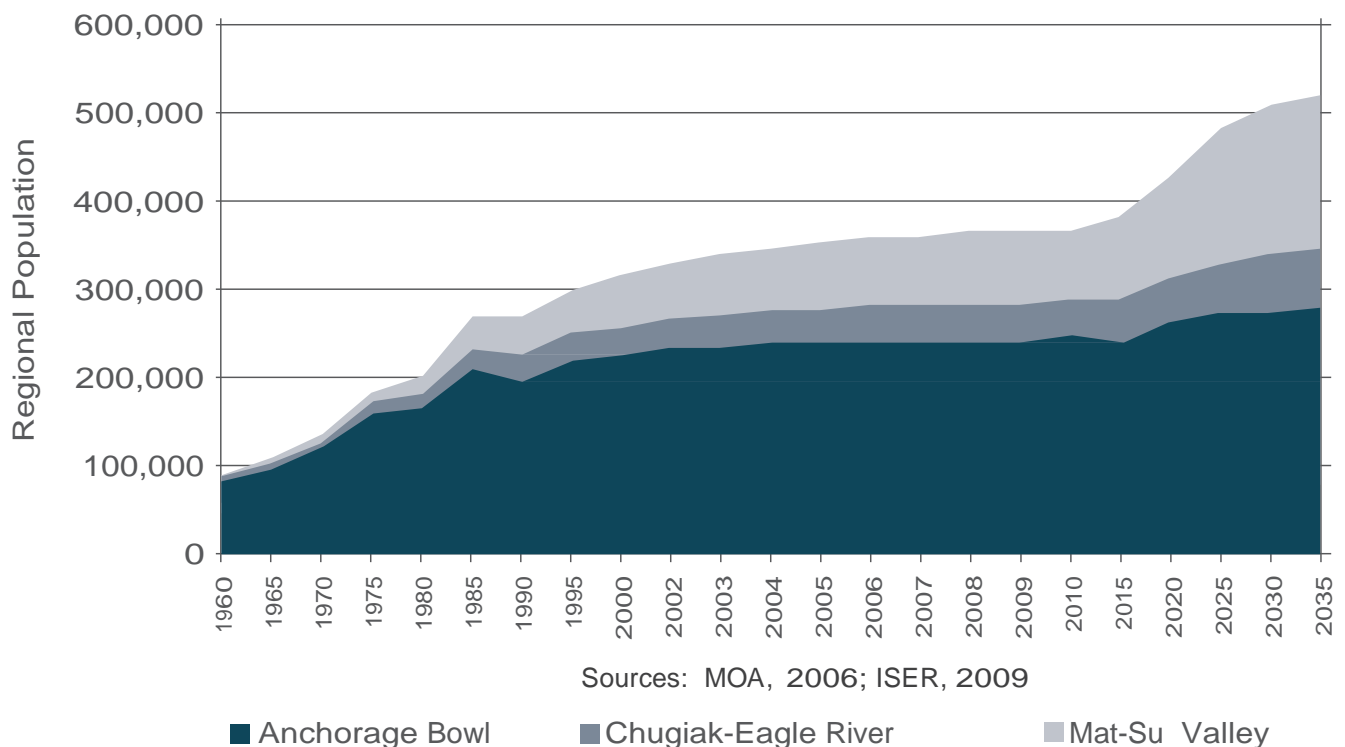




Table ES-1 Projected Household Growth by Planning Area, 2007–2035

| PLANNING AREA            | HOUSEHOLD GROWTH | PERCENTAGE OF TOTAL GROWTH |
|--------------------------|------------------|----------------------------|
| Central Anchorage Bowl   | 3,700            | 12                         |
| Northeast Anchorage Bowl | 4,480            | 14                         |
| Northwest Anchorage Bowl | 6,680            | 20                         |
| Southeast Anchorage Bowl | 3,200            | 10                         |
| Southwest Anchorage Bowl | 3,030            | 10                         |
| South Fork Eagle River   | 1,600            | 5                          |
| Eagle River              | 770              | 2                          |
| Eagle River Valley       | 2,410            | 8                          |
| Chugiak                  | 1,810            | 6                          |
| Birchwood                | 2,460            | 8                          |
| Peters Creek             | 890              | 3                          |
| Eklutna                  | 690              | 2                          |
| Total                    | 31,720           | 100                        |

Table ES-2 Projected Employment Growth by Planning Area, 2007–2035

| PLANNING AREA            | EMPLOYMENT GROWTH | PERCENTAGE OF TOTAL GROWTH |
|--------------------------|-------------------|----------------------------|
| Military                 | 4,740             | 11                         |
| Central Anchorage Bowl   | 6,190             | 14                         |
| Northeast Anchorage Bowl | 9,160             | 20                         |
| Northwest Anchorage Bowl | 14,310            | 32                         |
| Southeast Anchorage Bowl | 600               | 1                          |
| Southwest Anchorage Bowl | 4,030             | 9                          |
| South Fork Eagle River   | 130               | 0                          |
| Eagle River              | 2,080             | 5                          |
| Eagle River Valley       | 250               | 1                          |
| Chugiak                  | 1,130             | 3                          |
| Birchwood                | 1,010             | 2                          |
| Peters Creek             | 550               | 1                          |
| Eklutna                  | 320               | 1                          |
| Total                    | 44,500            | 100                        |

- in suburban settings, primarily in Chugiak-Eagle River
- A more diverse population. The metropolitan area is the largest Native village in Alaska, and the Alaska Native population is expected to continue to grow.
- An aging metropolitan area population. The proportion of the population older than 60 years of age will nearly double to more than 70,000
- Continuation of Anchorage's role as the dominant hub and transfer location for freight

movements for the region and Alaska

- Tighter clustering and higher densities of development along transit corridors and in employment districts and town centers in the Anchorage Bowl and in Chugiak-Eagle River, as defined by comprehensive plans
- Higher energy costs for transportation resulting in the need for more efficient personal vehicles, more dependency on public transportation, and changes in personal travel behaviors
- Increased public health consciousness resulting in more active travel behaviors and requiring better pedestrian, bicycle, and trail facilities
- Improvements in technology resulting in more efficient transportation management systems

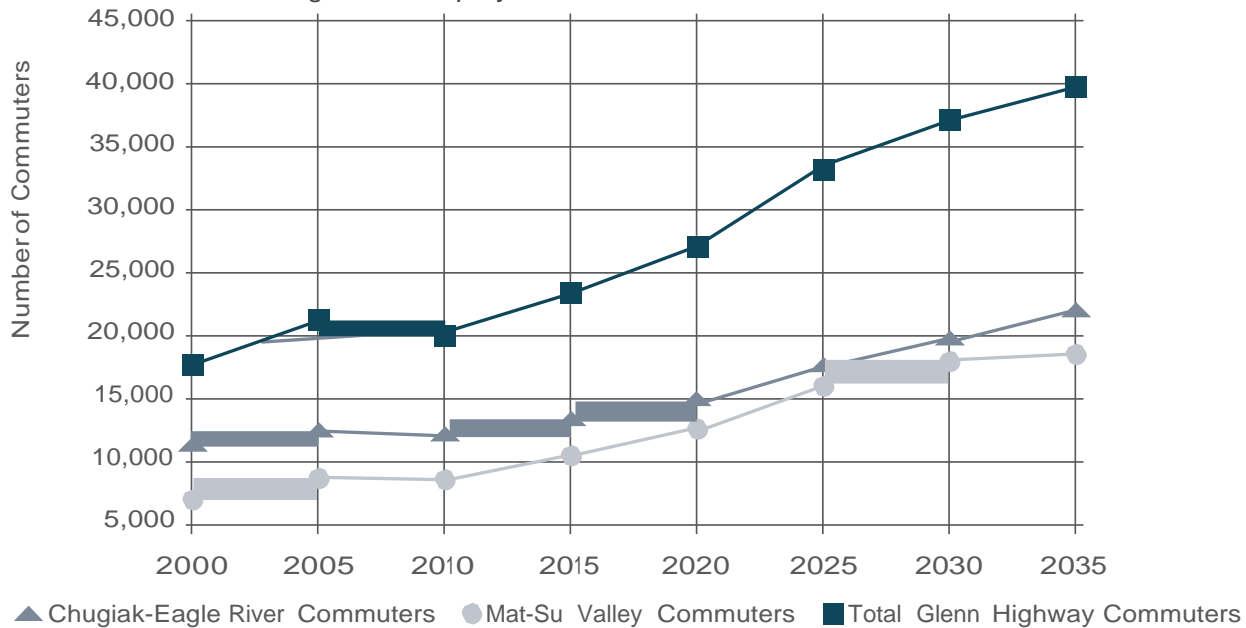
Advancements in e-commerce will provide added flexibility for employment and shopping travel needs. Daily travel within the metropolitan area continues to grow because of steady growth in the AMATS planning area and the Mat-Su Valley. Daily vehicle miles traveled will also increase, not only because more trips will be made every day but because a larger share of trips is forecast to travel a longer distance from suburban locations to places of employment.

### TRANSPORTATION SYSTEM NEEDS

In 2035, 560,000 more daily trips than in 2007 will vie for space on the transportation system within the Anchorage metropolitan area. Figure ES-5 illustrates the increase in weekday person trips expected by 2035. Traffic is expected to increase substantially on all of the existing highways, arterials, and collectors streets throughout the metropolitan area. An example of the projected increase in commuter traffic in the Glenn Highway corridor is shown in Figure ES-6. Other characteristics of the 2035 transportation system include deficiencies in public transportation services and continued gaps in the pedestrian, bicycle, and trail systems that limit the effectiveness of the existing networks to connect all areas of the region.

Many strategies can be used to meet future transportation demand. This MTP identifies a balanced approach, recognizing that no one solution is adequate to meet the increasing demands placed on the transportation system. Concerted efforts continue to be made toward improving the safety of the transportation system; however, additional investments are needed to make further progress. The transportation strategies employed in this MTP are consistent with AMATS policies and address six main transportation elements:

Figure ES-6 Projected Commuters from Chugiak-Eagle River and the Mat-Su Valley to Anchorage Bowl Employment



- Roads: overall capacity and safety improvements, major commuter corridors, and grid network connections
- Public transportation fixed route bus service, carpool/vanpool, and paratransit service
- Non-motorized transportation (pedestrian, bicycle, and trails systems): new facilities, solutions to fill system gaps, and facility design improvements
- Congestion management:
  - Transportation demand management (TDM): vanpools, Guaranteed Ride Home Program, employer participation, telecommuting, ride-share programs, tax benefits, cash incentives, parking management, school access and safety
  - Traffic system management (TSM): intersection improvements, access control management, traffic signal timing, signal system upgrade and central traffic management, and traffic calming
- Intelligent transportation system (ITS) management: high-priority transportation corridor prototype, integrated geographic information system, 511 traveler information system, and asset management system
- Freight distribution: Port of Anchorage, TSAIA, Alaska Railroad, and truck/freight distribution
- Regional connections: Knik Arm Crossing, regional public transportation services, and possibly commuter rail

To meet the 2035 travel demands of the region, a total of 227 capital projects are identified in the MTP. The sum of the capital costs for these improvements exceeds \$4 billion dollars (in 2010 dollars).



FUNDING

Federal legislation requires the MTP to be "financially constrained." In other words, the cost of implementing and maintaining transportation improvements should be within a funding amount that can reasonably be expected to be available during the life of the plan. The region faces a new funding reality. Demands for transportation services, particularly

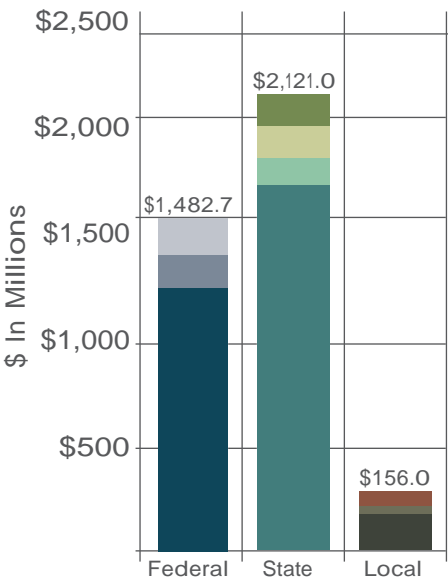
increasing more rapidly than the sources of funds to pay for them. Three major factors contribute to this. First, federal revenues that have been historically used to fund transportation improvements in Alaska are declining and expected to continue at lower levels for the foreseeable future. Second, regional development patterns are actually increasing the average travel distance between housing and jobs. Finally, travelers continue to heavily rely on their personal motor vehicles (92 percent of all regional travel) to accomplish most trips.

Revenue Sources and Amounts

Revenue is accumulated from three primary sources: federal, state, and local agencies. The total estimated to be available by 2035 to fund transportation capital improvements, operations, and maintenance is approximately \$5.3 billion dollars.

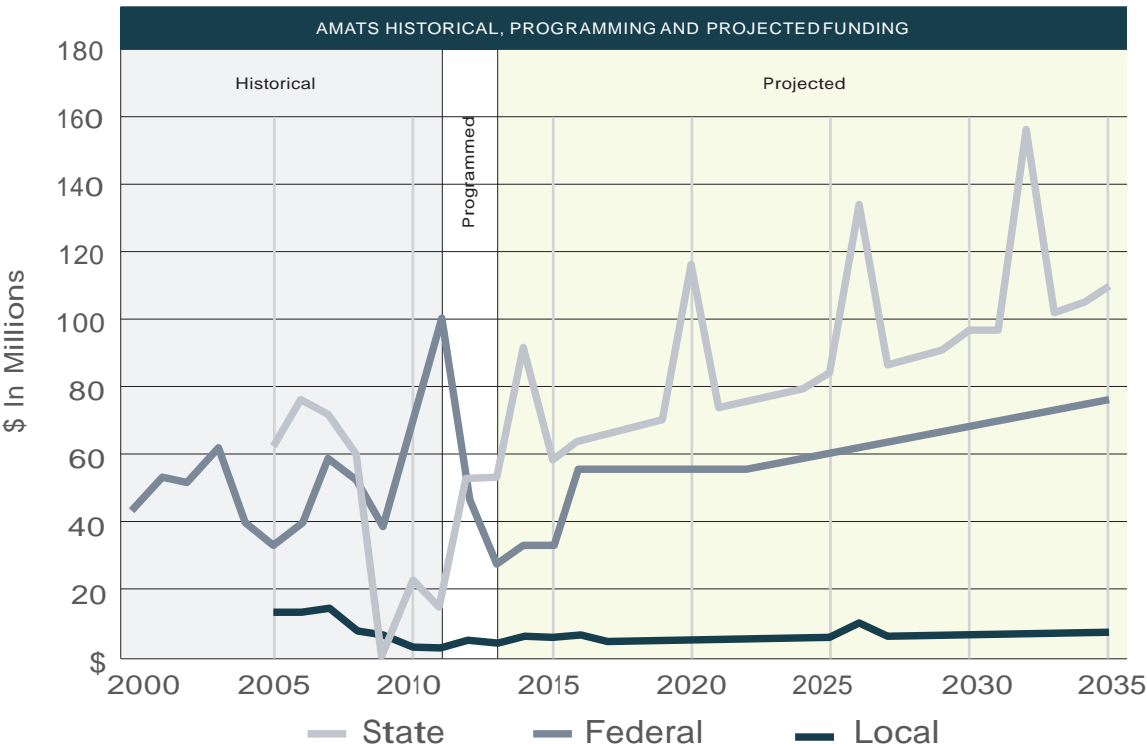
The total amounts of federal, state, and local funds, by category, in the MTP are shown in Figure ES-7. Figure ES-8 shows the estimated annual level of federal, state, and local funds expected for the MTP through the year 2035.

Figure ES-7 Federal, State, and Local Revenues Totals Through 2035



- Federal
- Federal Transit Administration
  - Federal Other
  - Federal Highway Administration
- State
- State Match
  - Alaska Transportation Fund
  - General Obligation Bond
  - Legislative Capital
- Local
- Municipality of Anchorage Transit Bonds
  - Local Match to Federal Dollars
  - Municipality of Anchorage Capital

Figure ES-8 Federal, State, and Local Revenues by Year Through 2035

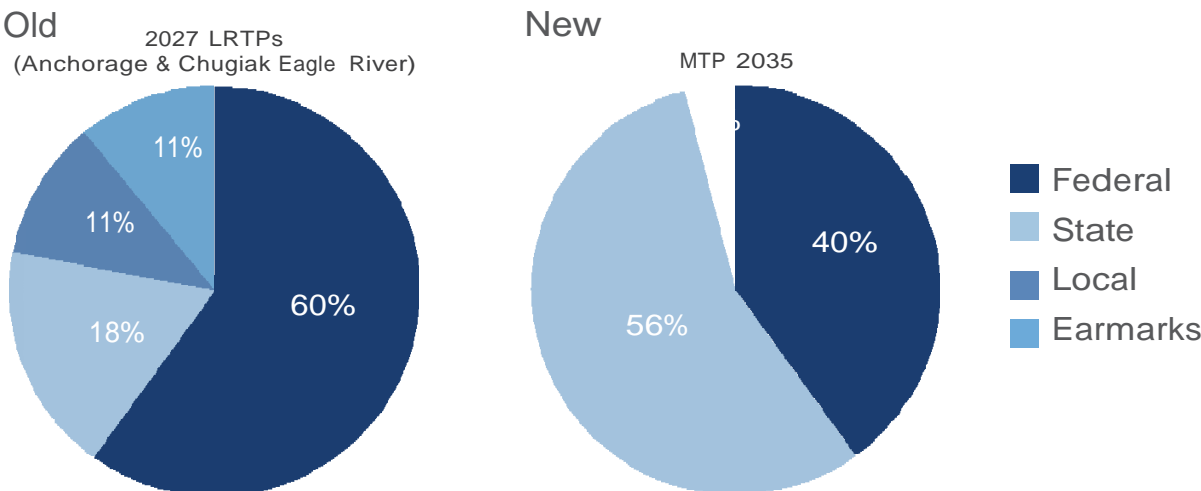


The funding assumptions used in the MTP differ from those used in the 2027 LRTPs for Chugiak-Eagle River and the Anchorage Bowl.

The comparison of the differences in the federal, state, and local funding assumptions between the 2027 LRTPs and the 2035 MTP are shown in Figure ES-9.

The noticeable differences in the assumptions for the 2035 MTP are the exclusion of congressional earmarks and the larger proportion of state funds supporting the transportation system which is largely state owned.

Figure ES-9 Comparison of Federal, State, and Local Revenues Percentages for the 2027 LRTPs and 2035 MTP



### Comparison of Revenues versus Expenses

Funding accrues over time, as does the expenditures for needed transportation capital improvements. The 2035 MTP divides funding into two timeframes; short term is from 2011 through 2023 and long term is from 2024 through 2035. Total available funding in the short term is estimated to be \$1.7 billion and the remaining \$2.1 billion will accrue during the long-term period of the 2035 MTP. Certain transportation improvement projects are phased because they can take several years to design and construct and/or they are very costly. Splitting such projects into phases allows early implementation, while funds accrue for later phases.

The identified federal, state, and local funds will be insufficient to build all projects identified during the 2035 needs analysis to meet all of the 2035 travel demands. A shortfall of about \$2.1 billion has been identified as the difference between the needed capital improvements and the available funding levels. To ensure the MTP meets the financially constrained requirement, projects were moved into the illustrative category.

The figures shown above do not include the management and O&M costs for the future transportation system. AMATS has prioritized the operation, maintenance, and safety of the existing multimodal

transportation system and, therefore, adequate funding appears to be available (estimated to cost \$1.5 billion).

### Knik Arm Crossing Public-Private Partnership

The MTP also includes the Knik Arm Crossing Project. The funding for the capital improvements and continuing O&M for the Knik Arm Crossing is to be delivered under a public-private partnership (P3). The capital improvements and O&M costs of the Knik Arm Crossing are estimated to be \$932 million (in 2010 dollars). In its ordinance (AO No. 2012-30S) adopting the MTP, the Anchorage Assembly specifically expressed the intent to prevent the degradation of other Anchorage road construction and maintenance programs contained in the MTP, by maintaining consistent priorities and preserving AMATS transportation facilities funding from diversion to the KAC project. No funding currently planned for AMATS project implementation of the existing MTP shall be used to support construction of any element of the Knik Arm Crossing.



## RECOMMENDATIONS

Recognizing the broad range of transportation modes used and the dispersed travel patterns, MTP investments need to expand the travel choices and be effectively spread across these program areas:

- Increasing safety, connectivity, and capacity on the road network
- Managing the transportation system better
- Deploying new technologies for traffic signal control
- Expanding public transportation service and infrastructure
- Providing improved and expanded pedestrian, bicycle, and trail facilities
- Facilitating efficient freight handling and movement
- Improving traveler choices and options
- Enhancing integration of transportation facilities and services with community planning and design

Therefore, the list of recommended investments has been ranked short term and long term to ensure that the most needed projects (in time and degree of importance in meeting the regional goals for transportation) receive funding. Initial screening criteria were adopted by AMATS to be used in identifying the final MTP roadway, public transportation, and non-motorized projects. The projects were prioritized into the short-term and long-term categories to best match the flow of funding.

The recommended MTP projects were reviewed during the public involvement process consisting of general public review, AMATS Technical Advisory Committee meetings, MTP Technical Advisory Committee Plus meetings, Policy Committee meetings, MOA Planning & Zoning Commission Public Hearing, and Municipality of Anchorage (MOA) Assembly Public Hearing.

### Summary of MTP Capital Improvement Projects

The recommended 2035 MTP provides the framework for the development, operations, and maintenance of a multimodal transportation system to meet the travel needs of the metropolitan area through the year 2035. The MTP meets the requirements set forth by the current federal legislation and regulations, but more important, it provides a harmonious mixture of road, public transportation, and non-motorized projects to match the funding challenges of the expected reduction of federal funding during the next 25 years. Table ES-3 summarizes the capital costs of the recommended MTP projects by mode.

Table ES-3 Summary of Recommended MTP Projects Capital Cost

| MODE                  | 2010 COST ESTIMATE (\$ MILLION) |                          |                |
|-----------------------|---------------------------------|--------------------------|----------------|
|                       | SHORT TERM<br>(2011-2023)       | LONG TERM<br>(2024-2035) | 2035 MTP TOTAL |
| Roads                 | \$1,185.20                      | \$916.40                 | \$2,101.60     |
| Public Transportation | \$87.50                         | \$95.70                  | \$183.20       |
| Non-motorized         | \$61.27                         | \$37.93                  | \$99.20        |
| AMATS Sub-total       | \$1,333.97                      | \$1,050.03               | \$2,384.00     |
| Knik Arm Crossing     | \$702.00                        | \$230.00                 | \$932.00       |
| Total Projects        | \$2,035.97                      | \$1,280.03               | \$3,316.00     |

### Road Improvement Highlights

The recommended MTP road improvements are shown in Figures ES-10 and ES-11 and accomplish the following:

- Complete missing segments to reduce the need to expand other streets
- Interconnect the upgraded Seward Highway with improved interchanges and a new freeway interchange connection to Minnesota Drive, and add three new east-west street connections across the Seward Highway to provide better circulation
- Connect the Glenn and Seward highways to provide needed capacity and more efficient freight distribution
  - Phase I: 36th Avenue/ Seward Highway interchange improvements from Tudor Road to 33rd Avenue
  - Phase II: Seward Highway Midtown congestion relief between 33rd Avenue and Chester Creek
  - Phase III: Seward Highway to Glenn Highway connection between Chester Creek and Airport Heights
- Improve the Glenn Highway interchanges at Hiland Road and Artillery Road and add a new partial interchange at Farm Avenue to provide safer and more efficient movements in the Eagle River area
- Improve the Glenn Highway interchange at Muldoon Road to provide safer and more efficient movements for the Joint Base Elmendorf Richardson, Veterans Administration Hospital, Takahtnu Commons, and residents in northeast Anchorage.
- Improve surface streets over and around the Glenn and Seward highway corridors to calm traffic and create opportunities for modes of travel other than the automobile
- Ease the Glenn Highway corridor commute with interchange improvements and additional high-occupancy vehicle (HOV) lanes
- Expand access to the Port of Anchorage and Port MacKenzie and provide a second major roadway connection from Anchorage to Interior Alaska with the Knik Arm Crossing project
- Improve circulation and accessibility in the Eagle River Central Business District and residential core with a number of improvements on the arterial and collector system

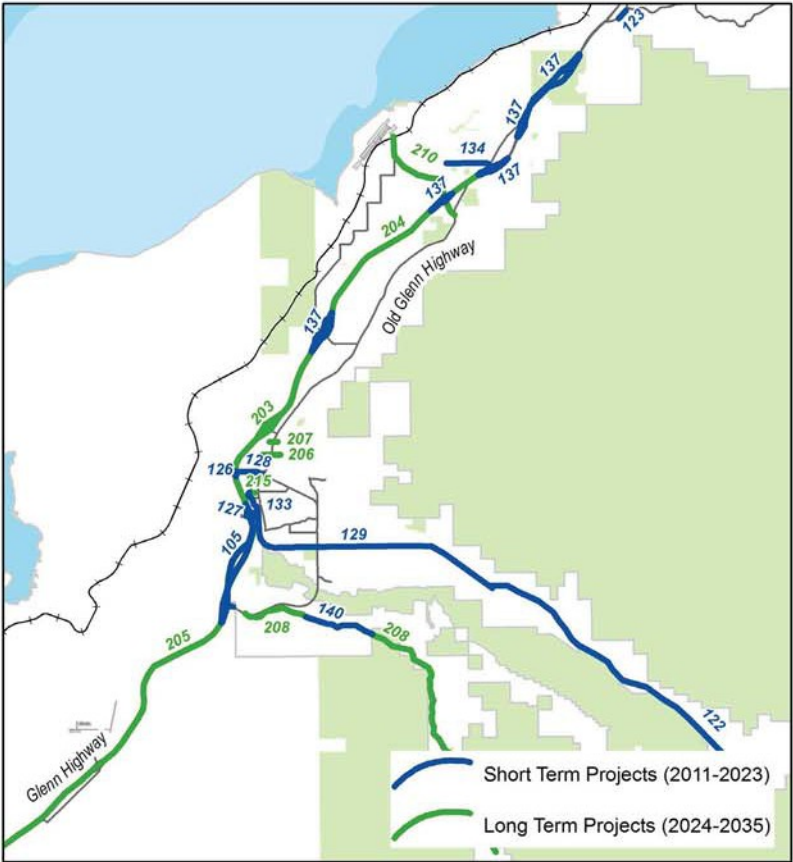


Figure ES-10 Recommended Road Projects-Chugiak-Eagle River

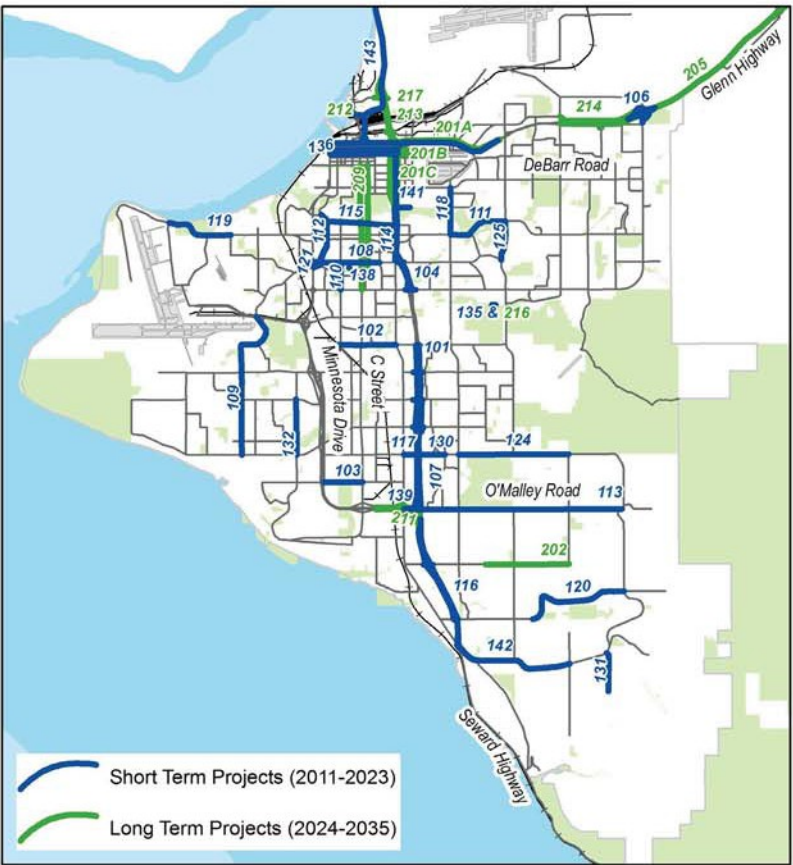


Figure ES-11 Recommended Road Projects-Anchorage Bowl

### Public Transportation Improvement Highlights

The recommended MTP public transportation improvements are shown in Figures ES-12 and ES-13 and accomplish the following:

- Replacement of the existing People Mover bus fleet
- Replacement and expansion of AnchorRIDES fleet
- Replacement and expansion of Share-a-ride (vanpool) fleet
- Service expansion in the short term to include increased span of weekday service, Sundays and holidays
- Service expansion in short term to provide minimum 30-minute frequency on all routes
- Service expansion in short term to provide 15-minute frequency on Routes 3, 36, and 45
- Service expansion in long term to provide 15-minute frequency on Routes 7, 9, and 15
- New service routes for South Anchorage-Hillside (short term), Klatt-Southport Circulator (long term), Abbott Rd-Elmore Rd Circulator (long term), International Airport-UAA Circulator (long term)
- Service Expansion for the Mat-Su and Anchorage Express Bus to provide 30 minute frequency during morning and afternoon peak periods
- Restoring Chugiak-Eagle River local service (long term)
- Initial phase of the Bus Rapid Transit (BRT) implementation will connect Downtown, Midtown, and U-Med District (long term)
- New service for South Anchorage to Downtown Express Route (long term)





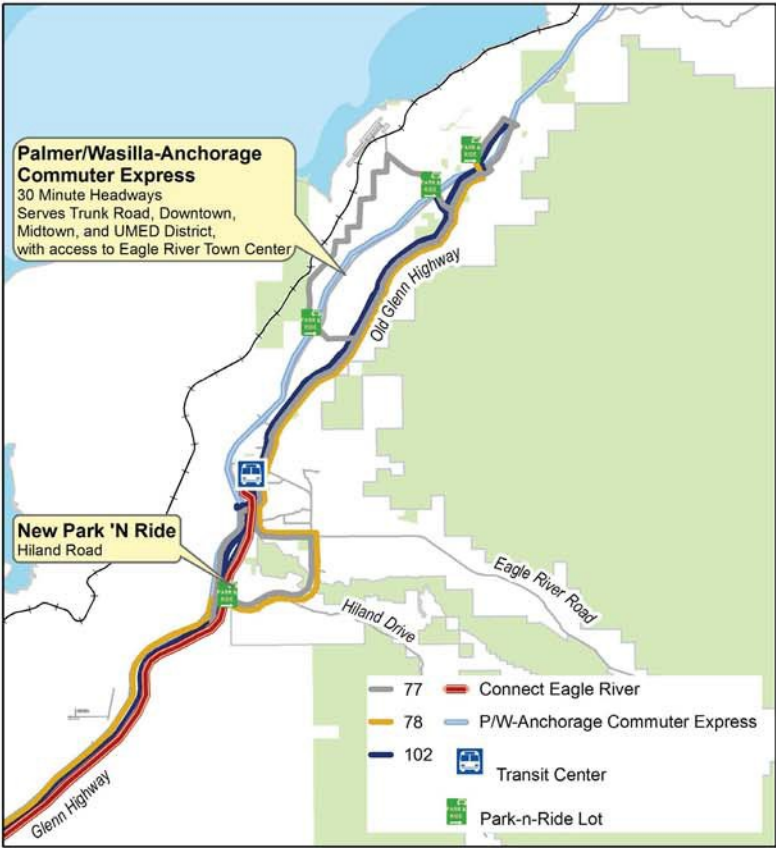


Figure ES-12 The Recommended MTP Public Transportation Improvements – Chugiak-Eagle River

Source: AMATS, People Mover, Valley Mover

Notes:  
Circ. = Circulator  
Exp. = Express  
P/W = Palmer/Wasilla



Figure ES-13 The Recommended MTP Public Transportation improvements – Anchorage Bowl

Source: AMATS, People Mover, Valley Mover

Notes:  
Circ. = Circulator  
Exp. = Express  
P/W = Palmer/Wasilla

### Non-motorized Transportation Improvement Highlights

The recommended MTP non-motorized transportation improvements are shown in Figures ES-14 and ES-15 and highlighted projects consist of the following:

- 76 short-term and 34 long-term projects
- Campbell Trail undercrossing at Lake Otis Parkway
- Sidewalk construction on Northern Lights Boulevard, south side between Captain Cook Estates Drive and Lois Drive
- Bicycle boulevard on 27th Avenue between Blueberry Road and Minnesota Drive
- Separated pathway on north side of Debarr Road between Orca Street and Turpin Street
- Upgrade of existing sidewalk on south side of Debarr Road between Boniface Parkway and Muldoon Road
- Bicycle lanes on Arctic Boulevard between Benson Boulevard and 10th Avenue (two projects)
- Bicycle lanes on C Street between O'Malley Road and 10th Avenue
- Campbell Trail lighting between Victor Road and Seward Highway
- Coastal Trail connection to the Ship Creek Trail
- Bicycle lanes on Elmore Road between 48th Avenue and Tudor Road
- Separate pathway on Old Seward Highway between DeArmoun Road and Seward Highway
- Sidewalk separation and upgrade on Northern Lights Boulevard between Seward Highway and Minnesota Drive
- Sidewalk and lighting on Coronado Road
- Chester Creek Trail expansion from Goose Lake to Westchester Lagoon
- Coastal Trail widening from Westchester Lagoon to Earthquake Park
- Bicycle lanes on Raspberry Road between Kincaid Park entrance and Minnesota Drive
- Tudor Road separated pathway upgrade between Elmore Road and Minnesota Drive
- Bicycle lanes on Dimond Boulevard between Sand Lake Road and Jewell Lake Road
- Construction of missing sidewalks in neighborhood east of Arctic Boulevard and 32nd Avenue
- Completion of Potter Drive missing sidewalk link between Arctic Boulevard and Dowling Road
- Bicycle lanes on North Eagle River Access Road between Old Glenn Highway and Powder Ridge Drive



Figure ES-14 Recommended Non-Motorized Transportation Projects – Chugiak-Eagle River

Source: AMATS Non-Motorized Transportation Plans

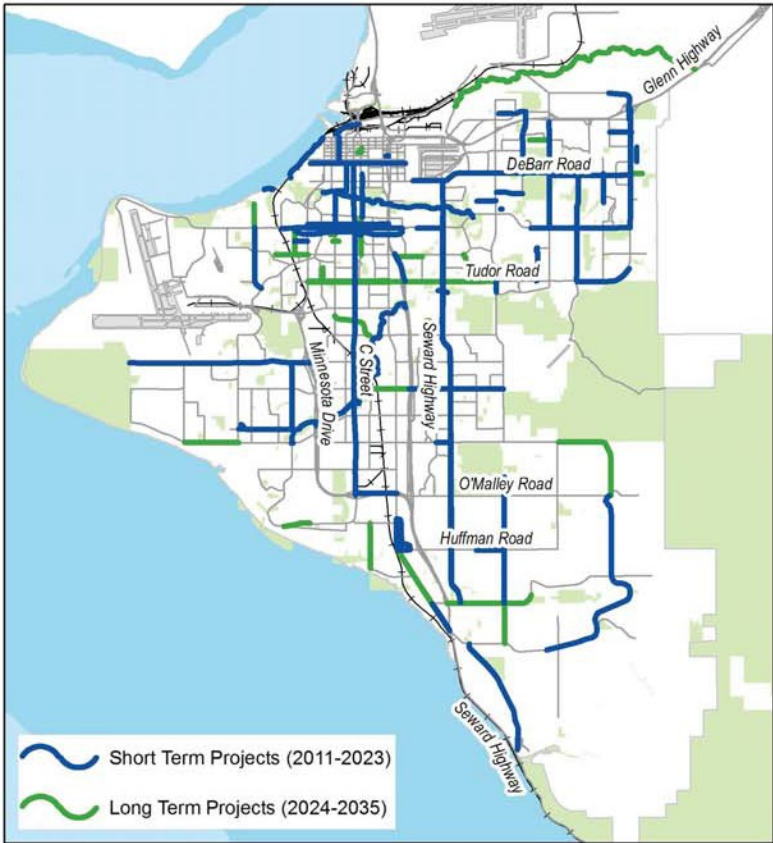


Figure ES-15 Recommended Non-Motorized Transportation Projects – Anchorage Bowl

Source: AMATS Non-Motorized Transportation Plans

AIR QUALITY  
CONFORMITY

Air quality in Anchorage is subject to national ambient air quality standards established by the Environmental Protection Agency (EPA). The EPA has established standards for ground level ozone, sulfur oxides, nitrogen dioxide, airborne lead, carbon monoxide (CO), and particulate matter less than 2.5 microns in diameter (PM-2.5) and less than 10 microns in diameter (PM-10). These criteria pollutant standards were established to protect health, particularly for those most susceptible to the effects of air pollution.

Impacts of expected growth in travel activity and the transportation improvements in the MTP on emissions of CO, PM-2.5, and PM-10 were analyzed for years 2015, 2025, and 2035. The analysis shows that the Anchorage metropolitan area meets the air quality conformity requirements set by the EPA.

IMPLEMENTATION &  
MONITORING

The recommended MTP improvements will make substantial contributions to Anchorage’s economic health, livability, and attractiveness and will reinforce its status as a great subarctic northern city and major gateway to Alaska. The successful implementation of the MTP will depend on strong political leadership, close collaboration among government jurisdictions, broad public support, and commitments to identifying and securing sufficient funding for the recommended multimodal transportation system improvements.

Regular reassessment of progress, system performance, and traffic congestions will aid in establishing priorities for implementation activities. A detailed set of specific action items has been developed to guide the implementation of the MTP. The categories for the policy recommendations and action items are listed in Table ES-4.

Table ES-4 MTP Policy and Action Item Categories

|  |                             |                            |
|--|-----------------------------|----------------------------|
| Comprehensive Plans                                    | Financial Issues            | Public Involvement         |
| Transportation System                                  | Roads                       | Public Transportation      |
| Non-Motorized System                                   | Freight                     | Regional Connections       |
| Congestion Management                                  | Coordination of Local Plans | Maintenance and Operations |
| Environmental Concerns, Air Quality, and Public Health |                             |                            |



## PROJECT IMPLEMENTATION

Before it is implemented, a project or program must first be included in one of the following funding documents: the MOA Capital Improvement Program (CIP) or the AMATS Transportation Improvement Program (TIP). The TIP is subsequently included without change in the Alaska Department of Transportation and Public Facilities (DOT&PF) Statewide Transportation Improvement Program (STIP), directly or by reference, after approval of the TIP by AMATS and the Governor.

Each funding document identifies the most likely funding source and ranks the projects and programs by priority. The CIP is funded locally with general obligation bonds and identifies local priorities for state funds. The AMATS TIP and the DOT&PF STIP are funded primarily with federal transportation dollars originating from the gasoline tax paid into the Highway Trust Fund and complemented by state or local matching funds. The funding source is important because each source requires specific project development processes. It determines whether National Environmental Policy Act documentation or state or local permitting processes apply to a project.

## CHALLENGE FOR NEXT MTP

Funding, Funding, and Funding! It is extremely important to not become complacent with the successes of the past investments in the region's transportation system and assume that it will take care of itself. As a community, we need to keep transportation funding on the radar screen with the other public needs. Our transportation system is a critical component of our community's livability, economy, and security. In addition, we must stay at the forefront of changes in the economy, travel behavior changes, technology changes, and performance measures. These issues and more will be addressed in the next MTP process during the next four years.

## FINAL THOUGHTS – YOUR CONTINUED INVOLVEMENT

With the improvements in the performance of Anchorage's transportation system witnessed during the past five years as a result of continued strategic investments, it may become easy to take the system for granted. It takes the daily efforts of the MOA and DOT&PF professionals to plan, design, and keep the system operating and maintained at the high standard we expect. Their efforts in providing a safe and efficient system for our community can be thankless. Their work is typically only noticed when there are problems.

We are all part of the transportation system as users and investors with our taxes and user fees. Your contributions help make the system better every day. Ride People Mover, ride your bike, take a walk, tour the Port of Anchorage or the TSAIA, and drive around the area. When you see something that is working well or not working to your satisfaction, make a call to the MOA or DOT&PF to provide your feedback.

Visit the AMATS website ([www.muni.org/Departments/OCPD/Planning/AMATS/Pages/2035MTP.aspx](http://www.muni.org/Departments/OCPD/Planning/AMATS/Pages/2035MTP.aspx)) to review the 2035 MTP. Check out the MTP project maps to find out what



new projects will be affecting your neighborhood or routes to work, school, shopping, and recreation. Get involved with the project development process for the new projects. Attend an AMATS Policy Committee or Technical Advisory Committee meeting.

Thank you for your involvement in the 2035 MTP process and stay involved in making our community better today and in the future!

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# Chapter

## INTRODUCTION

The metropolitan transportation plan (MTP) is a blueprint to guide the development and implementation of needed transportation system improvements. This MTP looks more than 20 years into the future to recommend improvements in the transportation system from today to 2035.

This MTP update considers the visions of community comprehensive plans and the context of unique subareas within the Anchorage metropolitan area, which encompasses the Anchorage Bowl and Chugiak-Eagle River. As directed by federal guidance, this MTP serves the entire Anchorage metropolitan area with one integrated plan.

The previous plans for the Anchorage Bowl and Chugiak-Eagle River areas were founded on extensive public involvement and a long-term vision for each area. It is now time to update each of these plans to ensure that they are indeed helping to implement those long-term visions, as well as make sure that those visions are still compatible with the views of current residents. Adjustments have also been made to reflect changing economic and environmental conditions that affect the planned transportation system improvements.

### What topics does the MTP cover?

- Public involvement
- Forecasts of population, households, and employment anticipated in 2035
- Assessment of the current transportation system and identification of its problems
- Evaluation of needs and opportunities for transportation elements:
  - Roads
  - Public transportation
  - Non-motorized transportation (pedestrians and bicycle system)
  - Congestion management
  - Freight distribution
  - Regional connections—air, rail, port, and highway
- Funding sources
- Recommendations
- Implementation plan

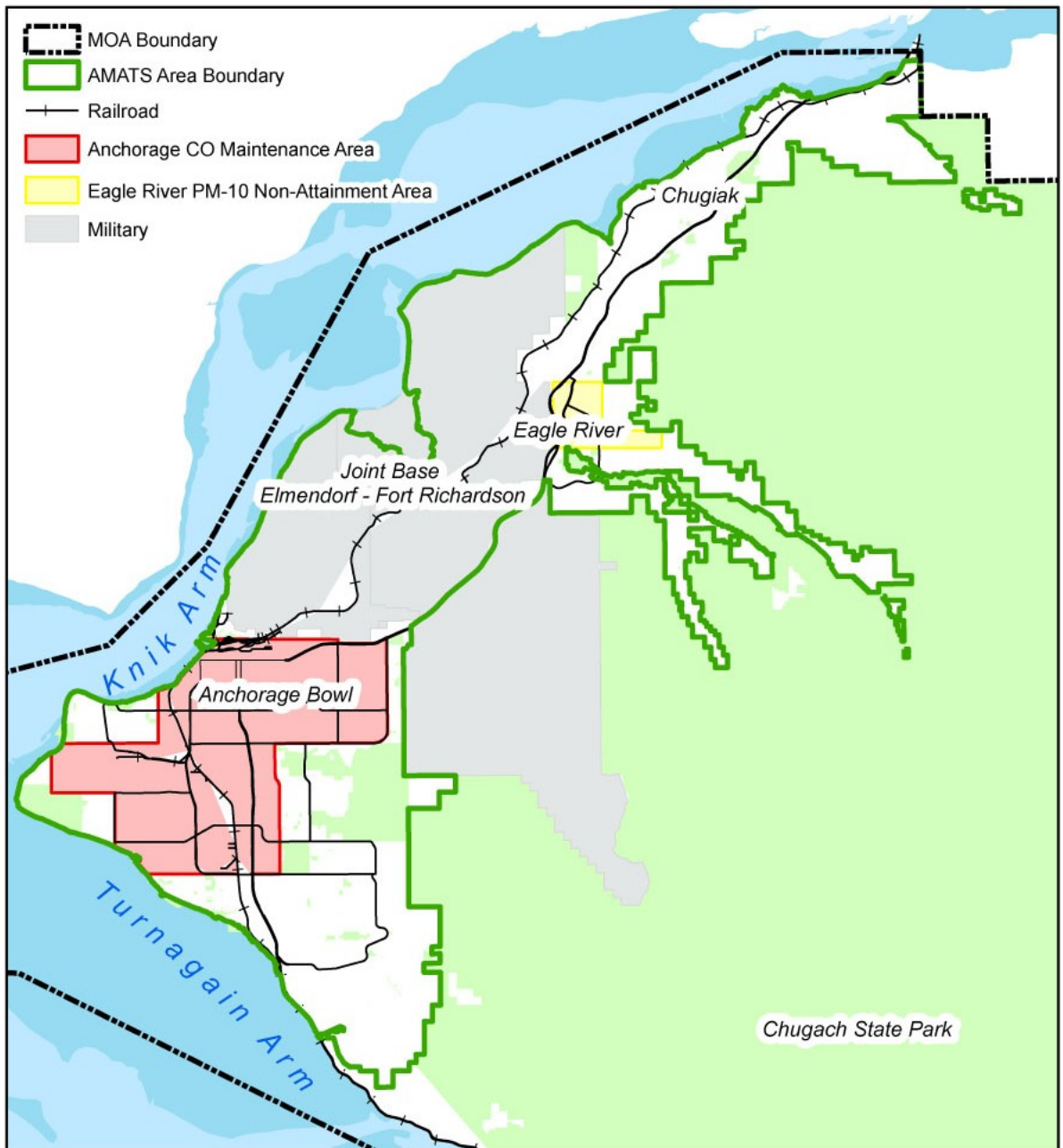
## SHAPING THE PLAN CHARACTER

The year 2011 marks 96 years since the Anchorage area emerged as the headquarters for railroad construction in Alaska. Like any major center of commerce, the area relies heavily on transportation infrastructure and services for mobility, economic activity, and connectivity to deliver goods and services. The progress of transportation, specifically its evolution in serving the population and traffic growth, is integral to the character and function of the area. The land within the Anchorage Metropolitan Area Transportation Solutions (AMATS) boundaries contains nearly 40 percent of the population of Alaska. **Figure 1-1** shows the shape and extent of the land that makes up the AMATS planning area.

Transportation is a vital part of the daily lives of Anchorage metropolitan area residents as well as the activities of the business community, service organizations and institutions, government agencies, and the military. The region's transportation infrastructure of roads, airports, port, railroad, transit services, and bicycle and pedestrian facilities is extensive. This infrastructure is the product of decades of policies, decisions, and investments. It is the starting point for the future.

In 2010, approximately 1.2 million personal and business trips were made every weekday; with each trip, the transportation system moved persons and goods

Figure 1-1 AMATS Boundaries



Source: Municipality of Anchorage GIS and Mapping Services

from one point to another. According to the most recent (2004-05) consumer expenditure surveys from the U.S. Bureau of Labor Statistics, the typical area household spends more than 21 percent of its disposable income on transportation. That is more than a combined \$1.3 billion expended annually for transportation by all area households.

This document plans for transportation facilities and services to ensure mobility and accessibility throughout the AMATS region.

The MTP addresses all modes and components of a fully integrated and comprehensive transportation system for the region. It is founded on a proactive, open, continuing dialog with community members. This communication process and the resulting MTP will guide and shape transportation decisions in the Anchorage metropolitan area for decades to come.

## UNDERSTANDING THE ORGANIZATIONAL STRUCTURE OF TRANSPORTATION PLANNING IN THE AMATS REGION

AMATS is the federally designated Metropolitan Planning Organization (MPO) responsible for transportation planning for the Anchorage Bowl, Chugiak, and Eagle

River. One of the most important roles of AMATS is the preparation and adoption of the MTP. Five primary groups participate in AMATS planning and decision-making activities:

- AMATS Policy Committee
- AMATS Technical Advisory Committee
- Municipal Assembly
- Municipal Planning and Zoning Commission
- Air Quality Advisory Committee

### Policy Committee

The AMATS Policy Committee has the authority to act on all matters relating to the continuing, comprehensive, and cooperative transportation and air quality planning process for the area. The committee consists of five equal voting members: Commissioner of the Alaska Department of Transportation and Public Facilities (DOT&PF) or a designee, Commissioner of the Alaska Department of Environmental Conservation or a designee, Municipal Mayor, and two Municipal Assembly Members. The Chair of the Policy Committee is the DOT&PF member. Responsibilities of the AMATS Policy Committee are as follows:

- Establish the needs and priorities of transportation

- Direct the preparation and implementation of transportation plans, programs, and studies
- Secure and manage funding to implement the Transportation Improvement Program (TIP)
- Provide overall direction to the AMATS Technical Advisory Committee and staff
- Ensure public involvement throughout the AMATS planning and decision-making process

### Technical Advisory Committee

The AMATS Technical Advisory Committee consists of these members: (1) DOT&PF Central Region Chief of Planning, (2) DOT&PF Regional Pre Construction Engineer, (3) representative from the Alaska Department of Environmental Conservation, (4) Municipal Planning Division Director, (5) Municipal Traffic Engineer, (6) Municipal Public Transportation Director, (7) representative from the Municipal Department of Health and Human Services, (8) a member of the Air Quality Advisory Committee, (9) Municipal Project Management & Engineering Division Director, (10) representative from the Port of Anchorage, and (11) representative from the Alaska Railroad Corporation.

The Chair of the Technical Advisory Committee is the Municipal Traffic



## 2035 Metropolitan Transportation Plan

Division Engineer. The committee duties include the following:

- Prepare and maintain the AMATS transportation plans, technical studies, and programs
- Provide recommendations to the Policy Committee about the effects of transportation and air quality plans and programs on the plans of other agencies
- Provide recommendations to the Policy Committee in its review of transportation projects and programs funded by the state and federal governments
- Receive public comments through the MOA Planning and Zoning Commission (acting as the AMATS Citizens' Advisory Committee) and the AMATS Air Quality Advisory Committee

### Municipal Assembly

The Municipal Assembly provides local government review and recommendations on the AMATS plans and programs to the AMATS Policy Committee. The Municipal Assembly's duties are as follows:

- Adopt by ordinance the MTP as the transportation plan element of the comprehensive plan
- Adopt by ordinance the Transportation Improvement Program (TIP)



- Adopt an official streets and highways plan
- Adopt the local area component of the State Implementation Plan for air quality
- Assist in securing adequate funding to implement the transportation program
- Designate two assembly members to serve as two of the three local

government representatives on the AMATS Policy Committee

### Municipal Planning and Zoning Commission

In its capacity as the AMATS Citizens' Advisory Committee, the Planning and Zoning Commission reviews transportation plans and programs. In another capacity, the Planning and Zoning Commission, whose members are appointed by the Mayor, reviews locations and site plans for roadway improvement projects. Responsibilities of the Planning and Zoning Commission are identified below:

- Review transportation plans and programs and prepare recommendations to both the Municipal Assembly and the AMATS Policy Committee
- Review and prepare recommendations on the transportation elements of the comprehensive plan and the Official Streets and Highways Plan (OS&HP) to the Municipal Assembly for adoption

### Air Quality Advisory Committee

The AMATS Air Quality Advisory Committee is the citizens' forum for air quality issues affecting the AMATS area. Specific functions of this group are to assist in promoting public participation in the air quality planning process and to comment



on air quality planning issues. Members of this group are appointed by the AMATS Policy Committee. Department of Health and Human Services is the coordinating agency for the Air Quality Advisory Committee. The committee's duties are as follows:

- Provide review and comment on air quality planning issues
- Assist in promoting public participation in the air quality planning process

## MEETING REGULATORY REQUIREMENTS

### National Transportation Program

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) was signed into law by the President in August 2005, replacing the expiring transportation funding bill known as the Transportation Equity Act for the 21st Century (TEA-21). SAFETEA-LU requires the MPO transportation planning process to explicitly provide for consideration of projects and strategies that accomplish the following eight planning factors:

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency

2. Increase the safety of the transportation system for motorized and non-motorized users
3. Increase the security of the transportation system for motorized and non-motorized users
4. Increase the accessibility and mobility options available to people and for freight
5. Protect and enhance the environment, promote energy conservation, and improve quality of life; and promote consistency between transportation improvements and state and local planned growth and economic development patterns
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight
7. Promote efficient system management and operation
8. Emphasize the preservation of the existing transportation system

The AMATS MTP is consistent with the national transportation program, addresses priority issues, and leverages funding opportunities and initiatives incorporated in the national program. This update was prepared in accordance with federal requirements that AMATS update its MTP every 4 years.

### Air Quality

Federal funding for local transportation projects is statutorily tied to achieving and maintaining minimum National Ambient Air Quality Standards. The AMATS region currently meets requirements for all six air pollutants for which there are standards. However, levels of particulate matter less than 10 microns in diameter (PM-10) and carbon monoxide (CO) sometimes approach or exceed standards. Although a standard has not been established for benzene, it is also a concern to area residents.

The Anchorage Bowl urbanized area is designated as a CO Maintenance Area. The Eagle River area is designated as a PM-10 non-attainment area. Because motor vehicles are primary sources of air pollution, AMATS must demonstrate that this MTP will not cause the region to fail to meet standards. Particular attention must be paid to PM-10, CO emissions, and compliance with the Anchorage CO Maintenance Plan prepared by the MOA for the CO Maintenance Area. This process is known as an air quality conformity determination and is discussed in detail in Chapter 9.

### Environmental Justice

The U.S. Department of Transportation has issued a final order on environmental justice. This final order requires that MPOs, like AMATS, identify and address disproportionately high and adverse pub-

2035 Metropolitan Transportation Plan

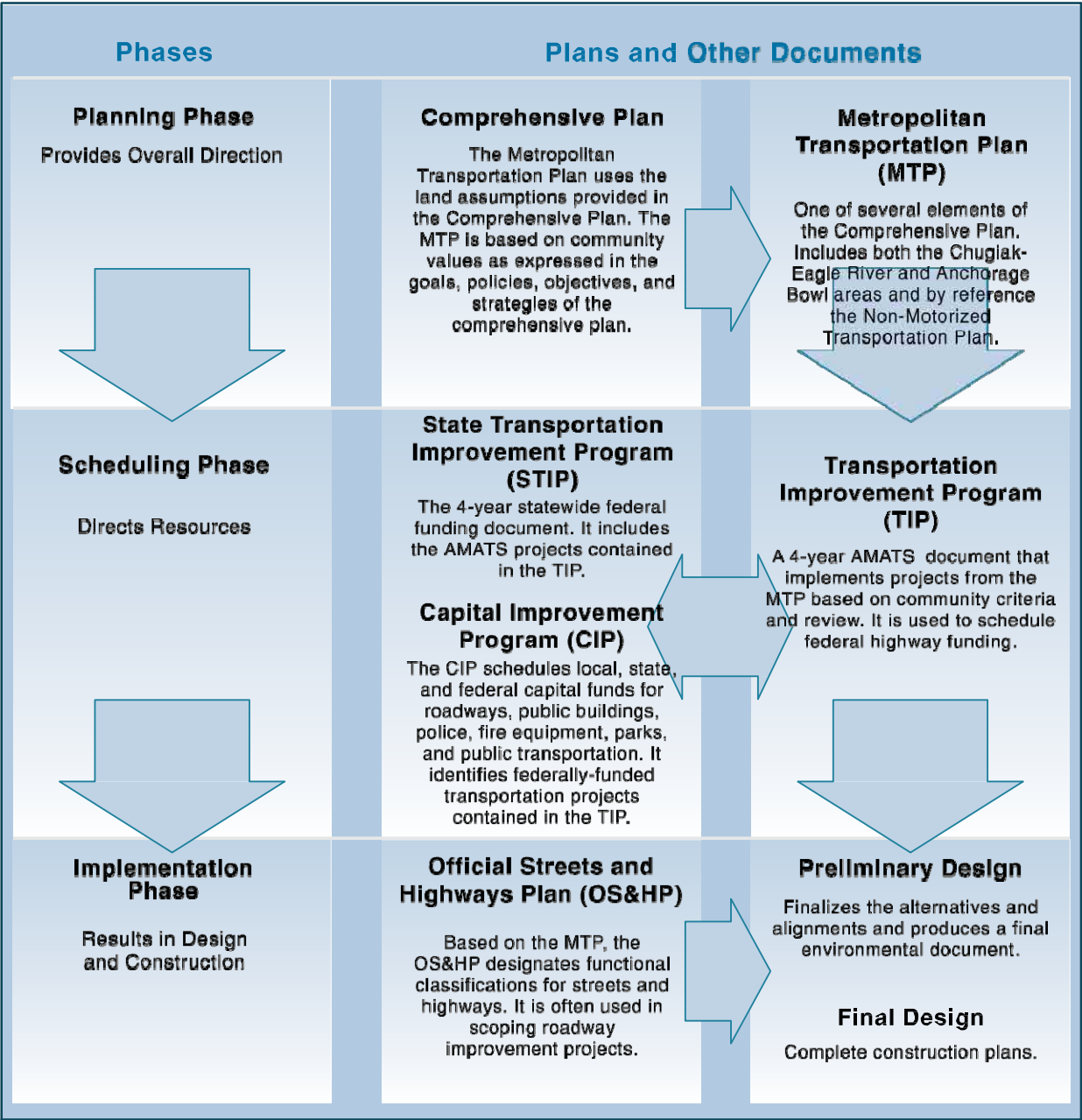
lic health and environmental effects of transportation policies, programs, and activities on minority and low-income populations. How these issues are addressed by this plan is discussed in Appendix B.

COORDINATING THE TRANSPORTATION PLANNING PROCESS

The MTP is the key planning document used by AMATS to plan the development and implementation of transportation system improvements more than 20 years into the future. This 2035 planning horizon provides a long-term view. The MTP frames a plan for transportation facilities and services to ensure mobility and accessibility throughout the municipality and serves to both complement and act as an element of comprehensive plans, which includes the Anchorage Bowl and Chugiak-Eagle River comprehensive plans. In addition to the comprehensive plans, adopted subarea plans such as the Hillside District Plan, Destination Downtown: Anchorage Downtown Comprehensive Plan, and Eagle River Central Business District and Residential Core Circulation Study provided findings and recommendations that are incorporated into this document.

Figure 1-2 shows the phases of the transportation planning process and the related documents that are developed to present findings and recommendations.

Figure 1-2 Transportation Planning Process Phases



A significant role of the MTP is identifying uses and scheduling the spending of federal transportation funds. Federal funds contribute a large share of the financial resources for transportation improvements within the AMATS boundary. With that funding comes a responsibility for meeting certain requirements. Federal regulations guide transportation planning, as well as the monitoring and maintenance of requirements for air quality standards. Preparation of the MTP is a requirement for compliance with federal regulations and funding eligibility.

The TIP is the short-range implementation plan used by AMATS to commit federal funding for transportation improvements. The TIP schedules the recommendations contained in the MTP for a short-term (4-year) time frame.

The OS&HP is based on the MTP, and establishes the location, classification, and minimum rights-of-way for streets needed to accommodate future transportation needs.

## POLICY COMMITTEE GUIDANCE FOR PLAN DEVELOPMENT

A team consisting of transportation planning consultants, AMATS staff, and representatives of the MOA and DOT&PF was assembled to prepare this 2035 MTP. AMATS provided the MTP team with the following planning assumptions to share

with the public and guide the plan development:

- AMATS must review and update the existing MTP at least every 4 years in air quality nonattainment areas; and an update of the air quality conformity analysis for the 2027 Anchorage Bowl and Chugiak-Eagle River LRTPs is required by June 14, 2011.
- The 2035 MTP for the Anchorage metropolitan area will build on the major amendment undertaken (but not approved) on the Anchorage Bowl Long Range Transportation Plan (LRTP) in 2009 and reflected in an unpublished draft 2027 LRTP Chapter 13 to make it compliant with the SAFETEA-LU requirements.
- The 2027 Anchorage Bowl and Chugiak-Eagle River LRTPs will be reviewed for SAFETEA-LU compliance, and those elements not in compliance will be addressed and updated as needed.
- The Seward Highway to Glenn Highway connection project enhancements to the AMATS travel demand model will be used for preparation of the 2035 MTP.
- The regional socioeconomic forecast used in the model and for the 2035 MTP will be provided by the December 2009 report titled Economic and Demographic Projections for Alaska and Greater Anchorage 2010–2035 developed by the Institute for Social and Economic Research (ISER) at the University of Alaska Anchorage (UAA).
- The transportation demand model will be used to confirm the need for the projects that were included in the 2027 LRTPs for the Anchorage Bowl and Chugiak-Eagle River, and to identify whether additional projects are required to meet the transportation needs in 2035.
- The goals and objectives in the adopted Anchorage Bowl and Chugiak-Eagle River LRTPs will be confirmed as still relevant and consistent with existing land use plans and, where possible, objectives will be revised to be specifically quantifiable.
- The 2035 MTP will recognize the completion of projects, strategies, and planning efforts identified in the 2027 LRTPs.
- The Knik Arm Crossing Project will remain in the 2035 MTP as a short-term project, unless the financial analysis determines that projects must be removed to meet fiscal constraints; if projects must be removed to meet fiscal constraints, the Knik Arm Crossing Project may be reconsidered along with other projects.
- The public participation activities will be consistent with those stated



## 2035 Metropolitan Transportation Plan

in the adopted AMATS Public Participation Plan and will focus on the achievements since the unpublished draft Chapter 13 for the 2027 Anchorage Bowl LRTP.

- The 2035 MTP will evaluate fiscal constraints to ensure that the proposed improvements can be funded.
- Only the road, bicycle, pedestrian, and public transportation projects included in plans or studies that have been completed and adopted after the approval of the 2027 Anchorage Bowl and Chugiak-Eagle River LRTPs will be considered for incorporation into the 2035 MTP.
- All relevant recommendations and corrective actions from the 2010 AMATS Certification Review will be addressed and incorporated into the 2035 MTP as applicable.
- The next transportation plan update and major plan development will occur when one or more of the following conditions are met: no more than 4 years have passed, a new Anchorage land use plan (comprehensive plan) is adopted, and substantive changes in population are documented.

### GATHERING INFORMATION FOR PLAN DEVELOPMENT

This plan identifies transportation improvements and investments to meet the needs of the metropolitan area in 2035. Two important steps are necessary to identify future needs: (1) characterizing the current transportation system, especially what factors most strongly influence the status quo; and (2) projecting the demands that will be placed on the transportation system in 2035.

Data required to develop the MTP include future land use development and locations of new households and employment—where the growing number of AMATS area residents will live and where regional workers, including commuters from the Matanuska-Susitna (Mat-Su) Borough, will travel to jobs. Another clue to future demand is understanding the patterns and types of trips into, within, and out of the AMATS boundary. The 2035 MTP is based on the most recent land use, population, housing, and employment information made available.

### MOVING THE VISION FORWARD

As was previously mentioned, this MTP is a combination and update of the previous plans for the Anchorage Bowl and Chugiak-Eagle River areas. These plans were last updated in 2007 with horizon years of 2027. The successes from the

#### Sources of Information for Transportation Planning

The statistics in this chapter are supported by socioeconomic information from the U.S. Census, demographic and economic forecasts by ISER in 2009 for the Seward Highway to Glenn Highway connection project, and previous planning efforts. These up-to-date statistical and behavioral resources provide a sound, quantitative understanding of the demographic and economic composition of the community and the daily travel needs and patterns of its residents. The AMATS travel forecasting model has been updated to reflect this new information. The model, which is used to forecast future (2035) travel demand, is used as the primary tool for identifying and evaluating roadway improvement projects to be included in the MTP.

implementation of these plans during the last few years speak to the importance of continuing forward with planning and implementation. These successes are summarized here and described in greater detail in Chapter 4.

Fourteen roadway projects contained within the last plans have been constructed since 2007. Twelve roadway projects have been completed in the Anchorage Bowl and two in Eagle River. These improvements have reduced intersection



delay and corridor travel time, allowing area residents to reach their destinations more efficiently.

Transit ridership has increased since 2007, despite People Mover service levels remaining relatively unchanged.

People Mover has been able to implement a number of Intelligent Transportation System (ITS) improvements, such as electronic message boards and a real-time bus tracker application. The number of vanpools operating has increased from 42 to 55, with 52 of those originating from the Mat-Su Valley.

The non-motorized transportation system has also been expanded in the last few years. Several new trail, sidewalk, and bicycle lane sections have been completed. These new facilities provide key connections to schools, parks, neighborhoods, and commercial destinations. In total, 35 miles of new sidewalks, 11 miles of bicycle lanes, 20 miles of multi-use paths, and 4 trail sections have been constructed since 2007.

Although these improvements have improved transportation in the AMATS area, needs remain for projects to remedy existing deficiencies and for planning to manage future issues.

Many points of stress are visible in the transportation system of the AMATS region:

- Almost all major arterials serving as commuter routes experience

congestion at multiple intersections during the afternoon peak period. Delay at the top three intersections alone results in approximately 182,000 lost hours, or \$3.1 million dollars based on median wage rates, for region residents on an annual basis.

- More than 7,300 traffic crashes occur annually in the MOA.
- Transit service per capita has declined steadily since the 1980s.
- Although air travel and the movement of goods to and from the airport and port are critical to the state and Anchorage economies, neither the airport nor the port is accessible by roads specifically designed for access to such distribution hubs.

In 2010 the AMATS area's population reached approximately 285,000 people, having grown steadily from 30,500 people in 1950 and 144,000 people in 1972, when the first Anchorage MTP (formerly called the LRTP) was prepared.

The AMATS area will continue to grow, which will increase overall travel demand and the locations of the growth will bring about different traffic patterns. By 2035, when the population of the Anchorage metropolitan area is expected to have increased to approximately 350,000 residents, available and developable land will be substantially occupied. Additionally more than 500,000 people will reside in the Southcentral Alaska region (AMATS

region and the Mat-Su Valley). The interaction between these areas will be far greater than it is today.

At the current rate, households in the AMATS region will expend in excess of \$30 billion for transportation during the next 24 years. Judicious and effective allocation of federal, state and local transportation funding dollars will dramatically affect the character and quality of life of the community. The blueprint outlined in this MTP will enhance community benefit from transportation spending for the AMATS area.



# Chapter

# 2

## PUBLIC INVOLVEMENT

Transportation touches every aspect of the lives of Anchorage metropolitan area residents. To ensure the needs of residents are met, efforts have engaged the public to help shape the MTP. This chapter addresses the outreach that shaped this plan.

Public involvement is an ongoing, continuous process. Public involvement for this MTP is built on the earlier outreach conducted as part of the adopted Anchorage Bowl and the Chugiak-Eagle River LRTPs. Many of the recommended projects from these plans are carried forward into this MTP. The public was also actively involved in the development of the Anchorage Pedestrian Plan, Anchorage Bicycle Plan, and other planning efforts such as the Hillside District Plan. Many parts of these other efforts have been incorporated into this MTP.

For the Anchorage Bowl 2025 LRTP, the community responded to the challenge of shaping future transportation by joining in a community involvement process named TransVision. Anchorage residents contributed to development of the LRTP in a dedicated, vocal, and active manner. Two years later that plan was revised to add the Knik Arm Crossing amendment, and the new edition was published as the Anchorage Bowl 2025 LRTP with 2007 Revisions.

The key element in the preparation of the Chugiak-Eagle River 2027 LRTP was a Citizen Advisory Committee that included representatives from each area community council; the Chugiak-Eagle River Chamber of Commerce; Chugiak-

Birchwood-Eagle River Rural Road Service Area (CBERRRSA) Board of Supervisors; Eagle River-Chugiak Parks and Recreation; MOA Planning and Zoning Commission; Native Village of Eklutna; and Eklutna, Inc. Each member of the committee was asked to serve as a liaison between the Citizen Advisory Committee and the group he or she represented. The Chugiak-Eagle River Comprehensive Plan, developed concurrently with the Chugiak-Eagle River LRTP, tied land use to transportation planning.

Work sessions and hearings at meetings of the MOA Planning and Zoning Commission, Municipal Assembly, and AMATS Technical Advisory and Policy committees during adoption of these plans provided additional public involvement opportunities.

The public involvement for this MTP consisted of three phases: (1) awareness building, (2) plan development, and (3) plan review and approval. A chronology of all of the public outreach activities can be found in Appendix C.

### BUILDING AWARENESS OF THE METROPOLITAN TRANSPORTATION PLAN

Early in the MTP development, team members connected with established MOA boards and commissions and other community groups. Many of these groups represent constituencies that are traditionally underserved by transportation such as low-income, minority, and persons with disabilities.

The scope and schedule of the MTP update was shared with boards, commissions, and community groups, which in turn provided valuable feedback on travel preferences and transportation needs. The initial groups, which are identified in the following lists, also supplied additional contacts that helped the outreach effort extend deeper into the community.

#### ■ Community

- Alaska Homeland Security & Emergency Management
- Anchorage Faith and Action Congregations Together (AFACT)
- Anchorage Literacy Program students and staff
- ARC of Anchorage
- Bridge Builders, Education Outreach
- Catholic Social Services, HUGS Event attendees



- Catholic Social Services, Program Managers
- Federation of Community Councils
- North Pole Chapter, National Defense Transportation Association
- Third Friday Event

- Municipality of Anchorage
- American with Disabilities Act Advisory Commission
- Anchorage Community Diversity Advisory Commission
- Equal Rights Commission
- Health and Human Services Commission
- Historic Preservation Commission
- Homeless Coordinator and Diversity Advisory Commissioner
- Housing and Neighborhood Development (HAND) Commission
- Planning and Zoning Commission
- Senior Citizens Advisory Commission
- Watershed and Natural Resources Commission
- Women's Commission
- Youth Advisory Commission
- Tribal
  - Native Village of Eklutna
- Regional
  - Matanuska-Susitna Borough Transportation Advisory Board



## DEVELOPING THE METROPOLITAN TRANSPORTATION PLAN THROUGH OUTREACH

The public involvement activities for plan development reflected a multi-faceted approach. The creation of an expanded AMATS Technical Advisory Committee (Technical Advisory Committee Plus, or TAC+) served as a mechanism for providing public input into plan development.

Additions to the standing AMATS Technical Advisory Committee (TAC) membership were determined based on the following criteria:

- Broad representation of stakeholder groups
- Contribution of a regional viewpoint

- Representation of a wider range of perspectives

With this in mind, the stakeholder groups, shown in **Table 2-1**, were invited to attend TAC+ meetings. The TAC+ worked with the MTP team throughout plan development, providing feedback and input. They were asked to share information with their constituent groups and bring the feedback of those groups to the plan development process.

Throughout the MTP development, the AMATS website ([www.amatsinfo.org](http://www.amatsinfo.org)) provided information on the evolving plan. Information on all AMATS Technical Advisory Committee, Policy Committee, and TAC+ meetings was posted. Chapters of the plan were made available when the team review was complete. The AMATS e-mail notifications provided advance

notice of any and all AMATS meetings to a large e-mail list.

Throughout the outreach efforts described above, the MTP team encouraged stakeholders to join the AMATS e-mail list. Through the website and e-mail communications, members of the public who were unable to attend and participate in meetings or presentations were able to keep abreast of the progress and submit comments. E-mail was used to alert members of organizations and public contacts about upcoming participation activities and to widely share information about the MTP.

To supplement the work of the TAC+ and expand the public involvement outreach, the MTP team developed an electronic survey and provided information about the link to the survey on fact sheets, in

Table 2-1 MTP Stakeholder Groups

| STAKEHOLDER GROUP  | NATURE OF THE STAKEHOLDER GROUP                                      |
|--|--|
| Access Alaska  | Persons with disabilities  |
| Alaska Center for the Environment                                    | Environmental advocates  |
| Freight Advisory Committee   | Trucking companies and freight interests                             |
| Chugiak-Birchwood-Eagle River Rural Road Service Area                | Chugiak-Eagle River and Birchwood residents of the road service area |
| Joint Base Elmendorf-Richardson                                      | Military base personnel  |
| Matanuska-Susitna Borough  | Neighboring jurisdictional partner for regional connections          |
| Native Village of Eklutna  | Local Tribal entity  |
| Public Transit Advisory Board  | Public transportation users  |
| State of Alaska Division of Homeland Security & Emergency Management | Safety and security agency   |
| State of Alaska, Department of Health                                | Non-motorized transportation users                                   |
| Knik Arm Bridge and Toll Authority                                   | State agency working to build the Knik Arm Crossing                  |

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e-mail notices, and on the MTP website. The survey remained open throughout development of the MTP. In addition to the opportunity to complete the survey, the team provided a feedback form that could be filled out and returned by stakeholders. Issues raised through all outreach activities are summarized in **Table 2-2**.

## FACILITATING PLAN REVIEW AND APPROVAL

The third phase of the planning process—plan review and approval—produced two draft iterations of the MTP: the Public Review Draft Plan and the Public Hearing Draft Plan. The first part of the review and approval phase consisted of the release of the Public Review Draft Plan on September 30, 2011, which signaled the start of an intensive public comment period. During this time, the recommendations contained in the draft plan were extensively discussed at a number of public forums.

To kick off the release of the Public Review Draft Plan, a media campaign publicized upcoming opportunities for public participation. More than 72,000 copies of a newspaper publication that outlined the draft plan were distributed throughout the MOA as an insert in the Anchorage Daily News, Alaska Star, Anchorage Press, Alaska Journal of Commerce, and Mat-Su Valley-based Frontiersman. The insert included the date, time, and loca-

**Time for a Transportation Plan Checkup**

Like a regular checkup at the doctor, the Metropolitan Transportation Plan (MTP) update is a check-up for decision-makers and citizens to assess what is or is not working within the system of roads, sidewalks, bus routes, and trails that we use to get around. The update also provides a look at how the community is growing and reviews the transportation system to see if it needs to be adjusted to reflect changing conditions.

This important transportation plan update will guide almost \$4 billion in transportation network improvements between 2012 and 2035—from new road connections, additional buses, sidewalks, bike lanes, trails to better streets and improved intersections. Everyone uses these—whether we ride our bikes, walk to school, take a bus to work, drive a truck to supply the local grocery store, or head out of town for the weekend.

Transportation shapes our community and our daily lives in profound and lasting ways. What we plan for and invest in today will affect the health of everything from our citizens to the economy and environment for years and generations to come. By planning ahead, our community provides ways to get around, eases congestion, saves gas, and reduces transportation costs.

As the major hub for goods, services and tourism, Anchorage transportation also plays an important role in the State of Alaska. People and goods need to move into and out of Anchorage as well as around town.

The check up is done and the results are included in the MTP. We need you to review the results in the document, provide a "second opinion" and comment on the recommendations for treatment!

**We've accomplished a lot in the last four years (2006-2010)! It's all in the numbers.**

- 14 - Major roadway projects completed
- 8446 - Jobs created or maintained (construction, design and maintenance)
- 13 - Additional vanpools on the Glenn Highway between 2007 and 2010
- 930 - Daily commuters using vanpools on the Glenn Highway
- 930 - Fewer single occupancy vehicles on the Glenn Highway
- 8 - Miles of pathway/trail improvements
- 35 - Miles of new sidewalks
- 31 - Miles of new bicycle facilities
- 1 - Million Dollars Spent on roads, bicycle and pedestrian facilities
- 103 - Intersection and pavement rehabilitation including Connect Anchorage projects (See map for project locations)

...and it all happened because we planned and prioritized it first!

**Anchorage Accomplishments**

**Eagle River Accomplishments**

tion of the three open houses hosted in October 2011. In addition, 6,000 copies of this publication, translated into Spanish, Korean, and Tagalog were distributed to community groups, public locations, and community meetings, as well as on People Mover buses.

Three open houses were held during the 30-day comment period following release of the Public Review Draft Plan: downtown Anchorage, midtown Anchor-

age and Chugiak-Eagle River. The team set up and staffed stations representing each chapter of the plan. Team members, AMATS, MOA staff, KABATA staff and DOT&PF staff were on hand to discuss the issues and to solicit and collect comments.

The team met once again with the boards, commissions, and groups listed above, as well as conducted specific focus groups meetings with key stakeholders and other interested organizations.

Feedback from the public forums and focus groups served as the basis for revisions of the Public Review Draft Plan, which were then incorporated into the Public Hearing Draft Plan. A comment response summary, provided to AMATS committees for review and approval formed the basis for changes reflected in the Public Hearing Draft document.

During the second part of the plan review and approval phase, the Municipal Assembly and AMATS Policy Committee reviewed and adopted the Public Hearing Draft Plan. Two formal public hearings were held, one for the Planning and Zoning Commission (which serves as the AMATS Citizen Advisory Committee) and the other for the Municipal Assembly. The public was also able to weigh in at meetings of the AMATS Technical and Policy Committees when approval of the Public Hearing Draft was considered.

## Outreach for Inclusion of the Underserved

Outreach to transportation disadvantaged (youth, Seniors, low-income, minority populations, etc.) was accomplished in several ways. The first initiative was an awareness-building campaign combined with direct contact with the boards and commissions in the MOA government and in non-governmental organizations (NGOs)

that provide a voice and services for these underserved groups. In visits to the NGOs, the MTP team was able to connect with transportation system users and hear their concerns directly.

The translation of the newspaper insert and distribution to the specific community groups also made connections with underserved segments of the public. In addition, the newspaper inserts were placed on

People Mover buses and the Open Houses were also advertised on the buses. As a result, there were a number of regular transit users that attended the downtown Open House. Further analysis of the effects of MTP recommendations on the underserved is provided in Appendix B.

Table 2-2 Issues Identified During Public Involvement Outreach

| KEY ISSUES                         | SPECIFIC CONCERNS CITED DURING OUTREACH  |
|------------------------------------|--|
| Access to alternative modes        | <p>Recognizing transportation as the No. 2 expense for needy individuals (behind rent and utility payments), which makes public transportation important</p> <p>Improving non-motorized and public transportation access to:</p> <ul style="list-style-type: none"> <li>▪ Employment,</li> <li>▪ Schools for youth and adult education and services and</li> <li>▪ Community facilities for all residents</li> <li>▪ Non-motorized and transit access for seniors, homeless, and low-income residents</li> </ul> |
| Accessibility                      | <p>Providing public transportation availability</p> <p>Expanding and improving areas along streets for walkers and bikers</p> <p>Developing public transit access to public facilities and specific locations such as the ARCA facility on Northern Lights Boulevard and the new neighborhood health center on C Street</p> <p>Improving public transit access to assisted living, group housing, and rehabilitation facilities</p> <p>Enhancing truck access for freight delivery</p>                           |
| Congestion                         | Needing road improvements to alleviate congestion as population grows  |
| Coordination                       | <p>Enhancing coordination with:</p> <ul style="list-style-type: none"> <li>▪ Knik Arm Bridge and Toll Authority</li> <li>▪ Native Village of Eklutna on current and planned development</li> <li>▪ Developers of workforce housing to enhance connections to public transportation</li> <li>▪ Utilities for infrastructure development</li> <li>▪ Regional transportation providers and governments</li> </ul>   |
| Economic and community development | <p>Developing road infrastructure that is an important component of community and business development</p> <p>Improving mobility that supports the safe movement of people and goods</p>   |

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Table 2-2 Issues Identified During Public Involvement Outreach (cont.)

| KEY ISSUES                          | SPECIFIC CONCERNS CITED DURING OUTREACH   |
|-------------------------------------|---|
| Education                           | <ul style="list-style-type: none"> <li>Providing information on rules of the road for motorists and bicyclists</li> <li>Explaining the community benefits of public transportation</li> <li>Providing travel training for public transportation</li> <li>Developing truck safety and education such as stopping distance for fully loaded trucks</li> </ul>   |
| Healthy community                   | <ul style="list-style-type: none"> <li>Providing healthy transportation choices</li> <li>Taking advantage of health benefits of public and non-motorized transportation</li> <li>Enhancing mode options that support healthy lifestyles</li> </ul>  |
| Maintenance                         | <ul style="list-style-type: none"> <li>Maintaining streets (such as removing potholes)</li> <li>Improving sidewalks and sidewalk access to public transportation stops and routes</li> <li>Providing lighting at bus stops</li> <li>Enhancing winter maintenance of sidewalks, public transportation stops, and bus shelters</li> </ul>   |
| Network development                 | <ul style="list-style-type: none"> <li>Increasing the bicycle network</li> <li>Adding sidewalks in neighborhoods</li> <li>Developing the network to include improved access for commercial development and freight delivery, including to the Port of Anchorage, Alaska Railroad, and Ted Stevens Anchorage International Airport</li> <li>Including the marine, rail, air, and pipeline modes</li> </ul>   |
| Public outreach for MTP development | <ul style="list-style-type: none"> <li>Expanding efforts to provide information and seek input from low-income and minority voices</li> <li>Providing information in multiple languages (Spanish, Tagalog, Korean, Samoan)</li> </ul>   |
| Public transportation               | <ul style="list-style-type: none"> <li>Providing safe service for all</li> <li>Maintaining and expanding service (including additional routes and more weekend service)</li> <li>Retaining AnchorRides as lifeline for seniors and people with disabilities</li> <li>Restoring public transportation service in Chugiak-Eagle River</li> <li>Advancing a Regional Transit Authority</li> <li>Advancing regional connections</li> <li>Considering use of discounted tokens for low-income residents</li> <li>Considering free public transportation for youth</li> <li>Increasing frequency of service</li> <li>Understanding how loss of service increases transit time and need for transfers</li> <li>Needing service for access to accessing health care facilities, particularly for traditionally underserved populations</li> <li>Providing information in multiple languages</li> <li>Coordinating with workforce housing developers</li> <li>Attempting to site assisted living, group housing, and rehabilitation facilities near current and planned public transportation routes</li> <li>Coordinating public transportation access to military bases for workers and residents</li> </ul> |



Table 2-2 Issues Identified During Public Involvement Outreach (cont.)

| KEY ISSUES              | SPECIFIC CONCERNS CITED DURING OUTREACH   |
|-------------------------|---|
| Regional transportation | Considering regional transportation needs and transportation systems that may include rail, bus, and vanpools   |
| Safety and security     | Providing for security of the transportation system<br>Ensuring safety of those who use the transportation system<br>Enhancing transportation for seniors, especially as the senior population grows<br>Improving transportation safety for <ul style="list-style-type: none"> <li>▪ Women, children and persons with disabilities</li> <li>▪ Pedestrians and bicyclists</li> <li>▪ Freight movement</li> <li>▪ Users of public transportation</li> </ul> Providing lighting along roadways, along sidewalks, and at bus stops<br>Planning an emergency network (for the safe and efficient movement of vehicles during an emergency)<br>Integrating communications to provide the ability to communicate across all agencies in the event of network disruptions |
| Technology              | Planning for technology use as the Baby Boomers become seniors and transition to alternative modes of transportation<br>Enhancing Intelligent Transportation System (ITS) technologies<br>Developing a public transportation app (application) for online use   |

## Policymaker Participation

Updates and work sessions involved Mayor Dan Sullivan, the Anchorage Assembly, the AMATS Policy Committee, and the MOA Planning and Zoning Commission, as well as other local, state, and federal transportation officials. The active involvement of these policymakers served to provide informed communications to their constituencies as well as to return vital feedback to the MTP team.

On November 1, 2011 the team held an information session for area state legislators to brief them on the document. The team also did a presentation to the House

Transportation, Transportation Infrastructure Fund Subcommittee on November 4, 2011. At both briefings the financial assumptions of the plan, which show a shift from federal funding to state funding during the life of the MTP, were highlighted.

## Regulatory and Resource Agency Participation

To address a requirement of federal Metropolitan Planning Regulations that state and local agencies resource agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preserva-

tion be consulted, the team presented an overview of the Public Review Draft to agencies. The intent of this meeting was to solicit input on potential environmental mitigation measures and strategies to be considered in conjunction with implementation of the transportation projects listed in the MTP. Following the overview with agencies, additional guidance for project implementers to follow during the project preliminary design phase was provided by the U.S. Army Corps of Engineers, the DOT&PF Environmental program, and the MOA Coastal Zone planning group. This guidance is included in Chapter 8.

### Summary

The issues identified in the public involvement outreach are summarized in Table 2-2. Recommendations for transportation improvements in Chapter 7 and for project management that adheres to policies and regulatory requirements in Chapter 8 address these issues.

The public outreach described in this chapter was undertaken with one goal in mind—to make better decisions about the future of transportation in the Anchorage metropolitan area. The input from the community has resulted not only in viable technical solutions, but also livable, credible, responsive solutions for all of its residents.

# Chapter

## PLAN GOALS AND OBJECTIVES

The MTP aims to accomplish a number of goals and objectives. These guiding principles are founded on citizen involvement in previous planning efforts. They are tailored to meet applicable regulations and to provide a means to measure the success of plan development, as well as ongoing implementation of the MTP.

Goals and objectives describe the desired end result of a transportation plan once it is implemented. They also provide direction on how to get there. In addition, goals and objectives permit identification of performance measures that track how effectively implementation of the plan achieves those goals and objectives.

### DEVELOPING GOALS AND OBJECTIVES

The basis for this plan's goals and objectives are those developed for the previous transportation plans for the Anchorage Bowl and Chugiak-Eagle River. Each of these previous efforts utilized citizen involvement to develop guiding principles. Therefore, integrating these documents is an excellent foundation for this MTP.

#### Municipal Comprehensive Plans

The Anchorage 2020: Anchorage Bowl Comprehensive Plan and the Chugiak-Eagle River Comprehensive Plan Update guide community planning by providing a framework for decisions about land use and transportation. They also provided direction for public facilities, economic development, housing, and other public issues that are vital to a healthy and livable community. Both are public declarations of general visions for the future that were articulated by area residents and adopted by the Anchorage Assembly.

#### How do comprehensive land use plans address transportation improvements?

The Anchorage Bowl and Chugiak-Eagle River comprehensive plans focus on land use planning and development issues related to land use. In recognition that land use and transportation are intertwined, the comprehensive plans also provide guidance on making transportation improvements. People use some form of transportation to travel between land uses—where they live, work, shop, conduct business, and recreate. Land uses that are far apart have a different impact on the transportation network (and vice versa) than those that are located close together. Both plans contain guiding principles related to transportation.

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During this integration process, only minor modifications were required, for one or more of the following reasons:

- To better meet federal requirements contained in current transportation legislation (SAFETEA-LU)
- To replace certain terms (such as “pedestrian trails” and “bicycle trails”) with those that are now used in adopted plans (such as “multi-use trails”)
- To remove or replace (when appropriate) geographic and jurisdictional references (such as Anchorage, Eagle River, and Municipality) with the term “community” to represent the entire geographic area within the AMATS boundaries and the citizens and businesses located in the region while recognizing there are some discrete areas having specific needs
- To avoid inconsistencies, minimize redundancy, provide for a measurable outcome, or clarify the intent

## GOALS AND OBJECTIVES

The goals and accompanying objectives of the MTP are presented on the following pages.

### GOAL 1

Ensure development of a balanced transportation network for people, goods, and services that provides an acceptable level of service, maximizes safety, minimizes environmental impacts, provides a variety of transportation choices, and supports planned land use patterns.

#### Goal 1 Objectives

- Decrease travel time through an increase in transportation efficiency during peak-hour periods.
- Minimize cut-through traffic in residential neighborhoods.
- Strike a balance between safety and economical design with all transportation projects.
- Improve, as necessary, expressway, arterial, and collector roads to safely and efficiently handle projected traffic.

#### *How Does Goal 1 Help Implement Area Land Use Plans?*

The Anchorage Bowl and Chugiak-Eagle River comprehensive plans stress the importance of having choices through a transportation system with mode options, a system that makes travel convenient and affordable across the city and for all segments—year-round. The goal also recognizes the need to preserve neighborhood quality of life and improve the safety of the transportation system.



### GOAL 2

Provide a transportation system that moves people and goods safely and securely throughout the community.

#### Goal 2 Objectives

- Reduce vehicle, pedestrian, and bicyclist crashes.
- Decrease emergency response time and reduce risk to the community from natural hazards and disasters.
- Promote a walkable community with safe winter walking conditions.
- Minimize conflicts between freight and passenger vehicles and non-motorized travelers.

#### *How Does Goal 2 Help Implement Area Land Use Plans?*

Goal 2 helps realize the vision for a safe community that is contained in both comprehensive plans. It recognizes that community safety can be improved by transportation efforts in a number of ways.



Reducing crashes, improving the ability of emergency responders to quickly and reliably respond to emergencies, and providing evacuation routes in the event of a natural disaster are all ways transportation planning can make the Anchorage metropolitan area a safer place.



### GOAL 3

Develop an attractive and efficient transportation network that considers the cost of building, operating, and maintaining the system; the equity of all users; public health impacts; community values; and social justice.

#### Goal 3 Objectives

- Prioritize the projects within the MTP to optimize the benefit-cost ratio.
- Consider the life-cycle costs of projects when evaluating and selecting them within the MTP.

- Optimize the travel choices within the transportation system to maximize the associated benefits for all users while minimizing the costs to taxpayers.
- Balance the purpose of each project with aesthetic considerations.
- Match street and highway design to the use and character of the community/ neighborhood, recognizing that character may vary from primarily commercial to primarily residential and from primarily urban to primarily rural.
- Maintain and rehabilitate the existing transportation system to minimize deterioration and the need for major reconstruction projects.
- Improve opportunities for active transportation (non-motorized) as part of daily system use.
- Balance the benefit of improvements against the impacts to neighborhoods with populations traditionally underserved by transportation.
- Preserve and improve air quality to maintain the health and welfare of citizens.

#### *How Does Goal 3 Help Implement Area Land Use Plans?*

Goal 3 expresses the community desire for visually attractive and fiscally responsible improvements. It treats transportation facilities as community assets. This

goal also helps implement the comprehensive plans' call for balanced transportation improvements by directing transportation planners to consider issues like equity, sustainability, secondary cost, and the unique character of the surrounding area.



### GOAL 4

Develop a transportation system that supports a thriving, sustainable, broad-based economy by locating and using transportation infrastructure and facilities to enhance community development.

#### Goal 4 Objective

- Optimize the transportation system to meet the needs of the Port of Anchorage, Ted Stevens Anchorage International Airport, the Alaska Railroad, the military bases, employment centers, and industrial and commercial areas.

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### *How Does Goal 4 Help Implement Area Land Use Plans?*

Goal 4 relates the importance of transportation to economic vitality. It acknowledges that the transportation system affects all sectors of the economy and that congestion has negative impacts on individuals, businesses, freight movements, and the municipality. This goal seeks to provide a transportation system that enhances community development as well as contributes to healthy municipal and statewide economic activity.



### **GOAL 5**

Establish community connectivity with safe, convenient, year-round automobile and non-automobile travel routes within and between neighborhoods, commercial centers, and public facilities.

### **Goal 5 Objectives**

- Ensure an adequate system of arterial and collector roads is identified.
- Promote the even distribution of traffic loads between streets by enhancing the existing grid pattern of streets.
- Establish an adequate number of access points from subdivisions to adjacent higher-order streets.
- Enhance the physical connectivity between neighborhoods by increasing the number of roadway, pedestrian, bicycle, and transit connections.
- Improve safe and convenient connectivity from schools to neighborhoods, parks, and other recreational and commercial areas by use of multi-use trails, bicycle lanes, sidewalks, and transit.

### *How Does Goal 5 Help Implement Area Land Use Plans?*

The comprehensive plans note the importance of having good access to all types of land uses. They also stress the need for solutions to balance the roles of neighborhoods, schools, and recreation areas as both transportation destinations and valued community elements.



### **GOAL 6**

Improve access to goods, jobs, services, housing, and other destinations while providing mobility for people and goods in a safe, affordable, efficient, and convenient manner.

### **Goal 6 Objectives**

- Develop mechanisms for improving regional cooperation and planning to address important transportation issues.
- Reduce the passenger vehicle miles traveled (VMT) and passenger vehicle hours traveled (VHT) per capita.
- Increase opportunities for multi-purpose trips in planned mixed-use centers.
- Promote the development of an effective roadway network through improvements in intersection and efficient roadway capacity.



- Improve the existing transportation system efficiency through the implementation of effective and innovative transportation system management (TSM), transportation demand management (TDM), and Intelligent Transportation System (ITS) strategies.
- Coordinate planning efforts across disciplines (such as transportation, land use, economic development, emergency management, public health, and the military) and geographic areas.

#### ***How Does Goal 6 Help Implement Area Land Use Plans?***

The focus of Goal 6 is mobility, the ability of people and goods to move from place to place. This goal builds on the direction provided in both comprehensive plans about moving people and goods efficiently and safely. Goal 6 recognizes that stronger regional collaborative mechanisms will be needed to address regional travel issues and improvements. Its intent is to reduce congestion and travel delay to ensure reasonable access to jobs, education, services, and other opportunities and provide efficient freight flows.

Goal 6 also stresses good management and operation of transportation systems—achieving optimum efficiency, offering travel options and incentives to reduce automobile dependency, and deploying advanced technologies to make transportation systems work better.



### **GOAL 7**

Provide a transportation system that provides viable transportation choices among various modes.

#### **Goal 7 Objectives**

- Promote the development of a safe network of trails and sidewalks that provide reasonable access to work, schools, parks, services, shopping, and the natural environment, with priority given to trail and sidewalk projects expected to have the highest use.
- Optimize the year-round accessibility and convenience of travel choices and, in particular, improve the year-round reliability and travel time of transit through the implementation of programs such as transit signal priority.

#### ***How Does Goal 7 Help Implement Area Land Use Plans?***

Goal 7 recognizes that walking, bicycling, and transit options are needed, and that

they must be made safe, accessible, attractive, and competitive to be viable. It calls for transportation improvements that make traveling by other modes (by bus, bicycle, or foot) more convenient to transit-dependent riders and more attractive to riders who currently choose to travel by automobile.



### **GOAL 8**

Design and maintain a transportation system that respects the integrity of the community's natural and built environment and protects scenic vistas.

#### **Goal 8 Objectives**

- Minimize adverse impacts on the community, such as neighborhood through-traffic movements.
- Minimize noise and light pollution impacts, to the extent practical.
- Balance the benefit of improvements against the impacts on the natural

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environment, such as water resources, fish habitat, watersheds and wetlands, and parklands.

- Design and landscape roads to maintain and enhance the attractiveness of neighborhoods, open space, and commercial corridors and centers.
- Use context-sensitive design strategies especially to support the development of mixed-use centers (such as town centers, employment centers, and redevelopment areas) and transit-supportive corridors with more pedestrian-, bicycle-, and transit-oriented street environments while recognizing the need to move freight into and throughout the community.
- Reinforce the link between transit and land use by establishing as a priority the building of transit-friendly residential and commercial development in Downtown Anchorage and Downtown Eagle River.

### *How Does Goal 8 Help Implement Area Land Use Plans?*

Goal 8 recognizes that the residents of Anchorage and Chugiak-Eagle River live in a northern, subarctic climate and their transportation facilities, including infrastructure for pedestrians, bicyclists, and transit users, must be operational year-round to provide true travel options. Goal 8 also reflects the value that

residents place in the ability to be outdoors. Further, it focuses on protecting the environment and balancing transportation improvements with community values. Goal 8 promotes transportation improvements that protect and enhance the air breathed, the sounds heard, and the magnificent landscape enjoyed every day.

Goal 8 is also about protecting neighborhoods. The importance of maintaining and improving the quality of area neighborhoods is expressed in both the Anchorage Bowl and Chugiak-River comprehensive plans. The relationship between how travel is conducted and where residents live is evident in air quality issues, as well as in the effects of traffic on neighborhoods, including detractions such as cut-through vehicles and heavy traffic on arterials that surround neighborhoods.



## MEETING REGULATORY REQUIREMENTS

Chapter 1 outlines eight planning factors from SAFETEA-LU that must be addressed by the MTP process. To ensure they are appropriately addressed in the MTP process, these factors must be reflected in the goals. To help identify whether goals speak to a planning factor, the theme or themes of each factor have been identified. The goals were compared to these factors and themes to determine whether each factor has been addressed by the goals of the MTP.

**Table 3-1** illustrates that every planning factor is reflected in at least one goal.



Table 3-1 MTP Goals Address Required Planning Factors

| SAFETEA-LU PLANNING FACTOR  | THEME(S)   | GOAL(S)          |
|---|--|------------------|
| Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency   | Economic vitality  | 2, 4, 6          |
| Increase the safety of the transportation system for motorized and non-motorized users  | Safety   | 1, 2, 5          |
| Increase the security of the transportation system for motorized and non-motorized users  | Security   | 2                |
| Increase the accessibility and mobility of people and for freight   | Accessibility, mobility  | 1, 3, 5, 6, 7    |
| Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and state and local planned growth and economic development patterns | Environmental sensitivity, energy efficiency, quality of life, land use-transportation integration, coordinated planning | 1, 3, 4, 5, 6, 8 |
| Enhance the integration and connectivity of the transportation system, across and between modes [throughout the state], for people and freight  | Intermodal connectivity  | 4, 6             |
| Promote efficient system management and operation   | Efficiency   | 3, 6             |
| Emphasize the preservation of the existing transportation system  | Preservation   | 3                |



# Chapter

# 4

## AMATS

## TRANSPORTATION SYSTEM TODAY

Transportation is an integral part of the daily lives of residents in the metropolitan area. How efficiently the transportation system moves people and goods influences the quality of the traveling experience, the cost and speed of shipping freight, and the safety of transportation users.

Transportation is shaped by infrastructure, available travel options, and management of the system. The overall transportation network can be viewed as having six essential elements:

- Roads
- Public transportation
- Pedestrian system
- Bicycle system
- Freight distribution
- Regional connections

This chapter discusses how these elements are performing as part of the current transportation system. Trends of decreasing efficiency and longer travel times—already evident for the metropolitan area transportation system—are expected to become more serious concerns in future years.

Additional information about the status of the metropolitan area transportation system is available in the report *Status of the System, 2010* (AMATS, 2011).

## TRANSPORTATION PLAN NCE IMPLEMENTATION SI 2007

Implementation of the previous 2007 transportation plans has been remarkably successful; improvements to roads, public transportation services, and non-motorized facilities produced measurable positive impacts. The specific projects and services implemented since 2007 are described in Table 4-1 and illustrated in Figure 4-1 and Figure 4-2.



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Table 4-1 Projects Completed Since 2007

| PROJECT NUMBER | PROJECT NAME                           | PROJECT LOCATION                         | PROJECT DESCRIPTION                     |
|----------------|--|--|---|
| 1              | C St Extension Phase III               | O Malley Rd to Dimond Blvd               | Add new facility                        |
| 2              | Eagle River Loop Rd Rehabilitation     | Old Glenn Hwy to Eagle River Rd          | Reconstruction                          |
| 3              | Old Glenn Hwy Reconstruction Phase II  | Fire Lake to Peters Creek, rural section | Reconstruction                          |
| 4              | Eagle River CBD Study                  | Central Business District (CBD)          | Study                                   |
| 5              | Minnesota/C St Interchange             | C St                                     | Add new facility                        |
| 6              | Creekside Pkwy                         | Debarr Rd to Muldoon Rd                  | Add new facility                        |
| 7              | Glenn Hwy                              | Ingra St/Gambell St to McCarrey St       | Reconstruction                          |
| 8              | Old Seward Hwy                         | Brandon St to O Malley Rd                | Reconstruction                          |
| 9              | Dowling Rd Extension                   | Laurel St to Elmore Rd                   | Add new facility                        |
| 10             | 100th Ave Extension                    | C to King St                             | Add new facility                        |
| 11             | Dr Martin Luther King Jr Ave Extension | Elmore Rd to Boniface Pkwy/Tudor Rd      | Add new facility                        |
| 12             | Elmore Rd Extension                    | Abbott Rd to E 48th Ave                  | Add new facility                        |
| 13             | Northern Lights Blvd                   | Nathaniel Ct to Wisconsin Ave            | Upgrade                                 |
| 14             | 3rd Ave Surface Rehabilitation         | Post Rd to Reeve Blvd                    | Restripe                                |
| 15             | Hartzell Rd Extension                  | Lore Rd to 79th Ave                      | Add new facility                        |
| 16             | Lake Otis Pkwy Surface Rehabilitation  | Abbott Rd to 68th Ave                    | Rehabilitation                          |
| 17             | Raspberry Rd Extension                 | Rovenna St to Arctic Blvd                | Add new facility                        |
| 18             | Arctic Blvd Surface Rehabilitation     | Fireweed Ln to International Airport Rd  | Rehabilitation                          |
| 19             | Lake Otis Pkwy/Tudor Rd Intersection   | Lake Otis Pkwy at Tudor Rd               | Reconstruction                          |
| 20             | Glenn Hwy/Bragaw Rd Interchange        | Glenn Hwy at Bragaw Rd                   | Add new facility                        |
| 21             | Muldoon Rd Improvements                | Tudor Rd to Glenn Hwy                    | Landscaping and pedestrian improvements |



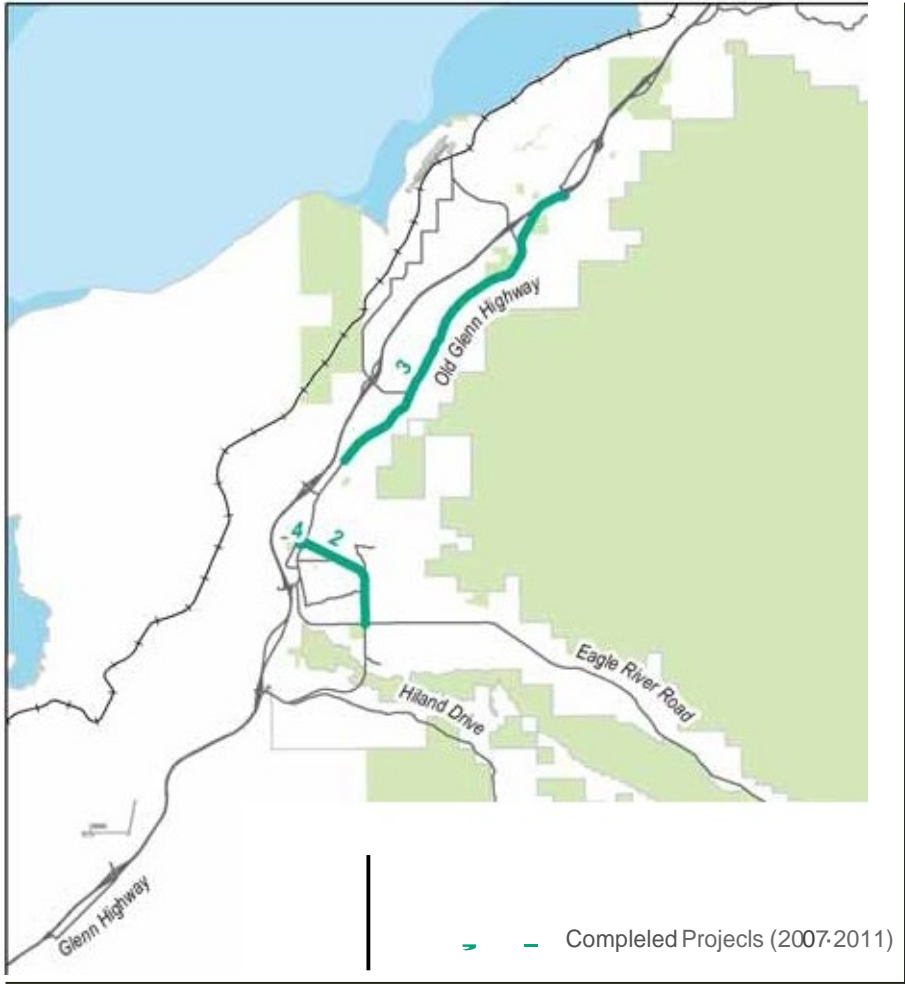
Figure 4-1 Completed Projects Since 2007 - Anchorage Bowl



Source: MOA

Note: Municipal Road Improvement Project (Project 21) is scheduled to be completed in Winter 2012.

Figure 4-2 Completed Projects Since 2007 - Chugiak/Eagle River



Source: MOA

### ROADS

The most visible component of the transportation system, the road network is used by private, commercial, and public transportation vehicles. Most of these vehicle trips (almost 89 percent) are made by drivers of private vehicles. A road network performs best when each type, or classification, of road is used for its primary function. Table 4-2 on the following page explains the types of road classifications found in the metropolitan area transportation system.

The busiest traffic routes in the metropolitan area play important roles in the area's mobility. The freeway portions of the system alone accommodate nearly one-third of all daily vehicle miles traveled (VMT), excluding the travel on local streets. A large share of VMT on arterial streets occurs on only a few segments—5th and 6th avenues, A Street, Boniface Parkway, C Street, Debarr Road, Dimond Boulevard, Eagle River Loop Road, Eagle River Road, the Ingra-Gambell streets couplet, Lake Otis Parkway, Minnesota Drive, Muldoon Road, Northern Lights and Benson boulevards, O Malley Road, Old Seward Highway, Tudor Road, and Old Glenn Highway.

Additionally, certain roads have been designated as part of the National Highway System (NHS). This designation highlights the importance of these roadways to the nation's economy, defense, and mobility. The NHS roads in the metropolitan area consist of freeways and express-



ways, as well as several arterial segments. Figure 4-3 and Figure 4-4 illustrate the NHS system in the metropolitan area (the Glenn Highway is the only NHS facility in the Chugiak-Eagle River area).

Figure 4-5 and Figure 4-6 show the functional classification of streets in the metropolitan area from the Official Streets and Highways Plan (OS&HP). An update of the OS&HP is expected to be completed in 2012.

### ROAD OWNERSHIP

Ownership of roads is shared by local, state, and federal governments and private entities. Figure 4-7 and Figure 4-8 illustrate the ownership of roads in the Anchorage Bowl and Chugiak-Eagle River, respectively. The State of Alaska owns most of the most heavily used arterial streets and freeways, such as Tudor Road, Glenn Highway, Seward Highway, and Dimond Boulevard (see green lines in Figure 4-5 and Figure 4-6).

Most of the remaining roads are owned by the MOA. In some cases, such as Northern Lights Boulevard, sections of the same road are owned by both entities. This common ownership of roadways by the State of Alaska and MOA illustrates the importance of close intergovernmental cooperation and collaboration. Ownership of roads by the federal government occurs on federal lands, such as military bases. Some private roads in the AMATS area are owned by the residents who use and maintain them (for example, any road in a local or rural road service area).

Table 4-2 Road Classifications and Their Characteristics

| CLASSIFICATION              | PRIMARY FUNCTION   | EXAMPLES   | 2010 CENTERLINE MILES* | COMMENTS  |
|-----------------------------|--|--|------------------------|---|
| Freeway                     | Carries through traffic across the community. Provides most mobility and least amount of access.   | Minnesota Drive; Glenn and Seward highways   | 51                     | Freeways serve the sole purpose of carrying through traffic. They accommodate high speeds and limited access, provided by only grade-separated interchanges, which also provide a safety benefit by reducing crashes. The typical ADT volume of a four-lane freeway is more than 40,000 vehicles. |
| Expressway                  | Carries through traffic. Provides high mobility and somewhat restricted access.  | International Airport Road between Minnesota Drive and Ted Stevens Anchorage International Airport             | 2                      | Expressways accommodate through traffic with full or partial control of access. Intersections may allow access from major arterials. Speeds typically are slower than those for freeways. The typical volume of a four-lane expressway is more than 20,000 ADT.                                   |
| Arterial                    | Carries large volumes of traffic and goods, generally from one part of the community to another. Provides high levels of mobility and moderate levels of access.     | Tudor Road, Northern Lights Boulevard, 36th Avenue, the Old Glenn Highway in Eagle River, and Eagle River Road | 174                    | Arterials handle the largest share of travel in the Anchorage metropolitan area. They connect major employment centers, activity centers, and residential areas. The typical volumes range from 10,000 ADT for a two-lane (minor) arterial to 60,000 ADT for a six-lane (major) arterial.         |
| Collector (rural and urban) | Collects traffic from local streets and conducts it to arterials, other local streets, and activity centers. Provides limited mobility and moderate level of access. | Baxter and Wisconsin roads, Hillside Drive, and Business Boulevard   | 149                    | Collectors accumulate traffic from local streets and provide connections to shopping centers, schools, and other commercial and community centers. The typical volumes range from 2,000 to 10,000 ADT for a two-lane collector.   |
| Local street                | Allows access to adjacent properties. Provides the highest level of access.  | Streets in neighborhoods   | 1,130                  | These roads specialize in connecting residential properties to other parts of the roadway network. Speed limits are low and through travel is discouraged. The typical volume of a two-lane local street is less than 2,000 ADT.  |

\*The centerline mile measurement is used for comparison purposes. This unit of measurement reflects distance as the sole measurement and does not account for multiple lanes.

ADT = average daily traffic

Source: Official Streets and Highways Plan, MOA, 2005.

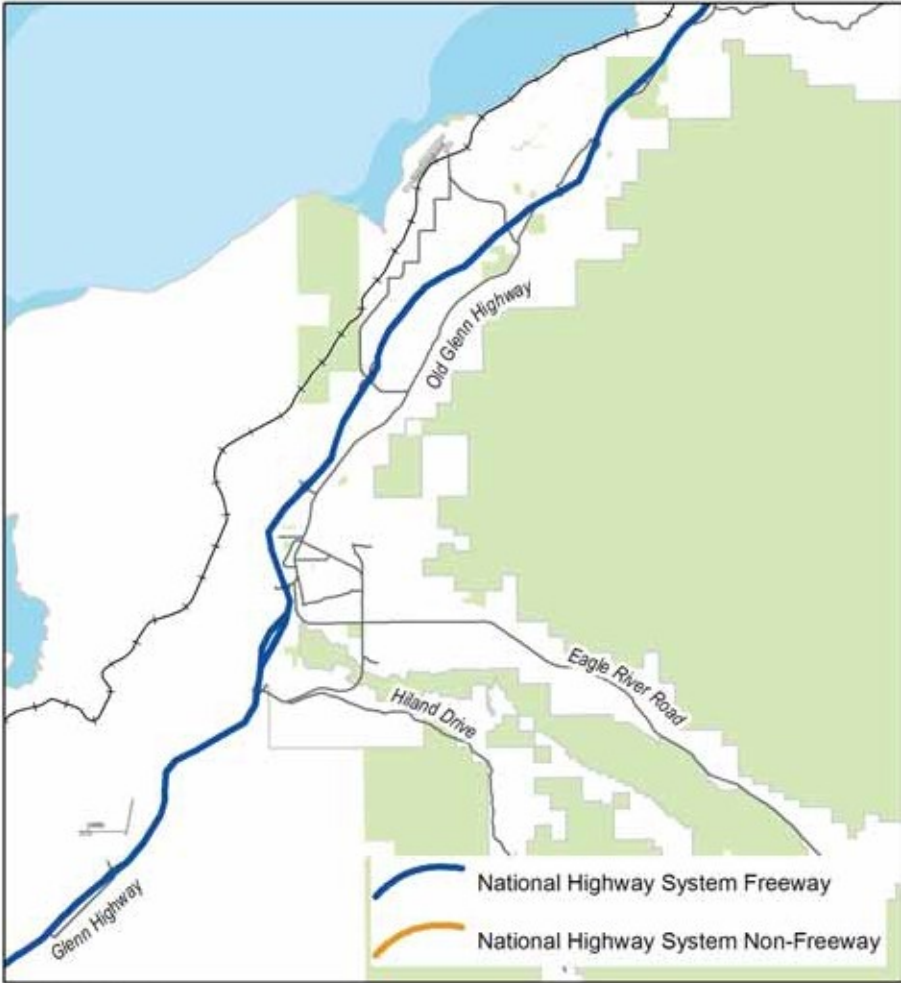


Figure 4-3 National Highway System – Anchorage Bowl



Source: DOT & PF

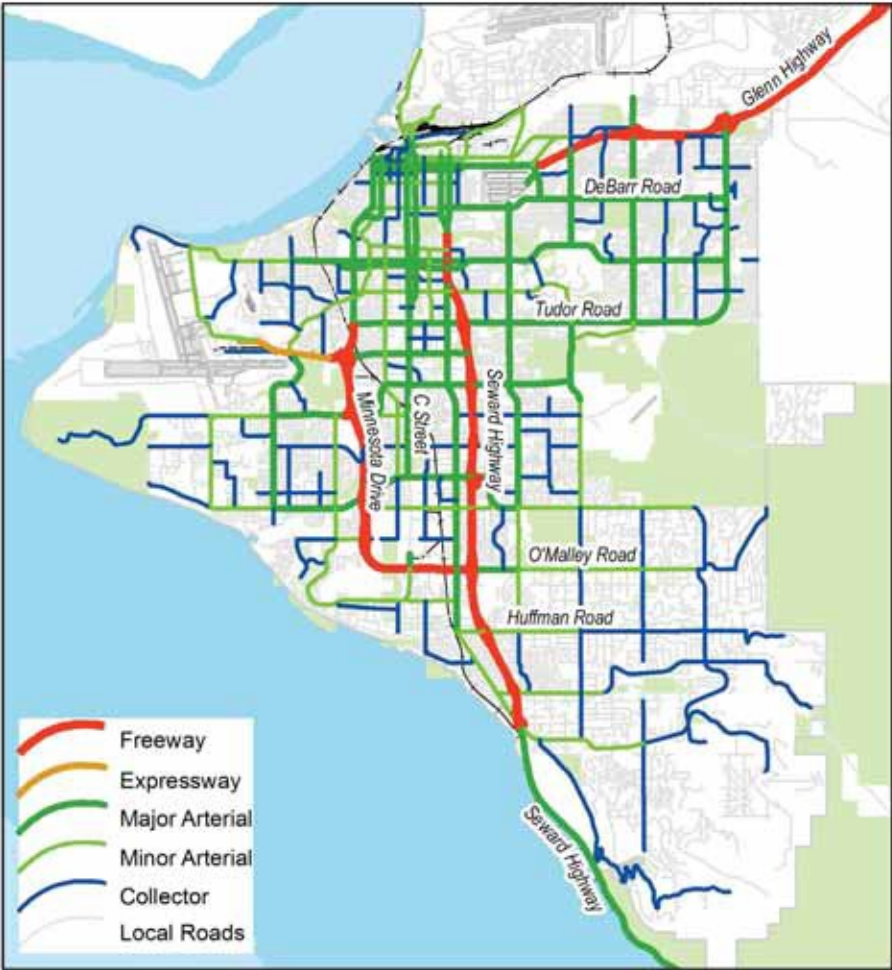
Figure 4-4 National Highway System – Chugiak-Eagle River



Source: DOT & PF

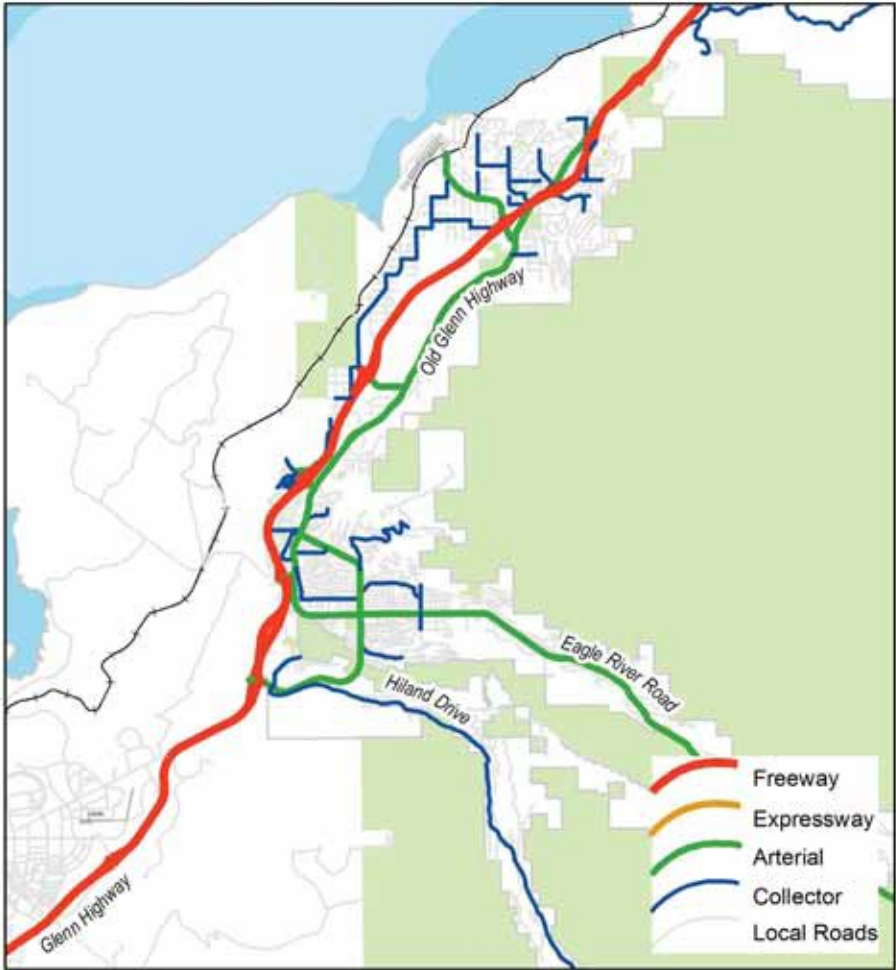


Figure 4-5 Road Functional Classifications - Anchorage Bowl



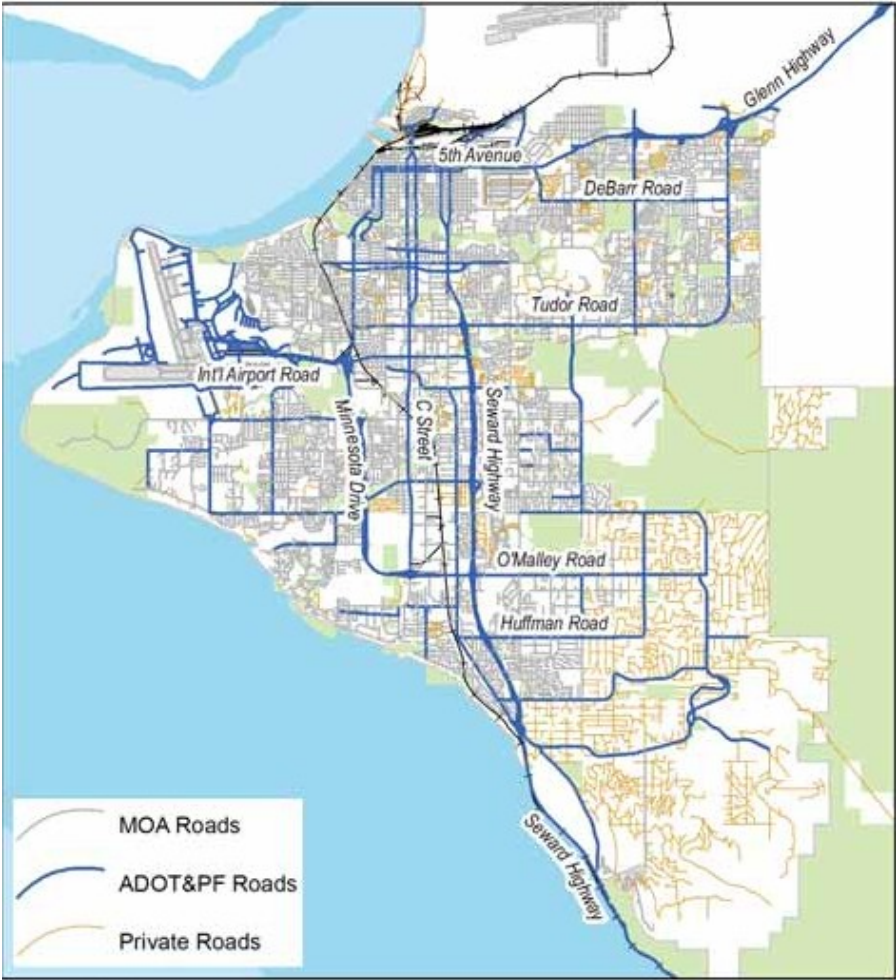
Source: MOA

Figure 4-6 Road Functional Classifications - Chugiak-Eagle River



Source: MOA

Figure 4-7 Road Ownership – Anchorage Bowl



Source: MOA

Figure 4-8 Road Ownership – Chugiak-Eagle River



Source: MOA



## Traffic Flow

The measure "level of service" (LOS) describes how well traffic flows on a road based on its design and operational characteristics and its traffic volumes. The roadway LOS scale ranges from LOS A—free-flow traffic—to LOS F—congested conditions that severely stall traffic. Figure 4-9 portrays 2009 LOS conditions during morning and afternoon peak-travel periods for freeway facilities. With the exceptions of the Seward Highway between 36th Avenue and Dimond Boulevard, and the Glenn Highway between the Old Glenn Highway (Artillery Road) and Hiland Road interchanges, the freeway system experiences low to moderate levels of congestion. Currently both Minnesota Drive and the Glenn Highway are operating well within their capacities to handle traffic. Crashes and other abnormal events (discussed later in this chapter) cause instances of non-recurring congestion.

Figure 4-9 2009 Freeway Level of Service - Morning and Afternoon Peak Periods

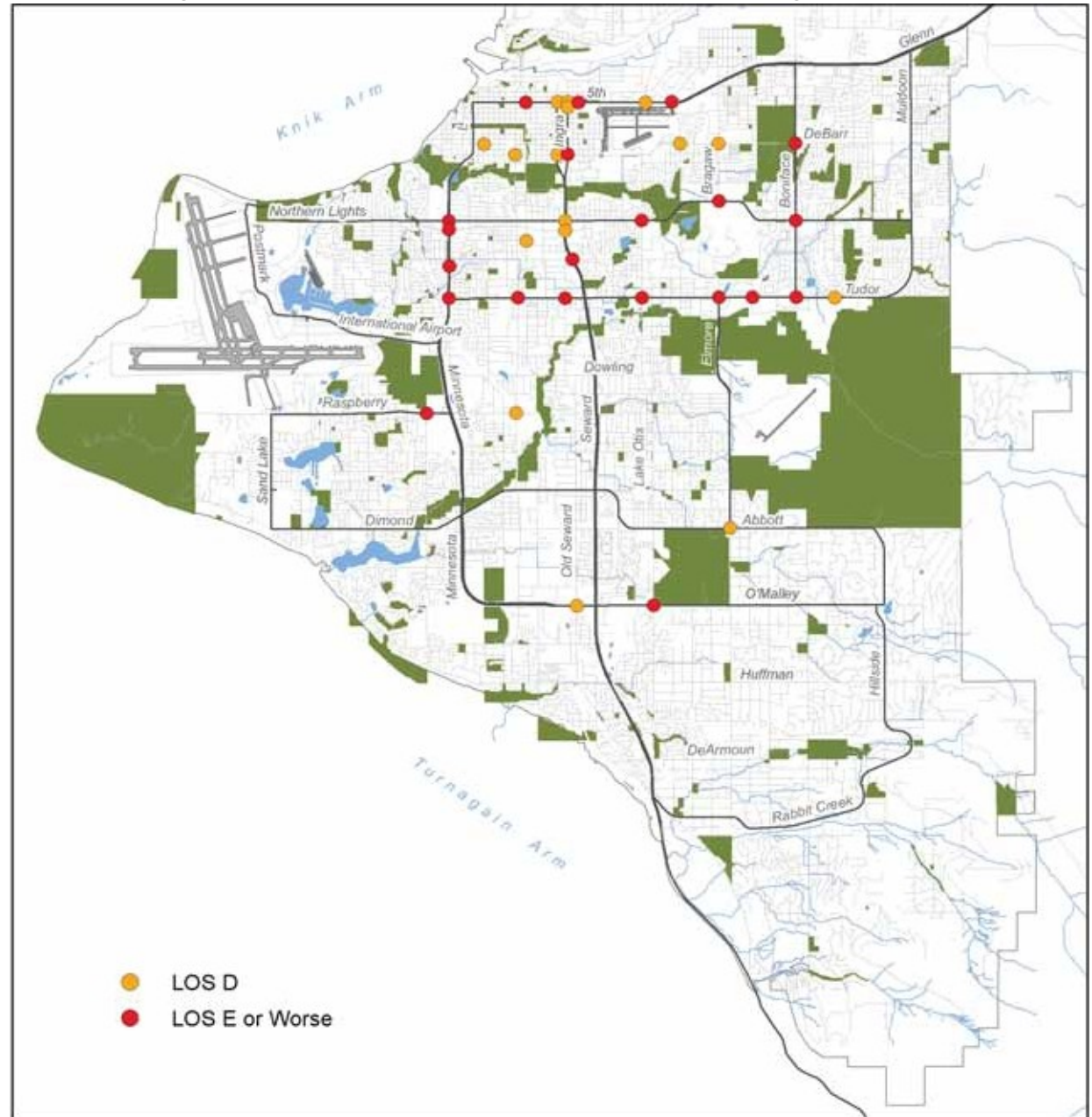


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Applied to intersections, the LOS scale ranges from LOS A—all vehicles move through a traffic light during a single green cycle with minimal delay—to LOS F—drivers experience long delays at traffic lights, potentially waiting through multiple cycles. Figure 4-10 and Figure 4-11 show the 2010 intersection LOS in the morning and afternoon peak periods of travel, respectively.

The afternoon peak LOS performance is significantly worse than the morning peak period. A total of 90 intersections have afternoon-peak LOS ratings of D or worse, (considered to be unacceptable) compared with a total of 37 intersections operating at LOS of D or worse during the morning peak period. The intersection LOS analysis showed that all signalized intersections in Chugiak-Eagle River operated at a LOS of C or better in 2010, with the exception of the intersection of Old Glenn Highway, Eagle River Loop, and Business Boulevard during the afternoon peak period.

Figure 4-10 2010 Intersection Level of Service - Morning Peak Period



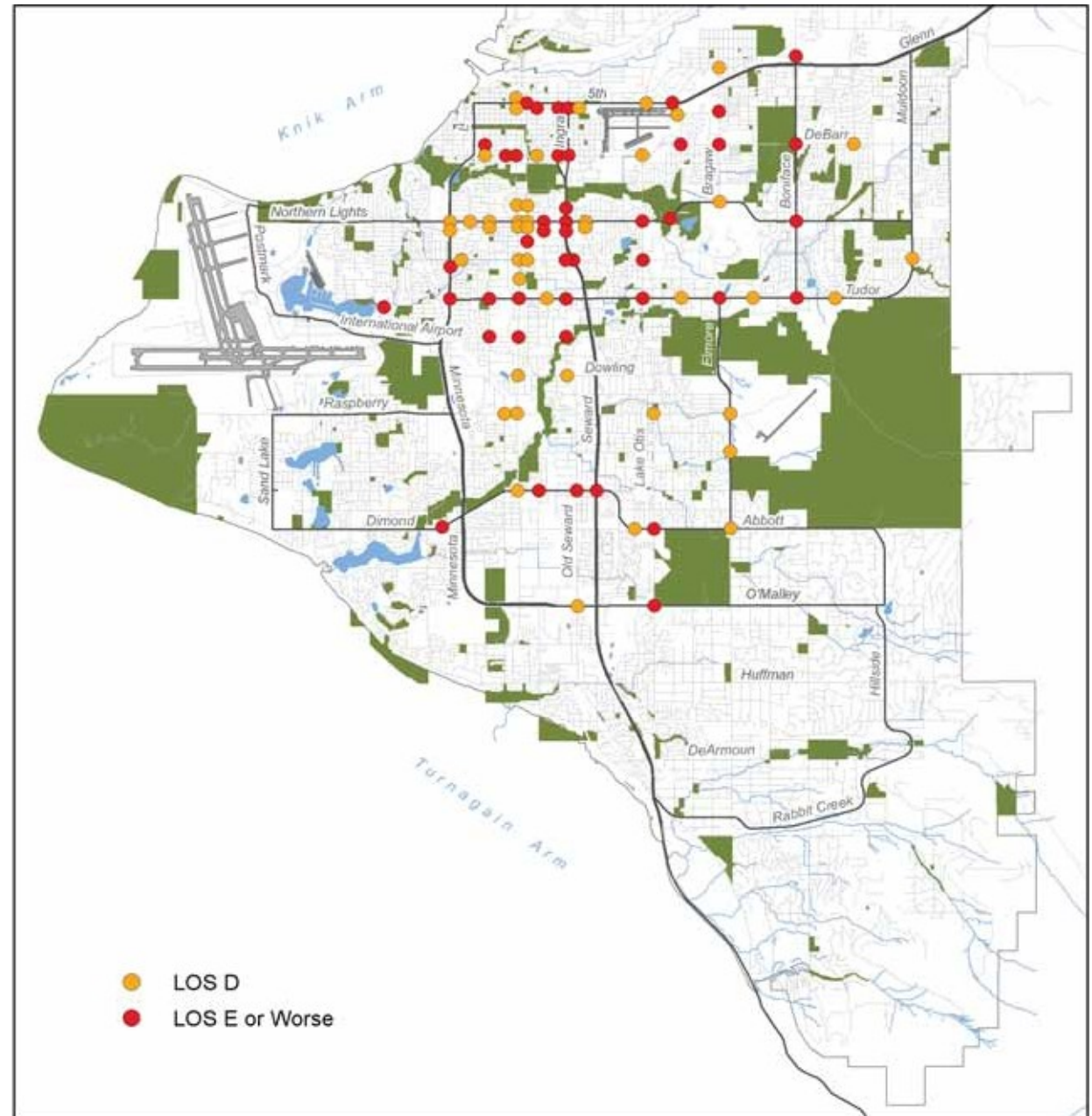


The three intersections in the metropolitan area that experience the highest afternoon peak-hour delays are Seward Highway and 36th Avenue; Lake Otis Parkway and Northern Lights Boulevard; and Tudor Road and Old Seward Highway. The cumulative annual delay for these three intersections is about 182,000 hours of lost time during the afternoon peak period. The monetary cost of this lost time valued at hourly earnings for the median metropolitan area worker is more than \$3.1 million per year.

Recent roadway projects have reduced delays at major intersections. For instance, the Lake Otis Parkway and Tudor Road intersection has recently dropped out of the top 10 intersections in terms of highest delay. Drivers at this intersection lost more than 500 vehicle hours in 2007. Driver delay has now been reduced to fewer than 100 hours annually.

This improvement is due primarily to the major roadway improvement projects completed in the vicinity of the intersection, including the Elmore Road extension, Dowling Road extension, and construction of Dr. Martin Luther King Jr. Avenue. These improvements provide alternative routes that allow traffic to avoid this intersection. Delay was further reduced by major improvements to the intersection itself.

Figure 4-11 2010 Intersection Level of Service - Afternoon Peak Period



### Travel Time Variables

Travel time is a straightforward measure of transportation system performance and congestion. Travel time measurement is applicable to all modes of travel, including automobiles, trucks, transit, carpools, vanpools, pedestrians, and bicycles. Consequently, travel time comparisons can be made across various modes of travel as well as within modes. In addition, travel time measurements enable trend comparisons through time to judge changes in system conditions.

On many road segments, the time required for a vehicle in the metropolitan area to travel from Point A to Point B varies by time of day. Travel time studies conducted in fall 2010 by the MOA Traffic Division are shown in Figure 4-12. These studies show that trips made on most corridors took longer during the afternoon peak period than during mid-day or morning periods. This finding about afternoon travel reaffirms the longer afternoon delays discussed above for intersection LOS.

Figure 4-13 depicts changes in travel times for the metropolitan area during the past 12 years.

The travel times for the majority of the corridors studied showed only modest changes—generally less than 3 minutes—from 1998 to 2010. Travel times for the Dimond Boulevard/Abbott Road corridor deteriorated, with each new data set showing slower trips than the previous one. The longer travel times reflect the rapid retail growth of the area during the past 12 years. The travel time pattern for the Tudor Road/Muldoon Road corridor is similar, and may have resulted from high growth rates in the midtown employment/office district.

None of the high-volume freeway corridors—Seward Highway, Glenn Highway, or Minnesota Drive—exhibits much difference in travel time between the 1998 and 2010 studies. The Glenn Highway travel times actually improved slightly, possibly because of recent capacity improvements, including the Bragaw Interchange and the expansion from four lanes to six lanes between Airport Heights Road and the beginning of the 5th/6th couplet.

Of particular interest in Figure 4-13 is the beneficial change in travel time along the Lake Otis Parkway corridor. As previously discussed, significant roadway improvements have been accomplished near the Lake Otis Parkway and Tudor Road inter-

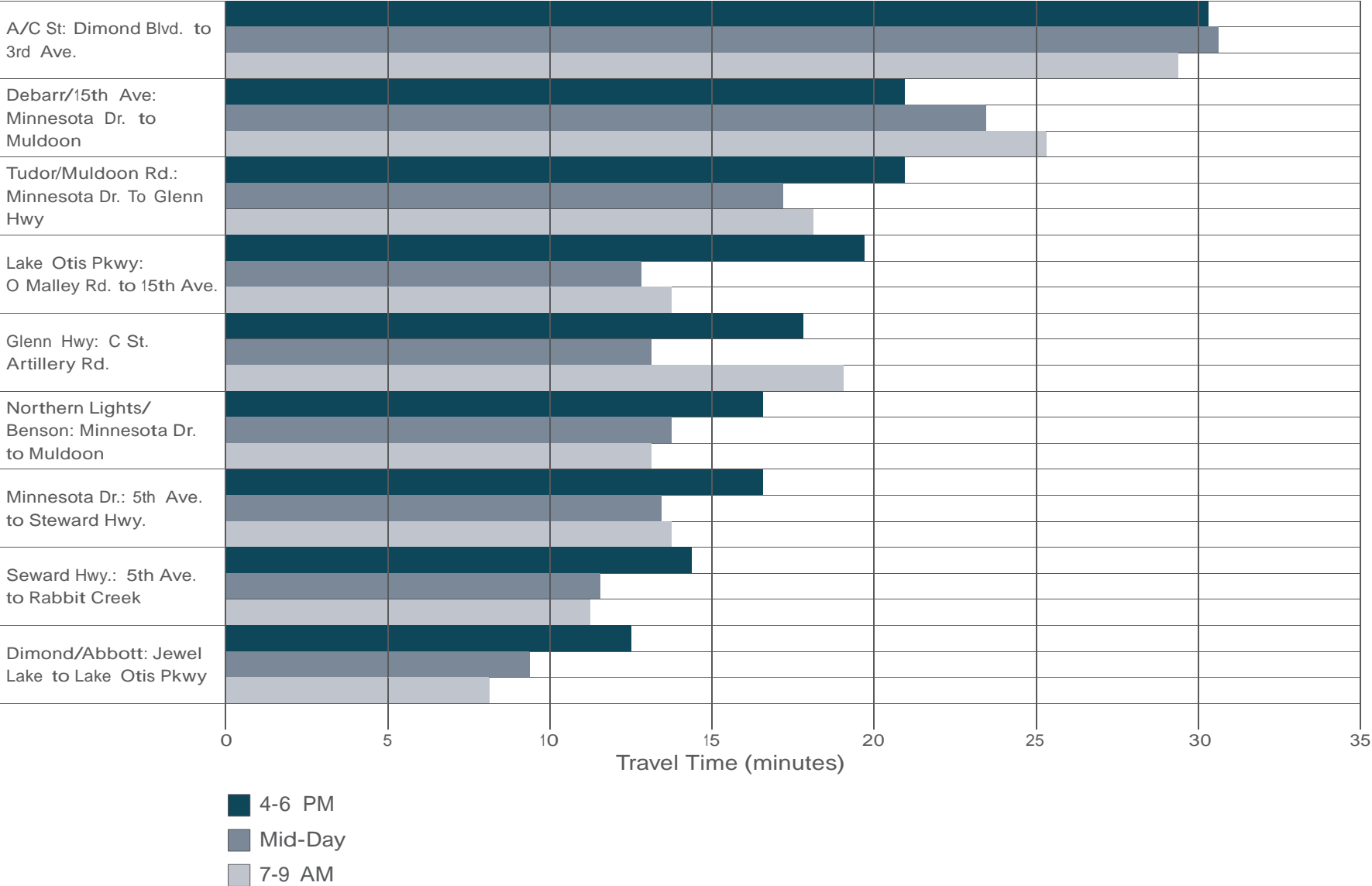
section during the past 3 years. Despite substantial growth of office and institutional facilities in the area, the afternoon peak travel times for northbound traffic on Lake Otis Parkway did not increase from 1998 to 2010.

The effect of the roadway improvements along the Lake Otis Parkway corridor is even more striking when examining travel time changes by segment. The segment between Northern Lights Boulevard and Tudor Road was one of the most congested roadway segments in the entire metropolitan area in 2006, with an average speed of only about 7 miles per hour (mph). In 2010 the average speed along this segment of Lake Otis Parkway increased over two times to approximately 17 mph in the afternoon peak period.

### Effect of Crashes on Non-recurring Congestion

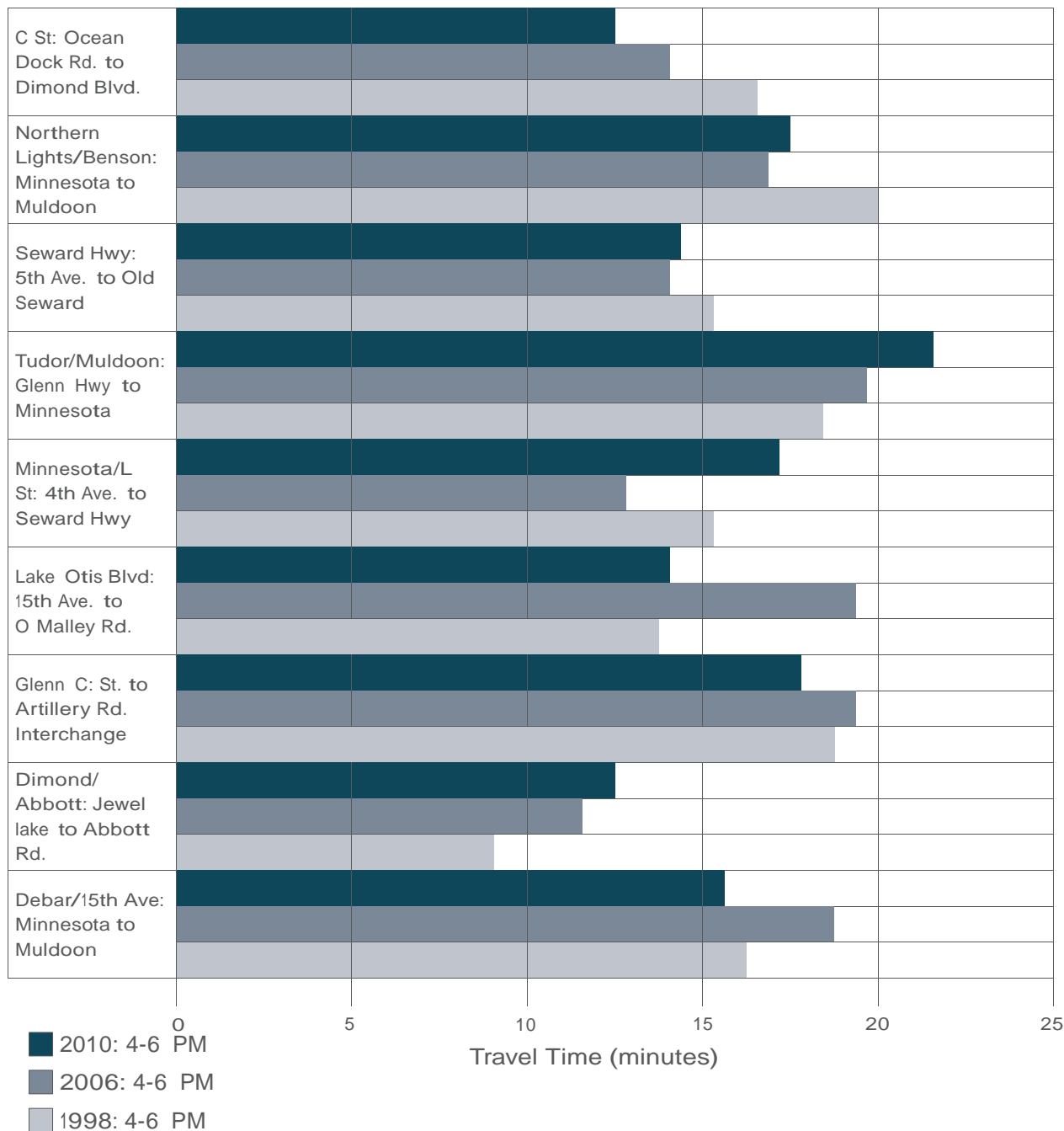
Rush-hour congestion is predictable, but not all congestion occurs on a regular basis. Irregular and random events, such as crashes, stalled vehicles, work zones, severe weather, and special events, sometimes cause unreliable travel times and contribute significantly to the overall congestion problem. Non-recurring

Figure 4-12 Automobile Travel by Time of Day on Major Corridors, 2010



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Figure 4-13 Afternoon Peak Travel Times, 1998 – 2010



### Delays Affect Safety, Freight Costs, and Service Delivery

The time spent by vehicle occupants is not the only concern when roads and intersections perform at a poor level of service. The flow of traffic also affects travel time required for public transportation, school buses, freight shipments, and emergency service response. Delays can drive up the cost of shipping, hinder fire truck and ambulance access, and affect coordination of scheduled activities.

congestion caused by such events can be reflected in several ways:

- Trips take longer than expected.
- Congestion affects more of the day.
- Congestion affects weekend travel and rural areas.
- Congestion affects more personal trips and freight shipments.

Ultimately, these irregular and random events make travel time less reliable. That is, a trip that normally takes x number of minutes to complete now takes y number of minutes. In areas where these events are more common, travelers are forced to budget extra time beyond the time normally needed to complete a trip. Neither the MOA nor the DOT&PF currently



Table 4-3 Severity of Glenn Highway Crashes Between Airport Heights Drive and Parks Highway Interchange, 2000-2009

| YEAR | FATALITY | INCAPACITATING INJURY | NON-INCAPACITATING OR POSSIBLE INJURY | PROPERTY DAMAGE ONLY | TOTAL |
|------|----------|-----------------------|---------------------------------------|----------------------|-------|
| 2000 | 1        | 22                    | 143                                   | 298                  | 464   |
| 2001 | 4        | 10                    | 175                                   | 268                  | 457   |
| 2002 | 4        | 9                     | 168                                   | 366                  | 547   |
| 2003 | 5        | 31                    | 133                                   | 259                  | 428   |
| 2004 | 5        | 33                    | 132                                   | 289                  | 459   |
| 2005 | 7        | 28                    | 167                                   | 320                  | 522   |
| 2006 | 1        | 35                    | 146                                   | 300                  | 482   |
| 2007 | 1        | 21                    | 136                                   | 247                  | 405   |
| 2008 | 3        | 13                    | 78                                    | 196                  | 290   |
| 2009 | 1        | 15                    | 101                                   | 271                  | 388   |

maintains data on the duration or impact of non-recurring events. However, travel time reliability is becoming a subject of increasing research and discussion, especially in urban metropolitan areas.

Crashes are responsible for many incidences of non-recurring congestion. They can substantially affect highway travel speeds, especially in areas where there are no alternative routes around the crash area, such as on the Glenn Highway. Table 4-3 shows the number of vehicular crashes on the Glenn Highway between Airport Heights Drive and the Parks Highway interchange between 2000 and 2009. This stretch of highway had an average of more than one crash per day every year, except 2007. Although the travel time speeds recorded for 2010 show that

traffic flows relatively freely on a standard day these speeds may frequently be reduced as a result of crashes.



## PUBLIC TRANSPORTATION

### Bus Service

People Mover is the fixed-route bus service in the metropolitan area operated by the MOA Department of Public Transportation. In 2011, 43 buses, each with a seating capacity of 39 passengers, are operating during the peak hours on 14 fixed routes. The People Mover active fleet consists of 53 buses. Bus service ranges from 30- to 60-minute frequencies during weekday peak periods and generally every 60 minutes for other hours on weekdays. On weekends, service is provided with 60-minute frequency.

Figure 4-14 and Figure 4-15 show the coverage of the 2010 transit network in the Anchorage Bowl and Chugiak-Eagle River.

Most of the People Mover transit routes in the metropolitan area operate at 30 minute headways, (times between bus service) in the peak periods and 60-minute headways in the off-peak periods. All routes have access to one of the three transit centers: Eagle River Transit Center, Downtown Anchorage Transit Center, and Dimond Transit Center. Exact routing, service times, and headways can be found on the People Mover website.

Service between Chugiak-Eagle River and the Anchorage Bowl is available through People Mover Route 102 and Eagle River Connect. The latter service combines a fixed route component with dial-a-ride

Figure 4-14 People Mover Bus Routes in 2011 – Anchorage Bowl

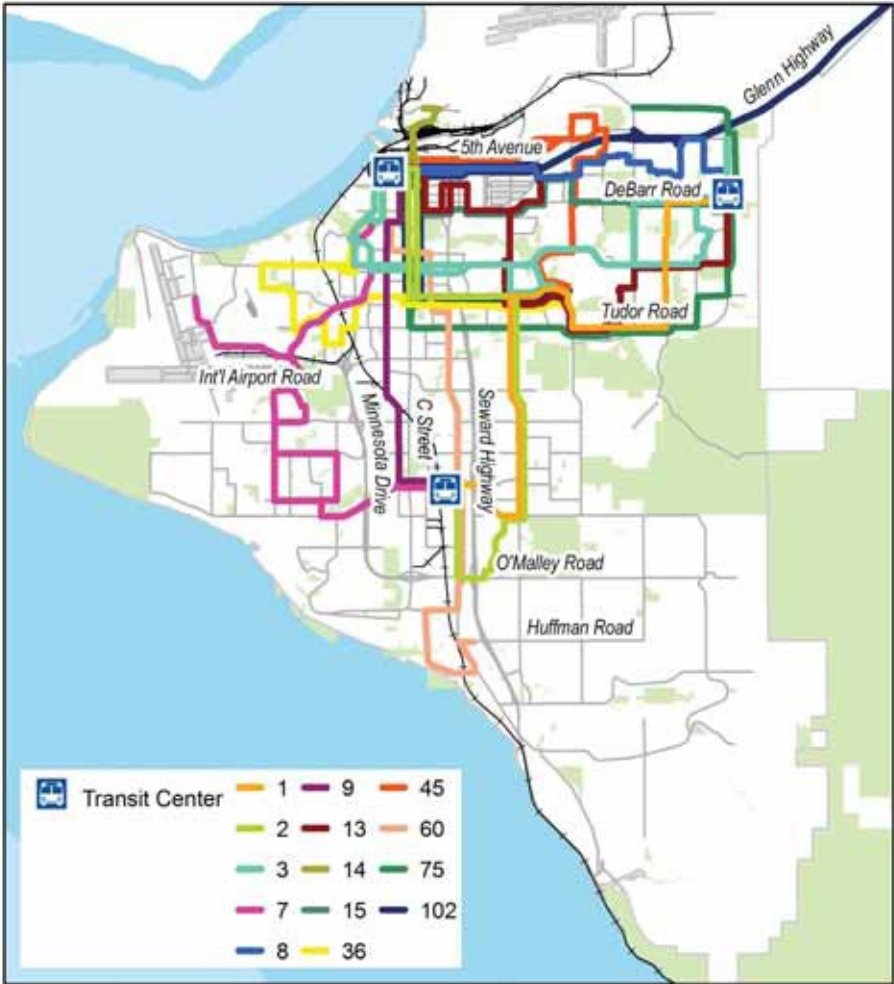


Figure 4-15 People Mover Bus Routes in 2011 – Chugiak-Eagle River



Source: AMATS. People Mover

Source: AMATS. People Mover

(AnchorRIDES) service between Chugiak-Eagle River and the University-Medical (U-Med) area, with drop-offs at designated People Mover stops or paratransit destinations. Destinations beyond the U-Med area require a transfer to People Mover or other AnchorRIDES vehicles.

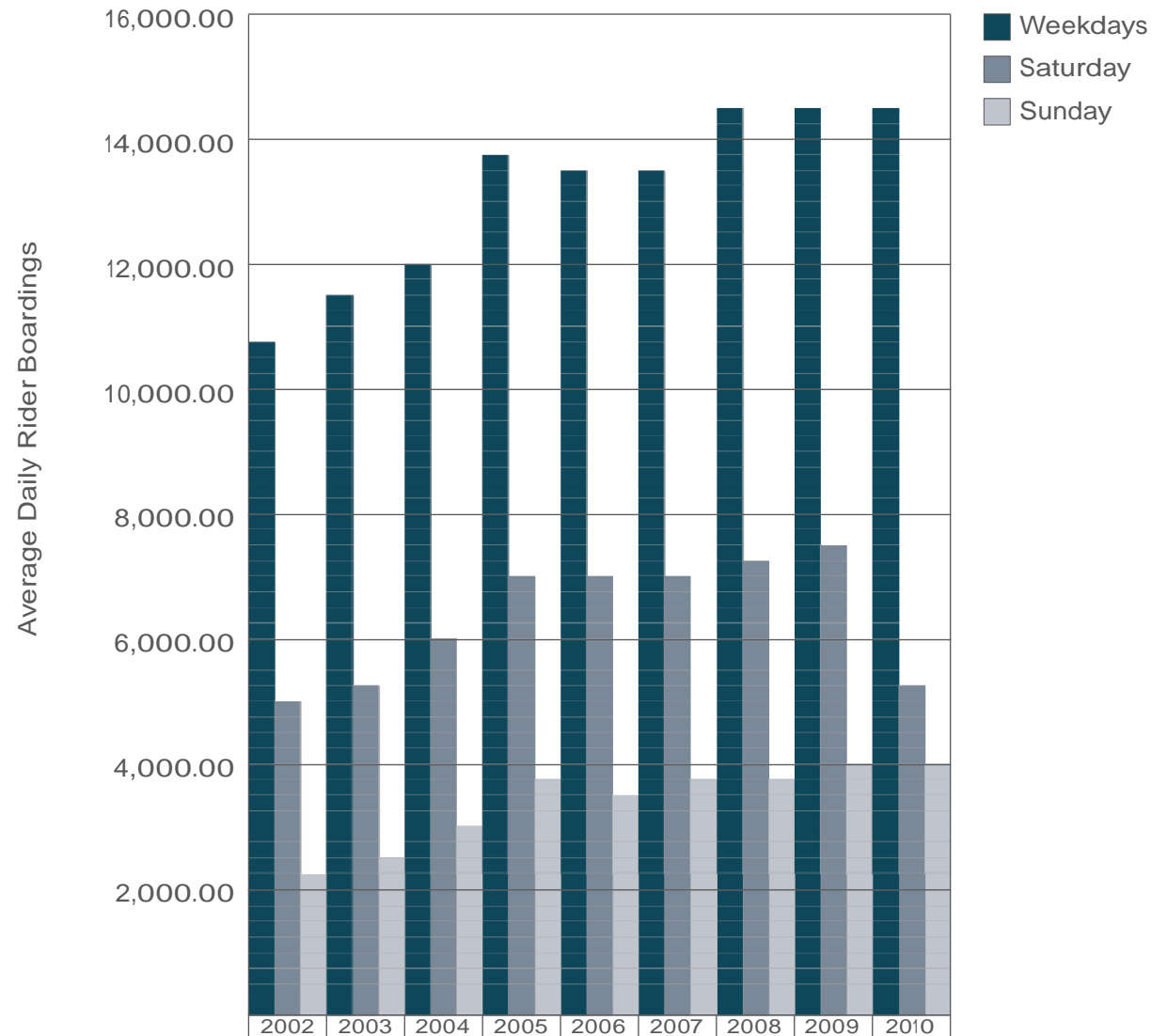
In 2008, People Mover surpassed the 4 million annual ridership level for the first time since passage of a local tax cap in 1983, carrying a total of more than 4.2 million passengers. The 2009 ridership figure also exceeded the 2008 mark and was 34 percent higher than in 2002, as shown in Figure 4-16.

A number of factors affect ridership volumes, including the following:

- Number of transfers required for travel
- Travel time
- Frequency of service
- Suitability of routes for desired trips
- Bus stop amenities, such as weather protection, seating, and lighting
- Cost of service
- Cost of alternative means of transportation

A distance of one-quarter mile for access to service (facilitated by conditions such as sidewalk availability and maintenance) is considered to be a benchmark for reasonable transit access from point of origin or destination. About 60 percent of the Anchorage Bowl population lives

Figure 4-16 People Mover Average Daily Riders 2002-2010



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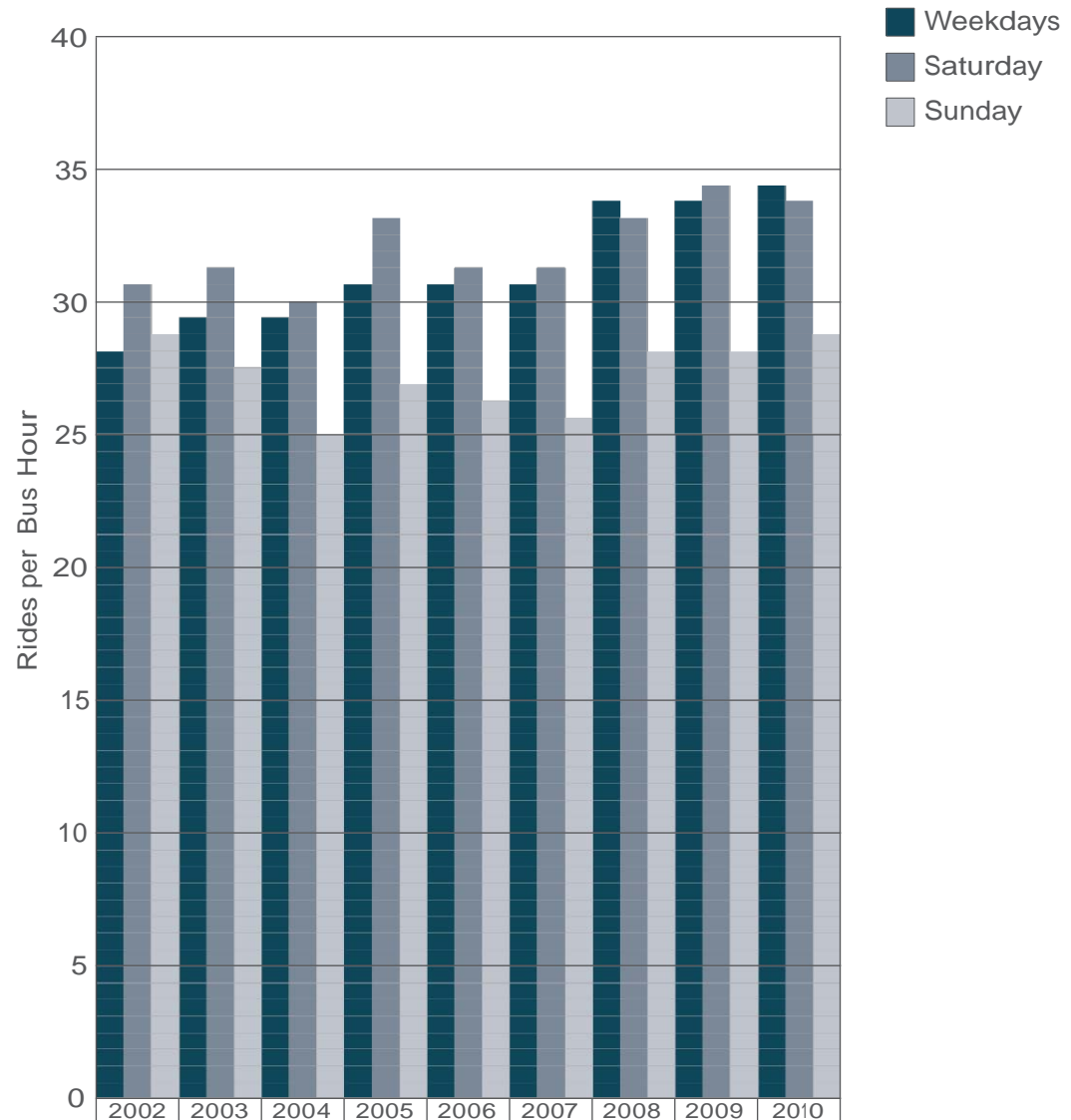
within one-quarter mile of a bus stop. People Mover bus service is not available in some areas.

Figure 4-17 displays bus service productivity measured in terms of the numbers of passenger boardings per hour of bus service for weekdays, Saturdays, and Sundays. Weekday and Saturday service productivity has increased since 2002 while Sunday service productivity has remained virtually the same. From 2002 to 2010, weekday service saw the largest productivity gain, an increase of more than 20 percent, and Saturday service productivity rose 10 percent.

The productivity figures for weekday and Saturday indicate that ridership has risen significantly faster than the increase in service hours. Between 2002 and 2010, weekday bus ridership increased by 34 percent, with only an 11 percent increase in service hours, and Saturday bus ridership rose 39 percent, with a 27 percent increase in service hours. The increase in Sunday ridership (82 percent) was almost directly proportional to the service hour increase (84%). Many other factors—such as the People Mover Blueprint plan (2001 and 2009 updates) that improved the frequency of service and consequently enhanced service convenience, higher gas prices, and economic factors—likely also contributed to these ridership increases.

The public transportation industry standard is for every 10 percent more in service hours provided, ridership will in-

Figure 4-17 People Mover Productivity, 2002 – 2010





crease seven percent. However, as People Mover's success since 2002 has indicated, there is a high latent demand for public transportation services.

Other Public Transportation

In addition to regularly scheduled service on fixed routes, the following alternatives provide needed or desired services for shared transportation.

AnchorRIDES

This shared-ride service provides demand-responsive, curb-to-curb transportation service to people with disabilities that prevent them from using the fixed-route system and to senior citizens. The AnchorRIDES service meets the federal requirements of the Americans with Disabilities Act (ADA) and is structured to comply with various funding sources. It operated 47 vehicles in 2010, funded primarily by local taxes and the Alaska Commission on Aging. Rider fares, donations, and Medicaid also contribute to operating costs. Nearly 195,000 passengers were served in 2009.

Seniors older than 60 years of age constitute a significant percentage of the AnchorRIDES users. This population is rapidly growing, and the trend of rapid growth is expected to continue. Between 1990 and 2009, the number of seniors in the metropolitan area grew from 13,400 to 33,900. According to the Alaska Department of Labor and Workforce Development (DOLWD), the number of seniors

is projected to continue to increase in the future, rising to approximately 70,300 and representing 20 percent of the total population by 2030.

School Buses

Anchorage School District students who live more than 1.5 miles from their schools or who live along routes designated as hazardous for walking are eligible to ride a school bus. Students who live fewer than 1.5 miles from school walk or arrange alternative transportation.

Share-A-Ride Program

Carpooling and vanpooling are supported by the MOA Share-a-Ride Program in the Public Transportation Department. These activities, which reduce the number of vehicles on Anchorage roadways, are key components of the MOA congestion management efforts. Table 4-4 summarizes statistics for carpooling and vanpooling activities from 2005 to June 2010.

From 2005 to 2010, active vanpools and vanpoolers have grown significantly while

active carpools and carpoolers have decreased by nearly half.

Of the 55 vanpools in operation in 2010, 52 originated from the Mat-Su Valley. With almost 930 commuters using vanpools along the Glenn Highway each day, the impact of vanpool ridesharing on peak-period commute conditions on the Glenn Highway is considerable.

It is estimated that vanpools reduce the total number of vehicles on the Glenn Highway by about 610 vehicles for each peak period. This amount of vehicle traffic represents just more than 8 percent of the total morning peak-period traffic and about 6 percent of the total afternoon peak-period traffic recorded by the permanent traffic recorder at the Fort Richardson overpass. Given its current growth rate (162 percent in 5 years), the vanpool program is expected to have an even greater future impact.

Table 4-4 Anchorage Ride Sharing Statistics, 2005–2010

| INDIVIDUALS SHARING RIDES | 2005  | 2006  | 2007  | 2008  | 2009  | 2010  |
|---------------------------|-------|-------|-------|-------|-------|-------|
| Registered applicants     | 4,602 | 4,822 | 4,946 | 4,774 | 4,823 | 4,772 |
| Active carpools           | 328   | 278   | 181   | 179   | 179   | 178   |
| Active carpoolers         | 659   | 557   | 365   | 361   | 361   | 359   |
| Active vanpools           | 24    | 41    | 42    | 52    | 52    | 55    |
| Active vanpoolers         | 375   | 569   | 637   | 810   | 917   | 985   |

Source: MOA Public Transportation Department, only includes participants in ridesharing program.

## NON-MOTORIZED TRANSPORTATION SYSTEM

### Pedestrian System

Walking represents a significant mode of transportation in the Anchorage metropolitan area. Results of the 2002 Anchorage Household Travel Survey indicate that Anchorage metropolitan area residents made more than 56,000 walking trips on a typical weekday in spring 2002, accounting for about 5.7 percent of all trips. According to the U.S. Census, American Community Survey (2005-2009), walking trips represent nearly 3 percent of all home-to-work trips in the Anchorage metropolitan area. These figures underestimate the importance of walking trips because nearly all trips require some walking if only to travel between the car and the office or home and the bus stop.

About 521 miles of sidewalks are found in the Anchorage Bowl and Chugiak-Eagle River areas. This sidewalk coverage represents that sidewalks exist adjacent to roughly 13 percent of area roads in the Anchorage Bowl and about 7 percent of roads in the Chugiak-Eagle River area. (One hundred percent would mean that all existing roadways have sidewalks on both sides of the road.) One reason for less sidewalk coverage in the Chugiak-Eagle River area is the rural nature characterizing that portion of the MOA. In general, complete sidewalk networks

### Pedestrian Mobility and Quality of Life

An important indicator for a livable city is the ability to walk. Walking is a clean, healthy, and inexpensive mode of transportation that should be considered a serious component of the modern transportation system. A favorable pedestrian environment includes connectivity, sidewalks set back from street curb lines, crosswalks, shorter walking distances across (instead of around) intersections, benches, landscaping, signs, and lighting to increase personal security. A good pedestrian environment such as described above can increase the likelihood of walking by 28 to 55 percent. (Source: "Environmental Forces Associated with Adults Participation in Physical Activity: A Review," by Nancy Humpel, Neville Owen, and Eva Leslie, in *American Journal of Preventative Medicine*, 2002, Vol. 22, No. 3, pages 188-199.)

are more likely to be found in the older neighborhoods such as Downtown Anchorage, Fairview, Mountain View, Airport Heights, College Village, and South Addition. Figure 4-18 and Figure 4-19 depict the existing sidewalks systems in the Anchorage Bowl and Chugiak-Eagle River areas, respectively. In most areas outside these neighborhoods, sidewalks are discontinuous or often missing entirely. The physical layouts of many neigh-

borhoods do not promote walking. For example, many neighborhoods outside the older areas are not well connected by local streets. Anchorage metropolitan area pedestrians are also challenged by winter weather that leaves sidewalks covered by snow, preventing or hindering pedestrian use. Although the number of sidewalks receiving snow plowing has improved significantly, many pedestrian facilities are still left unplowed. Currently about 175 miles of sidewalks, or about one-third of the total sidewalks in the Anchorage metropolitan area, are included in the snow removal programs conducted by MOA, DOT&PF, and Eagle River Parks and Recreation.

Figure 4-18 Sidewalks – Anchorage Bowl

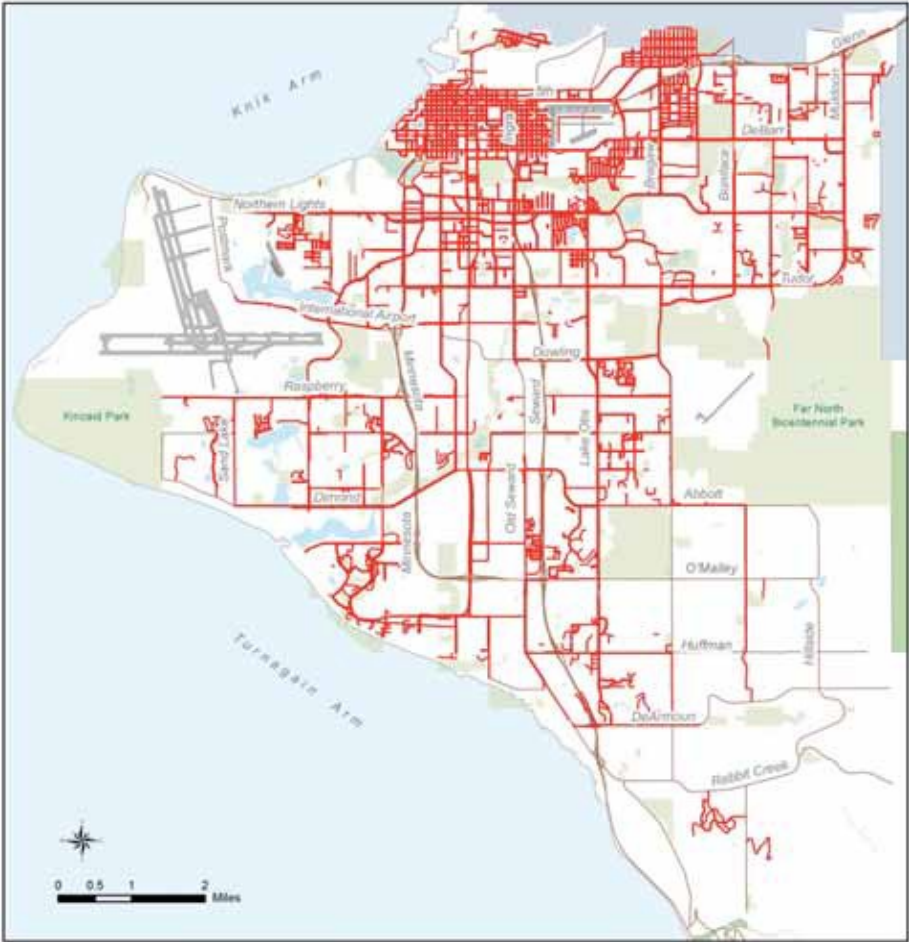
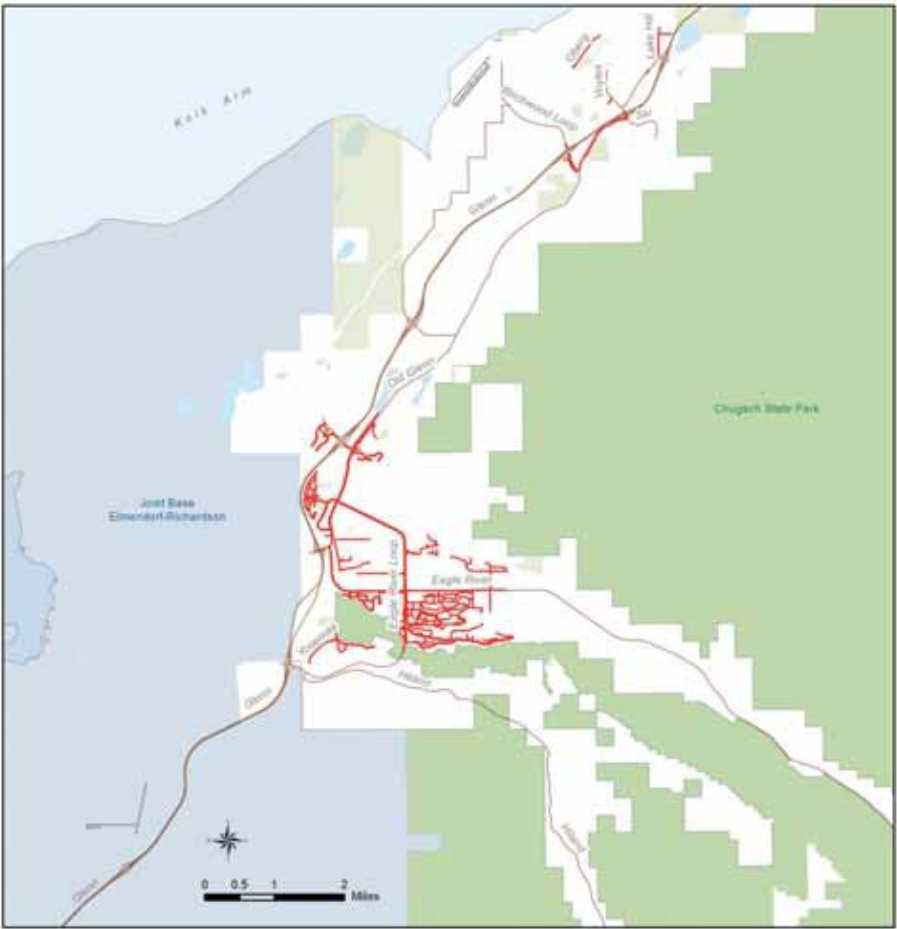


Figure 4-19 Sidewalks – Chugiak-Eagle River



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### Bicycle System

The 2002 Anchorage Household Travel Survey found that Anchorage metropolitan area residents made about 11,200 bicycle trips on a typical weekday in spring 2002 (about 1.2 percent of all trips). Statistical data about bicycle riders has been gathered annually on Bike to Work Day, held every May since 2007.

Volunteers at 12 locations counted the number of bicyclists between the hours of 6:30 and 9:00 a.m. These counts are reported in Table 4-5. The total bicycle riders counted at the 12 locations was more than 2,500 in 2010, an increase of 81 percent since 2007. The numbers for bicycle riders are undoubtedly higher than for an average day because of the

promotion for Bike to Work Day, and the trends in ridership may be skewed by varying levels of promotion and weather. However, the data do show an increase in bicycle riders.

Table 4-5 Bike to Work Day Counts, 2007–2010

| LOCATION  | 2007  | 2008  | 2009 <sup>A</sup> | 2010  | CHANGE, 2007-2010 |
|---|-------|-------|-------------------|-------|-------------------|
| Seward Highway and Chester Trail – trail and road bicycle traffic                     | 238   | 316   | 301               | 436   | 83%               |
| A Street and Chester Trail – trail and road bicycle traffic                           | 225   | 308   | 274               | 258   | 15%               |
| Chester Trail – Northern Lights Boulevard overpass at Goose Lake                      | 159   | 242   | 231               | 336   | 111%              |
| Tudor and C Street – north-south and east-west  | 170   | 171   | 209               | 303   | 78%               |
| Tudor Road and Elmore Road – north-south and east-west trail and road bicycle traffic | 94    | 160   | 179               | 341   | 263%              |
| Coastal/Chester Trail link, west end of Westchester Lagoon                            | 124   | 188   | 170               | 259   | 109%              |
| 15th Avenue and Arctic Boulevard/E Street   | 115   | 122   | 93                | 138   | 11%               |
| Lake Otis Parkway and 36th Avenue   | 91    | 103   | 99                | 128   | 41%               |
| 10th Avenue and N Street  | 63    | 101   | 72                | 109   | 73%               |
| Campbell Trail at Bittner House – south of Dowling Road                               | 67    | 71    | 81                | 120   | 80%               |
| Lake Otis Parkway and Abbott Road   | 55    | 71    | 51                | 87    | 58%               |
| Benson Boulevard and Minnesota Drive  | 21    | 31    | 37                | 52    | 148%              |
| Totals  | 1,422 | 1,884 | 1,797             | 2,567 | 81%               |

A – The slight drop in the number of bicycle riders counted in 2009 could be due to the exceptionally wet and cold weather encountered that year.

Source: MOA, Project Management and Engineering



Figure 4-20 and Figure 4-21 show the existing bicycle facilities for the Anchorage Bowl and Chugiak-Eagle River areas, respectively. A total of 243 miles of separated multi-use trails and bicycle lanes (on-street facilities that carry bicycle

traffic in the same direction as adjacent motor vehicle traffic) are currently available in both areas. Bicycle lanes are designated on more than 13 miles of roads in the Anchorage Bowl; none are designated in the Chugiak-Eagle River area.

Figure 4-20 Bicycle Facilities – Anchorage Bowl



Figure 4-21 Bicycle Facilities – Chugiak-Eagle River



## FREIGHT DISTRIBUTION

Trucks of all sizes distribute goods that arrive and depart by air, sea, and rail carrying freight to, from, and throughout the Anchorage metropolitan area and the region beyond. Because freight distribution is an integral part of the daily economic activity of the MOA, freight travel patterns affect traffic and are affected by the efficiency of the road network. A 2010 MOA freight mobility study identified the following constraints to freight transport in the Anchorage metropolitan area:

- Awkward access at the Port of Anchorage
- Delays from train operations and track operations in the port vicinity
- Road delays and poor signal timing
- Congestion at intersections
- Difficulties in executing left turns at many busy intersections

Table 4-6 shows the 2009 daily truck traffic at select locations. Heavy (combination unit) truck volumes were highest around the Port of Anchorage and on the NHS routes—Seward and Glenn highways. Heavy truck traffic is present on all arterial streets in the Anchorage metropolitan area, reflecting the diffuse pattern of commercial activity in the area. Most trucks on city streets are smaller, single-unit vehicles. (See the footnotes in Table 4-6 for definitions of single-unit and combination trucks.)

Table 4-6 Average Weekday Truck Counts at Spot Locations, 2009

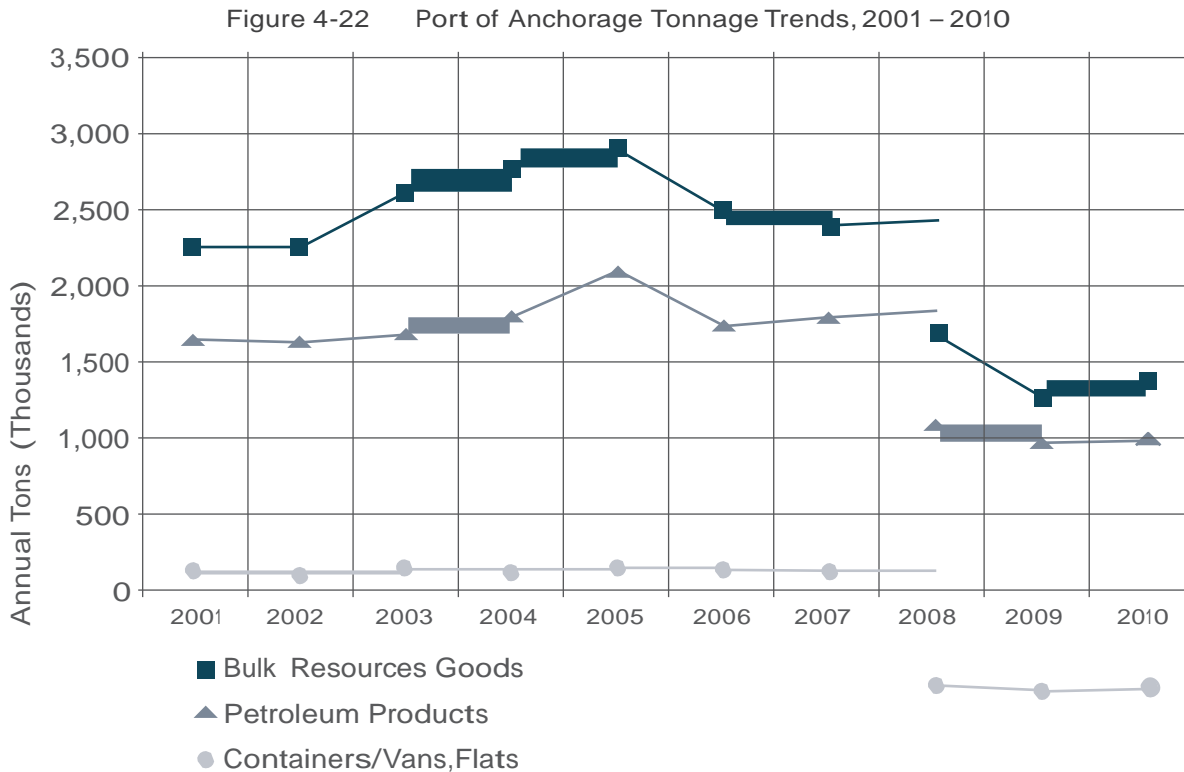
| LOCATION   | SINGLE-UNIT TRUCK <sup>A</sup> | COMBINATION UNIT TRUCK <sup>A</sup> | PERCENTAGE OF AVERAGE DAILY TRAFFIC |
|--|--------------------------------|-------------------------------------|-------------------------------------|
| Ocean Dock Road, Port of Anchorage               | 268                            | 454                                 | 38.2                                |
| Whitney Rd. east of North C Street               | 239                            | 115                                 | 31.0                                |
| Seward Highway at Potters Marsh                  | 825                            | 184                                 | 10.8                                |
| Glenn Highway east of Airport Heights            | 3037                           | 499                                 | 8.3                                 |
| International Airport Rd., east of Fairbanks St. | 536                            | 19                                  | 7.6                                 |
| Tudor Road, west of Patterson Street             | 1481                           | 235                                 | 7.3                                 |
| Seward Highway, south of 76th Ave.               | 3015                           | 291                                 | 7.2                                 |
| O Malley Rd. east of Seward Hwy.                 | 388                            | 11                                  | 5.4                                 |
| Arctic Blvd. south of 76th Avenue                | 189                            | 23                                  | 5.0                                 |
| Minnesota Drive north of Dimond Blvd.            | 1539                           | 135                                 | 4.9                                 |
| Dimond Boulevard, west of Arctic Blvd.           | 609                            | 20                                  | 4.2                                 |
| Debarr Rd. east of Wintergreen Street            | 455                            | 18                                  | 4.1                                 |
| Northern Lights Blvd., east of LaTouche St.      | 802                            | 20                                  | 3.9                                 |
| Eagle River Rd. east of Caribou Street           | 120                            | 6                                   | 2.7                                 |

<sup>A</sup> According to the Annual Traffic Volume Report prepared by DOT&PF in 2009, all single-unit and combination trucks are considered commercial vehicles. A single-unit truck has two or three axles. Examples are delivery trucks and dump trucks, pickups are not included. Combination trucks have four or more axles. Examples are concrete trucks, fuel trucks, and tractors hauling one or more trailers.

Source: MOA and DOT&PF

Port of Anchorage

The Port of Anchorage is the major gateway for goods moving into and out of Alaska. The port serves nearly all of Alaska's populated area from Homer to the North Slope by means of rail, road, and air cargo connections. It handles an estimated 90 percent of the merchandise goods sold in the Railbelt (the corridor extending from Fairbanks in Interior Alaska through Anchorage in Southcentral Alaska and to Seward on Kenai Peninsula) and is a key logistic resource for major military installations. Figure 4-22 shows port cargo trends from 2001 to 2010. Over 1.7 million containers moved through the Port of Anchorage in 2010, an increase of 7 percent since 2001. If the sharp drop in 2009, which was likely due to the global economic recession, is excluded, the overall increase in container traffic through the Port of Anchorage was about 13 percent. That change almost exactly reflects the region's population growth over the past 10 years. Bulk resource goods, particularly petroleum products, increased significantly in 2010.

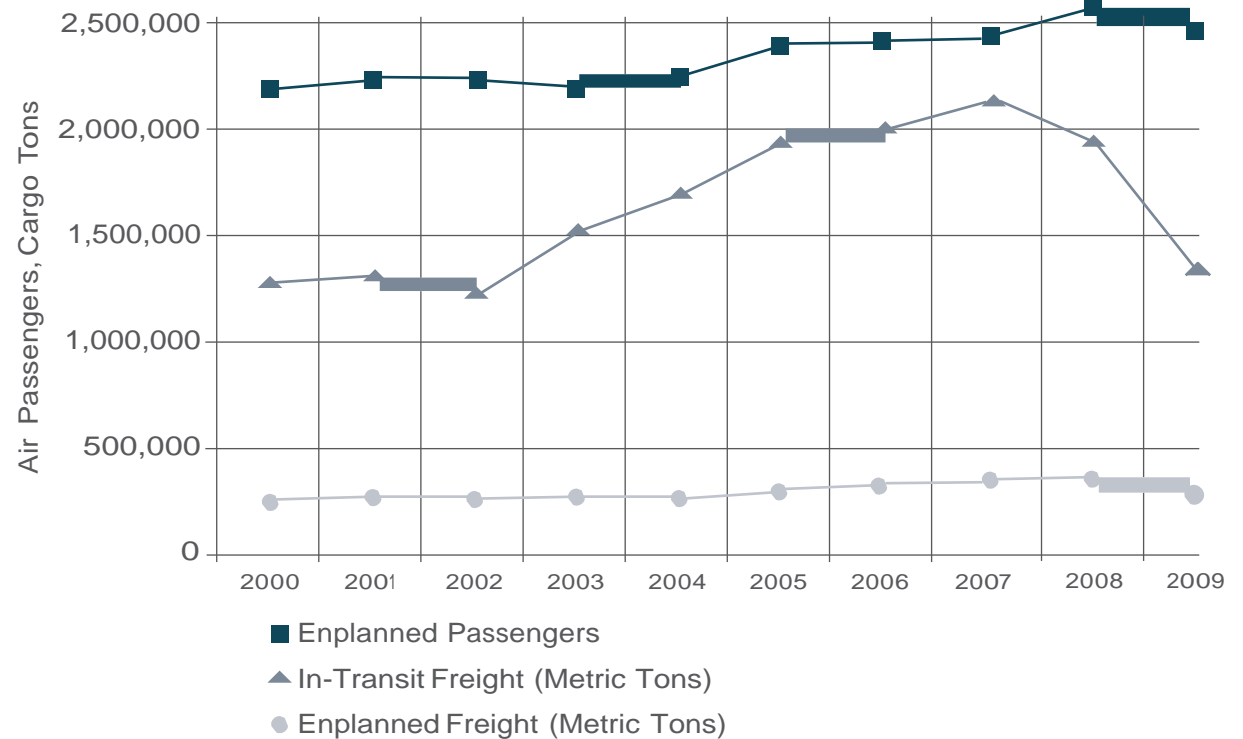


## Ted Stevens Anchorage International Airport

Air passengers and cargo tonnage continue to rise annually at Ted Stevens Anchorage International Airport (TSAIA). Passenger numbers were relatively flat during the early part of the decade (possible because of the events of September 11, 2001) but have shown a steady increase of about 2 percent annually since 2003. This growth in passenger traffic through the airport is twice as fast as the MOA growth rate from 2000 to 2009 and somewhat faster than the 1.7 percent growth rate of the combined MOA and Mat-Su Borough populations.

Between 2000 and 2009, in-transit air freight (passing through the airport) increased 4 percent and enplaned freight loaded in Anchorage gained 13 percent (see Figure 4-23). These freight numbers declined substantially because of the sudden drop in air cargo shipments in 2009, reflecting the global economic recession.

Figure 4-23 TSAIA Air Passenger and Cargo Trends, 2000-2009



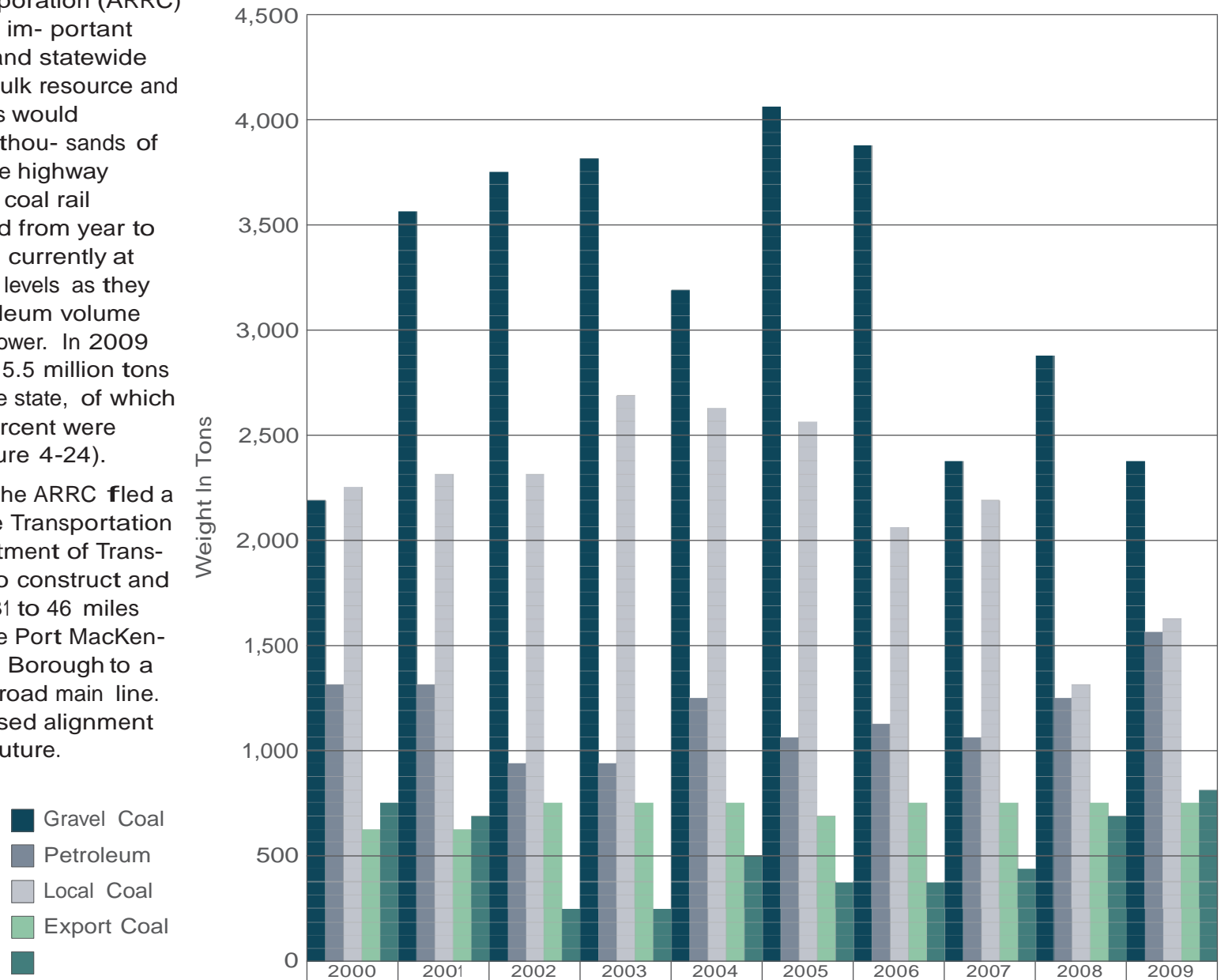


## Railroad

The Alaska Railroad Corporation (ARRC) freight shipments are an important component of regional and statewide transport movements. Bulk resource and petroleum rail shipments would otherwise require many thousands of annual truck loads on the highway system. Both gravel and coal rail tonnages have fluctuated from year to year since 2000, but are currently at approximately the same levels as they were in 2000, and petroleum volume has trended somewhat lower. In 2009 the railroad transported 5.5 million tons of freight throughout the state, of which 3.9 million tons or 70 percent were gravel and coal (see Figure 4-24).

On December 5, 2008, the ARRC filed a petition with the Surface Transportation Board of the U.S. Department of Transportation for authority to construct and operate approximately 31 to 46 miles of rail line to connect the Port MacKenzie District in the Mat-Su Borough to a point on the existing railroad main line. A decision on the proposed alignment is expected in the near future.

Figure 4-24 Alaska Railroad Freight Tonnage Trends, 2000 – 2009



## Regional Connections

The transportation system connects the metropolitan area with the rest of the state, the country, and the world. The regional connections are shown in Figure 4-25. On the NHS, automobiles and trucks move people and goods to and from other regions of the state. Ships, planes, and the railroad carry consumables, manufactured products, and travelers to and from Anchorage. In addition, these modes are connected through transfer hubs and corridors in an intermodal transportation system that is depicted in Figure 4-25.

Rail travel is an important component of the regional transportation system. The railroad carried more than 470,000 passengers in 2009 and 405,000 passengers in 2010, mostly Alaska visitors and cruise ship passengers. The ARRC is continuing its program of infrastructure development for rail passengers.

The railroad is collaborating with the Dimond Center on plans to develop an intermodal center there and is upgrading facilities at its Ship Creek headquarters complex.

Figure 4-25 Regional Transportation Hubs and Corridors



# Chapter

## METROPOLITAN AREA TRANSPORTATION IN 2035

To prepare for the future needs of a growing metropolitan area—the principal purpose of this MTP—it is important to understand the transportation needs in the year 2035 and to identify transportation improvements to meet those needs.

The first part of this chapter, "Demographics," summarizes assumptions and results of the land-use forecasts for the metropolitan area through 2035. Knowing the locations of both existing and future development is a critical part of projecting future transportation demand.

The second part of this chapter, "Transportation Systems," summarizes the impacts of the findings from the land-use forecasts on the transportation system. The section seeks to answer questions about the future transportation system, including the following:

- How well will the transportation system work in 2035?
- What improvements may be necessary and desirable?
- What happens under different hypothetical future scenarios such as doing nothing, expanding public transportation service, adding road capacity, or connecting more trails and facilities for pedestrians and bicyclists?
- What investments would be most effective?

- How will neighborhoods, safety, air quality, health, and the natural environment be affected by transportation choices?

The second part of the chapter also reports the results of analyses conducted for the MTP. The information guides identification of the possible future transportation choices for the metropolitan area and shapes decisions by the community about the future transportation system.





## DEMOGRAPHICS

### Population, Housing, and Employment

This MTP considers a 28-year planning horizon; it relies on data from a travel demand model that uses the base year of 2007 and a future year of 2035. The base year, 2007, is the most recent year for which the data from the travel demand have been validated; therefore, the 2007 data are used as the basis for evaluating the accuracy of the model in predicting existing and future travel behavior. For the remainder of this chapter, the base year will be referred to as the "existing" year.

The primary drivers of transportation demand and regional travel patterns are the scale and geographic distribution of population and employment. The relationships between land-use development and the effects on generating travel demand are well-defined.

Established land uses in the metropolitan area are constrained in many locations by geographical features such as coastlines, mountains, and stream corridors. These established land uses have influenced the travel patterns that exist today. Understanding the relationship between the distribution of housing and employment (and the resulting regional travel patterns) is key to projecting future transportation demand. People use some form of transportation whenever they travel

between land uses—where they live, work, shop, conduct business, and recreate. Land uses that are far apart have a different impact on the transportation network than those that are located close together.

Estimates of where new housing units and new businesses are expected to occur are important inputs needed for estimating the daily travel that the future

transportation system will be required to accommodate. A land-use forecast is developed in two stages: the first involves a regional forecast of population, household, and employment growth, and the second involves the allocation of the regional forecast into smaller discrete units (traffic analysis zones [TAZs]) within the MOA.

Table 5-1 Projected Population, Household, and Employment Growth for the Southcentral Region

| DEMOGRAPHICS                               | 2007           | 2035 FORECAST  | NUMERIC CHANGE |
|--|----------------|----------------|----------------|
| <b>Population</b>                          |                |                |                |
| Anchorage Bowl                             | 243,080        | 280,720        | 37,640         |
| Chugiak-Eagle River                        | 37,460         | 65,020         | 27,560         |
| Mat-Su Borough                             | 72,700         | 159,050        | 86,350         |
| <b>Total</b>                               | <b>353,240</b> | <b>504,790</b> | <b>151,550</b> |
| <b>Households</b>                          |                |                |                |
| Anchorage Bowl                             | 90,800         | 111,890        | 21,090         |
| Chugiak-Eagle River                        | 11,710         | 22,340         | 10,630         |
| Mat-Su Borough                             | 27,610         | 59,170         | 31,560         |
| <b>Total</b>                               | <b>130,120</b> | <b>193,400</b> | <b>63,280</b>  |
| <b>Employment (includes self-employed)</b> |                |                |                |
| Anchorage Bowl                             | 159,000        | 198,030        | 39,030         |
| Chugiak-Eagle River                        | 4,700          | 10,170         | 5,470          |
| Mat-Su Borough                             | 29,000         | 63,700         | 34,700         |
| <b>Total</b>                               | <b>192,700</b> | <b>271,900</b> | <b>79,200</b>  |

**Notes:**

The MOA is the sum of the Anchorage Bowl and Chugiak-Eagle River.

Military base housing and population are included in the Anchorage Bowl figures.

Source: ISER Economic and Demographic Projections for Alaska and Greater Anchorage 2010-2035, December 2009, as modified by AMATS to correspond to the AMATS planning boundaries.



## Regional Population, Household, and Employment Forecast

As reported in Chapter 1, the primary source of population, household, and employment growth projections used for this MTP was the Economic and Demographic Projections for Alaska and Greater Anchorage 2010-2035, prepared by ISER in 2009. Table 5-1 shows the population, household, and employment projections for the Southcentral region of Alaska, an area that includes the metropolitan area and the Mat-Su Borough.

The regional population growth projections show the most dramatic population growth occurring in the Mat-Su Borough (119 percent), followed by Chugiak-Eagle River (74 percent), and the Anchorage Bowl (15 percent). Regional population growth is shown in Figure 5-1.

Household growth generally follows the patterns established by the population growth, although a difference between the average household size in the Mat-Su Borough and the MOA affects household growth. Housing in the Anchorage Bowl is expected to grow by approximately 21,080 new units, representing about one-third of the regional housing expansion. About 17 percent of the future household growth in the metropolitan area is expected to be absorbed by Chugiak-Eagle River, where the number of existing households is anticipated to nearly double. The high rate of household

growth in Chugiak-Eagle River is due to large tracts of undeveloped land.

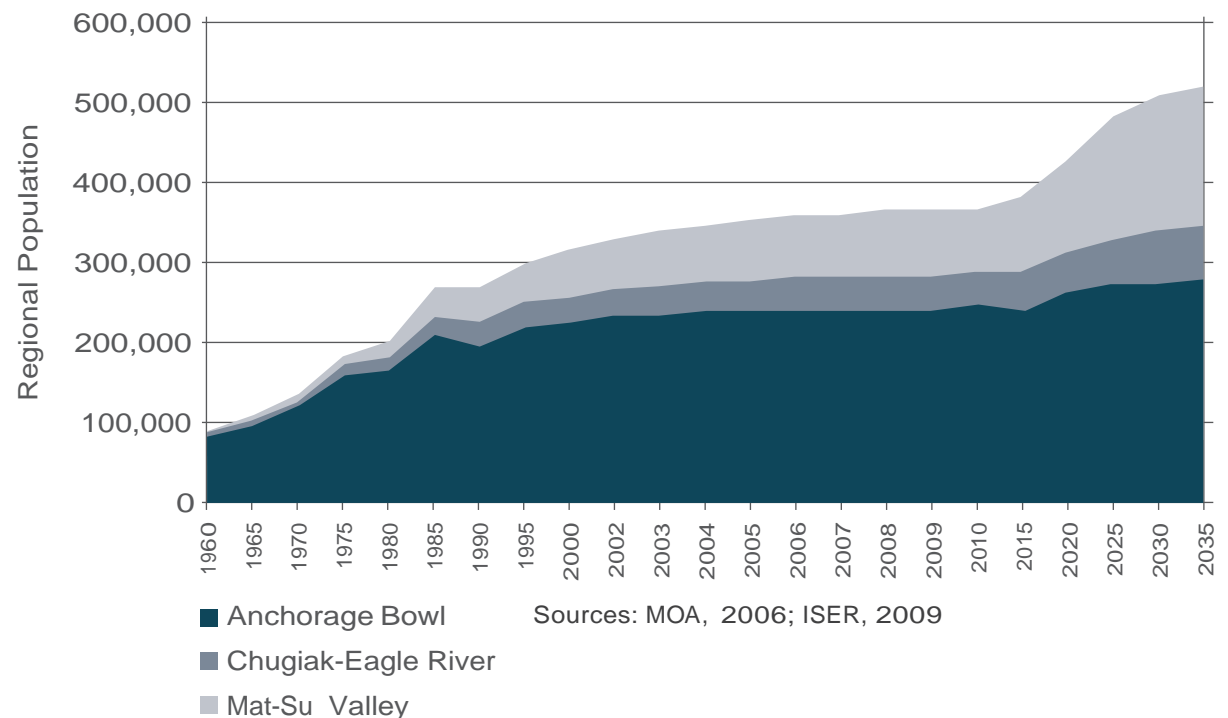
The remainder of the regional household growth (nearly 50 percent) is expected to be accommodated in the Mat-Su Borough, following the shifting pattern of growth to the valley that has been occurring during the past few decades.

The economies of the Mat-Su Borough and Chugiak-Eagle River will remain closely linked to the Anchorage Bowl economy. The employment growth in the Mat-Su Borough and Chugiak-Eagle River is expected to consist largely of local jobs required to meet the demand of the

growing local populations. The Anchorage Bowl will remain the dominant source of employment for the Southcentral Alaska region, supplying more than 70 percent of the region's jobs in 2035.

This economic relationship results in a strong regional travel pattern with a large percentage of residents in the fast growing Mat-Su Borough and Chugiak-Eagle River areas commuting to jobs in the Anchorage Bowl. Currently all commuters from these areas must use the Glenn Highway to travel to the Anchorage Bowl.

Figure 5-1 Regional Population Growth



## 2035 Metropolitan Transportation Plan

Figure 5-2 charts the projected growth of Glenn Highway commuters from the Mat-Su Borough and Chugiak-Eagle River to employment sites in the Anchorage Bowl.

Employment by industry sector is an important component in forecasting future travel demand. Each industry sector has characteristics relevant to choices that affect facility location and space requirements. Industry sectors also are affected by applicable land-use policies and regulations. The travel patterns associated with industry sectors vary; for example,

school employment trips do not occur during the same peak period as do trips for government employment, and health service employment generates a travel pattern different from those for all other types of employment. The Alaska Department of Labor and Workforce Development (DOLWD) recognizes 13 industry sectors.

### Considering the Knik Arm Crossing

The projections discussed in this chapter consider the effects of the proposed Knik Arm Crossing project on regional population and employment distribution.

It should be noted that the change in growth rates (location and quantity of forecast population and employment) is very sensitive to the year that the bridge is opened. The anticipated opening date is 2016; however, that date is subject to many variables. Population and employment changes that could result from the Knik Arm Bridge were analyzed as part of the Knik Arm Crossing Final Environmental Impact Statement and Final Section 4(f) Evaluation, published on December 18, 2007.

Figure 5-2 Projected Commuters from Chugiak-Eagle River and the Mat-Su Valley to Anchorage Bowl Employment

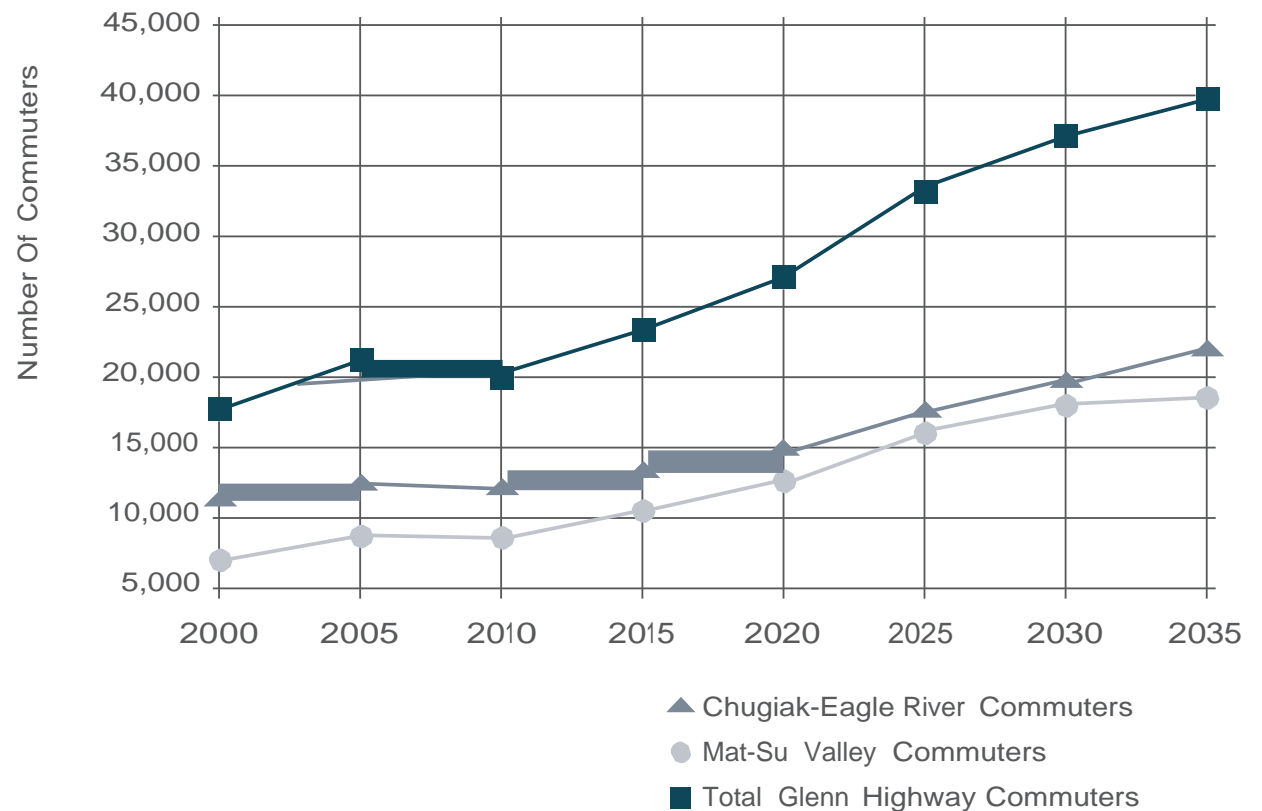
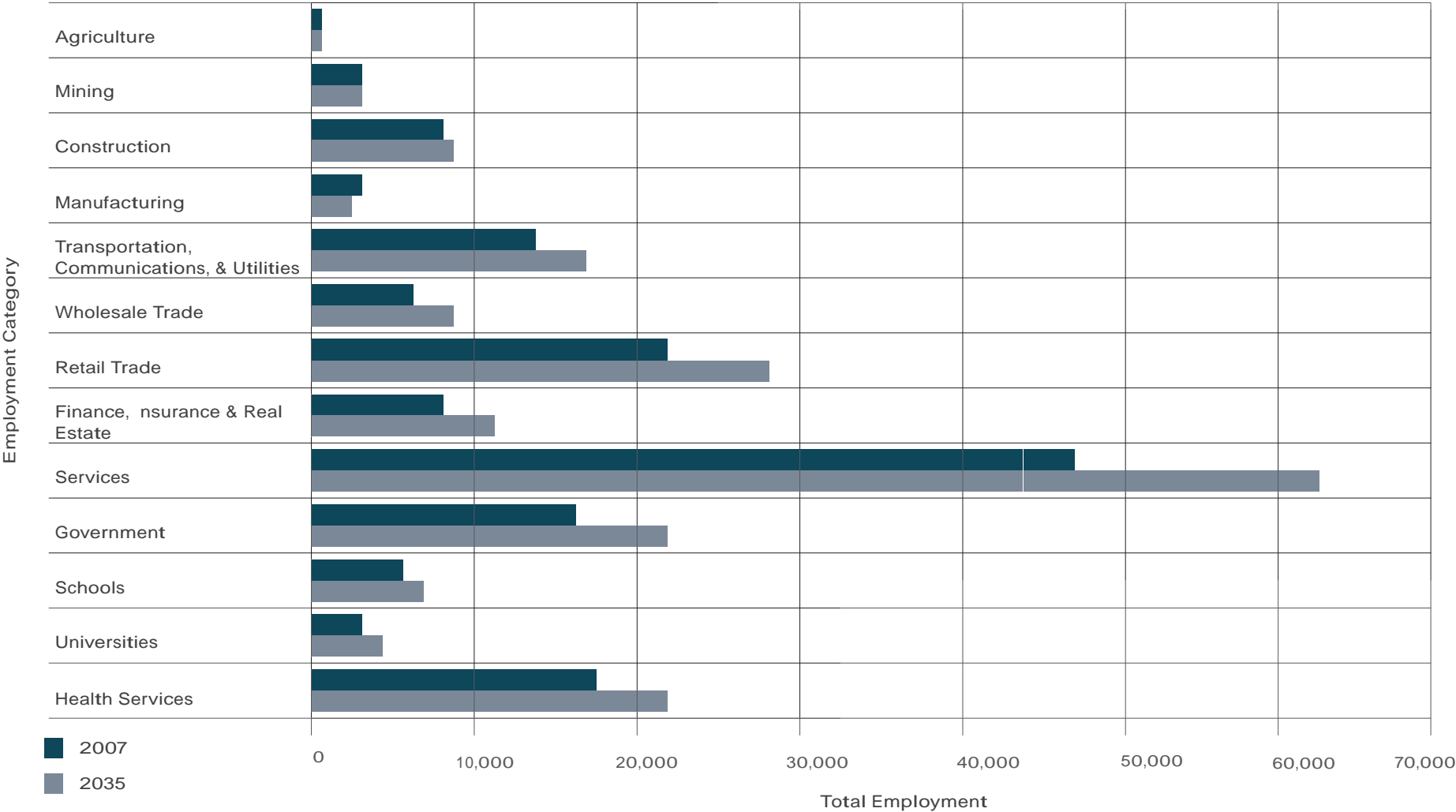


Figure 5-3 charts the projected growth in these sectors for the entire metropolitan area. For the area, the services, government, and retail trade sectors are the largest employers today and are expected to continue to be the largest employers in 2035. Of the growth in area jobs

expected to occur from 2007 to 2035, more than half is attributed to employment gains in the health services sector and the services sector, with additions of more than 4,500 health service jobs and 14,900 services jobs.

Figure 5-3 Projected Employment Growth



### DISTRIBUTION OF MOA POPULATION, HOUSEHOLD, AND EMPLOYMENT GROWTH

The adopted MOA comprehensive plans provide the main guidance related to future development patterns and density expectations. The distribution of the regional population, household, and employment growth within the MOA and the Mat-Su Borough also relies on an understanding of the following factors:

- Availability of a parcel for development (Is it vacant?)
- Type and amount of development allowed under zoning ordinances and the land-use plan map
- Accessibility of the parcel location (How close is the parcel to existing development?)
- Suitability of the land for development (Is it located in a wetland or on a steep hillside?)

**Guiding Comprehensive Plans** The MOA has developed a land use forecast for the year 2035 that reflects where and how future land development will occur based on its adopted comprehensive land-use plans. The household and employment growth allocations in the Anchorage Bowl are based on the Anchorage 2020: Anchorage Bowl Comprehensive Plan (adopted February 2001).

Figure 5-4 shows the land-use policy areas from the Anchorage Bowl comprehensive plan where the highest density development is expected to occur: Major Employment Centers, Redevelopment/Mixed-Use Areas, Transit Supportive Development Corridors, and Town Centers.

The intent of the Anchorage Bowl comprehensive plan is to create a city in which there will be more opportunities to live a lifestyle that is less dependent on automobiles. This goal is accomplished by selectively increasing housing densities, consolidating employment, and encouraging mixed-use development to improve walkability within the Anchorage Bowl and to promote public transportation use. Housing density increases are specifically called for along four transit corridors, within seven town centers, and in the three redevelopment areas near major employment centers. Policies have been identified to help focus employment growth within the three existing major employment centers: Downtown, Midtown, and the University-Medical (U-Med) District. The comprehensive plan also provides guidance for the population and household growth by subareas of the Anchorage Bowl, which assumes a high degree of redevelopment in the areas surrounding and within the Downtown and Midtown employment areas.

The household and employment growth projections in Chugiak-Eagle River are based on the Chugiak-Eagle River Comprehensive Plan Update (December

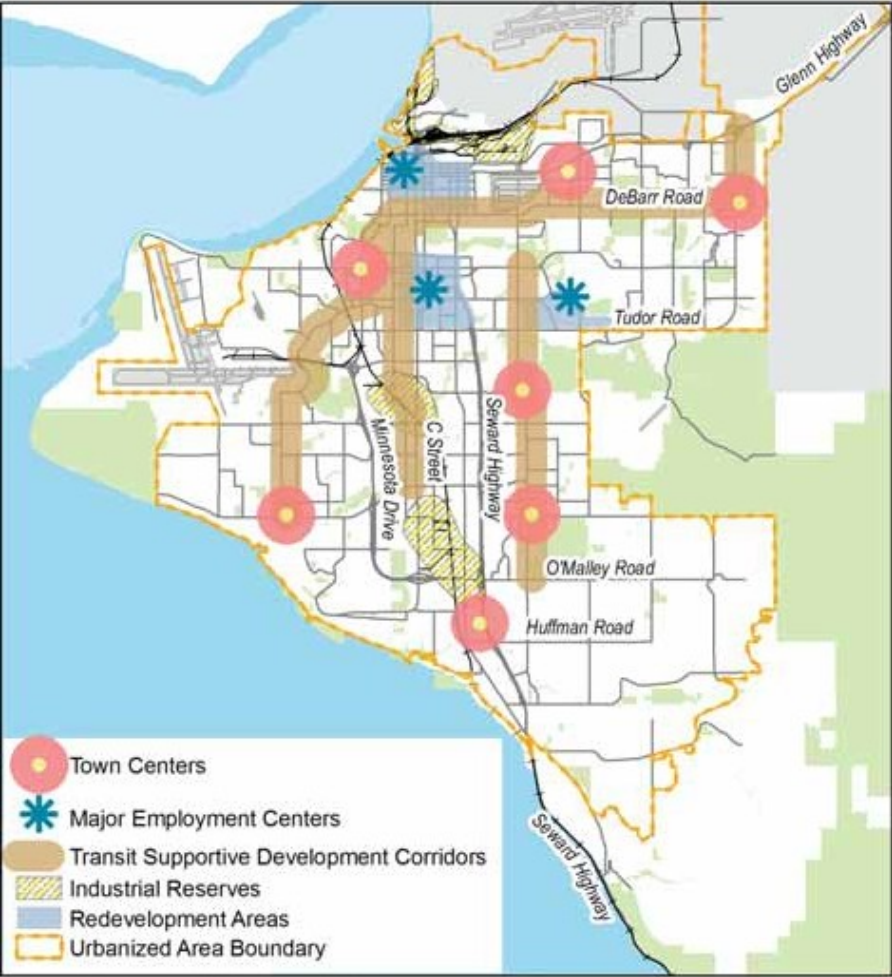
2006). Figure 5-5 shows the land-use plan map from the Chugiak-Eagle River comprehensive plan.

The comprehensive plan provides the long-term vision for development in this largely residential community. It identifies one town center in the Downtown Eagle River Central Business District (CBD). Most of the higher-density residential development is located near the town center. The majority of the existing and future residential development in Chugiak-Eagle River is relatively low density (less than one dwelling unit per acre). Chugiak-Eagle River also contains some of the last remaining large tracts of undeveloped land in the MOA. These undeveloped tracts are divided between areas that are expected to be developable within the timeframe of the MTP (2035) and development reserves. Although generally suitable for development, a development reserve is characterized by a location and an absence of both public facilities and projected demand; therefore, forecasts for these areas are uncertain. Most of the increased employment for Chugiak-Eagle River is projected to be retail and services jobs supporting the local community.

In both the Anchorage Bowl and Chugiak-Eagle River comprehensive plans, smaller planning areas—useful for identifying where growth is occurring—have been identified. The planning areas typically have similar land uses, such as urban residential, suburban residential,

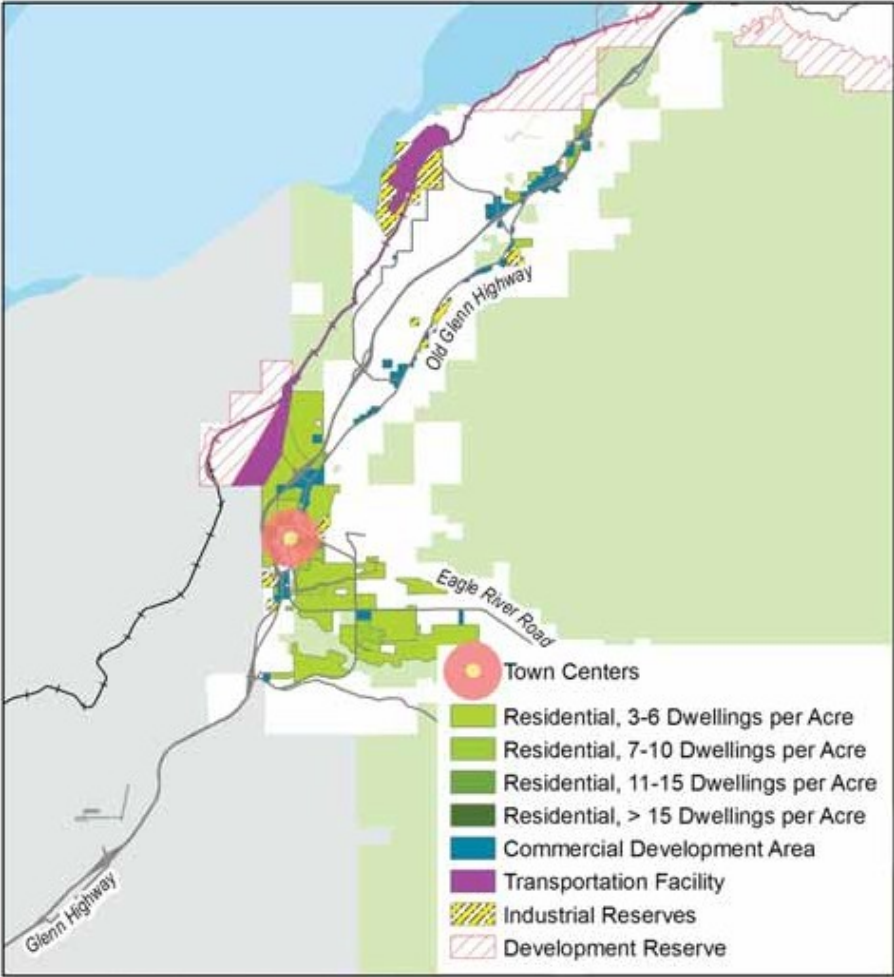


Figure 5-4 Land-Use Policy Areas in the Anchorage Bowl Comprehensive Plan



Source: Anchorage 2020 Comprehensive Plan

Figure 5-5 Land-Use Policy Areas in the Chugiak-Eagle River Comprehensive Plan



Source: Chugiak-Eagle River Comprehensive Plan Update, 2006

mixed use, or CBD employment. These smaller areas are shown in Figure 5-6 and Figure 5-7 for the Anchorage Bowl and Chugiak-Eagle River, respectively.

### Application of Land Use Allocations

The allocation of future population and household growth starts with the existing housing stock. The distribution of population, household, and employment growth has been developed to be consistent with the existing guiding comprehensive plans for the Anchorage Bowl and Chugiak-Eagle River. Predicting the locations where growth will occur in the Anchorage Bowl and Chugiak-Eagle River relies on identifying and understanding current patterns and factors that limit or promote future development.

The primary existing residential land use in the metropolitan area is low-density housing. This lack of density has important ramifications on the ability of the MOA to support public transportation services. In general, at least seven to ten residential units per acre are required to provide the densities necessary to support frequent public transportation service, about twice that for premium-quality public transportation, such as rail service. The distributions of household density are shown in Figure 5-8 and Figure 5-9 for the Anchorage Bowl and Chugiak-Eagle River, respectively. In the Anchorage Bowl, the average housing

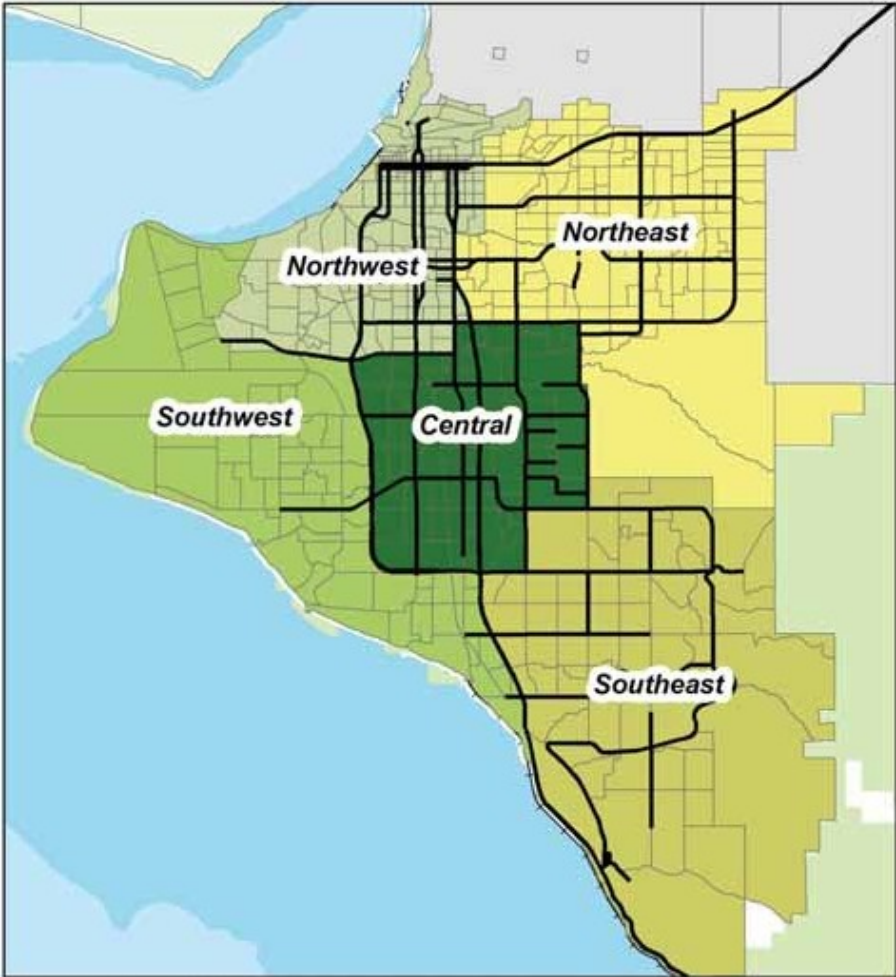
density exceeds 10 dwelling units per acre in only a few areas and the highest housing densities are in the Downtown CBD, Spenard, and Midtown. In Chugiak-Eagle River, the average housing density does not exceed the dwelling-unit-per-acre threshold for density in any location.

Future employment growth is dispersed throughout the metropolitan area. The Downtown CBD in the Anchorage Bowl is a significant source of jobs, but it no longer dominates employment or retail activity in the region. Other Anchorage Bowl areas with significant economic activity include Joint Base Elmendorf-Richardson (JBER), the U-Med District, Midtown, the TSA A area, and the Dimond Mall. The employment in Chugiak-Eagle River is also dispersed; however, jobs are predominantly located in the Eagle River CBD. Low employment density has a similar effect on public transportation viability because low employment density with 25 employees per acre is considered to be the minimum density needed to support frequent public transportation service. About twice that density is required to support premium-quality public transportation, such as rail service. Figure 5-10 and Figure 5-11 show the 2007 distribution of employment in the Anchorage Bowl and Chugiak-Eagle River, respectively.

Implementation of planning elements in the Anchorage Bowl and Chugiak-Eagle River comprehensive plans is expected to correct some shortcomings of the existing land-use pattern by developing more multi-use and denser town centers and focusing on land-use policies to create more viable employment centers.

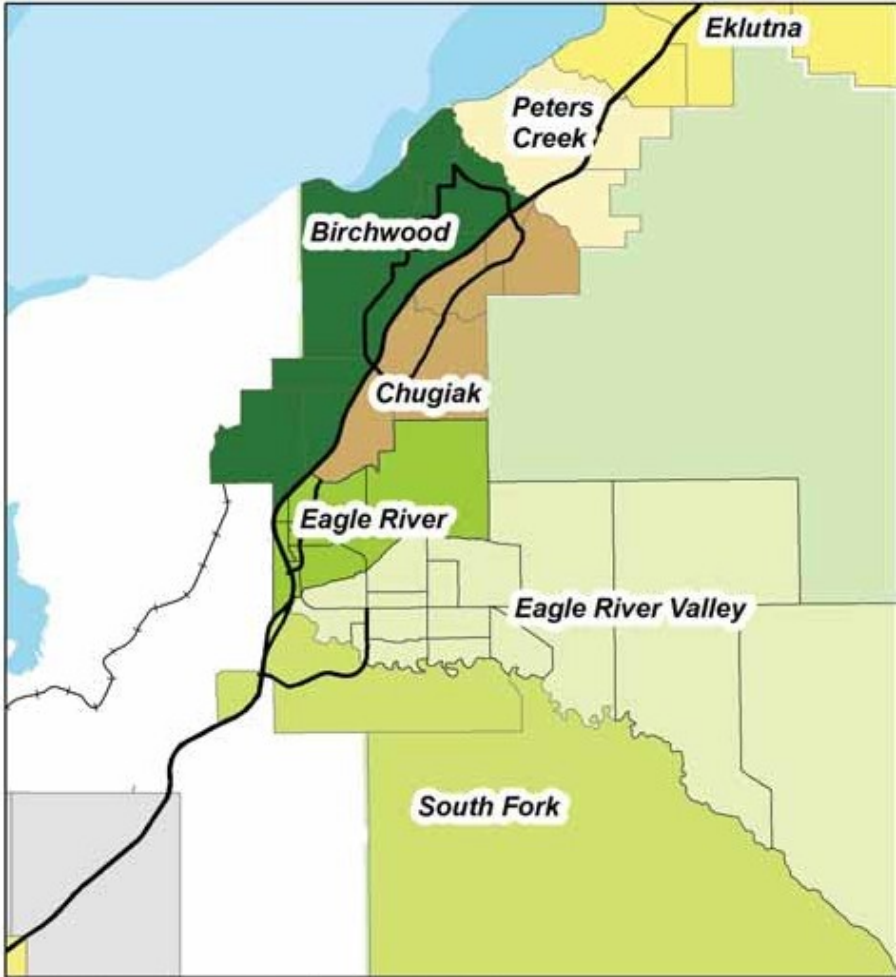
The guiding comprehensive plans for the Anchorage Bowl and Chugiak-Eagle River both call for changes in the decision process for allocating future land-use development. The goal of this allocation is to locate development (households and employment) in areas that will have a positive influence on travel patterns in the metropolitan area. Higher densities and mixed-use development called for in the comprehensive plans have the potential to decrease long-distance trips (across the network) and increase non-automobile trips.

Figure 5-6 Anchorage Bowl Planning Areas



Source: Anchorage 2020 Comprehensive Plan

Figure 5-7 Chugiak-Eagle River Planning Areas



Source: 2006 Chugiak-Eagle River Comprehensive Plan Update



Figure 5-8 2007 Household Density – Anchorage Bowl

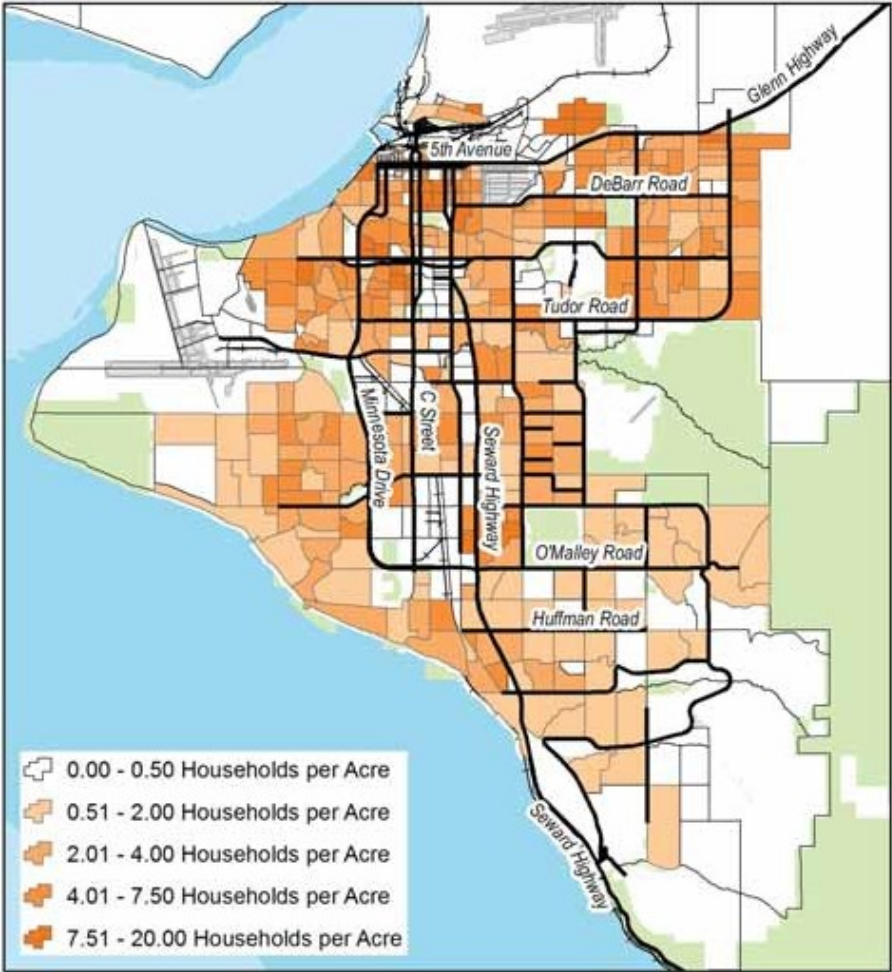


Figure 5-9 2007 Household Density – Chugiak-Eagle River

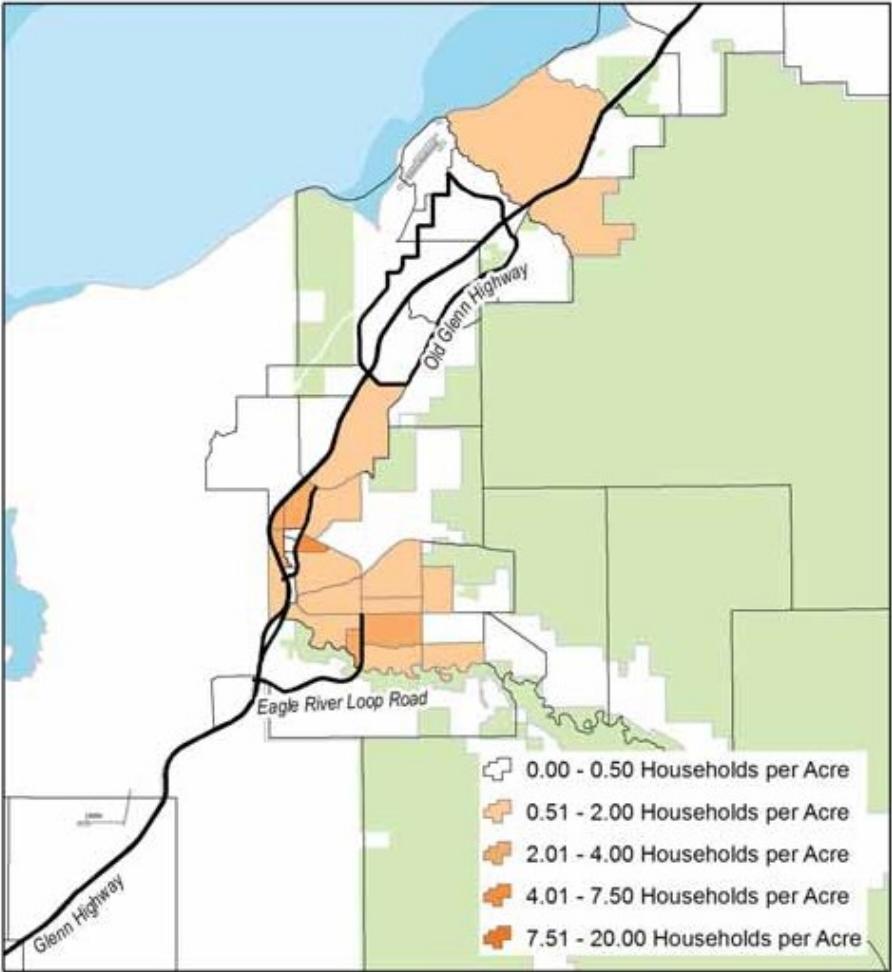




Figure 5-10 2007 Employment Density – Anchorage Bowl

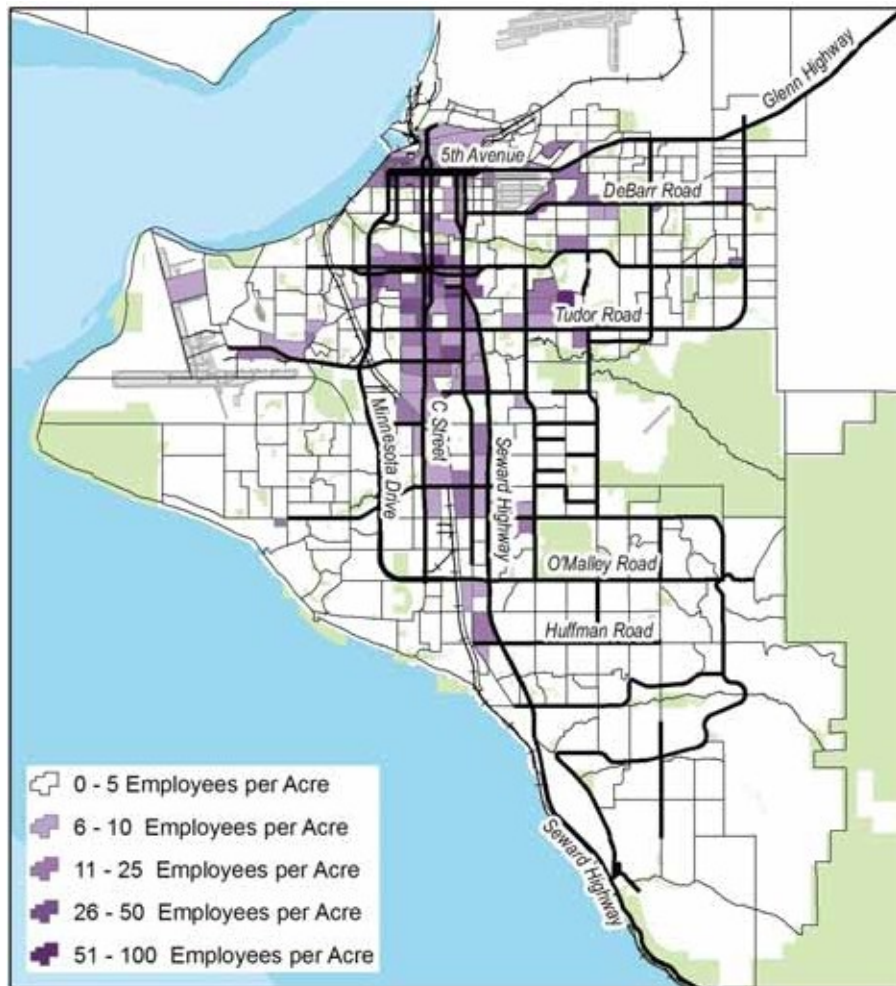
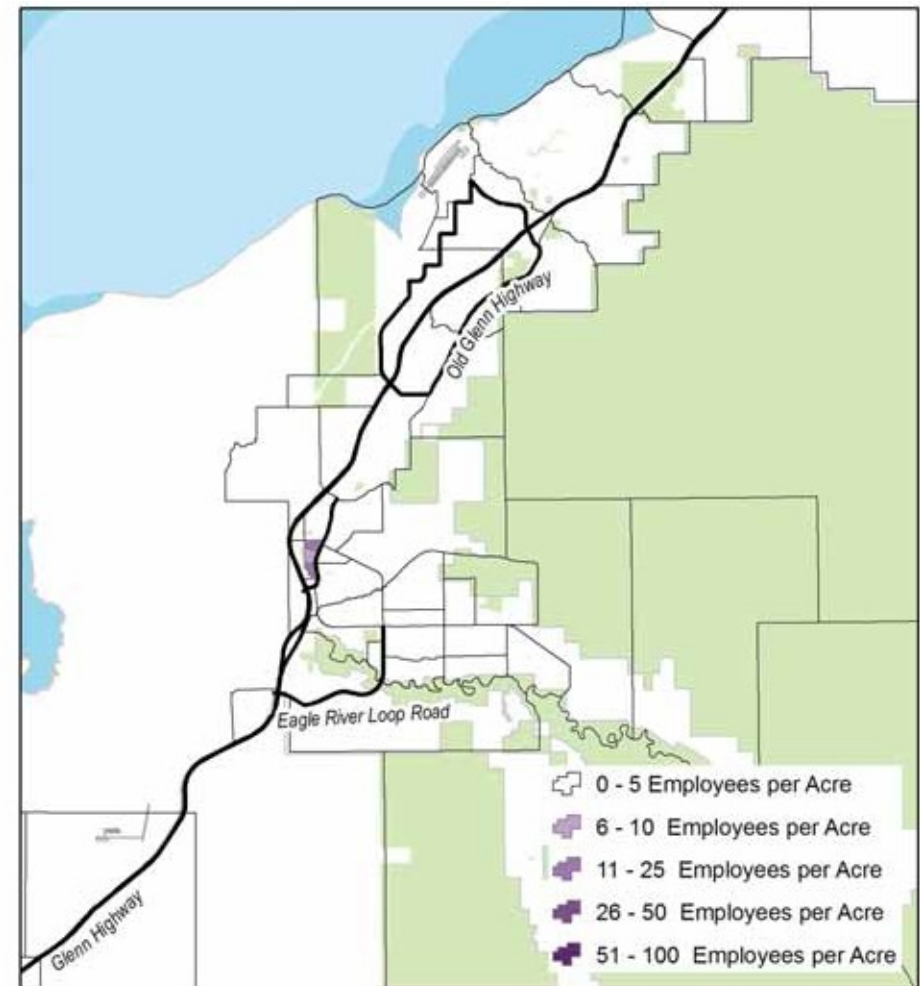


Figure 5-11 2007 Employment Density – Chugiak-Eagle River



Note: TSAIA is treated as a special generator in the transportation demand model. Traffic generation for TSAIA-take offs and landings-is calculated by means other than employment. Therefore, it was not necessary to project total employment at the airport for input into the transportation demand model.

Future Household and Employment Growth Allocation

An estimated collective total of approximately \$10 billion to \$14 billion (in 2010 dollars) is expected to be invested in new housing and employment sites between 2010 and 2035 in the metropolitan area. Despite the magnitude of this investment, changes to the existing patterns of development and the urban form will be gradual.

Household allocation by planning area for the Anchorage Bowl and Chugiak-Eagle River are shown in Table 5-2. These sub-areas are refined further into TAZs, which serve as the foundation for predicting origins and destinations of travel with the transportation forecasting model.

Figure 5-12 and Figure 5-13 show the allocations of housing growth by TAZ for the Anchorage Bowl and Chugiak-Eagle River.

Although existing areas of rapid development are predicted to continue to grow based on the availability of vacant land, a substantial amount of the future growth is projected to occur in and around town centers, transit-supportive development corridors, and redevelopment areas identified in the Anchorage Bowl and Chugiak-Eagle River comprehensive plans.

The 2035 housing allocation forecast for the Anchorage Bowl reflects the assumptions about future household growth contained in the comprehensive plan with a major shift occurring from the current

growth areas (south and central areas), to the northeast and northwest planning areas. The majority of this shift is explained by the projected increase in residential growth in areas surrounding and within the three major employment areas in the Anchorage Bowl (Downtown, Midtown, and the U-Med District). These areas alone are predicted to attract more than 4,350 new housing units, of which 1,760 housing units are forecast to be located within the Downtown CBD.

Four of the transit-supportive development corridors identified in the Anchorage Bowl comprehensive plan (Arctic Boulevard, Debarr Road, Spenard Road/Jewel Lake Road, and Lake Otis Parkway) are also projected to receive a substantial

amount of household growth with more than 8,300 new housing units added to these corridors by 2035.

The 2035 Chugiak-Eagle River housing forecast projects residential growth primarily in Birchwood, Chugiak, Eagle River Valley, and South Fork. In Chugiak-Eagle River, 300 housing units are forecast within the general area of the CBD.

Table 5-2 Projected Household Growth by Planning Area, 2007–2035

| PLANNING AREA            | HOUSEHOLD GROWTH | PERCENTAGE OF TOTAL GROWTH |
|--------------------------|------------------|----------------------------|
| Central Anchorage Bowl   | 3,700            | 12                         |
| Northeast Anchorage Bowl | 4,480            | 14                         |
| Northwest Anchorage Bowl | 6,680            | 20                         |
| Southeast Anchorage Bowl | 3,200            | 10                         |
| Southwest Anchorage Bowl | 3,030            | 10                         |
| South Fork Eagle River   | 1,600            | 5                          |
| Eagle River              | 770              | 2                          |
| Eagle River Valley       | 2,410            | 8                          |
| Chugiak                  | 1,810            | 6                          |
| Birchwood                | 2,460            | 8                          |
| Peters Creek             | 890              | 3                          |
| Eklutna                  | 690              | 2                          |
| Total                    | 31,720           | 100                        |

Figure 5-12 2007-2035 Household Growth by Traffic Analysis Zone - Anchorage Bowl

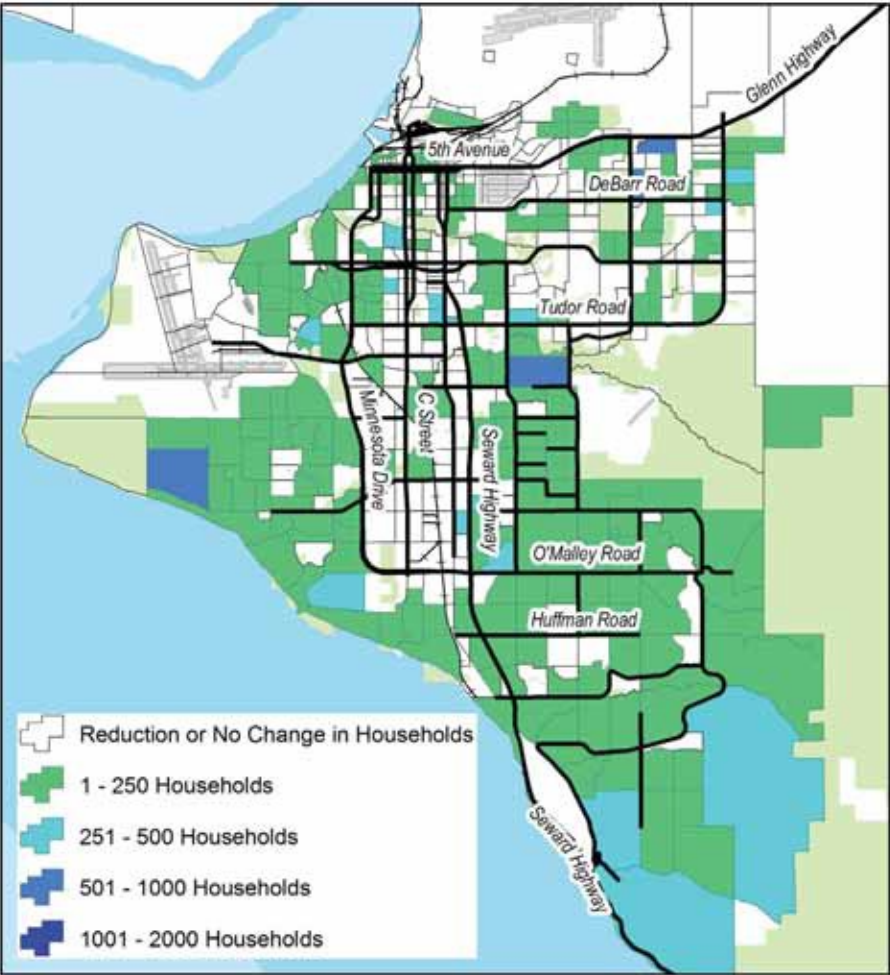
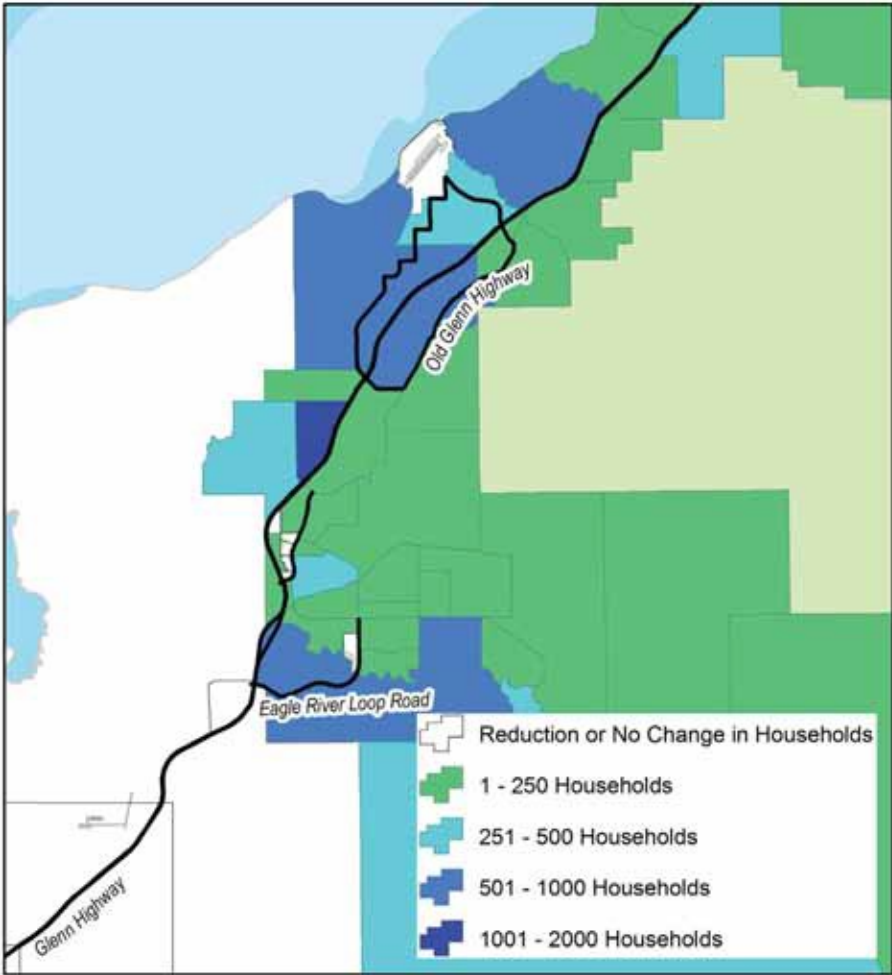


Figure 5-13 2007-2035 Household Growth by Traffic Analysis Zone - Chugiak-Eagle River





## 2035 Metropolitan Transportation Plan

Employment allocations by planning area for the Anchorage Bowl and Chugiak-Eagle River are shown in Table 5-3. The location of future employment strongly influences the travel patterns within the metropolitan area. The Anchorage Bowl comprehensive plan identified three employment centers for employment growth: Midtown, Downtown, and the U-Med District. The 2035 employment forecast for the Anchorage Bowl is shown in Figure 5-14. Approximately 30 percent of employment growth is concentrated in the major employment centers of the Anchorage Bowl comprehensive plan.

Consistent with the Anchorage Bowl comprehensive plan, the largest amount of employment growth is allocated to Midtown, where 7,200 new jobs are projected by 2035 (17 percent of the total Anchorage Bowl employment growth). New development will result in more concentrated employment density in Midtown, closely matching the density in Downtown Anchorage.

The higher employment density, combined with a more diversified mix of office and retail uses, will help to encourage carpooling and public transportation use in Midtown, as well as to enhance the attraction of Midtown as an employment and retail destination. Employment in both the U-Med District and the Downtown areas is expected to increase by approximately 2,800 jobs by 2035 (each area seeing 6 percent of the total Anchorage Bowl employment growth).

Future employment growth in Chugiak-Eagle River will continue to be attracted to the commercial center for the area in Downtown Eagle River. Commercial development is also expected to occur at strategic locations such as Eklutna, Peters Creek, North Birchwood, South Birchwood, Chugiak, the intersection of Eagle River Road and E. Eagle River Loop Road, and the intersection of the Old Glenn Highway and North Eagle River Access Road.

The major areas designated for industrial land use are located around the Birchwood Airport, along the Old Glenn Highway in Chugiak, at Springbrook Drive in Eagle River, and at Artillery Road in

Eagle River. The 2035 employment forecast for Chugiak-Eagle River is shown in Figure 5-15.

### Summary

The Southcentral Alaska region consisting of the metropolitan area and the Mat-Su Borough is expected to continue to grow as the primary urbanized region in Alaska, with population projected to exceed 500,000 by 2035.

Other important expectations about future growth in the metropolitan area include the following:

- Metropolitan area residents will increase by 65,200 people, of whom

Table 5-3 Projected Employment Growth by Planning Area, 2007–2035

| PLANNING AREA            | EMPLOYMENT GROWTH | PERCENTAGE OF TOTAL GROWTH |
|--------------------------|-------------------|----------------------------|
| Military                 | 4,740             | 11                         |
| Central Anchorage Bowl   | 6,190             | 14                         |
| Northeast Anchorage Bowl | 9,160             | 20                         |
| Northwest Anchorage Bowl | 14,310            | 32                         |
| Southeast Anchorage Bowl | 600               | 1                          |
| Southwest Anchorage Bowl | 4,030             | 9                          |
| South Fork Eagle River   | 130               | 0                          |
| Eagle River              | 2,080             | 5                          |
| Eagle River Valley       | 250               | 1                          |
| Chugiak                  | 1,130             | 3                          |
| Birchwood                | 1,010             | 2                          |
| Peters Creek             | 550               | 1                          |
| Eklutna                  | 320               | 1                          |
| Total                    | 44,500            | 100                        |



Figure 5-14 2007-2035 Employment Growth by Traffic Analysis Zone – Anchorage Bowl

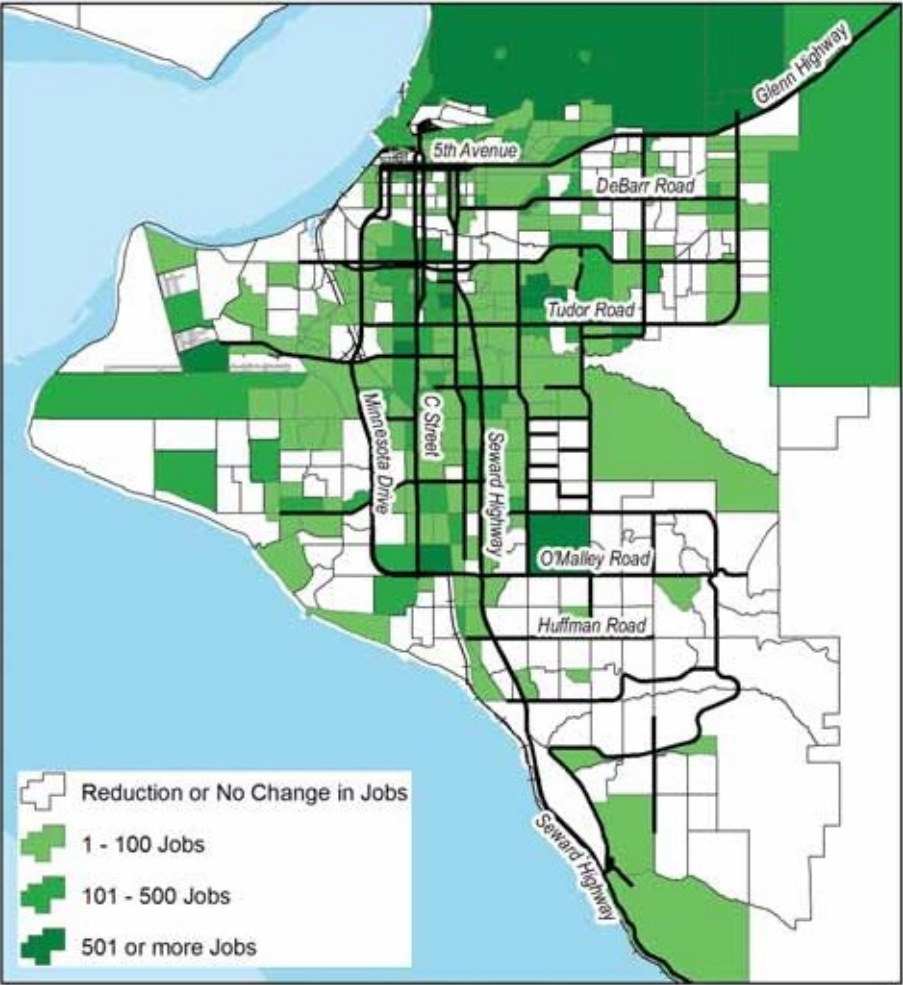
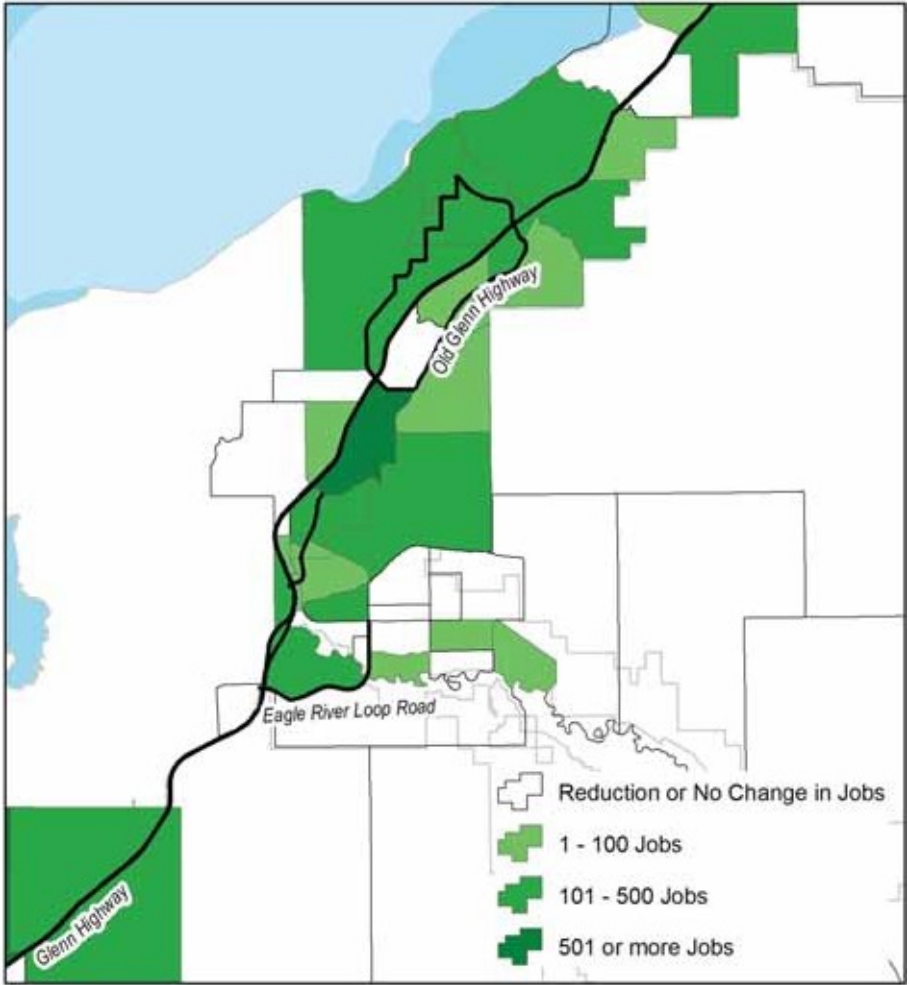


Figure 5-15 2007-2035 Employment Growth by Traffic Analysis Zone – Chugiak-Eagle River



Note: TSAIA is treated as a special generator in the transportation demand model. Traffic generation for TSAIA-take offs and landings-is calculated by means other than employment. Therefore, it was not necessary to project total employment at the airport for input into the transportation demand model.

## 2035 Metropolitan Transportation Plan

37,640 will live in the Anchorage Bowl and 27,560 will reside in Chugiak-Eagle River.

- Anchorage Bowl employment growth will continue, representing more than 70 percent of the regional employment.
- The Mat-Su Borough will continue to gain a larger share of regional households, accounting for nearly 50 percent of the total household growth between 2007 and 2035.

The growth in population and employment, including the locations of growth, relates directly to future transportation needs. These needs will be discussed in the remainder of this chapter.

## TRANSPORTATION SYSTEM

### Identification of Future Transportation Trends

The picture of future travel in the metropolitan area in 2035 emerges from the forecasted growth in the economy, more specifically, the addition of new households and employment. This section identifies future transportation trends expected in the 2035 network. Those trends are directly related to future needs in the transportation system. The 2035 picture reveals these broad trends:

- An urban region encompassing the metropolitan area and the Mat-Su Borough

- Continuation of Anchorage's role as the dominant population and employment center for the region and Alaska
- Increasing shares of metropolitan area population in suburban settings, primarily in Chugiak-Eagle River
- A more diverse population. The metropolitan area is the largest Native village in Alaska, and the Alaska Native population is expected to continue to grow.
- An aging metropolitan area population. The proportion of the population older than 60 years of age will nearly double to more than 70,000.
- Continuation of Anchorage's role as the dominant hub and transfer location for freight movements for the region and Alaska
- Tighter clustering and higher densities of development along transit corridors and in employment districts and town centers in the Anchorage Bowl and in Chugiak-Eagle River, as defined by comprehensive plans
- Higher energy costs for transportation resulting in the need for more efficient personal vehicles, more dependency on public transportation, and changes in personal travel behaviors

- Increased public health consciousness resulting in more active travel behaviors and requiring better pedestrian, bicycle, and trail facilities
- Improvements in technology resulting in more efficient transportation management systems

Advancements in e-commerce will provide added flexibility for employment and shopping travel needs. Daily travel within the metropolitan area continues to grow because of steady growth in AMATS and the Mat-Su Valley. Daily vehicle miles traveled also increase, not only because more trips are being made every day but because a larger share of trips are forecast to travel a longer distance from suburban locations to places of employment.

### The Travel Demand Challenge

In 2035, 560,000 more daily trips than in 2007 will vie for space on the transportation system within the Anchorage metropolitan area.

Figure 5-16 shows daily trips by mode in 2007 and the projected total trip demand in 2035. The 2035 daily trips show the level of mobility needed to sustain daily activity in the metropolitan area. The transportation system must be adequate to serve these trip needs.

## Identifying and Meeting Future Transportation Needs

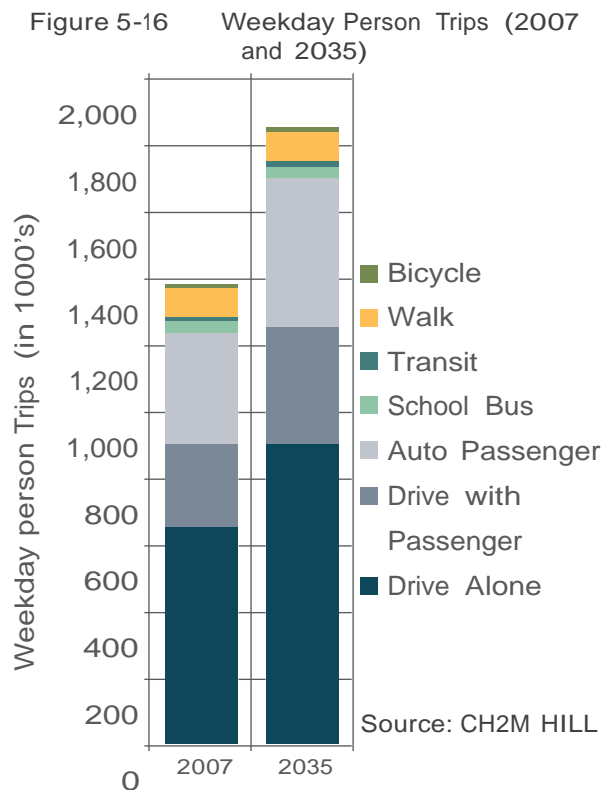
Many strategies can be used to meet future transportation demand. This MTP identifies a balanced approach, recognizing that no one solution is adequate to meet the increasing demands placed on the transportation system. The transportation strategies employed in this MTP and discussed in this section address six main transportation elements:

- Roads
- Public transportation
- Non-motorized transportation (pedestrian, bicycle, and trail facilities)
- Congestion management
- Freight distribution
- Regional connections

### Methods to Analyze and Evaluate Transportation Systems

The AMATS travel demand model is one of the primary analytical tools used in preparing this MTP. The model integrates information from many subset models (for example, a trip distribution model and a school model) that forecast future travel, delineate possible transportation systems, allocate travel to different modes and specific routes of the road and public transportation networks, and evaluate how well transportation systems operate. Starting with the forecast of land-use

growth and where homes and jobs will be located, these models sum the trips made by all people, businesses, and freight movers and then determine how that travel will affect a candidate transportation system.



The AMATS travel demand model is a regional model encompassing the Municipality of Anchorage and the Mat-Su Borough. A regional model allows for a better representation of regional trip distribution and modal choice than would a model focusing only on the Anchorage metropolitan area.

The travel model is based on current and future land use types and density, characteristics that largely determine how and where people travel. To verify that the travel model estimates are realistic, the model is first executed for existing conditions and compared against independent information for accuracy. This step is called model calibration and validation. During this step, the AMATS model results were found to be well within industry standards.

### Comparison of MTP Model and Knik Arm Crossing Model

Different travel demand models have been developed by AMATS for the MTP and by the Knik Arm Bridge and Toll Authority (KABATA) for the Knik Arm Crossing. (KABATA and Knik Arm Crossing are described in Chapter 6.) The AMATS model was run with no tolls, and the KABATA model was run with tolls. The bridge traffic forecasts used by both models are similar, however.



## 2035 Metropolitan Transportation Plan

Assumptions for the AMATS and KABATA models also differ. The AMATS model uses the most recent (2009) ISER population and employment projections, while the KABATA forecasts, which were developed by Independent Research Corporation, use a combination of estimates from SER, DOLWD, and Woods and Poole Economics, nc. Because of these differences in the socioeconomic assumptions, the results from the two models are expected to vary.

Although the AMATS model does have a feature to account for tolls, the model could not be calibrated to reliably represent the effect of tolls on the Knik Arm Crossing. The toll feature is very sensitive to the demographic and employment assumptions on the Mat-Su side of the bridge; validating those assumptions is outside AMATS' authority and responsibility.

Because of the potential effects of traffic from the Knik Arm Crossing on affected neighborhoods, the roadway network for the Anchorage side of the bridge must be able to handle the anticipated increase in traffic while mitigating those effects. This objective is best served by using more conservative assumptions to avoid underestimating the future traffic volumes using the bridge. Underestimation creates the risk of inadequate planning for the impacts of the Knik Arm Crossing traffic on the Anchorage side of the bridge (i.e., within the MTP planning area). For that purpose and for consistency of the AM-

ATS MTP model results with the KABATA model results, AMATS elected to model the Knik Arm Crossing without tolls. The MTP model produces an estimated 37,100 vehicles a day on the bridge in 2035. This assumption provides results that are both conservative with respect to the projected traffic and are consistent with the February 2011 KABATA forecast. Table 5-4 compares the 2035 MTP and Knik Arm Crossing model assumptions for 2035 household and employment forecasts and the resulting traffic volumes on the Knik Arm Crossing and Glenn Highway.

## Roads

As the metropolitan area evolves toward 2035 and the regional population exceeds 500,000, travel growth will put more stress on the transportation system and create capacity deficiencies in the road network. Assessing where that stress will occur and its intensity is the first challenge in framing MTP improvements.

Various scenarios were evaluated by using the AMATS travel model to forecast future 2035 travel by mode and then routing vehicle trips over the scenario road network to determine traffic volumes on each road segment. Traffic con-

Table 5-4 Comparison of 2035 Land Use Assumptions and Traffic Volumes -2035 MTP vs. KAC Project

| DEMOGRAPHICS                   | AMATS 2035 MTP | KABATA KAC |
|--------------------------------|----------------|------------|
| Economic Forecast Sources      | AMATS          | IRC        |
| Households                     |                |            |
| Anchorage                      | 134,200        | 142,700    |
| Mat-Su Borough                 | 59,200         | 74,600     |
| Total                          | 193,400        | 217,300    |
| Employment                     |                |            |
| Anchorage                      | 208,200        | 199,200    |
| Mat-Su Borough                 | 63,700         | 51,700     |
| Total                          | 271,900        | 250,900    |
| 2035 Traffic Volumes (AADT)    | No Toll        | Toll       |
| KAC Bridge                     | 37,100         | 36,000     |
| Glenn Highway at Ekultna Flats | 52,300         | 48,700     |

AADT = Average Annual Daily Traffic

IRC = Independent Research Corporation

AMATS = Regional forecast based on Institute of Social and Economic Research December 2009 Economic and Demographic Projections for Alaska and Greater Anchorage as modified by AMATS to correspond to the AMATS planning boundaries.



ditions have been determined for three time-of-day periods, morning peak period (7 to 9 a.m.), afternoon peak period (3 to 6 p.m.), and an off-peak time period (all other hours). Mapping and statistical evaluations for each scenario outcome yielded a comprehensive assessment of how well it would meet future travel demand and possible community, environmental, physical, and other impacts.

#### ROAD NETWORK GRID SPACING

A road system works best when the street grid does not have missing links and when the street system is spaced properly. Figure 5-17 and Figure 5-18 illustrate missing grid links in the primary road network in the metropolitan area, for the Anchorage Bowl and Chugiak-Eagle River, respectively.

Benefits that would accrue from a more complete street grid network in the metropolitan area include minimizing out-of-direction (excess) travel; improving connectivity for walking and biking; and providing more accessible routing for public transportation service. A grid network more evenly distributes the travel load. Spreading vehicle traffic over a greater number of roads would reduce the traffic growth experienced on some existing routes. Consequently, some roads may not need to be made wider, which also makes them more amenable to walking and public transportation use. It should be noted that a complete road grid may not be practical in areas of

steep terrain, sensitive natural areas, or where other land uses are not compatible with through traffic.

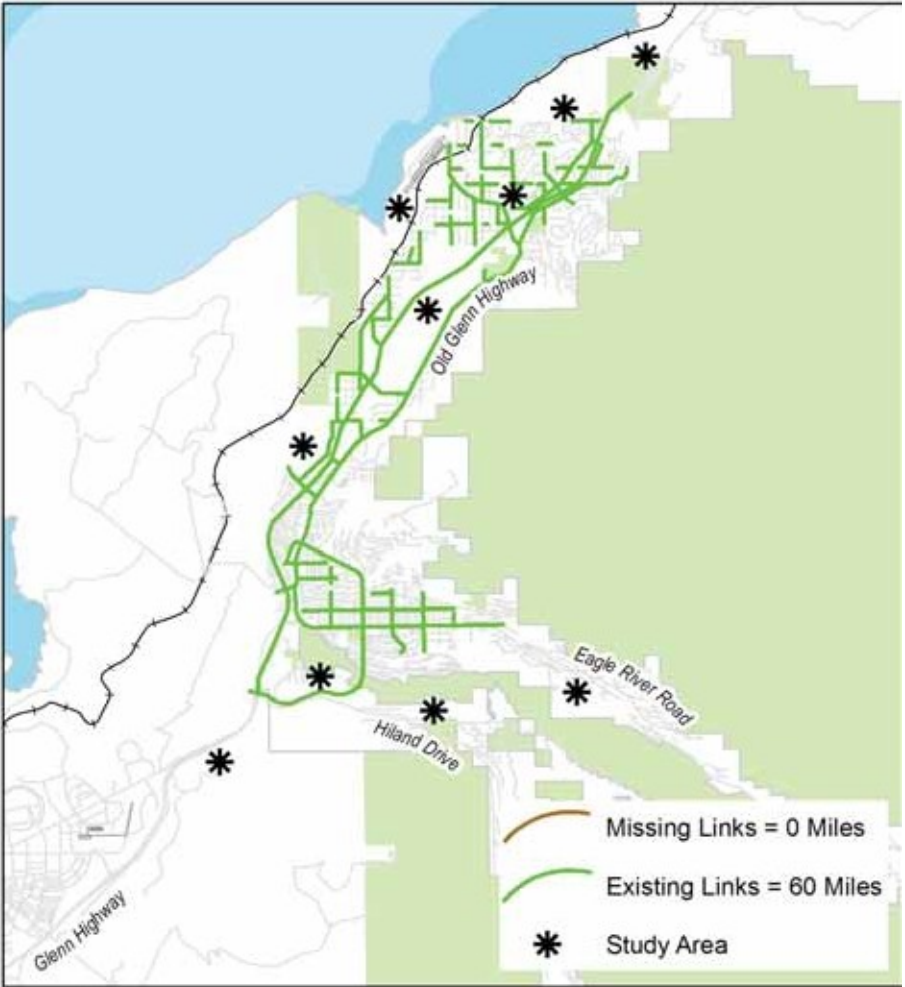
Large-block land areas in the metropolitan area that are without roads (such as parks and airports) and wide spacing of major arterials place a tremendous strain on fewer widely spaced roads and intersections to carry the travel demand. Such concentrated travel demand often occurs in employment areas, as well as higher-density residential areas.

Figure 5-17 Missing Grid Links in the Roadway Network – Anchorage Bowl



Note: For study areas, additional analysis is required to identify the primary transportation network.

Figure 5-18 Missing Grid Links in the Roadway Network – Chugiak-Eagle River



Note: For study areas, additional analysis is required to identify the primary transportation network.

These missing grid maps are used to identify missing system links but do not constitute a recommendation to construct them.

IDENTIFICATION OF FUTURE ROAD DEFICIENCIES

One hurdle for planning to meet future transportation needs of the metropolitan area is accommodating the projected increase of 560,000 additional daily trips (a 44 percent increase), which will vie for space on the transportation system in the next 25 years. As stated above, to begin framing MTP improvements for roadways, the locations where stress would occur had to be identified. As part of MTP development, a deficiency analysis utilized the AMATS travel demand model forecasts to determine locations (and time periods) of moderate and severe deficiencies on the roadway network in 2035. After road deficiencies were analyzed, solutions could be created and evaluated.

The AMATS travel model is capable of forecasting the number of 2035 trips on each roadway segment within the metropolitan area, as well as the mode of travel—public transportation, pedestrian, bicycle, carpool, single-occupancy vehicle (SOV), and truck. Information derived from the travel demand model can also be used to identify which roadways are expected to experience unacceptable levels of congestion and which can operate satisfactorily without major improvements. The travel demand model is also used to test the effectiveness of alternative solutions in reducing congestion problems.

As discussed in Chapter 4, LOS describes how well a road segment in the network is operating and whether it provides adequate vehicle capacity. This performance measure is based on the ratio of traffic volume to roadway carrying capacity. Table 5-5 describes LOS A through F. The deficiencies discussed in this chapter are locations where the LOS is D or greater.

NO BUILD SCENARIO

The "no-build" scenario was created to identify the locations of network deficiencies if no future transportation improvements were completed. This scenario utilized the existing street network (for the 2007 base year with improvements to bring the network up to the year 2010) and the future 2035 land use. This extreme worst case is examined to help identify where potential road deficiencies would occur and how bad they might be; the deficiencies identify locations where

capacity improvements are needed. The orange and red road segments in Figure 5-19 and Figure 5-20 (of the Anchorage Bowl and Chugiak-Eagle River, respectively) illustrate the roadway deficiencies of the no-build scenario, showing where traffic overload and congestion would occur. This scenario would result in clearly unacceptable mobility conditions by 2035. Fortunately, the no-build scenario is hypothetical because transportation improvements funded by the TIP and MOA bond improvements are already being implemented.

Performance statistics for the 2035 no-build scenario define more specific implications. Both vehicle miles and driver hours traveled in severely congested conditions would increase by nearly seven times over the existing conditions. On average, 23 percent of all freeway network miles and 7 percent of major arterial miles would be operating at un-

Table 5-5 Level of Service Characteristics

| LEVEL OF SERVICE | DESCRIPTION  |
|------------------|--|
| A                | Free flow with low volumes and high speeds.  |
| B                | Reasonably free flow, but speeds beginning to be restricted by traffic conditions.             |
| C                | n stable flow zone, but most drivers are restricted in the freedom to select their own speeds. |
| D                | Approaching unstable flow; drivers have little freedom to select their own speeds.             |
| E                | Unstable flow; may be short stoppages  |
| F                | Unacceptable congestion; stop-and-go; forced flow.   |

Source: Chugiak-Eagle River Comprehensive Plan Update (MOA, 2006).



2035 Metropolitan Transportation Plan

Figure 5-19 Total Daily Performance of the No-Build 2010 Road Network in 2035 – Anchorage Bowl

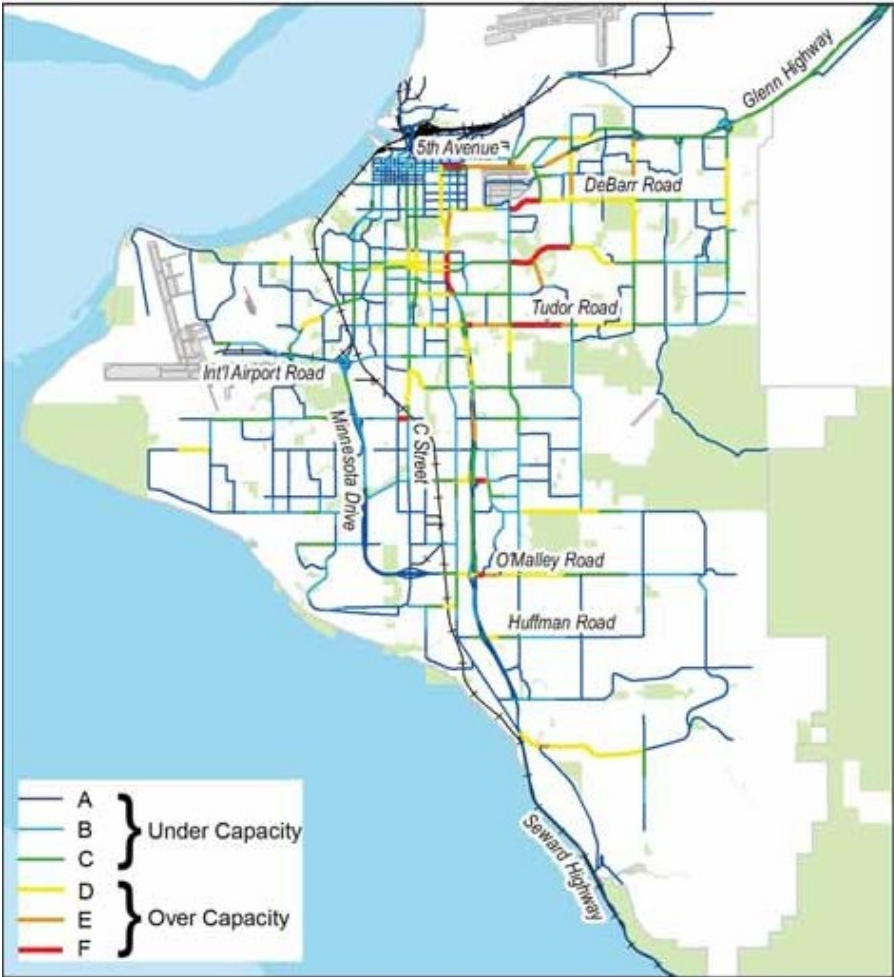
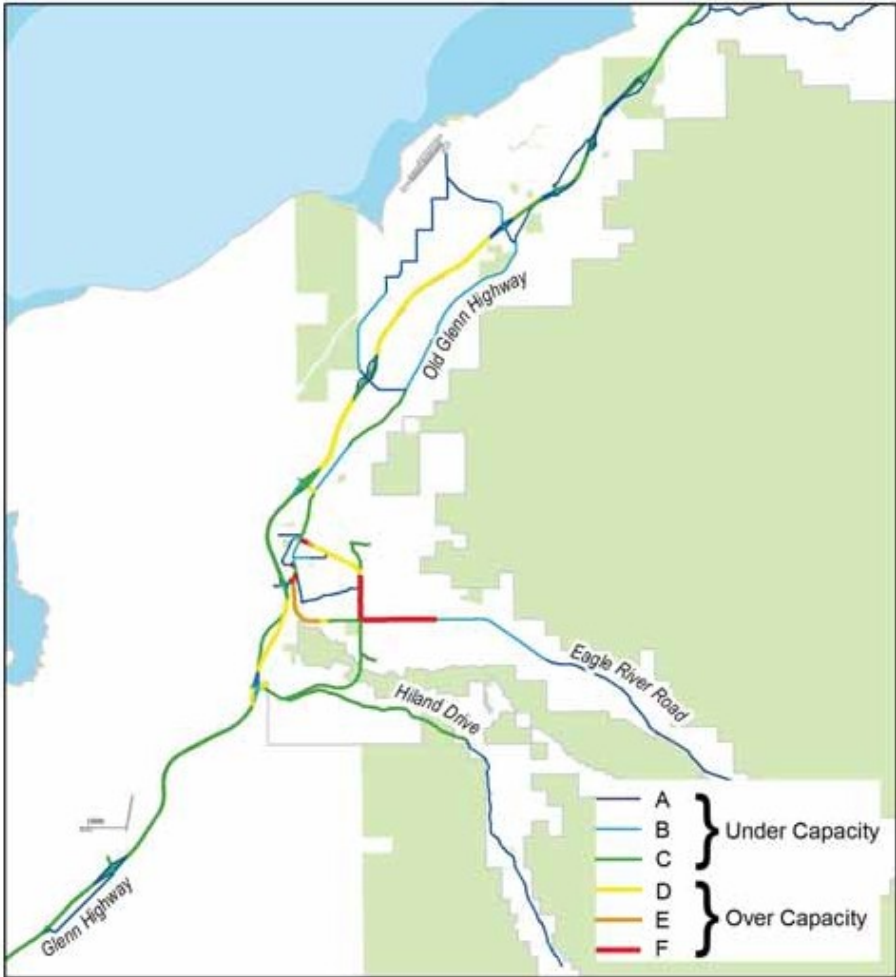


Figure 5-20 Total Daily Performance of the No-Build 2010 Road Network in 2035 – Chugiak-Eagle River





satisfactory levels of service during peak periods. The performance of scenarios for 2007 and 2035 scenarios are shown in Table 5-6

Deficiencies in the Anchorage Bowl are primarily located on the Glenn Highway and Northern Lights Boulevard, Downtown, and Midtown, and occur most often in the afternoon peak period. Deficiencies in Eagle River are primarily located on Eagle River Road east of E. Eagle River Loop Road, and occur in all time periods.

#### Glenn Highway Corridor

Some of the largest increases in traffic will be along the Glenn Highway between the Mat-Su Valley and the Anchorage Bowl. Despite the higher densities and mixed-use development called for in the comprehensive plans, projected regional growth patterns portend longer trips and heavier future commuting from the bedroom communities of the Mat-Su Borough and Chugiak-Eagle River to the employment centers of the Anchorage Bowl. This travel pattern will result in the near doubling of daily traffic entering the Anchorage Bowl along the Glenn Highway corridor.

The Glenn Highway from Muldoon Road into Downtown Anchorage is forecast to operate at capacity in the afternoon peak period,

resulting in spillover traffic onto other city streets.

Consequently, the traffic burden on several East Anchorage arterials—Northern Lights Boulevard, Lake Otis Parkway, and Tudor Road—will be compounded. Refer to Figure 5-2 for projections of commuters from Chugiak-Eagle River and the Mat-Su Valley to Anchorage. Figure 5-21 compares 2035 demand and available capacity on the Glenn Highway during the morning peak period.

#### Ingra-Gambell Couplet and Seward Highway Corridor

Seward Highway is the dominant north-south traffic corridor in the Anchorage

Bowl. In the existing roadway network, the highway transitions into an arterial street north of Tudor Road, eventually evolving into the Ingra-Gambell arterial couplet. Very heavy traffic volume at 36th Avenue overwhelms the arterial portion of Seward Highway and the Ingra-Gambell couplet farther north. The 2035 model results assuming no improvements (no-build scenario) shows a virtual traffic blockage occurs in the area from the Glenn Highway at Airport Heights to the Ingra-Gambell couplet and then down the couplet and Seward Highway to 36th Avenue. Congestion brings north-south traffic to a standstill and creates a barricade for east-west traffic. Drivers move to alternative routes to avoid getting caught

Table 5-6 Performance Comparison for 2007 and 2035 Project Scenarios

| PERFORMANCE FEATURE   | SCENARIO          |                       |                           |                                |
|---|-------------------|-----------------------|---------------------------|--------------------------------|
|   | 2007 ROAD NETWORK | 2035 NO BUILD NETWORK | 2035 BASE ROADWAY NETWORK | 2035 BASE PLUS ROADWAY NETWORK |
| Daily Vehicle miles of travel in severe congestion <sup>a</sup> | 25,360            | 173,040               | 10,610                    | 10,300                         |
| Traveler hours spent in severe congestion <sup>a</sup>          | 812               | 6,550                 | 495                       | 480                            |
| Congested freeway miles <sup>b</sup>                            |                   |                       |                           |                                |
| Morning peak period   | 1%                | 39%                   | 10%                       | 13%                            |
| Evening peak period   | 2%                | 57%                   | 16%                       | 21%                            |
| Congested arterial miles <sup>b</sup>                           |                   |                       |                           |                                |
| Morning peak period   | 2%                | 8%                    | 2%                        | 2%                             |
| Evening peak period   | 9%                | 22%                   | 6%                        | 5%                             |

<sup>a</sup>Severe congestion is defined as having a volume-capacity ratio of 7.25 or greater.

<sup>b</sup>Congestion is defined as having a level of service of D or worse.

## 2035 Metropolitan Transportation Plan

in the gridlock. The primary alternative routes affected are Tudor Road, Northern Lights Boulevard, Debarr Road, Airport Heights Drive, Lake Otis Parkway, and Boniface Parkway.

### Northern Lights Boulevard

Northern Lights Boulevard is a major east-west arterial route in East Anchorage, and parallels the Glenn Highway and Tudor Road. Northern Lights Boulevard approaches and exceeds capacity in the morning and afternoon peak periods. The daily performance around the area of Bragaw Street and Lake Otis Parkway and continuing into Midtown Anchorage (the Northern Lights Boulevard and Benson Boulevard couplet) also exceed capacity. This congestion results from the high demand for travel to and from major facilities such as the universities, hospitals, and major commercial areas. Inadequate access and traffic circulation to these major travel generators compounds traffic conditions.

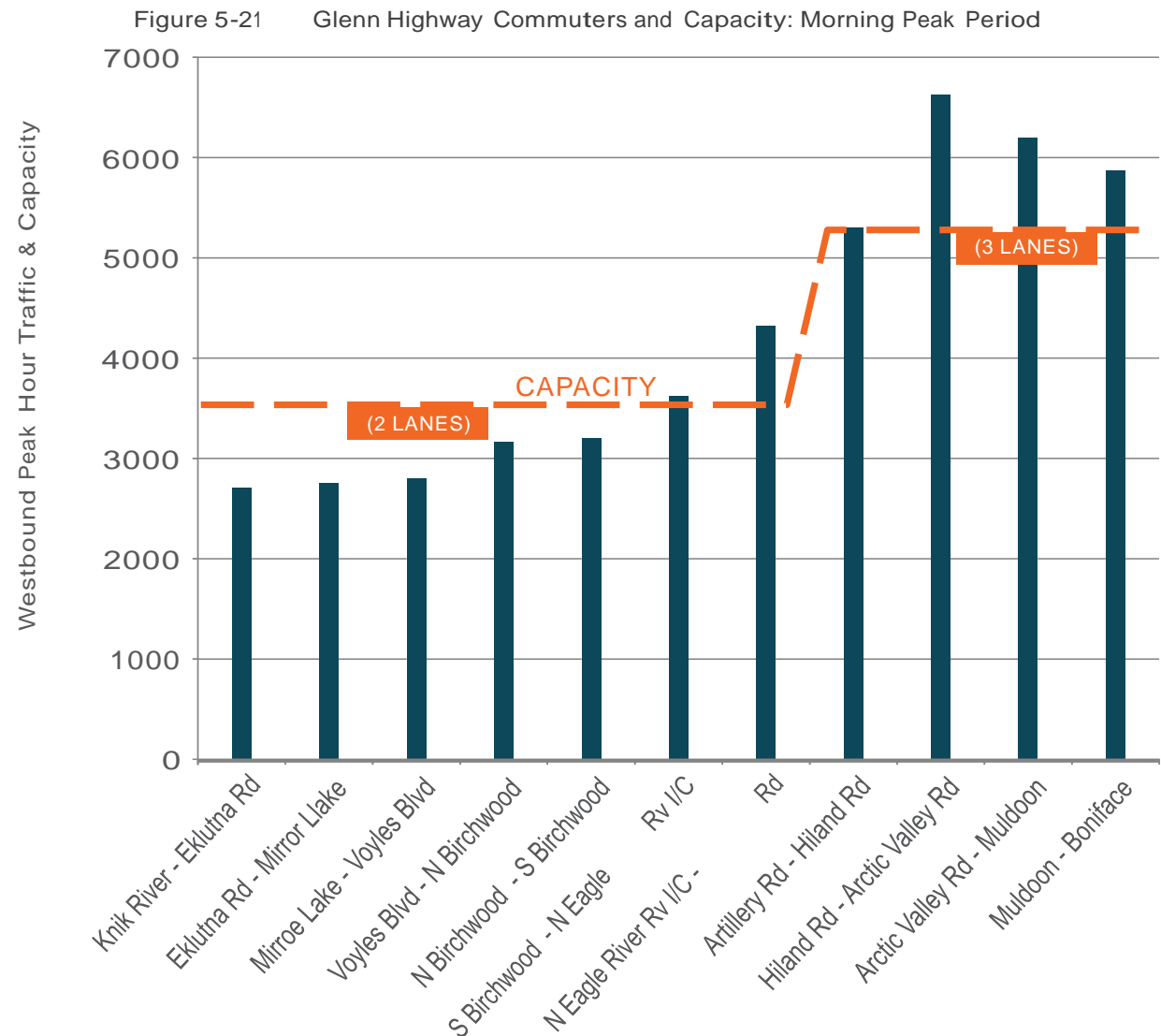
### Tudor Road Corridor

Tudor Road is one of the busiest arterials in the Anchorage Bowl. A component of the National Highway System (NHS), this road is one of only a few east-west arterials that traverse the entire Anchorage Bowl area (from Minnesota Drive to Muldoon Road). Daily traffic volumes in 2010 ranged from 20,000 vehicles per day at

each end to 40,000 vehicles per day in busier sections.

Travel projections for 2035 show that congestion across the Tudor Road corridor becomes increasingly severe. The intersection deficiencies along Tudor

Road and the systemic congestion and capacity deficiency occur primarily in the afternoon peak period. Congestion and capacity deficiency are particularly severe between C Street and the Seward Highway.



## Eagle River Road

Population growth and development along the Eagle River Valley will result in an increase in traffic along Eagle River Road. The traffic projections for Eagle River Road could vary, however, depending on the pace of development of the relatively large tracts of vacant land located south of Eagle River Road and east of Eagle River Lane.

## FORMULATING AND EVALUATING FUTURE ROADWAY SCENARIOS

Potential road improvements were considered in the development of this MTP. Table 5-8 at the end of this chapter is a list of roadway projects modeled to identify potential improvements to the roadway network. Different combinations of these projects were used to guide the deficiency analysis. Two travel model scenarios used to determine the roadway conditions (specifically roadway deficiencies) for future roadway systems—the 2035 Base scenario and the 2035 Base Plus scenario—are discussed below.

## Travel Model Scenarios

### IN PROGRESS OR IDENTIFIED IN PREVIOUS PLANNING

The 2035 Base model includes all projects (public transportation as well as roadway) from the previously accepted Anchorage Bowl and Chugiak-Eagle River LRTPs. These projects include road repair, rehabilitation, and improvement projects for which funding has been identified by the State of Alaska and the MOA in the Transportation Improvement Program (TIP) or by the MOA in the Capital Improvement Program (CIP). (See Chapter 6 for details on the funding of transportation projects for the metropolitan area.) Figure 5-22 (Anchorage Bowl) and Figure 5-23 (Chugiak-Eagle River) show the road improvement projects in the 2035 Base network.

### IDENTIFIED TO “GET THE RED OUT”

The 2035 Base Plus model, which was used to determine the roadway deficiencies, includes recommended projects from the 2027 Anchorage Bowl and Chugiak-Eagle River LRTPs and additional projects identified as necessary for eliminating roadway deficiencies demonstrated by the 2035 Base network. Figure 5-24 and Figure 5-25 show the additional projects identified to solve roadway deficiencies.

## 2035 Metropolitan Transportation Plan

A major project added to attempt to resolve deficiencies identified in the 2035 Base scenario is a third lane on eastbound Northern Lights Boulevard between Lake Otis Parkway and Bragaw Street to address the congestion on this segment of roadway. Project additions also included many projects from the following subarea or district plans, which were adopted since the LRTPs were approved in 2007:

- Destination Downtown: Anchorage Downtown Comprehensive Plan (December 2007)
- People Mover Route Restructure Plan Update (October 2009)
- Hillside District Plan (April 2010)
- Eagle River Central Business District and Residential Core Transportation Study (January 2011)

The 2035 Base Plus network projects consist of all projects in Figure 5-22 through Figure 5-25 (Figure 5-22 and Figure 5-24 for the Anchorage Bowl and Figure 5-23 and Figure 5-25 for Chugiak-Eagle River).

## 5-26

Figure 5-23 Projects in the 2035 Base Road Network – Chugiak-Eagle River

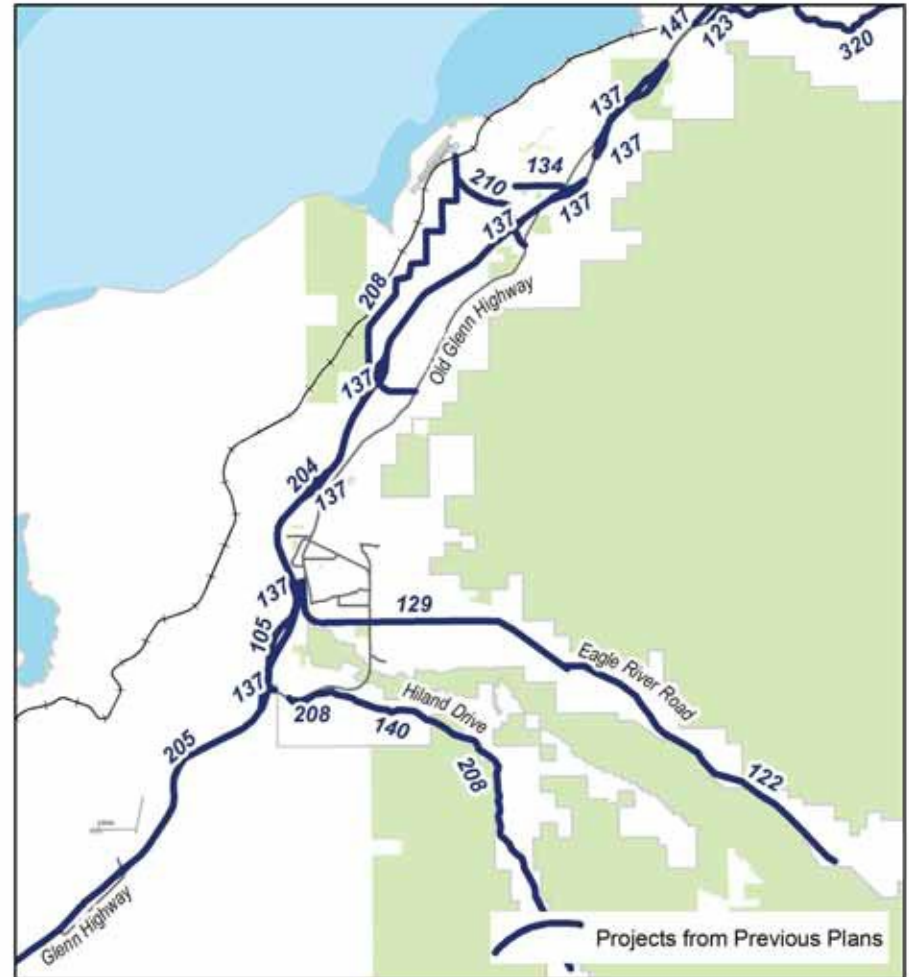




Figure 5-24 Projects Added In the 2035 Base Plus Road Network- Anchorage Bowl



Figure 5-25 Projects Added In the 2035 Base Plus Road Network - Chugiak/Eagle River



## 2035 Metropolitan Transportation Plan

### Performance of the Travel Model Scenarios

To refine the projects identified for selection of recommended projects, answers to the following questions had to be found: Which projects are most needed? Will the combined projects be sufficient to provide satisfactory mobility that meets future needs? To answer these questions, the ability of the road network scenarios to perform within the capacity provided was assessed.

### 2035 BASE ROADWAY NETWORK SCENARIO

Figure 5-26 (Anchorage Bowl) and Figure 5-27 (Chugiak-Eagle River) illustrate how the projects in the 2035 Base scenario would perform; the relatively few overloaded and congested conditions are identified in orange and red segments. Statistical results of comparing scenario performance are summarized in Table 5-6. The evaluation of the 2035 Base model results indicates that the previously adopted roadway improvement projects in the 2027 LRTPs for the Anchorage Bowl and Chugiak-Eagle River still do a good job of meeting the future transportation needs even in the year 2035.

Roads that perform unsatisfactorily in the 2035 Base roadway network are Northern Lights Boulevard in the Anchorage Bowl and Eagle River Road in Eagle River. Sections of Tudor Road and frontage roads around the Seward Highway to Glenn Highway connection corridor show signs of overloading as well.

### 2035 BASE PLUS ROADWAY NETWORK SCENARIO

Figure 5-28 and Figure 5-29 illustrate the performance of road segments in the 2035 Base Plus scenario; very few overloaded or congested locations are identified in orange and red segments. The most congested areas within the Anchorage Bowl are Northern Lights Boulevard between Lake Otis Parkway and Bragaw Street, 36th Avenue between Denali Street and C Street, and Tudor Road between Seward Highway and Denali Street. Eagle River Road, east of E. Eagle River Loop Road, is the only major roadway in the Chugiak-Eagle River area that is expected to experience major congestion in the future conditions.

Statistical results of comparing scenario performance are summarized in Table 5-6. The performance of the 2035 Base Plus scenario shows relatively modest improvement over the 2035 Base scenario. Although the improvements on Northern Lights Boulevard between Lake Otis Parkway and Bragaw Street do not appear to resolve all congestion issues, the addition of a third lane appears likely to improve functioning of the Lake Otis Parkway and Northern Lights Boulevard intersection by increasing the capacity in the eastbound direction of Northern Lights Boulevard. According to the Status of the System, 2010 report, this intersection has the second-highest delay during peak periods of any intersection within the MOA.

### RESOLVING OUTSTANDING DEFICIENCIES WITH NEW PROJECTS

The analysis of the 2035 scenarios provided answers about how well a road network could accommodate the forecast demand for capacity. The modeling identified the need for new projects to improve the 2035 road network performance. Chapter 7 discusses the candidate projects and selection of the recommended projects.



Figure 5-26      Total Daily Performance of the 2035 Base Network – Anchorage Bowl



Figure 5-27      Total Daily Performance of the 2035 Base Network – Chugiak-Eagle River

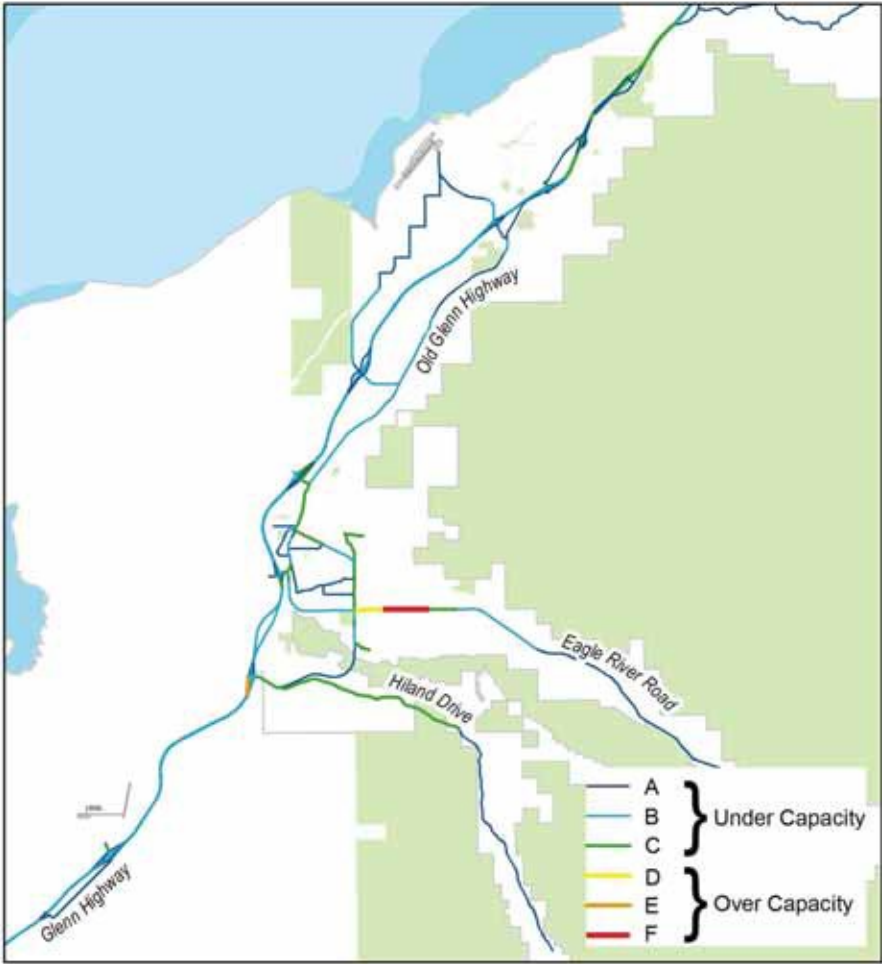
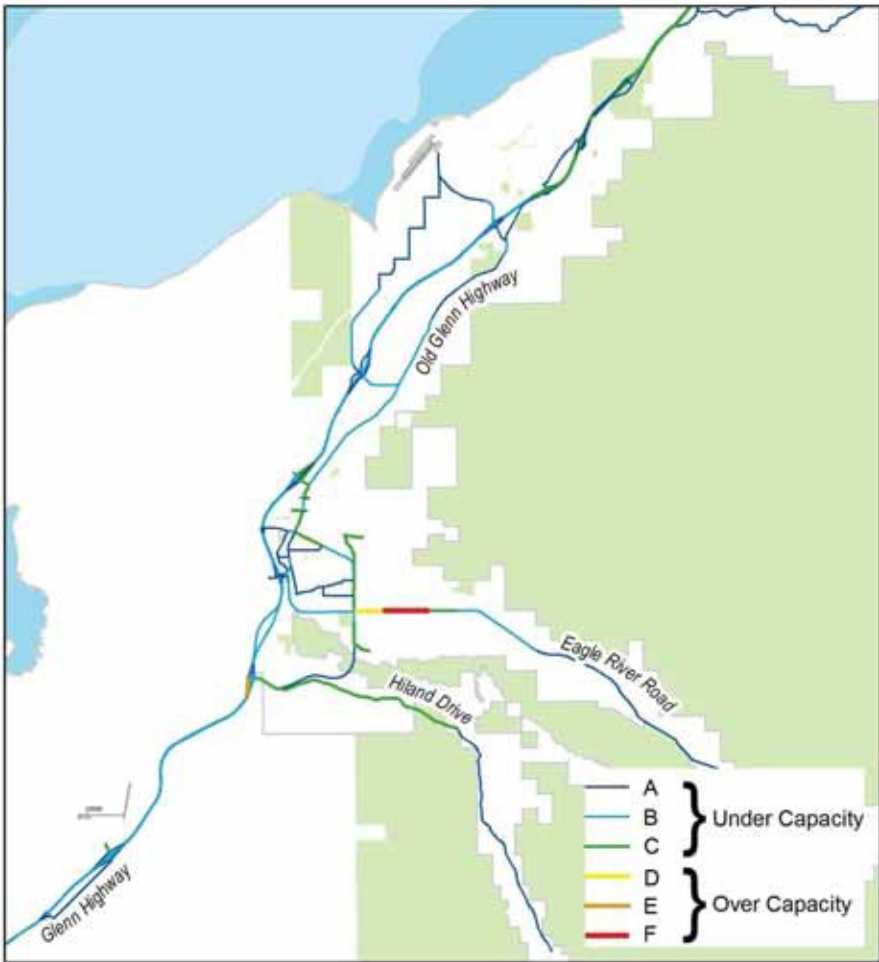




Figure 5-28 Total Daily Performance of the 2035 Base Plus Network – Anchorage Bowl



Figure 5-29 Total Daily Performance of the 2035 Base Plus Network – Chugiak-Eagle River





## Public Transportation

An important concern for MTP development was identifying the appropriate scale of the public transportation system that could best serve the metropolitan area in 2035. Answers to the following questions were sought: What is the frequency and scope of service? How many riders might public transportation attract? Is a public transportation system that attracts 10 to 20 percent of all trips, or even just 10 to 20 percent of all commute-to-work trips, achievable in the metropolitan area? How can public transportation help relieve congestion?

Studies of the People Mover system show a significant increase in public transportation ridership could be achieved by simply increasing the frequency of service on the most productive routes. From 2002 to 2010, weekday bus ridership rose 34 percent with an 11 percent increase in service hours and Saturday bus ridership rose 39 percent with a 27 percent increase in service hours.

A policy commitment to significantly improve public transportation services is important. The first priority is creating viable travel choices to alleviate the adverse impacts of automobile dependency. To maintain productivity and ridership gains, superior service must be delivered.

The jump in Sunday ridership for the same period, 82 percent, was almost directly proportional to the service hour increase, 84 percent. (See Table 5-7). It appears that the improvements initiated under the 2009 update of the People Mover Blueprint plan, which improved the frequency of service and consequently improved service convenience, had a multiplier effect on public transportation ridership.

Some other metropolitan areas are attaining a significantly larger mode share of public transportation riders. These cities have at least two distinguishing characteristics.

First, they are much larger than the metropolitan area, usually with well above a million metropolitan residents. Second, they invariably have a dominant CBD, and often have a radial road network focusing on the Downtown area.

Although the Southcentral Alaska region is growing, with population projected to exceed 500,000 by 2035, household densities are expected to remain relatively low throughout most of the urbanized areas. Moreover, employment is expected to continue to be dispersed in multiple centers rather than concentrated in Downtown areas. Public transportation systems work better when connecting origins that serve large numbers of residents to destinations that serve large numbers of employees. In those circumstances, effective corridor public transportation service can be provided directly

between origins and destinations without the need for time-consuming transfers.

## FORMULATING AND EVALUATING FUTURE PUBLIC TRANSPORTATION SCENARIOS

To study the effects of improvements to the public transportation system, the following three scenarios were investigated: 2035 Base scenario, 2035 Base Plus scenario, and 2035 Bus Rapid Transit (BRT) scenario.

### 2035 Base Scenario

The initial analyses of possible future scenarios for public transportation service examined what might evolve based on the 2010 People Mover bus system, with several planned updates. For many years, fiscal constraints have controlled bus service and operation in the metropolitan area. The existing level of public transportation was identified as the worst-case public transportation scenario, the 2035 Base scenario, in which the same funding limitations prevail through 2035 and the public transportation system remains largely as it is today.

Figure 5-30 (Anchorage Bowl) and Figure 5-31 (Chugiak-Eagle River) illustrate the 2035 Base scenario for the public transportation system.

Estimated weekday riders in the 2035 public transportation system for the 2035 Base scenario are projected to increase to 24,950 riders (as shown in Table 5-8), a gain of 43 percent from 2007 to 2035. The public transportation rider increase

## 2035 Metropolitan Transportation Plan

from 2007 to 2035 (see Table 5-8) can be attributed at least partially to greater density of housing units and jobs in public transportation development corridors resulting from Anchorage Bowl and Chugiak-Eagle River comprehensive plan policies. As land use in the metropolitan area is guided by the Anchorage Bowl

and Chugiak-Eagle River comprehensive plan policies, the population and employment growth are expected to create opportunities for increasing public transportation riders. About 10,000 more people and 9,500 new jobs are expected to be within one-quarter mile of the existing (2010) bus routes by 2035.

Table 5-10 at the end of this chapter identifies the public transportation projects that were evaluated during development of this MTP.

Table 5-7 People Mover Service and Ridership, 1992–2010

| YEAR | PEAK HOUR BUSES | TIMETABLE HOURS | OPERATING COST (\$) | PASSENGERS | OPERATING REVENUES (\$) |
|------|-----------------|-----------------|---------------------|------------|-------------------------|
| 1992 | 44              | 105,371         | 9,943,764           | 3,050,659  | 1,768,437               |
| 1993 | 42              | 104,252         | 9,655,793           | 3,058,469  | 1,861,292               |
| 1994 | 40              | 104,527         | 9,459,389           | 3,029,483  | 1,830,907               |
| 1995 | 38              | 104,829         | 9,419,151           | 3,019,765  | 1,827,339               |
| 1996 | 38              | 105,569         | 9,408,753           | 3,052,690  | 1,923,758               |
| 1997 | 42              | 107,315         | 9,465,703           | 3,161,658  | 1,913,393               |
| 1998 | 42              | 108,666         | 9,781,769           | 3,220,524  | 1,947,758               |
| 1999 | 39              | 107,414         | 10,333,089          | 3,316,060  | 2,019,359               |
| 2000 | 40              | 104,506         | 10,532,615          | 3,356,982  | 1,955,982               |
| 2001 | 40              | 109,255         | 11,727,420          | 3,339,940  | 1,836,844               |
| 2002 | 41              | 110,449         | 13,023,362          | 3,120,567  | 2,397,031               |
| 2003 | 43              | 114,614         | 13,526,892          | 3,339,451  | 2,452,354               |
| 2004 | 46              | 124,734         | 17,234,475          | 3,536,059  | 3,162,262               |
| 2005 | 46              | 131,037         | 19,471,489          | 3,975,074  | 3,438,756               |
| 2006 | 46              | 130,324         | 19,731,254          | 3,948,228  | 4,143,598               |
| 2007 | 46              | 130,184         | 20,517,201          | 3,989,137  | 3,890,908               |
| 2008 | 46              | 132,120         | 22,154,915          | 4,220,667  | 4,332,186               |
| 2009 | 45              | 131,125         | 22,210,962          | 4,184,141  | 4,434,226               |
| 2010 | 43              | 126,655         | 23,372,117          | 4,145,579  | 5,069,100               |

Operating revenue consists of passenger fare revenues, advertising revenues, and other program revenues. Federal capital and other program grants are excluded.

Source: MOA Department of Public Transportation

### 2035 Base Plus Scenario

The 2035 Base Plus scenario builds on the 2035 Base scenario, but includes modifications—deleting, revising, and creating new routes. The purpose of the 2035 Base Plus scenario is to develop an intermediate level of public transportation for analysis. Routes 77 and the Mascot route into Anchorage from Wasilla were deleted, Route 102 was extended to Trunk Road in Wasilla, and a new park-and-ride facility was added at Hiland Road. In addition, the following new local routes were added with 60-minute headways all day long:

- South Anchorage Express
- New Klatt Southport Circulator Route
- New Abbott Elmore Circulator Route
- International UAA Crosstown Route

Figures 5-32 (Anchorage Bowl) and 5-33 (Chugiak-Eagle River) illustrate the 2035 Base Plus scenario for the public transportation system.

Weekday estimated riders of the 2035 public transportation system are projected to increase to 25,570 riders (Table 5-8), a gain of 77 percent from 2007 to 2035.

### Bus Rapid Transit Scenario

An important policy question for AMATS is whether a higher-performance public transportation system could attract many more riders and reduce vehicle traffic and road investments. Under the 2035 BRT scenario, People Mover buses would have

traffic signal preemption transmitters, electronic fare collection, low floors for quick passenger entry and exit, and other amenities. For the 2035 BRT scenario, two BRT routes, as well as several other updates to the public transportation system, were added to the 2035 Base Plus scenario.

The two BRT routes are on the Glenn Highway and in South Anchorage. Week-day service frequency for both routes would operate at 10-minute headways in the morning and afternoon peak periods, 15-minute headways in the mid-day time period, and 30-minute headways in the evening.

The following modifications were made to the 2035 Base Plus scenario for creation of the 2035 BRT scenario:

- Relocation of the Muldoon Transit Center from its current location near the intersection of Muldoon Road and Debarr Road to the Tikahtnu Commons Center in the Muldoon area north of the Glenn Highway. Routes that access the Muldoon Transit Center would be modified to extend to the proposed location.
- A stop would be added to Route 45 near the Northway Town Center.

Figure 5-34 (Anchorage Bowl) and Figure 5-35 (Chugiak-Eagle River) illustrate the 2035 BRT scenario for the public transportation system.

The 2035 BRT scenario attracts 26,155 daily riders (see Table 5-8), reflecting a

gain of 81 percent riders from 2007 to 2035 and 2 percent more riders than for the 2035 Base Plus scenario. Projections for public transportation ridership are subject to a number of variables that can significantly affect the forecast. Future changes in the relative travel times between automobiles and buses, automobile and fuel costs, and public transportation reliability could influence ridership outcomes.

### INTERPRETING THE ALTERNATIVES AND OUTCOMES

Since the 1970s, long-range planning documents have consistently envisioned improved public transportation services and a larger public transportation system. Improvements to public transportation service have been few, however. In 2007, the People Mover bus system operated significantly less service and consequently carried fewer riders than in the early 1980s. Therefore, a critical challenge for the public transportation proposals considered during development of this MTP was confronting the basic dichotomy between the vision and historical reality.

High per capita reliance on automobiles often results in congestion, larger streets, constant traffic, drivers cutting through neighborhoods, adverse safety and health effects, larger street scale, and more parking and land consumption. These factors tend to thwart compact and walkable neighborhoods conducive to the use of public transportation and other modes of transportation. Success in reducing peak-

## 2035 Metropolitan Transportation Plan

hour congestion and the need for road expansion hinges on providing effective and viable transportation options.

### Public Transportation Share of All Trips

Table 5-8 compares the number of existing and 2035 estimated daily public transportation trips by trip purpose and time of day for the service scenarios. Increasing the public transportation service by improving peak-period service and

by implementing express bus and BRT routes into the system will attract more riders, especially for home-based trips to and from work. Frequent and fast public transportation service in the Glenn Highway corridor during commuting periods can potentially be a decisive element in averting the congestion anticipated from

Table 5-8 Mode Share and Purposes of Weekday Trips by Public Transportation

| TRIP PURPOSE                      | 2007 EXISTING FREQUENCY | 2035 BASE PUBLIC TRANSPORTATION SCENARIO | 2035 BASE PLUS PUBLIC TRANSPORTATION SCENARIO | 2035 BUS RAPID TRANSIT SCENARIO |
|-----------------------------------|-------------------------|--|---|---------------------------------|
| Morning peak period mode share:   | 1.2%                    | 1.5%                                     | 1.5%  | 1.6%                            |
| Home-based work trips             | 730                     | 2,110                                    | 2,190   | 2,190                           |
| All other home-based travel       | 510                     | 990                                      | 1,000   | 1,065                           |
| <b>Total trips</b>                | <b>1,385</b>            | <b>3,450</b>                             | <b>3,520</b>                                  | <b>3,595</b>                    |
| Afternoon peak period mode share: | 1.1%                    | 1.5%                                     | 1.5%  | 1.6%                            |
| Home-based work trips             | 1,160                   | 2,760                                    | 2,920   | 2,935                           |
| All other home-based travel       | 1,950                   | 3,350                                    | 3,500   | 3,670                           |
| <b>Total trips</b>                | <b>3,655</b>            | <b>7,330</b>                             | <b>7,500</b>                                  | <b>7,860</b>                    |
| Total weekday mode share:         | 1.0%                    | 1.3%                                     | 1.2%  | 1.3%                            |
| Home-based work trips             | 4,380                   | 9,350                                    | 9,850   | 9,855                           |
| All other home-based travel       | 7,600                   | 11,330                                   | 11,650  | 12,220                          |
| <b>Total trips</b>                | <b>14,475</b>           | <b>24,630</b>                            | <b>25,570</b>                                 | <b>26,155</b>                   |

Note: Mode share is the number of trips by public transportation as a percentage of all trips by all means. School bus trips are not included.

Source: AMATS Travel Demand Model

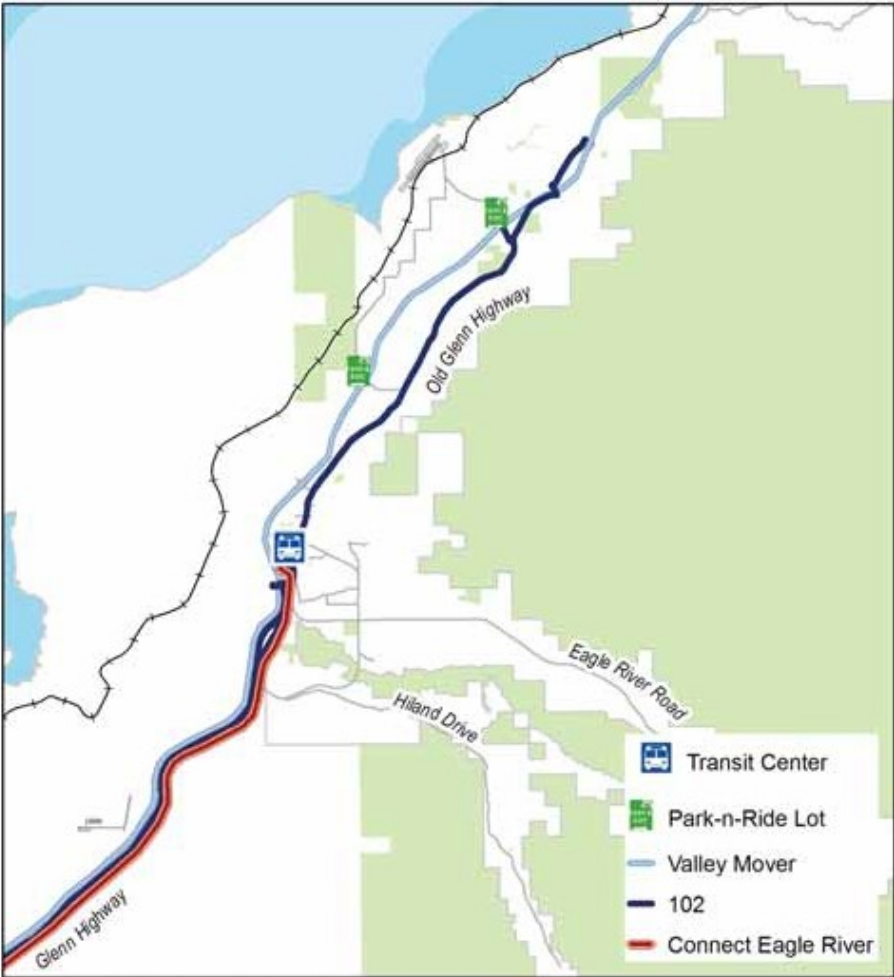


Figure 5-30 2035 Base Scenario for the Public Transportation System – Anchorage Bowl



Source: AMATS, People Mover, Valley Mover

Figure 5-31 2035 Base Scenario for the Public Transportation System – Chugiak-Eagle River



Source: AMATS, People Mover, Valley Mover

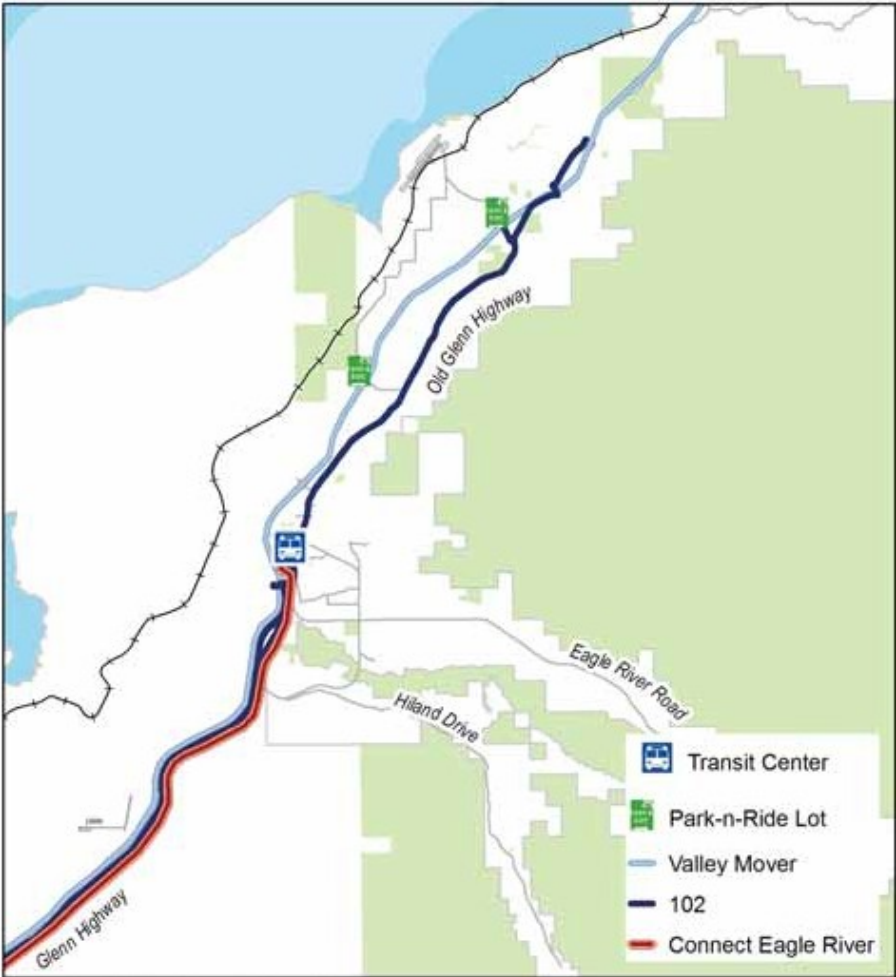
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Figure 5-32 2035 Base Plus Scenario for the Public Transportation System – Anchorage Bowl



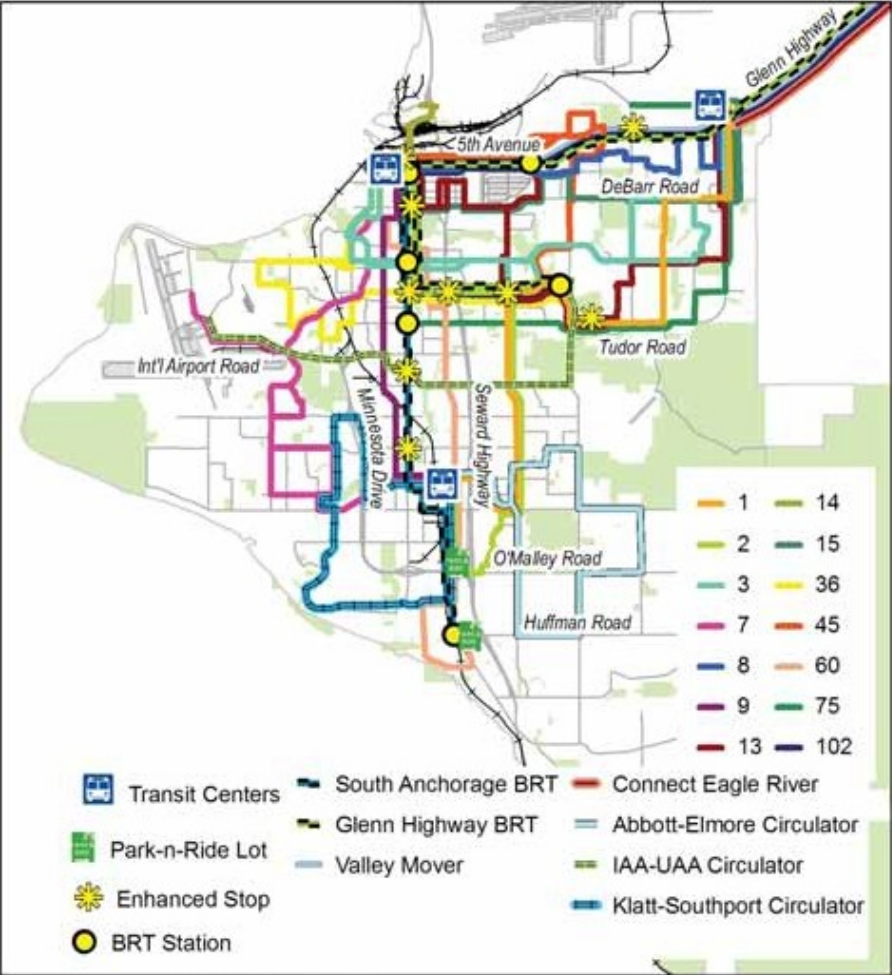
Source: AMATS, People Mover, Valley Mover

Figure 5-33 2035 Base Plus Scenario for the Public Transportation System – Chugiak-Eagle River



Source: AMATS, People Mover, Valley Mover

Figure 5-34 2035 Bus Rapid Transit Scenario for the Public Transportation System – Anchorage Bowl



Source: AMATS, People Mover, Valley Mover

Figure 5-35 2035 Bus Rapid Transit Scenario for the Public Transportation System – Chugiak-Eagle River



Source: AMATS, People Mover, Valley Mover



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2035 traffic demands. Elsewhere the effects will be positive but not as dramatic.

### Impact of Public Transportation on Relieving Congestion

The increase in service frequency of public transportation does have the ability to shift travelers out of automobiles, and help relieve congestion. However, the future public transportation share of trips under all public transportation scenarios is still in the single digits. Consequently, public transportation alone cannot solve the deficiencies forecasted in the network without the application of other strategies, particularly roadway improvement projects.

### Impact of BRT on Relieving Congestion

Many cities throughout the country have begun to implement BRT systems that incorporate many of the elements described in the 2035 BRT scenario. The advantage of BRT systems is that they can attract more choice riders because of significant improvements in travel time for public transportation compared to that for the automobile. The analysis of the 2035 BRT scenario described above, in which potential BRT routes would be introduced along the Glenn Highway to Downtown, Midtown, and the U-Med District, shows that there may be some potential for a high-capacity public transportation route along this corridor. It is not clear from this study, however, whether alternative BRT corridors might

be more productive and generate more ridership than the Glenn Highway BRT corridor. An additional study is needed to evaluate all potential BRT corridors and identify the best candidate for future implementation.

### Elderly and Disabled Transportation Needs

The 2000 U.S. Census reported that 5.5 percent (14,300 persons) of the MOA population was 65 years of age or older, and that 13 percent (34,000 persons) of the population had disabilities. (See Figure 5-36). Beyond that, the State of Alaska statistics indicate that 46 percent of the senior group has a disability. Not all persons with disabilities or elderly persons are transportation-limited, but the scale of the numbers demonstrates community-wide need for special transportation services to enable older persons and disabled persons to get around and stay connected and involved in the community. Mobility support services need to be coordinated through the collaboration of many participants and providers from medical, social, faith-based, human services, and transportation service entities.

The need for mobility support service can be expected to increase with an aging population. DOLWD projections indicate the number of seniors in the MOA will increase by more than 250 percent between 2010 and 2030 (Figure 5-36). The MOA AnchorR DES program provides demand-responsive transportation service for seniors and disabled persons.

The number of annual rides provided has grown overall, as shown by the historical trips on AnchorR DES charted in Figure 5-37.

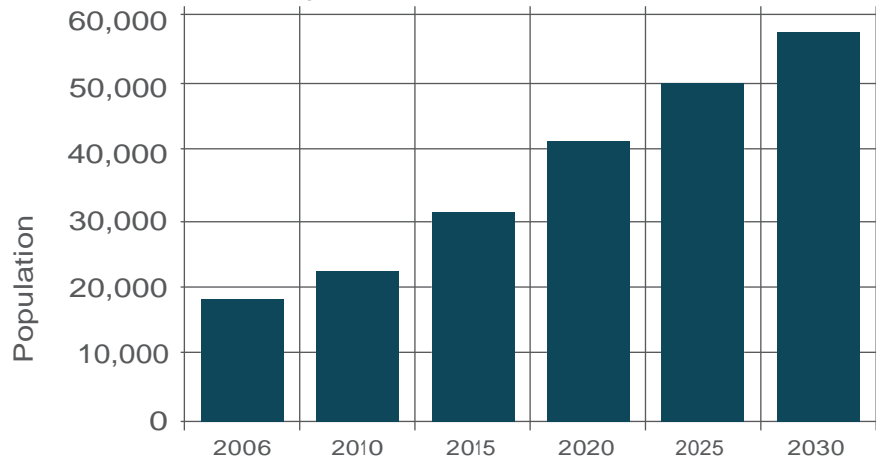
When more senior and disabled persons require specialized transportation services in the future, it will be difficult for AnchorR DES alone to meet the expanded needs. More private-sector involvement is needed; public-private partnerships and multi-provider collaboration should be embraced. AnchorR DES will need to exploit advanced dispatching, vehicle location, scheduling, and routing logistics technologies to contain costs. The operation of AnchorR DES likely will need to double by 2035.

## CONCLUSIONS AND APPROACHES FOR ENHANCING PUBLIC TRANSPORTATION SERVICE

The Anchorage Bowl and Chugiak-Eagle River comprehensive plans position transportation as a significant policy and strategy component to help achieve desired goals and serve future development. In short, the comprehensive plans articulate a future with greater emphasis on transportation choice, more frequent public transportation service, and organization of land development patterns to strengthen opportunities to gain more public transportation riders and generally, a reduction in automobile dependency.

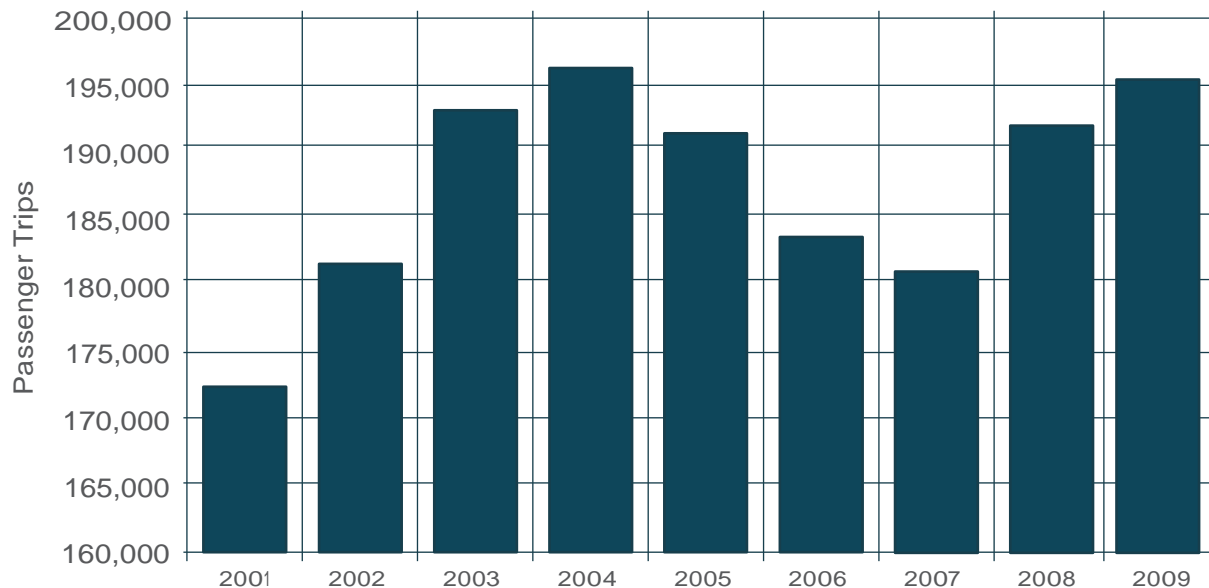


Figure 5-36 Municipality of Anchorage Population Projection, Age 65 and Older, 2006–2030



Source: Alaska Department of Labor and Workforce Development, Alaska Population Projections 2007 - 2030

Figure 5-37 AnchorRIDES Trips, 2001–2009



Source: AMATS Status of System, 2010

A core mission of public transportation is to ensure that all segments of the community have mobility and access to community opportunities. Another mission is to help reduce congestion by offering a viable choice to as many travelers as possible. Better public transportation service is a requisite to attract riders who could use automobiles.

In identifying the scope of the MTP public transportation element, two important challenges are recognized:

- Funding determines what level of public transportation service is possible.
- Public policy and perceptions of the value delivered by public transportation service define public willingness to support funding.

Attracting more riders and sustaining or improving service productivity are the key benchmarks for public transportation performance. More frequent public transportation service and improved quality of service delivery quality will increase riders, as has been clearly demonstrated by recent People Mover productivity gains.

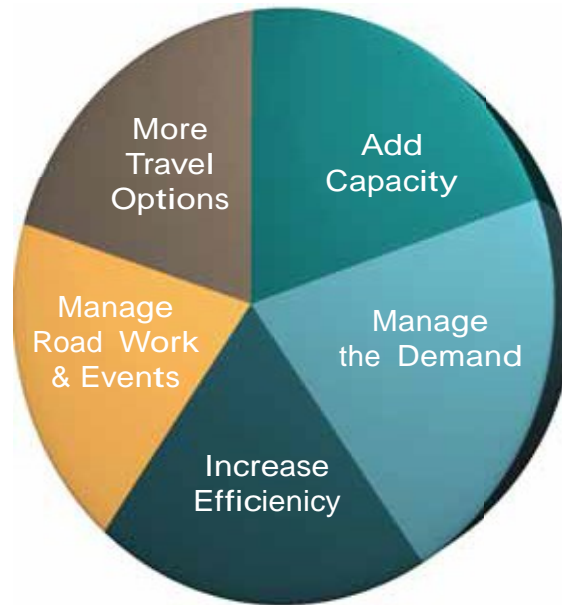
### Congestion Management

Congestion management is a compendium of policies, strategies, and actions designed to address the root causes of congestion and to reduce or relieve its magnitude. Congestion management encompasses land use and city form that reduce travel necessity; reduce dependency on automobiles, especially solo-driver automobile travel; promote travel options and availability of non-automobile modes (public transportation, carpooling, and vanpooling) and non-motorized transportation; implement more efficient management and operation of existing systems; and calm traffic in neighborhoods. See Figure 5-38 for the five general methods of congestion management.

#### COPING WITH CONGESTION

Traditional ways of coping with congestion are to add road capacity or increase public transportation service, largely because the automobile remains the overwhelmingly dominant mode of travel in most urban areas across the United States, including the MOA. The cumulative consequences of vehicle dominance are increasingly receiving serious attention and becoming topics of policy debate. Civic officials and citizens across the nation are confronting congestion by crafting policies, strategies, and actions focused on transportation and urban growth management to guide develop-

Figure 5-38 Congestion Management Methods



ment, reduce vehicle dependency, and control congestion.

It is unrealistic to presume that personal automobiles will not continue to be widely used. But other modes need to have larger roles. The MOA can leverage opportunities and nurture a future cityscape with attractive urban design and broader travel choices. Careful and judicious policies, strategies, and investment initiatives are needed.

Public interest in nurturing alternatives—walking, bicycling, public transportation, and telework opportunities—is broadening. Aging population, rising fuel costs, the health and well-being of cities, and other demographics suggest the need

for more balanced options and bolstering availability of alternative modes.

#### LIMITATIONS OF INFRASTRUCTURE ADDITIONS

Congestion and traveler delay are problems in the majority of America's urban areas, which results in a decline in mobility. The recent economic recession did slow the growth of congestion and traveler delay since 2007; however, the forecast is for continued growth in congestion.

Unlike many cities experiencing heavy congestion, Anchorage has been able to implement a number of roadway expansion projects in the past decade that have substantially relieved congestion, at least in some localized areas. The 2010 Urban Mobility Report (published by the Texas Transportation Institute) documents the rate of congestion increase compared to capacity increases for many urban areas, including Anchorage. According to the report, Anchorage is among a group of urban areas where the travel demand grows faster than roadway capacity by less than 10 percent, which supports the conclusion that Anchorage is more or less keeping up with the growth of its transportation demand.

This ability to generally keep up with transportation demand may not always be the case, however. In the next chapter, a discussion on financing concludes that

many of the projects previously included in the previously described 2035 road scenarios will have to be removed because of projected shortfalls in revenues. Also, in some situations, roadway expansion solutions to congestion problems are too expensive or just plain undesirable. An example of this is the Midtown employment center. Transportation demand modeling shows that this area of town will experience a substantial amount of congestion in 2035, even with the full build-out of roadway improvements recommended earlier in this chapter. The construction of wider streets to reduce congestion would require the acquisition of numerous thriving businesses and would be prohibitively expensive. Those steps would also run contrary to the Anchorage Bowl comprehensive plan, which calls for the creation of a more walkable pedestrian environment in the area.

Road construction also has wider environmental and social consequences, including more traffic, expansive parking lots, noise, air pollution, unpleasant walking environments, isolation of non-driver population segments, traffic-related injuries and fatalities, hazards around school environments, pedestrian and bicycle safety conflicts, intrusion in neighborhoods, and health impacts. Scale and aesthetic character of streets, neighborhood walkability, noise levels, and even urban character eventually succumb to vehicles and traffic.

In light of the above concerns, it will become increasingly important to incorporate less-expensive and perhaps more-creative solutions (see below) into future lists of recommended transportation actions.

Three broad categories of strategies characterize efforts to reduce travel demand and congestion: land use, transportation system management (TSM), and travel demand management (TDM).

### LAND USE

Community land use and urban form within the metropolitan area reflect a distinct pattern of development that is the legacy of decisions spanning 50 years. Within the Anchorage Bowl, five major retail centers (Downtown, Midtown, Northway, Muldoon, and Dimond Center) attract commercial activity. A retail center also is located in Downtown Eagle River, serving the Chugiak-Eagle River area.

Table 5-1 on page 5-2, identifies the growth trends for employment and household location. The most significant increases are household growth in Chugiak-Eagle River and employment growth in the Anchorage Bowl. In 2007, the percentage of metropolitan area households located in Chugiak-Eagle River was 11 percent, a figure projected to increase to 17 percent in 2035.

This pattern of employment and household growth, which is forecast to remain constant into the future, encourages SOV trips from the Chugiak-Eagle River area

into the Anchorage Bowl. Implementation of the Anchorage Bowl and Chugiak-Eagle River comprehensive plans policies would have the effect of encouraging higher densities and more mixed-use development in strategic locations that, in turn, would encourage fewer SOV trips.

Land-use strategies that would be beneficial to the transportation system in the metropolitan area will be addressed in the following future planning documents:

- Midtown District Plan
- East Anchorage District Plan
- West Anchorage District Plan

### TRAVEL DEMAND MANAGEMENT

TDM strategies are intended to influence travel behavior and demand, reducing the need for travel, increasing vehicle occupancy, creating more travel options, encouraging use of non-driver modes, and shifting the timing of trips to flatten peaks. These strategies seek to improve system performance by reducing and redistributing the demand for SOV trips. Behavioral responses to TDM are highly dependent on employer support and employee commuting actions.

The following TDM strategies would be beneficial to the transportation system in the metropolitan area:

- More vanpools. Vanpools are especially effective for two reasons: (1) one vehicle carries more travelers than carpools, and (2) they reduce more vehicle miles because of

- typically longer trip distance. Nearly all existing vanpools operate along the Glenn Highway, helping to reduce congestion in that busy corridor.
- **Guaranteed Ride Home Program.** This program offers back-up to ensure that in emergency situations ride-share participants can get home, increasing ride sharing viability. Employer partnering is needed to implement this strategy.
  - **Employer participation.** Active support of employers is critical to realize measurable success in shifting employee commute habits. Employer implementation of telecommuting, flexible work schedules, priority carpool and vanpool parking, bus passes, and other initiatives helps relieve congestion. Government efforts at ride-share and related programs are significantly ineffective in the absence of broad, continuing employer participation.
  - **Telecommuting and other work schedule options.** Communications technology makes it possible for many people to work from home, at least some of the time. Currently in Anchorage, about 15,000 daily work trips are eliminated by telecommuting. This number is about the same number of weekday trips carried by the People Mover bus system. The scale attests to the powerful benefit of promoting
- telecommuting programs with employers.
- **Ride-share programs.** Facilitating ride sharing results in fewer vehicles on the road. Most carpools are created informally by members, often from the same household.
  - **Tax (monetary) benefits.** Under the federal commuter tax benefit, bus passes are tax-free. Employers could support this program with companion programs.
  - **Cash incentives.** Consumers respond to price stimuli and incentives. Most consumer behavior decisions have a cost-value dimension. Price-related and cash-incentive programs can encourage desired behavior. For example, the State of Washington is implementing innovative value-pricing experiments and programs to expand traveler behavior responses. Analysis of potential cash incentives applied to reduce solo commutes on the Glenn Highway suggests that as little as \$8 million may achieve traffic reduction sufficient to avoid the necessity of a large road expansion investment. Funding to implement carefully crafted pilot programs could be highly effective.
  - **Parking management.** Most employers in Anchorage provide free parking for their employees, but very few provide free bus passes, resulting in a built-in bias toward automobile
- commuting. Parking pricing affects employee commute choice.
- **School access and safety.** Schools attract an inordinate amount of vehicle traffic. Some students are driven to and from school, generating a round trip in the morning and another in the afternoon, totaling four trips. The automobile trips to schools occur even at schools whose students live within walking distance. At high schools, restrictions on student parking (to encourage alternative modes and carpooling) could relieve traffic.
  - **Walking School Bus Program.** A program of chaperoned walks to schools (known as a "Walking School Bus") can substitute for student chauffeuring. It would also promote health benefits by fostering exercise for students. As many as 15,000 daily automobile trips could be eliminated from around schools by aggressive implementation of walking to school initiatives.
  - **Market research and analysis.** Affecting behavior change is a marketing activity. There clearly is risk in undertaking such programs. Research helps assess the risk and merits of potential programs and targets efforts for maximum effectiveness. Research is critical to gauge market segments: those pre-disposed to the concepts, those open



to considering the proposition, and those decidedly uninterested. That knowledge should guide design of programs and investments.

- Performance evaluation. When an initiative to change travel behavior is launched, it should be viewed as an experiment. Evaluation of the performance, costs, and effectiveness of each program should be part of the process. Evaluation feedback should inform decision makers and focus energies.

#### TRANSPORTATION SYSTEM MANAGEMENT

TSM strategies are designed to achieve the best possible operation and performance from the existing transportation system. Generally, they are roadway improvements that increase effective capacity, optimize traffic operation, and apply traffic calming in residential areas. TSM strategies tend to be low cost, require minimal right-of-way, and can be implemented quickly. Responsibility for TSM activities generally lies in government domains.

Signalized intersections are the key determinants of congestion in the MOA. Numerous intersections cause bottlenecks and significant delays. Many of these problem intersections are concentrated in the central part of the Anchorage Bowl. There are relatively few congested intersections in the southwest and southeast

areas of the Anchorage Bowl or in Chugiak-Eagle River.

Generally, the afternoon peak period (3 to 6 p.m.) is more congested than the morning peak period (7 to 9 a.m.). Although intersection congestion causes most delays on the road system, congestion is also evident because of inadequate capacity along some major roadway corridors. Studies of corridor travel times and analyses of service levels on roadway segments reveal the locations and extent of roadway delay.

Strategies to manage transportation operations should focus on improving these congested intersections (through signal timing or physical improvements). Other strategies may focus on systemwide issues or address local issues through individual projects. Potential strategies are discussed below.

- Turn lanes. Additional turn lanes and lengthening of existing turn lanes allow turning vehicles to move out of through-traffic lanes.
- Access control management. Roadway capacity is reduced when vehicles make right-hand turns into driveways. Reducing or consolidating the number of driveways on arterials has been shown to increase the capacity of roadways and minimize disruptions in traffic flow.
- Traffic signal timing. Traffic signal timing and coordination along corridors is arguably the single most

important factor in management of arterial streets. The MOA Signal Operations team utilizes a centralized computer in the Traffic Department office to remotely operate and check traffic operations for most signals in the Anchorage Bowl. A majority of signals in the Anchorage Bowl and Chugiak-Eagle River are programmed to run on several different timing plans throughout the day. The plans account for routine changes in traffic flow that occur throughout a typical day. Optimizing timing to traffic conditions is a continuous task and requires adequate staffing to monitor, analyze, and re-time signals. Strategies for improving signal system operations include the following:

- Periodic review and re-optimizing
- Intersection signal timing to reduce delay and coordinate timing plans for subareas or along corridors
- Time-of-day optimization, including vehicle-actuated signals
- Automated and real-time data collection
- Operation of a traffic management center to facilitate monitoring and rapid response
- Intersection geometry changes to eliminate split-phase signal operation (for example, by

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installing dedicated left-turn lanes)

- Field observation and maintenance
- Signal system upgrade and central traffic management. Good signal timing and system management produce significant benefits. Critical elements of the signal system include controller technology for intersection signals, communications infrastructure, operations management and analysis. Modern advanced signal controllers have advanced state-of-the-art computer components—logic and control, sensors and detectors, automated data acquisition and communications, wireless and hard-wired communications, and modular software components. These advances provide greater flexibility in traffic management. They enable greater efficiency through administration by a centralized traffic management center, increase staff productivity, and permit faster response in adapting to traffic conditions and changes. These technology and system advances can be leveraged by the MOA to improve the street system management. An additional benefit of central traffic management is the opportunity to provide real-time traveler information about the status of the street system.

Information automatically gathered from intersection signal controllers and detectors at other locations can be fed to broadcast media to inform travelers about incidents and traffic conditions.

- Spot geometric improvements. Focused geometric improvement (at intersections or on freeways) can remedy bottleneck situations. An additional turn bay at one approach to an intersection may reduce delay for all movements, in all directions, at that intersection. Although there is no specific strategy that can be implemented throughout the MOA, focused studies at key congested intersections can reveal cost-efficient strategies.
- Traffic calming. Cut-through traffic on neighborhood streets is a safety and quality-of-life concern for neighborhoods. Cut-through traffic is often a symptom of a congested system; drivers are avoiding congested major thoroughfares. Implementation of neighborhood traffic calming can eliminate the negative impacts of the congestion problem.

The Traffic Calming Protocol Manual (MOA Traffic Department, 2002) provides a toolbox of strategies available for traffic-calming applications. Traffic calming is intended for neighborhoods, in

contrast to the location-specific spot improvements on higher-volume arterial streets.

### INTELLIGENT TRANSPORTATION SYSTEMS

Responding to freeway incidents, weather and traffic reporting, Commercial Vehicle Intelligent System Network (CV SN), and automated data collection are examples of ITS deployment. This systemwide strategy supports commercial vehicle operation; assists in motor carrier operations; enhances communication, safety, and permit acquisition; and allows enforcement of rules and regulations. Current efforts should continue and implementation should be completed throughout the metropolitan area.

Travel delays caused by frequent occurrences of crashes and weather incidents on the Glenn and Seward highways are a major contributor to congestion. One form of an ITS, an incident management program, can help reduce recurring impacts of incidents through the systematic and coordinated use of human, institutional, and technical resources.

The following are additional examples of ITS projects that have been scheduled for funding:

- High-priority transportation corridor prototype plan—an advanced ITS for public transportation, which may include transit signal priority testing and evaluation

- ITS automated operating system (for public transportation), which includes automated ticketing, smart fare boxes, Web-based interfaces, and automated telephone system for the paratransit system
- Anchorage Integrated GIS (Geographic Information System) Transportation Network (Roadnet)
- Public transportation fleet improvements and support equipment
- Traffic signal system upgrade
- 511 program for disseminating traveler information
- Road Conditions Acquisitions and Reporting System (CARS)
- Automatic vehicle location (AVL) systems
- Shared traveler information and traffic database
- Asset management system (for example, GIS-based sign inventory)

DOT&PF is creating an ITS implementation plan (ways) specifically for the Glenn Highway corridor between Anchorage and the Mat-Su Valley. The ITS implementation plan will help deploy ITS in a coordinated and cost-effective fashion that will best meet the needs of improving traveler safety in this corridor. Potential applications include road weather stations, bridge deicing systems, fog warn-

ing sensors, traffic monitoring system, variable message signs, and variable speed limit signs.

#### CONCLUSIONS AND APPROACHES FOR CONGESTION MANAGEMENT

Managing the transportation system efficiently and pursuing programs to reduce or shift travel demand complement traditional expansion of transportation capacity through road projects and increases in public transportation service. These management efforts will become increasingly important to address congestion in coming years.

The primary issue is coping with travel during peak traffic periods—weekday surges that occur during only a few commute hours. If traffic during the peak-hour commute periods is managed more efficiently, congestion can be reduced. Figure 5-39 shows the fluctuation of trips throughout the day. By fixing capacity "pinch points" and reducing some demand or shifting it to other hours, the most severe problems can be relieved.

Management initiatives focused on specific congestion problems will be most effective. These include traffic signal timing, spot improvements at pinch points of congestion in the transportation network, more bus service and vanpool availability, and employer partnering emphasis to change commuter habits. In addition, pricing mechanisms are an important tool to bring change.

A much greater challenge lies in creating viable choices and options and addressing pervasive SOV travel. These issues are far larger, broader, and more difficult than congestion management. The character of the metropolitan area in the future will hinge on confronting this challenge.

#### Non-Motorized (Pedestrian, Bicycle, and Trail) Transportation

Walking and bicycling paths that are accessible, convenient, and well-connected contribute to the quality of life in the metropolitan area. Policies have been set forth for the Anchorage Bowl and Chugiak-Eagle River in the adopted comprehensive plans that advocate for inclusion of non-motorized travel choices as strongly valued community assets. Public input and comments during the MTP development expressed a similar, strongly held position.

Three elements comprise the AMATS Non-Motorized Transportation Plan: the Anchorage Pedestrian Plan (2007), the Anchorage Bicycle Plan (2010), and the Areawide Trails Plan (1997), each of which has its own set of recommended projects.

#### EVALUATION OF FUTURE NEEDS

When provided with access to sidewalks, trails, and other walkable features, community residents are 28 to 55 percent more likely to choose walking over other modes of transportation. The pedestrian and bicycle improvements recommended



## 2035 Metropolitan Transportation Plan

by the AMATS Non-Motorized Transportation Plan were selected through a system that identified the highest-priority projects.

One primary concern was improving safety for non-motorized transportation as part of projects. Figure 5-40 shows the historical number of pedestrian-vehicle and bicycle-vehicle crashes. Taking safety, mobility, and access into account, the recommended core network for non-motorized transportation in the metropolitan area is shown in Figure 5-41 (Anchorage Bowl) and Figure 5-42 (Chugiak-Eagle River). These projects were used as the starting point for identification of pedestrian, bicycle, and trail projects to be included in the MTP.

Table 5-10, included at the end of this chapter, presents a complete list of pedestrian, bicycle, and trail system projects used during development of this MTP.

### Anchorage Pedestrian Plan

Walking is a basic mode of travel in the Anchorage transportation system. According to the 2002 Anchorage Household Travel Survey, walking constituted 5.7 percent of all reported trips reported by households. In addition to providing a means of travel, walking has other benefits. It is convenient, inexpensive, offers health benefits, and has no harmful impacts on air quality.

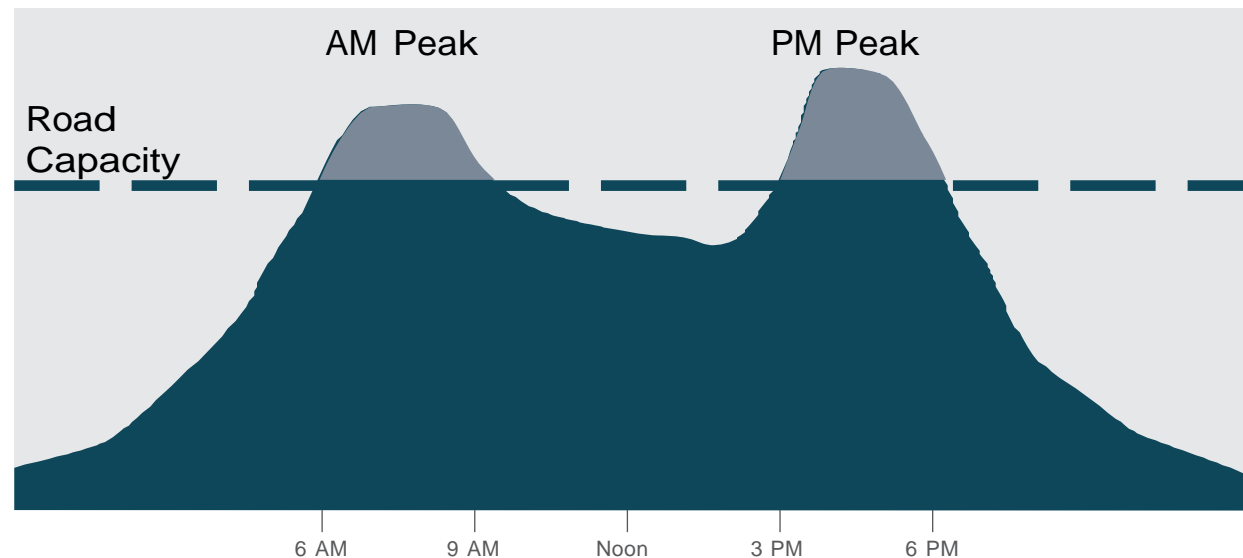
Many people enjoy and prefer walking as a mode of transportation.

During the last two decades, obesity has reached epidemic proportions in our nation and many developed countries around the globe. According to the Centers for Disease Control and Prevention in the U.S. Department of Health and Human Services, 61 percent of adults in the MOA are overweight, with more than 23 percent qualifying as obese.

Obesity causes diseases like Type 2 diabetes as well as increased risk for heart disease, blood pressure, and stroke. Increasing the use of walking—and thereby promoting exercise—will help combat obesity and promote better health.

Unfortunately, Anchorage's existing sidewalk system is woefully incomplete. In general, complete sidewalks are more likely to be found in older Anchorage Bowl neighborhoods such as Downtown, Fairview, Mountain View, Airport Heights, College Village, and South Addition. Currently about 474 miles of sidewalks are found in the Anchorage Bowl (excluding separated multi-purpose trails). This sidewalk coverage represents roughly 13 percent of the total miles of roads in the Anchorage Bowl. In other words, if the ideal is to provide sidewalks on both sides of Anchorage streets where sidewalks are appropriate for the street typology (excluding freeways), only 13 percent of the need is currently met.

Figure 5-39 Trip Fluctuation





The percentage of sidewalk coverage in Chugiak-Eagle River is even less. The existing 47 miles of sidewalks represent only about a 7 percent coverage ratio of the total roadway infrastructure.

The Anchorage Pedestrian Plan, adopted in October 2007, identified projects needed to fill gaps in the existing sidewalk network and established a framework for pedestrian improvements. This MTP is the first transportation plan for the metropolitan area to incorporate pedestrian projects. All projects listed in Chapter 7 have been previously determined to be those with the highest potential for pedestrian use.

It should also be noted that the Anchorage Pedestrian Plan gives priority to sidewalk maintenance. Increased sidewalk maintenance, particularly in the winter months, can decrease the number of pedestrian-vehicle crashes.

### Anchorage Bicycle Plan

Bicycling is one of the most popular leisure activities enjoyed in Anchorage, a city with a world-class trail system boasting more than 214 miles of trails. Increasingly, bicycle travel is being embraced as a practical means of daily transportation. Many are increasingly turning to a bicycle as their primary mode of transportation, riding bicycles to reach work, attend school, reach public transportation, visit friends, and shop. The exercise of bicycle riding im-

proves health and fitness, and bicyclists save money on gas and other operating expenses, compared with the use of an automobile. The 2002 Anchorage Household Survey reported approximately 11,500 daily bicycle trips for all purposes, roughly similar to the number of public transportation trips.

The Anchorage Bicycle Plan, adopted in March 2010, encourages the expansion of the bicycle infrastructure and the use of bicycles for transportation. Its recommendations are intended to meet the needs of bicyclists who wish to use bicycles as a form of transportation.

The Anchorage Bicycle Plan identifies the following deficiencies in the existing bicycle network:

- Separated pathways. Reliance on multi-use pathways that are adjacent to but separated from roads as the primary focus of the bicycle network

creates operational as well as safety issues for bicyclists.

- Gaps in the bicycle network. Major gaps in the network require bicyclists to find their own routes to reach destinations.
- Facilities inappropriately designated as part of the bicycle infrastructure. Many of the older facilities identified in the Areawide Trails Plan are merely narrow pathways or sidewalks (less than 8 feet wide) or do not have the minimum 5-foot separation from the roadway; therefore, these facilities are not desirable for bicycle travel.
- Signs on the bicycle route system. Many existing bicycle facilities do not have the proper signs, and many sidewalks have bicycle route signs. In addition, the existing bicycle route signs are not posted in appropriate locations and should be moved to reflect better routes.

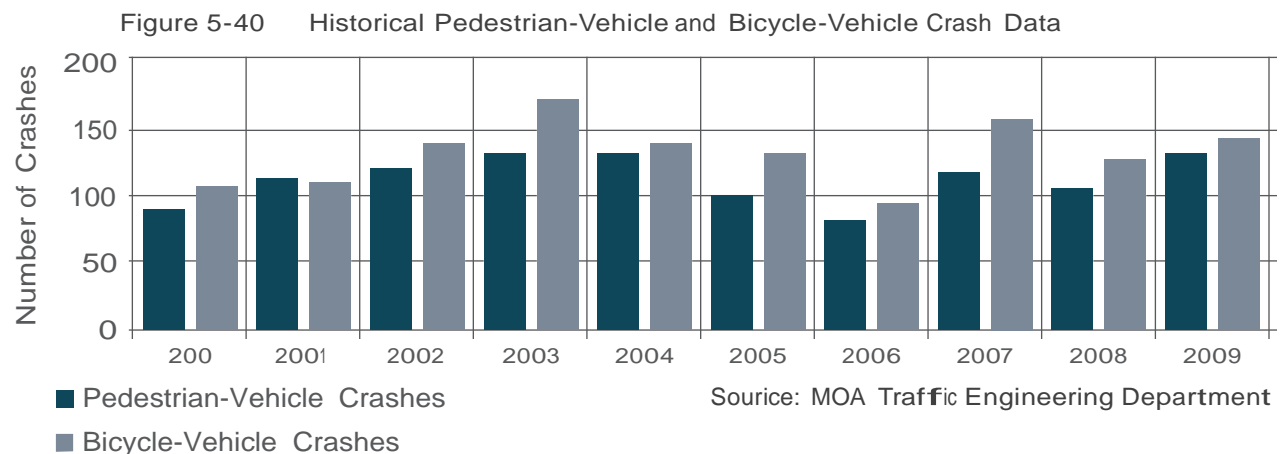
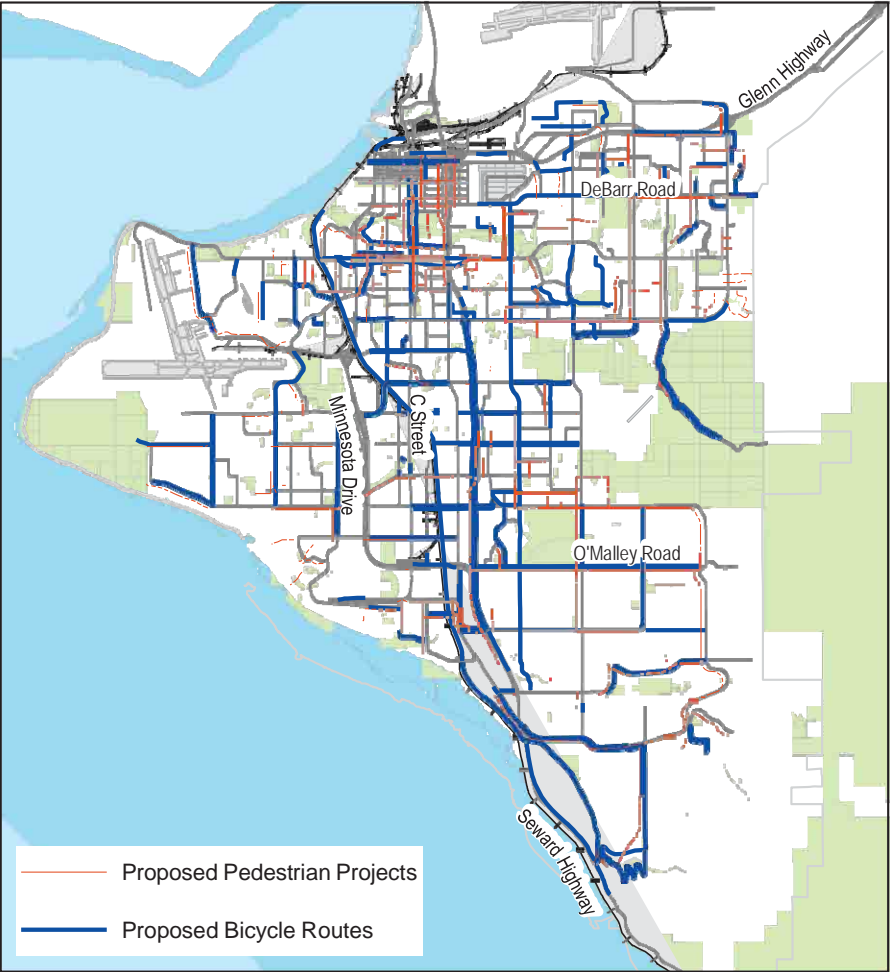
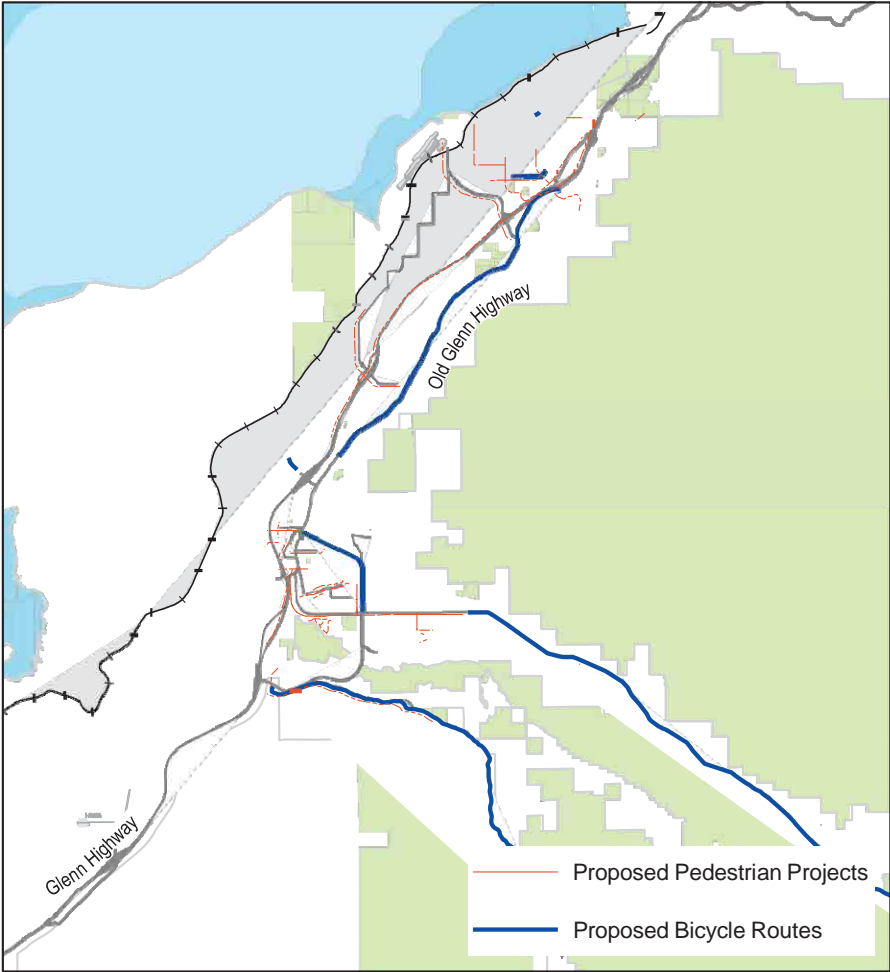


Figure 5-41 Recommended Core Network for Non-motorized Transportation – Anchorage Bowl



Source: AMATS Non-Motorized Transportation Plans

Figure 5-42 Recommended Core Network for Non-motorized Transportation – Chugiak-Eagle River



Source: AMATS Non-Motorized Transportation Plans

The Anchorage Bicycle Plan identifies and establishes priorities for bicycle facility projects designed to address these deficiencies. This MTP is also the first transportation plan for the metropolitan area to incorporate bicycle projects. All projects listed in Chapter 7 have been previously determined to be those with the highest potential for use by bicyclists.

#### Areawide Trails Plan

The Areawide Trails Plan, adopted in 1997, served as guide for trail project implementation in the MOA for the past 14 years. The emphasis of the original plan was on identifying needed recreational trails, the majority of which have now been implemented. Today only a few projects on the list of trail improvements identified in the Areawide Trails Plan remain to be completed. With the new emphasis on walking and bicycling as a form of transportation, less emphasis is expected to be given to purely recreational facilities. Nevertheless, some of the remaining trails, especially those that also have a utilitarian function, have been incorporated into the list of non-motorized projects in Chapter 7.

#### IDENTIFICATION OF SOLUTIONS

The Non-motorized Transportation plan is a part of this MTP by reference. The pedestrian and bicycle projects described in the adopted plans were included in the

2035 road network and public transportation scenarios.

### Freight Distribution

Efficient freight handling and movement are important activities that supply consumer goods to households and move the commerce that sustains local, state, and national economies and security. The residents of the MOA and all of Alaska rely on ocean and air transport far more heavily than other urban regions and states. That reliance increases the importance of efficient freight transport. With only nominal manufacturing in Alaska, most goods need to be imported. The Port of Anchorage and TSAIA are the dominant freight termini for imports to the metropolitan area and the rest of the state. The Alaska Railroad also plays an important role in distribution of consumer goods, natural resources, petroleum products, and heavy goods.

#### PORT OF ANCHORAGE

The existing facilities at the Port of Anchorage include three general cargo terminals, two bulk petroleum product terminals, loose cement offloading capability, intermodal connections (to rail, road, and air), an on-dock public transportation shed, rail-mounted electric container cranes, portable cranes, and a bulk petroleum valve yard. The Port of Anchorage is situated on 129 acres in the northwest corner of the Anchorage Bowl.

A regional port, it contributes an estimated \$725 million annually to the state economy by its involvement in domestic and international markets, including automobiles, bulk cargo, and cruise activities. The Port of Anchorage is a major gateway for commerce, and is expected to continue to show steady growth into the future.

The current port facility is 50 years old and in a deteriorated condition, necessitating the replacement of the current dock. Additionally, the dramatic expansion in global economic trade is pressing ever-larger vessels, capable of carrying 3,000 container units, into service. To sustain its market and future services, port infrastructure must be able to accommodate larger ships and provide wider and faster cranes for container handling. Improved transportation links to and from the Port of Anchorage are needed to distribute goods to local, regional, and statewide establishments, as well as to support military and homeland security requirements.

The Port of Anchorage Intermodal Expansion Project will replace the current, deteriorated infrastructure while constructing a new dock to accommodate larger vessels, crane and cargo-handling infrastructure, improved road and rail links, and terminal facilities that will allow the port to expand to meet future needs. The project was developed in phases, and the first phase is already underway.



Access to the Port of Anchorage is difficult because of topography and the presence of the railroad yard and main-line tracks between the marine facilities and the major road network. The primary roads for access to the port are on the NHS (including the Seward Highway, Ingra-Gambell streets couplet, A-C streets couplet, 5th/6th avenues couplet, and the Glenn Highway). This configuration results in heavy vehicles and tractor trailer combinations being routed through the Downtown Anchorage area.

Figure 5-43 shows a general trend of steady truck traffic and container growth into and out of the Port of Anchorage. The recent decline in growth (2008-2009) is due to the economic recession, and is not expected to continue.

The continued growth of truck traffic into the Port of Anchorage will require greater capacity on roadways at the Port of

Anchorage, and will also require a more fluid connection between the port and regional freeways.

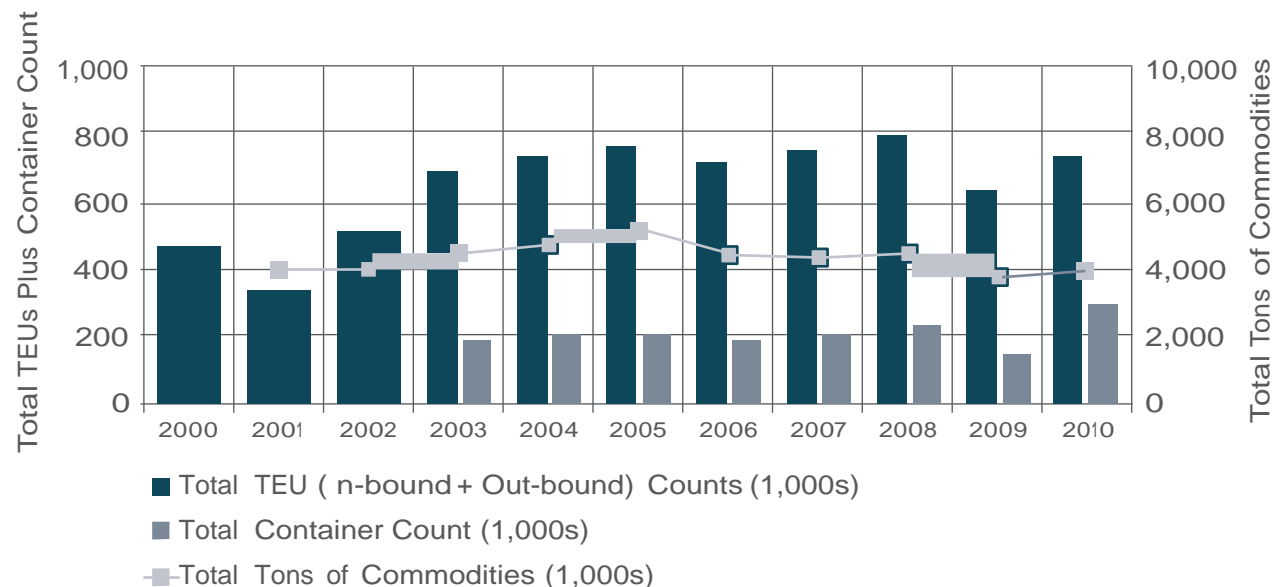
This MTP recommends continuation of the Port of Anchorage Intermodal Expansion Project. Other transportation system improvements are also needed to increase the ease of access to the port: a new connection near the Ingra-Gambell streets couplet and ramps to a new freeway that ties the Glenn and Seward highways together. The new connection better improves the efficiency of regional freight distribution from the Port of Anchorage to the north and south.

### TED STEVENS ANCHORAGE INTERNATIONAL AIRPORT

TSAIA is the primary air transportation facility in the state of Alaska. The airport meets local, regional, state, national, and international needs, for both passengers and cargo. The 2008 airport master plan identifies forecasts for passenger volumes, cargo tonnage and operations, and the facility requirements for airfield and support facilities.

Access to TSAIA is primarily through the use of International Airport Road and Postmark Drive. To enter and leave the airport, passenger vehicles typically use International Airport Road. The cargo facilities are principally located on Postmark Drive north of International Airport

Figure 5-43 Freight Traffic at the Port of Anchorage, 2000-2010







Road. (The U.S. Post Office, FedEx, UPS, DHL, and Alaska Cargo Port are major facilities in this location.)

As discussed in Chapter 4, cargo trends show a gradual increase in total cargo between 2000 and 2008, with a slight drop in total cargo between 2007 and 2009. This recent decline was due to the economic recession, and is expected to reverse in the near future.

### ALASKA RAILROAD

ARRC operates freight and passenger services between Southcentral and Interior Alaska. Headquarters facilities are located in the Ship Creek area and include corporate offices, the main intermodal terminal, and yard facilities. The railroad moves bulk resource products (primarily gravel and coal), petroleum, and military shipments, as well as containers with general cargo. ARRC is one of the major regional connections for the state of Alaska. It carries freight that reaches destinations

from Valdez to Prudhoe Bay and operates a total of 656 miles of track.

Throughout the Anchorage Bowl, the railroad track crosses roadways on at-grade crossings. Reducing the number of at-grade crossings increases safety while also decreasing delay to both rail and vehicle travel. Several at-grade crossings are of particular concern, because of higher daily vehicle travel: C Street, Arctic Boulevard/Dowling Road, and International Airport Road/Jewel Lake Road.

Safety reinforcements should be considered at these locations (at a minimum) to enhance safety. The implementation of electronic motorist-warning systems at rail crossings is recommended to provide greater safety assurance until planned roadway-rail grade separations can be completed.

This MTP recommends continuation of currently planned improvements for the ARRC, including the following:

- Port MacKenzie Rail Extension Project
- Continued development of passenger facilities
- Pedestrian improvements and enhancements
- Construction of additional track
- Continued realignment of tracks within the existing rail corridor
- Rolling stock rehabilitation
- Signalization

### SHIP CREEK INTERMODAL TRANSPORTATION CENTER

ARRC is in the process of designing and developing an intermodal facility at Ship Creek. The Ship Creek Intermodal Transportation Center is intended to complement the existing and projected developments in the Ship Creek area. Project components include the following:

- A new intermodal facility with adequate baggage and passenger services, convenient and safe passenger boarding zones, well-defined arrival and departure areas and platforms, signage, appropriate security, and retail/office space that complements ridership
- Pedestrian connections between the new center and Downtown Anchorage, between 1st Avenue and 3rd Avenue
- Improvements to and expansion of public parking

### TRUCKS AND FREIGHT DISTRIBUTION

By far the largest share of freight shipments are carried by trucks. Roads on the NHS (Glenn Highway, Seward Highway, Minnesota Drive, International Airport Road, and Tudor Road) have the highest truck traffic. Truck volumes on other major arterials such as C Street and Northern Lights Boulevard are significant, too.

Regional truck traffic (including that of the Mat-Su Borough) is projected to



increase from 124,500 vehicles daily in 2007 to nearly 181,200 in 2035, a gain of approximately 45 percent. Figure 5-44 (Anchorage Bowl) and Figure 5-45 (Chugiak-Eagle River) show expected origins (productions) of truck trips by TAZ in 2035. About three-quarters of all truck trips are single-unit vehicles; the remainder are combination tractor-trailer units. Trips made by the latter type are primarily linked to the Port of Anchorage, TSA A, or the railroad. Other truck-activity centers are the major big-box retail outlets, manufacturing and wholesale facilities, quarries, and industrial lands.

### COMMERCIAL VEHICLE INTELLIGENT SYSTEMS NETWORK

The CVISN is an integrated intelligent transportation system that supports commercial vehicle operation. It assists in motor carrier operations, enhancing communication, safety, and permit acquisition, as well as roadside safety enforcement and

weigh station operations. The following are some of the CVISN components used in Alaska:

- Electronic weigh-in motion systems
- Automated vehicle classification count stations
- Motor carrier safety inspection data exchange
- Electronic oversize or overweight permit processing
- Wayside safety detection and warning systems such as vertical clearance or rollover indicators at critical sites

Significant progress has been made in deploying CV SN elements, and these efforts should continue and be completed throughout the metropolitan area.

Figure 5-44 2035 Truck Origin Trips (Productions) by Traffic Analysis Zones - Anchorage Bowl

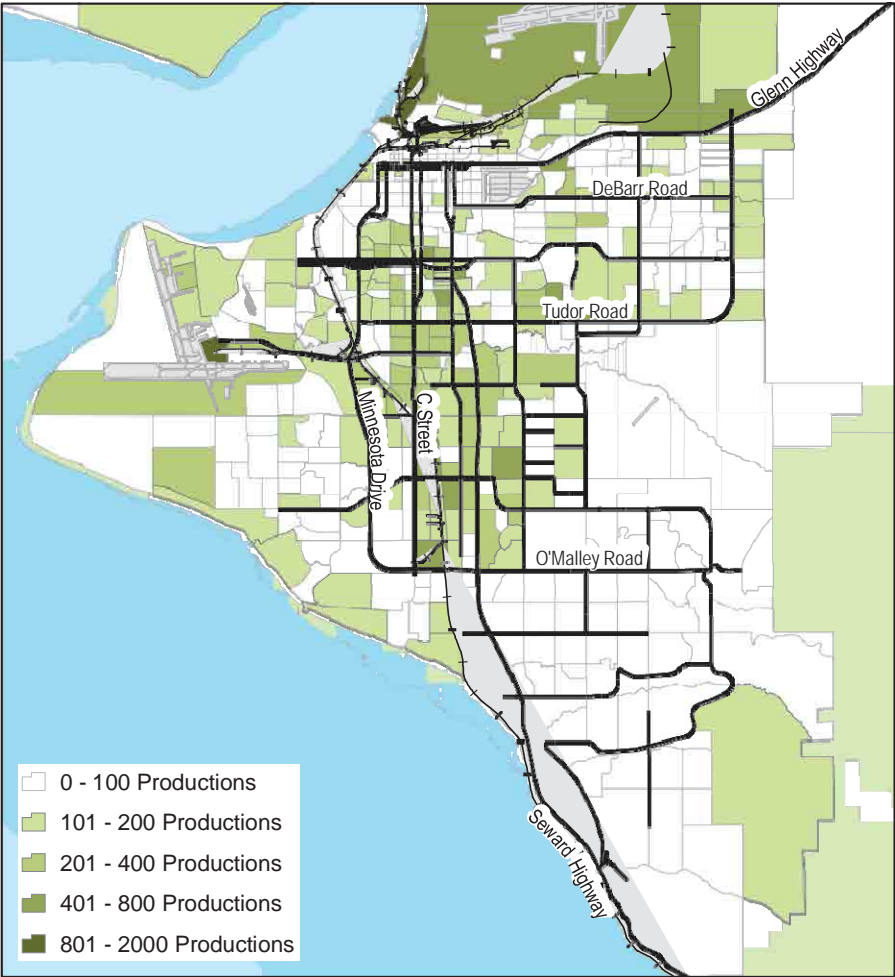
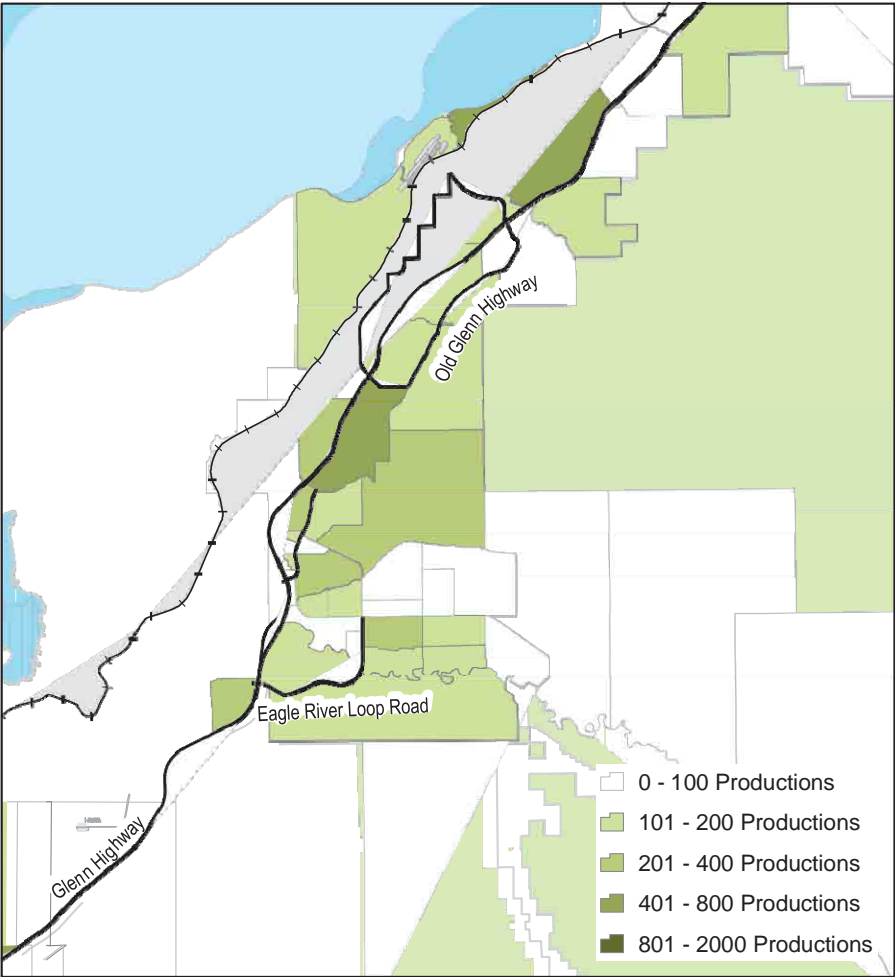


Figure 5-45 2035 Truck Origin Trips (Productions) by Traffic Analysis Zones - Chugiak-Eagle River





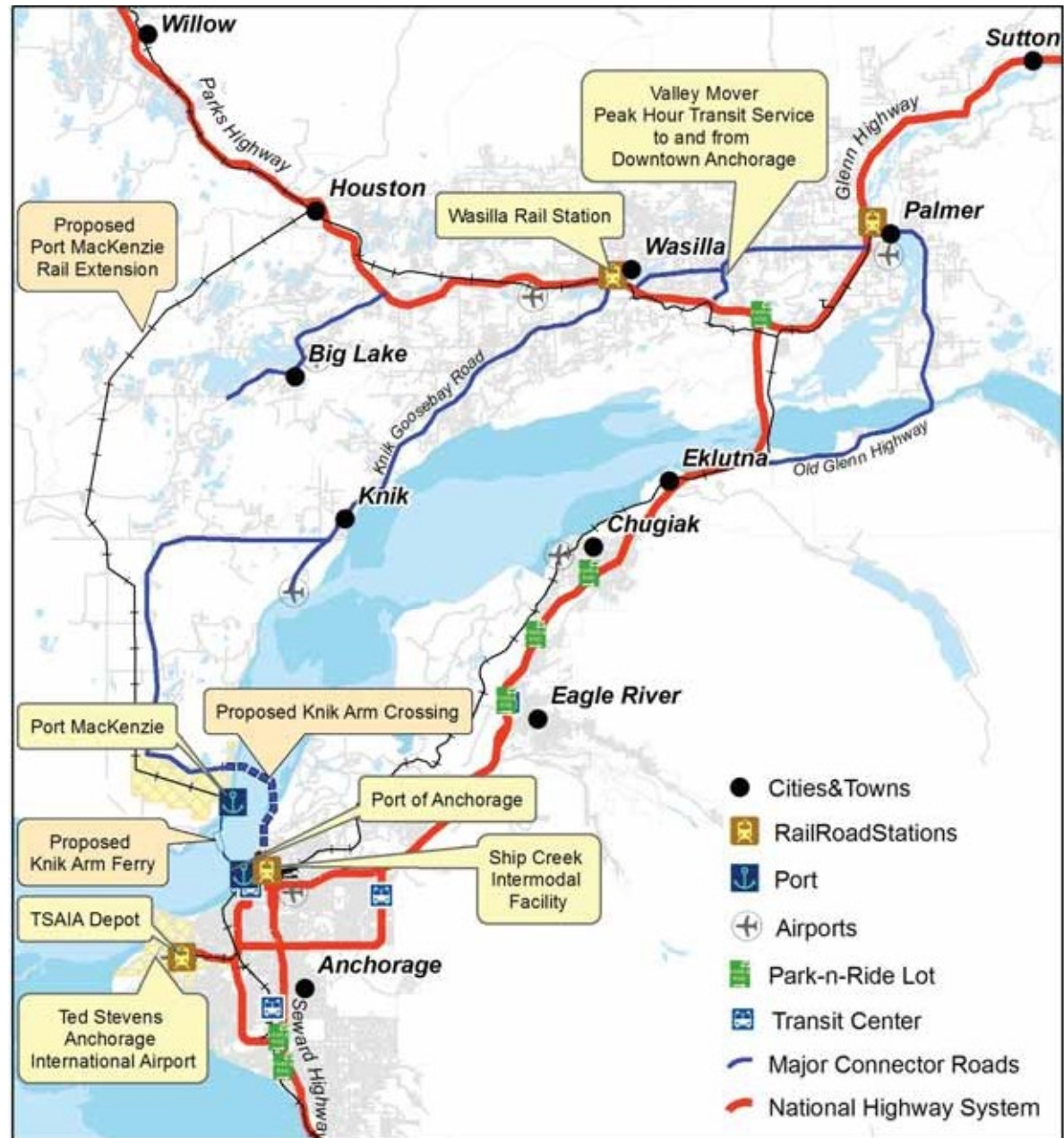
### Regional Connections

Railroad tracks and only two road connections link Anchorage by land to the north and south, serving freight distribution and travelers. Components of the NHS, the Glenn Highway and Seward Highway serve northbound and southbound travel, respectively. The Glenn Highway corridor is unusual in that no alternative or back-up route is available in case of crashes or overcrowding. According to 2035 travel demand projections, traffic during commute hours will exceed the existing corridor capacity. Figure 5-21 on page 5-24 shows the existing road capacity and projected traffic demand along the Glenn Highway corridor from Eklutna Village Road to Boniface Parkway. Traffic demand on the Glenn Highway corridor will exceed capacity in 2035 from South Birchwood Loop Road in Chugiak to Boniface Parkway in Anchorage.

Other key access roads connect the regional Glenn and Seward highways to both TSAIA and the Port of Anchorage.

Figure 5-46 shows existing and potential regional transportation hubs and corridors that connect the metropolitan area with other parts of Alaska and the remainder of the world.

Figure 5-46 Regional Transportation Hubs and Transportation Corridors





**KNIK ARM CROSSING**

The project will be phase-constructed. Phase I includes a minimum 2-lane roadway and bridge extending from Port Mackenzie District boundary in the Mat-Su Borough to the A-C couplet in Anchorage. This phase also includes a 6-lane cut-and-cover tunnel under Government Hill. The bridge substructure and the in-water and Anchorage side roadway subgrade must initially be built to accommodate the full future 4-lane roadway width. The expansion of the bridge and roadway from 2 lanes to 4 lanes within the Phase I construction limits will be the responsibility of the private developer, who has the option to construct these additional lanes at any time, provided they are in place at such time that traffic volumes warrant. Since the work is included in the initial contract, it is considered short term for the purposes of the MTP.

Phase II includes the 4-lane extension of the Ingra-Gambell couplet on a viaduct over Ship Creek to tie into the Government Hill tunnel. This phase is the responsibility of KABATA, and this portion of Phase II is considered a long term project in the MTP. Phase II also includes the 4-lane upgrade between Burma Road and the Port of Mackenzie District boundary in the Mat-Su Borough, which is outside the consideration of the MTP.

Upon completion of construction, it will automatically be classified NHS Intermodal Connector.

Chapter 7 provides project details, including illustrations of the general project location and preferred alignment.

**REGIONAL PUBLIC  
TRANSPORTATION SERVICES**

The Glenn Highway corridor links Anchorage with Chugiak-Eagle River and the Mat-Su Borough. The only regional public transportation service operating regularly between the Mat-Su Borough and Anchorage is the Valley Mover bus service. It offers six peak commuter round trips a day from the Mat-Su Borough on the Glenn Highway and serves park-and-ride locations.

Commuter transportation provided by bus, express bus, and rail between the Mat-Su Borough and the Anchorage Bowl is another potential travel option. As recommended public transportation improvements are implemented, they will provide an efficient network for commuter rail travelers to make connections that will enhance the viability of commuter rail.

The MTP endorses future studies of the feasibility and funding of a regional transit authority in cooperation with the Mat-Su Borough and Anchorage.

**COMMUTER RAIL SERVICES**

The Alaska Railroad mainline runs parallel to the Glenn Highway from Wasilla and other communities, providing the

prospect of a commuter rail option for travel into and out of Anchorage. Recent improvements in the mainline track have substantially reduced the travel time between the Mat-Su Borough and Anchorage. Depending on the number of stops, the trip between the City of Wasilla and Ship Creek near Downtown Anchorage could take anywhere between 55 and 68 minutes. The most recent feasibility study of commuter rail service in the South-central Alaska region (by Wilbur Smith Associates et al., 2005) estimated that a commuter rail service between the City of Wasilla and Ship Creek could attract between 700 and 1,100 passengers in 2012, increasing to between 900 and 1,600 passengers by 2020.

This projection assumes availability of a commuter service that consists of three trains per day in both the morning and afternoon commute period. Inclusion of service during non-peak hours is expected to increase the ridership by approximately 10 percent.

Although implementation of a commuter rail service is advocated by some, many steps would be required to make implementation feasible. Foremost is determination of funding responsibilities, mechanisms, and sources. (Like most commuter rail service in the United States, the service between the Mat-Su Borough and Anchorage would need to be subsidized.) In parallel with the funding steps, creation of an institutional structure and negotiation of management, operations,

and sponsorship agreements among the several affected parties is required. Other prerequisite activities include project development planning; engineering and environmental analyses; operations detailing; equipment procurement and customization; station and facilities development; service specifications; patronage, pricing, marketing, and revenue-projection refinements; arrangements to integrate and connect public transportation service; and related multi-government coordination.

### CONCLUSIONS AND APPROACHES FOR ENHANCING REGIONAL CONNECTIONS

Major issues related to regional transportation connections hinge on facilities that provide connections. The rapid growth in the Mat-Su Borough and Chugiak-Eagle River will put significant strain on the Glenn Highway in the absence of other actions. Enhancements to public transportation service through a BRT or commuter rail implementation could assist in addressing the forecast capacity deficiencies in the Glenn Highway corridor. BRT initiation would require development of funding resources and mechanisms, as well as many of the same development steps noted above for commuter rail service.

The solution to improving regional connections lies in greatly improved public transportation service, spot improvements to relieve traffic bottlenecks,

deployment of advanced technologies for transportation system management, and aggressive travel behavior incentives. Tightly coordinated strategies and programs can be packaged together to meet future travel demand. Because high investment stakes and substantial impacts or consequences are critical issues, the use of carefully, well-reasoned policies and strategies will be important during execution.

### Summary of 2035

**Transportation System Needs** The capital improvements needed to meet the 2035 travel demands within the metropolitan area are listed in Table 5-9 for roads, Table 5-10 for public transportation, and Table 5-11 for non-motorized transportation (pedestrian, bicycle, and trail). The projects in these tables are not listed in priority order. The sum of the capital costs for these improvements exceeds \$4 billion dollars (in 2010 dollars).

The analyses described in this chapter identify the needs for the transportation system. In subsequent chapters, the funding available for MTP project implementation is described (Chapter 6) and the recommendations are developed to balance the system needs with the available funding (Chapter 7).

Table 5-9 2035 Road Projects

| PROJECT NUMBER | PROJECT NAME                         | PROJECT LOCATION                          | BASE DOCUMENT OR SOURCE | PROJECT DESCRIPTION     |
|----------------|--------------------------------------|---|-------------------------|-------------------------|
| 101            | Seward Highway                       | Dimond Blvd to Dowling Rd                 | AB 2027 LRTP            | Reconstruction          |
| 102            | Dowling Rd Extension - Phase         | C St to Minnesota Dr                      | AB 2027 LRTP            | Add New Facility        |
| 103            | 100th Ave Extension                  | Minnesota Dr to C St                      | AB 2027 LRTP            | Add New Facility        |
| 104            | 36th Ave/Seward Hwy Interchange      | Tudor Rd to 33rd Ave                      | AB 2027 LRTP            | Add New Facility        |
| 105            | Glenn Hwy                            | Hiland Rd to Old Glenn Hwy (Artillery Rd) | AB 2027 LRTP            | Reconstruction          |
| 106            | Muldoon Rd Interchange               | Glenn Hwy at Muldoon Rd                   | AB 2027 LRTP            | Reconstruct Interchange |
| 107            | Seward Hwy                           | O'Malley Rd to Dimond Blvd                | AB 2027 LRTP            | Reconstruction          |
| 108            | 36th Ave Access Management           | Spenard Rd to Denali St                   | HS P/Get the Red Out    | Access Management       |
| 109            | Jewel Lake Rd                        | Dimond Blvd to International Airport Rd   | AB 2027 LRTP            | Reconstruction          |
| 110            | Arctic Blvd Rehabilitation           | 36th Ave to Tudor Rd                      | AB 2027 LRTP            | Rehabilitation          |
| 111            | Northern Lights Blvd                 | Lake Otis Parkway to Bragaw               | Get the Red Out         | Reconstruction          |
| 112            | Spenard Rd Rehabilitation            | Hillcrest Dr to Benson Blvd               | AB 2027 LRTP            | Rehabilitation          |
| 113            | O'Malley Rd                          | Seward Hwy to Hillside Dr                 | AB 2027 LRTP            | Rehabilitation          |
| 114            | Seward Hwy Improvements              | 33rd Ave to Chester Creek                 | AB 2027 LRTP            | Reconstruction          |
| 115            | Fireweed Ln Rehabilitation           | Spenard Rd to Seward Hwy                  | AB 2027 LRTP            | Rehabilitation          |
| 116            | Seward Hwy Pedestrian Overcrossing   | O'Malley Rd to Rabbit Creek Rd            | AB 2027 LRTP            | Construction            |
| 117            | Seward Hwy/92nd Ave Grade Separation | Homer Dr to Brayton Dr                    | AB 2027 LRTP            | Add New Facility        |
| 118            | Lake Otis Pkwy                       | Northern Lights Blvd to Debarr Rd         | AB 2027 LRTP            | Reconstruction          |

## 2035 Metropolitan Transportation Plan

Table 5-9 2035 Road Projects (Continued)

| PROJECT NUMBER | PROJECT NAME   | PROJECT LOCATION                      | BASE DOCUMENT OR SOURCE | PROJECT DESCRIPTION              |
|----------------|--|---------------------------------------|-------------------------|----------------------------------|
| 119            | Northern Lights Blvd   | Postmark Dr to Nathaniel Court        | AB 2027 LRTP            | Rehabilitation                   |
| 120            | DeArmoun Rd Reconstruction - Phase II                              | 140th Ave to Hillside Dr              | AB 2027 LRTP            | Reconstruction                   |
| 121            | Spenard Rd Rehabilitation - Benson Blvd to Minnesota Dr            | Benson Blvd to Minnesota Dr           | AB 2027 LRTP            | Rehabilitation                   |
| 122            | Eagle River Rd Rehabilitation - MP 5.3 to MP 12.6 (Eagle River)    | MP 5.3 to MP 12.6                     | C-ER 2027 LRTP          | Reconstruction                   |
| 123            | Eklutna River Bridge Rehabilitation/Replacement (Chugiak)          | Old Glenn Hwy                         | C-ER 2027 LRTP          | Rehabilitation                   |
| 124            | Abbott Rd  | Lake Otis Pkwy to Birch Rd            | AB 2027 LRTP            | Reconstruction                   |
| 125            | North Access to University-Medical District                        | Providence Dr to Northern Lights Blvd | AB 2027 LRTP            | Add New Facility                 |
| 126            | Glenn Hwy/Farm Ave Partial Interchange                             | Glenn Hwy at Farm Ave                 | ER CBD/ Base Plus       | Add New Facility                 |
| 127            | Old Glenn Hwy (Artillery Rd) northbound off-ramp to Eagle River Rd | Glenn Hwy to Eagle River Rd           | ER CBD/ Base Plus       | Add New Facility                 |
| 128            | Farm Ave Realignment at Old Glenn Hwy                              | Winter Park Pl to Old Glenn Hwy       | ER CBD/ Base Plus       | Reconstruction                   |
| 129            | Eagle River Rd Rehabilitation - MP 0.0 to MP 5.3                   | MP 0 to Upper Terrace St (MP 5.3)     | C-ER 2027 LRTP          | Rehabilitation                   |
| 130            | 92nd Ave/Academy Dr Extension                                      | Brayton Dr to Abbott Rd               | AB 2027 LRTP            | Add New Facility                 |
| 131            | Mountain Air Dr  | Rabbit Creek Rd to E 164th Ave        | AB 2027 LRTP            | Add New Facility                 |
| 132            | Northwood St Extension   | Strawberry Rd to Dimond Blvd          | AB 2027 LRTP            | Traffic Calming/Add New Facility |
| 133            | Business Blvd Extension  | Business Blvd to Eagle River Rd       | ER CBD/ Base Plus       | Add New Facility                 |
| 134            | Homestead Rd Improvements  | Oberg Rd to Voyles Blvd               | C-ER 2027 LRTP          | Add New Facility                 |



Table 5-9 2035 Road Projects (Continued)

| PROJECT NUMBER | PROJECT NAME   | PROJECT LOCATION   | BASE DOCUMENT OR SOURCE | PROJECT DESCRIPTION             |
|----------------|--|--|-------------------------|---------------------------------|
| 135            | Short-Term MTP Element Implementation Projects             | AMATS area   | AMATS/Get the Red Out   | Planning                        |
| 136            | 3rd-6th Ave Couplet/E St Conversion Recon Study            | L St to Ingra-Gambell/3rd to 4th Ave   | DCP/Base Plus           | Planning                        |
| 137            | Glenn Hwy Operations Analysis - Muldoon Rd to Eklutna      | Muldoon Rd to Eklutna  | Get the Red Out         | Reconstruction                  |
| 138            | Midtown Subarea Transportation Plan                        | Midtown Area   | Get the Red Out         | Planning                        |
| 139            | Seward Hwy/O'Malley Rd Interchange Study                   | Old Seward Hwy to Seward Hwy   | AB 2027 LRTP            | Planning                        |
| 140            | Hiland Rd Improvements Phase I                             | MP 2.2 to MP 3.4   | C-ER 2027 LRTP          | Reconstruction                  |
| 141            | Seward Hwy/Glenn Hwy Connection Phase III                  | Chester Creek to Airport Heights Dr  | AB 2027 LRTP            | Environmental Document          |
| 142            | Rabbit Creek Rd  | Seward Hwy to Golden View Dr   | AB 2027 LRTP            | Reconstruction                  |
| 143            | Knik Arm Crossing – Phase I                                | A-C St Couplet to Point MacKenzie-Burma Road intersection                        | KABATA                  | Add New Facility                |
| 201            | Seward Hwy/Glenn Hwy Connection                            | Chester Creek to Airport Heights Dr  | AB 2027 LRTP            | Reconstruction/Add New Facility |
| 202            | Huffman Rd Rehabilitation                                  | Pintail St to Birch Rd   | AB 2027 LRTP            | Rehabilitation                  |
| 203            | North Eagle River Interchange Capacity Modifications Study | Glenn Hwy at North Eagle River Access Rd   | Get the Red Out         | Planning                        |
| 204            | Glenn Hwy HOV Lane   | Old Glenn Hwy (Artillery Rd) interchange to Peters Creek interchange (Voyles Rd) | AB 2027 LRTP            | Add New Facility                |
| 205            | Glenn Hwy HOV Lane   | Boniface Pkwy to Old Glenn Hwy (Artillery Rd) Interchange                        | AB 2027 LRTP            | Add New Facility                |

## 2035 Metropolitan Transportation Plan

Table 5-9 2035 Road Projects (Continued)

| PROJECT NUMBER | PROJECT NAME  | PROJECT LOCATION   | BASE DOCUMENT OR SOURCE | PROJECT DESCRIPTION |
|----------------|---|--|-------------------------|---------------------|
| 206            | Davis St and Santa Maria Dr Realignment at Old Glenn Hwy    | Old Glenn Hwy - N Eagle River Loop Rd and North Eagle River Access | ER CBD/ Base Plus       | Reconstruction      |
| 207            | Eleonora St and S Juanita Loop Realignment at Old Glenn Hwy | Old Glenn Hwy - N Eagle River Loop Rd and North Eagle River Access | ER CBD/ Base Plus       | Reconstruction      |
| 208            | Hiland Rd Improvements Phase II                             | MP 1.0 to MP 2.2 and MP 3.4 to MP 8.3                              | C-ER 2027 LRTP          | Rehabilitation      |
| 209            | A-C St Couplet Restripe                                     | Tudor Rd to 9th Ave  | AB 2027 LRTP            | Restripe            |
| 210            | Birchwood Loop Rd and Birchwood Spur Rd Improvements        | Old Glenn Hwy to Birchwood Airport                                 | C-ER 2027 LRTP          | Reconstruction      |
| 211            | Seward Hwy/O'Malley Rd Interchange                          | Old Seward Hwy to Seward Hwy                                       | AB 2027 LRTP            | Add New Facility    |
| 212            | C St/Ocean Dock Rd Access Ramp                              | C St Viaduct to Ocean Dock Rd                                      | AB 2027 LRTP            | Reconstruction      |
| 213            | Ingra-Gambell Couplet Extension                             | 3rd Ave to Whitney Rd  | AB 2027 LRTP            | Add New Facility    |
| 214            | Glenn Hwy Frontage Rd                                       | Boniface Pkwy to Muldoon Rd  | Get the Red Out         | Add New Facility    |
| 215            | Eagle River CBD - Phase                                     | Downtown Eagle River & Residential Core                            | ER CBD                  | Planning            |
| 216            | Long-Term MTP Element Implementation Projects               | AMATS area   | AMATS/Get the Red Out   | Planning            |
| 217            | Knik Arm Crossing – Phase II                                | Ingra-Gambell Couplet Connection                                   | KABATA                  | New facility        |
| 301            | Tudor Rd Access Management                                  | Seward Hwy to Arctic Blvd  | AB 2027 LRTP            | Access Management   |
| 302            | Tudor Rd Access Management                                  | Seward Hwy to Patterson St   | AB 2027 LRTP            | Access Management   |
| 303            | Boniface Pkwy Access Management                             | Tudor Rd to Glenn Hwy  | AB 2027 LRTP            | Access Management   |
| 304            | Jewel Lake Rd/ nternational Airport Rd Grade Separation     | Jewel Lake Rd to Northwood St                                      | AB 2027 LRTP            | Grade Separation    |

Table 5-9 2035 Road Projects (Continued)

| PROJECT NUMBER | PROJECT NAME   | PROJECT LOCATION   | BASE DOCUMENT OR SOURCE | PROJECT DESCRIPTION |
|----------------|--|--|-------------------------|---------------------|
| 305            | Postmark Dr/ International Airport Rd Grade Separation | Postmark Dr to International Airport Rd                                    | AB 2027 LRTP            | Grade Separation    |
| 306            | Lake Otis Pkwy Extension                               | Debarr Rd to Glenn Hwy   | AB 2027 LRTP            | Add New Facility    |
| 307            | Elmore Rd Extension                                    | O'Malley Rd to Abbott Rd   | HDP/Base Plus           | Add New Facility    |
| 308            | South Birchwood Loop Rd Improvements                   | Old Glenn Hwy to Birchwood Loop Rd   | C-ER 2027 LRTP          | Rehabilitation      |
| 309            | Minnesota Dr Corridor/Tudor Rd Interchange             | International Airport Rd to Northern Lights Blvd/ Minnesota Dr at Tudor Rd | AB 2027 LRTP            | Add New Facility    |
| 310            | 84th Ave   | Hartzell Rd to Lake Otis Pkwy  | AB 2027 LRTP            | Reconstruction      |
| 311            | Seward Hwy   | Potter Weigh Station to Rabbit Creek Rd                                    | AB 2027 LRTP            | Reconstruction      |
| 312            | 92nd Ave Extension                                     | King St to Old Seward Hwy  | AB 2027 LRTP            | Add New Facility    |
| 313            | 92nd Ave Extension                                     | Minnesota Dr to King St  | AB 2027 LRTP            | Add New Facility    |
| 314            | Birch Rd   | Huffman Rd to O'Malley Rd  | AB 2027 LRTP            | Reconstruction      |
| 315            | Whitney Rd   | North C St to Post Rd  | AB 2027 LRTP            | Upgrade             |
| 316            | Minnesota Dr (Northbound)                              | 26th Ave to 15th Ave   | AB 2027 LRTP            | Rehabilitation      |
| 317            | Minnesota Dr Frontage Rd                               | Dimond Blvd to Raspberry Rd  | AB 2027 LRTP            | Add New Facility    |
| 318            | Huffman Rd Extension                                   | Birch Rd to Hillside Dr  | HDP/Base Plus           | Add New Facility    |
| 319            | Railroad Grade Separation - C St                       | C St   | AB 2027 LRTP            | Grade Separation    |
| 320            | Eklutna Lake Rd Rehabilitation                         | Old Glenn Hwy to Eklutna Lake  | C-ER 2027 LRTP          | Rehabilitation      |
| 321            | Knik Arm Ferry Service - Anchorage Terminal            | Ship Creek Area  | Modal Workshop          | Construction        |
| 322            | Seward Hwy/O'Malley Rd Interchange                     | Seward Hwy   | Get the Red Out         | Construction        |

# 2035 Metropolitan Transportation Plan

## Table 5-9 Notes

- AB = Anchorage Bowl
- CBD = Commercial Business District
- C-ER = Chugiak-Eagle River
- ER = Eagle River
- Get the Red Out = MTP team meeting to review model runs for solutions to address congestion
- HDP = Hillside District Plan
- HOV = high-occupancy vehicle
- HSIP = DOT&PF Highway Safety Improvement Program
- ITS = Intelligent Transportation System
- LRTP = long-range transportation plan
- MP = Milepost



Table 5-10 2035 Public Transportation Projects

| MTP | PROJECT NAME  | PROJECT DESCRIPTION   |
|-----|---|---|
| 801 | Replacement of existing bus fleet   | A total of 52 new bus purchases will be needed to replace the existing 52 bus fleet during the short-term of the MTP.   |
| 802 | Service Expansion – increase span of service Mon-Fri, & Sun; miscellaneous service improvements | No additional buses will be needed to increase span of service Monday-Friday & Sunday and holidays.   |
| 803 | Service Expansion – 30-minute headways on all routes  | An additional two buses will be needed to increase the frequency of service to 30 minutes on all routes. These buses will need to be replaced once during the life of the MTP.  |
| 804 | Service Expansion – 15-minute headways on Routes 3, 36, & 45                                    | An additional 12 buses will be needed to increase the frequency of service to 15 minutes on these three routes. These buses will need to be replaced once during the life of the MTP.   |
| 805 | New Service – South Anchorage-Hillside  | An additional two buses will be needed to provide a frequency of service of 30 minutes on this new route. No replacement buses will be needed. Possible park and ride to be developed in the Hillside area to supplement this service.  |
| 806 | AnchorR DES fleet replacement   | This project funds the replacement of the AnchorR DES fleet with a replacement cycle of 5 years. An additional 50 vehicles will be needed to replace the existing fleet.  |
| 807 | AnchorR DES fleet expansion   | This project funds the expansion of the AnchorR DES fleet. The AnchorR DES fleet is assumed to grow by 1 vehicle annually to keep up with demand.   |
| 808 | Share-a-ride (vanpool) fleet replacement  | This project funds the replacement of the vanpool vehicle fleet with a replacement life cycle of 5 years. It is assumed that the vanpool program doubles by 2031.   |
| 809 | Share-a-ride (vanpool) fleet expansion  | This project funds the expansion of the vanpool vehicle fleet to double its current fleet by 2031. At this point, it is expected that the market for vanpool will be saturated.   |
| 810 | Bus stop improvements   | This program funds the upgrade of bus stop sites to meet requirements of the Americans with Disabilities Act (ADA) and operational needs. Typical improvements include bus shelters, benches, trash receptacles, landscaping, grading, paving, utility relocations, lighting, pathways, and turnouts. |
| 811 | Transit centers and facilities  | This project supports an ongoing effort to provide major public transportation facilities at town centers and major destinations.   |
| 812 | TS/automated operating systems  | Staff and capital resources provide project oversight and capital for ITS for all modes of public transportation services.  |
| 813 | Fleet improvements/support equipment  | Typical projects include ticket reader and issue attachment; security systems; transit/signal improvements for headway enhancements; mechanical and other improvements for facilities; mobile display terminals; and vehicle communications and location systems.                                     |

## 2035 Metropolitan Transportation Plan

Table 5-10 2035 Public Transportation Projects (Continued)

| MTP | PROJECT NAME   | PROJECT DESCRIPTION  |
|-----|--|--|
| 814 | Management information systems   | Typical projects include geographic information system (G S) capabilities; upgrades to the automated maintenance, refueling, and inventory systems; a new computerized dispatch system; and upgrades to the scheduling/run-cutting process, customer information and telephone communications system; and desktop computers. |
| 815 | Support vehicles   | Typical purchases include pickup trucks, maintenance trucks with special equipment, supervisor vehicles, shift change vehicles, forklifts, sweepers, and snow removal equipment for bus access.  |
| 816 | Dimond Center ntermodal Facility   | Design and construction provide revisions to the existing Dimond Transit Center with improved pedestrian connections.  |
| 817 | Muldoon Transit Center relocation  | Design and construction provide a new Muldoon Transit Center near the Tikahtnu Commons development.  |
| 818 | Anchorage ride-sharing/transit marketing   | This project funds the operation of the MOA Share-a-Ride program.  |
| 819 | Transit warm storage expansion   | Design and construction provide expansion of the warm storage building for public transportation vehicles and vehicle maintenance facilities.  |
| 820 | Service Expansion – 15-minute headways on Routes 7, 9, & 15                        | An additional ten buses will be needed to increase the frequency of service to 15 minutes on these three routes. No replacement buses will be needed.  |
| 821 | Service Expansion – Mat-Su and Anchorage Express Bus Service                       | Express bus service between Mat-Su Valley and Anchorage will provide a 30 minute frequency of service during the morning and afternoon peak periods.   |
| 822 | New Services (Klatt Rd/ Southport, Abbott Rd/Elmore Rd & International Airport Rd) | An additional six buses will be needed to provide a 60 minute frequency of service on these three new routes. No replacement buses will be needed.   |
| 823 | Bus Rapid Transit – Downtown, Midtown, & University-Medical District core service  | The initial phase of Bus Rapid Transit (BRT) implementation will connect Downtown, Midtown, and UMED District and eight new buses will be needed. Characteristics of the BRT service will include frequent headways, well-spaced enhanced stops, and improved travel times.  |
| 824 | South Anchorage to Downtown Express Route  | The South Anchorage BRT Route will be preceded by an Express Bus Route that will connect the Huffman Town Center with Downtown Anchorage. Possible park and ride to be developed to supplement this route.   |
| 825 | New Services Chugiak-Eagle River Local Service - Routes 77 & 78                    | Restore local bus service for Chugiak-Eagle River to provide 30 minute frequency of service on these two routes. No additional buses will be needed.   |
| 826 | Bus Rapid Transit – full build-out   | The full Build-out bus rapid transit system will include segments from Peter's Creek to Downtown Anchorage and from South Anchorage to Downtown Anchorage that will be integrated into the initial core route.   |

Table 5-11 2035 Non-Motorized Transportation Projects

| PROJECT NUMBER | PROJECT NAME                             | PROJECT LOCATION                                       | PROJECT PURPOSE AND DESCRIPTION   |
|----------------|--|--|---|
| 501            | Campbell Trail                           | Lake Otis Pkwy undercrossing                           | Separated Campbell Creek Trail with connection across Lake Otis Blvd  |
| 502            | Coastal Trail at Fish Creek improvements | Fish Creek Estuary Improvements                        | Paving improvements and relocation of a fence that is a safety issue because it creates a blind corner where there have been reported bicycle-vehicle and pedestrian-vehicle crashes. (No right-of-way acquisition involved.) |
| 503            | Northern Lights Blvd                     | Path on south side, Captain Cook Estates Dr to Lois Dr | Construction of missing sidewalk  |
| 504            | Checkmate Dr                             | Tudor Rd to Emmanuel Ave                               | Construction of missing sidewalk  |
| 505            | Patterson St                             | Debarr Rd to Chester Creek                             | Construction of missing sidewalk  |
| 506            | 27th Ave                                 | Blueberry Rd to Minnesota Dr                           | Bicycle boulevard   |
| 507            | Debarr Rd                                | Orca St to Turpin St                                   | Separated pathway on north side of street   |
| 508            | Lake Otis Pkwy                           | Huffman Rd to Chester Creek                            | Study (Area B)—investigate the feasibility of constructing improved bicycle facility  |
| 509            | Lake Otis Pkwy                           | DeArmoun Rd to Debarr Rd                               | Bicycle lane (pending results of the Lake Otis Pkwy study, Project 508)   |
| 510            | Midtown east-west routes                 | Reconnaissance study                                   | Study (Area C)—investigate feasibility of constructing bicycle facility through Midtown   |
| 511            | Muldoon Rd (reconnaissance study)        | Northern Lights Blvd to Glenn Hwy                      | Study (Area D)—investigate feasibility of constructing bicycle facility along Muldoon Rd  |
| 512            | Debarr Rd                                | Boniface Pkwy to Muldoon Rd                            | Upgrade existing sidewalk on south side of street   |
| 513            | 10th Ave                                 | P St to Medfra St                                      | Bicycle boulevard   |
| 514            | Arctic Blvd                              | Benson Blvd to Fireweed Ln                             | Bicycle lanes   |
| 515            | C St                                     | O'Malley Rd to 10th Ave                                | Bicycle lanes   |

## 2035 Metropolitan Transportation Plan

Table 5-11 2035 Non-Motorized Transportation Projects (Continued)

| PROJECT NUMBER | PROJECT NAME              | PROJECT LOCATION                                       | PROJECT PURPOSE AND DESCRIPTION   |
|----------------|---------------------------|--|---|
| 516            | Campbell Trail lighting   | Victor Rd to Seward Hwy                                | Installation of lighting along Campbell Creek Trail                     |
| 517            | Coastal Trail             | Connection to Ship Creek Trail                         | Separated pathway linking Coastal Trail with Ship Creek Trail           |
| 518            | Dimond Blvd at Victor Rd  | Reconnaissance study                                   | Study (Area G)—investigate feasibility of improving pedestrian crossing |
| 519            | Elmore Rd                 | Doctor Martin Luther King Junior Ave to Tudor Rd       | Bicycle lanes   |
| 520            | Lake Otis Pkwy            | Abbott Rd to DeArmoun Rd                               | Upgrade sweeps at intersection of separated pathway and intersections   |
| 521            | Mountain View Dr          | Pine St to Lane St                                     | Upgrade of existing separated trail                                     |
| 522            | Old Seward Hwy            | DeArmoun Rd to Seward Hwy                              | Separated pathway   |
| 523            | Glenn Hwy Trail           | S Artillery Rd to Brooks Loop                          | Construction of missing link in Glenn Hwy separated pathway             |
| 524            | Arctic Blvd Bicycle lanes | Fireweed Ln to 10th Ave                                | Bicycle lane striping and signage                                       |
| 525            | Duben Ave                 | to Muldoon Elementary School                           | Construction of missing sidewalk, crossing                              |
| 526            | Northern Lights Blvd      | Seward Hwy to Minnesota Dr                             | Sidewalk separation, upgrade  |
| 527            | 32nd Ave                  | Lois Dr to Minnesota Dr                                | Construction of missing sidewalk  |
| 528            | Coronado Rd               | Old Glenn to Echo St to North Eagle River Loop Rd      | Sidewalk, lighting  |
| 529            | Muldoon Rd                | Boundary Ave to Bartlett High School, North Muldoon Rd | Construction of missing sidewalk  |
| 530            | East High                 | Northeast entry, 20th Ave & Bragaw St                  | Walkway or stairway needed to link Bragaw St with school entrance       |



Table 5-11 2035 Non-Motorized Transportation Projects (Continued)

| PROJECT NUMBER | PROJECT NAME                         | PROJECT LOCATION                                      | PROJECT PURPOSE AND DESCRIPTION  |
|----------------|--------------------------------------|---|--|
| 531            | A St                                 | Fireweed Ln north to 13th Ave                         | Construction of missing sidewalk   |
| 532            | Business Blvd at Carrs to Regency Dr |   | Construction of missing link walkway behind Carrs Store                          |
| 533            | Huffman Town Center walkways         | Daryl Ave, Old Seward Hwy, from Post Office, Klatt Rd | Construction of missing sidewalk   |
| 534            | Industry Way                         | Entire length   | Construction of missing sidewalk   |
| 535            | Huffman Park Dr                      | Entire Length   | Construction of missing sidewalk   |
| 536            | 88th Ave                             | Jewel Lake Rd to Northwood St                         | Bicycle lanes  |
| 537            | Benson Blvd/<br>Northern Lights Blvd | Arlington Dr to LaTouche St                           | Bicycle lane (pending results of the Midtown east-west route study, Project 510) |
| 538            | Chester Creek Trail                  | Goose Lake to Westchester Lagoon widening             | Expand existing separate greenbelt trail (12 feet wide)                          |
| 539            | G St                                 | 3rd Ave to 10th Ave                                   | Shared-road bicycle facility   |
| 540            | Maplewood Dr Trail Connection        | Sitka Park to Maplewood Dr                            | Separated pathway  |
| 541            | Ingra-Gambell Couplet                | Reconnaissance study                                  | Study (Area F)—investigate pedestrian safety study                               |
| 542            | Old Seward Hwy                       | Rabbit Creek Rd to Potter Valley Rd                   | Paved shoulder bikeway   |
| 543            | O'Malley Rd                          | Old Seward Hwy to C St                                | Separated pathway (under railroad)   |
| 544            | Wisconsin St                         | Spenard Rd to Northern Lights Blvd                    | Bicycle lanes  |
| 545            | 27th Ave                             | Seward Hwy to Minnesota Dr                            | Crossing, sidewalk upgrade   |
| 546            | 20th Ave                             | Bragaw St to Tikishla Park                            | Construction of missing sidewalk   |
| 547            | McCarrey St                          | west side Chena Ave north to bus stop                 | Construction of missing sidewalk   |

## 2035 Metropolitan Transportation Plan

Table 5-11 2035 Non-Motorized Transportation Projects (Continued)

| PROJECT NUMBER | PROJECT NAME           | PROJECT LOCATION                               | PROJECT PURPOSE AND DESCRIPTION                                 |
|----------------|------------------------|--|---|
| 548            | Town Center walkways   | Old Glenn Hwy and Business Blvd connections    | Construction of missing link walkway                            |
| 549            | Abbott Rd              | Academy Dr to Lake Otis Pkwy                   | Bicycle lanes   |
| 550            | Baxter Rd              | Tudor Rd to 21st Ave at Cheney Lake            | Bicycle lanes   |
| 551            | Baxter Rd/Beaver Place | Cheney Lake to Debarr Rd                       | Shared-road bicycle facility                                    |
| 552            | Coastal Trail          | Westchester Lagoon to Earthquake Park widening | Separated pathway   |
| 553            | Elmore Rd              | 101st Ave to Lilleston St                      | Separated pathway   |
| 554            | Elmore Rd              | DeArmoun Rd to O'Malley Rd                     | Bicycle lanes   |
| 555            | Hillside Dr            | Clark's Rd to Abbott Rd                        | Paved shoulder bikeway  |
| 556            | Huffman Rd             | Pintail St to Elmore Rd                        | Bicycle lanes   |
| 557            | Lore Rd                | Lake Otis Pkwy to Elmore Rd                    | Shared-road bicycle facility and separated pathway to Elmore Rd |
| 558            | Lore Rd                | Seward Hwy to Lake Otis Pkwy                   | Bicycle lanes   |
| 559            | Pine St/McCarrey St    | Klondike Ave to Mountain View Dr               | Shared-road bicycle facility                                    |
| 560            | Northern Lights Blvd   | Maplewood St to Lake Otis Pkwy                 | Upgrade separated pathway on south side of the street           |
| 561            | Peterkin Ave           | Bunn St to McPhee St                           | Bicycle boulevard   |
| 562            | Pine St                | Debarr Rd to Klondike Ave                      | Bicycle lanes   |
| 563            | Rabbit Creek Rd        | Evergreen Ridge St to Clark's Rd               | Paved shoulder bikeway  |
| 564            | Raspberry Rd           | Kincaid Park entrance to Minnesota Dr          | Bicycle lanes   |

Table 5-11 2035 Non-Motorized Transportation Projects (Continued)

| PROJECT NUMBER | PROJECT NAME                         | PROJECT LOCATION                                    | PROJECT PURPOSE AND DESCRIPTION   |
|----------------|--------------------------------------|---|---|
| 565            | Seward Hwy                           | Tudor Rd to 36th Ave                                | Separated pathway   |
| 566            | Tudor Rd                             | Campbell Airstrip Rd to Pioneer Dr                  | Separated pathway   |
| 567            | Lake Hill Dr                         | Old Glenn Hwy to Mirror Lake Middle School          | Paved shoulder bikeway  |
| 568            | Reka Dr                              | Bragaw St to Pine St                                | Construction of missing sidewalk  |
| 569            | Old Glenn Hwy, Monte Rd, Brooks Loop |   | Sidewalk, crossing  |
| 570            | Duben Ave                            | Muldoon Rd to Oklahoma St                           | Construction of missing sidewalk  |
| 571            | Molanary Dr                          | 86th Ave to 88th Ave                                | Construction of missing sidewalk  |
| 572            | Valley St                            | Muldoon Rd to 10th Ave                              | Construction of missing link walkway  |
| 573            | Boniface Pkwy                        | Glenn Hwy south to Northern Lights Blvd (west side) | Construction of missing sidewalk  |
| 574            | Northern Lights Blvd                 | Wesleyan Dr to Muldoon Rd upgrades                  | Separated pathway   |
| 575            | Northwood St                         | 88th Ave to Raspberry Rd                            | Bicycle lanes   |
| 576            | Fairview Pedestrian Safety Study     | Fairview Community Council Boundary                 | Investigate pedestrian safety improvement needs within the Ingra-Gambell streets couplet corridor |
| 601            | 32nd Ave extension                   | North Star St to Arctic Blvd                        | Construction of missing pathway   |
| 602            | Tudor Rd                             | Elmore Rd to Minnesota Dr                           | Upgrade separated pathway   |
| 603            | 76th Ave                             | Alaska Railroad to Seward Hwy                       | Bicycle lanes   |
| 604            | 76th Ave                             | Alaska Railroad to Taku Lake Park                   | Shared-road bicycle facility  |
| 605            | Abbott Rd                            | Birch Rd to Hillside Dr                             | Paved shoulder bikeway  |
| 606            | DeArmoun Rd                          | Seward Hwy to 140th Ave                             | Bicycle lanes   |

## 2035 Metropolitan Transportation Plan

Table 5-11 2035 Non-Motorized Transportation Projects (Continued)

| PROJECT NUMBER | PROJECT NAME                                     | PROJECT LOCATION                      | PROJECT PURPOSE AND DESCRIPTION      |
|----------------|--|---------------------------------------|--------------------------------------|
| 607            | Dimond Blvd                                      | Sand Lake Rd to Jewel Lake Rd         | Bicycle lanes                        |
| 608            | Elmore Rd  | 101st Ave to Lilleston St             | Bicycle lanes                        |
| 609            | Old Seward Hwy                                   | Rabbit Creek Rd to Huffman Rd         | Paved shoulder bikeway               |
| 610            | Turnagain Pkwy                                   | Northern Lights Blvd to Iliamna Ave   | Shared-road bicycle facility         |
| 611            | Farm Ave   | Old Glenn Hwy to Breckenridge Dr      | Shared-road bicycle facility         |
| 612            | Neighborhood northeast of Arctic Blvd & 32nd Ave |                                       | Construction of missing sidewalks    |
| 613            | West 36th Ave                                    | Minnesota Dr to Fish Creek            | Construction of missing sidewalks    |
| 614            | Crescent Cir at East 37th Ave                    |                                       | Construction of missing link walkway |
| 615            | A St   | west side, Fireweed Ln to Benson Blvd | Construction of missing sidewalk     |
| 616            | A St   | west side, Benson Blvd to 36th Ave    | Construction of missing sidewalk     |
| 617            | Lois Dr  | Northern Lights Blvd & 36th Ave       | Construction of missing sidewalk     |
| 618            | Spirit Dr  | Piper St to Providence Dr             | Construction of missing sidewalk     |
| 619            | Johns Rd   | High View Dr to Klatt Rd              | Construction of missing sidewalk     |
| 620            | 4th Ave  | Bunnell St to Boniface Pkwy           | Construction of missing sidewalk     |
| 621            | Potter Dr  | Arctic Blvd to Dowling Rd             | Construction of missing link walkway |
| 622            | Debarr Rd  | Muldoon Rd east to Cross Pointe Loop  | Construction of missing sidewalk     |
| 623            | Klatt Rd   | west of Puma St                       | Shared-road bicycle facility         |



Table 5-11 2035 Non-Motorized Transportation Projects(Continued)

| PROJECT NUMBER | PROJECT NAME                    | PROJECT LOCATION                           | PROJECT PURPOSE AND DESCRIPTION                |
|----------------|---------------------------------|--|--|
| 624            | Tudor Rd                        | Minnesota Dr to Old Seward Hwy             | Paved shoulder bikeway                         |
| 625            | Mirror Lake to Old Glenn Hwy    |  | Separated pathway                              |
| 626            | North Eagle River Access Rd     | Old Glenn Hwy to Powder Ridge Dr           | Bicycle lanes                                  |
| 627            | Old Glenn Hwy                   | Voyles Rd to end                           | Paved shoulder bikeway                         |
| 628            | West Parkview Terrace Loop      |  | Shared-road bicycle facility                   |
| 629            | Wilson St                       | 40th Ave to Tudor Rd                       | Construction of missing sidewalk               |
| 630            | Petersburg St                   | 56th Ave to 57th Ave                       | Construction of missing link walkway, lighting |
| 631            | Ship Creek Trail                | Glenn Hwy to Tyson School                  | Separated pathway                              |
| 632            | Glenn Hwy Trail                 | Birchwood Loop Rd to Eklutna               | Separated pathway                              |
| 633            | Elmore Path Extension           | Rabbit Creek Rd to DeArmoun Rd             | Separated pathway                              |
| 634            | 6th Ave & 7th Ave at A St       | to Museum                                  | Crossing improvements                          |
| 701            | Eagle River Greenbelt Trail     | Glenn Highway to Eagle River Nature Center | Separated pathway                              |
| 702            | Fire Creek                      | Glenn Hwy through Tract A Powder Reserve   | Separated pathway                              |
| 703            | Lake Otis Pkwy                  | 68th Ave to Abbott Rd                      | Sidewalk upgrade                               |
| 704            | 3rd Ave                         | Post Rd to E St                            | Paved shoulder bikeway                         |
| 705            | 3rd Ave                         | A St to Hyder St                           | Separated pathway                              |
| 706            | Glenn Hwy Trail                 | Eklutna to Mat-Su Borough                  | Separated pathway                              |
| 707            | Coastal Trail – south extension | Kincaid Park to Jodhpur St                 | Separated pathway in greenbelt                 |
| 708            | Coastal Trail – south extension | Jodhpur St to Potter Marsh                 | Separated pathway in greenbelt                 |



# Chapter



## FINANCIAL PLAN

This chapter discusses the financial plan for the 2035 MTP. Federal legislation requires that the MTP be “financially constrained”; in other words, the cost of implementing and maintaining transportation improvements should be within a funding amount that can reasonably be expected to be available during the life of the plan.

Federal regulations establish the requirements for the financial plan in Title 23, Section 450.322(f)(10), of the Code of Federal Regulations. To summarize, the regulations (effective December 2007) state that the financial plan should include the following:

- Estimates of costs and revenue sources needed to operate and maintain federal-aid highways and public transportation
- Estimates of funds that will be available to support the MTP implementation and that are agreed upon by the MPO, public transportation operator(s), and the state
- Recommendations on any additional financing strategies to fund projects and programs included in the MTP
- Revenue and cost estimates that use an inflation rate to reflect “year of expenditure dollars” and that have been developed cooperatively by the MPO, state, and public transportation operator

Funding to implement the MTP recommendations comes from federal, state, and local sources. This financial element of the MTP includes estimates of costs that would be required to implement the MTP as well as estimates of existing and contemplated sources of funds available to pay for these improvements.

2035 Metropolitan Transportation Plan

Different sets of revenue assumptions apply for capital, for operations and maintenance (O&M), and for each mode—non-motorized (pedestrian, bicycle, and trail facilities); public transportation; and roads. An additional set of revenue assumptions was prepared for the Knik Arm Crossing, which is proposed to be implemented through a public-private partnership.

The costs to design, construct, operate, and maintain all elements of the recommended MTP through 2035 are more than \$5.3 billion.

IDENTIFYING PROJECT CATEGORIES—SHORT TERM, LONG TERM, AND ILLUSTRATIVE

The improvements in the MTP are broken into short- and long-term ranges. Short-term improvements are those that are expected to be fully funded and in place by 2023. Long-term projects are those

that are expected to be fully funded and in place by 2035.

Projects that are not expected to be funded by 2035, because of fiscal constraint, are listed as illustrative, meaning that they could be included in the adopted transportation plan if additional resources beyond those identified in the financial plan become available.

Screening criteria were used to identify projects that should be included in the short- and long-term lists and projects that should be identified as illustrative. **Table 6-1** identifies how the projects were sorted into the three categories. The screening criteria for each mode are provided in Chapter 7.

Balancing Costs and Revenues

Cost Assumptions

The impacts of inflation in determining revenue and costs were considered in the development of the financial plan. The cost estimates for the roads and pedestrian, bicycle, and trail capital projects

were calculated starting with a base year (2010) estimate provided by the DOT&PF or MOA. Projects included in recently adopted plans that contained cost estimates were inflated to the base year. A “year of expenditure” inflator of 4 percent was applied to the base year through 2023. The 4 percent year-of-expenditure inflator is based on general guidance of the Federal Highway Administration (FHWA). For the remainder of the plan (2024–2035), an inflator of 3.5 percent was applied. This inflator is used to reflect the fluctuation over time in construction costs. Cost estimates for the public transportation capital projects were provided by the MOA Public Transportation Department starting with a base year of 2011.

A year-of-expenditure inflator of 2.1 percent was applied to the base year through the balance of the plan. The 2.1 percent inflator is based on national trends. Historically, nationwide, inflation rates for public transportation capital projects have grown about 15 percent less than the consumer price index (CPI)

Table 6-1 Recommended Projects by Category

| PROJECT MODE          | PROJECT CATEGORY                         |                        |                            |
|-----------------------|--|------------------------|----------------------------|
|                       | SHORT TERM, 2011–2023                    | LONG TERM, 2024–2035   | ILLUSTRATIVE (BEYOND 2035) |
| Roadway               | 42 Projects (\$1,185.2M)                 | 18 Projects (\$916.4M) | 22 Projects (\$740.1M)     |
| Public Transportation | 25 short & long term projects (\$183.2M) |                        | 1 Project (\$22M)          |
| Non-motorized         | 76 Projects (\$61.3M)                    | 34 Projects (\$37.9M)  | 8 projects (\$77.1M)       |

Note: Project costs are shown in 2010 dollars and have not been inflated.



of a region. For the Anchorage area, the calculated inflation rate is 2.1 percent.

All tables in this chapter reflect planning-level cost estimates for use in demonstrating funding constraints, according to FHWA guidance. All funding is subject to federal, state, and local appropriation.

The financial plan does not establish the specific year in which each project will be constructed. Rather, it tallies the total capital cost for all projects in 2010 dollars, then applies the inflation rate of 4 percent to identify the program costs in 2011 dollars. The total capital cost is then reduced from that year's projected revenue, and the balance is then increased by the inflator and carried over to the next year. An example of the method for calculating the annual inflation factor used in the financial analysis is shown in **Table 6-2**.

This methodology was applied to each mode. By the year 2035, the cost of the recommended improvements must bal-

ance with the projected revenues to meet the federal requirements for a fiscally constrained MTP.

### Revenue Assumptions

Based on economic uncertainties and an expected decrease in federal funds, AMATS used a conservative approach to estimate revenues that can reasonably be expected to be available for transportation from federal, state and local funds. All revenue assumptions and projections were derived through a collaboration with and consent of state, public transportation, local, and federal partners. The AMATS Technical Advisory Committee and Policy Committee approved a revenue growth scenario that blended low- and moderate-grow rates for each identified funding source.

To determine the inflator for the revenue projections, the yearly average of the Anchorage area CPI was determined. Between 1983 and 2010, the average an-

nual change in the Anchorage area CPI was 2.5 percent. All revenues for capital projects and O&M were inflated at 2.5 percent annually. It is important to note, that depending on the revenue source, the inflator was applied at different years.

Projected revenue from identifiable sources for all capital projects totals \$3.8 billion in 2035. See **Table 6-3** and **Table 6-4** for the short-term and long-term revenue sources, respectively. Although revenues appear adequate to operate and maintain the system through 2035, a funding shortfall of about \$2.1 billion is projected in 2035 for construction of all capital improvements, including the list of recommended short-term, long-term, and illustrative projects. To ensure the MTP meets the financially constrained requirement, projects were moved into the illustrative category.

A reduction in federal funds is anticipated. The current trend in federal gas tax income is flat to negative. In the short

Table 6-2 Example Calculations for the Cost of Recommended Short-Term Road Projects, 2011–2035

| 2010 SHORT TERM                   |                       |       |       |       |       |      |
|-----------------------------------|-----------------------|-------|-------|-------|-------|------|
| 2011-2035 ALL ROAD PROJECTS       | SOURCE                | TOTAL | 2011  | 2012  | 2013  | 2014 |
| Total Project Costs               | Total Project Cost    | 1,084 | 1,128 | 1,063 | 1,015 | 978  |
| Less: Year's Spending             | 2010-2035 Annual Rev. |       | -105  | -88   | -74   | -120 |
| Projects Deferred to Future Years |                       |       | 1,023 | 976   | 941   | 858  |
| Inflation                         |                       |       | +4%   | +4%   | +4%   | +4%  |
| Deferred Projects                 |                       |       | 1,063 | 1,015 | 978   | 893  |

## 2035 Metropolitan Transportation Plan

Table 6-3 Total Revenue Forecast – Short Term (2011-2023)

| REVENUE SOURCES  | REVENUE IN MILLIONS \$ |              |             |             |              |             |              |              |              |              |              |              |              |              |
|--|------------------------|--------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|  | NOTES                  | 2011         | 2012        | 2013        | 2014         | 2015        | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | 2023         |
| MOA Road Capital (road bonds to MTP projects)                        | 1                      | 2.0          | 3.2         | 3.4         | 5.2          | 5.2         | 5.8          | 4.1          | 4.2          | 4.3          | 4.4          | 4.5          | 4.6          | 4.7          |
| AK Legislative Capital Program (not including State Bonds) – NHS     | 2                      | 2.5          | 16.8        | 17.2        | 17.7         | 18.1        | 18.5         | 19.0         | 19.5         | 20.0         | 20.5         | 21.0         | 21.5         | 22.0         |
| AK Legislative Capital Program (not including State Bonds) - Non-NHS | 2                      | 0.0          | 30.0        | 30.7        | 31.5         | 32.3        | 33.1         | 33.9         | 34.7         | 35.6         | 36.5         | 37.4         | 38.3         | 39.3         |
| Federal Other  | 3                      | 0.0          | 0.0         | 0.0         | 5.0          | 5.0         | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          |
| FHWA NHS (Anchorage & Chugiak-Eagle River)                           | 4                      | 62.1         | 5.0         | 0.0         | 0.0          | 0.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         |
| FHWA Non-NHS (Anchorage & Chugiak-Eagle River)                       | 5                      | 21.6         | 11.9        | 11.9        | 12.8         | 12.8        | 12.8         | 12.8         | 12.8         | 12.8         | 12.8         | 12.8         | 12.8         | 12.8         |
| HSIP   | 6                      | 6.7          | 16.4        | 7.8         | 7.4          | 7.4         | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          |
| State Match to FHWA NHS & Non-NHS Total                              | 7                      | 9.0          | 3.3         | 2.0         | 2.5          | 2.5         | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          |
| Alaska Transportation Fund (ATF)                                     | 8                      | 0.0          | 0.0         | 0.0         | 0.0          | 0.0         | 4.9          | 5.1          | 5.4          | 5.7          | 6.0          | 6.3          | 6.6          | 6.9          |
| GO Bond  | 9                      | 0.0          | 0.0         | 0.0         | 36.8         | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 42.7         | 0.0          | 0.0          | 0.0          |
| ARRC Match to federal funds  | 10                     | 0.1          | 0.1         | 0.1         | 0.1          | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Railroad track, facilities and infrastructure                        | 11                     | 1.0          | 1.0         | 1.0         | 1.0          | 1.0         | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          |
| <b>Road Revenue Source Total</b>                                     |                        | <b>105.0</b> | <b>87.7</b> | <b>74.1</b> | <b>120.0</b> | <b>84.4</b> | <b>116.4</b> | <b>116.2</b> | <b>117.9</b> | <b>119.7</b> | <b>164.2</b> | <b>123.3</b> | <b>125.1</b> | <b>127.0</b> |

Table 6-3 Total Revenue Forecast – Short Term (2011-2023) (Continued)

| REVENUE SOURCES  | REVENUE IN MILLIONS \$ |              |              |             |              |             |              |              |              |              |              |              |              |              |
|--|------------------------|--------------|--------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|  | NOTES                  | 2011         | 2012         | 2013        | 2014         | 2015        | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | 2023         |
| TE Funds (10% of AMATS Allocation)                       | 19                     | 3.3          | 1.9          | 1.9         | 2.0          | 2.0         | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          |
| State Match to federal funds (TE)                        | 12                     | 0.2          | 0.1          | 0.1         | 0.1          | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Local Match to federal funds (TE)                        | 13                     | 0.2          | 0.1          | 0.1         | 0.1          | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| MOA Capital (bonds to bike/ped MTP projects)             | 14                     | 0.4          | 0.4          | 0.4         | 0.4          | 0.4         | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          |
| AK Legislative Capital Program - Non-Motorized           | 15                     | 2.7          | 2.7          | 2.7         | 2.8          | 2.8         | 2.9          | 3.0          | 3.1          | 3.1          | 3.2          | 3.3          | 3.4          | 3.5          |
| <b>Non-Motorized Transportation Revenue Source Total</b> |                        | <b>6.8</b>   | <b>5.2</b>   | <b>5.2</b>  | <b>5.4</b>   | <b>5.4</b>  | <b>5.5</b>   | <b>5.6</b>   | <b>5.7</b>   | <b>5.7</b>   | <b>5.8</b>   | <b>5.9</b>   | <b>6.0</b>   | <b>6.1</b>   |
| Federal Transit Administration Capital Funding           | 16                     | 2.1          | 10.0         | 3.1         | 3.1          | 3.1         | 3.1          | 3.1          | 3.1          | 3.1          | 3.1          | 3.1          | 3.1          | 4.1          |
| FTA Very Small Starts Program for BRT                    |                        | 0.0          | 0.0          | 0.0         | 0.0          | 0.0         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          |
| FTA 5311 for Vanpools                                    | 17                     | 0.1          | 0.1          | 0.1         | 0.1          | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| MOA Transit Capital                                      | 18                     | 0.4          | 1.4          | 0.6         | 0.6          | 0.6         | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.6          | 0.8          |
| CMAQ   | 19                     | 3.3          | 1.9          | 1.9         | 2.0          | 2.0         | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          | 2.0          |
| State Match to federal funds (CMAQ)                      | 20                     | 0.2          | 0.1          | 0.1         | 0.1          | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Local Match to federal funds (CMAQ)                      | 21                     | 0.2          | 0.1          | 0.1         | 0.1          | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| State Transit Match Assistance SB77                      | 22                     | 0.2          | 0.2          | 0.2         | 0.2          | 0.5         | 0.5          | 0.5          | 0.5          | 0.5          | 0.8          | 0.8          | 0.8          | 0.8          |
| AK Legislative Capital Program - Transit                 | 23                     | 0.0          | 0.0          | 0.0         | 0.0          | 1.7         | 0.0          | 0.0          | 0.0          | 0.0          | 1.9          | 0.0          | 0.0          | 0.0          |
| Alaska Mental Health Trust                               | 24                     | 0.3          | 0.3          | 0.3         | 0.3          | 0.3         | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          | 0.3          |
| <b>Public Transportation Revenue Source Total</b>        |                        | <b>6.8</b>   | <b>14.1</b>  | <b>6.4</b>  | <b>6.5</b>   | <b>8.5</b>  | <b>6.8</b>   | <b>6.8</b>   | <b>6.8</b>   | <b>6.8</b>   | <b>9.0</b>   | <b>7.1</b>   | <b>7.1</b>   | <b>8.3</b>   |
| <b>Estimated Total Sources of Funding</b>                |                        | <b>118.6</b> | <b>107.0</b> | <b>85.7</b> | <b>131.9</b> | <b>98.3</b> | <b>128.7</b> | <b>128.5</b> | <b>130.4</b> | <b>132.2</b> | <b>179.0</b> | <b>136.3</b> | <b>138.2</b> | <b>141.4</b> |

## 2035 Metropolitan Transportation Plan

Table 6-4 Total Revenues Forecast - Long Term (2024-2035)

| REVENUE SOURCES  | REVENUE IN MILLIONS \$ |              |              |              |              |              |              |              |              |              |              |              |              |                        |
|--|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------|
|  | NOTES                  | 2024         | 2025         | 2026         | 2027         | 2028         | 2029         | 2030         | 2031         | 2032         | 2033         | 2034         | 2035         | TOTAL<br>2011-<br>2035 |
| MOA Road Capital (road bonds to MTP projects)                        | 1                      | 4.9          | 5.0          | 5.1          | 5.2          | 5.4          | 5.5          | 5.6          | 5.8          | 5.9          | 6.1          | 6.2          | 6.4          | 122.7                  |
| AK Legislative Capital Program (not including State Bonds)-NHS       | 2                      | 22.6         | 23.2         | 23.7         | 24.3         | 24.9         | 25.6         | 26.2         | 26.9         | 27.5         | 28.2         | 28.9         | 29.6         | 545.9                  |
| AK Legislative Capital Program (not including State Bonds) - Non-NHS | 2                      | 40.3         | 41.3         | 42.3         | 43.4         | 44.5         | 45.6         | 46.7         | 47.9         | 49.1         | 50.3         | 51.6         | 52.9         | 969.2                  |
| Federal Other  | 3                      | 5.1          | 5.3          | 5.4          | 5.5          | 5.7          | 5.8          | 5.9          | 6.1          | 6.2          | 6.4          | 6.6          | 6.7          | 120.7                  |
| FHWA NHS (Anchorage & Chugiak-Eagle River)                           | 4                      | 23.6         | 24.2         | 24.8         | 25.4         | 26.0         | 26.7         | 27.3         | 28.0         | 28.7         | 29.4         | 30.2         | 30.9         | 576.3                  |
| FHWA Non-NHS (Anchorage & Chugiak-Eagle River)                       | 5                      | 13.3         | 13.5         | 13.9         | 14.2         | 14.6         | 14.9         | 15.2         | 15.7         | 16.0         | 16.5         | 16.9         | 17.2         | 355.3                  |
| HSIP   | 6                      | 7.6          | 7.8          | 8.0          | 8.2          | 8.4          | 8.6          | 8.8          | 9.0          | 9.2          | 9.5          | 9.7          | 10.0         | 209.7                  |
| State Match to FHWA NHS & Non-NHS Total                              | 7                      | 4.9          | 5.0          | 5.2          | 5.3          | 5.4          | 5.6          | 5.7          | 5.8          | 6.0          | 6.1          | 6.3          | 6.4          | 125.4                  |
| Alaska Transportation Fund (ATF)                                     | 8                      | 7.2          | 7.6          | 8.0          | 8.4          | 8.8          | 9.2          | 9.7          | 10.2         | 10.7         | 11.2         | 11.8         | 12.4         | 162.1                  |
| GO Bond  | 9                      | 0.0          | 0.0          | 49.5         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 57.4         | 0.0          | 0.0          | 0.0          | 186.4                  |
| ARRC Match to federal funds  | 10                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.5                    |
| Railroad track, facilities and infrastructure                        | 11                     | 1.0          | 1.1          | 1.1          | 1.1          | 1.1          | 1.2          | 1.2          | 1.2          | 1.2          | 1.3          | 1.3          | 1.3          | 27.1                   |
| <b>Road Revenue Source Total</b>                                     |                        | <b>130.6</b> | <b>134.1</b> | <b>187.1</b> | <b>141.1</b> | <b>144.9</b> | <b>148.8</b> | <b>152.4</b> | <b>156.7</b> | <b>218.0</b> | <b>165.1</b> | <b>169.6</b> | <b>173.9</b> | <b>3,403.2</b>         |



Table 6-4 Total Revenues Forecast - Long Term (2024-2035) (Continued)

| REVENUE SOURCES  | REVENUE IN MILLIONS \$ |              |              |              |              |              |              |              |              |              |              |              |              |                        |
|--|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------|
|  | NOTES                  | 2024         | 2025         | 2026         | 2027         | 2028         | 2029         | 2030         | 2031         | 2032         | 2033         | 2034         | 2035         | TOTAL<br>2011-<br>2035 |
| TE Funds (10% of AMATS Allocation)                       | 19                     | 2.0          | 2.1          | 2.1          | 2.2          | 2.2          | 2.3          | 2.4          | 2.4          | 2.5          | 2.5          | 2.6          | 2.7          | 55.1                   |
| State Match to federal funds (TE)                        | 12                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.6                    |
| Local Match to federal funds (TE)                        | 13                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.6                    |
| MOA Capital (bonds to bike/ped MTP projects)             | 14                     | 0.4          | 0.4          | 0.4          | 0.4          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 0.5          | 10.8                   |
| AK Legislative Capital Program - Non-Motorized           | 15                     | 3.5          | 3.6          | 3.7          | 3.8          | 3.9          | 4.0          | 4.1          | 4.2          | 4.3          | 4.4          | 4.5          | 4.6          | 87.8                   |
| <b>Non-Motorized Transportation Revenue Source Total</b> |                        | <b>6.1</b>   | <b>6.3</b>   | <b>6.4</b>   | <b>6.6</b>   | <b>6.8</b>   | <b>7.0</b>   | <b>7.2</b>   | <b>7.3</b>   | <b>7.5</b>   | <b>7.6</b>   | <b>7.8</b>   | <b>8.0</b>   | <b>158.9</b>           |
| Federal Transit Administration Capital Funding           | 16                     | 4.2          | 4.3          | 4.4          | 4.5          | 4.6          | 4.7          | 4.8          | 5.0          | 5.0          | 5.2          | 5.4          | 5.4          | 104.7                  |
| FTA Very Small Starts Program for BRT                    |                        | 0.0          | 0.0          | 11.1         | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 0.0          | 11.1                   |
| FTA 5311 for Vanpools                                    | 17                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.5                    |
| MOA Transit Capital                                      | 18                     | 0.9          | 0.9          | 3.1          | 0.9          | 0.9          | 1.0          | 1.0          | 1.0          | 1.0          | 1.1          | 1.1          | 1.1          | 22.6                   |
| CMAQ   | 19                     | 2.0          | 2.1          | 2.1          | 2.2          | 2.2          | 2.3          | 2.4          | 2.4          | 2.5          | 2.5          | 2.6          | 2.7          | 55.1                   |
| State Match to federal funds (CMAQ)                      | 20                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.6                    |
| Local Match to federal funds (CMAQ)                      | 21                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.6                    |
| State Transit Match Assistance SB77                      | 22                     | 0.8          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 1.3          | 20.1                   |
| AK Legislative Capital Program - Transit                 | 23                     | 0.0          | 2.1          | 0.0          | 0.0          | 0.0          | 0.0          | 2.4          | 0.0          | 0.0          | 0.0          | 0.0          | 2.7          | 10.8                   |
| Alaska Mental Health Trust                               | 24                     | 0.3          | 0.3          | 0.3          | 0.3          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 0.4          | 8.3                    |
| <b>Public Transportation Revenue Source Total</b>        |                        | <b>8.5</b>   | <b>11.0</b>  | <b>22.3</b>  | <b>9.2</b>   | <b>9.4</b>   | <b>9.7</b>   | <b>12.6</b>  | <b>10.4</b>  | <b>10.5</b>  | <b>10.8</b>  | <b>11.1</b>  | <b>13.9</b>  | <b>240.4</b>           |
| <b>Estimated Total Sources of Funding</b>                |                        | <b>145.2</b> | <b>151.4</b> | <b>215.8</b> | <b>156.9</b> | <b>161.1</b> | <b>165.5</b> | <b>172.2</b> | <b>174.4</b> | <b>236.0</b> | <b>183.5</b> | <b>188.5</b> | <b>195.8</b> | <b>3,802.4</b>         |

## 2035 Metropolitan Transportation Plan

**Table 6-3 and Table 6-4 Notes**

|         |  |          |  |  |  |
|---------|--|----------|--|--|--|
| Note 1) | Years 2011-2016 reflects Capital Improvement Program (CIP) Numbers for projects in the MTP and modified by the MOA. Year 2017 is the 2011-2016 CIP MTP Road average. CPI applied beginning in 2018   | Note 6)  | 2011 & 2012 reflects current AMATS TIP. 2013 reflects a 30% reduction from current TIP amount. 2014 is an average of 2005-2013. Inflation by CPI applied beginning in 2024   | projects, 2017 = 2011-2016 average of actual/proposed bonds to MTP projects and then increased annually by CPI |  |
| Note 2) | 2011 actual NHS/Non-NHS number. 2012 is a 6 year average of the MTP NHS/Non-NHS projects. CPI applied beginning in 2013  | Note 7)  | State required match of 9.03% of total Federal amounts on NHS, Non-NHS, HSIP, and Federal Other  | Note 15)   | 2005 - 2011 = State Legislative Capital Grants to the MOA for non-motorized projects; averaged and increased annually by CPI starting 2014   |
| Note 3) | Consists of \$5million discretionary funding programs that are awarded on a competitive basis. Includes various other programs from EPA, HUD, Health and Human Services, & others that may be proposed and funded in new authorization from 2014-2023. Inflation applied beginning in 2024   | Note 8)  | New Program Alaska Transportation Fund (ATF) created for Statewide improvements in 2015 (initial funding \$350M annually with an average 5% return on investment and 28% of that investment returns to the Anchorage area based on Historical AMATS allocation formula funding recommended by the TAC) | Note 16)   | FTA Formula funding to increase with reauthorization in 2013. Includes Section 5309 funding for C Street and Dimond Intermodal Facility and other grants. Inflation by CPI beginning in 2025 |
| Note 4) | Reflects 2010-2013 & Draft 2012-2015 STIP numbers and \$23 million annually beginning in 2016. CPI applied beginning in 2024   | Note 9)  | Based on history of GO bonds in 2002 and 2008. Assume state GO Bond every 6 years of total historical average (2014, 2020, 2026, 2032). Increased annually by CPI  | Note 17)   | FTA 5311 for vanpools are provided by the Matanuska-Susitna Borough. Inflated by CPI per year starting in 2024   |
| Note 5) | Reflects 2010-2013 & Draft 2012-2015 STIP Non-NHS Allocation from ADOT&PF's Community Transportation Program (CTP) + Trails and Recreational Access for Alaska (TRAAK) program and Congestion Mitigation and Air Quality (CMAQ) program. Reduced by 10% for Enhancements, 10% for CMAQ and 10% for Pavement Replacement each year based on current AMATS policy. CPI applied beginning in 2024 | Note 10) | Amount based on calculation of 9.03% of Federal funds to ARRC  | Note 18)   | Local match for FTA funds. 20% of FTA capital funding  |
|         |  | Note 11) | Railway/railroad infrastructure projects funded by combination of ARRC, FTA Sec 5307 & 5309, and FRA Federal funds. CPI applied beginning in 2018  | Note 19)   | 10% of AMATS allocation per current policy   |
|         |  | Note 12) | Assumes State Match of 50% of TE funds   | Note 20)   | Assumes State Match of 50% of CMAQ funds   |
|         |  | Note 13) | Assumes Local Match of 50% of TE funds   | Notes 21)  | Assumes Local Match of 50% of CMAQ funds   |
|         |  | Note 14) | Historical spending of MOA bonds. 2011-2016 = proposed CIP of MTP  | Note 22)   | SB 77 increases from \$1m per year every 5 years. MOA to receive 25% of total state amount   |
|         |  |          |  | Note 23)   | State Legislative Grants assist in fleet replacement   |
|         |  |          |  | Note 24)   | Inflation by CPI beginning in 2012.  |

term, it is not assumed that an increase in federal revenue will occur unless the public changes its driving habits or a different revenue source is identified. (Trends in fuel efficiency and the corporate average fuel economy standard do not represent increased federal revenue.) Alaska, in the past, has received more federal funding than the amount the state has contributed in revenue—a trend that may not continue in the future. Under the last federal highway bill, an authorized increase in federal spending for transportation was authorized without a corresponding increase in revenue. This scenario is not likely with a new authorization. Authorization of a new highway bill is being debated in Congress.

In the short term, federal revenue is projected to drop approximately 30 percent in 2013 from historical levels and then remain flat. For the long term and beyond, during the next transportation bill cycle (2 or 6 years), a moderate revenue increase is more likely nationwide, but this increase may not translate to an increase in Alaska. With the assumptions discussed, all federal revenue sources are projected to remain constant during the short-term portion of the MTP. The inflator will then be applied beginning in 2024 through the balance of the MTP (until 2035).

## Transportation Modes—Roads, Public Transportation, and Non-Motorized Projects

Three main funding sources have been identified to implement the MTP recommendations. The sources and assumptions are described below:

- **Municipal Funds.** For the MTP financial plan, it is assumed that the MOA will continue to issue voter-approved bonds within Anchorage Roads and Drainage Service Area (ARDSA) in support of transportation improvements and to provide matching funds to federally funded projects. Forecasted funding levels are based on the amount of bond funding that has historically gone to MTP projects from 2005 to 2010, coupled with those funds included in the 2011–2016 Capital Improvement Program (CIP). The 2011–2016 amounts were averaged and increased by the Anchorage CPI at 2.5 percent per year, beginning in 2017.
- **State Funds.** For the MTP financial plan, it is assumed that the State of Alaska will continue to fund Anchorage area transportation improvements as appropriated by the Alaska Legislature. The amount of state general funds appropriated by the Legislature for MTP projects in 2005–2011 was averaged and increased by the CPI.

Statewide general obligation bonds are assumed to continue in the future, approximately every 6 years. Anchorage received \$37.5 million and \$36.1 million in state general obligation bonds in 2002 and 2008, respectively. These amounts were averaged, and then increased by the CPI.

The only new source of State of Alaska transportation funding assumed to be available for use in the implementation of the MTP during the 2035 planning horizon involves the proposed Alaska Transportation Infrastructure Fund. Two bills were introduced in the 2010–2011 legislative session. One asks voters to amend the Alaska State Constitution and establish the Alaska Transportation Infrastructure Fund. Another would designate the fund to generate from an endowment, and receive revenue from the fuel tax and vehicle registrations—pending voter approval of the constitutional amendment. Similar bills were introduced in the 2011–2012 legislative session – House Bill 30 (HB 30) and Senate Bill 77 (SB 77) respectively.

For the purposes of this Plan, the endowment was conservatively estimated at \$350 million with the AMATS study area receiving 28 percent of the 5 percent estimated annual interest earned on the fund. This amount is increased by 2.5 percent CPI each year. The House Finance Infrastructure Committee held hearings on the proposed legislation in preparation for the 2012 legislative session when

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a vote on the bills is expected to occur. If approved, the constitutional amendment would be placed on the November 2012 Statewide ballot.

The Alaska Mental Health Trust supports AnchorRIDES vehicle purchases, and this funding support is expected to continue.

sistance, as initiated in 2011 by the passage of Senate Bill (SB) 77, is assumed to continue.

- **Federal Funds.** For the MTP financial plan, it is assumed that there will continue to be funds provided by both the Federal

FHWA. Based on guidance from

levels allocated to AMATS for the Community Transportation Program (CTP) and Trails and Recreational Access for Alaska (TRAAK) program are anticipated to be reduced by approximately 30 percent beginning in 2013. Federal funds for the NHS are based on historical averages and coordination with the DOT&PF, and are estimated at \$23 million per year beginning in 2016. The Anchorage CPI is applied to federal funds annually beginning in 2024.

The non-NHS federal funds allocated to AMATS are programmed into the following four categories by percentage, as identified in No. 3 of the AMATS policies and procedures:

- Transportation Enhancements (TE) Non-motorized: 10-15 percent
- Congestion Mitigation Air Quality (CMAQ): 10 percent
- Pavement Replacement: 15-20 percent (included in the O&M
- Roadway Improvements: 55-65 percent

The total amounts of federal, state, and local funds, by category, in the MTP are shown in **Figure 6-1**. **Figure 6-2** shows the annual level of federal, state, and local year 2035.

from those used in the 2027 LRTPs for Chugiak-Eagle River and the Anchorage Bowl. The comparison of the differences in the federal, state, and local funding assumptions between the 2027 LRTPs and the 2035 MTP are shown in **Figure 6-3**.

Figure 6-1 Federal, State, and Local Revenues by Year Totals Through 2035

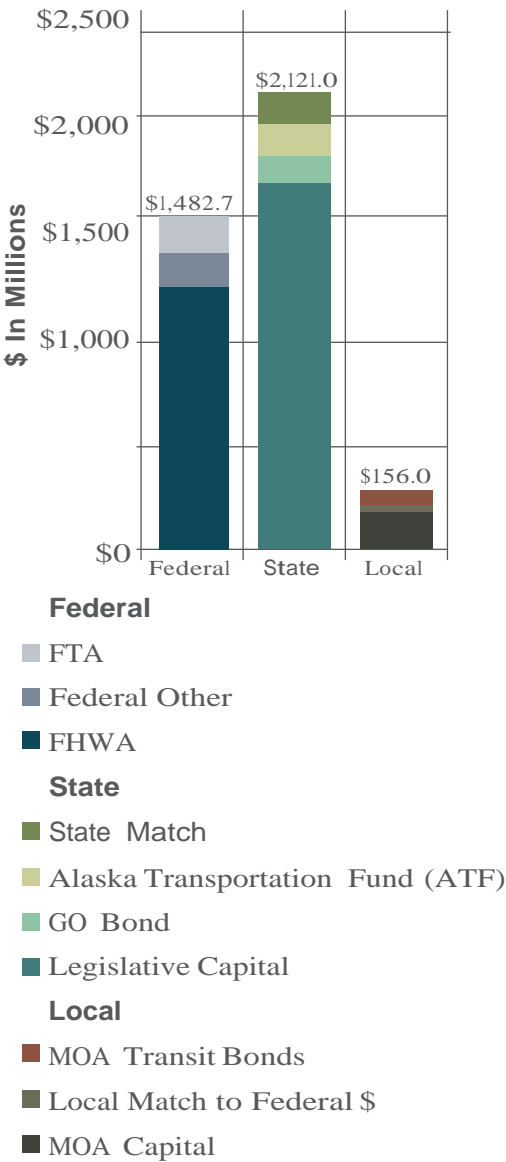




Figure 6-2 Federal, State, and Local Revenues by Year Through 2035

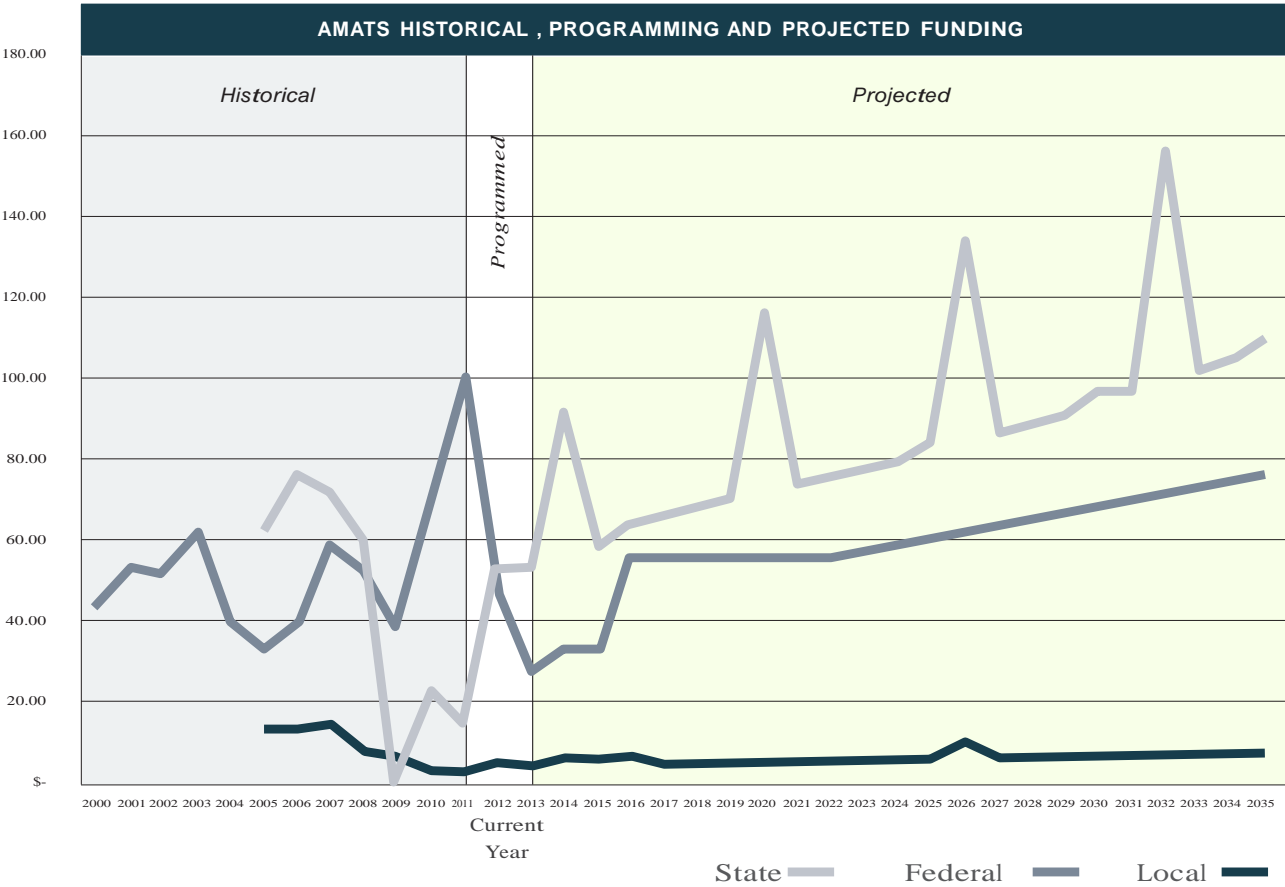
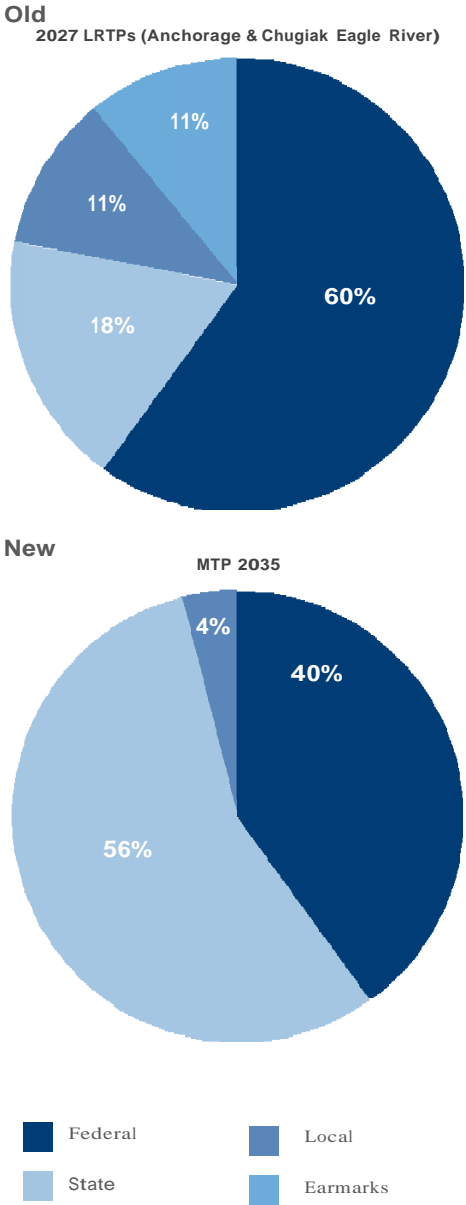


Figure 6-3 Comparison of Federal, State, and Local Revenues Percentages for the 2027 L RTPs and 2035 MTP



EXAMINING PROJECT  
COST AND REVENUE  
DETAIL

Roads

Capital Costs and Estimated Revenues

Road capital projects are divided into two categories: NHS and non-NHS projects. The purpose of the NHS is to provide an interconnected system of principal arterial routes to serve major population centers, international border crossings, ports, airports, public transportation facilities, and other major travel destinations; meet national defense requirements; and serve interstate and interregional travel. Some federal funds are specifically designated only for use on the NHS. The priorities for those funds are determined, statewide, by the DOT &PF. However, funds other than NHS funds can also be spent on NHS facilities.

The following are NHS facilities within the AMATS planning area:

- Glenn Highway and 5th/6th avenues
- Seward Highway
- Minnesota Drive/O'Malley Road, from 5th Avenue to Seward Highway
- International Airport Road, from Minnesota Drive to TSAIA
- C Street viaduct to the Port of Anchorage

- Boniface Parkway, from Glenn Highway to JBER gate
- Muldoon Road
- Tudor Road

The cost of implementing NHS road improvement recommendations in this MTP is approximately \$2.9 billion. Other NHS-related expenditures for pavement rehabilitation, rut repair, and preservation are included with the O&M costs. Federal revenues designated for the NHS, federal discretionary funds, and state bonding and capital program sources projected to be available to pay for NHS improvements total approximately \$1.5 billion. The remaining balance of \$1.4 billion can be covered by a portion of available non-NHS revenues.

Non-NHS revenue sources can be used more flexibly than NHS funding. The estimated expenditures for the non-NHS road portion of the MTP total \$473 million. The remaining revenue from all sources (federal, state, and local) available to fund these needs is approximately \$1.9 billion. A portion of the non-NHS revenues, \$1.4 billion, is applied toward funding the NHS program described above.

The revenue and inflation-adjusted costs for the combined NHS and non-NHS road projects are shown in **Table 6-5** and **Table 6-6** for the short-term and long-term periods, respectively. The annual funding amounts and the annual use of the revenue for the road projects are shown in **Table 6-7**. These tables do not

include the capital costs for the Knik Arm Crossing project.

Table 6-5 Capital Funding Sources for Road Projects – Short Term (2011-2023)

| FUNDING SOURCES  | FUNDING IN MILLIONS \$ |              |             |             |              |             |              |              |              |              |              |              |              |              |
|--|------------------------|--------------|-------------|-------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
|  | NOTES                  | 2011         | 2012        | 2013        | 2014         | 2015        | 2016         | 2017         | 2018         | 2019         | 2020         | 2021         | 2022         | 2023         |
| MOA Road Capital (road bonds to MTP projects)                        | 1                      | 2.0          | 3.2         | 3.4         | 5.2          | 5.2         | 5.8          | 4.1          | 4.2          | 4.3          | 4.4          | 4.5          | 4.6          | 4.7          |
| AK Legislative Capital Program (not including State Bonds) – NHS     | 2                      | 2.5          | 16.8        | 17.2        | 17.7         | 18.1        | 18.5         | 19.0         | 19.5         | 20.0         | 20.5         | 21.0         | 21.5         | 22.0         |
| AK Legislative Capital Program (not including State Bonds) - Non-NHS | 2                      | 0.0          | 30.0        | 30.7        | 31.5         | 32.3        | 33.1         | 33.9         | 34.7         | 35.6         | 36.5         | 37.4         | 38.3         | 39.3         |
| Federal Other  | 3                      |              |             |             | 5.0          | 5.0         | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          | 5.0          |
| FHWA NHS (Anchorage & Chugiak-Eagle River)                           | 4                      | 62.1         | 5.0         | 0.0         | 0.0          | 0.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         | 23.0         |
| FHWA Non-NHS (Anchorage & Chugiak-Eagle River)                       | 5                      | 33.2         | 18.5        | 18.5        | 19.8         | 19.8        | 19.8         | 19.8         | 19.8         | 19.8         | 19.8         | 19.8         | 19.8         | 19.8         |
| Transportation Enhancements  | 5A                     | (3.3)        | (1.9)       | (1.9)       | (2.0)        | (2.0)       | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        |
| CMAQ   | 5A                     | (3.3)        | (1.9)       | (1.9)       | (2.0)        | (2.0)       | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        | (2.0)        |
| Pavement Replacement   | 5A                     | (5.0)        | (2.8)       | (2.8)       | (3.0)        | (3.0)       | (3.0)        | (3.0)        | (3.0)        | (3.0)        | (3.0)        | (3.0)        | (3.0)        | (3.0)        |
| HSIP   | 6                      | 6.7          | 16.4        | 7.8         | 7.4          | 7.4         | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          | 7.4          |
| State Match to FHWA NHS & Non-NHS Total                              | 7                      | 9.0          | 3.3         | 2.0         | 2.5          | 2.5         | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          | 4.8          |
| Alaska Transportation Fund (ATF)                                     | 8                      | 0.0          | 0.0         | 0.0         | 0.0          | 0.0         | 4.9          | 5.1          | 5.4          | 5.7          | 6.0          | 6.3          | 6.6          | 6.9          |
| GO Bond  | 9                      |              |             |             | 36.8         |             |              |              |              |              | 42.7         |              |              |              |
| ARRC Match to federal funds  | 10                     | 0.1          | 0.1         | 0.1         | 0.1          | 0.1         | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          |
| Railroad track, facilities and infrastructure                        | 11                     | 1.0          | 1.0         | 1.0         | 1.0          | 1.0         | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          | 1.0          |
| <b>Estimated Total Sources of Funding</b>                            |                        | <b>105.0</b> | <b>87.7</b> | <b>74.1</b> | <b>120.0</b> | <b>84.4</b> | <b>116.4</b> | <b>116.2</b> | <b>117.9</b> | <b>119.7</b> | <b>164.2</b> | <b>123.3</b> | <b>125.1</b> | <b>127.0</b> |

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Table 6-6 Capital Funding Sources for Road Projects - Long Term (2024-2035)

| FUNDING SOURCES  | FUNDING IN MILLIONS \$ |              |              |              |              |              |              |              |              |              |              |              |              |                 |
|--|------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------------|
|  | NOTES                  | 2024         | 2025         | 2026         | 2027         | 2028         | 2029         | 2030         | 2031         | 2032         | 2033         | 2034         | 2035         | TOTAL 2011-2035 |
| MOA Road Capital (road bonds to MTP projects)                        | 1                      | 4.9          | 5.0          | 5.1          | 5.2          | 5.4          | 5.5          | 5.6          | 5.8          | 5.9          | 6.1          | 6.2          | 6.4          | 122.7           |
| AK Legislative Capital Program (not including State Bonds) – NHS     | 2                      | 22.6         | 23.2         | 23.7         | 24.3         | 24.9         | 25.6         | 26.2         | 26.9         | 27.5         | 28.2         | 28.9         | 29.6         | 545.9           |
| AK Legislative Capital Program (not including State Bonds) - Non-NHS | 2                      | 40.3         | 41.3         | 42.3         | 43.4         | 44.5         | 45.6         | 46.7         | 47.9         | 49.1         | 50.3         | 51.6         | 52.9         | 969.2           |
| Federal Other  | 3                      | 5.1          | 5.3          | 5.4          | 5.5          | 5.7          | 5.8          | 5.9          | 6.1          | 6.2          | 6.4          | 6.6          | 6.7          | 120.7           |
| FHWA NHS (Anchorage & Chugiak-Eagle River)                           | 4                      | 23.6         | 24.2         | 24.8         | 25.4         | 26.0         | 26.7         | 27.3         | 28.0         | 28.7         | 29.4         | 30.2         | 30.9         | 576.3           |
| FHWA Non-NHS (Anchorage & Chugiak-Eagle River)                       | 5                      | 20.3         | 20.8         | 21.3         | 21.9         | 22.4         | 23.0         | 23.5         | 24.1         | 24.7         | 25.3         | 26.0         | 26.6         | 548.1           |
| Transportation Enhancements  | 5A                     | (2.0)        | (2.1)        | (2.1)        | (2.2)        | (2.2)        | (2.3)        | (2.4)        | (2.4)        | (2.5)        | (2.5)        | (2.6)        | (2.7)        | (55.1)          |
| CMAQ   | 5A                     | (2.0)        | (2.1)        | (2.1)        | (2.2)        | (2.2)        | (2.3)        | (2.4)        | (2.4)        | (2.5)        | (2.5)        | (2.6)        | (2.7)        | (55.1)          |
| Pavement Replacement   | 5A                     | (3.0)        | (3.1)        | (3.2)        | (3.3)        | (3.4)        | (3.5)        | (3.5)        | (3.6)        | (3.7)        | (3.8)        | (3.9)        | (4.0)        | (82.6)          |
| HSIP   | 6                      | 7.6          | 7.8          | 8.0          | 8.2          | 8.4          | 8.6          | 8.8          | 9.0          | 9.2          | 9.5          | 9.7          | 10.0         | 209.7           |
| State Match to FHWA NHS & Non-NHS Total                              | 7                      | 4.9          | 5.0          | 5.2          | 5.3          | 5.4          | 5.6          | 5.7          | 5.8          | 6.0          | 6.1          | 6.3          | 6.4          | 125.4           |
| Alaska Transportation Fund (ATF)                                     | 8                      | 7.2          | 7.6          | 8.0          | 8.4          | 8.8          | 9.2          | 9.7          | 10.2         | 10.7         | 11.2         | 11.8         | 12.4         | 162.1           |
| GO Bond  | 9                      |              |              | 49.5         |              |              |              |              |              | 57.4         |              |              |              | 186.4           |
| ARRC Match to federal funds  | 10                     | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 0.1          | 2.5             |
| Railroad track, facilities and infrastructure                        | 11                     | 1.0          | 1.1          | 1.1          | 1.1          | 1.1          | 1.2          | 1.2          | 1.2          | 1.2          | 1.3          | 1.3          | 1.3          | 27.1            |
| <b>Estimated Total Sources of Funding</b>                            |                        | <b>130.6</b> | <b>134.1</b> | <b>187.1</b> | <b>141.1</b> | <b>144.9</b> | <b>148.8</b> | <b>152.4</b> | <b>156.7</b> | <b>218.0</b> | <b>165.1</b> | <b>169.6</b> | <b>173.9</b> | <b>3,403.2</b>  |



Table 6-5 Capital Funding Sources for Road Projects – Short Term (2011-2023) and Table 6-6 Notes

|         |  |          |  |          |  |
|---------|--|----------|--|----------|--|
| Note 1) | Years 2011-2016 reflects Capital Improvement Program (CIP) Numbers for projects in the MTP and modified by the MOA. Year 2017 is the 2011-2016 CIP MTP Road average. CPI applied beginning in 2018   | Note 5)  | Reflects 2010-2013 & Draft 2012-2015 STIP Non-NHS Allocation from ADOT&PF's Community Transportation Program (CTP) + Trails and Recreational Access for Alaska (TRAAK) program and Congestion Mitigation and Air Quality (CMAQ) program. Reduced by 10% for Enhancements, 10% for CMAQ and 10% for Pavement Replacement each year based on current AMATS policy. CPI applied beginning in 2024 | Note 8)  | New Program Alaska Transportation Fund (ATF) created for Statewide improvements in 2015 (initial funding \$350M annually with an average 5% return on investment and 28% of that investment returns to the Anchorage area based on historical AMATS allocation formula funding recommended by the TAC) |
| Note 2) | 2011 actual NHS/Non-NHS number. 2012 is a 6 year average of the MTP NHS/Non-NHS projects. CPI applied beginning in 2013  |          |  | Note 9)  | Based on history of GO bonds in 2002 and 2008. Assume state GO Bond every 6 years of total historical average (2014, 2020, 2026, 2032). Increased annually by CPI  |
| Note 3) | Consists of \$5million discretionary funding programs that are awarded on a competitive basis. Includes various other programs from EPA, HUD, Health and Human Services, & others that may be proposed and funded in new authorization from 2014-2023. Inflation applied beginning in 2024 | Note 5A) | Calculated based on current AMATS policy.  | Note 10) | Amount based on calculation of 9.03% of federal funds to ARRC  |
| Note 4) | Reflects 2010-2013 & Draft 2012-2015 STIP numbers and \$23 million annually beginning in 2016. CPI applied beginning in 2024   | Note 6)  | 2011 & 2012 reflects current AMATS TIP. 2013 reflects a 30% reduction from current TIP amount. 2014 is an average of 2005-2013. Inflation by CPI applied beginning in 2024   | Note 11) | Railway/railroad infrastructure projects funded by combination of ARRC, FTA Sec 5307 & 5309, and FRA Federal funds. CPI applied beginning in 2024  |
|         |  | Note 7)  | State required match of 9.03% of total Federal amounts on NHS, Non-NHS, HSIP, and Federal Other  |          |  |

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Table 6-7 Sources and Uses of Revenue for Road Projects

|                                   | REVENUE IN MILLIONS \$ |       |                    |       |       |       |       |       |       |       |       |       |       |                   |      |
|-----------------------------------|------------------------|-------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------------|------|
| SHORT TERM (2011-2023)            | SOURCE                 | 2010  | 2011               | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022              | 2023 |
| Total Project Costs               | Total Project Cost     | 1,114 | 1,159              | 1,096 | 1,048 | 1,013 | 929   | 878   | 792   | 703   | 609   | 509   | 358   | 244               | 124  |
| Less: Year's Spending             | 2010-2035 Annual Rev.  |       | -105               | -88   | -74   | -120  | -84   | -116  | -116  | -118  | -120  | -164  | -123  | -125              | -127 |
| Projects Deferred to Future Years |                        |       | 1,054              | 1,008 | 974   | 893   | 845   | 762   | 676   | 585   | 489   | 345   | 235   | 119               | (3)  |
| Inflation                         |                        |       | +4%                | +4%   | +4%   | +4%   | +4%   | +4%   | +4%   | +4%   | +4%   | +4%   | +4%   | +4%               | +4%  |
| Deferred Projects                 |                        |       | 1,096              | 1,048 | 1,013 | 929   | 878   | 792   | 703   | 609   | 509   | 358   | 244   | 124               | (3)  |
| LONG TERM (2024-2035)             | SOURCE                 | 2023  | 2024               | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2031  | 2032  | 2033  | 2034  | 2035              |      |
| Total Project Costs               | Total Project Costs    | (3)   | 1,576 <sup>1</sup> | 1,496 | 1,410 | 1,265 | 1,164 | 1,055 | 937   | 812   | 679   | 477   | 323   | 158               |      |
| Less: Year's Spending             | 2010-2035 Annual Rev.  |       | -131               | -134  | -187  | -141  | -145  | -149  | -152  | -157  | -218  | -165  | -170  | -174              |      |
| Projects Deferred to Future Years |                        |       | 1,446              | 1,362 | 1,223 | 1,124 | 1,019 | 906   | 785   | 656   | 461   | 312   | 153   | (15)              |      |
| Inflation                         |                        |       | +3.5%              | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5%             |      |
| Deferred Projects                 |                        |       | 1,496              | 1,410 | 1,265 | 1,164 | 1,055 | 937   | 812   | 679   | 477   | 323   | 158   | (16) <sup>2</sup> |      |

Note 1) Equals 2023 deferred project total plus inflated long term project costs.

Note 2) In 2035, a surplus of \$16.0 million is projected.

### Operations and Maintenance

Adequate funding of street O&M functions is important to ensure that the road system continues to function well. The O&M functions include activities such as signing, marking, lighting, street sweeping, traffic signal system operation, snow clearing, sanding, pothole repair, landscaping, and sidewalk maintenance.

The O&M cost for new roadway projects recommended in this MTP is based on the current cost per lane mile times the new road lane miles added to the system as a result of implementation of the roadway projects. **Table 6-8** shows the results of calculating the difference between the existing 2011 lane miles and the future 2035 lane miles. Because costs per lane mile from the DOT&PF and the MOA vary, the additional lane miles are broken out by new lane miles added to the DOT&PF system and new lane miles added to the MOA system.

The MOA lane miles are further broken out by the Anchorage Roads and Drainage Service Area (ARDSA) and Chugiak/

Birchwood/Eagle River Rural Roads Service Area (CBERRRSA), which also have different cost structures. ARDSA is the largest road service area in Anchorage. It has full maintenance and construction authority for drainage and road facilities in the Anchorage Bowl. CBERRRSA encompasses more than 350 lane miles of roadway in the Chugiak, Birchwood, and Eagle River areas.

The DOT&PF and MOA jointly share the responsibility of maintaining roadways in the Anchorage Bowl. For the most part, the MOA maintains municipality-owned roads and the DOT&PF maintains state-owned roads. However, in cases where efficiencies can be achieved, the maintenance responsibilities have been shifted through formal maintenance agreements.

The ability and willingness to pay the additional cost of maintaining an expanded system should be resolved before a commitment to build more infrastructure is made. The DOT&PF contracts with the MOA for certain O&M functions. Three roadways recommended for widening

(Northern Lights Boulevard, Fireweed Lane, and the proposed northern access road to the U-Med area) currently have split maintenance responsibilities. As a result, the additional lane miles were further broken out by summer and winter maintenance responsibilities.

Assumptions for the O&M costs include the following:

- Conversions of four lane-roads to three-lane roads decrease the maintenance cost by one lane.
- The restriping of the A/C couplet will not increase the maintenance cost of these facilities because the pavement area will remain the same.
- There is no difference between the maintenance costs based on roadway classification. In other words, lane mile costs for freeways are the same as those for arterials.

The DOT&PF and MOA spent almost \$47 million in 2011 for O&M of the public road system in the AMATS planning area. See **Table 6-9** and **Table 6-10** for the short-term and long-term periods, respectively. Based on the current O&M budgets, the average costs per lane mile are \$10,000 on DOT&PF facilities, \$16,000 within ARDSA, and \$9,500 within CEBERRRSA. The cost to maintain a separated path or walkways adjacent to the roadway is included in the amounts. Although these amounts differ by responsible organization, it is important to note that the services provided also differ. For example,

Table 6-8 Lane Mile Increases by Agency Maintenance Responsibility

| AGENCY       | SUMMER MAINTENANCE (MILES) | WINTER MAINTENANCE (MILES) | YEAR-ROUND MAINTENANCE (MILES) |
|--------------|----------------------------|----------------------------|--------------------------------|
| DOT&PF       | 1.42                       | 1.89                       | 92.45                          |
| MOA ARDSA    | 1.89                       | 1.42                       | 1.31                           |
| MOA CBERRRSA | 0                          | 0                          | 5.83                           |

## 2035 Metropolitan Transportation Plan

**Table 6-9 Comparison of Funding and Expenses for Roads and Non-Motorized Operations & Maintenance – Short Term (2011-2023)**

|  | REVENUE AND EXPENSES IN MILLIONS \$ |             |             |             |             |             |             |             |             |             |             |             |             |
|--|-------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|  | 2011                                | 2012        | 2013        | 2014        | 2015        | 2016        | 2017        | 2018        | 2019        | 2020        | 2021        | 2022        | 2023        |
| <b>Revenue Estimates</b>   |                                     |             |             |             |             |             |             |             |             |             |             |             |             |
| AMATS Pavement Replacement   | 5.0                                 | 2.8         | 2.8         | 3.0         | 3.0         | 3.0         | 3.0         | 3.0         | 3.0         | 3.0         | 3.0         | 3.0         | 3.0         |
| MOA Road Capital (road bonds to LRTP surface rehab projects)                       | 3.9                                 | 3.0         | 4.0         | 4.5         | 2.2         | 4.0         | 3.6         | 3.7         | 3.8         | 3.9         | 4.0         | 4.1         | 4.2         |
| AK Legislative Capital Program (not including State Bonds) -Non-NHS Pavement Rehab | 0.0                                 | 2.3         | 2.4         | 2.4         | 2.5         | 2.5         | 2.6         | 2.7         | 2.7         | 2.8         | 2.9         | 2.9         | 3.0         |
| DOT&PF O&M Budget  | 12.0                                | 12.3        | 12.6        | 12.9        | 13.3        | 13.6        | 13.9        | 14.3        | 14.6        | 15.0        | 15.4        | 15.8        | 16.2        |
| DOT&PF Traffic Signal Management   | 1.7                                 | 1.7         | 1.8         | 1.8         | 1.9         | 1.9         | 2.0         | 2.0         | 2.0         | 2.1         | 2.2         | 2.2         | 2.3         |
| DOT&PF MS4 Permit Compliance   | 2.9                                 | 3.0         | 3.0         | 3.1         | 3.2         | 3.3         | 3.4         | 3.4         | 3.5         | 3.6         | 3.7         | 3.8         | 3.9         |
| DOT&PF Sidewalk Snow Removal   | 0.5                                 | 0.5         | 0.5         | 0.5         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.6         | 0.7         | 0.7         |
| MOA ARDSA O&M Budget   | 20.5                                | 21.0        | 21.6        | 22.1        | 22.7        | 23.2        | 23.8        | 24.4        | 25.0        | 25.6        | 26.3        | 26.9        | 27.6        |
| MOA CBERRRSA O&M Budget  | 0.19                                | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.3         | 0.3         |
| <b>Estimated Total Sources of Funding</b>  | <b>46.7</b>                         | <b>46.8</b> | <b>48.9</b> | <b>50.6</b> | <b>49.4</b> | <b>52.3</b> | <b>53.0</b> | <b>54.3</b> | <b>55.6</b> | <b>56.9</b> | <b>58.2</b> | <b>59.6</b> | <b>61.0</b> |
| <b>M&amp;O Expenses</b>  |                                     |             |             |             |             |             |             |             |             |             |             |             |             |
| DOT&PF   | 17.1                                | 17.5        | 18.0        | 18.4        | 18.9        | 19.3        | 19.8        | 20.3        | 20.8        | 21.4        | 21.9        | 22.4        | 23.0        |
| DOT&PF Pavement Replacement Projects   | 5.0                                 | 5.1         | 5.0         | 5.4         | 5.5         | 5.5         | 5.6         | 5.7         | 5.7         | 5.8         | 5.9         | 5.9         | 6.0         |
| MOA ARDSA  | 20.5                                | 21.0        | 21.6        | 22.1        | 22.7        | 23.2        | 23.8        | 24.4        | 25.0        | 25.6        | 26.3        | 26.9        | 27.6        |
| MOA CBERRRSA   | 0.19                                | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.2         | 0.3         | 0.3         |
| MOA Pavement Replacement Projects  | 3.90                                | 3.00        | 4.00        | 4.50        | 2.20        | 4.00        | 3.60        | 3.69        | 3.78        | 3.88        | 3.97        | 4.07        | 4.17        |
| <b>Estimated Total Expenses</b>  | <b>46.7</b>                         | <b>46.9</b> | <b>48.7</b> | <b>50.6</b> | <b>49.4</b> | <b>52.3</b> | <b>53.1</b> | <b>54.3</b> | <b>55.6</b> | <b>56.9</b> | <b>58.2</b> | <b>59.6</b> | <b>61.0</b> |

ARDSA includes the expensive costs of longer time spent by crews clearing and hauling snow in residential streets than the time spent clearing snow on the high-speed facilities maintained by the DOT&PF.

New roads and lanes to be built as a part of the MTP implementation will add maintenance cost of about \$1 million per year by 2035. During the 2011–2035 MTP

period, O&M costs for the road system are projected to be \$1.5 billion.

In some cases, the recommended MTP projects may result in a net cost savings for maintenance, especially where improvements to the existing substandard roadbed and drainage reduce the need to repair the roadway surface. It is assumed that the DOT&PF and MOA will continue the current level of service for maintaining the existing system and additional

lane miles added as a part of the MTP projects.



Table 6-10 Comparison of Funding vs. Expenses for Roads and Non-Motorized Operations & Maintenance – Long Term (2024-2035)

|  | REVENUE AND EXPENSES IN MILLIONS \$ |      |      |      |      |      |      |      |      |      |      |      |                        |
|--|-------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------------------------|
|  | 2024                                | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | TOTAL<br>2011-<br>2035 |
| Revenue Estimates  |                                     |      |      |      |      |      |      |      |      |      |      |      |                        |
| AMATS Pavement Replacement   | 3.0                                 | 3.1  | 3.2  | 3.3  | 3.4  | 3.5  | 3.5  | 3.6  | 3.7  | 3.8  | 3.9  | 4.0  | 82.6                   |
| MOA Road Capital (road bonds to LRTP surface rehab projects)                       | 4.3                                 | 4.4  | 4.5  | 4.6  | 4.7  | 4.8  | 5.0  | 5.1  | 5.2  | 5.3  | 5.5  | 5.6  | 107.8                  |
| AK Legislative Capital Program (not including State Bonds) -Non-NHS Pavement Rehab | 3.1                                 | 3.2  | 3.2  | 3.3  | 3.4  | 3.5  | 3.6  | 3.7  | 3.8  | 3.9  | 3.9  | 4.0  | 74.2                   |
| DOT&PF O&M Budget  | 16.6                                | 17.0 | 17.4 | 17.8 | 18.3 | 18.7 | 19.2 | 19.7 | 20.2 | 20.7 | 21.2 | 21.7 | 410.3                  |
| DOT&PF Traffic Signal Management   | 2.3                                 | 2.4  | 2.4  | 2.5  | 2.6  | 2.6  | 2.7  | 2.8  | 2.8  | 2.9  | 3.0  | 3.0  | 57.5                   |
| DOT&PF MS4 Permit Compliance   | 4.0                                 | 4.1  | 4.2  | 4.3  | 4.4  | 4.5  | 4.6  | 4.8  | 4.9  | 5.0  | 5.1  | 5.2  | 99.1                   |
| DOT&PF Sidewalk Snow Removal   | 0.7                                 | 0.7  | 0.7  | 0.7  | 0.8  | 0.8  | 0.8  | 0.8  | 0.8  | 0.9  | 0.9  | 0.9  | 17.1                   |
| MOA ARDSA O&M Budget   | 28.3                                | 29.0 | 29.7 | 30.5 | 31.2 | 32.0 | 32.8 | 33.6 | 34.5 | 35.3 | 36.2 | 37.1 | 701.1                  |
| MOA CBERRRSA O&M Budget  | 0.3                                 | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 6.6                    |
| Estimated Total Sources of Funding   | 62.5                                | 64.1 | 65.7 | 67.4 | 69.1 | 70.8 | 72.5 | 74.3 | 76.2 | 78.1 | 80.0 | 82.1 | 1,556.2                |
| M&O Expenses   |                                     |      |      |      |      |      |      |      |      |      |      |      |                        |
| DOT&PF   | 23.6                                | 24.2 | 24.8 | 25.4 | 26.0 | 26.7 | 27.3 | 28.0 | 28.7 | 29.4 | 30.2 | 30.9 | 584.1                  |
| DOT&PF Pavement Replacement Projects   | 6.1                                 | 6.3  | 6.4  | 6.6  | 6.8  | 7.0  | 7.1  | 7.3  | 7.5  | 7.7  | 7.8  | 8.0  | 156.6                  |
| MOA ARDSA  | 28.3                                | 29.0 | 29.7 | 30.5 | 31.2 | 32.0 | 32.8 | 33.6 | 34.5 | 35.3 | 36.2 | 37.1 | 701.1                  |
| MOA CBERRRSA   | 0.3                                 | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 6.6                    |
| MOA Pavement Replacement Projects  | 4.28                                | 4.39 | 4.50 | 4.61 | 4.72 | 4.84 | 4.96 | 5.09 | 5.21 | 5.34 | 5.48 | 5.61 | 107.8                  |
| Estimated Total Expenses   | 62.5                                | 64.1 | 65.7 | 67.4 | 69.1 | 70.8 | 72.5 | 74.3 | 76.2 | 78.1 | 80.1 | 82.1 | 1,556.2                |

Assumptions for Table 6-9 and Table 6-10:

*DOT&PF and MOA will continue to maintain the existing system and additional lane miles added as part of the MTP to the current level of service.*

*The system will be maintained at the level of funding available.*

*2.5% growth in both revenue and expenses for the O&M budgets. This is a conservative assumption compared to the actual 5- year average growth rate in the DOT&PF, ARDSA, and CEBERRRSA M&O budgets. Averaged over time, these budgets have increased greater than 2.5% per year.*

### Public Transportation

#### Capital Costs

Public transportation capital costs are projected to be \$243 million, and are made up of replacement and expansion for People Mover, AnchorRIDES, and Share-a-Ride vehicles; bus stop improvements; public transportation centers and facilities; ITS projects; fleet improvements and support equipment and vehicles; BRT implementation; and ride sharing and associated marketing.

Available capital funding from federal and municipal sources is sufficient to cover the estimated capital expenses. The capital program funding will be from FTA sources—Sections 5307, 5309, 5311, 5316, 5317, and 5340 funds and the Very Small Starts program; FHWA CMAQ; state and local matching funds; the Alaska Mental Health Trust Authority; Alaska Legislature grants; and a new (State Fiscal Year 2012) State Transit Match Assistance program.

The funding sources for public transportation capital improvement projects for the short-term and long-term periods are shown in **Table 6-11** and **Table 6-12**, respectively. The annual funding amounts and the annual use of the revenue for the public transportation projects are shown in **Table 6-13**.

#### Operating Costs

This MTP expands existing public transportation services: People Mover, AnchorRIDES, and Share-a-Ride. It is consistent

with the Anchorage Bowl comprehensive plan, the Chugiak-Eagle River comprehensive plan, the People Mover Blueprint, Anchorage Downtown comprehensive plan, Human Services Coordination Transportation Plan, Public Transit Advisory Board recommendations, and public requests for service.

Within the MTP planning horizon, People Mover expansion includes implementing half-hour headways until 6:00 p.m. on all local routes within the Anchorage Bowl, and 15-minute peak period headways on six routes. Local service in Eagle River is reinstated and additional service is provided on the Glenn Highway. A new BRT route is initiated between Downtown, Midtown, and the U-Med district; a new South Anchorage express route is added; new coverage in the Klatt Road/Southport area, along Abbott Road/Elmore Road, and along International Airport Road is identified; and a new South Anchorage-Hillside express route is provided in the MTP.

The required peak-period fleet will be approximately 92 People Mover buses—slightly more than double the fleet in 2011. The annual O&M costs are estimated to increase from \$26.3 million in 2011 to \$47.5 million in 2035, with 2.5 percent inflation added per year. **Table 6-14** and **Table 6-15** show the annual funding and expenditures for the O&M of the public transportation system in the short-term and long-term periods, respectively.

Expansion of the AnchorRIDES system will increase the fleet from 46 vehicles in 2011 to 61 vehicles in 2035. With increased emphasis on coordinated human-services transportation from federal and state funding sources, most of the increase in O&M costs will be provided through other sources, similar to the current Medicaid funding for many AnchorRIDES trips.

The Share-a-Ride vanpool fleet is estimated to increase from 76 vehicles in 2011 to 151 vehicles in 2035. The majority of the O&M costs for the program are from rider fees; however, FHWA CMAQ funds will be used to provide funding for project overhead and approximately \$40,000 annually in FTA Section 5307 funding is provided for capital and major maintenance expenses of the vanpool fleet. Vehicle acquisition is funded through a capital program of FHWA CMAQ, and FTA Sections 5307 and 5311 funds, as well as matching funds from both MOA and Mat-Su Borough.

The operating budget for the public transportation system is funded by multiple sources: local property tax dollars; passenger fares; grants from the FTA, FHWA, and Department of Health and Human Services (DHHS), Older Americans Act; advertising revenues; and miscellaneous revenues.

The State of Alaska, which occasionally provides funding for small capital projects, had not provided operating fund-

Table 6-11 Capital Funding Sources for Public Transportation Projects– Short Term (2011-2023)

| FUNDING SOURCES  | FUNDING IN MILLIONS \$ |      |      |      |      |      |      |      |      |      |      |      |      |      |
|--|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|  | NOTES                  | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | 2023 |
| Revenue Estimates  |                        |      |      |      |      |      |      |      |      |      |      |      |      |      |
| Federal Transit Administrative Capital Funding - Formula funding Section 5307, 5316 and 5317 | 1                      | 1.1  | 1.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  | 2.1  |
| Federal Transit Administrative Capital Funding-Competitive -Section 5309 and Other           |                        | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 2.0  |
| Section 5309 from Prior Years: Dimond Center Intermodal Facility.                            | 2                      |      | 2.9  |      |      |      |      |      |      |      |      |      |      |      |
| Pending Section 5309 from Prior Years: C Street Intermodal Facility.                         |                        |      | 5.0  |      |      |      |      |      |      |      |      |      |      |      |
| FTA Very Small Starts Program for BRT  |                        |      |      |      |      |      |      |      |      |      |      |      |      |      |
| FTA 5311 for Vanpools  | 3                      | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  |
| MOA Transit Capital  | 4                      | 0.4  | 1.4  | 0.6  | 0.6  | 0.6  | 0.6  | 0.6  | 0.6  | 0.6  | 0.6  | 0.6  | 0.6  | 0.8  |
| CMAQ   | 5                      | 3.3  | 1.9  | 1.9  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  | 2.0  |
| State Match to federal funds (CMAQ)  | 6                      | 0.2  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  |
| Local Match to federal funds (CMAQ)  | 7                      | 0.2  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  |
| State Transit Match Assistance SB77  | 8                      | 0.2  | 0.2  | 0.2  | 0.2  | 0.5  | 0.5  | 0.5  | 0.5  | 0.5  | 0.8  | 0.8  | 0.8  | 0.8  |
| AK Legislative Capital Program - Transit   | 9                      |      |      |      |      | 1.7  |      |      |      |      | 1.9  |      |      |      |
| Alaska Mental Health Trust   | 10                     | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  | 0.3  |
| Estimated Total Sources of Funding   |                        | 6.8  | 14.1 | 6.4  | 6.5  | 8.5  | 6.8  | 6.8  | 6.8  | 6.8  | 9.0  | 7.1  | 7.1  | 8.3  |

## 2035 Metropolitan Transportation Plan

Table 6-12 Capital Funding Sources for Public Transportation Projects – Long Term (2024-2035)

| FUNDING SOURCES  | FUNDING IN MILLIONS \$ |      |      |      |      |      |      |      |      |      |      |      |      |                        |
|--|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------------------------|
|  | NOTES                  | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | 2031 | 2032 | 2033 | 2034 | 2035 | TOTAL<br>2011-<br>2035 |
| Revenue Estimates  |                        |      |      |      |      |      |      |      |      |      |      |      |      |                        |
| Federal Transit Administrative Capital Funding - Formula funding Section 5307, 5316 and 5317 | 1                      | 2.2  | 2.2  | 2.3  | 2.3  | 2.4  | 2.4  | 2.5  | 2.6  | 2.6  | 2.7  | 2.8  | 2.8  | 55.1                   |
| Federal Transit Administrative Capital Funding-Competitive -Section 5309 and Other           |                        | 2.0  | 2.1  | 2.1  | 2.2  | 2.2  | 2.3  | 2.3  | 2.4  | 2.4  | 2.5  | 2.6  | 2.6  | 41.7                   |
| Section 5309 from Prior Years: Dimond Center Intermodal Facility.                            | 2                      |      |      |      |      |      |      |      |      |      |      |      |      | 2.9                    |
| Pending Section 5309 from Prior Years: C Street Intermodal Facility.                         |                        |      |      |      |      |      |      |      |      |      |      |      |      | 5.0                    |
| FTA Very Small Starts Program for BRT  |                        |      |      | 11.1 |      |      |      |      |      |      |      |      |      | 11.1                   |
| FTA 5311 for Vanpools  | 3                      | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 2.5                    |
| MOA Transit Capital  | 4                      | 0.9  | 0.9  | 4.1  | 0.9  | 0.9  | 1.0  | 1.0  | 1.0  | 1.0  | 1.1  | 1.1  | 1.1  | 22.6                   |
| CMAQ   | 5                      | 2.0  | 2.1  | 2.1  | 2.2  | 2.2  | 2.3  | 2.4  | 2.4  | 2.5  | 2.5  | 2.6  | 2.7  | 55.1                   |
| State Match to federal funds (CMAQ)  | 6                      | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 2.6                    |
| Local Match to federal funds (CMAQ)  | 7                      | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 0.1  | 2.6                    |
| State Transit Match Assistance SB77  | 8                      | 0.8  | 1.0  | 1.0  | 1.0  | 1.0  | 1.0  | 1.3  | 1.3  | 1.3  | 1.3  | 1.3  | 1.3  | 20.1                   |
| AK Legislative Capital Program - Transit   | 9                      |      | 2.1  |      |      |      |      | 2.4  |      |      |      |      | 2.7  | 10.8                   |
| Alaska Mental Health Trust   | 10                     | 0.3  | 0.3  | 0.3  | 0.3  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 0.4  | 8.3                    |
| Estimated Total Sources of Funding   |                        | 8.5  | 11.0 | 22.3 | 9.2  | 9.4  | 9.7  | 12.6 | 10.4 | 10.5 | 10.8 | 11.1 | 13.9 | 240.4                  |



Table 6-11 and Table 6-12 Notes

|         |  |         |  |          |  |
|---------|--|---------|--|----------|--|
| Note 1) | FTA Formula funding to increase with reauthorization in 2013 and inflated by CPI per year starting in 2024     | Note 4) | Local match for FTA funds. 20% of FTA capital funding  | Note 9)  | State Legislative Grants assist in fleet replacement. \$1.5M in 2010\$ inflated by CPI per year. |
| Note 2) | Amount left from prior year funding, anticipate obligating in 2012. MOA match has already been applied.        | Note 5) | 10% of AMATS allocation per current policy   | Note 10) | Historical funding held constant 2011-2014. Inflated by CPI per year starting 2015               |
| Note 3) | FTA 5311 for vanpools are provided by the Matanuska-Susitna Borough. Inflated by CPI per year starting in 2024 | Note 6) | Assumes State Match of 50% of CMAQ funds   |          |  |
|         |  | Note 7) | Assumes Local Match of 50% of CMAQ funds   |          |  |
|         |  | Note 8) | SB 77 increases from \$1million per year every 5 years. MOA to receive 25% of total state amount |          |  |

Table 6-13 Public Transportation Projects Sources and Uses of Revenue

| SHORT TERM (2011-2023)                                   | REVENUE IN MILLIONS \$ |        |        |         |        |        |         |         |         |         |         |                    |        |
|--|------------------------|--------|--------|---------|--------|--------|---------|---------|---------|---------|---------|--------------------|--------|
|  | 2011                   | 2012   | 2013   | 2014    | 2015   | 2016   | 2017    | 2018    | 2019    | 2020    | 2021    | 2022               | 2023   |
| Current Year Project Cost in Year of Expenditure Dollars | 6.8                    | 10.5   | 4.4    | 7.7     | 4.3    | 3.7    | 3.9     | 5.0     | 7.7     | 12.9    | 10.4    | 12.3               | 9.0    |
| Previously Deferred Revenue                              | + 0.0                  | + 0.0  | +(3.6) | +(5.6)  | +(4.4) | +(8.5) | +(11.7) | +(14.5) | +(16.4) | +(15.5) | +(11.6) | +(8.3)             | +(3.1) |
| Current Year Revenue                                     | - 6.8                  | - 14.1 | - 6.4  | - 6.5   | - 8.5  | - 6.8  | - 6.8   | - 6.8   | - 6.8   | - 9.0   | - 7.1   | - 7.1              | - 8.3  |
| Total Deferred Revenue                                   | 0.0                    | (3.6)  | (5.6)  | (4.4)   | (8.5)  | (11.7) | (14.5)  | (16.3)  | (15.5)  | (11.6)  | (8.3)   | (3.1)              | (2.4)  |
| LONG TERM (2024-2035)                                    | 2024                   | 2025   | 2026   | 2027    | 2028   | 2029   | 2030    | 2031    | 2032    | 2033    | 2034    | 2035               |        |
|  |                        |        |        |         |        |        |         |         |         |         |         |                    |        |
| Current Year Project Cost in Year of Expenditure Dollars | 16.0                   | 5.0    | 5.3    | 21.3    | 5.8    | 5.9    | 10.8    | 6.3     | 17.3    | 13.9    | 16.1    | 17.1               |        |
| Previously Deferred Revenue                              | +(2.4)                 | + 5.1  | +(0.9) | +(17.9) | +(5.8) | +(9.4) | +(13.2) | +(15.0) | +(19.1) | +(12.3) | +(9.2)  | +(4.3)             |        |
| Current Year Revenue                                     | - 8.5                  | - 11.0 | - 22.3 | - 9.2   | - 9.4  | - 9.7  | - 12.6  | - 10.4  | - 10.5  | - 10.8  | - 11.1  | - 13.9             |        |
| Total Deferred Revenue                                   | 5.1                    | (0.9)  | (17.9) | (5.8)   | (9.4)  | (13.2) | (15.0)  | (19.1)  | (12.3)  | (9.2)   | (4.3)   | (1.1) <sup>1</sup> |        |

Summary:

Assume total capital cost for all Transit improvements is \$239.3 million

Revenues or spending is the estimated yearly funding to spent on projects to reduce the total projects deferred to the next year

Transit 2.1% annual project inflation from 2011-2035, which reflects 85% of CPI. Currently Transit Projects Costs from 2011-2035 are shown in Year of Expenditure Dollars resulting in a 0.0% Inflation.

Note: 1) In 2035 a surplus of \$1.1 million is projected.

# 2035 Metropolitan Transportation Plan

**Table 6-14 Public Transportation Capital Projects and Operations & Maintenance Expenses — Short-Term (2011–2023)**

| Project Number   |  | 2011              | 2012              | 2013     | 2014    | 2015    | 2016    | 2017    | 2018    | 2019     | 2020     | 2021     | 2022     | 2023    |
|--|--|-------------------|-------------------|----------|---------|---------|---------|---------|---------|----------|----------|----------|----------|---------|
| <b>FLEET REPLACEMENT (# OF VEHICLES)</b>                           |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| 801-S & 801-L  | PEOPLE MOVER   |                   | 11                |          |         |         |         |         |         |          | 18       |          | 15       | 8       |
| 806-S & 806-L  | ANCHORRIDES  |                   | 9                 | 9        | 9       | 9       | 10      | 10      | 10      | 10       | 10       | 11       | 11       | 11      |
| 808-S & 808-L  | SHARE-A-RIDE   |                   | 15                | 15       | 15      | 15      | 16      | 20      | 20      | 20       | 20       | 21       | 25       | 25      |
| <b>FLEET EXPANSION</b>   |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| 802  | Service Expansion -- Increase span of service Mon-Fri, Sun; Misc Service Improvements. | 0 buses           |                   |          |         | 2       | 0       | 0       | 2       | 0        | 0        | 12       | 0        | 0       |
| 803  | Service Expansion --:30 headways on all routes   | 2 buses           |                   |          |         | 2       |         |         |         |          |          |          |          |         |
| 804  | Service Expansion --:15 peak service on 3, 36, 45                                      | 12 buses          |                   |          |         |         |         |         |         |          |          | 12       |          |         |
| 820  | Service Expansion --:15 peak service on 7, 9, 15                                       | 10 buses          |                   |          |         |         |         |         |         |          |          |          |          |         |
| 821  | Service Expansion -- Mat-Su Anchorage Express Bus Service                              | 6 buses           |                   |          |         |         |         |         |         |          |          |          |          |         |
| 823  | Bus Rapid Transit Downtown, Midtown, & U-Med District Core Service                     | 8 buses           |                   |          |         |         |         |         |         |          |          |          |          |         |
| 805  | New Service - South Anchorage-Hillside   | 2 buses           |                   |          |         |         |         |         | 2       |          |          |          |          |         |
| 822  | New Service - Klatt/Southport, Abbott/Elmore, International Airport Road               | 6 buses           |                   |          |         |         |         |         |         |          |          |          |          |         |
| 824  | New Service - South Anchorage to Downtown Express Route                                | 2 buses           |                   |          |         |         |         |         |         |          |          |          |          |         |
| 825  | New Service - Chugiak-Eagle River Local Service  | 0 buses           |                   |          |         |         |         |         |         |          |          |          |          |         |
| 807-S & 807-L  | AnchorRIDES expansion  |                   | 1                 | 1        | 1       | 1       | 1       | 1       | 1       | 1        | 1        | 1        | 1        | 1       |
| 809-S & 809-L  | Vanpool expansion  |                   | 5                 | 5        | 5       | 5       | 5       | 5       | 5       | 5        | 5        | 5        | 5        | 5       |
|  |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
|  |  | PRICE PER VEHICLE | R-6 40' and 5 30' |          |         |         |         |         |         |          |          |          |          |         |
|  | PEOPLE MOVER   | \$ 0.402          | \$ 4.51           | \$ -     | \$ -    | \$ 0.87 | \$ -    | \$ -    | \$ 0.93 | \$ -     | \$ 8.72  | \$ 5.94  | \$ 7.58  | \$ 4.13 |
|  | ANCHOR RIDES   | \$ 0.069          | \$ 0.70           | \$ 0.72  | \$ 0.73 | \$ 0.75 | \$ 0.84 | \$ 0.86 | \$ 0.88 | \$ 0.90  | \$ 0.92  | \$ 1.02  | \$ 1.04  | \$ 1.06 |
|  | SHARE-A-RIDE   | \$ 0.042          | \$ 0.86           | \$ 0.88  | \$ 0.89 | \$ 0.91 | \$ 0.98 | \$ 1.19 | \$ 1.21 | \$ 1.24  | \$ 1.27  | \$ 1.34  | \$ 1.58  | \$ 1.62 |
| <b>TOTAL VEHICLE COST (2011 \$)</b>                                |  |                   | \$ 6.08           | \$ 1.59  | \$ 1.63 | \$ 2.54 | \$ 1.82 | \$ 2.05 | \$ 3.02 | \$ 2.14  | \$ 10.91 | \$ 8.30  | \$ 10.20 | \$ 6.81 |
| <b>CAPITAL Program</b>   |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
|  | People Mover Fleet Replacement and Expansion   |                   | \$ 4.51           | \$ -     | \$ -    | \$ 0.87 | \$ -    | \$ -    | \$ 0.93 | \$ -     | \$ 8.72  | \$ 5.94  | \$ 7.58  | \$ 4.13 |
|  | AnchorRIDES Fleet Replacement and Expansion  |                   | \$ 0.70           | \$ 0.72  | \$ 0.73 | \$ 0.75 | \$ 0.84 | \$ 0.86 | \$ 0.88 | \$ 0.90  | \$ 0.92  | \$ 1.02  | \$ 1.04  | \$ 1.06 |
|  | Share-a-Ride (Vanpool) Fleet Replacement and Expansion                                 |                   | \$ 0.86           | \$ 0.88  | \$ 0.89 | \$ 0.91 | \$ 0.98 | \$ 1.19 | \$ 1.21 | \$ 1.24  | \$ 1.27  | \$ 1.34  | \$ 1.58  | \$ 1.62 |
| 810-S & 810-L  | Bus Stop Improvements  | 0.50              | \$ 0.51           | \$ 0.52  | \$ 0.53 | \$ 0.54 | \$ 0.55 | \$ 0.57 | \$ 0.58 | \$ 0.59  | \$ 0.60  | \$ 0.62  | \$ 0.63  | \$ 0.64 |
| 811  | Transit Centers & Facilities   |                   | \$ 1.04           | \$ 1.06  |         |         |         |         |         |          |          |          |          |         |
| 812-S & 812-L  | ITS/Automated Operating Systems  | 0.10              | \$ 0.10           | \$ 0.10  | \$ 0.11 | \$ 0.11 | \$ 0.11 | \$ 0.11 | \$ 0.12 | \$ 0.12  | \$ 0.12  | \$ 0.12  | \$ 0.13  | \$ 0.13 |
| 813-S & 813-L  | Fleet Improvements/Support Equipment   | 0.25              | \$ 0.26           | \$ 0.26  | \$ 0.27 | \$ 0.27 | \$ 0.28 | \$ 0.28 | \$ 0.29 | \$ 0.30  | \$ 0.30  | \$ 0.31  | \$ 0.31  | \$ 0.32 |
| 814-S & 814-L  | Management Information Systems   | 0.05              | \$ 0.05           | \$ 0.05  | \$ 0.05 | \$ 0.05 | \$ 0.06 | \$ 0.06 | \$ 0.06 | \$ 0.06  | \$ 0.06  | \$ 0.06  | \$ 0.06  | \$ 0.06 |
| 815-S & 815-L  | Support Vehicles   | 0.10              | \$ 0.10           | \$ 0.10  | \$ 0.11 | \$ 0.11 | \$ 0.11 | \$ 0.11 | \$ 0.12 | \$ 0.12  | \$ 0.12  | \$ 0.12  | \$ 0.13  | \$ 0.13 |
| 816  | Dimond Center Intermodal Facility  |                   | \$ 2.70           |          |         |         |         |         |         |          |          |          |          |         |
| 817  | Muldoon Transit Center Relocation  |                   |                   |          | \$ 3.19 |         |         |         |         |          |          |          |          |         |
| 823  | BRT Routes (Very Small Start)--Stops & Stations  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| 818-S & 818-L  | Anchorage Ridesharing/Transit Marketing  |                   | \$ 0.72           | \$ 0.72  | \$ 0.72 | \$ 0.72 | \$ 0.74 | \$ 0.76 | \$ 0.78 | \$ 0.79  | \$ 0.81  | \$ 0.83  | \$ 0.86  | \$ 0.88 |
| 819  | Transit Warm Storage Expansion   |                   |                   |          |         |         |         |         |         | \$ 3.543 |          |          |          |         |
| <b>CAPITAL Annual Total</b>  |  |                   | \$ 6.80           | \$ 10.52 | \$ 4.40 | \$ 7.67 | \$ 4.34 | \$ 3.67 | \$ 3.94 | \$ 4.95  | \$ 7.65  | \$ 12.93 | \$ 10.37 | \$ 8.97 |
| <b>OPERATIONS &amp; MAINTENANCE COSTS</b>                          |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| 2011 Operating Budget, as amended in AM 153-2011 (A)               |  |                   | \$ 26.3           | \$ 26.9  | \$ 27.6 | \$ 28.3 | \$ 29.0 | \$ 29.7 | \$ 30.5 | \$ 31.2  | \$ 32.0  | \$ 32.8  | \$ 33.6  | \$ 34.5 |
|  | Service Expansion -- Increase span of service Mon-Fri, Sun; Misc Service Improvements. | 0.50              |                   | \$ 0.500 |         |         |         |         |         |          |          |          |          |         |
|  | Service Expansion -- :30 headways on all routes  | 4.00              |                   |          |         |         | \$ 2.00 |         |         | \$ 2.00  |          |          |          |         |
|  | Service Expansion -- :15 peak service on 3, 36, 45                                     | 1.20              |                   |          |         |         |         |         |         |          |          |          | \$ 1.20  |         |
|  | Service Expansion -- :15 peak service on 7, 9, 15                                      | 1.00              |                   |          |         |         |         |         |         |          |          |          |          |         |
|  | Service Expansion -- Glenn Highway Commute, Eagle River Local Service                  | 3.00              |                   |          |         |         |         |         |         |          |          |          |          |         |
|  | Bus Rapid Transit Downtown, Midtown, & U-Med District Core Service                     | 3.10              |                   |          |         |         |         |         |         |          |          |          |          |         |
|  | New Service - South Anchorage-Hillside   | 1.10              |                   |          |         |         |         |         |         | \$ 1.10  |          |          |          |         |
|  | New Service - Klatt/Southport, Abbott/Elmore, International Airport Road               |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| <b>Notes/Assumptions</b>   |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| Vehicle costs based on 2011 actuals                                |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| People Mover buses replaced every 12 years                         |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| AnchorRIDES & Vanpool vehicles replaced every 5 years              |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| People Mover phased expansion--Doubles fleet over life of the plan |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| AnchorRIDES expansion of 1% annually                               |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| Vanpool expansion doubles fleet by 2031                            |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| Dimond Center Intermodal Facility to be costed                     |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| RTA Recommendations yet to be costed                               |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |
| Annual operating budget inflated 2.5% annually                     |  |                   |                   |          |         |         |         |         |         |          |          |          |          |         |

Table 6-15 Public Transportation Capital Projects and Operations & Maintenance Expenses — Long-Term (2024–2035)

| Project Number   | 2024            | 2025           | 2026           | 2027            | 2028           | 2029           | 2030            | 2031           | 2032            | 2033            | 2034            | 2035            | TOTALS           |
|--|-----------------|----------------|----------------|-----------------|----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| <b>FLEET REPLACEMENT (# OF VEHICLES)</b>   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 801-S & 801-L<br>PEOPLE MOVER  | 11              |                |                | 2               | 0              | 0              |                 | 0              | 18              | 12              | 15              | 8               | 118              |
| 806-S & 806-L<br>ANCHORRIDES   | 11              | 11             | 12             | 12              | 12             | 12             | 12              | 13             | 13              | 13              | 13              | 13              | 266              |
| 808-S & 808-L<br>SHARE-A-RIDE  | 25              | 25             | 26             | 30              | 30             | 30             | 30              | 31             | 30              | 30              | 30              | 30              | 574              |
| <b>FLEET EXPANSION</b>   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| Service Expansion -- Increase span of service Mon-Fri, Sun; Misc Service Improvements. | 10              | 0              | 0              | 6               | 0              | 0              | 8               | 0              | 0               | 0               | 0               | 8               | 0                |
| 802<br>Service Expansion --30 headways on all routes                                   | 0 buses         |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 803<br>Service Expansion --15 peak service on 3, 36, 45                                | 2 buses         |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 804<br>Service Expansion --15 peak service on 7, 9, 15                                 | 12 buses        |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 820<br>Service Expansion -- Mat-Su Anchorage Express Bus Service                       | 10 buses        |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 821<br>Service Expansion -- Klatt/Southport, Abbott/Elmore, International Airport Road | 6 buses         |                |                | 6               |                |                |                 |                |                 |                 |                 |                 |                  |
| 823<br>Bus Rapid Transit Downtown, Midtown, & U-Med District Core Service              | 8 buses         |                |                |                 |                |                | 8               |                |                 |                 |                 |                 |                  |
| 805<br>New Service - South Anchorage-Hillside  | 2 buses         |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 822<br>New Service - Klatt/Southport, Abbott/Elmore, International Airport Road        | 6 buses         |                |                |                 |                |                |                 |                |                 |                 |                 | 6               |                  |
| 824<br>New Service - South Anchorage to Downtown Express Route                         | 2 buses         |                |                |                 |                |                |                 |                |                 |                 |                 | 2               |                  |
| 825<br>New Service - Chugiak-Eagle River Local Service                                 | 0 buses         |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 807-S & 807-L<br>AnchorRIDES expansion   | 1               | 1              | 1              | 1               | 1              | 1              | 1               | 1              | 1               | 1               | 1               | 1               | 24               |
| 809-S & 809-L<br>Vanpool expansion   | 5               | 5              | 5              | 5               | 5              | 5              | 5               | 5              |                 |                 |                 |                 | 100              |
| <b>PEOPLE MOVER</b>  |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| ANCHOR RIDES   | \$ 11.06        | \$ -           | \$ -           | \$ 4.48         | \$ -           | \$ -           | \$ 4.77         | \$ -           | \$ 11.20        | \$ 7.62         | \$ 9.73         | \$ 10.59        | \$ 92.14         |
| SHARE-A-RIDE   | \$ 1.65         | \$ 1.69        | \$ 1.78        | \$ 2.05         | \$ 2.09        | \$ 2.14        | \$ 2.18         | \$ 2.29        | \$ 1.95         | \$ 1.99         | \$ 2.03         | \$ 2.07         | \$ 37.89         |
| TOTAL VEHICLE COST (2011 \$)   | \$ 13.80        | \$ 2.79        | \$ 3.00        | \$ 7.79         | \$ 3.37        | \$ 3.44        | \$ 8.29         | \$ 3.76        | \$ 14.64        | \$ 11.14        | \$ 13.32        | \$ 14.26        | \$ 156.66        |
| <b>CAPITAL Program</b>   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| People Mover Fleet Replacement and Expansion   | \$ 11.06        | \$ -           | \$ -           | \$ 4.48         | \$ -           | \$ -           | \$ 4.77         | \$ -           | \$ 11.20        | \$ 7.62         | \$ 9.73         | \$ 10.59        | \$ 92.14         |
| AnchorRIDES Fleet Replacement and Expansion  | \$ 1.08         | \$ 1.11        | \$ 1.23        | \$ 1.25         | \$ 1.28        | \$ 1.30        | \$ 1.33         | \$ 1.46        | \$ 1.49         | \$ 1.53         | \$ 1.56         | \$ 1.59         | \$ 26.64         |
| Share-a-Ride (Vanpool) Fleet Replacement and Expansion                                 | \$ 1.65         | \$ 1.69        | \$ 1.78        | \$ 2.05         | \$ 2.09        | \$ 2.14        | \$ 2.18         | \$ 2.29        | \$ 1.95         | \$ 1.99         | \$ 2.03         | \$ 2.07         | \$ 37.89         |
| 810-S & 810-L<br>Bus Stop Improvements   | \$ 0.66         | \$ 0.67        | \$ 0.68        | \$ 0.70         | \$ 0.71        | \$ 0.73        | \$ 0.74         | \$ 0.76        | \$ 0.77         | \$ 0.79         | \$ 0.81         | \$ 0.82         | \$ 15.72         |
| 811<br>Transit Centers & Facilities  |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 2.11          |
| 812-S & 812-L<br>ITS/Automated Operating Systems                                       | \$ 0.13         | \$ 0.13        | \$ 0.14        | \$ 0.14         | \$ 0.14        | \$ 0.15        | \$ 0.15         | \$ 0.15        | \$ 0.15         | \$ 0.16         | \$ 0.16         | \$ 0.16         | \$ 3.14          |
| 813-S & 813-L<br>Fleet Improvements/Support Equipment                                  | \$ 0.33         | \$ 0.33        | \$ 0.34        | \$ 0.35         | \$ 0.36        | \$ 0.36        | \$ 0.37         | \$ 0.38        | \$ 0.39         | \$ 0.39         | \$ 0.40         | \$ 0.41         | \$ 7.86          |
| 814-S & 814-L<br>Management Information Systems  | \$ 0.07         | \$ 0.07        | \$ 0.07        | \$ 0.07         | \$ 0.07        | \$ 0.07        | \$ 0.07         | \$ 0.08        | \$ 0.08         | \$ 0.08         | \$ 0.08         | \$ 0.08         | \$ 1.57          |
| 815-S & 815-L<br>Support Vehicles  | \$ 0.13         | \$ 0.13        | \$ 0.14        | \$ 0.14         | \$ 0.14        | \$ 0.15        | \$ 0.15         | \$ 0.15        | \$ 0.15         | \$ 0.16         | \$ 0.16         | \$ 0.16         | \$ 3.14          |
| 816<br>Dimond Center Intermodal Facility   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 2.70          |
| 817<br>Muldoon Transit Center Relocation   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 3.19          |
| 823<br>BRT Routes (Very Small Start)--Stops & Stations                                 |                 |                |                | \$ 11.10        |                |                |                 |                |                 |                 |                 |                 | \$ 11.10         |
| 818-S & 818-L<br>Anchorage Ridesharing/Transit Marketing                               | \$ 0.90         | \$ 0.92        | \$ 0.94        | \$ 0.97         | \$ 0.99        | \$ 1.02        | \$ 1.04         | \$ 1.07        | \$ 1.10         | \$ 1.12         | \$ 1.15         | \$ 1.18         | \$ 21.73         |
| 819<br>Transit Warm Storage Expansion  |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 3.54          |
| <b>CAPITAL Annual Total</b>  | <b>\$ 16.01</b> | <b>\$ 5.05</b> | <b>\$ 5.31</b> | <b>\$ 21.25</b> | <b>\$ 5.79</b> | <b>\$ 5.91</b> | <b>\$ 10.81</b> | <b>\$ 6.34</b> | <b>\$ 17.28</b> | <b>\$ 13.84</b> | <b>\$ 16.08</b> | <b>\$ 17.08</b> | <b>\$ 239.28</b> |
| <b>OPERATIONS &amp; MAINTENANCE COSTS</b>  |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| 2011 Operating Budget, as amended in AM 153-2011 (A)                                   | \$ 36.2         | \$ 37.1        | \$ 38.0        | \$ 39.0         | \$ 40.0        | \$ 41.0        | \$ 42.0         | \$ 43.0        | \$ 44.1         | \$ 45.2         | \$ 46.4         | \$ 47.5         | \$ 897.3         |
| Service Expansion -- Increase span of service Mon-Fri, Sun; Misc Service Improvements. | 0.50            |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 0.500         |
| Service Expansion -- :30 headways on all routes  | 4.00            |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 4.000         |
| Service Expansion -- :15 peak service on 3, 36, 45                                     | 1.20            |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 1.200         |
| Service Expansion -- :15 peak service on 7, 9, 15                                      | 1.00            | \$ 1.000       |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 1.000         |
| Service Expansion -- Glenn Highway Commute, Eagle River Local Service                  | 3.00            |                |                |                 | \$ 3.00        |                |                 |                |                 |                 |                 |                 | \$ 3.000         |
| Bus Rapid Transit Downtown, Midtown, & U-Med District Core Service                     | 3.10            |                |                |                 |                |                |                 | \$ 3.10        |                 |                 |                 |                 | \$ 3.100         |
| New Service - South Anchorage-Hillside   | 1.10            |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ 1.100         |
| New Service - Klatt/Southport, Abbott/Elmore, International Airport Road               |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 | \$ -             |
| <b>Notes/Assumptions</b>   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| Vehicle costs based on 2011 actuals  |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| People Mover buses replaced every 12 years   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| AnchorRIDES & Vanpool vehicles replaced every 5 years                                  |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| People Mover phased expansion--Doubles fleet over life of the plan                     |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| AnchorRIDES expansion of 1% annually   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| Vanpool expansion doubles fleet by 2031  |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| Dimond Center Intermodal Facility to be costed   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| RTA Recommendations yet to be costed   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |
| Annual operating budget inflated 2.5% annually   |                 |                |                |                 |                |                |                 |                |                 |                 |                 |                 |                  |

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ing for public transportation until the 2011 legislative session, when \$1.0 million statewide was approved for 50/50 matching to cover capital and operations costs. For this MTP, it is assumed that a similar level of state support for public transportation will continue in the future.

Funding for the expanded operations of the public transportation system will require increased MOA general fund allocations or new sources. Funding from property taxes depends on the willingness of the Municipal Assembly and the MOA Administration to allocate money for this purpose and on support of the general public. Many other public transportation systems receive allocations from additional funding sources, such as a percentage of sales tax, gasoline tax, or vehicle registration tax.

### Non-Motorized Transportation Capital Costs

Projects identified in the 2010 Anchorage Bicycle Plan, 2007 Anchorage Pedestrian Plan, and 1997 Areawide Trails Plan were considered for inclusion in this MTP. First, the projects that were remaining to be built from the Trails Plan, with the exceptions of the Coastal Trail extension and Alaska Railroad Trail, were added to the initial list. Next, bicycle facility projects located on the core bicycle network and identified as a “Priority A” projects within the Bicycle Plan were included in the initial list of projects. Finally, the pedes-

trian projects identified in the Anchorage Pedestrian Plan, excluding crosswalks, that ranked within the top 200 on the Project Priority List and were not covered in either the trails or bicycle plans were included in the initial list of projects. After the initial list was compiled, the non-motorized projects that were adjacent to the MTP roadway projects were removed from the list. Those non-motorized elements were included in the cost estimates for the related roadway projects and assumed to be built as part of that particular roadway improvement. The remaining projects were given a project cost estimate and scored using the project screening criteria to develop the list of short-term, long-term, and illustrative projects. See Chapter 7 for the screening criteria.

Project cost estimates were either inflated at 4 percent per year from the plan in which they were identified or were revised by the MOA to better reflect the complete project cost in 2010 dollars.

The funding sources for non-motorized transportation capital improvement projects are shown in **Table 6-16**. The annual funding amounts and the annual use of the revenue for the non-motorized transportation projects are shown in **Table 6-17**. Funding for the non-motorized projects was based on historical revenue trends, including federal, state and local sources. Federal funding for non-motorized projects is based on 10% of non-NHS funding which is the established AMATS policy. Sidewalk, bicycle, and trail

improvements included as part of roadway projects are in addition to the non-motorized projects shown in these tables.

### Maintenance Costs

Estimated maintenance costs for sidewalks, bicycle paths, and trails adjacent to roadways are incorporated into the roadway O&M costs. The MOA Parks and Recreation Department estimated cost to maintain a trail that is not adjacent to a roadway at \$2,600 per mile. As part of this MTP, 3.41 additional miles of trails, not adjacent to roadways, are anticipated to be built at an additional cost of about \$8,900 per year. This additional cost is expected to be absorbed as part of the annual budget for the MOA Parks and Recreation Department over time.

### Alaska Railroad

#### Capital and Operating Costs and Estimated Revenues

Capital funding for selected Alaska Railroad Corporation (ARRC) improvements is estimated to originate from the FTA and the Federal Railroad Administration (FRA). The O&M of railroad capital facilities is the responsibility of the ARRC. The corporation reports systemwide operating, capital, and funding sources for purposes of the National Transit Database. FTA formula programs (Urbanized Area Formula funds and Fixed Guideway Modernization funds) are calculated on passenger revenue vehicle miles and rail route miles.



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**Table 6-16 Non-Motorized Projects Capital Funding Sources — Short-Term (2011–2023) & Long-Term (2024–2035)**

| SHORT TERM (2011-2023)                         | FUNDING IN MILLIONS \$ |            |            |            |            |            |            |            |            |            |            |            |            |                      |
|--|------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|----------------------|
|  | NOTES                  | 2011       | 2012       | 2013       | 2014       | 2015       | 2016       | 2017       | 2018       | 2019       | 2020       | 2021       | 2022       | 2023                 |
| <b>Revenue Estimates</b>                       |                        |            |            |            |            |            |            |            |            |            |            |            |            |                      |
| TE Funds (10% of AMATS Allocation)             | 1                      | 3.3        | 1.9        | 1.9        | 2.0        | 2.0        | 2.0        | 2.0        | 2.0        | 2.0        | 2.0        | 2.0        | 2.0        | 2.0                  |
| State Match to federal funds (TE)              | 2                      | 0.2        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1                  |
| Local Match to federal funds (TE)              | 3                      | 0.2        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1                  |
| MOA Capital (bonds to bike/ped MTP projects)   | 4                      | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4        | 0.4                  |
| AK Legislative Capital Program - Non-Motorized | 5                      | 2.7        | 2.7        | 2.7        | 2.8        | 2.8        | 2.9        | 3.0        | 3.1        | 3.1        | 3.2        | 3.3        | 3.4        | 3.5                  |
| <b>Estimated Total Sources of Funding</b>      |                        | <b>6.8</b> | <b>5.2</b> | <b>5.2</b> | <b>5.4</b> | <b>5.4</b> | <b>5.5</b> | <b>5.6</b> | <b>5.7</b> | <b>5.7</b> | <b>5.8</b> | <b>5.9</b> | <b>6.0</b> | <b>6.1</b>           |
| LONG TERM (2024-2035)                          | NOTES                  | 2024       | 2025       | 2026       | 2027       | 2028       | 2029       | 2030       | 2031       | 2032       | 2033       | 2034       | 2035       | TOTAL<br>2011 - 2035 |
| <b>Revenue Estimates</b>                       |                        |            |            |            |            |            |            |            |            |            |            |            |            |                      |
| TE Funds (10% of AMATS Allocation)             | 1                      | 2.0        | 2.1        | 2.1        | 2.2        | 2.2        | 2.3        | 2.4        | 2.4        | 2.5        | 2.5        | 2.6        | 2.7        | 55.1                 |
| State Match to federal funds (TE)              | 2                      | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 2.6                  |
| Local Match to federal funds (TE)              | 3                      | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 0.1        | 2.6                  |
| MOA Capital (bonds to bike/ped MTP projects)   | 4                      | 0.4        | 0.4        | 0.4        | 0.4        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 0.5        | 10.8                 |
| AK Legislative Capital Program - Non-Motorized | 5                      | 3.5        | 3.6        | 3.7        | 3.8        | 3.9        | 4.0        | 4.1        | 4.2        | 4.3        | 4.4        | 4.5        | 4.6        | 87.8                 |
| <b>Estimated Total Sources of Funding</b>      |                        | <b>6.1</b> | <b>6.3</b> | <b>6.4</b> | <b>6.6</b> | <b>6.8</b> | <b>7.0</b> | <b>7.2</b> | <b>7.3</b> | <b>7.5</b> | <b>7.6</b> | <b>7.8</b> | <b>8.0</b> | <b>158.9</b>         |

Note 1) 10% of AMATS allocation per current policy

Note 2) Assumes State Match of 50% of TE funds

Note 3) Assumes Local Match of 50% of TE funds

Note 4) Historical spending of MOA bonds. 2011-2016 = proposed CIP of MTP projects, 2017 = 2011-2016 average of actual/proposed bonds to MTP projects and then increased annually by CPI\*

Note 5) 2005 - 2011 = State Legislative Capital Grants to the MOA for non-motorized projects; averaged and increased annually by CPI starting 2014

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Table 6-17 Sources and Uses of Revenue for Non-motorized Transportation Projects

| SHORT TERM (2011-2023)            | SOURCE                | REVENUE IN MILLIONS \$ |                   |       |       |       |       |       |       |       |       |       |       |                    |       |
|-----------------------------------|-----------------------|------------------------|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------|-------|
|                                   |                       | 2010                   | 2011              | 2012  | 2013  | 2014  | 2015  | 2016  | 2017  | 2018  | 2019  | 2020  | 2021  | 2022               | 2023  |
| Total Project Costs               | Total Project cost    | 61.2                   | 63.6              | 59.1  | 56.0  | 52.9  | 49.4  | 45.7  | 41.8  | 37.7  | 33.3  | 28.7  | 23.9  | 18.7               | 13.2  |
| Less: Year's Spending             | 2011-2035 Annual Rev. |                        | -6.8              | -5.2  | -5.2  | -5.4  | -5.4  | -5.5  | -5.6  | -5.7  | -5.7  | -5.8  | -5.9  | -6.0               | -6.1  |
| Projects Deferred to Future Years |                       |                        | 56.8              | 53.9  | 50.8  | 47.5  | 44.0  | 40.2  | 36.3  | 32.0  | 27.6  | 22.9  | 18.0  | 12.7               | 7.1   |
| Inflation                         |                       |                        | +4.0%             | +4.0% | +4.0% | +4.0% | +4.0% | +4.0% | +4.0% | +4.0% | +4.0% | +4.0% | +4.0% | +4.0%              | +4.0% |
| Deferred Projects                 |                       |                        | 59.1              | 56.0  | 52.9  | 49.4  | 45.7  | 41.8  | 37.7  | 33.3  | 28.7  | 23.9  | 18.7  | 13.2               | 7.4   |
| LONG TERM (2024-2035)             | SOURCE                |                        |                   |       |       |       |       |       |       |       |       |       |       |                    |       |
|                                   |                       | 2023                   | 2024              | 2025  | 2026  | 2027  | 2028  | 2029  | 2030  | 2031  | 2032  | 2033  | 2034  | 2035               |       |
| Total Project Costs               | Total Project cost    | 7.4                    | 69.6 <sup>1</sup> | 65.8  | 61.6  | 57.1  | 52.3  | 47.0  | 41.4  | 35.4  | 29.1  | 22.4  | 15.3  | 7.8                |       |
| Less: Year's Spending             | 2011-2035 Annual Rev. |                        | -6.1              | -6.3  | -6.4  | -6.6  | -6.8  | -7.0  | -7.2  | -7.3  | -7.5  | -7.6  | -7.8  | -8.0               |       |
| Projects Deferred to Future Years |                       |                        | 63.5              | 59.5  | 55.2  | 50.5  | 45.5  | 40.0  | 34.2  | 28.1  | 21.6  | 14.8  | 7.5   | (0.2)              |       |
| Inflation                         |                       |                        | +3.5%             | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5% | +3.5%              |       |
| Deferred Projects                 |                       |                        | 65.8              | 61.6  | 57.1  | 52.3  | 47.0  | 41.4  | 35.4  | 29.1  | 22.4  | 15.3  | 7.8   | (0.2) <sup>2</sup> |       |

Summary: Assume 2010 capital cost for all Bike/Ped/Trail improvements is \$99.2 million in 2010 dollars.

Revenues or spending is the estimated yearly funding to spent on projects to reduce the total projects deferred to the next year

Note 1) Equals 2023 deferred project total plus inflated long term project costs.

Note 2) In 2035, a surplus of \$0.2 million is projected.

## Knik Arm Crossing—Public-Private Partnership

### Capital and Operating Costs, Estimated Revenues, and Financial Plan

The effort to develop the MTP financial plan for the Knik Arm Crossing project was a cooperative effort between the AMATS staff and representatives from the Knik Arm Bridge and Toll Authority (KABATA), a public corporation of the State of Alaska. The detailed financial information prepared for the Knik Arm Crossing far exceeds that required for an MTP. The financial information simplifies the key elements of available data at a planning level and in a format that is similar to the financial planning assumptions, forecast, and descriptions used for all other modes of transportation and projects in the MTP. The financial analysis in this plan is based on the February 2011 “pro-forma” funding plan that KABATA has developed as one potential funding scenario based on current information, market forces, and investor climate. The project is evolving and additional funding scenarios are anticipated.

In general terms, the financial plan for the Knik Arm Crossing is for a toll project—the only toll facility recommended in the MTP—expected to generate revenue from user fees. Those fees will be used, directly indirectly, or both, to fund project construction, operations, and maintenance. The project is planned to be delivered under a public-private partner-

ship (P3). Under this structure, the selected private partner will finance, design, build, operate, and maintain the facility under the terms of a public-private agreement for an expected term of 35 years after substantial completion. The private partner will be compensated for the finance, design, build, operation, and maintenance through periodic payments called “availability fees.” Those availability fees will be paid by the project owner, KABATA, by using toll revenue backed by a state-provided project reserve fund. The private partner will be the borrower of debt financing and the provider of equity to fund construction of Phase I of the project and will also be responsible for Phase II future capacity improvements within the Phase I alignment. Phase II capacity improvements and project extensions, like the Ingra-Gambell couplet connection, will be funded separately by KABATA by using projected surplus toll revenue.

The revenue sources and amounts to support the project will be a blend and balanced mix of sources, including public and private funds. The opportunities to fund the project that would then be backed with future toll revenues are currently assumed to be a combination of private activity bonds, Transportation Infrastructure Finance and Innovation Act (TIFIA) loans, private equity, bank credit facilities/lines of credit, taxable bonds, and other sources unknown until project

proposals are received in 2012, after the MTP adoption. The public funds include state general funds, a proposed state-funded reserve account that is eventually replenished with surplus toll revenues, possibly state-issued general obligation bonds, and a small amount of state funds to match existing federal dollars.

There also is a reasonable expectation that funds from the federal Transportation Investment Generating Economic Recovery (TIGER) grant program could be used to support the project.

The private partner will consider many financial instruments in its plan of finance, but the actual plan will not be known until proposals are submitted and a partner is selected through a competitive procurement process. KABATA has engaged financial advisor Citigroup to prepare a pro forma financial plan that represents one potential financial solution. The ability of the selected private partner to obtain financing is reasonably expected, because the pro forma financial model indicates that revenue from tolls will exceed availability payments to the private partner by 50 percent during the 35-year contractual term of the P3 agreement.

State of Alaska legislation (SB 79/House Bill (HB) 80) was introduced in the 2011–2012 session. This pending legislation requests creation of a reserve account of \$150 million for the Knik Arm Crossing project. The reserve account, held by the State of Alaska Department of Revenue,

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would be created with an initial deposit of state general funds to fund availability fee payments to the private partner during the early years (8 to 10 years) of operation, until the tolls alone can support these payments. Collected tolls would replenish the reserve account and fund Phase II of the project. Another aspect of the pending legislation involves increasing KABATA's existing bond limit. The ability of KABATA to issue and refund bonds was established in the legislation that created the agency. The proposed legislation requests support to raise the bond issuance limit from \$500 million to \$600 million to match the potential funding allocation provided by the U.S. Department of Transportation. Raising the bond limit provides a more attractive financial mix of funding sources available to the P3 partner.

For the purposes of demonstrating fiscal constraint within this MTP, it is assumed that \$150 million would be the only additional state funds made available and that the allocation of these funds to a reserve account will not affect the allocation of the assumed flow of funds from the state to the rest of the roadway recommendations in the MTP.

The current pro forma plan suggests that KABATA would require the ability to pledge, transfer, or otherwise obligate and spend money that the legislature may appropriate in the future. However, the current financing plan for Knik Arm Crossing, including project toll revenues,

does not jeopardize federal program funds or state general funds directed by the legislature to projects in AMATS.

For purposes of fiscal constraint, the revenue assumptions about the Knik Arm Crossing for the MTP, which are consistent with KABATA's pro-forma financial plan, are as follows:

- All revenue sources for construction, other than existing federal and state funds, will be secured by the private partner. The private partner will assume all risk associated with finance, design, construction, operations, and maintenance of the facility.
- One-way tolls will be assessed at \$5 per passenger vehicle and \$18 per commercial vehicle, beginning in 2016 when the bridge is forecast to open.
- Toll fees will increase at an average of 2.5 percent per year.
- In accordance with the February 2011 analysis for KABATA by Wilbur Smith Associates, bridge traffic will increase from 6,700 at the 2016 opening to 36,000 vehicles per day in 2035.
- In contrast to the 2027 adopted Anchorage Bowl LRTP, which stipulated that no additional federal, state, or local funds were to be allocated to the project, tolls collected in the early years will not be sufficient to meet the availability payments to the private

partner, necessitating a legislative appropriation for a "loan" that would be repaid if toll revenues allow. Under SB 79, if approved, the state would provide a \$150 million loan, which is assumed will be repaid by tolls.

- In contrast to the 2027 adopted Anchorage Bowl LRTP, which stipulated that no additional federal, state, or local funds were to be allocated to the project, any gap between the tolls collected and the required availability payments to the private partner will be the responsibility of the State of Alaska, subject to appropriation. Under SB 80, if approved, the monetary obligations incurred by KABATA under partnerships or agreements would be obligations of the state and satisfaction of those obligations from funds other than authority funds is subject to appropriation.
- Any state appropriation associated with SB 79 or SB 80 to cover the required availability payments are assumed to be in excess of what is identified in the MTP and will not adversely affect the amount of state funds anticipated to be committed within the AMATS area.
- The state will assume all risks associated with the availability payments.
- No additional federal highway program funds will be allocated to



the crossing beyond those already identified by the DOT&PF and AMATS. The MTP carries forward the \$26 million previously identified in the 2027 Anchorage Bowl LRTP for the Ingra-Gambell couplet extension, which is part of Phase II of the Knik Arm Crossing project.

- Phase II will be funded from toll revenues, when traffic volumes warrant.

### Summary of Revenues and Costs

Similar to the information for other transportation improvements, for which project costs were updated, revenue assumptions and forecasts were revised, and inflation factors were applied, the Knik Arm Crossing project reflects updated costs, updated revenue sources and levels, and a spending plan. **Table 6-18** describes the funding scenario and cost allocations proposed for the Knik Arm Crossing.

The existing adopted 2027 Anchorage Bowl LRTP states that the Knik Arm Crossing project would have no effect on the ability to finance or implement the other LRTP projects. The current pro forma financing suggests that KABATA would require the ability to pledge, transfer, or otherwise obligate and spend money that the legislature may appropriate in the future. However, similar to 2027 Anchorage Bowl LRTP, the financing plan for Knik Arm Crossing does not jeopardize federal program funds or state

**Table 6-18 Sources and Uses of Revenue for Knik Arm Crossing**

| FUNDING SOURCES   | FUNDING<br>(MILLIONS OF \$) |
|---|-----------------------------|
| <b>Phase 1 Sources</b>  |                             |
| Public Sources  | 341                         |
| Private Sources   | 437                         |
| <b>Total Phase I Sources</b>                                    | <b>778</b>                  |
| <b>Phase 1 Uses</b>   |                             |
| Development and Construction                                    | 702                         |
| Operations and Maintenance                                      | 76                          |
| <b>Total Phase 1 Uses</b>                                       | <b>778</b>                  |
| <b>Phase II Sources</b>   |                             |
| Public Sources — Toll Revenue and Toll Revenue Backed Financing | 234                         |
| Private Sources   | 0                           |
| <b>Total Phase II Sources</b>                                   | <b>234</b>                  |
| <b>Phase II Uses</b>  |                             |
| Development and Construction                                    | 230                         |
| Operations and Maintenance                                      | 4                           |
| <b>Total Phase II Uses</b>                                      | <b>234</b>                  |

general funds directed by the legislature to projects in AMATS.

An important difference between the 2027 Anchorage Bowl LRTP and the 2035 MTP is that AMATS has assumed substantial future state funding for the rest of the transportation network within

the AMATS area, based on historical trends. AMATS does not have the ability to decide on the allocation of future state legislative appropriations to transportation improvements within the AMATS area.

For purposes of fiscal constraint in this MTP, it is assumed that if the State of Alaska elects to provide funds for the bridge reserve account or appropriate other state funds at its discretion, these funds would be in excess of the funding assumed by AMATS for implementing its 2035 MTP.

The P3 agreement with the successful developer cannot be finalized until a revenue source for the availability payment is committed by KABATA. The revenue or availability payment will be committed at the time the P3 agreement with the developer is signed, currently scheduled for the Fall of 2012. It should be noted that the revenue source for the availability payments is primarily dependent upon future toll-based revenue streams. KABATA has completed significant research to estimate what those future toll revenue streams will be based on forecasted population and employment forecasts developed by their consultants. If the revenue from the tolls is not sufficient to cover the availability payments, then the State of Alaska will have a legal obligation to pay until such time that tolls are sufficient. The MTP currently assumes that the State legislature may approve a \$150 million reserve account that is designed as a

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loan to cover the anticipated shortfall in toll revenues during the first years of the bridge operation. If this is insufficient to cover the shortfall, it is assumed that the State of Alaska will be asked to make annual appropriations as needed. Additional State of Alaska appropriations are not part of the financial constraint assumptions of the MTP. As a result, if annual appropriations are required, then the MTP's financial plan will have to be reassessed to ensure that the MTP meets the FHWA financial constraint requirements.

## CONCLUSION

In the Anchorage Assembly's ordinance (AO No. 2012-30S) adopting this Plan, the body specifically expressed the intent to protect against the degradation of other Anchorage road construction and maintenance programs contained in the Plan, by maintaining consistent priorities and preserving local road funding from diversion to the Knik Arm Crossing project.

No funding currently planned for AMATS project implementation of the existing MTP shall be used to support construction of any element of the Knik Arm Crossing.

**Table 6-19** depicts the short term (2011–2032) annual revenues by funding source that will be required to implement the MTP. Ongoing costs to operate and maintain the transportation system are borne by the MOA and the State of Alaska from annual operating budgets.

**Table 6-20** summarizes the long term (2024–2035) costs for the recommended MTP and the allocation of available revenues to fund implementation.

Transportation system infrastructure development, improvements, rehabilitation, and preservation are costly endeavors. The recommended transportation plan outlined in Chapter 6 will cost approximately \$3.8 billion for capital items and \$1.5 billion for O&M items.

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Table 6-19 2035 MTP Sources and Uses of Revenue - Short Term (2011-2023)

|                                   |                       | REVENUE IN MILLIONS \$ |         |         |         |         |        |        |         |         |         |         |         |        |        |                        |
|-----------------------------------|-----------------------|------------------------|---------|---------|---------|---------|--------|--------|---------|---------|---------|---------|---------|--------|--------|------------------------|
|                                   |                       | 2010                   | 2011    | 2012    | 2013    | 2014    | 2015   | 2016   | 2017    | 2018    | 2019    | 2020    | 2021    | 2022   | 2023   | SHORT<br>TERM<br>TOTAL |
| Road, Non-motorized, ARR          |                       |                        |         |         |         |         |        |        |         |         |         |         |         |        |        |                        |
| Total Project Costs               | Total Project Cost    | 1,175.2                | 1,222.2 | 1,154.8 | 1,104.4 | 1,066.1 | 978.4  | 924.1  | 834.3   | 741.1   | 642.2   | 537.4   | 382.2   | 263.1  | 137.3  |                        |
| Less: Year's Spending             | 2011-2035 Annual Rev. |                        | -111.8  | -92.9   | -79.3   | -125.4  | -89.8  | -121.9 | -121.7  | -123.6  | -125.4  | -170.0  | -129.2  | -131.1 | -133.1 | 1,555.2                |
| Projects Deferred to Future Years |                       |                        | 1,110.4 | 1,061.9 | 1,025.1 | 940.7   | 888.6  | 802.2  | 712.6   | 617.5   | 516.8   | 367.5   | 253.0   | 132.0  | 4.2    |                        |
| Inflation                         |                       |                        | +4%     | +4%     | +4%     | +4%     | +4%    | +4%    | +4%     | +4%     | +4%     | +4%     | +4%     | +4%    | +4%    |                        |
| Deferred Projects                 |                       |                        | 1,154.8 | 1,104.4 | 1,066.1 | 978.4   | 924.1  | 834.3  | 741.1   | 642.2   | 537.4   | 382.2   | 263.1   | 137.3  | 4.3    |                        |
| Public Transportation             |                       |                        |         |         |         |         |        |        |         |         |         |         |         |        |        |                        |
| Total Project Costs               | Total Project Cost    | 0.0                    | 6.8     | 10.5    | 4.4     | 7.7     | 4.3    | 3.7    | 3.9     | 5.0     | 7.7     | 12.9    | 10.4    | 12.3   | 9.0    |                        |
| Previously Deferred Revenue       |                       |                        | +0.0    | +0.0    | +(3.6)  | +(5.6)  | +(4.4) | +(8.5) | +(11.7) | +(14.5) | +(16.4) | +(15.5) | +(11.6) | +(8.3) | +(3.1) |                        |
| Less: Year's Spending             | 2011-2035 Annual Rev. |                        | -6.8    | -14.1   | -6.4    | -6.5    | -8.5   | -6.8   | -6.8    | -6.8    | -6.8    | -9.0    | -7.1    | -7.1   | -8.3   | 101.0                  |
| Deferred Projects                 |                       |                        | 0.0     | (3.6)   | (5.6)   | (4.4)   | (8.5)  | (11.7) | (14.5)  | (16.4)  | (15.5)  | (11.6)  | (8.3)   | (3.1)  | (2.4)  |                        |
|                                   |                       |                        |         |         |         |         |        |        |         |         |         |         |         |        |        |                        |
| Total Project Costs               | Total Project Cost    | 1,168.4                | 1,229.0 | 1,165.3 | 1,105.2 | 1,068.2 | 978.4  | 919.3  | 826.6   | 731.5   | 633.5   | 534.9   | 381.0   | 267.1  | 143.1  |                        |
| Less: Year's Spending             | 2011-2035 Annual Rev. |                        | -118.6  | -107.0  | -85.7   | -131.9  | -98.3  | -128.7 | -128.5  | -130.4  | -132.2  | -179.0  | -136.3  | -138.2 | -141.4 | 1,656.2                |
| Projects Deferred to Future Years |                       |                        | 1,110.4 | 1,058.4 | 1,019.6 | 936.4   | 880.1  | 790.6  | 698.1   | 601.1   | 501.3   | 355.9   | 244.7   | 128.9  | 1.7    |                        |
| Deferred Projects                 |                       |                        | 1,154.8 | 1,100.8 | 1,060.6 | 974.0   | 915.6  | 822.7  | 726.6   | 625.8   | 521.9   | 370.6   | 254.8   | 134.2  | 1.9    |                        |

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Table 6-20 2035 MTP Sources and Uses of Revenue - Long Term (2024-2035)

|   |                       | REVENUE IN MILLIONS \$ |         |         |         |         |         |         |         |         |         |        |        |                            |                   |
|---|-----------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|--------|----------------------------|-------------------|
|   |                       | 2024                   | 2025    | 2026    | 2027    | 2028    | 2029    | 2030    | 2031    | 2032    | 2033    | 2034   | 2035   | LONG<br>TERM<br>TO-<br>TAL | MTP<br>TO-<br>TAL |
| Road, Non-motorized, ARR                  |                       |                        |         |         |         |         |         |         |         |         |         |        |        |                            |                   |
| Total Project Costs                       | Total Project Cost    | 1,645.9                | 1,562.0 | 1,471.3 | 1,332.6 | 1,216.0 | 1,101.6 | 978.9   | 847.9   | 707.9   | 499.3   | 338.0  | 166.2  |                            |                   |
| Less: Year's Spending                     | 2011-2035 Annual Rev. | -136.7                 | -140.4  | -193.5  | -147.7  | -151.7  | -155.8  | -159.6  | -164.0  | -225.5  | -172.7  | -177.4 | -181.9 | 2,006.9                    | 3,562.1           |
| Projects Deferred to Future Years         |                       | 1,509.2                | 1,421.6 | 1,277.9 | 1,174.9 | 1,064.3 | 945.8   | 819.3   | 683.9   | 482.4   | 326.6   | 160.6  | (15.7) |                            |                   |
| Inflation                                 |                       | +3.5%                  | +3.5%   | +3.5%   | +3.5%   | +3.5%   | +3.5%   | +3.5%   | +3.5%   | +3.5%   | +3.5%   | +3.5%  | +3.5%  |                            |                   |
| Deferred Projects                         |                       | 1,562.0                | 1,471.3 | 1,332.6 | 1,216.0 | 1,101.6 | 978.9   | 847.9   | 707.9   | 499.3   | 338.0   | 166.2  | (16.2) |                            |                   |
| Public Transportation                     |                       |                        |         |         |         |         |         |         |         |         |         |        |        |                            |                   |
| Total Public Transportation Project Costs | Total Project Cost    | 16.0                   | 5.0     | 5.3     | 21.3    | 5.8     | 5.9     | 10.8    | 6.3     | 17.3    | 13.9    | 16.1   | 17.1   |                            |                   |
| Previously Deferred Revenue               | 2011-2035 Annual Rev. | +2.4                   | +5.1    | +(0.9)  | +(17.9) | +(5.8)  | +(9.4)  | +(13.2) | +(15.0) | +(19.1) | +(12.3) | +(9.2) | +(4.3) |                            |                   |
| Less: Year's Spending                     |                       | -8.5                   | -11.0   | -22.3   | -9.2    | -9.4    | -9.7    | -12.6   | -10.4   | -10.5   | -10.8   | -11.1  | -13.9  | 139.4                      | 240.4             |
| Deferred Projects                         |                       | 5.1                    | (0.9)   | (17.9)  | (5.8)   | (9.4)   | (13.2)  | (15.0)  | (19.1)  | (12.3)  | (9.2)   | (4.3)  | (1.1)  |                            |                   |
|   |                       |                        |         |         |         |         |         |         |         |         |         |        |        |                            |                   |
| Total Project Costs                       | Total Project Cost    | 1,659.5                | 1,572.1 | 1,475.8 | 1,326.0 | 1,216.0 | 1,098.0 | 976.5   | 839.3   | 706.1   | 500.8   | 344.8  | 179.0  |                            |                   |
| Less: Year's Spending                     | 2011-2035 Annual Rev. | -145.2                 | -151.4  | -215.8  | -156.9  | -161.1  | -165.5  | -172.2  | -174.4  | -236.0  | -183.5  | -188.5 | -195.8 | 2,146.3                    | 3,802.5           |
| Projects Deferred to Future Years         |                       | 1,514.2                | 1,420.7 | 1,260.0 | 1,169.1 | 1,054.9 | 932.5   | 804.3   | 664.9   | 470.1   | 317.3   | 156.3  | (16.8) |                            |                   |
| Deferred Projects                         |                       | 1,567.1                | 1,470.5 | 1,304.7 | 1,210.2 | 1,092.1 | 965.6   | 832.9   | 688.8   | 487.0   | 328.7   | 161.9  | (17.3) |                            |                   |



# Chapter



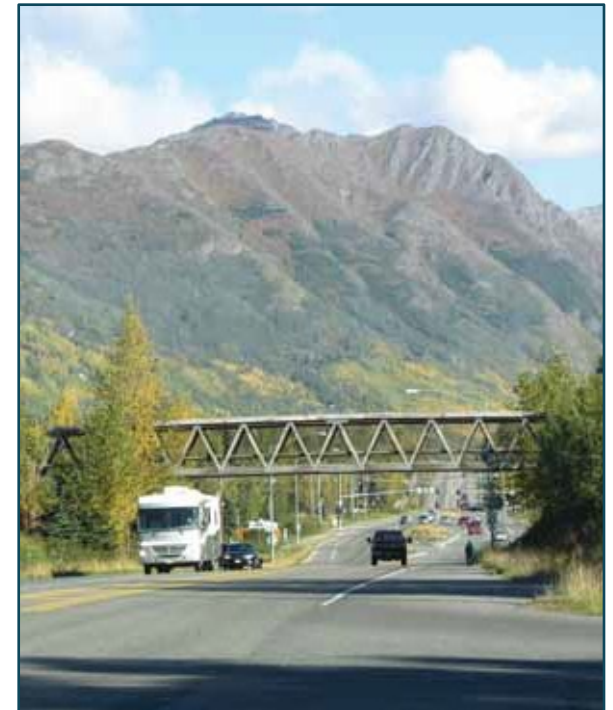
## RECOMMENDATIONS

Informed decisions about transportation issues and about where and when to allocate limited infrastructure investments rely on two key knowledge areas: (1) understanding the shape, character, and extent of future land development in the MOA and surrounding region; and (2) the results of analyzing a range of possible future transportation plan options with the AMATS travel demand model.

As detailed in the previous chapter, federal, state, and local funds will be insufficient to build all projects identified in Chapter 5 to meet the 2035 travel demands. Recognizing the broad range of transportation modes used and the dispersed travel patterns, MTP investments need to expand the travel choices and be effectively spread across these program areas:

- Increasing road safety, connectivity, and capacity
- Managing the transportation system better
- Deploying new technologies for traffic signal control
- Expanding public transportation service and infrastructure
- Providing improved and expanded pedestrian, bicycle, and trail facilities
- Facilitating efficient freight handling and movement
- Improving traveler choices and
- Enhancing integration of transportation facilities and services with community planning and design

The 2035 MTP will guide more than \$3.3 billion in transportation capital project investments within the metropolitan area during the next 25 years.



Analyses identified the following transportation-related findings about current and future conditions:

- Travel from Chugiak-Eagle River and the Mat-Su Borough into the Anchorage Bowl is rapidly increasing.
- Travel is broadly dispersed, with at least six major activity centers in Anchorage that attract large numbers of trips. Contrary to common belief, the Downtown CBD is not the primary destination of trips within the Anchorage Bowl. The Midtown District is the predominant destination of trips.
- Attaining the vision and goals of the Anchorage Bowl and Chugiak-Eagle River comprehensive plans will involve more effective system management, availability of and access to alternative travel options, freight network improvements, traveler behavior shifts, and reduced automobile dependence.
- Significant improvements to the road system will be required to meet future travel needs. The performance of the existing road network is significantly hindered because of missing route segments, bottlenecks, and limited major north-south and east-west through connections. (See Chapter 4.)
- Expanding and maintaining the sidewalks, bicycle facilities, and multi-use trail network are important to

the community. These improvements encourage non-motorized and healthy travel and provide better public transportation access. The community highly values open space and the existing trail system. Filling in gaps will create better continuity, improve safety for pedestrians and bicyclists, and create a more integrated multimodal system.

- Improving public transportation is important to increase mobility for a broader spectrum of residents. Comprehensive public transportation service provides options for all users of the system, relieves congestion along freeways and arterials, and reinforces goals and objectives of the Anchorage Bowl and Chugiak-Eagle River comprehensive plans. Widely dispersed activity centers and travel patterns and the relatively low residential densities present challenges for providing effective public transportation. Reducing door-to-door travel times by public transportation is key to attracting new riders.

### A CALL TO ACTION

The cumulative investment in the existing transportation system is very large. A high priority is to obtain the best possible performance from the existing system. Continuous refinements must include the following:

- Regularly updating traffic signal timing plans
- Using technology to help manage and operate the transportation systems
- Running public transportation as efficiently as possible
- Responding quickly to resolve bottlenecks in the road network that hinder traffic and transit flow

### Traffic Signal Timing

Managing traffic signals is arguably the most important traffic engineering function within a city. Few activities have an equivalent impact on the public. Optimizing traffic signal timing and coordination has the potential to significantly reduce driver delay and congestion. Simple things-like adjusting the length of the red-green-yellow cycle for different day-time hours, weekdays versus weekends, and seasonally—can reduce traveler delay by upwards of a million traveler hours annually.

More than 250 intersections have traffic signals in Anchorage. Getting the timing correct is critical for minimizing delay, improving safety, and protecting non-motorized modes of transportation. The MOA has a vigorous program to keep its signal system timing plan updated to reflect current travel patterns. Complete signal timing reviews and updates are

scheduled to be done at least every 4 years.

## Signal System Technology Upgrade

The importance of an efficient arterial street network operation is evident: currently two-thirds of congested hours of travel in the Anchorage metropolitan area occur on arterial and collector streets, and traffic signals are the principal instruments for managing the efficient flow of traffic.

Advanced technologies and systems for traffic signal control can enable Anchorage traffic engineers to more efficiently and more effectively manage the traffic signal system. The MOA needs to upgrade its traffic signal hardware, software, and management systems by leveraging ITS technologies. Core upgrade features include state-of-the-art signal controllers, management software for modern modular signal systems, automated data collection and camera surveillance, and real-time communication between field sites and a central traffic management center. Signal preemption for emergency vehicles and signal priority for buses needs to be part of the upgrade package.

The benefits of this technology upgrade investment will include significant MOA traffic staffing productivity gains and reduction in travel delay. These benefits are realized through automated data acquisi-

tion for timely decisions, real-time capability to monitor traffic operations, quick adaptations of signal-control strategies to traffic conditions, and adjustments of timing patterns by time of day, daily cycles, seasonal changes, emergencies, and special events.

## Public Transportation System Operation

In 2011, the MOA budget provides more than \$26 million per year to operate People Mover, AnchorRIDES, and Share-A-Ride programs. The cost is partially offset by operating revenues from passenger fares and advertising. People Mover is implementing its bus fixed-route-restructuring plan (documented in The People Mover Blueprint: A Plan to Restructure the Anchorage Transit System, 2001, and People Mover Route Restructure Plan Update, 2009; discussed in Chapter 5) to realign routes, coordinate bus schedules, increase service frequencies, and improve service availability and accessibility. People Mover's ability to deliver more service is directly tied to the level of operating funding.

### Completion of the Route Restructuring Plan Implementation

The restructuring plan calls for 30-minute service frequency all day on all routes. These frequency improvements need to be completed; they increase riders and improve productivity.

In parallel with the frequency improvements, continuous focus on service-delivery quality, on-time schedule performance, refinements in stop locations to optimize passenger access and bus travel times, and attention to details will help boost ridership. These efforts include listening to customers, monitoring performance, fine-tuning bus operations, and providing clean and safe vehicles, courteous drivers, and easy public access to route and schedule information.

### New Buses

No additional buses will be required to complete Service Expansion Priority 1. This top priority is reinstatement of previously cancelled nighttime and weekend bus service. Two additional buses will be required to provide 30-minute service frequency on all routes to accomplish Service Expansion Priority 2. An additional 12 buses will be required to accomplish Service Priority 3, which provides 15-minute headways on Route 3 (Northern Lights), Route 36 (West Anchorage/U-Med District), and Route 45 (Mountain View).

By fall 2011, People Mover will have replaced 41 of its 52 buses with newer, low-floor, accessible buses. Also in 2011, People Mover will have expanded its Share-a-Ride program by 10 new van-pools and will have replaced 10 AnchorRIDES vehicles. The MTP supports the continued replacement of the People Mover vehicle fleet through the use of



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federal capital grant funding (80 percent of the capital cost), but the MOA will need to provide the additional 20 percent in matching funds. New buses and marketing promotions will further reinforce gains in riders.

### Public Transportation Funding

Funding is the critical issue for People Mover throughout the MTP planning horizon. Maintaining the momentum—increased riders and productivity—of the People Mover route-restructuring plan is crucial. Momentum cannot be sustained in the absence of committed and stable public funding support. Funding priorities are to complete the restructuring improvements, continue to expand service throughout the metropolitan area, and secure funding for new buses.

### Congestion Bottleneck Repairs

Transportation network performance is often hindered at critical locations that constrict travel flow and create network bottlenecks. Transitions from freeways to arterials and highly congested intersections are good examples of bottlenecks. A continuing program is recommended to resolve trouble spots as quickly as possible. Suggested strategies to fix, or at least mitigate, these bottlenecks are spot improvements employing a variety of traffic engineering and congestion management tools. The existing MOA right-turn program will be expanded, and reviews of intersections and pedestrian

safety will continue. Remedying problem sites can make noticeable improvements in network performance.

## ROADS

The roadway network is the backbone of the metropolitan area transportation system and will continue to be so during the next 25 years. Projected 2035 population and development are used in the travel model to identify future road traffic volumes indicating when and where road improvements will be needed. The recommended road projects are necessary to provide system connectivity and accommodate expected future traffic demand.

The majority of new-road and road-improvement projects occur on the free-way and arterial network, including both state highways and significant municipal streets. New and improved collector roads that provide network connectivity and capacity are included in the recommended projects. The collector upgrades include important non-motorized facilities for pedestrians, bicyclists, and persons with disabilities. If collectors need upgrades to meet current standards, but do not add new capacity, safety, or connectivity, they have not been included in the recommended MTP project list. For MOA-owned collectors, these road upgrades to meet standards likely will be included as MOA bond-funded improvements. (Projects to reconstruct roadways to meet

urban standards, typically without adding lanes or capacity, will need to be implemented during the next 25 years.)

### Initial Road Project Screening Process

Because of the approximately \$525 million shortfall in road project funding identified in Chapter 6, it was necessary to strategically pare the list of roadway projects originally identified as needed to meet the 2035 travel needs. An initial project-screening process was approved by the TAC+ group representing diverse community interests to accomplish the almost 20 percent shortfall for road funding. Each future road project was scored by using the six criteria identified in Table 7-1.

The results of the screening process for road projects are shown in Table 7-2. Following the ranking of the roadway projects by the total score for each project, the projects were grouped into short-term (2011-2023), long-term (2024-2035), and illustrative (beyond 2035) periods to ensure that the annual capital cost outlays closely matched the expected annual funding revenue stream. Some projects that received high scores were moved into later time periods to balance the costs and revenues; other projects with lower scores were moved up because of funding commitments already made through the AMATS TIP process.



Table 7-1 Initial Screening Criteria for Road Projects

| CRITERION   | SCORING POINTS             |  |  |  |
|---|----------------------------|--|--|--|
|   | 0                          | 1  | 3  | 5  |
| Project readiness   | No work started            | Some preliminary design and/or environmental work complete | Final engineering completed or nearing completion                                    | Right-of-way purchased; ready to construct                               |
| Timing of need  | Can wait until beyond 2035 | Long-term need (2023-2035)                                 | Needed in short term—helps to complete grid system or improves facility to standards | Needed in short term (2011-2023) – addresses major safety/capacity needs |
| Logical sequencing  | N/A                        | New project  | N/A  | Next logical or final phase of an existing road                          |
| Functional classification   | Local                      | Collector  | Arterial/expressway  | Freeway  |
| Number of modes (automobile, pedestrian, bicycle, transit, freight or intermodal) | Single                     | Two  | Three  | Four or more   |
| Cost/(length x AADT)  | 4th quartile               | 3rd quartile   | 2nd quartile   | 1st quartile (lowest score)  |

AADT = Annual Average Daily Traffic

N/A = not applicable

Although not part of the recommended 2035 MTP road projects, the illustrative projects have been identified in this MTP to assist local officials in identifying future projects if additional funds become available before the next regularly scheduled MTP is prepared and adopted. However, in order for any of the illustrative projects to become part of the MTP, a major amendment of the MTP would be necessary to officially include the project as a short- or long-term project.

In Table 7-3, which provides a detailed list of 2035 MTP recommended road projects, the projects are grouped into their

recommended time periods. Short-term projects are to be constructed between 2011 and 2023, and long-term projects are to be constructed between 2024 and 2035. The project purpose, description, and capital cost of the Knik Arm Crossing project area shown in Table 7-4. The locations of recommended road projects are illustrated in Figure 7-1 (Anchorage Bowl) and Figure 7-2 (Chugiak-Eagle River) by geographic areas within the metropolitan area. Some projects provide for infrastructure preservation and rehabilitation; almost all add pedestrian, bicycle, and related enhancements (as components of projects that are building or rebuilding

adjacent roads); and some add capacity to critical segments.

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Table 7-2 Initial Screening Scores for Road Projects

| PROJECT<br>NUMBER | PROJECT NAME   | PROJECT LOCATION                          | 2010 COST<br>ESTIMATE<br>(\$ MIL-<br>LION) | PROJECT<br>READINESS | CRITERION SCORING POINTS |                       |                              |                      |                         |       |
|-------------------|--|---|--|----------------------|--------------------------|-----------------------|------------------------------|----------------------|-------------------------|-------|
|                   |  |   |  |                      | TIMING OF NEED           | LOGICAL<br>SEQUENCING | FUNCTIONAL<br>CLASSIFICATION | COST/LENGTH/<br>AADT | MULTI-MODAL<br>FUNCTION | TOTAL |
| 101               | Seward Hwy - Dimond Blvd to Dowling Rd                                       | Dimond Blvd to Dowling Rd                 | \$88.8                                     | 3                    | 5                        | 5                     | 5                            | 5                    | 3                       | 26    |
| 102               | Dowling Rd Extension - Phase II  | C St to Minnesota Dr                      | \$63.4                                     | 3                    | 5                        | 5                     | 3                            | 1                    | 5                       | 22    |
| 103               | 100th Ave Extension - Minnesota Dr to C St                                   | Minnesota Dr to C St                      | \$8.7                                      | 5                    | 5                        | 5                     | 1                            | 0                    | 5                       | 21    |
| 104               | 36th Ave/Seward Hwy Interchange (Seward Hwy to Glenn Hwy Connection Phase I) | Tudor Rd to 33rd Ave                      | \$108.0                                    | 1                    | 5                        | 1                     | 5                            | 3                    | 5                       | 20    |
| 105               | Glenn Hwy - Hiland Rd to Old Glenn Hwy (Artillery Rd) (Eagle River)          | Hiland Rd to Old Glenn Hwy (Artillery Rd) | \$62.8                                     | 1                    | 5                        | 1                     | 5                            | 5                    | 3                       | 20    |
| 106               | Muldoon Rd Interchange   | Glenn Hwy at Muldoon Rd                   | \$70.0                                     | 1                    | 5                        | 1                     | 3                            | 5                    | 5                       | 20    |
| 107               | Seward Hwy - O'Malley Rd to Dimond Blvd                                      | O'Malley Rd to Dimond Blvd                | \$42.1                                     | 1                    | 3                        | 5                     | 5                            | 3                    | 3                       | 20    |
| 108               | 36th Ave Access Management - Spenard Rd to Denali St                         | Spenard Rd to Denali St                   | \$1.5                                      | 0                    | 5                        | 1                     | 3                            | 5                    | 5                       | 19    |
| 109               | Jewel Lake Rd - Dimond Blvd to International Airport Rd                      | Dimond Blvd to International Airport Rd   | \$13.0                                     | 0                    | 5                        | 1                     | 3                            | 5                    | 5                       | 19    |
| 110               | Arctic Blvd Rehabilitation - 36th Ave to Tudor Rd                            | 36th Ave to Tudor Rd                      | \$8.5                                      | 0                    | 3                        | 5                     | 3                            | 3                    | 5                       | 19    |
| 111               | Northern Lights Blvd - Lake Otis Pkwy to Bragaw St                           | Lake Otis Pkwy to Bragaw St               | \$8.0                                      | 0                    | 3                        | 5                     | 3                            | 3                    | 5                       | 19    |
| 112               | Spenard Rd Rehabilitation - Hillcrest Dr to Benson Blvd                      | Hillcrest Dr to Benson Blvd               | \$16.6                                     | 3                    | 5                        | 1                     | 3                            | 1                    | 5                       | 18    |
| 113               | O'Malley Rd - Seward Hwy to Hillside Dr                                      | Seward Hwy to Hillside Dr                 | \$29.0                                     | 3                    | 3                        | 1                     | 3                            | 5                    | 3                       | 18    |

Table 7-2 Initial Screening Scores for Road Projects (Continued)

| PROJECT<br>NUMBER | PROJECT NAME   | PROJECT LOCATION                         | 2010 COST<br>ESTIMATE<br>(\$ MIL-<br>LION) | PROJECT<br>READINESS | CRITERION SCORING POINTS |                       |                              |                      |                         |       |
|-------------------|--|--|--|----------------------|--------------------------|-----------------------|------------------------------|----------------------|-------------------------|-------|
|                   |  |  |  |                      | TIMING OF NEED           | LOGICAL<br>SEQUENCING | FUNCTIONAL<br>CLASSIFICATION | COST/LENGTH/<br>AADT | MULTI-MODAL<br>FUNCTION | TOTAL |
| 114               | Seward Hwy Improvements<br>(Midtown Congestion Relief<br>– Seward Hwy to Glenn Hwy<br>Connection Phase II) | 33rd Ave to Chester Creek                | \$178.0                                    | 1                    | 5                        | 1                     | 5                            | 1                    | 5                       | 18    |
| 115               | Fireweed Ln Rehabilitation -<br>Spenard Rd to Seward Hwy   | Spenard Rd to Seward Hwy                 | \$10.4                                     | 1                    | 5                        | 1                     | 3                            | 5                    | 3                       | 18    |
| 116               | Seward Hwy Pedestrian<br>Overcrossing  | O'Malley Rd to Rabbit Creek<br>Rd        | \$7.1                                      | 1                    | 3                        | 1                     | 5                            | 5                    | 3                       | 18    |
| 117               | Seward Hwy/92nd Ave Grade<br>Separation  | Homer Dr to Brayton Dr                   | \$60.4                                     | 3                    | 5                        | 1                     | 5                            | 0                    | 3                       | 17    |
| 118               | Lake Otis Pkwy - Northern Lights<br>Blvd to Debarr Rd  | Northern Lights Blvd to<br>Debarr Rd     | \$34.9                                     | 0                    | 5                        | 1                     | 3                            | 3                    | 5                       | 17    |
| 119               | Northern Lights Blvd - Postmark<br>Dr to Nathaniel Ct  | Postmark Dr to Nathaniel Ct              | \$14.9                                     | 0                    | 5                        | 1                     | 3                            | 5                    | 3                       | 17    |
| 120               | DeArmoun Rd Reconstruction -<br>Phase II   | 140th Ave to Hillside Dr                 | \$15.0                                     | 1                    | 5                        | 5                     | 1                            | 1                    | 3                       | 16    |
| 121               | Spenard Rd Rehabilitation -<br>Benson Blvd to Minnesota Dr   | Benson Blvd to Minnesota Dr              | \$50.2                                     | 1                    | 5                        | 1                     | 3                            | 0                    | 5                       | 15    |
| 122               | Eagle River Rd Rehabilitation - MP<br>5.3 to MP 12.6 (Eagle River)   | MP 5.3 to MP 12.6                        | \$28.4                                     | 3                    | 5                        | 1                     | 3                            | 1                    | 1                       | 14    |
| 123               | Eklutna River Bridge<br>Rehabilitation/Replacement<br>(Chugiak)  | Old Glenn Hwy                            | \$6.8                                      | 1                    | 5                        | 1                     | 3                            | 1                    | 3                       | 14    |
| 124               | Abbott Rd - Lake Otis Pkwy to<br>Birch Rd  | Lake Otis Pkwy to Birch Rd               | \$39.0                                     | 1                    | 3                        | 1                     | 3                            | 3                    | 3                       | 14    |
| 125               | North Access to University-<br>Medical District  | Providence Dr to Northern<br>Lights Blvd | \$18.8                                     | 1                    | 3                        | 1                     | 3                            | 1                    | 5                       | 14    |

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Table 7-2 Initial Screening Scores for Road Projects (Continued)

| PROJECT<br>NUMBER | PROJECT NAME   | PROJECT LOCATION  | 2010 COST<br>ESTIMATE<br>(\$ MIL-<br>LION) | PROJECT<br>READINESS | CRITERION SCORING POINTS |                       |                              |                      |                         |       |
|-------------------|--|---|--|----------------------|--------------------------|-----------------------|------------------------------|----------------------|-------------------------|-------|
|                   |  |   |  |                      | TIMING OF NEED           | LOGICAL<br>SEQUENCING | FUNCTIONAL<br>CLASSIFICATION | COST/LENGTH/<br>AADT | MULTI-MODAL<br>FUNCTION | TOTAL |
| 126               | Glenn Hwy/Farm Ave Partial Interchange (Eagle River)                             | Glenn Hwy at Farm Ave   | \$50.0                                     | 0                    | 3                        | 1                     | 5                            | 0                    | 5                       | 14    |
| 127               | Old Glenn Hwy (Artillery Rd) northbound off-ramp to Eagle River Rd (Eagle River) | Glenn Hwy to Eagle River Rd   | \$13.5                                     | 0                    | 5                        | 1                     | 5                            | 1                    | 1                       | 13    |
| 128               | Farm Ave Realignment at Old Glenn Hwy (Eagle River)                              | Winter Park Pl to Old Glenn Hwy                                     | \$6.5                                      | 0                    | 5                        | 1                     | 3                            | 1                    | 3                       | 13    |
| 129               | Eagle River Rd Rehabilitation - MP 0.0 to MP 5.3 (Eagle River)                   | MP 0 to MP 5.3 (Upper Terrace St)                                   | \$29.0                                     | 0                    | 3                        | 1                     | 3                            | 3                    | 3                       | 13    |
| 130               | 92nd Ave/Academy Dr Extension - Brayton Dr to Abbott Rd                          | Brayton Dr to Abbott Rd   | \$8.8                                      | 1                    | 3                        | 1                     | 3                            | 1                    | 3                       | 12    |
| 131               | Mountain Air Dr - Rabbit Creek Rd to E 164th Ave                                 | Rabbit Creek Rd to E 164th Ave                                      | \$7.9                                      | 3                    | 3                        | 1                     | 1                            | 0                    | 3                       | 11    |
| 132               | Northwood St Extension - Strawberry Rd to Dimond Blvd                            | Strawberry Rd to Dimond Blvd  | \$26.2                                     | 0                    | 3                        | 1                     | 3                            | 0                    | 3                       | 10    |
| 133               | Business Blvd Extension (Eagle River)  | Business Blvd to Eagle River Rd at Old Glenn Highway (Artillery Rd) | \$10.0                                     | 0                    | 3                        | 1                     | 1                            | 0                    | 5                       | 10    |
| 134               | Homestead Rd Improvements (Chugiak)  | Oberg Rd to Voyles Blvd   | \$7.1                                      | 0                    | 3                        | 1                     | 1                            | 0                    | 3                       | 8     |
| 135               | Short-Term MTP Element mplementation Projects                                    | AMATS area  | \$6.0                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 136               | 3rd Ave,6th Ave Couplet/E St Conversion Reconnaissance Study                     | L St to Ingra-Gambell Couplet/3rd Ave to 4th Ave                    | \$0.5                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 137               | Glenn Hwy Operations Analysis - Muldoon Rd to Eklutna                            | Muldoon Rd to Eklutna   | \$5.6                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |



Table 7-2 Initial Screening Scores for Road Projects (Continued)

| PROJECT<br>NUMBER | PROJECT NAME  | PROJECT LOCATION   | 2010 COST<br>ESTIMATE<br>(\$ MIL-<br>LION) | PROJECT<br>READINESS | CRITERION SCORING POINTS |                       |                              |                      |                         |       |
|-------------------|---|--|--|----------------------|--------------------------|-----------------------|------------------------------|----------------------|-------------------------|-------|
|                   |   |  |  |                      | TIMING OF NEED           | LOGICAL<br>SEQUENCING | FUNCTIONAL<br>CLASSIFICATION | COST/LENGTH/<br>AADT | MULTI-MODAL<br>FUNCTION | TOTAL |
| 138               | Midtown Subarea Transportation Plan   | Midtown area   | \$0.8                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 139               | Seward Hwy/O'Malley Rd Interchanges Study   | Old Seward Hwy to Seward Hwy   | \$0.5                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 140               | Hiland Rd Improvements – Phase I MP 2.2 to MP 3.4 (Eagle River)   | MP 2.2 to MP 3.4   | \$6.8                                      | 0                    | 3                        | 1                     | 1                            | 5                    | 1                       | 11    |
| 141               | Seward Hwy to Glenn Hwy Connection – Phase III  | Environmental Document   | \$10.0                                     | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 142               | Rabbit Creek Rd - Seward Hwy to Golden View Dr  | Seward Hwy to Golden View Dr   | \$11.7                                     | 0                    | 3                        | 1                     | 3                            | 3                    | 3                       | 13    |
| 143               | Knik Arm Crossing - Phase I   | A-C Couplet to Point MacKenzie-Burma Rd intersection                             | \$702.0                                    | 3                    | 1                        | 1                     | 3                            | 1                    | 3                       | 12    |
| 201               | Seward Hwy/Glenn Hwy Connection – Phase III   | Chester Creek to Airport Heights Dr  | \$605.0                                    | 1                    | 5                        | 1                     | 5                            | 3                    | 5                       | 20    |
| 202               | Huffman Rd Rehabilitation - Pintail St to Birch Rd  | Pintail St to Birch Rd   | \$8.0                                      | 0                    | 3                        | 5                     | 1                            | 3                    | 3                       | 15    |
| 203               | North Eagle River Interchange Capacity Modifications Study (Eagle River)  | Glenn Hwy at North Eagle River Access Rd   | \$0.5                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 204               | Glenn Hwy HOV Lane - Old Glenn Hwy (Artillery Rd) interchange to Peters Creek interchange (Voyles Rd) (Eagle River) | Old Glenn Hwy (Artillery Rd) interchange to Peters Creek interchange (Voyles Rd) | \$55.0                                     | 0                    | 1                        | 1                     | 5                            | 5                    | 1                       | 13    |
| 205               | Glenn Hwy HOV Lane - Boniface Pkwy to Old Glenn Hwy (Artillery Rd) Interchange                                      | Boniface Pkwy to Eagle River Old Glenn Hwy (Artillery Rd) Interchange            | \$71.7                                     | 0                    | 1                        | 1                     | 5                            | 5                    | 1                       | 13    |

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Table 7-2 Initial Screening Scores for Road Projects (Continued)

| PROJECT<br>NUMBER | PROJECT NAME  | PROJECT LOCATION   | 2010 COST<br>ESTIMATE<br>(\$ MIL-<br>LION) | PROJECT<br>READINESS | CRITERION SCORING POINTS |                       |                              |                      |                         |       |
|-------------------|---|--|--|----------------------|--------------------------|-----------------------|------------------------------|----------------------|-------------------------|-------|
|                   |   |  |  |                      | TIMING OF NEED           | LOGICAL<br>SEQUENCING | FUNCTIONAL<br>CLASSIFICATION | COST/LENGTH/<br>AADT | MULTI-MODAL<br>FUNCTION | TOTAL |
| 206               | Davis St and Santa Maria Dr<br>Realignment at Old Glenn Hwy<br>(Eagle River)    | Old Glenn Hwy – North Eagle<br>River Loop Rd and North<br>Eagle River Access | \$5.5                                      | 0                    | 3                        | 1                     | 3                            | 0                    | 5                       | 12    |
| 207               | Eleonora St and S Juanita Loop<br>Realignment at Old Glenn Hwy<br>(Eagle River) | Old Glenn Hwy – North Eagle<br>River Loop Rd and North<br>Eagle River Access | \$2.0                                      | 0                    | 3                        | 1                     | 3                            | 0                    | 5                       | 12    |
| 208               | Hiland Rd Improvements – Phase II<br>(Eagle River)                              | MP 1.0 to MP 2.2 and MP 3.4<br>to MP 8.3                                     | \$31.7                                     | 0                    | 3                        | 1                     | 1                            | 5                    | 1                       | 11    |
| 209               | A/C St Couplet Restripe - Tudor<br>Rd to 9th Ave                                | Tudor Rd to 9th Ave  | \$0.5                                      | 0                    | 1                        | 1                     | 3                            | 5                    | 1                       | 11    |
| 210               | Birchwood Loop Rd and<br>Birchwood Spur Rd Improvements<br>(Eagle River)        | Old Glenn Hwy to Birchwood<br>Airport  | \$16.6                                     | 0                    | 1                        | 1                     | 3                            | 3                    | 3                       | 11    |
| 211               | Seward Hwy/O’Malley Rd<br>Interchange   | Old Seward Hwy to Seward<br>Hwy  | \$75.0                                     | 0                    | 1                        | 1                     | 5                            | 3                    | 1                       | 11    |
| 212               | C St/Ocean Dock Rd Access Ramp  | C St Viaduct to Ocean Dock<br>Rd   | \$11.2                                     | 0                    | 3                        | 1                     | 3                            | 0                    | 3                       | 10    |
| 213               | Ingra-Gambell Couplet Extension -<br>3rd Ave to Whitney Rd                      | 3rd Ave to Whitney Rd  | \$26.0                                     | 0                    | 1                        | 1                     | 3                            | 0                    | 3                       | 8     |
| 214               | Glenn Hwy Frontage Rd   | Boniface Pkwy to Muldoon Rd  | \$18.0                                     | 0                    | 3                        | 1                     | 1                            | 1                    | 1                       | 7     |
| 215               | Eagle River CBD - Phase II, Study<br>(Eagle River)                              | Downtown Eagle River &<br>Residential Core                                   | \$0.5                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 216               | Long-Term MTP Element<br>mplementation Projects                                 | AMATS area   | \$6.0                                      | N/A                  | N/A                      | N/A                   | N/A                          | N/A                  | N/A                     | 0     |
| 217               | Knik Arm Crossing - Phase II  | Ingra-Gambell Couplet<br>Connection  | \$230.0                                    | 1                    | 1                        | 1                     | 3                            | 0                    | 5                       | 11    |

Table 7-2 Initial Screening Scores for Road Projects (Continued)

| PROJECT<br>NUMBER | PROJECT NAME  | PROJECT LOCATION   | 2010 COST<br>ESTIMATE<br>(\$ MIL-<br>LION) | PROJECT<br>READINESS | CRITERION SCORING POINTS |                       |                              |                      |                         |       |
|-------------------|---|--|--|----------------------|--------------------------|-----------------------|------------------------------|----------------------|-------------------------|-------|
|                   |   |  |  |                      | TIMING OF NEED           | LOGICAL<br>SEQUENCING | FUNCTIONAL<br>CLASSIFICATION | COST/LENGTH/<br>AADT | MULTI-MODAL<br>FUNCTION | TOTAL |
| 301               | Tudor Rd Access Management -<br>Seward Hwy to Arctic Blvd     | Seward Hwy to Arctic Blvd  | \$14.0                                     | 0                    | 5                        | 1                     | 3                            | 5                    | 5                       | 19    |
| 302               | Tudor Rd Access Management -<br>Seward Hwy to Patterson St    | Seward Hwy to Patterson St   | \$41.6                                     | 0                    | 5                        | 1                     | 3                            | 5                    | 5                       | 19    |
| 303               | Boniface Pkwy Access<br>Management - Tudor Rd to Glenn<br>Hwy | Tudor Rd to Glenn Hwy  | \$22.5                                     | 0                    | 1                        | 1                     | 3                            | 5                    | 3                       | 13    |
| 304               | Jewel Lake Rd/International<br>Airport Rd Grade Separation    | Jewel Lake Rd to Northwood<br>St   | \$50.6                                     | 0                    | 0                        | 1                     | 3                            | 3                    | 5                       | 12    |
| 305               | Postmark Dr/International Airport<br>Rd Grade Separation      | Postmark Dr to International<br>Airport Rd                                       | \$23.6                                     | 0                    | 0                        | 1                     | 3                            | 3                    | 5                       | 12    |
| 306               | Lake Otis Pkwy Extension - Debarr<br>Rd to Glenn Hwy          | Debarr Rd to Glenn Hwy   | \$36.0                                     | 1                    | 3                        | 1                     | 3                            | 0                    | 3                       | 11    |
| 307               | Elmore Rd Extension - O'Malley Rd<br>to Abbott Rd             | O'Malley Rd to Abbott Rd   | \$35.2                                     | 0                    | 3                        | 1                     | 1                            | 3                    | 3                       | 11    |
| 308               | South Birchwood Loop Rd<br>Improvements (Eagle River)         | Old Glenn Hwy to Birchwood<br>Loop Rd  | \$38.0                                     | 0                    | 3                        | 1                     | 1                            | 3                    | 3                       | 11    |
| 309               | Minnesota Dr Corridor/Tudor Rd<br>Interchange                 | International Airport Rd<br>to Northern Lights Blvd/<br>Minnesota Dr at Tudor Rd | \$112.7                                    | 0                    | 1                        | 1                     | 3                            | 3                    | 3                       | 11    |
| 310               | 84th Ave - Hartzell Rd to Lake Otis<br>Pkwy                   | Hartzell Rd to Lake Otis Pkwy  | \$9.4                                      | 1                    | 3                        | 1                     | 1                            | 1                    | 3                       | 10    |
| 311               | Seward Hwy - Potter Weigh<br>Station to Rabbit Creek Rd       | Potter Weigh Station to<br>Rabbit Creek Rd                                       | \$47.0                                     | 1                    | 1                        | 1                     | 3                            | 1                    | 3                       | 10    |
| 312               | 92nd Ave Extension - King St to<br>Old Seward Hwy             | King St to Old Seward Hwy  | \$17.2                                     | 0                    | 3                        | 1                     | 3                            | 0                    | 3                       | 10    |

## 2035 Metropolitan Transportation Plan

Table 7-2 Initial Screening Scores for Road Projects (Continued)

| PROJECT<br>NUMBER | PROJECT NAME                                     | PROJECT LOCATION              | 2010 COST<br>ESTIMATE<br>(\$ MIL-<br>LION) | PROJECT<br>READINESS | CRITERION SCORING POINTS |                       |                              |                      |                         |       |
|-------------------|--|-------------------------------|--|----------------------|--------------------------|-----------------------|------------------------------|----------------------|-------------------------|-------|
|                   |  |                               |  |                      | TIMING OF NEED           | LOGICAL<br>SEQUENCING | FUNCTIONAL<br>CLASSIFICATION | COST/LENGTH/<br>AADT | MULTI-MODAL<br>FUNCTION | TOTAL |
| 313               | 92nd Ave Extension- Minnesota Dr to King St      | Minnesota Dr to King St       | \$11.0                                     | 0                    | 3                        | 1                     | 3                            | 0                    | 3                       | 10    |
| 314               | Birch Rd - Huffman Rd to O'Malley Rd             | Huffman Rd to O'Malley Rd     | \$9.0                                      | 0                    | 3                        | 1                     | 1                            | 1                    | 3                       | 9     |
| 315               | Whitney Rd - North C St to North Post Rd         | North C St to North Post Rd   | \$15.0                                     | 0                    | 3                        | 1                     | 1                            | 1                    | 3                       | 9     |
| 316               | Minnesota Dr (northbound) - 26th Ave to 15th Ave | 26th Ave to 15th Ave          | \$29.3                                     | 0                    | 1                        | 1                     | 3                            | 1                    | 1                       | 7     |
| 317               | Minnesota Dr Frontage Rd                         | Dimond Blvd to Raspberry Rd   | \$9.0                                      | 0                    | 1                        | 1                     | 1                            | 1                    | 3                       | 7     |
| 318               | Huffman Rd Extension - Birch Rd to Hillside Dr   | Birch Rd to Hillside Dr       | \$13.5                                     | 0                    | 1                        | 1                     | 1                            | 0                    | 3                       | 6     |
| 319               | Railroad Grade Separation - C St                 | C St                          | \$91.5                                     | 0                    | 0                        | 1                     | 3                            | 1                    | 1                       | 6     |
| 320               | Eklutna Lake Rd Rehabilitation (Chugiak)         | Old Glenn Hwy to Eklutna Lake | \$39.0                                     | 0                    | 1                        | 1                     | 1                            | 1                    | 1                       | 5     |
| 321               | Knik Arm Ferry Service - Anchorage Terminal      | Ship Creek area               | Assumes Matanuska-Susitna Borough funding  | 0                    | 0                        | 1                     | 0                            | N/A                  | 3                       | 4     |
| 322               | Seward Hwy/O'Malley Rd Interchanges              | Old Seward Hwy to Seward Hwy  | \$75.0                                     | 0                    | 0                        | 1                     | 0                            | N/A                  | 3                       | 4     |

CBD = Central Business District

HOV = high-occupancy vehicle

MP = Milepost

N/A = not applicable



Table 7-3 Recommended 2035 MTP Road Projects

| PROJECT NUMBER                  | PROJECT NAME  | PROJECT LOCATION                          | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|---|---|---------------------------------|---|
| Short-Term Projects (2011-2023) |   |   |                                 |   |
| 101                             | Seward Hwy - Dimond Blvd to Dowling Rd                                      | Dimond Blvd to Dowling Rd                 | \$88.8                          | Reconstruct and widen from 4 to 6 lanes from Dimond to Dowling Rd with frontage road improvements, landscaping, and possible noise walls. Includes 68th and 76th avenues grade separation, reconstruction of Dowling Rd interchange and roundabouts. Does not include reconstruction of Dimond Blvd interchange. Recommend separated pathways on frontage roads. Purpose: Capacity and freight. Facility Class: Freeway. Length of Project: 2 miles. Length of new sidewalk: None. Length of new pathway: 2 miles. Linked project(s): None. |
| 102                             | Dowling Rd Extension - Phase II   | C St to Minnesota Dr                      | \$63.4                          | Add new facility - extend Dowling Rd from C St to Minnesota Dr. Recommend bicycle lanes and separated pathway. Wetland impacts anticipated. Purpose: Capacity, freight, circulation. Facility class: Major arterial. Length of project: 1.14 miles. Length of new sidewalk: 1.14 miles. Length of new pathway: 1.14 miles. Linked project(s): None.   |
| 103                             | 100th Ave Extension - Minnesota Dr to C St                                  | Minnesota Dr to C St                      | \$8.7                           | Add new facility—extend 100th Ave between Minnesota Dr. and C St. Recommend separated pathway. Wetland impacts anticipated. Purpose: Circulation, access, and freight. Facility class: Collector. Length of project: 0.7 mile. Length of new sidewalk: 0.7 mile. Length of new pathway: 0.7 mile. Linked project(s): None.  |
| 104                             | 36th Ave/Seward Hwy Interchange (Seward Hwy to Glenn Hwy Connection Phase ) | Tudor Rd to 33rd Ave                      | \$108.0                         | Add new facility – interchange at 36th Ave and Seward Hwy, including braided ramps connecting to the Tudor Rd interchange. Phase I of Seward Hwy/Glenn Hwy Connection. Recommend separated pathway. Purpose: Capacity, freight, and circulation. Facility class: Freeway. Length of project: 1 mile. Length of new sidewalk: Replace existing on 36th Ave. Length of new pathway: 1 mile. Linked project(s): 114, 201.  |
| 105                             | Glenn Hwy - Hiland Rd to Old Glenn Hwy (Artillery Rd) (Eagle River)         | Hiland Rd to Old Glenn Hwy (Artillery Rd) | \$62.8                          | Make necessary improvements at Hiland Rd and Old Glenn Hwy (Artillery Rd) interchanges and add a 3rd lane northbound and southbound between Hiland Rd and Old Glenn Hwy (Artillery Rd); bridge improvements at Eagle River interchange, Hiland Rd interchange, and 2 Eagle River bridges. Purpose: Capacity, circulation, access, and freight. Facility class: Freeway. Length of project: 2 miles. Length of new sidewalk: N/A. Length of new pathway: 4 miles. Linked project(s): 204, 205.   |
| 106                             | Muldoon Rd Interchange  | Glenn Hwy at Muldoon Rd                   | \$70.0                          | Reconstruct interchange to include ramps and Muldoon Rd bridge. Purpose: Circulation, access, and freight. Facility class: Major arterial. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.  |

## 2035 Metropolitan Transportation Plan

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                  | PROJECT NAME  | PROJECT LOCATION                        | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|---|---|---------------------------------|---|
| Short-Term Projects (2011-2023) |   |   |                                 |   |
| 107                             | Seward Hwy - O'Malley Rd to Dimond Blvd                 | O'Malley Rd to Dimond Blvd              | \$42.1                          | Reconstruct and widen from 4 to 6 lanes. Landscaping and possible noise walls. Includes reconstruction of Dimond Blvd interchange. Recommend separated pathways on all frontage road improvements. Purpose: Capacity, circulation, and freight. Facility class: Freeway. Length of project: 1.03 miles. Length of new sidewalk: N/A. Length of new pathway: 1.03 miles. Linked project(s): None.                                    |
| 108                             | 36th Ave Access Management - Spenard Rd to Denali St    | Spenard Rd to Denali St                 | \$1.5                           | Access management treatments. Purpose: Circulation and access. Facility class: Minor arterial. Length of project: 1.06 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |
| 109                             | Jewel Lake Rd - Dimond Blvd to International Airport Rd | Dimond Blvd to International Airport Rd | \$13.0                          | Reconstruct Jewel Lake to operate as a 2-lane with center turn lane. Recommend bicycle lanes and pedestrian facilities on the other side. Wetland impacts anticipated. Purpose: Maintenance and safety. Facility class: Major arterial. Length of project: 2.9 miles. Length of new sidewalk: 2.9 miles. Length of new pathway: 2.9 miles. Linked project(s): 304   |
| 110                             | Arctic Blvd Rehabilitation - 36th Ave to Tudor Rd       | 36th Ave to Tudor Rd                    | \$8.5                           | Rehabilitate Arctic Blvd from 4 to 3 lanes between 36th Ave and Tudor Rd. Recommend bicycle lanes and pedestrian facilities. Purpose: Circulation and access. Facility class: Minor arterial. Length of project: 0.5 mile. Length of new sidewalk: 0.5 mile. Length of new pathway: None. Linked project(s): None.  |
| 111                             | Northern Lights Blvd - Lake Otis Pkwy to Bragaw St      | Lake Otis Pkwy to Bragaw St             | \$8.0                           | Extend third eastbound lane from Lake Otis Pkwy to Bragaw St. May include intersection improvements at both Lake Otis Pkwy. and UAA Dr. Purpose: Capacity. Facility class: Major arterial. Length of project: 1.1 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 125.   |
| 112                             | Spenard Rd Rehabilitation - Hillcrest Dr to Benson Blvd | Hillcrest Dr to Benson Blvd             | \$16.6                          | Rehabilitate to improve traffic flow. Recommend pedestrian facilities. Purpose: Circulation and access. Facility class: Minor arterial. Length of project: 0.51 mile. Length of new sidewalk: 0.51 mile. Length of new pathway: N/A. Linked project(s): None.   |
| 113                             | O'Malley Rd - Seward Hwy to Hillside Dr                 | Seward Hwy to Hillside Dr               | \$29.0                          | Rehabilitate to improve safety and capacity. 3-lane section east of Lake Otis Pkwy and 5-lane section between Seward Hwy and Lake Otis Pkwy. Recommend separated pathway and pedestrian facilities. Wetland impacts anticipated. Purpose: Capacity and access. Facility class: Major/minor arterial. Length of project: 3.65 miles. Length of new sidewalk: 3.65 miles. Length of new pathway: 3.65 miles. Linked project(s): None. |

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                  | PROJECT NAME   | PROJECT LOCATION                  | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|--|-----------------------------------|---------------------------------|---|
| Short-Term Projects (2011-2023) |  |                                   |                                 |   |
| 114                             | Seward Hwy Improvements (Midtown Congestion Relief- Seward Hwy to Glenn Hwy Connection Phase ) | 33rd Ave to Chester Creek         | \$178.0                         | Reconstruct the Seward Hwy as a depressed freeway, includes interchanges at Northern Lights Blvd, and Benson Blvd and the reconstruction of Old Seward Hwy from 33rd Ave to 20th Ave, Phase II of Seward Hwy/Glenn Hwy Connection. Purpose: Capacity, freight, and circulation. Facility class: Freeway. Length of project: 0.69 mile. Length of new sidewalk: N/A. Length of new pathway: 0.69 mile. Linked project(s): 105, 201.  |
| 115                             | Fireweed Ln Rehabilitation - Spenard Rd to Seward Hwy  | Spenard Rd to Seward Hwy          | \$10.4                          | Rehabilitate roadway to improve surface and safety for automobiles. Recommend bicycle lanes and pedestrian facilities. Purpose: Circulation and access. Facility class: Minor arterial. Length of project: 1.25 miles. Length of new sidewalk: 1.25 miles. Length of new pathway: 1.25 miles. Linked project(s): 112, 209.  |
| 116                             | Seward Hwy Pedestrian Overcrossing   | O'Malley Rd to Rabbit Creek Rd    | \$7.1                           | Construct ADA ramps for existing pedestrian overcrossing and extend pedestrian facilities from Rabbit Creek Rd to O'Malley Rd. Purpose: Pedestrian. Facility class: Freeway. Length of project: 3 miles. Length of new sidewalk: N/A. Length of new pathway: 3 miles. Linked project(s): 107.   |
| 117                             | Seward Hwy/92nd Ave Grade Separation   | Homer Dr to Brayton Dr            | \$60.4                          | Add new facility - grade separation and extension of 92 Ave from Homer Dr to Brayton Dr. Current project includes west side on- and off-ramps from Seward Hwy at 92nd Ave connecting via a newly constructed 92nd Ave to the Old Seward Hwy. New traffic signal at 92nd Ave and Old Seward Hwy. Pedestrian, storm drain, and lighting improvements. Recommend bicycle lanes. Purpose: Capacity, circulation, and freight. Facility class: Freeway. Length of project: 0.21 mile. Length of new sidewalk: 0.21 mile. Length of new pathway: 0.21 mile. Linked project(s): 116. |
| 118                             | Lake Otis Pkwy - Northern Lights Blvd to Debarr Rd   | Northern Lights Blvd to Debarr Rd | \$34.9                          | Reconstruct and increase capacity, bridge over Chester Creek, Lake Otis Pkwy/ Northern Lights Blvd intersection. Recommend pedestrian facilities and bicycle lanes. Purpose: Safety and capacity. Facility class: Major arterial. Length of project: 0.85 mile. Length of new sidewalk: 0.85 mile. Length of new pathway: 0.85 mile. Linked project(s): 105, 114, 201.  |
| 119                             | Northern Lights Blvd - Postmark Dr to Nathaniel Ct   | Postmark Dr to Nathaniel Ct       | \$14.9                          | Rehabilitate pavement, add shoulders where needed. Wetland impacts anticipated. Purpose: Circulation, access, and safety. Facility class: Minor arterial. Length of project: 1.2 miles. Length of new sidewalk: None. Length of new pathway: None. Linked project(s): None.   |

## 2035 Metropolitan Transportation Plan

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                  | PROJECT NAME  | PROJECT LOCATION                      | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|---|---------------------------------------|---------------------------------|---|
| Short-Term Projects (2011-2023) |   |                                       |                                 |   |
| 120                             | DeArmoun Rd Reconstruction - Phase II                           | 140th Ave to Hillside Dr              | \$15.0                          | Reconstruct and add pedestrian facilities; minimize impact on private property. Purpose: Safety and capacity. Facility class: Collector. Length of project: 2.4 miles. Length of new sidewalk: 2.4 miles. Length of new pathway: 2.4 miles. Linked project(s): None.  |
| 121                             | Spenard Rd Rehabilitation - Benson Blvd to Minnesota Dr         | Benson Blvd to Minnesota Dr           | \$50.2                          | Rehabilitate to improve traffic flow from Benson Blvd to Minnesota Dr, including the feasibility and impact analysis on local properties of the proposed Spenard Rd/36th Ave couplet. Recommend pedestrian and bicycle facilities. Purpose: Capacity and safety. Facility class: Minor arterial. Length of project: 0.63 mile. Length of new sidewalk: 0.63 mile. Length of new pathway: 0.63 mile. Linked project(s): 112. |
| 122                             | Eagle River Rd Rehabilitation - MP 5.3 to MP 12.6 (Eagle River) | MP 5.3 to MP 12.6                     | \$28.4                          | Upgrade the road with widened shoulders, improved visibility, and repavement. Wetland impacts anticipated. Purpose: Capacity and safety. Facility class: Major arterial. Length of project: 7.3 miles. Length of new sidewalk: None. Length of new pathway: None. Linked project(s): None.  |
| 123                             | Eklutna River Bridge Rehabilitation/ Replacement (Chugiak)      | Old Glenn Hwy                         | \$6.8                           | Rehabilitate or replace the existing bridge. A new structure would have a design life of 50+ years and would include two travel lanes, shoulders, one pathway, and railing. Purpose: Maintenance, safety, and freight. Facility class: Major arterial. Length of project: 0.88 mile. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.  |
| 124                             | Abbott Rd - Lake Otis Pkwy to Birch Rd                          | Lake Otis Pkwy to Birch Rd            | \$39.0                          | 5 lanes Lake Otis Pkwy to Elmore Rd, 3 lanes Elmore Rd to Birch Rd with intersection improvements. Recommend paved shoulder bikeway and pedestrian facilities. Purpose: Safety and capacity. Facility class: Minor arterial. Length of project: 2 miles. Length of new sidewalk: 2 miles. Length of new pathway: 2 miles. Linked project(s): None.  |
| 125                             | North Access to University-Medical District                     | Providence Dr to Northern Lights Blvd | \$18.8                          | Construct north access to University-Medical District, a 0.5-mile 2-lane or 4-lane facility with non-motorized facilities. Purpose: Circulation, capacity, and safety. Facility class: Major/Minor arterial. Length of project: 0.5 mile. Length of new sidewalk: 0.5 mile. Length of new pathway: 0.5 mile. Linked project(s): None.   |



Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                  | PROJECT NAME   | PROJECT LOCATION                  | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|--|-----------------------------------|---------------------------------|---|
| Short-Term Projects (2011-2023) |  |                                   |                                 |   |
| 126                             | Glenn Hwy/<br>Farm Ave Partial Interchange<br>(Eagle River)                      | Glenn Hwy at Farm Ave             | \$50.0                          | Partial interchange to Farm Ave off the Glenn Hwy (could include an overcrossing to a north-south collector on the west side of the Glenn Hwy). Includes improvements to Farm Ave between Glenn Hwy and Business Blvd. Recommend pedestrian facilities. Purpose: Circulation, access, and freight. Facility class: Freeway. Length of project: 0.2 mile. Length of new sidewalk: 0.2 mile. Length of new pathway: 0.2 mile. Linked project(s): 105, 127, 133, 204, 217.               |
| 127                             | Old Glenn Hwy (Artillery Rd) northbound off-ramp to Eagle River Rd (Eagle River) | Glenn Hwy to Eagle River Rd       | \$13.5                          | Eliminates existing weaving section between the existing Old Glenn Hwy (Artillery Rd) interchange northbound ramp terminal and the Eagle River Rd intersection on Old Glenn Hwy. Provides additional capacity to a heavy demand movement. Recommend separated pathway. Purpose: Capacity, safety, and freight. Facility class: Freeway. Length of project: 0.15 mile. Length of new sidewalk: 0.15 mile. Length of new pathway: 0.15 mile. Linked project(s): 126, 127, 133 204, 217. |
| 128                             | Farm Ave Realignment at Old Glenn Hwy (Eagle River)                              | Winter Park Pl to Old Glenn Hwy   | \$6.5                           | Realignment of Farm Ave to provide direct connection to Eagle River Loop Rd at Old Glenn Hwy. Improves safety and provides direct connection for new interchange for downtown area. Purpose: Capacity, circulation, and access. Facility class: Major arterial. Length of project: 0.35 mile. Length of new sidewalk: 0.35 mile. Length of new pathway: 0.35 mile. Linked project(s): 126, 127.   |
| 129                             | Eagle River Rd Rehabilitation - MP 0.0 to MP 5.3 (Eagle River)                   | MP 0 to MP 5.3 (Upper Terrace St) | \$29.0                          | Rehabilitate approximately 6 miles. Improvements may include turn lanes. Recommend bicycle lanes and reconstruction of existing separated pathway. Purpose: Capacity and circulation. Facility class: Major arterial. Length of project: 6 miles. Length of new sidewalk: 6 miles. Length of new pathway: 6 miles. Linked project(s): 127.  |
| 130                             | 92nd Ave/<br>Academy Dr Extension - Brayton Dr to Abbott Rd                      | Brayton Dr to Abbott Rd           | \$8.8                           | Add new facility—extend 92nd Ave from Brayton Dr to Abbott Rd. Recommend bicycle lanes and separated pathway. Purpose: Capacity and circulation. Facility class: Minor arterial. Length of project: 0.45 mile. Length of new sidewalk: 0.45 mile. Length of new pathway: 0.45 mile. Linked project(s): 117.   |
| 131                             | Mountain Air Dr - Rabbit Creek Rd to E 164th Ave                                 | Rabbit Creek Rd to E 164th Ave    | \$7.9                           | Add new facility—extend Mountain Air Dr from Rabbit Creek Rd to E 164th Ave. Recommend separated pathway. Purpose: Circulation, access, and safety. Facility class: Collector. Length of project: 1 mile. Length of new sidewalk: None. Length of new pathway: 1 mile. Linked project(s): None.   |

## 2035 Metropolitan Transportation Plan

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                  | PROJECT NAME  | PROJECT LOCATION   | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|---|--|---------------------------------|---|
| Short-Term Projects (2011-2023) |   |  |                                 |   |
| 132                             | Northwood St Extension - Strawberry Rd to Dimond Blvd         | Strawberry Rd to Dimond Blvd   | \$26.2                          | Calming measures will be added from 88th Ave to Strawberry Rd. Add new facility - extend Northwood Dr from Strawberry Rd to Dimond Blvd. Recommend bicycle lanes and pedestrian facilities. Purpose: Circulation, capacity, and access. Facility class: Minor arterial. Length of project: 1 mile. Length of new sidewalk: 1 mile. Length of new pathway: 1 mile. Linked project(s): None.  |
| 133                             | Business Blvd Extension (Eagle River)                         | Business Blvd to Eagle River Rd at Old Glenn Hwy (Artillery Rd)          | \$10.0                          | Extension of Business Blvd south to Eagle River Rd to provide better circulation and connection to downtown Eagle River. Recommend pedestrian facilities. Purpose: Circulation, access, and safety. Facility class: Collector. Length of project: 0.3 mile. Length of new sidewalk: 0.3 mile. Length of new pathway: 0.3 mile. Linked project(s): 126, 127, 128.  |
| 134                             | Homestead Rd Improvements (Chugiak)                           | Oberg Rd to Voyles Blvd  | \$7.1                           | Construct new collector roadway. Purpose: Circulation and safety. Facility class: Collector. Length of project: 0.66 mile. Length of new sidewalk: 0.66 mile. Length of new pathway: 0.66 mile. Linked project(s): None.  |
| 135                             | Short-Term MTP Element Implementation Projects                | AMATS area   | \$6.0                           | Could include the following projects: Regional Travel Survey, Complete Streets Plan, Freeway Incident Management Plan, Traffic Signal Operations Plan, Intersection Operations and Safety Improvements Program, Travel Options Report Recommendations, South Anchorage Intersection Study, MTP Update, Subarea Circulation-Collector Street Studies, etc. Purpose: MTP Implementation. Facility class: N/A. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None. |
| 136                             | 3rd Ave, 6th Ave Couplet/E St Conversion Reconnaissance Study | L St to Ingra-Gambell Couplet/3 <sup>rd</sup> Ave to 4 <sup>th</sup> Ave | \$0.5                           | Evaluate the 5th/6th Couplet to a 3rd/6th Couplet. 3rd Ave to become one-way westbound traffic. 5th Ave to become two-way traffic contingent on the 3rd Ave conversion. Purpose: Circulation, access, and freight. Facility class: N/A. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |
| 137                             | Glenn Hwy Operations Analysis - Muldoon Rd to Eklutna         | Muldoon Rd to Eklutna  | \$5.6                           | Include future interchanges. Old Glenn Hwy, Eklutna Village Rd, Thunderbird Falls, Mirror Lake, North Peters Creek/Settlers Dr, South Peters Creek/Ski Rd, Birchwood Loop Rd North, Birchwood Loop Rd South. Purpose: Capacity, freight, and safety. Facility class: Freeway. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 105, 106, 126, 127, 128.  |

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                           | PROJECT NAME  | PROJECT LOCATION             | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|--|---|------------------------------|---------------------------------|--|
| Short-Term Projects (2011-2023)          |   |                              |                                 |  |
| 138                                      | Midtown Subarea Transportation Plan                     | Midtown area                 | \$0.8                           | Finish the study by identifying needs and multimodal/land use solutions. Purpose: Circulation, access, and safety. Facility class: N/A. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 104, 108, 110, 112, 114, 115, 121.   |
| 139                                      | Seward Hwy/ O'Malley Rd Interchanges Study              | Old Seward Hwy to Seward Hwy | \$0.5                           | Reconnaissance study to identify operations, functional design, and phasing of the freeway-to-freeway interchange at Seward Hwy and O'Malley Rd/Minnesota Dr and an interchange at Old Seward Rd and O'Malley Rd. Purpose: Capacity, circulation, and freight. Facility class: N/A. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 107, 113, 116.                           |
| 140                                      | Hiland Rd Improvements – MP 2.2 to MP 3.4 (Eagle River) | MP 2.2 to MP 3.4             | \$6.8                           | Rehabilitate 1.2 miles of existing two lane Hiland Rd to current standards. Improvements may include widening roadway, adding shoulders, improving visibility, reducing grades, and possibly trails, where practical and feasible. Recommend paved shoulder bikeway. Purpose: Safety. Facility class: Collector. Length of project: 1.2 miles. Length of new sidewalk: None. Length of new pathway: None. Linked projects: None. |
| 141                                      | Seward Hwy to Glenn Hwy Connection – Phase III          | Environmental Document       | \$10.0                          | Develop an environmental impact statement for phase 3 of the Seward Hwy to Glenn Hwy connection from Chester Creek to Airport Heights Dr. Alternatives will be evaluated and preferred alignment will be chosen recognizing that the following three segments (210A, 201B, and 201C) of this project may change.   |
| 142                                      | Rabbit Creek Rd - Seward Hwy to Golden View Dr          | Seward Hwy to Golden View Dr | \$11.7                          | Construct center turn lane, sidewalk, and pathway on Rabbit Creek Rd from Seward Hwy to Golden View Dr. Recommend bicycle lanes and separated pathway. Purpose: Capacity. Facility class: Minor arterial. Length of project: 1 mile. Length of new sidewalk: None. Length of new pathway: 1 mile. Linked project(s): 319.  |
| Short-Term Projects (2011-2023) Subtotal |   |                              | \$1,185.2                       |  |

## 2035 Metropolitan Transportation Plan

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                 | PROJECT NAME                                       | PROJECT LOCATION                                      | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|--------------------------------|--|---|---------------------------------|--|
| Long-Term Projects (2024-2035) |  |   |                                 |  |
| 201                            | Seward Hwy to Glenn Hwy Connection – Phase III     | Chester Creek to Airport Heights Dr                   | See phases A-C below            | Construct freeway connection between Seward Hwy/20th Ave and Glenn Hwy/Airport Heights Dr; includes an interchange at Airport Heights Rd freeway access and egress ramps elsewhere along the alignment, depressed sections of freeway that include the construction of bridges and decking above the freeway for cross streets, community amenities, and redevelopment over highway airspace. Purpose: Circulation, access, and freight. Facility class: Freeway. Length of project: 4.9 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 105, 114. Projects 201 A, B, & C are segments of a potential alignment. The preferred and chosen alignment will be evaluated and selected as part of project 141. Projects 201 A, B, & C are subject to change and are not listed in priority order. |
| 201 A                          | Seward Hwy to Glenn Hwy Connection – Phase III     | Airport Heights/ Glenn Hwy Interchange                | \$70.0                          | Add new facility - interchange at Airport Heights Dr. and Glenn Hwy.   |
| 201 B                          | Seward Hwy to Glenn Hwy Connection – Phase III     | Airport Heights to Ingra/ Gambell Corridor            | \$200.0                         | Improvements to increase capacity and provide a limited access corridor from Airport Heights Dr to Ingra/Gambell.  |
| 201 C                          | Seward Hwy to Glenn Hwy Connection – Phase III     | Chester Creek to 5 <sup>th</sup> /6 <sup>th</sup> Ave | \$325.0                         | Construct a depressed freeway between Chester Creek and 5 <sup>th</sup> /6 <sup>th</sup> Ave. Reconstruct Ingra and Gambell streets, crossings over the depressed freeway, and cut-and-cover lids.   |
| 202                            | Huffman Rd Rehabilitation - Pintail St to Birch Rd | Pintail St to Birch Rd                                | \$8.0                           | Rehabilitate road. Improvements may include widening roadway, adding shoulders, improving visibility, reducing grades, and possibly trails, where practical and feasible. Recommend bicycle lanes and separated pathway. Purpose: Capacity, circulation, and access. Facility class: Collector. Length of project: 2.63 miles. Length of new sidewalk: 2.63 miles. Length of new pathway: 2.63 miles. Linked project(s): 307, 314.   |



Table 7-3 Recommended 2035 MTP Road Projects(Continued)

| PROJECT NUMBER                 | PROJECT NAME  | PROJECT LOCATION   | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|--------------------------------|---|--|---------------------------------|--|
| Long-Term Projects (2024-2035) |   |  |                                 |  |
| 203                            | North Eagle River Interchange Capacity Modifications Study (Eagle River)  | Glenn Hwy at North Eagle River Access Rd   | \$0.5                           | Study the need for improvements at ramp terminals. Purpose: Capacity, safety, and freight. Facility class: N/A. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 204, 205.  |
| 204                            | Glenn Hwy HOV Lane - Old Glenn Hwy (Artillery Rd) interchange to Peters Creek interchange (Voyles Rd) (Eagle River) | Old Glenn Hwy (Artillery Rd) interchange to Peters Creek interchange (Voyles Rd) | \$55.0                          | Widen Glenn Hwy to add an additional non-SOV lane in each direction, including interchange upgrades at Peters Creek bridge. Purpose: Capacity and freight. Facility class: Freeway. Length of project: 8.1 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 205.   |
| 205                            | Glenn Hwy HOV Lane - Boniface Pkwy to Old Glenn Hwy (Artillery Rd) Interchange                                      | Boniface Pkwy to Eagle River Old Glenn Hwy (Artillery Rd) Interchange            | \$71.7                          | Widen with lanes to the outside with 1 lane each direction designated non-SOV, includes Ship Creek bridge improvements. Purpose: Capacity and freight. Facility class: Freeway. Length of project: 11.3 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 105, 204.   |
| 206                            | Davis St and Santa Maria Dr Realignment at Old Glenn Hwy (Eagle River)  | Old Glenn Hwy - North Eagle River Loop Rd and North Eagle River Access           | \$5.5                           | Extend Davis St east to Schroeder Dr and align with Santa Maria Dr as a 4-leg intersection on Old Glenn Hwy. Reduces number of offset intersections on Old Glenn Hwy and improves safety for pedestrian, bicycle, and vehicle crossings and emergency-response accessibility. Purpose: Circulation and safety. Facility class: Major arterial. Length of project: 0.35 mile. Length of new sidewalk: None. Length of new pathway: N/A. Linked project(s): 207. |
| 207                            | Eleonora St and S Juanita Loop Realignment at Old Glenn Hwy (Eagle River)   | Old Glenn Hwy - North Eagle River Loop Rd and North Eagle River Access           | \$2.0                           | Align Eleonora St and S Juanita Loop as a 4-leg intersection on Old Glenn Hwy. Reduces number of offset intersections on Old Glenn Hwy and improves safety for pedestrian, bicycle, and vehicle crossings and emergency-response accessibility. Purpose: Circulation and safety. Facility class: Major arterial. Length of project: 0.35 mile. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 206.                                |

## 2035 Metropolitan Transportation Plan

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                 | PROJECT NAME  | PROJECT LOCATION                      | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|--------------------------------|---|---------------------------------------|---------------------------------|---|
| Long-Term Projects (2024-2035) |   |                                       |                                 |   |
| 208                            | Hiland Rd Improvements Phase II – MP 1.0 to MP 2.2 and MP 3.4 to MP 8.3 (Eagle River) | MP 1.0 to MP 2.2 and MP 3.4 to MP 8.3 | \$24.9                          | Rehabilitate 6.1 miles of existing two lane Hiland Rd to current standards . Improvements may include widening shoulders, improving visibility, reducing grades, and possibly trails, where practical and feasible. Recommend paved shoulder bikeway. Purpose: Safety. Facility class: Collector. Length of project: 6.1 miles. Length of new sidewalk: None. Length of new pathway: None. Linked project(s): None. |
| 209                            | A/C St Couplet Restripe - Tudor Rd to 9th Ave   | Tudor Rd to 9th Ave                   | \$0.5                           | Restripe to include 4 lanes in each direction. Purpose: Capacity. Facility class: Major arterial. Length of project: 4.5 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |
| 210                            | Birchwood Loop and Birchwood Spur Rd Improvements (Chugiak)                           | Old Glenn Hwy to Birchwood Airport    | \$16.6                          | Reconstruct 2.98 miles of roadway to current standards. Improvements may include widening roadway and adding shoulders. Purpose: Capacity and safety. Facility class: Major arterial. Length of project: 2.98 miles. Length of new sidewalk: N/A. Length of new pathway: N/A miles. Linked project(s): None.  |
| 211                            | Seward Hwy/ O'Malley Rd Interchange   | Old Seward Hwy to Seward Hwy          | \$75.0                          | Add a freeway style interchange at Seward Hwy and O'Malley Rd/ Minnesota Dr that provides unimpeded traffic flow between Seward Hwy and Minnesota Dr. Purpose: Capacity, safety, and freight. Facility class: Freeway. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 116, 139.  |
| 212                            | C St/Ocean Dock Rd Access Ramp  | C St Viaduct to Ocean Dock Rd         | \$11.2                          | Reconstruct the ramp at Ship Creek. Purpose: Maintenance, safety, and freight. Facility class: Minor arterial. Length of project: 0.05 mile. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.  |
| 213                            | Ingra-Gambell Couplet Extension - 3rd Ave to Whitney Rd                               | 3rd Ave to Whitney Rd                 | \$26.0                          | Add new facility—extend Ingra St/Gambell St to Ship Creek Ave and Whitney Rd. Purpose: Access, circulation, and freight. Facility class: Major arterial. Length of project: 0.05 mile. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 201, 315.  |

Table 7-3 Recommended 2035 MTP Road Projects (Continued)

| PROJECT NUMBER                          | PROJECT NAME                                    | PROJECT LOCATION                         | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---|---|--|---------------------------------|---|
| Long-Term Projects (2024-2035)          |   |  |                                 |   |
| 214                                     | Glenn Hwy Frontage Rd                           | Boniface Pkwy to Muldoon Rd              | \$18.0                          | Construct a frontage road between Boniface Pkwy and Muldoon Rd on the north side of the Glenn Hwy and a possible flyover to connect with Turpin St. Purpose: Circulation and Capacity. Facility class: Frontage. Length of project: 0.6 mile. Length of new sidewalk: 0.6 mile. Length of new pathway: 0.6 mile. Linked project(s): 106, 137, 205.  |
| 215                                     | Eagle River CBD - Phase II, Study (Eagle River) | Downtown & Residential Core, Eagle River | \$0.5                           | Study to identify the recommended long-term solution for the CBD transportation system. Purpose: Circulation, capacity, and safety. Facility class: N/A. Length of project: 1.8 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 105, 126, 127, 128.  |
| 216                                     | Long-Term MTP Element Implementation Projects   | AMATS area                               | \$6.0                           | Could include the following projects: Regional Travel Survey, Complete Streets Plan, Freeway Incident Management Plan, Traffic Signal Operations Plan, Intersection Operations and Safety Improvements Program, Travel Options Report Recommendations, South Anchorage Intersection Study, MTP Update, Subarea Circulation-Collector Street Studies, etc. Purpose: MTP Implementation. Facility class: N/A. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None. |
| Long-Term Projects (2024-2035) Subtotal |   |  | \$916.4                         |   |
| 2035 MTP Road Projects Total            |   |  | \$2,101.6                       |   |

Project listing and numbers do not indicate any priority order within the short and long term periods. Project priority will be determined through the AMATS TIP process.

ADA = Americans with Disabilities Act N/A = not applicable

CBD = Central Business District SOV = single-occupancy vehicle

HOV = high-occupancy vehicle TIP = Transportation Improvement Program

M = million MP = Milepost

## 2035 Metropolitan Transportation Plan

Table 7-4 Knik Arm Crossing Project

| PROJECT NUMBER                  | PROJECT NAME                 | PROJECT LOCATION                                     | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|---------------------------------|------------------------------|--|---------------------------------|--|
| Short-Term Project (2011–2023)  |                              |  |                                 |  |
| 143                             | Knik Arm Crossing - Phase I  | A-C Couplet to Point MacKenzie-Burma Rd Intersection | \$702.0                         | Add new bridge facility access across Knik Arm with associated roads connecting to the Anchorage roadway network. Purpose: Access, circulation, and freight. Facility class: National Highway System route—freeway/major arterial. Length of project: Phase I, 19 miles; Length of new sidewalk: N/A Length of new pathway: N/A. Linked project(s): 213. |
| Long-Term Project (2024–2035)   |                              |  |                                 |  |
| 217                             | Knik Arm Crossing - Phase II | Ingra-Gambell Couplet Connection                     | \$230.0                         | Add new connection from Government Hill tunnel to Ingra-Gambell Couplet over Ship Creek. Purpose: Access, circulation, and freight. Facility class: National Highway System route—freeway/major arterial. Length of project: Phase II: 0.7 mile. Length of new sidewalk: N/A Length of new pathway: N/A. Linked project(s): 213.                         |
| Knik Arm Crossing Project Total |                              |  | \$932.0                         |  |

Source: KABATA (2011): Project costs include design and build the facility.



Figure 7-1 Recommended Road Projects-Anchorage Bowl

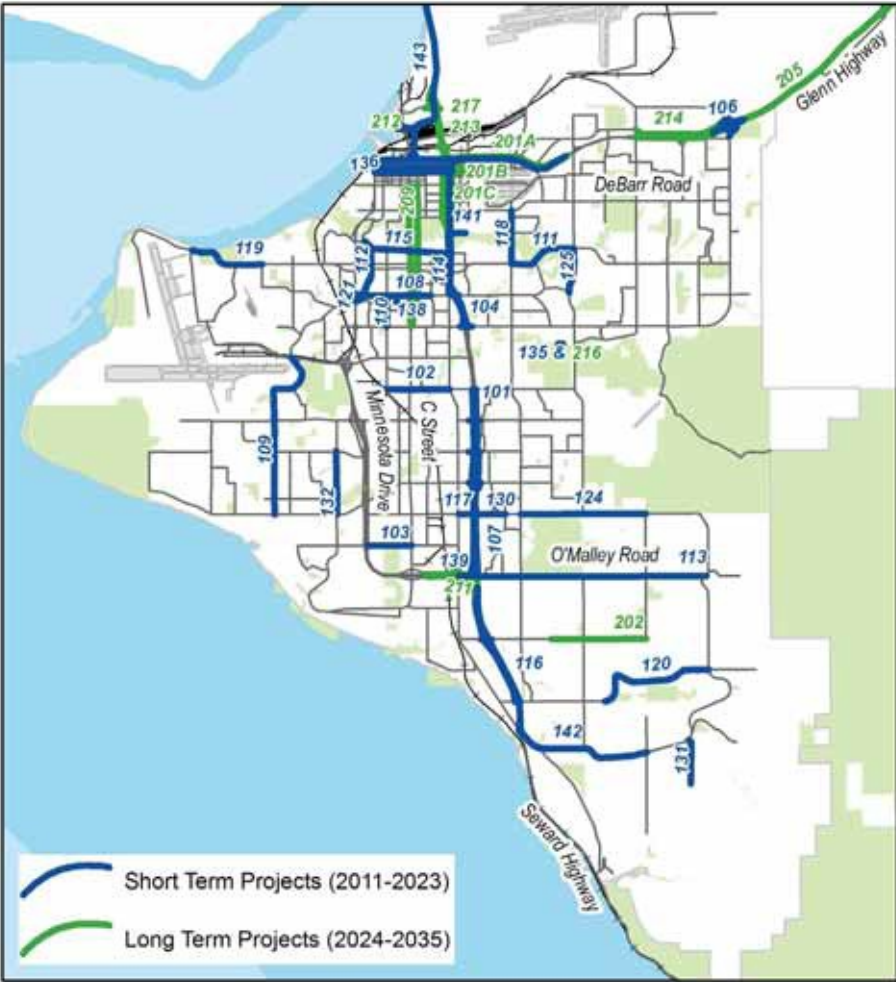
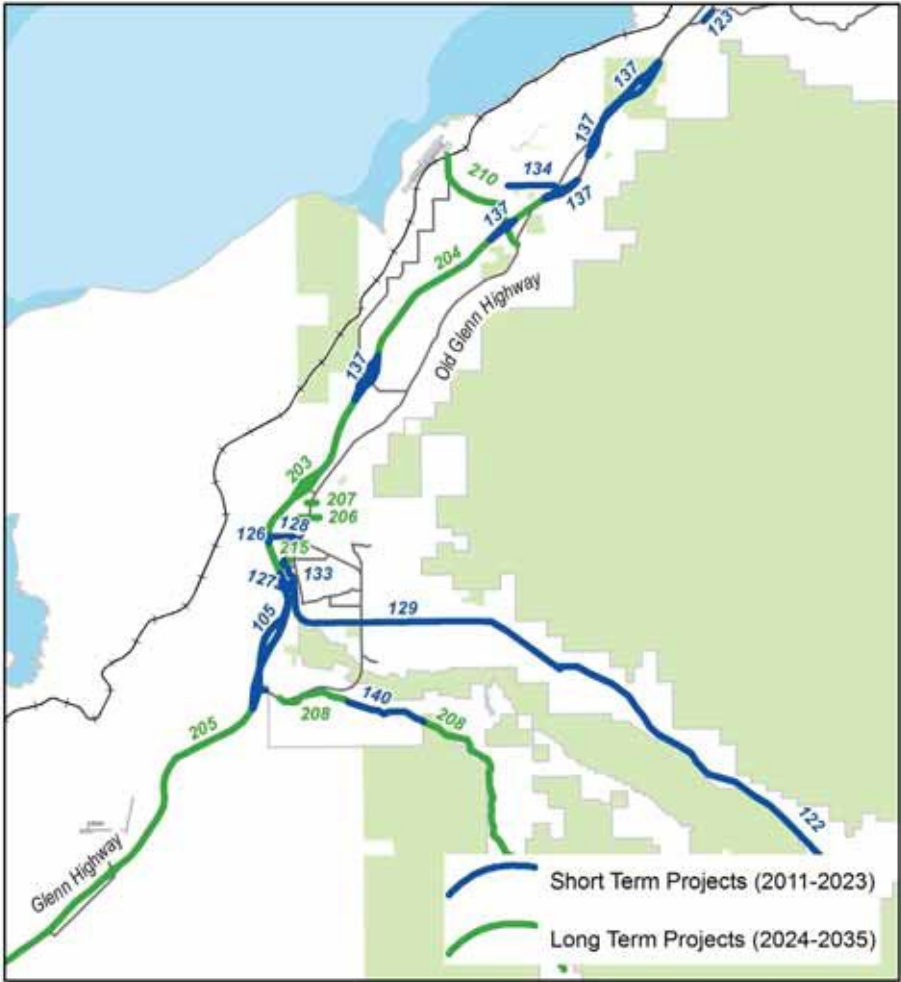


Figure 7-2 Recommended Road Projects-Chugiak-Eagle River



### Road Improvement Highlights

The recommended road improvements accomplish the following:

- Complete missing segments to reduce the need to expand other streets
- Interconnect the upgraded Seward Highway with improved interchanges and a new freeway interchange connection to Minnesota Drive, and add three new east-west street connections across the Seward Highway to provide better circulation
- Connect the Glenn and Seward highways to provide needed capacity and more efficient freight distribution
- Improve the Glenn Highway interchanges at Hiland Road and Old Glenn Highway (Artillery Road) and add a new partial interchange at Farm Avenue to provide safer and more efficient movements in the Eagle River area
- Improve surface streets over and around the Glenn and Seward highway corridors to calm traffic and create opportunities for modes of travel other than the automobile
- Ease the Glenn Highway corridor commute with interchange improvements and additional high-occupancy vehicle (HOV) lanes
- Expand access to the Port of Anchorage and Port MacKenzie and provide a second major roadway

connection from Anchorage to Interior Alaska with the Knik Arm Crossing project

- Improve circulation and accessibility in the Eagle River CBD and residential core with a number of improvements on the arterial and collector system
- Three especially important projects are the Seward Highway to Glenn Highway Connection (in three phases), the Glenn Highway corridor project to the north, and the Knik Arm Crossing.

#### Building the Seward Highway to Glenn Highway Connection

The Seward and Glenn highways together form Anchorage's longest and most multifaceted transportation corridor. Both highways are part of the NHS, the regional transportation network, the city street system, and the city and neighborhood landscape. Both highways provide critical links in support of state, regional, and local economies.

The MOA and Mat-Su Borough regional population will exceed one-half million people by 2035. That population figure exceeds by more than 150,000 the number of people who live in these areas today. In the Anchorage Bowl and Chugiak-Eagle River combined, the growth will add 65,200 more people and 400,000 more trips every day on the regional transportation system. The traffic at the junction of the Glenn and Seward high-

ways is anticipated to exceed 100,000 vehicles per day, increasing faster than on other roads because of suburban growth and drivers' preference for higher-speed freeway travel. Finishing this highway connection is a top-priority to provide safety and mobility of people and goods within the metropolitan area and the rest of the state.

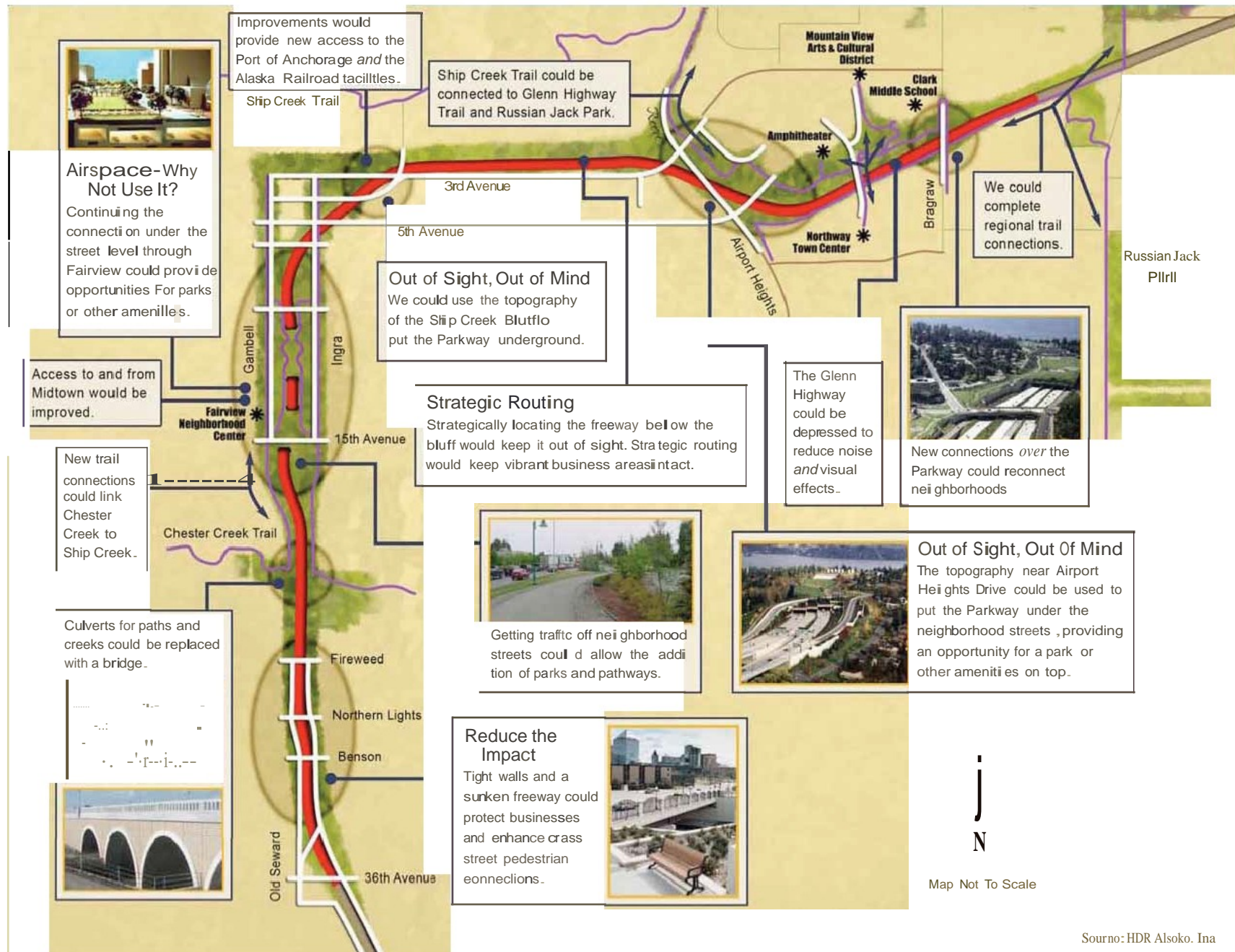
#### The Concept

The connection concept uses topography to depress a new, high-capacity expressway designed to serve through trips—travel to major destinations within and across the MOA—and reduce traffic on the neighborhood streets while incorporating improved parks and trail connections to benefit neighborhoods. (See Figure 7-3.) Innovative community enhancements, well-landscaped roadways, and a series of ground-level connections would span the depressed highway connection and re-establish neighborhood connectivity. By depressing the highway through sensitive areas, new opportunities would be created for adjacent neighborhoods and surface streets to return primarily to serving local neighborhood traffic. Gambell and Ingra streets, 5th and 6th avenues, Mountain View Drive, and 15th Avenue/Debarr Road would all serve local and business access. The list of associated benefits is long:

- Fewer new lanes are needed in the corridor because higher-speed, non-stop express lanes can accommodate



Figure 7-3 Benefits of the Connecting Corridor



Source: HDR, Alaska Ina

more than twice the number of vehicles than lanes that also have to provide access to the abutting properties.

- Less time is spent in traffic—a wide range of users from commuters, to freight haulers, to emergency response personnel would realize this benefit.
- Traffic is no longer the major feature and concern of neighborhoods and communities. The highway's visibility and neighborhood impacts are severely reduced.
- Traffic on local streets and in neighborhoods is reduced because cut-through traffic is eliminated and longer trips bypass neighborhoods.
- The safety and ease of crossing the corridor (for cars and pedestrians) is significantly enhanced.
- Freight mobility improves with decreased congestion and improved travel times, which subsequently reduce the cost of doing business in and around the region.
- Freight haulers can move between the Port of Anchorage and distribution centers without traveling through Downtown or on surface streets in neighborhoods.
- Previous surface arterials can be reclaimed to serve local and business needs. Existing multiple-lane corridors can be used as frontage

roads, or some can be reclaimed for on-street parking, beautification projects, or pedestrian facilities.

- Transit improves through shortened travel times, made possible by new opportunities to implement high-speed express bus, HOV lanes, or both. Longer-distance commutes, typical of the corridor, are well served by good connections to various Anchorage activity centers and other attractions.
- Capacity is leveraged and safety is improved because of controlled access.
- Rebuilding of neighborhoods, housing, and public facilities is made possible.
- Neighborhoods and parks are reconnected with each other and Downtown.
- Communities are revitalized with transportation assistance.

Linking the highways is crucial to meet Anchorage transportation needs. But far more important is how the link is done. Context-sensitive design will be used to put the facility partly, or in some cases entirely, underground, getting the connection out of sight and off surface streets.

The Anchorage Bowl comprehensive plan and the 2005 draft Anchorage Bowl Land Use Plan Map depict portions of the eastern Downtown and western Fairview ar-

reas as providing much of the critical mass of housing units needed near Downtown. A well-designed, expedited project is essential to medium-term implementation of the comprehensive plan policies for infill, redevelopment, and an enhanced urban environment. Timely completion of the Seward and Glenn highways connection project is essential to spur other investments to regenerate eastern Downtown and western Fairview. The following characteristics of the project are essential to provide consistency with the Anchorage Bowl comprehensive plan and to emphasize the importance of the land use aspects:

- The project design should enhance east-west neighborhood street connectivity. The most important east-west street connections in Fairview are 9th, 13th, and 15th avenues. These streets are most central, but additional connections should be considered.
- Extensive decking over the freeway, particularly in the areas between 9th and 15th avenues, is important from a land-use perspective. The resulting open spaces would provide a neighborhood focus and integrate with abutting residential projects and the neighborhood commercial activity center.
- Land-use benefits will be realized if the freeway alignment allows (1) Gambell and Ingra streets to be



a two-sided, north-south street (with housing on both sides) and (2) enough space for a block width of high-density residential and limited mixed-use between Gambell and Hyder streets. An alignment of the freeway centerline east of the Hyder Street centerline would maximize neighborhood space for redevelopment and infill in the area west of the freeway (and closer to Downtown).

### Phasing of Construction

The financial constraints of the 2035 MTP have created the need to examine logical and effective construction phasing of the Seward and Glenn highways connection project. The DOT&PF has developed a three-phase implementation plan consisting of the following segments:

- Phase 1: 36th Avenue/Seward Highway interchange improvements from Tudor Road to 33rd Avenue (short term). This phase would consist of a new interchange at 36th Avenue and include braided ramps connecting to the Tudor Road interchange and a separated multi-use pathway.
- Phase 2: Seward Highway Midtown congestion relief between 33rd Avenue and Chester Creek (short term). This phase would reconstruct Seward Highway between 33rd Avenue and 20th Avenue as a

depressed freeway with new interchanges at Northern Lights Boulevard and Benson Boulevard. It would also include a separated multi-use pathway and connections to the Chester Creek trail.

- Phase 3: Seward Highway to Glenn Highway connection between Chester Creek and Airport Heights Drive (short and long term). This final phase would construct a depressed freeway connection with new interchanges at the Ingra-Gambell Couplet—to provide access to Downtown, the Port of Anchorage, JBER, and Knik Arm Crossing—and at Airport Heights Road. It also includes construction of bridges and decking above the freeway for cross streets, community amenities, and redevelopment over highway airspace, plus a separated multi-use pathway. The environmental document for phase 3 is in the short-term projects and the construction segments are in the long-term projects.

Phase 1 and 2 target the most critical congestion problems on the Seward Highway through Midtown. The intersection of the Seward Highway and 36th Avenue currently has the highest afternoon peak period delay of any intersection in the MOA. To place a freeway segment between 5th Avenue and Chester Creek first would cause a traveler to go from a freeway to an

arterial to a freeway to an arterial and finally enter the freeway again. Therefore, this segment is Phase 3 of the Seward Highway to Glenn Highway connection. To address non-motorized safety concerns in the Ingra-Gambell couplet area, a Fairview Pedestrian Safety Study has been added as a short term project.

### EASING THE GLENN HIGHWAY CORRIDOR COMMUTE

Travel in the Glenn Highway corridor between Chugiak-Eagle River and the Anchorage Bowl is projected to double during the next 25 years, as suburban development flourishes. The demand will exceed the capacity of the existing six-lane freeway by 1,600 vehicles in the afternoon peak hour.

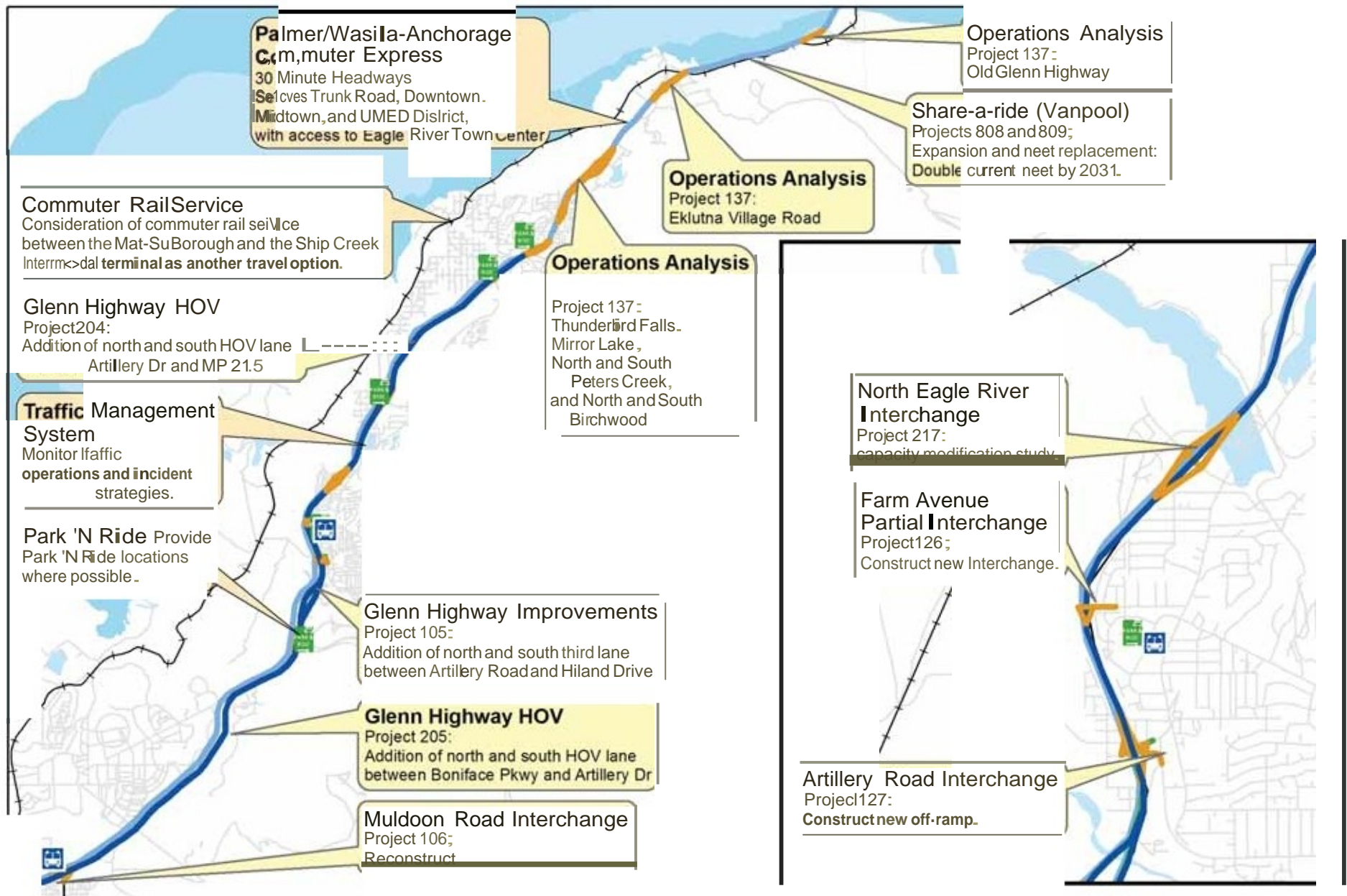
A multi-pronged strategy to meet mobility needs in the corridor is recommended. It includes improving interchanges, ramp, and roadway bottlenecks along the corridor; implementing high-performance, express, commuter transit service together with aggressive incentives to shift commuters from single-occupancy vehicles (SOVs); providing (in phases) dedicated lanes for express buses and HOVs; and assessing the potential of commuter rail.

Figure 7-4 illustrates components of the Glenn Highway corridor plan. The components are also described below:

- The Glenn Highway Corridor Study to examine the functional design and

|  |  |  |
|--|--|--|
| <p>traffic operational requirements for the Glenn Highway between Muldoon Road and Eklutna. The study will examine use of additional lanes (including HOV lanes), interchange modifications, and possible new interchange locations north of Chugiak-Eagle River to serve future developments</p> <ul style="list-style-type: none"><li>▪ Location of park-and-ride lots at Hiland Road, the Eagle River Transit Center, South Birchwood, North Birchwood, South Peters Creek, and North Peters Creek to encourage alternative mode ridership between Chugiak-Eagle River and the Anchorage Bowl</li><li>▪ Regional mode choice options available for Mat-Su area ridership, including a park-and-ride lot at Trunk Road and Valley Mover service connecting Wasilla and Palmer with Downtown Anchorage</li><li>▪ Commute options incentive program, consisting of value rewards, commute shift incentives, and strong employer partnerships to foster flexible work hours, telecommuting, and other employee incentives to lessen solo-driver commutes</li><li>▪ Expanded vanpool and carpool programs working in collaboration with major employers to provide viable options to drive-alone commuting</li></ul> | <ul style="list-style-type: none"><li>▪ Facilitation of broad implementation of federal tax-benefit credits for vanpool and public transportation commuters to reinforce non-drive commuting</li><li>▪ Road improvements that include a third highway lane in each direction between Hiland Road and Old Glenn Highway (Artillery Road), incorporating bridge widening, interchange and access improvements, ramp extensions, and related spot improvements to improve traffic capacity, flow, and safety</li><li>▪ Traffic management system that monitors corridor traffic operation conditions and includes incident-response strategies (cameras, response coordination, public information dissemination, and traffic advisories)</li><li>▪ Commercial Vehicle Intelligent System Network (CVISN) that includes automated safety information exchange, electronic credentialing, and electronic screening upgrades to roadside weigh and inspection facilities</li><li>▪ Reconsideration of the Glenn Highway weigh station investments for the long term because relocation appears to be necessary</li><li>▪ Phased implementation of HOV lanes, express bus lanes, or both to reduce</li></ul> | <p>solo-driver automobile use and make commute alternatives more attractive</p> <ul style="list-style-type: none"><li>▪ Creation of a regional transit authority to develop commuter service options and ultimately plan, operate, and maintain them in the future</li><li>▪ Consideration of commuter rail service between the Mat-Su Borough and the Anchorage Bowl as another travel option</li></ul> <p>Knik Arm Crossing</p> <p>Background</p> <p>The Alaska Legislature established KABATA in 2003 as a public corporation and an instrumentality of the State of Alaska within the DOT&amp;PF. The specific mission of KABATA is to “develop, stimulate, and advance the economic welfare of the state and further the development of public transportation systems in the vicinity of the Upper Cook Inlet with construction of a bridge to span Knik Arm and connect the Municipality of Anchorage (MOA) and the Mat-Su Borough” (Alaska Statute 19.75.011).</p> <p>Project Description</p> <p>The Knik Arm Crossing project is a roadway and bridge crossing of Knik Arm connecting the MOA and the Mat-Su Borough, as shown in Figure 7-5. The total length of the project from the intersection of Point MacKenzie and Burma roads</p> |
|--|--|--|

Figure 7-4 Easing the Glenn Highway Commute





to the A-C Couplet and Ingra-Gambell Couplet is approximately 19 miles.

The selected alternative assumes construction of a minimum 8,200-foot, pier-supported bridge with causeway approaches that extend 2,000 feet from the western shore and 3,300 feet from the eastern shore of Knik Arm.

In Anchorage, the project follows the Anchorage shoreline and western perimeter of JBER at the bottom of the bluff to Cairn Point, and then continues south, closely following the natural curvature of the shoreline. The project includes a cut-and-cover tunnel under Government Hill along an Erickson Street-area alignment. Initial construction would include a connection to the existing A-C Couplet. Because of the impact of the future bridge traffic on downtown streets, work on the design of the connection to a new viaduct (elevated bridge) across the Ship Creek rail yard to connect with the Ingra-Gambell Couplet should begin as soon as possible after the bridge's expected opening in 2016. Figure 7-6 depicts the Knik Arm Crossing alignment and configuration in more detail.

The project will be phase-constructed. Phase I includes a minimum two-lane roadway and bridge extending from Port Mackenzie District boundary in the Mat-Su Borough to the A-C streets couplet in Anchorage. This phase also includes a six-lane cut-and-cover tunnel under Government Hill. The bridge substructure

and the in-water and Anchorage-side roadway subgrade must initially be built to accommodate the full future four-lane roadway width. The expansion of the bridge and roadway from two lanes to four lanes within the Phase I construction limits will be the responsibility of the private developer, who has the option to construct these additional lanes at any time, provided they are in place at such time that traffic volumes warrant. Because the work is included in the initial contract, it is considered short-term for the purposes of the MTP.

Phase II includes the four-lane extension of the Ingra-Gambell couplet on a viaduct over Ship Creek to tie into the Government Hill tunnel. This phase is the responsibility of KABATA, and this portion of Phase II is considered a long-term project in the MTP.

Phase II also includes the four-lane upgrade between Burma Road and the Port of Mackenzie District boundary in the Mat-Su Borough, which is outside the consideration of the MTP.

The project is classified as a rural principal arterial in the Mat-Su Borough and across Knik Arm, transitioning to an urban principal arterial in Anchorage in the vicinity of the Port of Anchorage. Upon completion of construction, it will automatically be classified NHS Intermodal Connector.

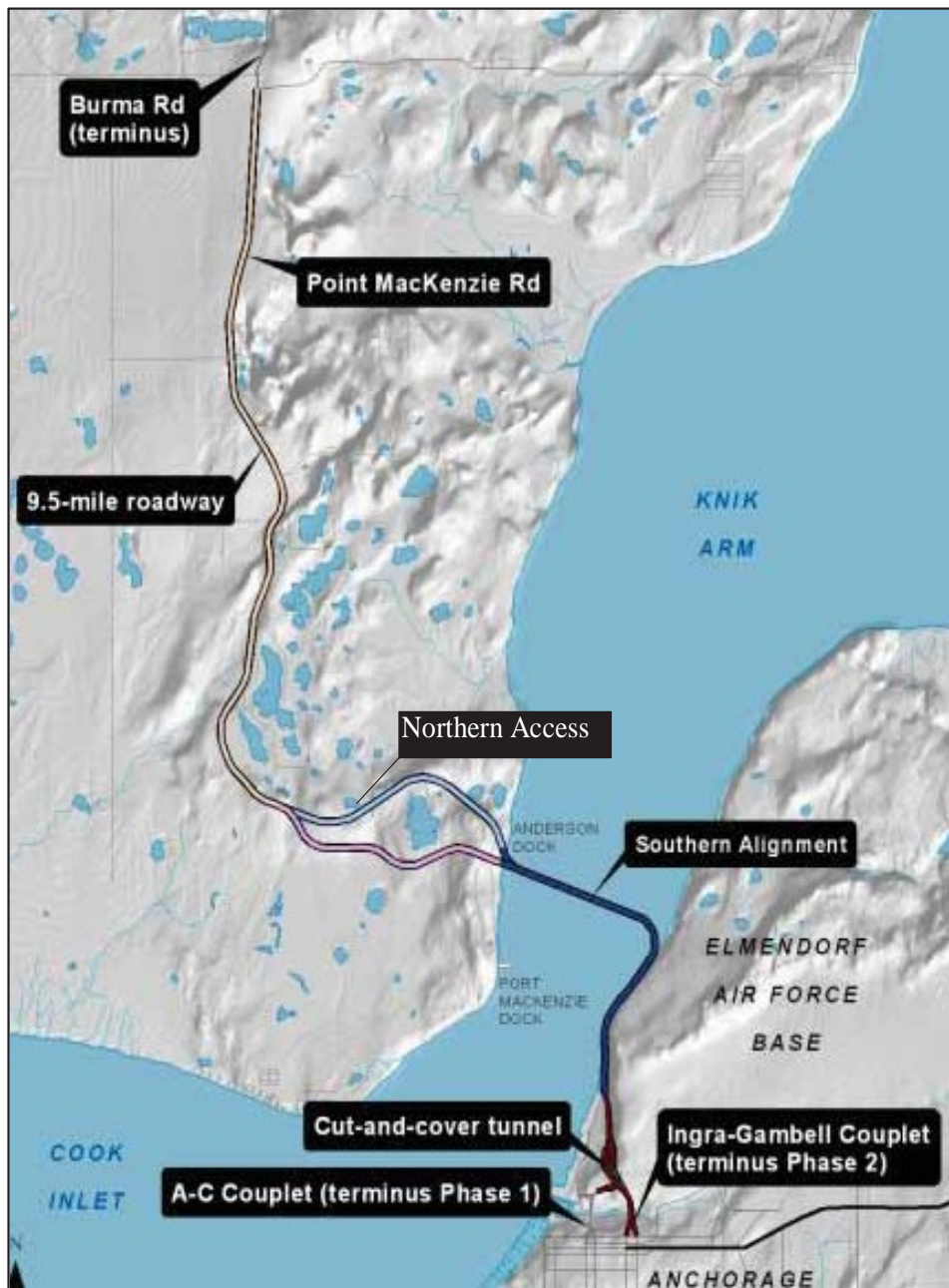
### Neighborhood Mitigation

The communities served by the Government Hill Community Council as well as other neighborhood community councils, such as Downtown, South Addition, and Fairview, would be directly affected by the proposed Knik Arm Crossing, given the proposed alignment. Because of the potentially adverse effects of Phase I traffic from the Knik Arm Crossing on the revitalization of affected neighborhoods, the design for the Anchorage side of the bridge must include adequate mitigation to facilitate the efficient, safe, and neighborhood-appropriate incorporation of bridge traffic through Downtown and onto roads that can handle the anticipated increase in traffic. Design considerations would include measures to reduce the impact of the Knik Arm Crossing traffic from Government Hill to Downtown, and would provide improved pedestrian connectivity along the A-C streets couplet up to 3rd Avenue.

The connection of the Knik Arm Crossing to the A-C streets couplet and ultimately the Ingra-Gambell streets couplet extension in concept would include the use of existing topography to trench and cover an expressway-type roadway on an alignment designed to serve through trips and reduce traffic on neighborhood streets. These components would be accomplished while incorporating improved parks and pedestrian connections to benefit the Government Hill neighborhood, including trail connections joining



Figure 7-5 Knik Arm Crossing Project



Source: HDR Alaska, Inc.

Figure 7-6 Knik Arm Crossing Project Preferred Alignment



Source: HDR Alaska, Inc.

Downtown, Ship Creek, and Government Hill. Unique and innovative community and streetscape enhancements would be required as part of the Knik Arm Crossing project as it travels through Government Hill. For example, a span over the depressed expressway could be used to reestablish neighborhood connectivity and minimize noise and air quality impacts to the neighborhood. The project would provide Government Hill with a balance of local road, trail, and pedestrian facilities, and would discourage the use of local roads by through traffic that might cut through the neighborhood.

The Knik Arm Crossing project would not result in a traditional freeway through a neighborhood that creates a barrier and separation of the neighborhood. The goal is for Government Hill and the project sponsors to use the opportunity to implement well-designed mitigation projects. Such mitigation projects would be developed in close cooperation with the neighborhood. They would use a best practices and context-sensitive design approach to enhance and revitalize the Government Hill community with a design that fits within the character of this unique and historic neighborhood.

### Illustrative Road Projects

In Table 7-5, the roads projects in the illustrative category are listed. These road projects are not funded in the MTP and will be scheduled to be constructed after 2035.

Table 7-5 Illustrative Road Projects (Not funded in MTP—after 2035)

| PROJECT NUMBER | PROJECT NAME   | PROJECT LOCATION                        | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|----------------|--|---|---------------------------------|---|
| 301            | Tudor Rd Access Management - Seward Hwy to Arctic Blvd   | Seward Hwy to Arctic Blvd               | \$14.0                          | Add access management and turn restrictions; modify local connections to make adjacent property access to other roads; east-west or north-south access in lieu of direct access from Tudor Rd wherever practical. Purpose: Circulation, access, and safety. Facility class: Major arterial. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |
| 302            | Tudor Rd Access Management - Seward Hwy to Patterson St  | Seward Hwy to Patterson St              | \$41.6                          | Add access management and turn restrictions; modify local connections to make adjacent property access to other roads; east-west or north-south access in lieu of direct access from Tudor Rd wherever practical. Purpose: Circulation, access, and safety. Facility class: Major arterial. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |
| 303            | Boniface Pkwy Access Management - Tudor Rd to Glenn Hwy  | Tudor Rd to Glenn Hwy                   | \$22.5                          | Add access management and related local circulation access to preserve capacity on Boniface Pkwy. Purpose: Circulation, access, and safety. Facility class: Major arterial. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 604.  |
| 304            | Jewel Lake Rd/ International Airport Rd Grade Separation | Jewel Lake Rd to Northwood St           | \$50.6                          | Construct interchange at International Airport Rd and Jewel Lake Rd incorporating a grade separation of the railroad and construct a grade separation of International Airport Rd near Northwood St with realignment of railroad to the south side of International Airport Rd. Purpose: Capacity, safety, and freight. Facility class: Expressway. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None. |
| 305            | Postmark Dr/ International Airport Rd Grade Separation   | Postmark Dr to International Airport Rd | \$23.6                          | Add grade separation of International Airport Rd over Postmark Dr. Purpose: Capacity, safety, and freight. Facility class: N/A. Length of project: N/A. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |
| 306            | Lake Otis Pkwy Extension - Debarr Rd to Glenn Hwy        | Debarr Rd to Glenn Hwy                  | \$36.0                          | Add new facility—extend Lake Otis Pkwy to Glenn Hwy interchange at Airport Heights Rd. Recommend pedestrian facilities. Purpose: Circulation and capacity. Facility class: Major arterial. Length of project: 0.7 miles. Length of new sidewalk: 0.7 miles. Length of new pathway: N/A. Linked project(s): 105, 114, 201, 306.  |

## 2035 Metropolitan Transportation Plan

Table 7-5 Illustrative Road Projects (Not funded in MTP—after 2035) (cont.)

| PROJECT NUMBER | PROJECT NAME   | PROJECT LOCATION   | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|----------------|--|--|---------------------------------|---|
| 307            | Elmore Rd Extension - O'Malley Rd to Abbott Rd       | O'Malley Rd to Abbott Rd   | \$35.2                          | 1-mile road connection - completes north-south corridor between DeArmoun Rd and Providence Dr. Recommend bicycle lanes and separated pathway. Purpose: Circulation and capacity. Facility class: Collector. Length of project: 1 mile. Length of new sidewalk: None. Length of new pathway: None. Linked project(s): None.  |
| 308            | South Birchwood Loop Rd Improvements (Chugiak)       | Old Glenn Hwy to Birchwood Loop Rd   | \$38.0                          | Rehabilitate 5.05 miles of roadway to address safety issues and add shoulders. Recommend bicycle lane from Old Glenn Hwy to Hillcrest Dr and separated pathway along the length of the project. Purpose: Capacity and safety. Facility class: Collector. Length of project: 5.05 miles. Length of new sidewalk: None. Length of new pathway: 5.05. Linked project(s): None.           |
| 309            | Minnesota Dr Corridor/Tudor Rd Interchange           | International Airport Rd to Northern Lights Blvd/ Minnesota Dr at Tudor Rd | \$112.7                         | Extend controlled access from International Airport Rd through a grade-separated interchange at Tudor Rd and widen the arterial to 8 lanes north of Tudor Rd to Northern Lights Blvd. Purpose: Capacity, safety, and freight. Facility class: Major arterial. Length of project: 0.7 mile. Length of new sidewalk: 0.7 mile. Length of new pathway: N/A. Linked project(s): 112, 121. |
| 310            | 84th Ave - Hartzell Rd to Lake Otis Pkwy             | Hartzell Rd to Lake Otis Pkwy  | \$9.4                           | Reconstruct existing road and add new segment. Recommend pedestrian facilities. Purpose: Circulation and access. Facility class: Collector. Length of project: 1 mile. Length of new sidewalk: 1 mile. Length of new pathway: N/A. Linked project(s): None.   |
| 311            | Seward Hwy - Potter Weigh Station to Rabbit Creek Rd | Potter Weigh Station to Rabbit Creek Rd                                    | \$47.0                          | Reconstruct and widen Seward Hwy between Potter Weigh Station and Rabbit Creek Rd. Recommend paved shoulder bikeway. Purpose: Safety and freight. Facility class: Freeway. Length of project: 2.65 miles. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): 303, 311.   |
| 312            | 92nd Ave Extension - King St to Old Seward Hwy       | King St to Old Seward Hwy  | \$17.2                          | Add new facility—extend 92nd Ave from King St to Old Seward Hwy and evaluate grade-separation crossing of railroad. Recommend bicycle lanes and pedestrian facilities. Purpose: Circulation, access, and freight. Facility class: Minor arterial. Length of project: 1 mile. Length of new sidewalk: 3.2 miles. Length of new pathway: N/A. Linked project(s): None.                  |



Table 7-5 Illustrative Road Projects (Not funded in MTP—after 2035) (cont.)

| PROJECT NUMBER | PROJECT NAME                                     | PROJECT LOCATION            | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|----------------|--|-----------------------------|---------------------------------|---|
| 313            | 92nd Ave Extension- Minnesota Dr to King St      | Minnesota Dr to King St     | \$11.0                          | Add new facility—extend 92nd Ave from Minnesota Dr to King St. Recommend bicycle lanes and pedestrian facilities. Purpose: Circulation, access, and freight. Facility class: Minor arterial. Length of project: 0.5 mile. Length of new sidewalk: 1 mile. Length of new pathway: None. Linked project(s): None.             |
| 314            | Birch Rd - Huffman Rd to O'Malley Rd             | Huffman Rd to O'Malley Rd   | \$9.0                           | Reconstruct road. Recommend bicycle lanes. Purpose: Safety. Facility class: Collector. Length of project: 2.65 miles. Length of new sidewalk: 2.65 miles. Length of new pathway: 2.65 miles. Linked project(s): 202.  |
| 315            | Whitney Rd - North C St to Post Rd               | North C St to Post Rd       | \$15.0                          | Upgrade Whitney Rd to urban industrial standards; may include relocation of Whitney Rd. Recommend pedestrian facilities. Purpose: Circulation, access, and freight. Facility class: Collector. Length of project: 0.49 mile. Length of new sidewalk: 1.05 miles. Length of new pathway: 1.05 miles. Linked project(s): 213. |
| 316            | Minnesota Dr (Northbound) - 26th Ave to 15th Ave | 26th Ave to 15th Ave        | \$29.3                          | Rehabilitate and add one lane to improve capacity northbound. Purpose: Capacity and freight. Facility class: Major arterial. Length of project: 0.25 mile. Length of new sidewalk: 0.7 mile. Length of new pathway: 0.7 mile. Linked project(s): None.  |
| 317            | Minnesota Dr Frontage Rd                         | Dimond Blvd to Raspberry Rd | \$9.0                           | Add a one-way northbound frontage road to the east side of Minnesota Dr between Dimond Blvd and Raspberry Rd. Purpose: Capacity and circulation. Facility class: Frontage. Length of project: 1.0 mile. Length of new sidewalk: None. Length of new pathway: 1.0 mile. Linked project(s): None.                             |
| 318            | Huffman Rd Extension - Birch Rd to Hillside Dr   | Birch Rd to Hillside Dr     | \$13.5                          | 1-mile road connection - completes east-west corridor between Hillside Dr and Seward Hwy. Recommend separated pathway. Purpose: Circulation and access. Facility class: Collector. Length of project: 1 mile. Length of new sidewalk: 1 mile. Length of new pathway: 1 mile. Linked project(s): None.                       |
| 319            | Railroad Grade Separation C St                   | C St                        | \$91.5                          | Add railroad grade separation at C St near Raspberry Rd. Purpose: Capacity, safety, and freight. Facility class: Major arterial. Length of project: 1 mile. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |

## 2035 Metropolitan Transportation Plan

Table 7-5 Illustrative Road Projects (Not funded in MTP—after 2035) (cont.)

| PROJECT NUMBER                   | PROJECT NAME                                | PROJECT LOCATION              | 2010 COST ESTIMATE (\$ MILLION)           | PROJECT PURPOSE AND DESCRIPTION  |
|----------------------------------|---|-------------------------------|---|--|
| 320                              | Eklutna Lake Rd Rehabilitation (Chugiak)    | Old Glenn Hwy to Eklutna Lake | \$39.0                                    | Rehabilitate 10 miles of roadway from the Old Glenn Hwy to Eklutna Lake to current standards. Improvements may include repaving, widening lanes and adding shoulders, improving visibility, and possibly trails, where practical and feasible. Purpose: Capacity and safety. Facility class: Collector. Length of project: 1 mile. Length of new sidewalk: N/A. Length of new pathway: 2 miles. Linked project(s): None. |
| 321                              | Knik Arm Ferry Service - Anchorage Terminal | Ship Creek area               | Assumes Matanuska-Susitna Borough funding | Access connection for Anchorage ferry terminal in Ship Creek area. Contingent upon Mat-Su Borough securing funding. Purpose: Access. Facility class: N/A. Length of project: 1 mile. Length of new sidewalk: N/A. Length of new pathway: N/A. Linked project(s): None.   |
| 322                              | Seward Hwy/ O'Malley Rd Interchanges        | Old Seward Hwy to Seward Hwy  | \$75.0                                    | Complete freeway system interchange at Seward Hwy and O'Malley Rd/ Minnesota Dr and an interchange at Old Seward Hwy and O'Malley Rd - Phase 2. Purpose: Capacity and safety. Facility class: N/A. Length of project: 1 mile. Length of new sidewalk: To be determined. Length of new pathway: To be determined. Linked project(s): 113, 116, 139.   |
| Total Illustrative Road Projects |   |                               | \$740.1                                   |  |

## PUBLIC TRANSPORTATION

Public transportation is expected to play an increasing role in meeting future transportation demand as the metropolitan area matures and the higher-density residential and employment goals of the Anchorage and Chugiak-Eagle River comprehensive plans are achieved.

Four core challenges guide scoping of the 2035 MTP public transportation element:

- Funding determines what level of public transportation service is possible.
- Public policy and public perceptions of the value of public transportation service define the willingness to support public funding.
- Improved operations and delivery of public transportation service can increase riders.
- Attracting more riders and sustaining or improving service productivity are the key performance benchmarks for public transportation.

### The Critical Balancing Act

Three criteria determine the critical balance for public transportation service: (1) the quantity of service operated, which defines cost; (2) the number of riders carried, which is the reason for providing transit; and the (3) revenue sources available to support service, some from riders and ancillary sources, but primarily from public funds.

Striving to achieve balance among these criteria is at the crux of policy about providing the minimum necessary service and identifying how much more public transportation service can be realistically provided. A core mission of public transportation is to ensure that all segments of the community have available transportation and access to community opportunities. The People Mover route restructuring plan with 30-minute frequency throughout the day accomplishes that mission. A second mission is to help reduce congestion by offering viable transportation alternatives to as many travelers as possible. Public transportation services must be more frequent and travel time must be more competitive with private vehicle travel to attract travelers who can choose either private vehicles or public transportation.

### Transit Riders Can Be Doubled

Many future scenarios have been analyzed with the AMATS travel demand model and projections of 2035 development. Public transportation patronage can likely be doubled from existing levels, and perhaps tripled. More funding is required if even higher levels of public transportation service are desired. Public funding will need to expand from an annual operating budget of \$26 million today (2011) to \$48.6 million (2035). Within the constraints of available funding, there are opportunities to improve service,

increase riders, and help alleviate traffic congestion.

What is the best public transportation service choice for Anchorage? The recommended MTP public transportation element reflects a pragmatic view that focuses on two priorities. First, the success of the restructuring plan is leveraged to gain more riders while retaining well-established standards for operating productivity of public transportation. Service frequency is increased on seven routes in corridors that have the highest ridership. Second, new high-frequency, high-performance, express bus service is introduced on the Glenn Highway. The service targets 5 to 7 percent of the corridor's peak-period commuters.

Success in executing these priorities to expand ridership can be the springboard for future service improvements.

### Recommended Public Transportation

The expected funding shortfall for public transportation is estimated to be about \$15 million. It was necessary to pare down the list of projects from what was needed to what could be afforded. An initial project-screening process was approved by the TAC+ to accomplish the more than 7 percent public transportation funding shortfall. Each public transportation project was scored by using the six criteria illustrated in Table 7-6.

## 2035 Metropolitan Transportation Plan

Table 7-6 Initial Screening Criteria for Public Transportation Projects

| CRITERION              | PROJECT SCORING POINTS   |
|------------------------|--|
| Timing of need         | Short term—10 points<br>Middle term—5 points<br>Long term—0 point  |
| Inclusion in plans     | Blueprint, MTP, & CMP—2 points each<br>ADA Paratransit & State Air Quality—4 points each<br>10 points maximum                            |
| Project effectiveness  | Greater than 50 benefiting passengers—10 points<br>25 to 50 benefiting passengers—5 points<br>Less than 25 benefiting passengers—0 point |
| Reliability of service | Decreased service interruptions—10 points<br>No change in service interruptions—5 points<br>Increased service interruptions—0 point      |
| Efficiency of service  | Increase—10 points<br>No change—5 points<br>Decrease—0 point   |
| Safety considerations  | 10 points maximum  |

ADA = Americans with Disabilities Act

CMP = Congestion Management Plan

The process of grouping the public transportation projects into short-term (2011-2023), long-term (2024-2035), and illustrative (beyond 2035) periods to ensure that the annual capital cost outlays closely matched with the expected annual funding revenue stream was relatively simple. A single project (full build-out of the BRT) was moved to the illustrative group.

Although not part of the recommended 2035 MTP public transportation projects, the illustrative project has been identified in this MTP to assist local officials in identifying future projects if additional

funds become available before the next regularly scheduled MTP is prepared and adopted. However, in order for the illustrative project to become part of the MTP, a major amendment of the MTP would be necessary to officially include the project as a short- or long-term project.

Table 7-7 provides a detailed list of recommended public transportation projects grouped by time period. The project locations are illustrated in Figure 7-7 (Anchorage Bowl) and Figure 7-8 (Chugiak-Eagle River) by geographic areas within the metropolitan area.



Table 7-7

Recommended 2035 MTP Public Transportation Projects

| PROJECT NUMBER                  | PROJECT NAME   | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|---------------------------------|--|---------------------------------|--|
| Short-Term Projects (2011-2023) |  |                                 |  |
| 801-S                           | Replacement of existing bus fleet  | \$20.9                          | A total of 52 new bus purchases will be needed to replace the existing 52 bus fleet during the short-term of the MTP.  |
| 802                             | Service Expansion – increase span of service Mon-Fri, Sun & holidays; miscellaneous service improvements | \$0                             | No additional buses will be needed to increase span of service Monday-Friday & Sunday and holidays.  |
| 803                             | Service Expansion – 30-minute headways on all routes   | \$1.6                           | An additional two buses will be needed to increase the frequency of service to 30 minutes on all routes. These buses will need to be replaced once during the life of the MTP.   |
| 804                             | Service Expansion – 15-minute headways on Routes 3, 36, & 45   | \$9.6                           | An additional 12 buses will be needed to increase the frequency of service to 15 minutes on these three routes. These buses will need to be replaced once during the life of the MTP.  |
| 805                             | New service - South Anchorage-Hillside   | \$0.8                           | An additional two buses will be needed to provide a frequency of service of 30 minutes on this new route. No replacement buses will be needed. Possible park and ride to be developed in the Hillside area to supplement this service. |
| 806-S                           | AnchorR DES fleet replacement  | \$8.7                           | This project funds the replacement of the AnchorR DES fleet with a replacement cycle of 5 years. An additional 50 vehicles will be needed to replace the existing fleet.   |
| 807-S                           | AnchorR DES fleet expansion  | \$0.8                           | This project funds the expansion of the AnchorR DES fleet. The AnchorR DES fleet is assumed to grow by 1 vehicle annually to keep up with demand.  |
| 808-S                           | Share-a-ride (vanpool) fleet replacement   | \$9.6                           | This project funds the replacement of the vanpool vehicle fleet with a replacement life cycle of 5 years. It is assumed that the vanpool program doubles by 2031.  |
| 809-S                           | Share-a-ride (vanpool) fleet expansion   | \$2.5                           | This project funds the expansion of the vanpool vehicle fleet to double its current fleet by 2031. At this point, it is expected that the market for vanpool will be saturated.  |

## 2035 Metropolitan Transportation Plan

Table 7-7 Recommended 2035 MTP Public Transportation Projects (cont.)

| PROJECT NUMBER                           | PROJECT NAME                             | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|--|--|---------------------------------|--|
| Short-Term Projects (2011-2023)          |  |                                 |  |
| 810-S                                    | Bus stop improvements                    | \$6.5                           | This program funds the upgrade of bus stop sites to meet requirements of the Americans with Disabilities Act (ADA) and operational needs. Typical improvements include bus shelters, benches, trash receptacles, landscaping, grading, paving, utility relocations, lighting, pathways, and turnouts.                        |
| 811                                      | Transit centers and facilities           | \$ 2.0                          | This project supports an ongoing effort to provide major public transportation facilities at town centers and major destinations.  |
| 812-S                                    | ITS/automated operating systems          | \$ 1.3                          | Staff and capital resources provide project oversight and capital for TS for all modes of public transportation services.  |
| 813-S                                    | Fleet improvements/ support equipment    | \$3.2                           | Typical projects include ticket reader and issue attachment; security systems; transit/signal improvements for headway enhancements; mechanical and other improvements for facilities; mobile display terminals; and vehicle communications and location systems.  |
| 814-S                                    | Management information systems           | \$0.6                           | Typical projects include geographic information system (G S) capabilities; upgrades to the automated maintenance, refueling, and inventory systems; a new computerized dispatch system; and upgrades to the scheduling/run-cutting process, customer information and telephone communications system; and desktop computers. |
| 815-S                                    | Support vehicles                         | \$1.3                           | Typical purchases include pickup trucks, maintenance trucks with special equipment, supervisor vehicles, shift change vehicles, forklifts, sweepers, and snow removal equipment for bus access.  |
| 816                                      | Dimond Center Intermodal Facility        | \$2.7                           | Design and construction provide revisions to the existing Dimond Transit Center with improved pedestrian connections.  |
| 817                                      | Muldoon Transit Center relocation        | \$3.0                           | Design and construction provide a new Muldoon Transit Center near the Tikahtnu Commons development.  |
| 818-S                                    | Anchorage ride-sharing/transit marketing | \$9.4                           | This project funds the operation of the MOA Share-a-Ride program.  |
| 819                                      | Transit warm storage expansion           | \$3.0                           | Design and construction provide expansion of the warm storage building for public transportation vehicles and vehicle maintenance facilities.  |
| Short-Term Projects (2011-2023) Subtotal |  | \$87.5                          |  |

Table 7-7 Recommended 2035 MTP Public Transportation Projects (cont.)

| PROJECT NUMBER                 | PROJECT NAME                             | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|--------------------------------|--|---------------------------------|--|
| Long-Term Projects (2024-2035) |  |                                 |  |
| 801-L                          | Replacement of existing bus fleet        | \$26.5                          | A total of 66 new bus purchases will be needed to replace the existing bus fleet during the long-term of the MTP.  |
| 806-L                          | AnchorR DES fleet replacement            | \$10.2                          | This project funds the replacement of the AnchorR DES fleet with a replacement cycle of 5 years. An additional 50 vehicles will be needed to replace the existing fleet.   |
| 807-L                          | AnchorR DES fleet expansion              | \$0.8                           | This project funds the expansion of the AnchorR DES fleet. The AnchorR DES fleet is assumed to grow by 1 vehicle annually to keep up with demand.  |
| 808-L                          | Share-a-ride (vanpool) fleet replacement | \$14.6                          | This project funds the replacement of the vanpool vehicle fleet with a replacement life cycle of 5 years. It is assumed that the vanpool program doubles by 2031.  |
| 809-L                          | Share-a-ride (vanpool) fleet expansion   | \$1.7                           | This project funds the expansion of the vanpool vehicle fleet to double its current fleet by 2031. At this point, it is expected that the market for vanpool will be saturated.  |
| 810-L                          | Bus stop improvements                    | \$6.0                           | This program funds the upgrade of bus stop sites to meet requirements of the Americans with Disabilities Act (ADA) and operational needs. Typical improvements include bus shelters, benches, trash receptacles, landscaping, grading, paving, utility relocations, lighting, pathways, and turnouts.                        |
| 812-L                          | ITS/automated operating systems          | \$ 1.2                          | Staff and capital resources provide project oversight and capital for ITS for all modes of public transportation services.   |
| 813-L                          | Fleet improvements/support equipment     | \$3.0                           | Typical projects include ticket reader and issue attachment; security systems; transit/signal improvements for headway enhancements; mechanical and other improvements for facilities; mobile display terminals; and vehicle communications and location systems.  |
| 814-L                          | Management information systems           | \$0.6                           | Typical projects include geographic information system (GIS) capabilities; upgrades to the automated maintenance, refueling, and inventory systems; a new computerized dispatch system; and upgrades to the scheduling/run-cutting process, customer information and telephone communications system; and desktop computers. |
| 815-L                          | Support vehicles                         | \$1.2                           | Typical purchases include pickup trucks, maintenance trucks with special equipment, supervisor vehicles, shift change vehicles, forklifts, sweepers, and snow removal equipment for bus access.  |
| 818-L                          | Anchorage ride-sharing/transit marketing | \$8.6                           | This project funds the operation of the MOA Share-a-Ride program.  |

## 2035 Metropolitan Transportation Plan

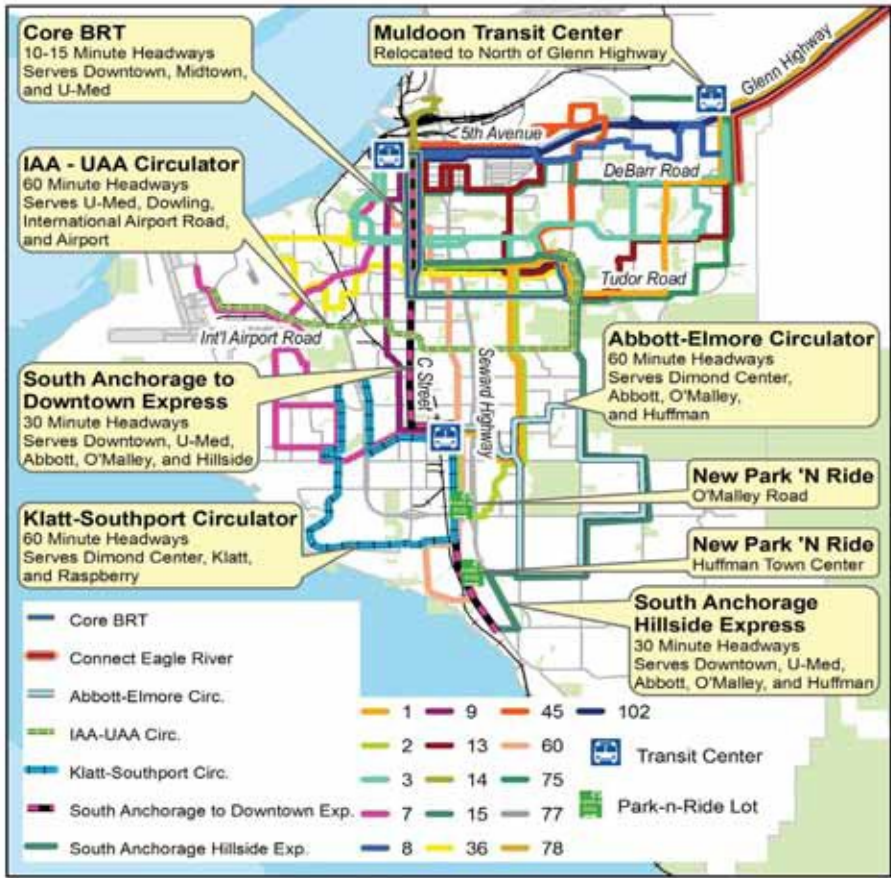
Table 7-7 Recommended 2035 MTP Public Transportation Projects (cont.)

| PROJECT NUMBER                                | PROJECT NAME  | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---|---|---------------------------------|---|
| Long-Term Projects (2024-2035)                |   |                                 |   |
| 820   | Service Expansion – 15-minute headways on Routes 7, 9, & 15                       | \$4.2                           | An additional ten buses will be needed to increase the frequency of service to 15 minutes on these three routes. No replacement buses will be needed.   |
| 821   | Service Expansion – Mat-Su and Anchorage Express Bus Service                      | \$2.5                           | Express bus service between Mat-Su Valley and Anchorage will provide a 30 minute frequency of service during the morning and afternoon peak periods. An additional six buses will be needed for this service.   |
| 822   | New service (Klatt Rd/Southport, Abbott Rd/Elmore Rd & International Airport Rd)  | \$2.4                           | An additional six buses will be needed to provide a 60 minute frequency of service on these three new routes. No replacement buses will be needed.  |
| 823   | Bus Rapid Transit – Downtown, Midtown, & University-Medical District core service | \$11.3                          | The initial phase of Bus Rapid Transit (BRT) implementation will connect Downtown, Midtown, and UMED District and eight new buses will be needed. Characteristics of the BRT service will include frequent headways, well-spaced enhanced stops, and improved travel times. |
| 824   | South Anchorage to Downtown Express Route   | \$0.9                           | The South Anchorage BRT Route will be preceded by an Express Bus Route that will connect the Huffman Town Center with Downtown Anchorage. An additional 2 buses will be needed for this service. Possible park and ride to be developed to supplement this route.           |
| 825   | Chugiak-Eagle River local service   | \$0.0                           | Restore local bus service for Chugiak-Eagle River to a 30 minute frequency of service. No additional buses will be needed for this service.   |
| Long-Term Projects (2024-2035) Subtotal       |   | \$95.7                          |   |
| 2035 MTP Public Transportation Projects Total |   | \$183.2                         |   |

Project listing and numbers do not indicate any priority order within the short and long term periods.



Figure 7-7 Recommended Public Transportation Projects - Anchorage Bowl



Source: AMATS, People Mover, Valley Mover

Notes:  
Circ. = Circulator  
Exp. = Express  
P/W = Palmer/Wasilla

Figure 7-8 Recommended Public Transportation Projects - Chugiak-Eagle River



Source: AMATS, People Mover, Valley Mover

Notes:  
Circ. = Circulator  
Exp. = Express  
P/W = Palmer/Wasilla

### CONGESTION MANAGEMENT

The crux of the transportation network congestion problem is coping with weekday surges that occur during morning and afternoon weekday commute hours. Congestion arises where there is more traffic than corresponding road capacity. For most hours of the day, the transportation network capacity in the metropolitan area is adequate and travel is relatively unrestricted.

A recommendation of this MTP is to continue to monitor the roadway segments and intersections in the metropolitan area that are identified in Chapters 4 and 5 as currently or projected to be (by 2035) performing over capacity. This work should be performed as part of the ongoing data collection and monitoring effort for the congestion management program.

#### Alternatives To Building More Capacity

Adding road and public transportation capacity cannot be the sole strategy for addressing transportation needs. Management strategies can complement capacity expansion projects and offer other ways to make transportation more efficient, more flexible, and less intrusive. They include optimizing the operating performance of the transportation network, creating more travel options, carefully managing road work schedules

to minimize travel disruption, increasing operations efficiency, and managing demand to conserve and influence traveler behavior. Collectively, these strategies can relieve stress on the available capacity in peak commute hours and can moderate travel impacts.

#### Managing The System

Management and operation of the current transportation system should be made as efficient as possible. This step should be taken along with investments in new projects. Performance metrics and monitoring to make traffic and public transportation operations as efficient as possible should be a continuing function. Several initiatives that can promote efficiency are discussed below.

##### Traffic Performance Monitoring

A system upgrade of signal control technology is needed by 2015. It should include updated control equipment, management software, real-time communications, and a traffic management center. Automatic collection of traffic volumes, surveillance monitoring, and adequate staff resources also will be needed to enable MOA traffic engineers to continuously be aware of actual traffic patterns and to quickly adapt to them.

##### Spot Geometric Improvements

Focused geometric improvement (at intersections and on the freeways) is a proven tool for eliminating bottlenecks.

In many cases, auxiliary lanes (between ramps) on freeways can eliminate or delay the need for expensive mainline widening. An additional turn bay at one approach to an intersection can reduce the delay for all movements, in all directions, at that intersection. Focused studies at key bottlenecks will reveal effective tactics and cost-efficient strategies.

##### Traffic Calming

Cut-through traffic (drivers avoiding congested major thoroughfares) on neighborhood streets is a safety and quality-of-life concern for many Anchorage neighborhoods. Traffic-calming tools can eliminate some negative impacts of cut-through traffic and mitigate the issue. The MOA 2001 Traffic Calming Protocol Manual identifies a toolbox of strategies that can be used for traffic-calming applications. They are intended for neighborhood focus, as opposed to spot improvements, and are used to discourage use of neighborhood streets for through trips. These strategies require engineering judgment. Having implemented traffic-calming measures in many neighborhoods, the MOA has acquired an understanding of the effectiveness and costs for the options available.

##### Road Work Repair and Construction

Road repair and construction work in Alaska is done primarily in a short summer window. The scale of repair and construction work can seriously affect ongoing

ing traffic operations. Careful scheduling, management, and public communications are important to minimize impacts on the community and travelers.

#### Special Events

Special events, such as Fur Rendezvous Festival, the Iditarod Ceremonial Start, and Sullivan Arena sports and concerts, can create large traffic impacts. Thoughtful planning and scheduling are needed to mitigate community and travel disruption.

### Traveler Options Program

Like many other regional transportation entities, AMATS recognizes the need to promote travel that reduces the use of SOVs. The Traveler Options Program is a collection of initiatives created to consider and apply appropriate means to provide travel choices and stimulate commuter demand for transportation options that offer alternatives to solo drivers and automobile travel. Efforts to increase use of alternative transportation modes may be targeted to specific locales of the MOA or areawide. The effectiveness of initiatives is assessed through public feedback and by observing commuting responses. The program must be guided by results and scientific research to produce the greatest return on investment.

Commuters need reasonable choices to get them to shift from driving. Better transit, employer-based incentives, and ride-share options will encourage em-

ployees to consider available alternatives for commuting. The primary initiatives of the Traveler Options Program are discussed below.

#### Support for Public Transportation Ridership

Boosting the number of public transportation riders reduces traffic congestion and improves operating efficiencies. The Traveler Options Program will pursue incentives to build transit ridership. Examples include employer partnerships for commute programs, federal tax-free commuter benefits, bus pass sponsorships, and merchant partnering for rider reward incentives.

#### Employer Partnerships

Proof is abundant that proactive efforts to encourage employer participation can successfully promote changes in commuter travel behavior. The program will develop ways to encourage individual and group employer efforts that can act as catalysts for commuter change and will implement incentives and supportive programs to influence change. Telecommuting and flexible schedules are two examples of employer programs that affect commuter travel.

#### Vanpool Promotion

Vanpools are among the most cost-effective instruments for shifting commuting modes. They are particularly effective for military base workers for whom bus access is restricted. Vanpools serve groups

of employees, eliminating multiple solo long-distance trips and their associated impacts. User participant fees cover vanpool operating and maintenance costs. (Users are eligible for federal commuter tax benefits, too.)

Forming vanpools is a particularly effective strategy to help address the Glenn Highway corridor traffic demand and relieve congestion. Therefore, funding vans and organizing travel pools will be a key activity in the Traveler Options Program.

#### Ride-Share Promotion

Ride-share matching and promotion is a logical extension of the vanpool promotion activity and employer partnerships. Employers can reinforce this program with preferential carpooling parking for carpool participants and other incentives.

#### Guaranteed Ride Home Program

Getting commuters to share rides or use other means to travel to work is easier when they have back-up ways to deal with return trips in emergencies or other unanticipated circumstances. The Guaranteed Ride Home Program provides such transportation for carpool and vanpool participants. Many other metropolitan areas have implemented such programs. Costs are minimal, generally less than one dollar per enrolled participant annually.

#### Parking Management

Parking availability and pricing influence travel behavior. Most employers provide free parking for employees; very few offer



free or subsidized bus passes. Offering free parking without other options creates and reinforces built-in bias favoring automobile commuting. Experiments to change parking bias and driver behavior will address this problem.

### School Access and Safety

Parents chauffeuring students to and from school create potentially unnecessary trips, additional traffic, and air pollution as well as safety issues around schools. As many as 15,000 daily automobile trips could be eliminated by aggressive implementation of school travel demand initiatives.

A Walking School Bus program will be piloted to reduce school traffic. As a side benefit, this initiative provides healthy exercise. High school student parking is another potential area for reducing vehicle parking demand.

### Value Pricing and Cash Incentives

Pilot experiments that stimulate traveler behavior change with value pricing or cash incentive strategies to encourage travelers to use alternative modes of transportation will be designed and evaluated. Response levels, cost-effectiveness, and transportation system impacts will be assessed.

### Travel Behavior Research

Basic research and market surveys will inform strategies, assess markets, guide design pilot projects, and evaluate results of initiatives.

## Intelligent Transportation Systems

Responding to freeway incidents, weather and traffic reporting, CV SN, and automated data collection are examples of ITS deployment. This systemwide strategy supports commercial vehicle operation; assists in motor carrier operations; enhances communication, safety, and permit acquisition; and allows enforcement of rules and regulations. Current efforts should continue, and implementation should be completed throughout the metropolitan area.

Travel delays caused by frequent occurrences of crashes and weather incidents on the Glenn and Seward highways are major contributors to congestion. One form of an ITS, an incident management program, can help reduce recurring impacts of incidents through the systematic and coordinated use of human, institutional, and technical resources. Among MTP recommendations is funding of an incident management program study for the Glenn and Seward highways.

The following are additional examples of TS projects that have been scheduled for funding:

- High-priority transportation corridor prototype plan—an advanced ITS for public transportation, which may include transit signal priority testing and evaluation
- ITS automated operating system (for public transportation), which

includes automated ticketing, smart fareboxes, Web-based interfaces, and automated telephone system for the paratransit system

- MOA Integrated GIS Transportation Network (Roadnet)
- Public transportation fleet improvements and support equipment
- Traffic signal system upgrade
- 511 program for disseminating traveler information
- Road Conditions Acquisitions and Reporting System (CARS)
- Automatic vehicle location (AVL) systems
- Shared traveler information and traffic database
- Asset management system (for example, GIS-based sign inventory)

DOT&PF is creating an ITS implementation plan (ways) specifically for the Glenn Highway corridor between Anchorage and the Mat-Su Valley. The ITS implementation plan will help deploy ITS in a coordinated and cost-effective fashion that will best meet the needs of improving traveler safety in this corridor. Potential ways applications include road weather stations, bridge deicing systems, fog warning sensors, traffic monitoring system, variable message signs, and variable speed limit signs.



Illustrative Public  
Transportation Project

In Table 7-8, the public transportation project in the illustrative category is listed. This project is not funded in the MTP and will be scheduled to be constructed after 2035.

Table 7-8 Illustrative Public Transportation Project (Not funded in MTP –after 2035)

| PROJECT NUMBER | PROJECT NAME                       | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|----------------|------------------------------------|---------------------------------|--|
| 826            | Bus Rapid Transit – full build-out | \$22.0                          | The full build-out bus rapid transit system includes segments from Peter’s Creek to Downtown Anchorage and from South Anchorage to Downtown Anchorage that are integrated into the initial core route. |

NON-MOTORIZED  
TRANSPORTATION  
(PEDESTRIAN, BICYCLE,  
AND TRAIL FACILITIES)

Pedestrian, bicycle, and trail facilities contribute to a more attractive and livable city, enhance personal health, and help foster a sense of community. They are used by people to travel to and from the public transportation system, jobs, medical facilities, schools, parks, and other destinations. The primary thrusts of pedestrian, bicycle, and trail facility improvements is completing major missing links in the sidewalk and trail system, preserving and rehabilitating the built infrastructure, establishing several major trail corridors, and funding sidewalk and trail maintenance.

Recommended Non-motorized  
Transportation Projects

Because the expected funding shortfall for the projects involving pedestrian, bicycle, and trail facilities is estimated to be about \$40 million, the list of projects needed to be pared to reflect what could be afforded. TAC+ approved an initial project-screening approach to address the almost 33 percent funding shortfall for the non-motorized projects. Each future pedestrian, bicycle, and trail facility project was scored by using the four criteria identified in Table 7-9.

Following the ranking of the pedestrian, bicycle, and trail facility projects by the total score for each, the projects were grouped into short-term (2011–2023), long-term (2024–2035), and illustrative (beyond 2035) periods to ensure that the annual capital cost outlays closely matched the expected annual funding revenue stream. Some projects that received high scores were moved into later time periods to balance the revenues and costs; other projects with lower scores were moved up because their funding commitments already have been made through the AMATS TIP process.

Although not part of the pedestrian, bicycle, and trail facility projects recommended in the 2035 MTP, the illustrative projects have been identified in this MTP to assist local officials in identifying fu-

ture projects if additional funds become available before the next regularly scheduled MTP is prepared and adopted. However, in order for an illustrative project to become part of the MTP and be funded with federal, state, or local transportation funds, a major amendment of the MTP would be necessary to officially include the project as a short-or long-term project. The use of private funds or volunteer labor to develop trails on the illustrative list would not require an amendment to the MTP.

The results of the screening process for the pedestrian, bicycle, and trail facility projects are shown in Table 7-10. Table 7-11 provides a detailed list of these projects, grouped by recommended time period. The locations of recommended projects for pedestrian, bicycle, and trail

Table 7-9 Initial Screening Criteria for Non-Motorized Transportation Projects

| CRITERION                  | SCORING POINTS  |  |  |   |
|----------------------------|---|--|--|---|
|                            | 0   | 1  | 3  | 5   |
| Project readiness          | Negative public comments                                    | No known issues  | Positive public support                  | Design work initiated                           |
| Project need               | Upgrade of an existing facility versus no existing facility | Lower demand and non-safety-related project            | Medium demand and safety-related project | Addresses major safety issue and/or high demand |
| Inclusion in plans         | Not in an existing plan                                     | In one plan  | In two plans                             | In three plans                                  |
| Primary purpose of project | Does not serve utilitarian users                            | Completes a gap in existing recreational trail network | Low to moderate utilitarian use          | High utilitarian use                            |

Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects

| PROJECT NUMBER | PROJECT NAME                             | PROJECT LOCATION                                       | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|--|--|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 501            | Campbell Trail                           | Lake Otis Pkwy undercrossing                           | \$15.60                         | 5                 | 5            | 3                  | 5               | 18    |
| 502            | Coastal Trail at Fish Creek improvements | Fish Creek Estuary Improvements                        | \$0.10                          | 5                 | 5            | 3                  | 5               | 18    |
| 503            | Northern Lights Blvd                     | Path on south side, Captain Cook Estates Dr to Lois Dr | \$1.00                          | 5                 | 5            | 3                  | 5               | 18    |
| 504            | Checkmate Dr                             | Tudor Rd to Emmanuel Ave                               | \$0.80                          | 5                 | 5            | 3                  | 5               | 18    |
| 505            | Patterson St                             | Debarr Rd to Chester Creek                             | \$0.61                          | 5                 | 5            | 3                  | 5               | 18    |
| 506            | 27th Ave                                 | Blueberry Rd to Minnesota Dr                           | \$0.05                          | 3                 | 5            | 3                  | 5               | 16    |
| 507            | Debarr Rd                                | Orca St to Turpin St                                   | \$3.28                          | 3                 | 5            | 3                  | 5               | 16    |
| 508            | Lake Otis Pkwy                           | Huffman Rd to Chester Creek                            | \$0.10                          | 3                 | 5            | 3                  | 5               | 16    |
| 509            | Lake Otis Pkwy                           | DeArmoun Rd to Debarr Rd                               | TBD                             | 3                 | 5            | 3                  | 5               | 16    |
| 510            | Midtown east-west routes                 | Reconnaissance study                                   | \$0.10                          | 3                 | 5            | 3                  | 5               | 16    |
| 511            | Muldoon Rd (reconnaissance study)        | Northern Lights Blvd to Glenn Hwy                      | \$0.05                          | 3                 | 5            | 3                  | 5               | 16    |
| 512            | Debarr Rd                                | Boniface Pkwy to Muldoon Rd                            | \$1.71                          | 3                 | 5            | 3                  | 5               | 16    |
| 513            | 10th Ave                                 | P St to Medfra St                                      | \$0.06                          | 3                 | 5            | 1                  | 5               | 14    |
| 514            | Arctic Blvd                              | Benson Blvd to Fireweed Ln                             | \$0.01                          | 3                 | 5            | 1                  | 5               | 14    |

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Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME             | PROJECT LOCATION                                      | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|--------------------------|---|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 515            | C St                     | O'Malley Rd to 10th Ave                               | \$0.40                          | 3                 | 5            | 1                  | 5               | 14    |
| 516            | Campbell Trail lighting  | Victor Rd to Seward Hwy                               | \$2.60                          | 3                 | 5            | 3                  | 3               | 14    |
| 517            | Coastal Trail            | Connection to Ship Creek Trail                        | \$1.77                          | 5                 | 3            | 3                  | 3               | 14    |
| 518            | Dimond Blvd at Victor Rd | Reconnaissance study                                  | \$0.05                          | 3                 | 5            | 3                  | 3               | 14    |
| 519            | Elmore Rd                | Doctor Martin Luther King Junior Ave to Tudor Rd      | \$0.02                          | 3                 | 5            | 3                  | 3               | 14    |
| 520            | Lake Otis Pkwy           | Abbott Rd to DeArmoun Rd                              | \$0.52                          | 3                 | 5            | 1                  | 5               | 14    |
| 521            | Mountain View Dr         | Pine St to Lane St                                    | \$0.15                          | 3                 | 5            | 1                  | 5               | 14    |
| 522            | Old Seward Hwy           | DeArmoun Rd to Seward Hwy                             | \$1.20                          | 3                 | 5            | 3                  | 3               | 14    |
| 523            | Glenn Hwy Trail          | Brooks Loop   | \$0.80                          | 3                 | 5            | 1                  | 5               | 14    |
| 524            | Arctic Blvd Bike Lanes   | Fireweed Ln to 10th Ave                               | \$0.10                          | 3                 | 5            | 1                  | 5               | 14    |
| 525            | Duben St                 | to Muldoon Elementary School                          | \$0.90                          | 3                 | 5            | 1                  | 5               | 14    |
| 526            | Northern Lights Blvd     | Seward Hwy to Minnesota Dr                            | \$1.24                          | 3                 | 3            | 3                  | 5               | 14    |
| 527            | 32nd Ave                 | Lois Dr to Minnesota Dr                               | \$0.17                          | 3                 | 3            | 3                  | 5               | 14    |
| 528            | Coronado Rd              | Old Glenn Hwy to Echo St to North Eagle River Loop Rd | \$1.00                          | 3                 | 5            | 1                  | 5               | 14    |



Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME                         | PROJECT LOCATION                                       | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|--------------------------------------|--|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 529            | Muldoon Rd                           | Boundary Ave to Bartlett High School, North Muldoon Rd | \$0.65                          | 3                 | 3            | 3                  | 5               | 14    |
| 530            | East High School                     | Northeast entry, 20th Ave & Bragaw St                  | \$0.02                          | 3                 | 5            | 1                  | 5               | 14    |
| 531            | A St                                 | Fireweed Ln north to 13th Ave                          | \$0.15                          | 3                 | 3            | 3                  | 5               | 14    |
| 532            | Business Blvd at Carrs to Regency Dr |  | \$0.30                          | 3                 | 3            | 5                  | 3               | 14    |
| 533            | Huffman Town Center walkways         | Daryl Ave, Old Seward Hwy, from Post Office, Klatt Rd  | \$0.30                          | 3                 | 3            | 3                  | 5               | 14    |
| 534            | Industry Way                         | Entire length  | \$0.65                          | 3                 | 3            | 3                  | 5               | 14    |
| 535            | Huffman Park Dr                      | Entire length  | \$0.37                          | 3                 | 3            | 3                  | 5               | 14    |
| 536            | 88th Ave                             | Jewel Lake Rd to Northwood St                          | \$0.10                          | 1                 | 5            | 1                  | 5               | 12    |
| 537            | Benson Blvd/ Northern Lights Blvd    | Arlington Dr to LaTouche St                            | TBD                             | 1                 | 5            | 1                  | 5               | 12    |
| 538            | Chester Creek Trail                  | Goose Lake to Westchester Lagoon widening              | \$4.16                          | 3                 | 1            | 3                  | 5               | 12    |
| 539            | G St                                 | West 3rd Ave to West 10th Ave                          | \$0.02                          | 3                 | 3            | 1                  | 5               | 12    |

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Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME                  | PROJECT LOCATION                            | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|-------------------------------|---|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 540            | Maplewood Dr Trail Connection | Sitka Park to Maplewood Dr                  | \$0.80                          | 1                 | 5            | 3                  | 5               | 14    |
| 541            | Ingra-Gambell Couplet         | Reconnaissance study                        | \$0.05                          | 1                 | 5            | 1                  | 5               | 12    |
| 542            | Old Seward Hwy                | Rabbit Creek Rd to Potter Creek Rd          | \$0.09                          | 3                 | 3            | 3                  | 3               | 12    |
| 543            | O'Malley Rd                   | Old Seward Hwy to C St                      | \$0.90                          | 3                 | 3            | 1                  | 5               | 12    |
| 544            | Wisconsin St                  | Spenard Rd to Northern Lights Blvd          | \$0.08                          | 3                 | 3            | 1                  | 5               | 12    |
| 545            | 27th Ave                      | Seward Hwy to Minnesota Dr                  | \$0.57                          | 1                 | 3            | 3                  | 5               | 12    |
| 546            | 20th Ave                      | Bragaw St to Tikishla Park                  | \$0.60                          | 3                 | 3            | 1                  | 5               | 12    |
| 547            | McCarrey St                   | west side Chena Ave north to bus stop       | \$0.05                          | 3                 | 3            | 1                  | 5               | 12    |
| 548            | Town Center walkways          | Old Glenn Hwy and Business Blvd connections | \$0.34                          | 3                 | 3            | 3                  | 3               | 12    |
| 549            | Abbott Rd                     | Academy Dr to Lake Otis Pkwy                | \$0.03                          | 1                 | 3            | 1                  | 5               | 10    |
| 550            | Baxter Rd                     | Tudor Rd to 21st Ave at Cheney Lake         | \$0.10                          | 3                 | 3            | 1                  | 3               | 10    |
| 551            | Baxter Rd/ Beaver Place       | Cheney Lake to Debarr Rd                    | \$0.01                          | 3                 | 3            | 1                  | 3               | 10    |

Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME         | PROJECT LOCATION                               | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|----------------------|--|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 552            | Coastal Trail        | Westchester Lagoon to Earthquake Park widening | \$2.60                          | 3                 | 1            | 3                  | 3               | 10    |
| 553            | Elmore Rd            | 101st Ave to Lilleston Rd                      | \$0.94                          | 3                 | 3            | 1                  | 3               | 10    |
| 554            | Elmore Rd            | DeArmoun Rd to O'Malley Rd                     | \$0.15                          | 3                 | 1            | 3                  | 3               | 10    |
| 555            | Hillside Dr          | Clark's Rd to Abbott Rd                        | \$0.25                          | 3                 | 3            | 1                  | 3               | 10    |
| 556            | Huffman Rd           | Pintail St to Elmore Rd                        | \$0.10                          | 3                 | 3            | 1                  | 3               | 10    |
| 557            | Lore Rd              | Lake Otis Pkwy to Elmore Rd                    | \$0.15                          | 1                 | 3            | 1                  | 5               | 10    |
| 558            | Lore Rd              | Seward Hwy to Lake Otis Pkwy                   | \$0.03                          | 3                 | 3            | 1                  | 3               | 10    |
| 559            | Pine St/ McCarrey St | Klondike Ave to Mountain View Dr               | \$0.01                          | 1                 | 3            | 1                  | 5               | 10    |
| 560            | Northern Lights Blvd | Maplewood St to Lake Otis Pkwy                 | \$0.20                          | 3                 | 3            | 1                  | 3               | 10    |
| 561            | Peterkin St          | Bunn St to McPhee St                           | \$0.05                          | 1                 | 3            | 1                  | 5               | 10    |
| 562            | Pine St              | Debarr Rd to Klondike Ave                      | \$0.02                          | 1                 | 3            | 1                  | 5               | 10    |
| 563            | Rabbit Creek Rd      | Evergreen Ridge St to Clark's Rd               | \$0.08                          | 3                 | 3            | 1                  | 3               | 10    |
| 564            | Raspberry Rd         | Kincaid Park entrance to Minnesota Dr          | \$0.25                          | 1                 | 3            | 1                  | 5               | 10    |

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Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME                         | PROJECT LOCATION                                    | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|--------------------------------------|---|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 565            | Seward Hwy                           | Tudor Rd to 36th Ave                                | \$0.80                          | 3                 | 3            | 1                  | 3               | 10    |
| 566            | Tudor Rd                             | Campbell Airstrip Rd to Pioneer Dr                  | \$1.65                          | 3                 | 3            | 1                  | 3               | 10    |
| 567            | Lake Hill Dr                         | Old Glenn Hwy to Mirror Lake Middle School          | \$0.02                          | 1                 | 3            | 3                  | 3               | 10    |
| 568            | Reka Dr                              | Bragaw St to Pine St                                | \$0.85                          | 1                 | 3            | 1                  | 5               | 10    |
| 569            | Old Glenn Hwy, Monte Rd, Brooks Loop |   | \$0.60                          | 3                 | 3            | 1                  | 3               | 10    |
| 570            | Duben St                             | Muldoon Rd to Oklahoma St                           | \$0.56                          | 3                 | 3            | 1                  | 3               | 10    |
| 571            | Molanary Dr                          | 86th Ave to 88th Ave                                | \$0.20                          | 3                 | 3            | 1                  | 3               | 10    |
| 572            | Valley St                            | Muldoon Rd to 10th Ave                              | \$0.60                          | 3                 | 3            | 1                  | 3               | 10    |
| 573            | Boniface Pkwy                        | Glenn Hwy south to Northern Lights Blvd (west side) | \$3.15                          | 3                 | 3            | 1                  | 3               | 10    |
| 574            | Northern Lights Blvd                 | Wesleyan Dr to Muldoon Rd upgrades                  | \$3.00                          | 3                 | 1            | 1                  | 3               | 8     |
| 575            | Northwood St                         | 88th Ave to Raspberry Rd                            | \$0.08                          | 1                 | 3            | 1                  | 3               | 8     |
| 576            | Fairview Pedestrian Safety Study     | Fairview Community Council Boundary                 | \$0.20                          | 1                 | 5            | 0                  | 3               | 9     |



Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME                                     | PROJECT LOCATION                     | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|--|--------------------------------------|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 601            | 32nd Ave Extended                                | North Star St to Arctic Blvd         | \$0.20                          | 0                 | 3            | 3                  | 3               | 9     |
| 602            | Tudor Rd   | Elmore Rd to Minnesota Dr            | \$5.50                          | 3                 | 0            | 3                  | 3               | 9     |
| 603            | 76th Ave   | Alaska Railroad to Seward Hwy        | \$0.02                          | 1                 | 3            | 1                  | 3               | 8     |
| 604            | 76th Ave   | Alaska Railroad to Taku Lake Park    | \$0.01                          | 1                 | 3            | 1                  | 3               | 8     |
| 605            | Abbott Rd  | Birch Rd to Hillside Dr              | \$0.03                          | 1                 | 3            | 1                  | 3               | 8     |
| 606            | DeArmoun Rd                                      | Seward Hwy to 140th Ave              | \$0.16                          | 3                 | 1            | 1                  | 3               | 8     |
| 607            | Dimond Blvd                                      | Sand Lake Rd to Jewel Lake Rd        | \$0.08                          | 3                 | 1            | 1                  | 3               | 8     |
| 608            | Elmore Rd  | 101st Ave to Lilleston St            | \$0.90                          | 1                 | 3            | 1                  | 3               | 8     |
| 609            | Old Seward Hwy                                   | Rabbit Creek Rd to Huffman Rd        | \$0.02                          | 3                 | 1            | 1                  | 3               | 8     |
| 610            | Turnagain Pkwy                                   | Northern Lights Blvd to Illiamna Ave | \$0.01                          | 1                 | 3            | 1                  | 3               | 8     |
| 611            | Farm Ave   | Old Glenn Hwy to Breckenridge Dr     | \$0.02                          | 1                 | 3            | 1                  | 3               | 8     |
| 612            | Neighborhood northeast of Arctic Blvd & 32nd Ave |                                      | \$2.40                          | 1                 | 3            | 1                  | 3               | 8     |
| 613            | W 36th Ave                                       | Minnesota Dr to Fish Creek           | \$0.60                          | 1                 | 3            | 1                  | 3               | 8     |

## 2035 Metropolitan Transportation Plan

Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME                 | PROJECT LOCATION                      | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|------------------------------|---------------------------------------|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 614            | Crescent Cir at E 37th Ave   |                                       | \$0.03                          | 1                 | 3            | 1                  | 3               | 8     |
| 615            | A St                         | west side, Fireweed Ln to Benson Blvd | \$0.40                          | 1                 | 3            | 1                  | 3               | 8     |
| 616            | A St                         | west side, Benson Blvd to 36th Ave    | \$0.70                          | 1                 | 3            | 1                  | 3               | 8     |
| 617            | Lois Dr                      | Northern Lights Blvd & 36th Ave       | \$0.70                          | 1                 | 3            | 1                  | 3               | 8     |
| 618            | Spirit Dr                    | Piper St to Providence Dr             | \$0.20                          | 1                 | 3            | 1                  | 3               | 8     |
| 619            | Johns Rd                     | High View Dr to Klatt Rd              | \$0.60                          | 1                 | 3            | 1                  | 3               | 8     |
| 620            | 4th Ave                      | Bunnell St to Boniface Pkwy           | \$0.55                          | 1                 | 3            | 1                  | 3               | 8     |
| 621            | Potter Dr                    | Arctic Blvd to Dowling Rd             | \$1.90                          | 1                 | 3            | 1                  | 3               | 8     |
| 622            | Debarr Rd                    | Muldoon Rd east to Cross Pointe Loop  | \$0.25                          | 0                 | 3            | 1                  | 3               | 7     |
| 623            | Klatt Rd                     | west of Puma St                       | \$0.01                          | 1                 | 1            | 1                  | 3               | 6     |
| 624            | Tudor Rd                     | Minnesota Dr to Old Seward Hwy        | \$0.05                          | 1                 | 1            | 1                  | 3               | 6     |
| 625            | Mirror Lake to Old Glenn Hwy |                                       | \$0.50                          | 3                 | 1            | 1                  | 1               | 6     |
| 626            | North Eagle River Access Rd  | Old Glenn Hwy to Powder Ridge Dr      | \$0.06                          | 1                 | 1            | 1                  | 3               | 6     |
| 627            | Old Glenn Hwy                | Voyles Blvd to end                    | \$0.08                          | 1                 | 1            | 1                  | 3               | 6     |

Table 7-10 Initial Screening Scores for Non-Motorized Transportation Projects (cont.)

| PROJECT NUMBER | PROJECT NAME                    | PROJECT LOCATION                           | 2010 COST ESTIMATE (\$ MILLION) | PROJECT READINESS | PROJECT NEED | INCLUSION IN PLANS | PRIMARY PURPOSE | TOTAL |
|----------------|---------------------------------|--|---------------------------------|-------------------|--------------|--------------------|-----------------|-------|
| 628            | West Parkview Terrace Loop      |  | \$0.05                          | 1                 | 1            | 1                  | 3               | 6     |
| 629            | Wilson St                       | 40th Ave to Tudor Rd                       | \$0.38                          | 1                 | 1            | 1                  | 3               | 6     |
| 630            | Petersburg St                   | 56th Ave to 57th Ave                       | \$0.06                          | 1                 | 1            | 1                  | 3               | 6     |
| 631            | Ship Creek Trail                | Glenn Hwy to Tyson School                  | \$4.26                          | 0                 | 1            | 3                  | 1               | 5     |
| 632            | Glenn Hwy Trail                 | Birchwood Loop Rd to Eklutna               | \$15.60                         | 1                 | 1            | 3                  | 0               | 5     |
| 633            | Elmore Path extension           | Rabbit Creek Rd to DeArmoun Rd             | \$1.50                          | 1                 | 3            | 1                  | 3               | 8     |
| 634            | 6th Ave & 7th Ave at A St       | to Museum                                  | \$0.10                          | 1                 | 0            | 1                  | 3               | 5     |
| 701            | Eagle River Greenbelt Trail     | Glenn Highway to Eagle River Nature Center | \$20.13                         | 5                 | 3            | 1                  | 1               | 10    |
| 702            | Fire Creek                      | Glenn Hwy through Tract A Powder Reserve   | \$6.33                          | 1                 | 1            | 1                  | 3               | 6     |
| 703            | Lake Otis Blvd                  | 68th Ave to Abbott Rd                      | \$1.76                          | 1                 | 0            | 1                  | 3               | 5     |
| 704            | 3rd Ave                         | Post Rd to E St                            | \$0.62                          | 1                 | 3            | 1                  | 3               | 8     |
| 705            | 3rd Ave                         | A St to Hyder St                           | \$0.75                          | 1                 | 3            | 1                  | 3               | 8     |
| 706            | Glenn Hwy Trail                 | Eklutna to Mat-Su Borough                  | \$12.51                         | 1                 | 1            | 1                  | 1               | 4     |
| 707            | Coastal Trail – south extension | Kincaid Park to Jodhpur St                 | \$2.80                          | 3                 | 1            | 1                  | 1               | 6     |
| 708            | Coastal Trail – south extension | Jodhpur St to Potter Marsh                 | \$32.20                         | 3                 | 1            | 1                  | 1               | 6     |

## 2035 Metropolitan Transportation Plan

Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities

| PROJECT NUMBER                  | PROJECT NAME                             | PROJECT LOCATION                                       | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|--|--|---------------------------------|---|
| Short-Term Projects (2011–2023) |  |  |                                 |   |
| 501                             | Campbell Trail                           | Lake Otis Pkwy undercrossing                           | \$15.60                         | Separated Campbell Creek Trail with connection across Lake Otis Blvd  |
| 502                             | Coastal Trail at Fish Creek improvements | Fish Creek Estuary Improvements                        | \$0.10                          | Paving improvements and relocation of a fence that is a safety issue because it creates a blind corner where there have been reported bicycle-vehicle and pedestrian-vehicle crashes. (No right-of-way acquisition involved.) |
| 503                             | Northern Lights Blvd                     | Path on south side, Captain Cook Estates Dr to Lois Dr | \$1.00                          | Construction of missing sidewalk  |
| 504                             | Checkmate Dr                             | Tudor Rd to Emmanuel Ave                               | \$0.80                          | Construction of missing sidewalk  |
| 505                             | Patterson St                             | Debarr Rd to Chester Creek                             | \$0.61                          | Construction of missing sidewalk  |
| 506                             | 27th Ave                                 | Blueberry Rd to Minnesota Dr                           | \$0.05                          | Bicycle boulevard   |
| 507                             | Debarr Rd                                | Orca St to Turpin St                                   | \$3.28                          | Separated pathway on north side of street   |
| 508                             | Lake Otis Pkwy                           | Huffman Rd to Chester Creek                            | \$0.10                          | Study (Area B)—investigate the feasibility of constructing improved bicycle facility  |
| 509                             | Lake Otis Pkwy                           | DeArmoun Rd to Debarr Rd                               | TBD                             | Bicycle lane (pending results of the Lake Otis Pkwy study, Project 508)   |
| 510                             | Midtown east-west routes                 | Reconnaissance study                                   | \$0.10                          | Study (Area C)—investigate feasibility of constructing bicycle facility through Midtown   |
| 511                             | Muldoon Rd (reconnaissance study)        | Northern Lights Blvd to Glenn Hwy                      | \$0.05                          | Study (Area D)—investigate feasibility of constructing bicycle facility along Muldoon Rd  |
| 512                             | Debarr Rd                                | Boniface Pkwy to Muldoon Rd                            | \$1.71                          | Upgrade existing sidewalk on south side of street   |
| 513                             | 10th Ave                                 | P St to Medfra St                                      | \$0.06                          | Bicycle boulevard   |
| 514                             | Arctic Blvd                              | Benson Blvd to Fireweed Ln                             | \$0.01                          | Bicycle lanes   |



Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities (cont.)

| PROJECT NUMBER                  | PROJECT NAME              | PROJECT LOCATION                                       | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|---------------------------------|---------------------------|--|---------------------------------|---|
| Short-Term Projects (2011-2023) |                           |  |                                 |   |
| 515                             | C St                      | O'Malley Rd to 10th Ave                                | \$0.40                          | Bicycle lanes   |
| 516                             | Campbell Trail lighting   | Victor Rd to Seward Hwy                                | \$2.60                          | Installation of lighting along Campbell Creek Trail                     |
| 517                             | Coastal Trail             | Connection to Ship Creek Trail                         | \$1.77                          | Separated pathway linking Coastal Trail with Ship Creek Trail           |
| 518                             | Dimond Blvd at Victor Rd  | Reconnaissance study                                   | \$0.05                          | Study (Area G)—investigate feasibility of improving pedestrian crossing |
| 519                             | Elmore Rd                 | 48th Ave to Tudor Rd                                   | \$0.02                          | Bicycle lanes   |
| 520                             | Lake Otis Pkwy            | Abbott Rd to DeArmoun Rd                               | \$0.52                          | Upgrade sweeps at intersection of separated pathway and intersections   |
| 521                             | Mountain View Dr          | Pine St to Lane St                                     | \$0.15                          | Upgrade of existing separated trail                                     |
| 522                             | Old Seward Hwy            | DeArmoun Rd to Seward Hwy                              | \$1.20                          | Separated pathway   |
| 523                             | Glenn Hwy Trail           | Brooks Loop  | \$0.80                          | Construction of missing link in Glenn Hwy separated pathway             |
| 524                             | Arctic Blvd Bicycle lanes | Fireweed Ln to 10th Ave                                | \$0.10                          | Bicycle lane striping and signage                                       |
| 525                             | Duben St                  | to Muldoon Elementary School                           | \$0.90                          | Construction of missing sidewalk, crossing                              |
| 526                             | Northern Lights Blvd      | Seward Hwy to Minnesota Dr                             | \$1.24                          | Sidewalk separation, upgrade  |
| 527                             | 32nd Ave                  | Lois Dr to Minnesota Dr                                | \$0.17                          | Construction of missing sidewalk  |
| 528                             | Coronado Rd               | Old Glenn to Echo St to North Eagle River Loop Rd      | \$1.00                          | Sidewalk, lighting  |
| 529                             | Muldoon Rd                | Boundary Ave to Bartlett High School, North Muldoon Rd | \$0.65                          | Construction of missing sidewalk  |

## 2035 Metropolitan Transportation Plan

Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities (cont.)

| PROJECT NUMBER                  | PROJECT NAME                         | PROJECT LOCATION                                      | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION  |
|---------------------------------|--------------------------------------|---|---------------------------------|--|
| Short-Term Projects (2011–2023) |                                      |   |                                 |  |
| 530                             | East High                            | Northeast entry, 20th Ave & Bragaw St                 | \$0.02                          | Walkway or stairway needed to link Bragaw St with school entrance                |
| 531                             | A St                                 | Fireweed Ln north to 13th Ave                         | \$0.15                          | Construction of missing sidewalk   |
| 532                             | Business Blvd at Carrs to Regency Dr |   | \$0.30                          | Construction of missing link walkway behind Carrs Store                          |
| 533                             | Huffman Town Center walkways         | Daryl Ave, Old Seward Hwy, from Post Office, Klatt Rd | \$0.30                          | Construction of missing sidewalk   |
| 534                             | Industry Way                         | Entire length   | \$0.65                          | Construction of missing sidewalk   |
| 535                             | Huffman Park Dr                      | Entire Length   | \$0.37                          | Construction of missing sidewalk   |
| 536                             | 88th Ave                             | Jewel Lake Rd to Northwood St                         | \$0.10                          | Bicycle lanes  |
| 537                             | Benson Blvd/ Northern Lights Blvd    | Arlington Dr to LaTouche St                           | TBD                             | Bicycle lane (pending results of the Midtown east-west route study, Project 510) |
| 538                             | Chester Creek Trail                  | Goose Lake to Westchester Lagoon widening             | \$4.16                          | Expand existing separate greenbelt trail (12 feet wide)                          |
| 539                             | G St                                 | West 3rd Ave to West 10th Ave                         | \$0.02                          | Shared-road bicycle facility   |
| 540                             | Maplewood Dr Trail Connection        | Sitka Park to Maplewood Dr                            | \$0.80                          | Separated pathway  |
| 541                             | Ingra-Gambell Couplet                | Reconnaissance study                                  | \$0.05                          | Study (Area F)—investigate pedestrian safety study                               |
| 542                             | Old Seward Hwy                       | Rabbit Creek Rd to Potter Valley Rd                   | \$0.09                          | Paved shoulder bikeway   |

Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities (cont.)

| PROJECT NUMBER                  | PROJECT NAME            | PROJECT LOCATION                               | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION      |
|---------------------------------|-------------------------|--|---------------------------------|--------------------------------------|
| Short-Term Projects (2011-2023) |                         |  |                                 |                                      |
| 543                             | O'Malley Rd             | Old Seward Hwy to C St                         | \$0.90                          | Separated pathway (under railroad)   |
| 544                             | Wisconsin St            | Spenard Rd to Northern Lights Blvd             | \$0.08                          | Bicycle lanes                        |
| 545                             | 27th Ave                | Seward Hwy to Minnesota Dr                     | \$0.57                          | Crossing, sidewalk upgrade           |
| 546                             | 20th Ave                | Bragaw St to Tikishla Park                     | \$0.60                          | Construction of missing sidewalk     |
| 547                             | McCarrey St             | west side Chena Ave north to bus stop          | \$0.05                          | Construction of missing sidewalk     |
| 548                             | Town Center walkways    | Old Glenn Hwy and Business Blvd connections    | \$0.34                          | Construction of missing link walkway |
| 549                             | Abbott Rd               | Academy Dr to Lake Otis Pkwy                   | \$0.03                          | Bicycle lanes                        |
| 550                             | Baxter Rd               | Tudor Rd to 21st Ave at Cheney Lake            | \$0.10                          | Bicycle lanes                        |
| 551                             | Baxter Rd/ Beaver Place | Cheney Lake to Debarr Rd                       | \$0.01                          | Shared-road bicycle facility         |
| 552                             | Coastal Trail           | Westchester Lagoon to Earthquake Park widening | \$2.60                          | Separated pathway                    |
| 553                             | Elmore Rd               | 101st Ave to Lilleston St                      | \$0.94                          | Separated pathway                    |
| 554                             | Elmore Rd               | DeArmoun Rd to O'Malley Rd                     | \$0.15                          | Bicycle lanes                        |
| 555                             | Hillside Dr             | Clark's Rd to Abbott Rd                        | \$0.25                          | Paved shoulder bikeway               |

## 2035 Metropolitan Transportation Plan

Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities (cont.)

| PROJECT NUMBER                  | PROJECT NAME                               | PROJECT LOCATION                           | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION                                 |
|---------------------------------|--|--|---------------------------------|---|
| Short-Term Projects (2011-2023) |  |  |                                 |   |
| 556                             | Huffman Rd                                 | Pintail St to Elmore Rd                    | \$0.10                          | Bicycle lanes   |
| 557                             | Lore Rd                                    | Lake Otis Pkwy to Elmore Rd                | \$0.15                          | Shared-road bicycle facility and separated pathway to Elmore Rd |
| 558                             | Lore Rd                                    | Seward Hwy to Lake Otis Pkwy               | \$0.03                          | Bicycle lanes   |
| 559                             | Pine St/<br>McCarrey St                    | Klondike Ave to Mountain View Dr           | \$0.01                          | Shared-road bicycle facility                                    |
| 560                             | Northern Lights Blvd                       | Maplewood St to Lake Otis Pkwy             | \$0.20                          | Upgrade separated pathway on south side of the street           |
| 561                             | Peterkin St                                | Bunn St to McPhee Ave                      | \$0.05                          | Bicycle boulevard   |
| 562                             | Pine St                                    | Debarr Rd to Klondike Ave                  | \$0.02                          | Bicycle lanes   |
| 563                             | Rabbit Creek Rd                            | Evergreen Ridge St to Clark's Rd           | \$0.08                          | Paved shoulder bikeway  |
| 564                             | Raspberry Rd                               | Kincaid Park entrance to Minnesota Dr      | \$0.25                          | Bicycle lanes   |
| 565                             | Seward Hwy                                 | Tudor Rd to 36th Ave                       | \$0.80                          | Separated pathway   |
| 566                             | Tudor Rd                                   | Campbell Airstrip Rd to Pioneer Dr         | \$1.65                          | Separated pathway   |
| 567                             | Lake Hill Dr                               | Old Glenn Hwy to Mirror Lake Middle School | \$0.02                          | Paved shoulder bikeway  |
| 568                             | Reka Dr                                    | Bragaw St to Pine St                       | \$0.85                          | Construction of missing sidewalk                                |
| 569                             | Old Glenn Hwy,<br>Monte Rd,<br>Brooks Loop |  | \$0.60                          | Sidewalk, crossing  |
| 570                             | Duben St                                   | Muldoon Rd to Oklahoma St                  | \$0.56                          | Construction of missing sidewalk                                |



| PROJECT NUMBER                           | PROJECT NAME                     | PROJECT LOCATION                                    | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION   |
|--|----------------------------------|---|---------------------------------|---|
| Short-Term Projects (2011-2023)          |                                  |   |                                 |   |
| 571                                      | Molanary Dr                      | 86th Ave to 88th Ave                                | \$0.20                          | Construction of missing sidewalk  |
| 572                                      | Valley St                        | Muldoon Rd to 10th Ave                              | \$0.60                          | Construction of missing link walkway  |
| 573                                      | Boniface Pkwy                    | Glenn Hwy south to Northern Lights Blvd (west side) | \$3.15                          | Construction of missing sidewalk  |
| 574                                      | Northern Lights Blvd             | Wesleyan Dr to Muldoon Rd upgrades                  | \$3.00                          | Separated pathway   |
| 575                                      | Northwood St                     | 88th Ave to Raspberry Rd                            | \$0.08                          | Bicycle lanes   |
| 576                                      | Fairview Pedestrian Safety Study | Fairview Community Council Boundary                 | \$0.20                          | Investigate pedestrian safety improvement needs within the Ingra-Gambell streets couplet corridor |
| Short-Term Projects (2011-2023) Subtotal |                                  |   | \$61.27                         |   |

## 2035 Metropolitan Transportation Plan

Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities (cont.)

| PROJECT NUMBER                 | PROJECT NAME                                     | PROJECT LOCATION                     | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION      |
|--------------------------------|--|--------------------------------------|---------------------------------|--------------------------------------|
| Long-Term Projects (2024-2035) |  |                                      |                                 |                                      |
| 601                            | 32nd Ave extension                               | North Star St to Arctic Blvd         | \$0.20                          | Construction of missing pathway      |
| 602                            | Tudor Rd   | Elmore Rd to Minnesota Dr            | \$5.50                          | Upgrade separated pathway            |
| 603                            | 76th Ave   | Alaska Railroad to Seward Hwy        | \$0.02                          | Bicycle lanes                        |
| 604                            | 76th Ave   | Alaska Railroad to Taku Lake Park    | \$0.01                          | Shared-road bicycle facility         |
| 605                            | Abbott Rd  | Birch Rd to Hillside Dr              | \$0.03                          | Paved shoulder bikeway               |
| 606                            | DeArmoun Rd                                      | Seward Hwy to 140th Ave              | \$0.16                          | Bicycle lanes                        |
| 607                            | Dimond Blvd                                      | Sand Lake Rd to Jewel Lake Rd        | \$0.08                          | Bicycle lanes                        |
| 608                            | Elmore Rd  | 101st Ave to Lilleston St            | \$0.90                          | Bicycle lanes                        |
| 609                            | Old Seward Hwy                                   | Rabbit Creek Rd to Huffman Rd        | \$0.02                          | Paved shoulder bikeway               |
| 610                            | Turnagain Pkwy                                   | Northern Lights Blvd to Illiamna Ave | \$0.01                          | Shared-road bicycle facility         |
| 611                            | Farm Ave   | Old Glenn Hwy to Breckenridge Dr     | \$0.02                          | Shared-road bicycle facility         |
| 612                            | Neighborhood northeast of Arctic Blvd & 32nd Ave |                                      | \$2.40                          | Construction of missing sidewalks    |
| 613                            | West 36th  | Minnesota Dr to Fish Creek           | \$0.60                          | Construction of missing sidewalks    |
| 614                            | Crescent Cir at East 37th Ave                    |                                      | \$0.03                          | Construction of missing link walkway |

Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities (cont.)

| PROJECT NUMBER                 | PROJECT NAME                 | PROJECT LOCATION                      | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION                |
|--------------------------------|------------------------------|---------------------------------------|---------------------------------|--|
| Long-Term Projects (2024-2035) |                              |                                       |                                 |  |
| 615                            | A St                         | Fireweed Ln to Benson Blvd, west side | \$0.40                          | Construction of missing sidewalk               |
| 616                            | A St                         | west side, Benson Blvd to 36th Ave    | \$0.70                          | Construction of missing sidewalk               |
| 617                            | Lois Dr                      | Northern Lights Blvd & 36th Ave       | \$0.70                          | Construction of missing sidewalk               |
| 618                            | Spirit Dr                    | Piper St to Providence Dr             | \$0.20                          | Construction of missing sidewalk               |
| 619                            | Johns Rd                     | High View Dr to Klatt Rd              | \$0.60                          | Construction of missing sidewalk               |
| 620                            | 4th Ave                      | Bunnell St to Boniface Pkwy           | \$0.55                          | Construction of missing sidewalk               |
| 621                            | Potter Dr                    | Arctic Blvd to Dowling Rd             | \$1.90                          | Construction of missing link walkway           |
| 622                            | Debarr Rd                    | Muldoon Rd east to Cross Pointe Loop  | \$0.25                          | Construction of missing sidewalk               |
| 623                            | Klatt Rd                     | west of Puma St                       | \$0.01                          | Shared-road bicycle facility                   |
| 624                            | Tudor Rd                     | Minnesota Dr to Old Seward Hwy        | \$0.05                          | Paved shoulder bikeway                         |
| 625                            | Mirror Lake to Old Glenn Hwy |                                       | \$0.50                          | Separated pathway                              |
| 626                            | North Eagle River Access Rd  | Old Glenn Hwy to Powder Ridge Dr      | \$0.06                          | Bicycle lanes                                  |
| 627                            | Old Glenn Hwy                | Voyles Blvd to end                    | \$0.08                          | Paved shoulder bikeway                         |
| 628                            | West Parkview Terrace Loop   |                                       | \$0.05                          | Shared-road bicycle facility                   |
| 629                            | Wilson St                    | 40th Ave to Tudor Rd                  | \$0.38                          | Construction of missing sidewalk               |
| 630                            | Petersburg St                | 56th Ave to 57th Ave                  | \$0.06                          | Construction of missing link walkway, lighting |

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Table 7-11 Recommended 2035 MTP Projects for Non-Motorized Transportation Facilities (cont.)

| PROJECT NUMBER                          | PROJECT NAME              | PROJECT LOCATION               | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION |
|---|---------------------------|--------------------------------|---------------------------------|---------------------------------|
| Long-Term Projects (2024-2035)          |                           |                                |                                 |                                 |
| 631                                     | Ship Creek Trail          | Glenn Hwy to Tyson School      | \$4.26                          | Separated pathway               |
| 632                                     | Glenn Hwy Trail           | Birchwood Loop Rd to Eklutna   | \$15.60                         | Separated pathway               |
| 633                                     | Elmore Path Extension     | Rabbit Creek Rd to DeArmoun Rd | \$1.50                          | Separated pathway               |
| 634                                     | 6th Ave & 7th Ave at A St | to Museum                      | \$0.10                          | Crossing improvements           |
| Long-Term Projects (2024-2035) Subtotal |                           |                                | \$37.93                         |                                 |
| 2035 MTP Non-motorized Projects Total   |                           |                                | \$99.20                         |                                 |

Project listing and numbers do not indicate any priority order within the short and long term periods.

facilities are illustrated in Figure 7-9 (Anchorage Bowl) and Figure 7-10 (Chugiak-Eagle River) by geographic areas within the metropolitan area.

This MTP recommends the following activities associated with non-motorized transportation projects:

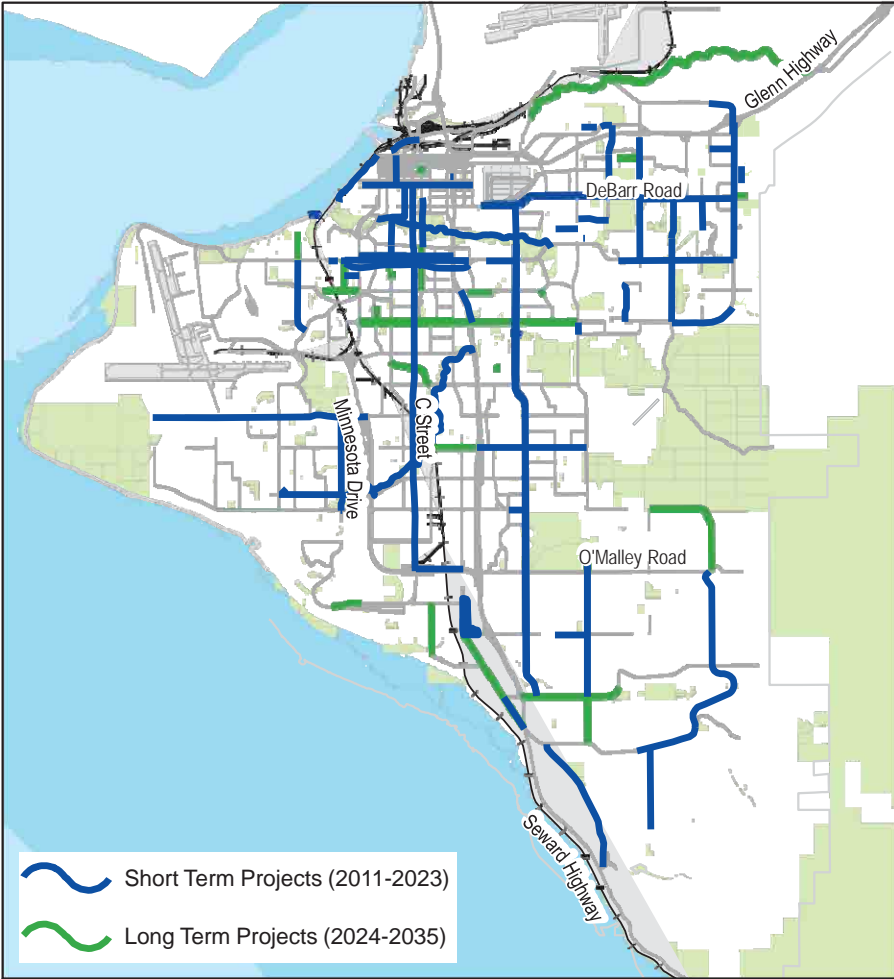
- Funding of transportation enhancements is at least 10 percent of the monies allotted to AMATS in the TIP for non-NHS federal funds.
- Updates to the Anchorage Non-motorized Transportation Plan to establish the following as high priorities:
  - Safe walking paths along major connections in areas without sidewalks
  - Improved bicycle facilities to promote bicycle commute options
  - Recreational trail corridors that are consistent with objectives of the pedestrian and bicycle plans
- Establishment of funding priorities for pedestrian, bicycle, and trail plan projects
- Enforcement of sidewalk clearing ordinances
- Creation of a youth education program (Street Smarts) for bicyclist and pedestrian safety

### Funding Priorities-Repair and Maintenance of Trails and Sidewalks

Anchorage has a world-class recreational trail system. These trails need to be preserved and rehabilitated. They need to be widened to meet current demand, resurfaced to address poor subsurface conditions, and lighted where appropriate. Additional needs include enhancement and maintenance of vegetation where there are not conflicts with personal property rights and maintenance of trail surfaces for summer and winter use. Maintaining the Anchorage network of sidewalks, particularly for winter pedestrian use, is also a priority. Additional equipment for both trail and sidewalk maintenance may

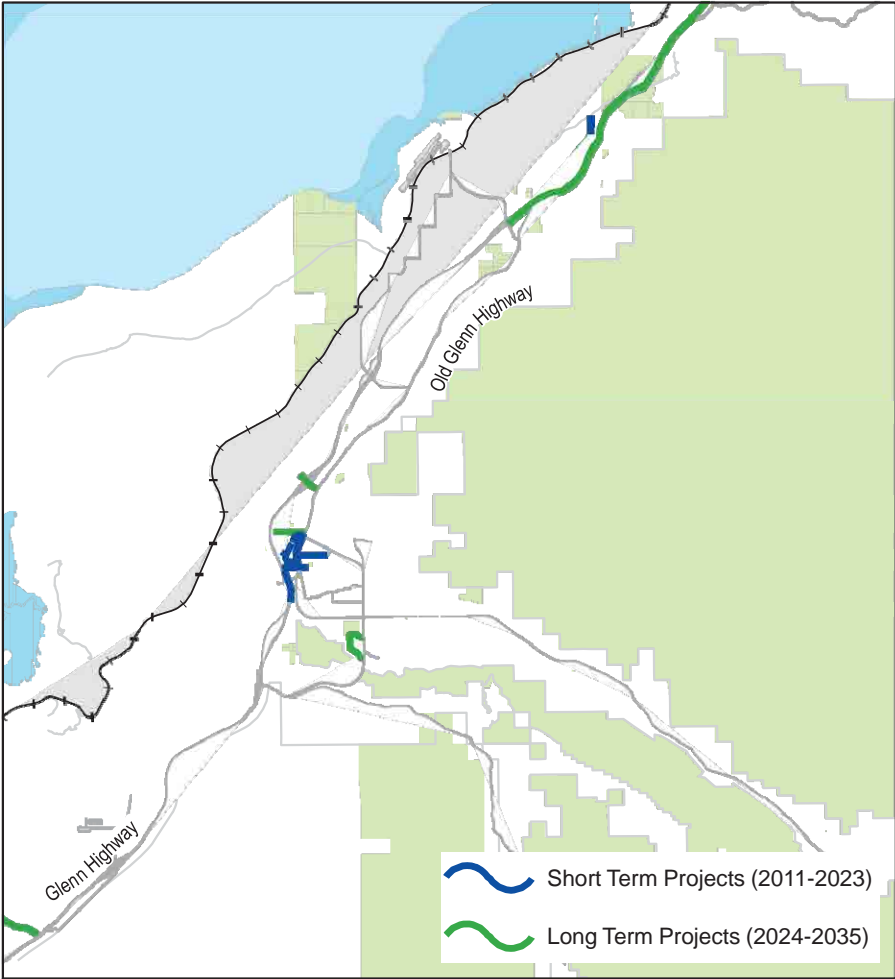


Figure 7-9 Recommended Non-Motorized Transportation Projects - Anchorage Bowl



Source: AMATS Non-Motorized Transportation Plans

Figure 7-10 Recommended Non-Motorized Transportation Projects - Chugiak-Eagle River



Source: AMATS Non-Motorized Transportation Plans

## 2035 Metropolitan Transportation Plan

be necessary to ensure year-round access for pedestrians and bicyclists. This MTP identifies the repair and maintenance of the existing trails and sidewalks as a funding priority that takes precedence over the addition of new trails when determining budget allocations.

### Missing Links

Many missing links in the system of pedestrian, bicycle, and trail facilities are included in recommended road projects. These improvements will contribute more than 160 miles of sidewalk and multi-use pathways in the metropolitan area. The road project trail and sidewalk improvements do not complete all missing links. The adopted pedestrian and bicycle plans and the upcoming update to the 1997 MOA Areawide Trails Plan will establish priorities for other missing link connections in sidewalks, bicycle routes, and recreational multi-use trails.

### Establishing And Connecting Major Trail Corridors

Major cross-town greenbelt trail corridors provide utility transportation to destinations (schools, employment, and shopping) as well as recreational opportunities for bicycle, ski, and pedestrian commuters to reach employment centers.

Existing major trails to be improved include the north extension of the Coastal Trail, connecting the Coastal Trail to the Ship Creek Trail.

### Trail And Pathway Easements

Easements are critical components for the connectivity of the recreational trail system in the metropolitan area. Easements through subdivisions need to be preserved, and trail easements should be established in new subdivisions, giving access to schools, shopping, employment, and recreational areas. Access (trailheads) to the existing Chugach State Park and the Coastal Trail is especially important.

### Illustrative Non-Motorized Transportation Projects

In Table 7-12, the non-motorized transportation projects in the illustrative category are listed. These projects are not funded in the MTP and will be scheduled to be constructed after 2035.

Table 7-12 Illustrative Non-Motorized Projects (Not funded in MTP—after 2035)

| PROJECT NUMBER                            | PROJECT NAME                    | PROJECT LOCATION                           | 2010 COST ESTIMATE (\$ MILLION) | PROJECT PURPOSE AND DESCRIPTION |
|---|---------------------------------|--|---------------------------------|---------------------------------|
| 701                                       | Eagle River Greenbelt Trail     | Glenn Highway to Eagle River Nature Center | \$20.13                         | Separated pathway               |
| 702                                       | Fire Creek                      | Glenn Hwy through Tract A Powder Reserve   | \$6.33                          | Separated pathway               |
| 703                                       | Lake Otis Pkwy                  | 68th Ave to Abbott Rd                      | \$1.76                          | Sidewalk upgrade                |
| 704                                       | 3rd Ave                         | Post Rd to E St                            | \$0.62                          | Paved shoulder bikeway          |
| 705                                       | 3rd Ave                         | A St to Hyder St                           | \$0.75                          | Separated pathway               |
| 706                                       | Glenn Hwy Trail                 | Eklutna to Mat-Su Borough                  | \$12.51                         | Separated pathway               |
| 707                                       | Coastal Trail – south extension | Kincaid Park to Jodhpur St                 | \$2.80                          | Separated pathway in greenbelt  |
| 708                                       | Coastal Trail – south extension | Jodhpur St to Potter Marsh                 | \$32.20                         | Separated pathway in greenbelt  |
| Total Illustrative Non-motorized Projects |                                 |  | \$77.10                         |                                 |

## FREIGHT DISTRIBUTION

Anchorage is the gateway connection to the world for Alaska; freight shipments from elsewhere sustain the state and local economies. Updating and expanding the Port of Anchorage (currently in progress) is essential for accommodating larger vessels and adapting to changing requirements and technologies. The Port of Anchorage improvements are also required to strengthen Anchorage's role and position in global commerce. Companion MTP projects include improving access to

the port, airport, and railroad terminals and connections to the NHS. The costs of moving goods directly affect end-user costs as well as economic vitality.

Design standards and connectivity through major arterial streets are important for distribution to freight destinations. The expected types and volume of truck traffic need to be reviewed as part of any roadway project. Identification of truck-related requirements would help to ensure that commercial vehicle movements (for which requirements include

clearances and turning radii) are taken into consideration in the design of a project.

Efficiency of freight movements will be facilitated with expansion planned at the Port of Anchorage. Those improvements combined with road projects to provide better port access and relieve congestion on the road network will help motor carriers and other freight haulers. Figure 7-11 and Figure 7-12 portray road improvement projects that are especially relevant to freight operations.

Figure 7-11 Road Projects That Enhance Freight Distribution - Anchorage Bowl

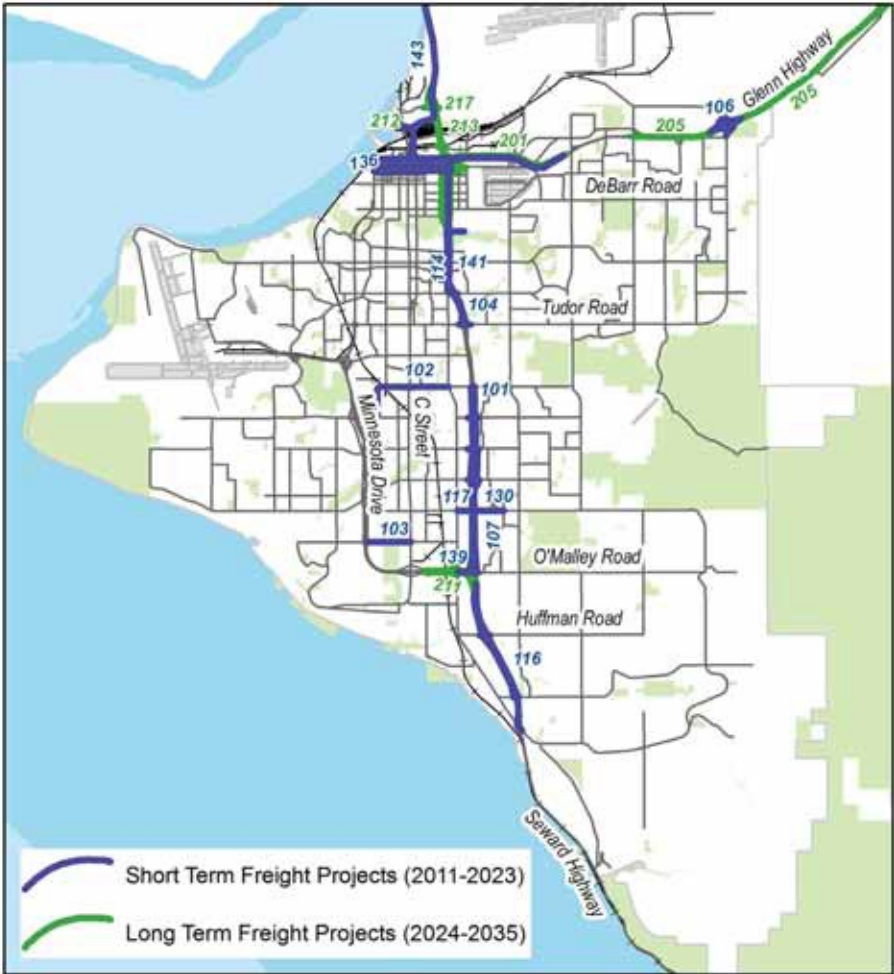
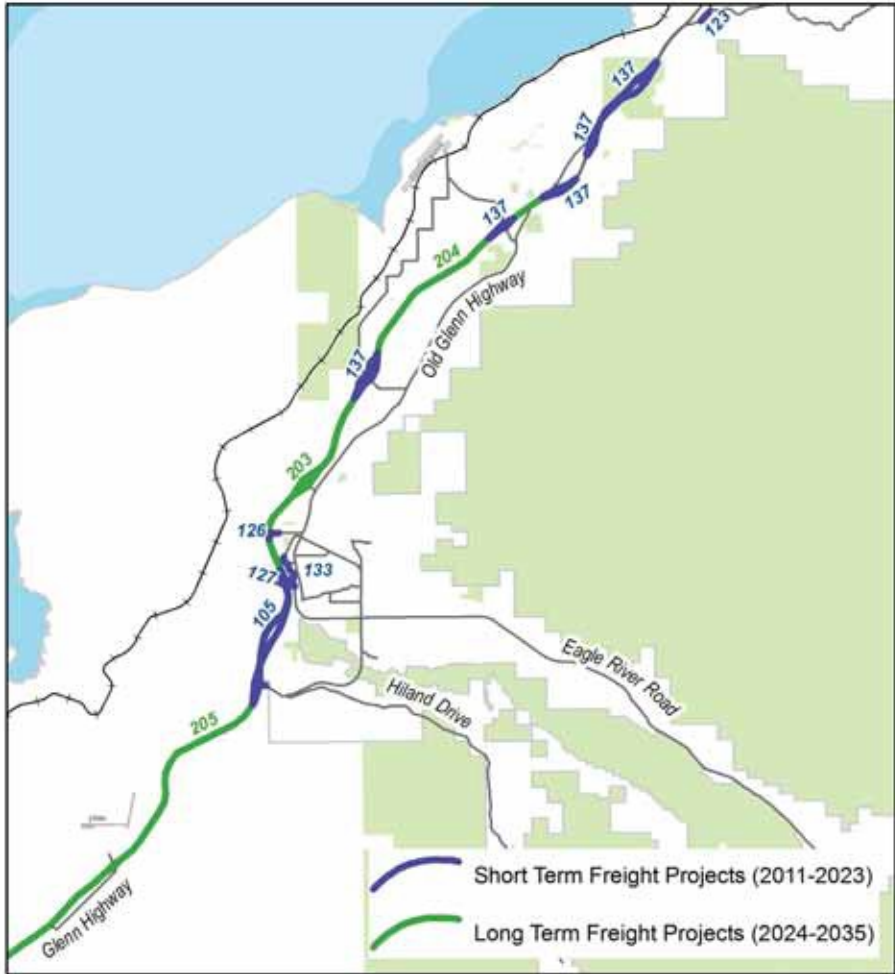


Figure 7-12 Road Projects That Enhance Freight Distribution - Chugiak-Eagle River





The AMATS Freight Advisory Committee provides a forum for continuing interaction with the freight community and dialog on issues and concerns affecting freight operations.

## REGIONAL CONNECTIONS

Several components of the transportation system in the metropolitan area contribute to travel and freight movement for the region—MOA, the Mat-Su Borough, and areas south of the MOA. keystones of the regional network are TSAIA, the Port of Anchorage, the NHS, the Knik Arm Crossing, public transportation, and joint planning efforts of affected entities.

### Airport Access Improvements

The MTP includes two road projects, connection of Dowling and Raspberry roads and improvements on Jewel Road, that will enhance TSAIA access from the south. The Knik Arm Crossing will provide faster travel to TSAIA from some locations in the Mat-Su Borough.

### Port of Anchorage Access Improvements

Truck access to and egress from the Port of Anchorage are significantly improved by projects linking the Port of Anchorage to the Knik Arm Crossing, the Glenn Highway, and the Seward Highway.

## National Highway System Continuity and Improvements

The MTP materially improves NHS connectivity and design consistency through Anchorage. The Seward and Glenn highways connection closes a long-standing continuity gap and establishes a limited-access corridor serving the entire metropolitan area and the surrounding region.

The Seward Highway upgrade to six lanes north of O'Malley Road will accommodate increasing demand. Additionally, a system interchange linking the Seward Highway and Minnesota Drive (for which study is funded in the MTP recommendations), further strengthens the NHS connectivity. All of these projects improve access and connections with the port and airport intermodal terminals.

### Knik Arm Crossing

Details of this roadway project, which would add a connection to the Mat-Su Borough, are provided earlier in this chapter.

## Regional Transit Authority and Services

Bus, express bus, and rail travel between the Mat-Su Borough and the Anchorage Bowl are additional potential options for commuter transportation. As recommended public transportation improvements are implemented, they will provide an efficient network to make connections

that will enhance the viability of commuter rail. The MTP endorses future studies of the feasibility and funding of a regional transit authority in cooperation with the Mat-Su Borough and MOA.

## MOA and Mat-Su Borough Collaboration on Common Interests

Physical growth and common interests are jointly affecting the MOA and Mat-Su Borough. The two jurisdictions together house the majority of the population and employment in the state. Travel interactions and economic interest argue for collaboration on a number of fronts. As the urban region continues to grow, pressure will mount for urban infrastructure funding. Collaboration in regional planning and a unified voice on state funding issues should be supported by both jurisdictions.

## INTEGRATION WITH OTHER TRANSPORTATION AND LAND USE PLANS

Land use and travel are tightly intertwined. The geographical distribution of land uses, development densities, site designs, and proximity to complementary uses directly influence the number and length of trips, mode choice, viability of walking and cycling, attractiveness of transit service, and travel origin-destination patterns. The findings of this MTP will

## 2035 Metropolitan Transportation Plan

help the MOA Planning Department refine and implement the Anchorage Bowl and Chugiak-Eagle River comprehensive plans.

### Recommended Studies

More detailed transportation subarea and corridor studies are recommended as an integral part of the MTP. The purpose of the following studies is to provide more detailed recommendations for capital improvements and policies in the affected areas:

- 3rd and 6th Avenues Couplet Conversion Reconnaissance Study: This study will evaluate the traffic operation needs and capital costs for conversion of the existing 5th and 6th avenue couplet to a 3rd and 6th avenue couplet in downtown Anchorage.
- Glenn Highway Operations Study: This study will explore the functional operations needs and capital costs for improvements on the Glenn Highway between Muldoon Road and Ekultna. One study component is examination of possible new interchange locations north of Chugiak-Eagle River to serve future developments.
- Midtown Subarea Transportation Plan: This study will complete the analysis of multimodal transportation and land-use solutions in the rapidly growing Midtown District of the Anchorage Bowl.
- Seward Highway/O'Malley Road Interchange Study: This study will update traffic operations and capital improvements required for a freeway-to-freeway connection between the Seward Highway and Minnesota Drive at O'Malley Road.
- Eagle River Central Business District and Residential Core Study, Phase II: This study will examine the land-use, economic, and transportation system impacts of the three recommended strategies from the Phase I study.
- Glenn Highway-North Eagle River Road Interchange Capacity Study: This study will examine options to improve the capacity of the interchange area in Eagle River.
- An additional group of studies, referred to as AMATS MTP Element Implementation Projects, is recommended to supplement and enhance future MTP plans. The individual studies are as follows:
  - Regional Travel Survey
  - Complete Streets Plan
  - Freeway Incident Management Plan
  - Traffic Signal Operations Plan
  - Intersection Operations and Safety Improvement Studies

- Travel Options Report Updates
- Hillside Intersection Study
- Chugiak-Eagle River and Hillside transportation circulation studies for large tracts as identified in the OSHP

## MTP SYSTEM PERFORMANCE

### 2035 MTP Network

The 2035 MTP network consists of all the road, public transportation, and pedestrian, bicycle, and trail facility projects identified in the previous sections of this chapter.

Illustrations of how the recommended MTP network might perform throughout the day (Figure 7-13 and Figure 7-14), morning peak period (Figure 7-15 and Figure 7-16), and afternoon peak period (Figure 7-17 and Figure 7-18) show relatively few overloaded and congested conditions (orange and red segments) in 2035. Table 7-13 compares the recommended 2035 network to 2007 and other 2035 scenarios.

Figure 7-13      Total Daily Performance of "2035 MTP Network" - Anchorage Bowl

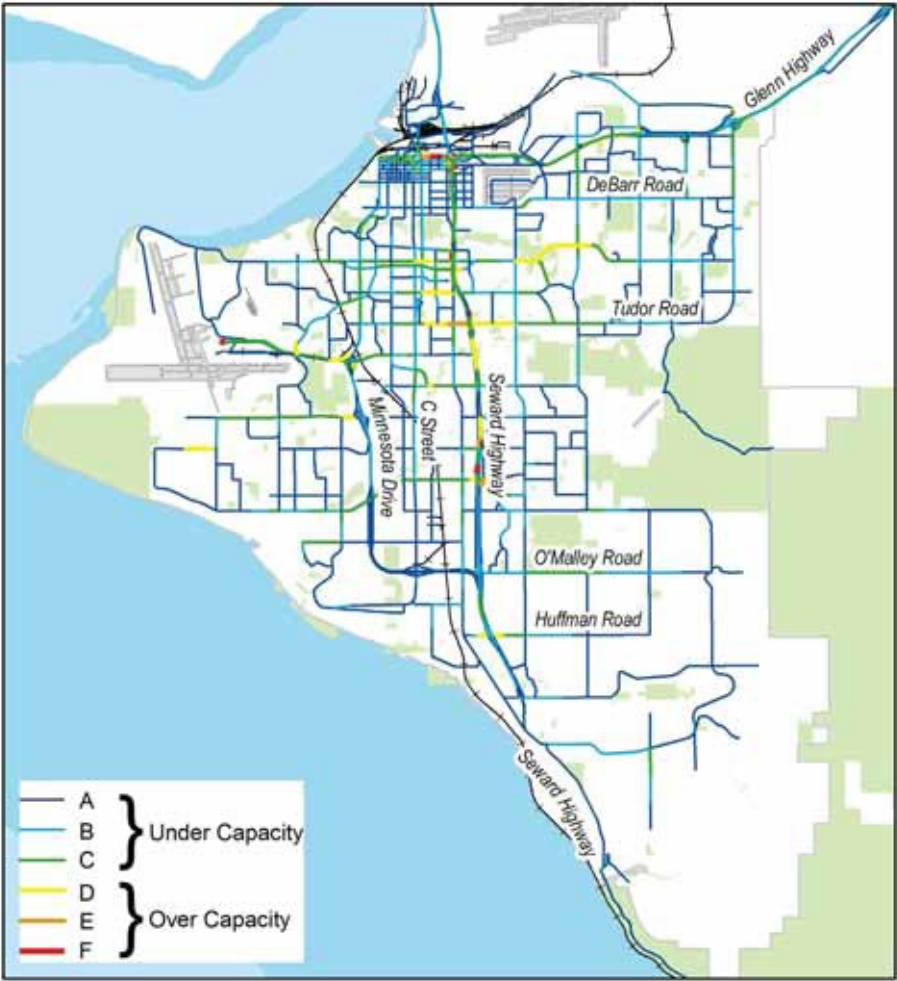


Figure 7-14      Total Daily Performance of "2035 MTP Network" - Chugiak-Eagle River

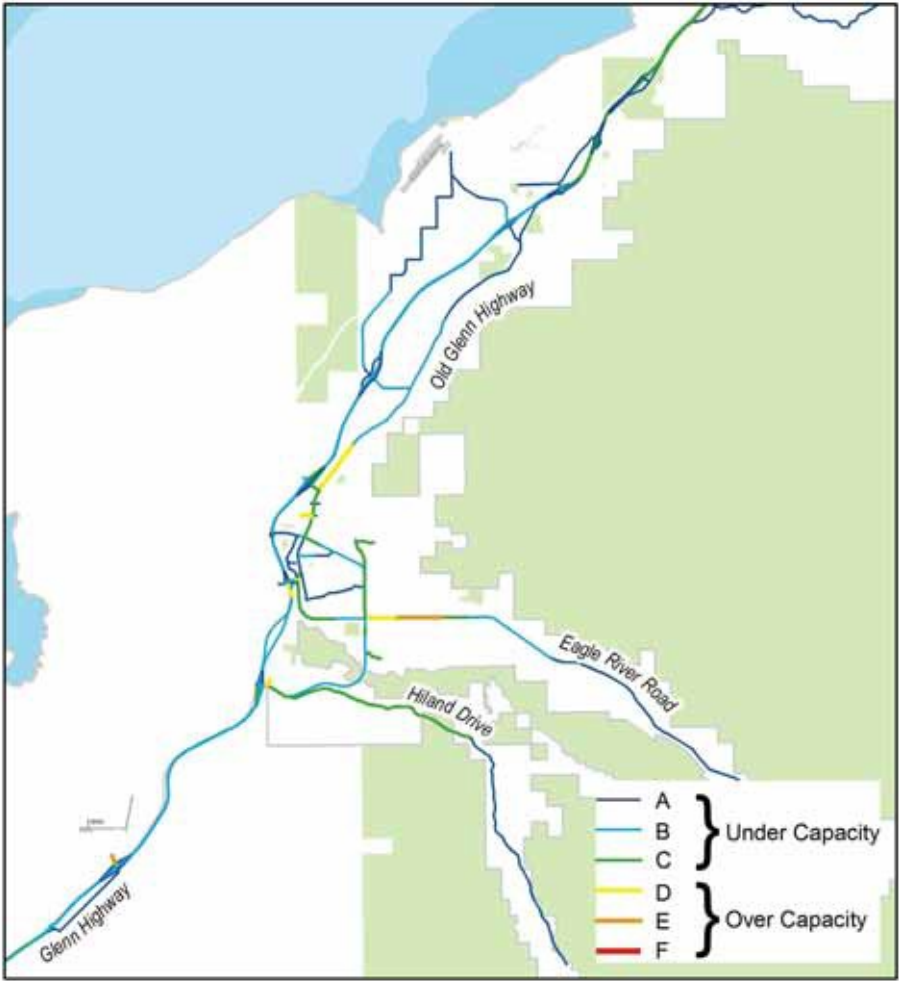




Figure 7-15 Morning Peak Period Performance of 2035 MTP Network - Anchorage Bowl

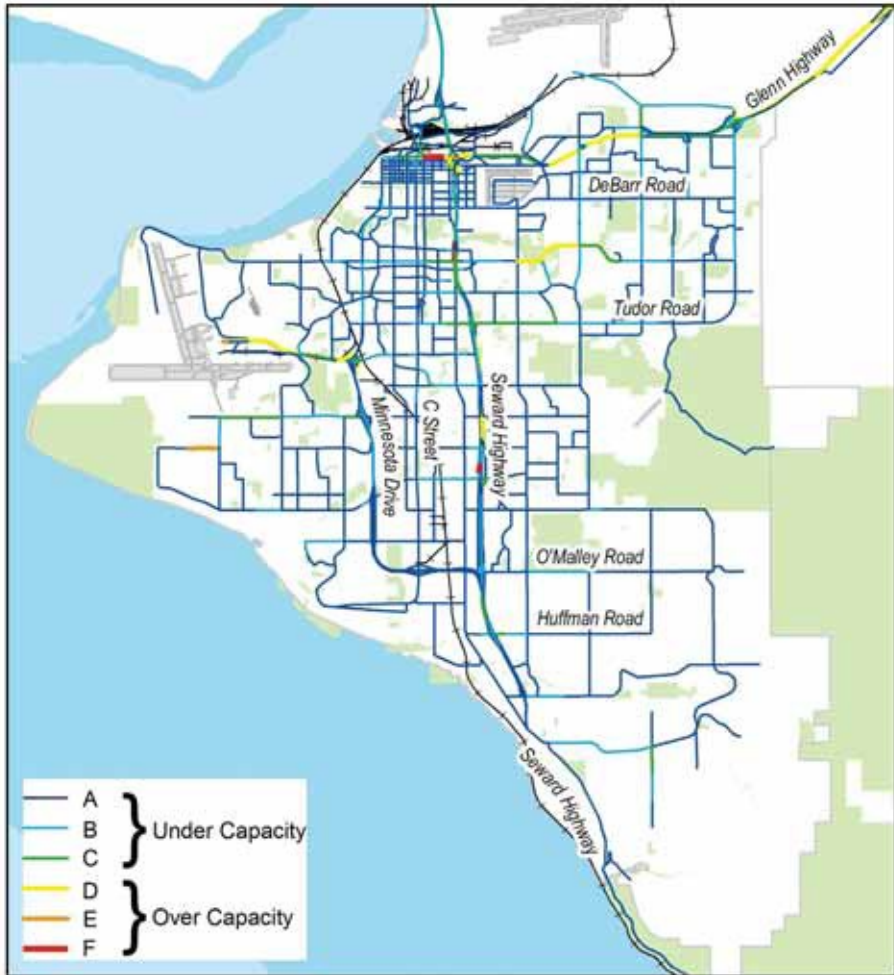


Figure 7-16 Morning Peak Period Performance of 2035 MTP Network - Chugiak-Eagle River

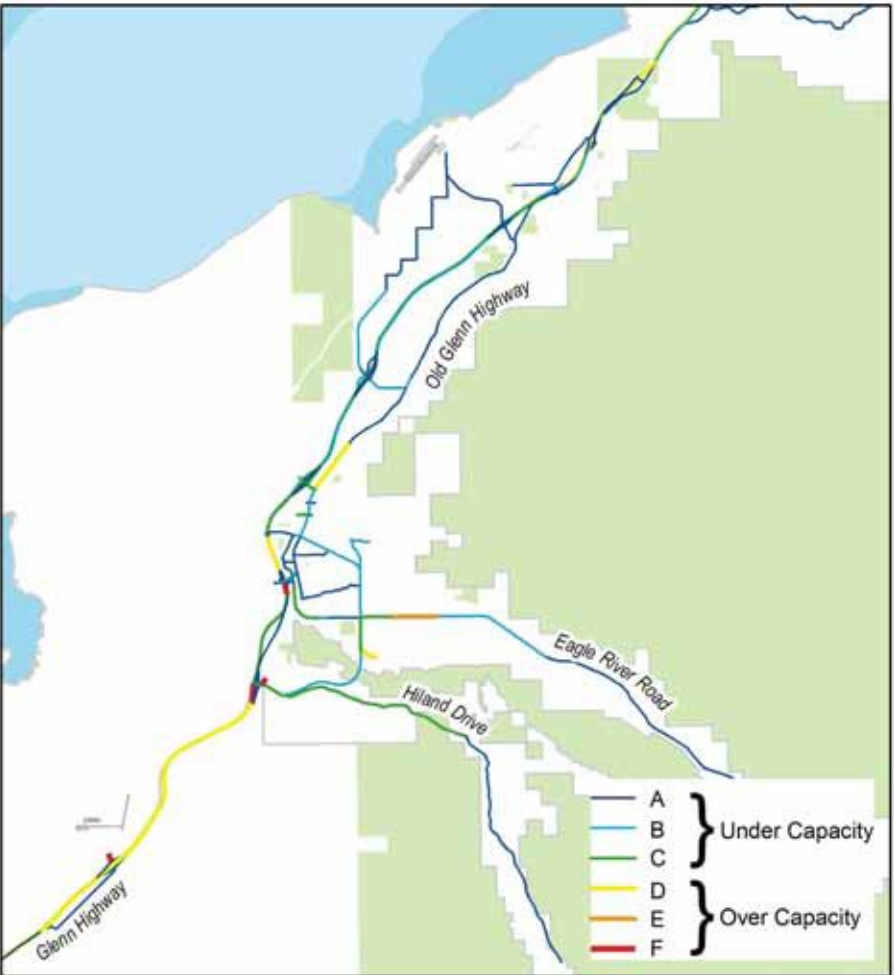




Figure 7-17      Afternoon Peak Period Performance of 2035 MTP Network - Anchorage Bowl

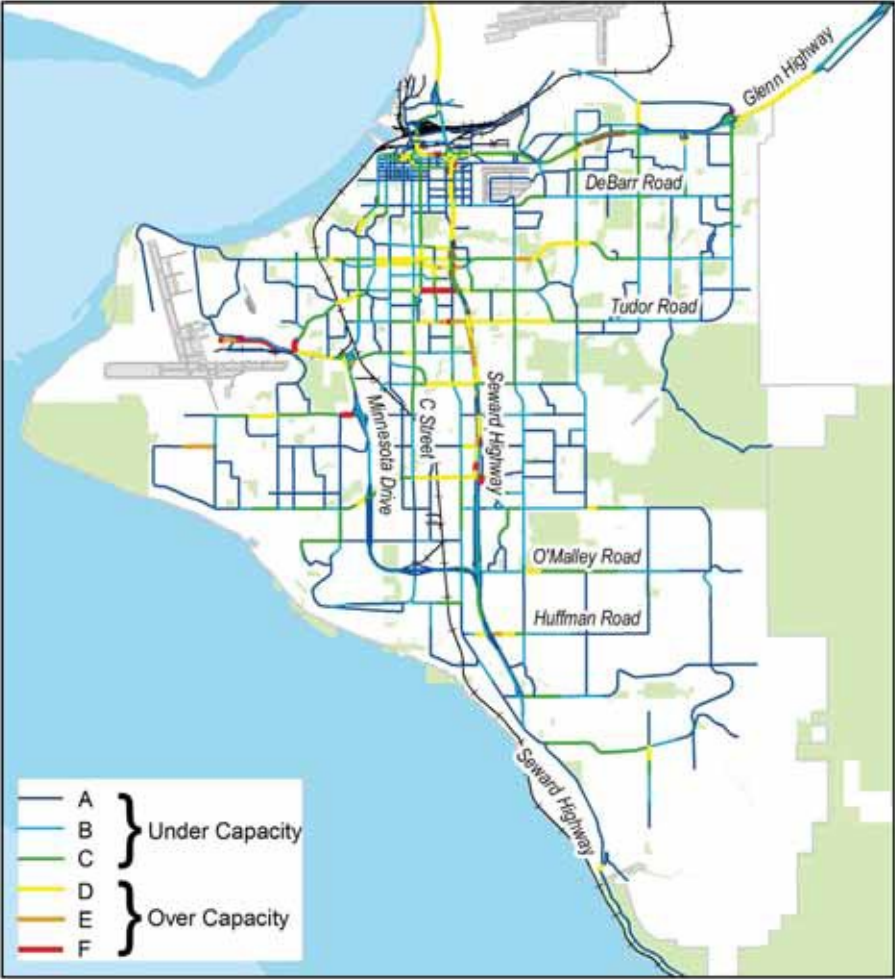
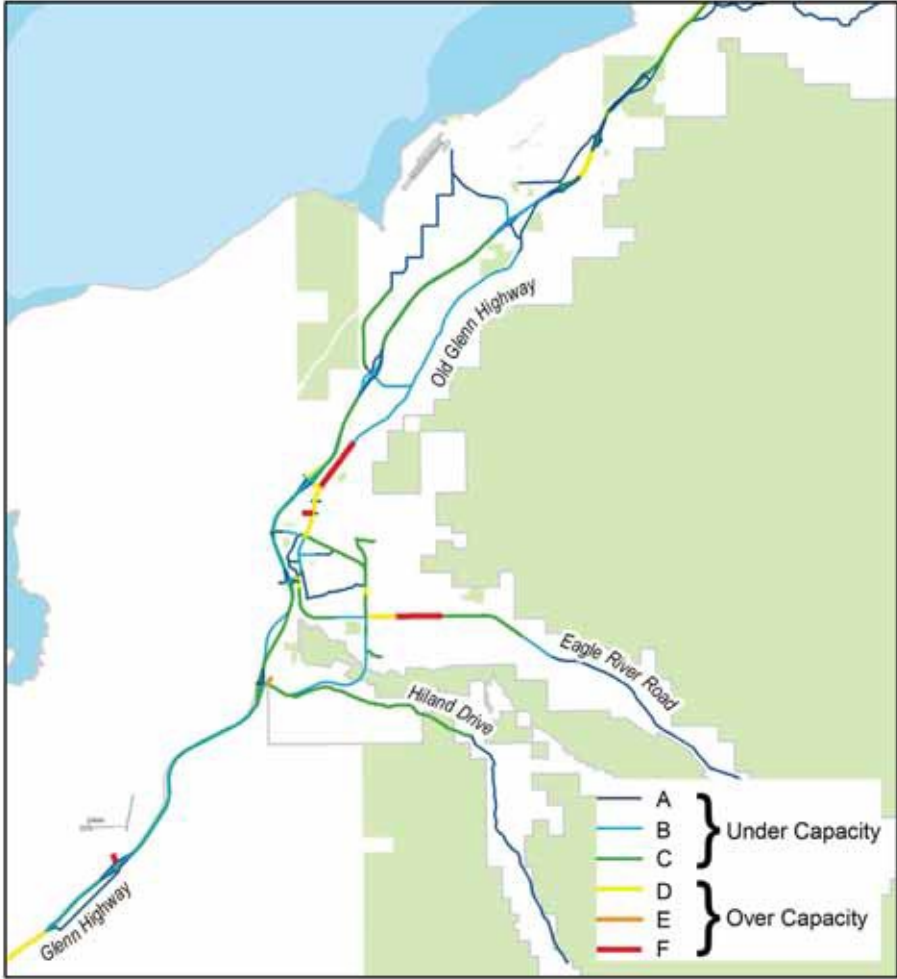


Figure 7-18      Afternoon Peak Period Performance of 2035 MTP Network - Chugiak-Eagle River



## 2035 Metropolitan Transportation Plan

Table 7-13 Performance Comparison of Transportation Network Scenarios for 2007 and 2035

| FEATURE   | SCENARIO          |                       |                           |                                |                          |
|---|-------------------|-----------------------|---------------------------|--------------------------------|--------------------------|
|   | 2007 ROAD NETWORK | 2035 NO BUILD NETWORK | 2035 BASE ROADWAY NETWORK | 2035 BASE PLUS ROADWAY NETWORK | 2035 MTP ROADWAY NETWORK |
| Daily vehicle miles of travel in severe congestion <sup>a</sup> | 25,360            | 173,040               | 15,110                    | 14,330                         | 15,160                   |
| Traveler hours spent in severe congestion <sup>a</sup>          | 812               | 6,550                 | 762                       | 725                            | 772                      |
| Congested <sup>b</sup> freeway miles                            |                   |                       |                           |                                |                          |
| Morning peak period   | 1%                | 39%                   | 20%                       | 20%                            | 22%                      |
| Afternoon peak period   | 2%                | 57%                   | 31%                       | 30%                            | 28%                      |
| Congested <sup>b</sup> arterial miles                           |                   |                       |                           |                                |                          |
| Morning peak period   | 2%                | 8%                    | 6%                        | 5%                             | 6%                       |
| Afternoon peak period   | 9%                | 22%                   | 16%                       | 16%                            | 18%                      |

a Severe congestion is defined as having a volume-capacity ratio of 7.25 or greater.

b Congestion is defined as having a level of service of D or worse.

Source: CH2M HILL

### Recommended Performance Measures

Simply examining roadway capacity and automobile travel times as a means of monitoring the performance of the transportation system is no longer sufficient. Federal policies and local public opinion now place a greater emphasis on many criteria for monitoring MTP performance, including the following:

- Providing for the needs of multimodal travel
- Increasing the efficiency of the existing transportation system
- Maintaining the existing transportation system

- Reducing crashes
- Supporting economic health
- Reducing the environmental impact of the existing system and future construction

Increased competitiveness for transportation funding means that agencies need to be able to show they have a clear understanding of how the transportation system is performing, where it needs improvement to meet their goals, and how funding will allow them to implement projects to achieve those goals. Advances in data collection and analysis capabilities, as well as a better understanding of how to measure the aforementioned criteria, provides AMATS with the ability to

holistically measure the performance of the transportation system in the Anchorage metropolitan area.

Performance measures have been developed for the metropolitan area transportation system as a part of this MTP. They are directly related to the goals and objectives outlined in Chapter 3 to provide a means to measure progress toward achieving the goals and objectives. The measures should be used by AMATS to regularly monitor the performance of the system and the effects of implementing this MTP. Table 7-14 lists the performance measures and the related goal or goals.

Table 7-14 Recommended Performance Measures

| NUMBER | PERFORMANCE MEASURE  | GOAL(S)    |
|--------|--|------------|
| 1      | VHT per capita and VMT per capita  | 1, 2, 6, 8 |
| 2      | Expected VMT per capita and VHT per capita to be reduced by improvements   | 1, 6       |
| 3      | Percentage of arterial-highway system managed with TSM and/or ITS  | 1, 6       |
| 4      | Percentage of collector-and-above roadways with a V/C ratio of greater than 1.0 during peak period   | 1, 3, 6    |
| 5      | Percentage of high-crash locations improved by MTP implementation  | 1, 2       |
| 6      | Percentage of primary pedestrian and bicycle systems maintained for year-round use   | 2          |
| 7      | Hours of vehicle delay per average daily traffic at crossing   | 2          |
| 8      | Ratio of deferred maintenance to total annual maintenance cost   | 3          |
| 9      | V/C ratios along high-priority freight routes (commercial and military) and/or along connectors from key destinations to major highways                  | 4          |
| 10     | Intersection density of all streets by area type   | 5          |
| 11     | Percentage of pedestrian, bicycle, and trail facility projects from current plans funded in MTP  | 5          |
| 12     | Percentage of schools connected to surrounding "attractions" by pedestrian, bicycle, and/or public transportation facilities (at least 2 of these modes) | 5          |
| 13     | Weekday transit trips per capita   | 6, 7       |
| 14     | Percentage of traffic signals in coordinated system  | 6          |
| 15     | Percentage of signal timing plans that have been updated within last 3 years   | 6          |
| 16     | Intersection density of higher functional class by area type   | 6          |
| 17     | Public transportation/automobile travel-time ratio to/from selected locations  | 7          |
| 18     | Percentage of public transportation projects from People Mover route restructuring plan funded by MTP  | 7          |
| 19     | Number of acres of identified wetlands, parks, and natural open spaces affected by new roadway links   | 8          |

ITS = Intelligent Transportation System | TSM = transportation system management | V/C = volume to capacity | VHT = vehicle hours traveled |  
VMT = vehicle miles traveled

SUMMARY OF MTP  
RECOMMENDATIONS

The recommended 2035 MTP provides the framework for the development, operations, and maintenance of a multimodal transportation system to meet the travel needs of the metropolitan area through the year 2035. The MTP meets the requirements set forth by the current federal legislation and regulations, but more important, it provides a harmonious mixture of road, public transportation, and non-motorized projects to match the funding challenges of the expected reduction of federal funding during the next 25 years. Table 7-15 summarizes the capital costs of the recommended MTP projects by mode.

The recommended projects described in this chapter and the implementation plan described in Chapter 8 will produce a sustainable, efficient, and safe transportation system that demonstrates how the various interests that characterize a community can work together as stewards of the surrounding built and natural environment. The MTP takes into account the vision and goals of the Anchorage Bowl and Chugiak-Eagle River comprehensive plans, the subarea and community plans and studies, and the open planning and design process for projects. This MTP was developed using a rigorous public involvement plan and recognizes the unique characteristics of the neighbor-

hoods and subareas within the metropolitan area.

Table 7-15 Summary of Recommended MTP Projects Capital Cost

| MODE                  | 2010 COST ESTIMATE (\$ MILLION) |                          |                |
|-----------------------|---------------------------------|--------------------------|----------------|
|                       | SHORT TERM<br>(2011-2023)       | LONG TERM<br>(2024-2035) | 2035 MTP TOTAL |
| Roads                 | \$1,185.20                      | \$916.40                 | \$2,101.60     |
| Public Transportation | \$87.50                         | \$95.70                  | \$183.20       |
| Non-motorized         | \$61.27                         | \$37.93                  | \$99.20        |
| AMATS Sub-total       | \$1,333.97                      | \$1,050.03               | \$2,384.00     |
| Knik Arm Crossing     | \$702.00                        | \$230.00                 | \$932.00       |
| Total Projects        | \$2,035.97                      | \$1,280.03               | \$3,316.00     |



# Chapter



## IMPLEMENTATION

The recommendations contained in the previous chapters are designed to meet the future transportation needs of a growing metropolitan area. These improvements will make substantial contributions to the Anchorage area's economic health, livability, and attractiveness and will reinforce its status as a great subarctic northern city and major gateway

to Alaska. The successful implementation of the MTP will depend on strong political leadership, close collaboration among government jurisdictions, broad public support, and commitments to identifying and securing sufficient funding for the recommended multimodal transportation system improvements.

## POLICY SHAPES IMPLEMENTATION

The discussion below identifies policy guidance and the specific action items needed to implement the MTP. The tables that describe the action items identify the goal or goals that each action item is designed to implement. Regular reassessment of progress, system performance, and traffic congestion will aid in establishing priorities for implementation activities.

## Comprehensive Plans

### Policy Recommendations

- Continue to pursue close coordination of transportation and land use linkage goals of the Anchorage Bowl and Chugiak-Eagle River comprehensive plans while honoring their differences.
- Support completion of the land use maps, which detail the land use changes; and shape Title 21 land-use codes to implement the envisioned development standards and densities.
- Continue to pursue development of subarea plans that bring further definition to development of neighborhoods and employment areas and inform future updates to the MTP and land-use decisions (for example, those contained in the West Anchorage District Plan, Eagle River Central Business District and Residential Core Circulation Study, Midtown District Plan, and Government Hill Neighborhood Plan).
- Incorporate parking requirements in Title 21 and employment center plans that encourage parking management strategies.

## 2035 Metropolitan Transportation Plan

- Explore use of federal funding to encourage smart growth and livable communities.
- Comprehensively evaluate congestion areas to include transportation and land-use solutions.

Table 8-1 Action Item Recommendations – Comprehensive Plans

| ACTION   | RESPONSIBLE ENTITY        | TIMEFRAME | PARTNERSHIP CONNECTIONS   | APPLICABLE GOAL(S) |
|--|---------------------------|-----------|---|--------------------|
| <b>CP-A</b> Update the Anchorage Bowl and Chugiak-Eagle River comprehensive plans to reference the 2035 MTP, the Anchorage Non-Motorized Transportation Plan, and the People Mover Blueprint (RLS & Associates, 2001 and 2009 updates).  | MOA Community Development | 0-5 years | Public Transportation<br>DOT&PF<br>AMATS                        | 6                  |
| <b>CP-B</b> Monitor effects from the major transportation projects (Seward Highway improvements, Knik Arm Crossing, Glenn Highway improvements, People Mover expanded bus service, etc.) on land-use patterns and the need to update the Anchorage Bowl and Chugiak-Eagle River comprehensive plans. | MOA Community Development | Ongoing   | DOT&PF<br>KABATA<br>Mat-Su Borough<br>JBER AMATS                | 1, 2, 6            |
| <b>CP-C</b> Develop subarea plans.   | MOA Community Development | Ongoing   | DOT&PF<br>AMATS   | 1-8                |
| <b>CP-D</b> Continue database maintenance and use of the AMATS travel demand model in accordance with latest planning assumptions.   | AMATS                     | Ongoing   | DOT&PF<br>KABATA<br>Mat-Su Borough<br>MOA Community Development | 1, 2, 6            |
| <b>CP-E</b> Update and refine the initial screening criteria used to rank the short-term and long-term projects in the MTP to take into consideration differences in sub-area needs and priorities.  | AMATS                     | 0-5 years | MOA<br>DOT & PF   | 1-8                |

## Financial Issues

### Policy Recommendations

- Explore strategies to broaden the base of transportation funding with the aim of better aligning the equity between beneficiaries and those who bear the costs; for example, increased gas tax, higher vehicle license and registration fees, or a dedicated sales tax to provide revenues.
- Seek a larger share of statewide funding for the Anchorage metropolitan area in recognition of its percentage of state population and importance to the statewide movement of people and goods.
- Explore and seek alternative transportation funding strategies to reflect future shifts from traditional transportation fuel sources and to offset declining federal gas tax revenues.
- Increase regional collaboration on transportation funding.
- Examine ways to reduce costs and resources required to develop funding for transportation improvements. Consider possible mechanisms such as multi-year bonding or multi-year tax propositions with sunset provisions.
- Continue to investigate federal funding opportunities available to AMATS.
- Investigate and undertake innovative experiments to promote strategies to change travel mode and assess their value.
- Identify and establish new funding mechanisms to provide adequate, predictable, long-term federal, state and local funding for the following:
  - MTP capital projects implementation.
  - MTP operations and maintenance.
  - Public transportation operations and maintenance.
- Investigate public transportation funding and develop strategies to broaden the existing O&M funding sources.
- Within the Chugiak-Eagle River subarea, emphasize the following priorities for transportation funding:
  - Bringing existing facilities up to current standards.
  - Coupling capacity expansion projects with safety improvements if they are warranted. Projects that address both capacity and safety concerns should receive highest priority.
  - Maintaining and rehabilitating the existing transportation system (roads, trails, and sidewalks) to prevent deterioration of facilities and avoid the need for major reconstruction.
- Establishing a basic network for bicyclist and pedestrian circulation that will provide access to schools, neighborhoods, commercial centers, and parks. The network development should adhere to the following priorities:
  - Provide funding priority to trails and pedestrian facilities for transportation over trails that primarily serve a recreational purpose.
  - Give priority to trails within high-density areas over trails within low-density areas.
- Projects planned in Chugiak-Eagle River require written agreement and cost estimates for maintenance with concurrence from the bodies performing the maintenance prior to project initiation.

## 2035 Metropolitan Transportation Plan

Table 8-2 Action Item Recommendations – Financial Issues

| ACTION   | RESPONSIBLE ENTITY                                | TIMEFRAME  | PARTNERSHIP CONNECTIONS   | APPLICABLE GOAL(S) |
|--|---|--|---|--------------------|
| <b>FI-A</b> Provide staffing levels and resources to plan, operate, monitor, manage, and maintain the transportation system and improvement programs.  | MOA<br>DOT&PF                                     | Ongoing  |   | 3, 6               |
| <b>FI-B</b> Continue regional collaboration on the establishment of a Regional Transit Authority.  | MOA Public<br>Transportation<br>Mat-Su<br>Borough | Ongoing  | Mat-Su Borough<br>DOT&PF Public<br>transportation<br>providers<br>Alaska Mobility<br>Coalition<br>AMATS | 6                  |
| <b>FI-C</b> Continue regional collaboration on projects, priorities, resources, and strategies mutually affecting Anchorage and the Mat-Su Borough.  | AMATS   | Ongoing  | Mat-Su Borough<br>DOT&PF MOA  | 3, 6               |
| <b>FI-D</b> Identify and fund staff resources to pursue discretionary funding programs available from federal agencies such as Federal Highway Administration (FHWA), Federal Transit Administration (FTA), U.S. Environmental Protection Agency (EPA), U.S. Department of Housing and Urban Development (HUD), and other applicable federal agencies. | AMATS   | Ongoing  | DOT&PF<br>MOA<br>Community<br>Development   | 3, 6               |
| <b>FI-E</b> Meet annually with the Anchorage legislative caucus to discuss Anchorage area transportation needs.  | AMATS   | Fall, before<br>Alaska<br>Legislature<br>session | Elected officials<br>DOT&PF   | 3, 6               |
| <b>FI-F</b> Explore and seek alternative funding sources and work to reduce cost of funding.   | AMATS   | Ongoing  | Elected officials<br>DOT&PF   | 6                  |
| <b>FI-G</b> Support development of the Alaska Transportation Fund.   | AMATS   | 0-2 years  | Elected officials   | 6                  |
| <b>FI-H</b> Increase funding for maintenance, infrastructure preservation, and snow clearance for roads and paths for pedestrians and bicyclists.  | MOA<br>DOT&PF                                     | 0-5 years  | Elected officials   | 3, 5               |



## Public Involvement

### Policy Recommendations

- Continue to follow a planning process based on a comprehensive, cooperative, and continuing interaction with stakeholders.
- Continue to enhance AMATS's capability to address environmental justice and Title VI issues.
- Periodically update and review the effectiveness of the procedures and strategies contained in the AMATS Public Participation Plan (PPP) to ensure a full and open participation process.
- Continue proactive stakeholder engagement during implementation of programs and projects identified by AMATS.
- Investigate the development of a single-point clearinghouse to coordinate the public involvement activities for transportation system projects within the Anchorage metropolitan area. This effort may include the design of a database to capture public comments on projects and programs.

Table 8-3 Action Item Recommendations – Public Involvement

| ACTION   | RESPONSIBLE ENTITY | TIMEFRAME | PARTNERSHIP CONNECTIONS   | APPLICABLE GOAL(S) |
|--|--------------------|-----------|---|--------------------|
| <b>PI-A</b> Update the AMATS PPP as identified in the PPP.   | AMATS              | 2-5 years | MOA<br>DOT&PF<br>Public transportation providers<br>Identified stakeholders in SAFETEA-LU | 6                  |
| <b>PI-B</b> Continue implementation of the AMATS PPP.  | AMATS              | Ongoing   | MOA<br>DOT&PF   | 6                  |
| <b>PI-C</b> Develop Title VI and Limited English Proficiency Plan defining outreach to environmental justice populations.                            | AMATS              | 0-2 years | MOA<br>DOT&PF   | 1, 6, 7, 8         |
| <b>PI-D</b> Develop additional visualization techniques to be used in conjunction with MTP and Transportation Improvement Program (TIP) development. | AMATS              | 0-2 years | MOA<br>DOT&PF   |                    |

## Transportation System

### Policy Recommendations

- Investigate and adopt modifications related to multimodal performance measures within the Anchorage metropolitan area.
- Investigate modifications to the level of service (LOS) standards that recognize the differences in acceptable LOS by subareas.
- Periodically update AMATS plans, including Status of System, congestion management process, and OS&HP.
- Establish a consistent procedure and methodology to evaluate the effectiveness of transportation projects in reducing congestion as an integral part of the implementation process for transportation improvements.
- Support and fund data collection and regular system evaluation.
- Conduct subarea transportation planning in Chugiak-Eagle River in areas without a designated collector system.

Table 8-4 Action Item Recommendations – Transportation System

| ACTION  | RESPONSIBLE ENTITY | TIMEFRAME                  | PARTNERSHIP CONNECTIONS  | APPLICABLE GOAL(S) |
|---|--------------------|----------------------------|--|--------------------|
| <b>TS-A</b> Develop multimodal LOS standards within the Anchorage metropolitan area in accordance with 2010 Highway Capacity Manual procedures. Different LOS standards will be adopted for different areas of the Municipality of Anchorage. | AMATS              | 0-2 years                  | MOA Traffic<br>MOA Project Management and Engineering (PME)<br>MOA Public Transportation<br>DOT&PF | 1, 6               |
| <b>TS-B</b> Reevaluate the existing set of transportation system performance measures and the need for additional data-collection efforts.  | AMATS              | 0-2 years                  | MOA Traffic<br>MOA PME<br>MOA Public Transportation<br>DOT&PF                                      | 1, 2, 6            |
| <b>TS-C</b> Conduct periodic (4-year cycle) systemwide review of traffic conditions and system performance using updated data (Status of the System Report).  | AMATS              | 2014<br>2018<br>2022, etc. | MOA Traffic<br>MOA PME<br>MOA Public Transportation<br>DOT&PF                                      | 1, 2               |
| <b>TS-D</b> Collect new traffic data, including volume and travel time before and after a roadway construction is completed and new traffic patterns are established.   | AMATS              | Ongoing                    | MOA Traffic<br>DOT&PF  | 1                  |
| <b>TS-E</b> Investigate modifications to the roadway LOS standards within the Anchorage metropolitan area.  | AMATS              | 0-2 years                  | MOA<br>DOT&PF  | 1                  |

## Roads

### Policy Recommendations

- Promote the integration of appropriate non-motorized, public transportation facilities and landscaping within new and major roadway reconstruction projects through inter-departmental coordination and public input during the project scoping phase.
- Promote and support projects that improve the efficiency and better utilization of existing roadway corridors.
- Establish a hierarchy of roadway classifications and functions in existing and newly developing areas of the MOA.
- Limit and provide access to the street network in a manner consistent with the function and purpose of each roadway. To achieve this level of access control, encourage consolidation of access in developing commercial and high-density residential areas through shared use of driveways and local access streets.
- Investigate congestion management alternatives to roadway expansion projects.
- Minimize residential and business relocations resulting from roadway improvement projects.
- Develop an interconnected network of streets, where appropriate, (a) to facilitate emergency response, particularly for fire and medical services; (b) for evacuation in event of a disaster; (c) for ease and variety of travel; and (d) to promote even distribution of traffic.
- Discourage high-speed and cut-through traffic in primarily residential areas.

Table 8-5 Action Item Recommendations – Roads

| ACTION   | RESPONSIBLE ENTITY          | TIMEFRAME | PARTNERSHIP CONNECTIONS | APPLICABLE GOAL(S) |
|--|-----------------------------|-----------|-------------------------|--------------------|
| R-A Participate in meetings with site and land use developers during pre-application and development plan reviews to provide timely direction on requirements for supporting transportation plan goals and objectives. | MOA Transportation Planning | Ongoing   | DOT&PF                  | 5, 6               |
| R-B Complete the signal timing update currently in progress and implement corridor signal coordination.  | MOA Traffic                 | Ongoing   | DOT&PF                  | 6                  |
| R-C Conduct a congestion management system analysis for all roadway capacity expansion projects before inclusion in the TIP.   | AMATS<br>MOA Traffic        | Ongoing   | DOT&PF                  | 6                  |
| R-D Continue implementation of MOA projects using the context sensitive solutions (CSS) document A Strategy for Developing Context Sensitive Transportation Projects.  | Project development teams   | Ongoing   | AMATS                   | 3                  |
| R-E Incorporate sidewalk, pathway, and trail facilities shown in the MOA Non-Motorized Transportation Plan in roadway project plans.   | Project development teams   | Ongoing   | AMATS                   | 1, 3               |

## 2035 Metropolitan Transportation Plan

Table 8-5 Action Item Recommendations – Roads (cont.)

| ACTION  | RESPONSIBLE ENTITY           | TIMEFRAME  | PARTNERSHIP CONNECTIONS                 | APPLICABLE GOAL(S) |
|---|------------------------------|--|---|--------------------|
| <b>R-F</b> Update the Official Streets and Highway Plan (OS&HP).  | AMATS                        | 1st quarter 2012 and every 4 years following MTP updates | MOA<br>Community Development<br>MOA PME | 3                  |
| <b>R-G</b> Review and update the Design Criteria Manual following the adoption of new Title 21, if necessary to accommodate relevant changes in code.   | MOA PME                      | Ongoing  | AMATS<br>DOT&PF                         | 3                  |
| <b>R-H</b> Complete subarea traffic studies in key areas or corridors such as Midtown, Downtown Eagle River, Seward Highway at O'Malley Road interchange, Glenn Highway corridor from Airport Heights to Eklutna, and the Hillside Intersections. | AMATS<br>DOT&PF              | 0-5 years  | MOA Traffic                             | 6                  |
| <b>R-I</b> Discourage high-speed cut through traffic through implementation of a traffic-calming program.   | MOA Traffic                  | Ongoing  |   | 2, 3               |
| <b>R-J</b> Require transportation circulation plans before development of large tracts of land, as required by OS&HP.   | MOA<br>Community Development | Ongoing  | MOA Traffic                             | 1, 5               |
| <b>R-K</b> Develop a process to implement street typology.  | MOA<br>Community Development |  | DOT&PF<br>MOA PME                       | 3, 6               |
| <b>R-L</b> Continue development review of site plans to ensure system connectivity.   | MOA<br>Community Development |  | MOA Traffic<br>DOT&PF                   | 6                  |
| <b>R-M</b> Promote improved street connectivity through changes in Title 21 standards and requirements.   | MOA<br>Community Development |  | MOA Traffic                             |                    |
| <b>R-N</b> Develop a right-of-way acquisition program to implement needed street connections.   | MOA Traffic                  | 0-5 years  | MOA PME                                 |                    |



## Public Transportation

### Policy Recommendations

- Develop strategy and funding commitment to ensure continuity and timely implementation of the Route Restructuring Plan (in The People Mover Blueprint: A Plan to Restructure the Anchorage Transit System, 2002, and People Mover Route Restructure Plan Update, 2009) and purchase of required fleet vehicles.
- Make consideration of public transportation explicit in land-use planning, development, and public works programs, a focus that is especially important for public services.
- Foster community and state support for funding, building, and maintaining a strong, viable public transportation system.
- Create institutional and public-private partnerships to collaborate in funding special transportation services for elderly and transportation-disadvantaged persons.
- Periodically update and evaluate implementation of the Human Services Coordination Transportation Plan.
- Set additional commuter ridership goals for significant commuter ridership increases into the three major employment areas during development of future plans. This MTP calls for at least a doubling of public transportation ridership during the next 25 years, as well as achieving a 5 to 6 percent share of traffic along the Glenn Highway corridor as public transportation.
- Promote regional planning activities for public transportation.
- Support improvements in the frequency and convenience of public transportation service to higher-density, public-transportation-dependent areas of Chugiak-Eagle River. Investigate alternative methods of providing public transportation services to low-density developments to, from and within the Chugiak-Eagle River area and expand alternatives that are proven to be efficient.
- Support the continued development of local and regional park-and-ride systems.
- Support regional planning activities for public transportation and support creation of a Regional Transit Authority.

## 2035 Metropolitan Transportation Plan

Table 8-6 Action Item Recommendations – Public Transportation

| ACTION   | RESPONSIBLE ENTITY  | TIMEFRAME | PARTNERSHIP CONNECTIONS | APPLICABLE GOAL(S) |
|--|---|-----------|-------------------------|--------------------|
| <b>PT-A</b> Develop steps and programs to implement the recommended MTP public transportation plan in Chapter 7.   | MOA Public Transportation   | Ongoing   | AMATS                   | 1, 5, 6, 7         |
| <b>PT-B</b> Continue and refine route-by-route operational analyses to fine-tune service and build riders. Establish performance benchmarks and monitor progress.  | MOA Public Transportation   | Ongoing   | AMATS                   | 6, 7               |
| <b>PT-C</b> Continue partnerships with schools, universities, government agencies, and employers to market public transportation and achieve ridership goals.  | MOA Public Transportation   | Ongoing   | AMATS                   | 6, 7               |
| <b>PT-D</b> Coordinate improvements for roadways and for bicyclist, and pedestrian facilities with public transportation improvements to increase accessibility to public transportation facilities.             | MOA Non-Motorized Transportation Coordinator<br>MOA Public Transportation | Ongoing   | AMATS                   | 6                  |
| <b>PT-E</b> Coordinate planning and development for public transportation corridors and public transportation center locations.  | MOA Community Development<br>MOA Public Transportation                    | Ongoing   | AMATS                   | 6                  |
| <b>PT-F</b> Continue coordination of public transportation services among transportation service providers in the region.  | MOA Public Transportation   | Ongoing   | AMATS                   | 6                  |
| <b>PT-G</b> Promote public transportation services partnerships with major employers (such as incentives, commuter tax benefits, and bus passes rather than free parking) to increase public transportation use. | MOA Public Transportation   | Ongoing   | AMATS                   | 5, 6, 7            |
| <b>PT-H</b> Actively participate in regional discussions and forums about regional public transportation services.   | MOA Public Transportation   | Ongoing   | AMATS<br>DOT&PF         | 6                  |
| <b>PT-I</b> Strive to improve public transportation efficiency that meets the needs of schools as well as Anchorage metropolitan area residents.   | MOA Public Transportation   | Ongoing   | AMATS<br>DOT&PF         | 5, 6               |

Table 8-6 Action Item Recommendations – Public Transportation (cont.)

| ACTION   | RESPONSIBLE ENTITY        | TIMEFRAME | PARTNERSHIP CONNECTIONS           | APPLICABLE GOAL(S) |
|--|---------------------------|-----------|-----------------------------------|--------------------|
| <b>PT-J</b> Develop educational programs to promote carpool, vanpool, and other public transportation.   | MOA Public Transportation | Ongoing   | AMATS<br>DOT&PF                   | 6                  |
| <b>PT-K</b> Promote the development of a public transportation system (local and/or regional) that serves the Glenn Highway corridor as an alternative to the single-occupancy vehicle.  | MOA Public Transportation | Ongoing   | AMATS<br>Mat-Su Borough<br>DOT&PF | 6                  |
| <b>PT-L</b> Continue to consider and evaluate the feasibility of commuter rail as a travel choice.   | AMATS<br>ARRC             | Ongoing   | Mat-Su Borough                    | 6                  |
| <b>PT-M</b> Investigate alternative methods of providing public transportation services to low-density developments to, from, and within the Chugiak-Eagle River area and expand alternatives that are proven to be efficient. | MOA Public Transportation | Ongoing   | AMATS                             | 5, 6               |
| <b>PT-N</b> Prepare comprehensive route selection study for high-capacity public transportation corridors, including Bus Rapid Transit.  | MOA Public Transportation | 0-2 years | AMATS                             | 1, 6               |
| <b>PT-O</b> Prepare periodic updates to the Public Transportation Development Plan.  | MOA Public Transportation | 2-5 years | AMATS                             | 1, 6               |

## 2035 Metropolitan Transportation Plan

### Non-Motorized System (Pedestrian and Bicyclist Facilities and Trails)

#### Policy Recommendations

- Explore the feasibility of “Complete Streets” legislation at the state and/or local level.
- Recognize rural neighborhoods in Chugiak-Eagle River and the Hillside that may not desire amenities such as lighting, landscaping, and non-motorized pathways on both sides of the roadway.
- Encourage travel by means other than the automobile and provide for the safety of pedestrians and bicyclists throughout the Anchorage metropolitan area.
- Create an ongoing process to analyze locations with high incidence of pedestrian-vehicle collisions and implementation of special designs to inform the Anchorage Non-Motorized Transportation Plan.
- Advocate for bicycle lane adoption into designs and retrofits of roads in locations identified in the Anchorage Bicycle Plan and increase education efforts with respect to rules of the road.
- Preserve existing platted easements for trails and establish new platted easements in subdivisions for access to schools, regional parks, recreational facilities, employment centers, and institutional and governmental facilities.
- Encourage expansion of the downtown Business Improvement District concept to other areas with the goal of enhancing maintenance and preservation of non-motorized transportation infrastructure.
- During roadway project scoping, establish as a priority the acquisition of sufficient right-of-way to allow for adequate separation of sidewalks or pathways from the curb where practicable.

Table 8-7 Action Item Recommendations – Non-Motorized System

| ACTION  | RESPONSIBLE ENTITY                           | TIMEFRAME        | PARTNERSHIP CONNECTIONS          | APPLICABLE GOAL(S) |
|---|--|------------------|----------------------------------|--------------------|
| <b>NM-A</b> Create Non-Motorized Transportation Advisory Committee as part of AMATS committee structure.                    | AMATS  | 1st Quarter 2012 | DOT&PF<br>MOA Parks & Recreation | 3, 6               |
| <b>NM-B</b> Complete the Anchorage Non-Motorized Transportation Plan (focusing on paved and non-paved recreational trails). | MOA Non-Motorized Transportation Coordinator | 0-2 years        | DOT&PF<br>MOA Parks & Recreation | 5, 7               |
| <b>NM-C</b> Implement the Anchorage Bicycle Plan.   | MOA Non-Motorized Transportation Coordinator | Ongoing          | AMATS                            | 1, 7               |



Table 8-7 Action Item Recommendations – Non-Motorized System (cont.)

| ACTION   | RESPONSIBLE ENTITY                           | TIMEFRAME | PARTNERSHIP CONNECTIONS                                    | APPLICABLE GOAL(S) |
|--|--|-----------|--|--------------------|
| <b>NM-D</b> Implement the Anchorage Pedestrian Plan.   | MOA Non-Motorized Transportation Coordinator | Ongoing   | AMATS  | 1, 7               |
| <b>NM-E</b> Create design guidelines and checklists for pedestrian plan streetscapes with street design standards for sidewalks, trails, landscape, signage, lighting, and traffic calming.  | MOA Non-Motorized Transportation Coordinator | 2-5 years | AMATS<br>MOA<br>DOT&PF                                     | 1, 3, 5, 7         |
| <b>NM-F</b> Review commercial and retail development plans for pedestrian and bicyclist accessibility.   | MOA Community Development                    | Ongoing   | AMATS<br>MOA<br>DOT&PF                                     | 5, 6, 7            |
| <b>NM-G</b> Develop and promote an educational awareness program for drivers, bicyclists, and pedestrians to create a better understanding of the rights for shared-use facilities.  | MOA Non-Motorized Transportation Coordinator | 0-2 years | AMATS<br>MOA Traffic                                       | 6                  |
| <b>NM-H</b> Develop Title 21 ordinance requirements for subdivision development and commercial redevelopment that cover sidewalks to meet Americans with Disabilities (ADA) requirements and pedestrian safety and access needs, and to further the sidewalk connectivity goals. | MOA Community Development                    | 0-2 years | MOA Traffic<br>DOT&PF                                      | 2, 5               |
| <b>NM-I</b> Set pedestrian and bicyclist safety priorities by using available crash data.  | MOA Traffic DOT&PF                           | Ongoing   | AMATS  | 2                  |
| <b>NM-J</b> Promote ordinances to require property owners beyond the Central Business District to clear sidewalks adjacent to their properties.  | MOA  | 2-5 years | Business owners<br>Municipal Assembly                      | 2                  |
| <b>NM-K</b> Encourage and promote programs providing safe access to schools and walking as a healthy exercise, such as the Walking School Bus.   | AMATS  | 0-5 years | MOA<br>Community Health<br>Anchorage School District (ASD) | 6, 8               |

## 2035 Metropolitan Transportation Plan

### Freight

#### Policy Recommendations

- Establish policy to incorporate commercial vehicle requirements and provisions in transportation design study reports and plan reviews.
- Develop policies that consider safety, security, efficiency, cost-

effective movement, and intermodal terminal needs for freight, goods, and commercial vehicles in land-use and transportation infrastructure decisions.

- Provide “last mile” intermodal freight connections to improve freight

capacity within the Anchorage metropolitan area.

- Seek to expand funding mechanism for freight projects, such as seeking federal grants, pursuing private-public partnerships, and/or creating a state freight investment board.

Table 8-8 Action Item Recommendations – Freight

| ACTION  | RESPONSIBLE ENTITY               | TIMEFRAME        | PARTNERSHIP CONNECTIONS  | APPLICABLE GOAL(S) |
|---|----------------------------------|------------------|--|--------------------|
| <b>F-A</b> Improve the National Highway System and the access and circulation for trucks in major transportation corridors, such as the Port of Anchorage.                    | DOT&PF                           | Ongoing          | Port of Anchorage<br>TSAIA<br>Alaska Railroad                    | 1, 4               |
| <b>F-B</b> Integrate freight requirements and objectives into roadway planning and design, including access and mobility in balance with other community planning objectives. | MOA PME<br>DOT&PF                | Ongoing          | AMATS<br>MOA<br>Community Planning                               | 1, 4, 6            |
| <b>F-C</b> Establish consistency between the State of Alaska and the MOA with respect to maximum weight and size regulations and design requirements for roadways.            | MOA Traffic<br>DOT&PF            | Ongoing          | AMATS  | 6                  |
| <b>F-D</b> Create and adopt a freight route map.  | MOA Traffic                      | 4th Quarter 2012 | AMATS Freight Advisory Committee<br>DOT&PF<br>Municipal Assembly | 1, 4, 6            |
| <b>F-E</b> Coordinate and update the MOA Design Criteria Manual and the DOT&PF Alaska Preconstruction Manual to address freight movement needs, as needed.                    | DOT&PF<br>MOA PME                | 0-5 years        | AMATS Freight Advisory Committee                                 | 6                  |
| <b>F-F</b> Create a regional freight strategy to address and prioritize future freight movement projects and needs.   | AMATS Freight Advisory Committee | 0-2 years        | MOA<br>DOT&PF  | 4, 6               |

Table 8-8 Action Item Recommendations – Freight (cont.)

| ACTION   | RESPONSIBLE ENTITY                          | TIMEFRAME | PARTNERSHIP CONNECTIONS                    | APPLICABLE GOAL(S) |
|--|---|-----------|--|--------------------|
| <b>F-G</b> Encourage AMATS Freight Advisory Committee input and involvement in transportation policy, funding, legislation, and planning matters affecting goods movement.   | AMATS                                       | Ongoing   | DOT&PF                                     | 4, 6               |
| <b>F-H</b> Provide opportunities for input to AMATS, MOA, and DOT&PF from the freight community and other stakeholders on matters affecting freight funding, operations, and movements.  | AMATS Freight Advisory Committee            | Ongoing   | DOT&PF                                     | 6                  |
| <b>F-I</b> Provide routine data collection and updates of freight volumes and tonnage that enter Alaska through the Port of Anchorage and Ted Stevens Anchorage International Airport (TSAIA) to better forecast transportation facility needs. Collect freight data from the Alaska Railroad Corporation (ARRC) and the freight industry. | Port of Anchorage<br>TSAIA<br>ARRC          | Ongoing   | AMATS<br>MOA<br>DOT&PF                     | 4, 6               |
| <b>F-J</b> Examine and monitor intersection LOS for noted freight corridors and zones.   | MOA Traffic                                 | Ongoing   | AMATS                                      | 1                  |
| <b>F-K</b> Establish freight safety improvement projects, such as signage and intersection upgrades.   | AMATS                                       | Ongoing   | AMATS Freight Advisory Committee           | 2                  |
| <b>F-L</b> Implement National Highway System improvements and Commercial Vehicle Intelligent System Network (CVISN) elements.  | AMATS<br>DOT&PF                             | Ongoing   | AMATS Freight Advisory Committee           | 6                  |
| <b>F-M</b> Monitor commercial vehicle crashes and causes.  | MOA Traffic<br>DOT&PF                       | Ongoing   | AMATS                                      | 2                  |
| <b>F-N</b> Examine strategies to improve freight movement through signal timing, road design, and platting actions.  | MOA<br>Community Development<br>MOA Traffic | Ongoing   | AMATS Freight Advisory Committee<br>DOT&PF | 6                  |
| <b>F-O</b> Collaborate with the trucking industry and create educational materials to help drivers and non-motorized users understand commercial vehicle requirements, particularly for stopping and sight distances, and how to operate safely within heavily used freight areas.   | AMATS Freight Advisory Committee            | Ongoing   | MOA<br>DOT&PF                              | 6                  |

## 2035 Metropolitan Transportation Plan

Table 8-8 Action Item Recommendations – Freight (cont.)

| ACTION   | RESPONSIBLE ENTITY              | TIMEFRAME | PARTNERSHIP CONNECTIONS | APPLICABLE GOAL(S) |
|--|---------------------------------|-----------|-------------------------|--------------------|
| <b>F-P</b> Ensure that conditional use permits for resource extraction give full consideration to minimizing impacts from sand, gravel, and rock operations on surrounding neighborhoods; reducing impact to traffic on public roadways from increased hauling; and minimizing damage to vehicles on public roadways caused by gravel and rocks falling from trucks. | MOA<br>Community<br>Development | Ongoing   | DOT&PF<br>MOA Traffic   | 2, 5               |
| <b>F-Q</b> Identify and find resources for AMATS staff to pursue freight mobility measures and grants.   | AMATS                           | Ongoing   | DOT&PF                  | 6                  |

## Regional Connections

### Policy Recommendations

- Provide policy support for technology, capacity, and efficiency improvements at the Port of Anchorage, Alaska Railroad Corporation (ARRC) facilities, and Ted Stevens Anchorage International Airport (TSAIA) to strengthen the competitive positions of these transportation entities and contain shipping costs.
- Continue and expand collaboration and regional planning with the Mat-Su Borough, Mat-Su communities, Kenai Peninsula Borough, Joint-Base Elmendorf-Richardson (JBER), the Village of Eklutna, and ARRC to accomplish the following:
  - Create a Regional Transit Authority.
  - Enhance regional data collection and modeling.
  - Sustain regional funding for transportation.
- Develop the Knik Arm Crossing.
- Operate and maintain the Mat-Su Ferry.
- Examine strategies and options for regional intermodal freight services and centers, including institutional, financial, and operating aspects. Consider market potential and public-private partnerships.

Table 8-9 Action Item Recommendations – Regional Connections

| ACTION  | RESPONSIBLE ENTITY    | TIMEFRAME | PARTNERSHIP CONNECTIONS | APPLICABLE GOAL(S) |
|---|-----------------------|-----------|-------------------------|--------------------|
| <b>RC-A</b> Improve access, mobility, and signage to marine, aviation, rail, intermodal facilities, and other industrial and commercial sites.  | DOT&PF<br>MOA Traffic | Ongoing   | AMATS                   | 4, 6               |
| <b>RC-B</b> Develop policy positions for regional transportation investments, such as future freight corridors and zones, potential economic development projects (such as the natural gas pipeline), freight security, land-use impacts, cost responsibility, and multimodal mobility principles, and strategies | MSB<br>AMATS          | Ongoing   | DOT&PF                  | 4, 6               |
| <b>RC-C</b> Conduct regional household survey.  | AMATS                 | 0-2 years | DOT&PF                  | 6                  |
| <b>RC-D</b> Update and improve regional travel demand model.  | AMATS                 | 2-5 years | DOT&PF                  | 6                  |
| <b>EC-E</b> For future road projects, address wildlife-vehicle incidents based on existing maps and traffic accident data and through consultation with the Alaska Departments of Fish and Game and Transportation and Public Facilities.   | MOA, DOT&PF           | Ongoing   | ADF&G,<br>ADOT&PF       | 8                  |



## 2035 Metropolitan Transportation Plan

### Congestion Management

#### Policy Recommendations

- Establish responsibility, accountability, and resources for MOA departmental staff to steward and promote the development of congestion management, transportation system management (TSM), traffic demand management (TDM), and parking management programs.
- Periodically update systemwide traffic signal timing and coordination to correspond to new traffic patterns and volume distribution.
- Incorporate Intelligent Transportation System (ITS) elements, as specified in the MOA ITS architecture document, in all improvement projects.
- Monitor congestion management progress and achievement to reveal the most effective and cost-efficient approaches to achieve MTP goals.

Table 8-10 Action Item Recommendations – Congestion Management

| ACTION   | RESPONSIBLE ENTITY              | TIMEFRAME | PARTNERSHIP CONNECTIONS                  | APPLICABLE GOAL(S) |
|--|---------------------------------|-----------|--|--------------------|
| <b>CM-A</b> Revise the AMATS Uniform Planning Work Program (UPWP) to include the following:<br>1) Update of the congestion management process after completion of the MTP development.<br>2) Continuation of Travel Options Coordinator work.  | AMATS Coordinator               | Fall 2011 | DOT&PF MOA Public Transportation         | 6                  |
| <b>CM-B</b> Assess MTP transportation system performance every 4 years or more often through the following:<br>1) Expand the coverage of the system performance analysis to include all of the Anchorage metropolitan area (Anchorage Bowl and Chugiak-Eagle River).<br>2) Assess LOS performance at specified intersections and for limited-access roadway segments.<br>3) Study corridor travel time in peak- and off-peak periods.<br>4) Track Texas Transportation Institute mobility statistics and results and compare MOA performance to that of other urban areas.<br>5) Track public transportation patronage and productivity statistics.<br>6) Review building permits and trends with respect to progress in achieving the goals of the MOA comprehensive plans. | AMATS MOA Community Development | 0-4 years | MOA Traffic<br>MOA Community Development | 1, 6, 7            |
| <b>CM-C</b> Establish and maintain an ongoing and highly focused intersection improvement program to improve mobility trouble spots.   | MOA Traffic DOT&PF              | Ongoing   | AMATS                                    | 1                  |

Table 8-10 Action Item Recommendations – Congestion Management (cont.)

| ACTION  | RESPONSIBLE ENTITY                 | TIMEFRAME | PARTNERSHIP CONNECTIONS | APPLICABLE GOAL(S) |
|---|------------------------------------|-----------|-------------------------|--------------------|
| <b>CM-D</b> Accelerate funding and implementation of upgrades for signal system technology and construction of an MOA traffic management center.  | AMATS<br>MOA Traffic               | Ongoing   | DOT&PF                  | 1, 6               |
| <b>CM-E</b> Complete update of systemwide traffic signal timing and coordination in 2014 and every 4 years thereafter.  | MOA Traffic                        | Ongoing   | AMATS                   |                    |
| <b>CM-F</b> Expedite implementation of a traffic signal pre-emption system for emergency vehicles.  | MOA Traffic                        | Ongoing   | DOT&PF                  | 2                  |
| <b>CM-G</b> Implement organization restructuring, scoping, and contractor services for a new travel-options program and employer-collaboration.   | MOA Public Transportation          | Ongoing   | AMATS                   | 6                  |
| <b>CM-H</b> Design pilot strategies for congestion management and an implementation program for the Glenn Highway and for Northern Lights Boulevard east of the Seward Highway.   | MOA Public Transportation<br>AMATS | 2-5 years | DOT&PF                  | 6                  |
| <b>CM-I</b> Continue and expand the guaranteed ride-home program for ride sharing participants (carpools or vanpools) and expand the vanpool program as rapidly as possible.  | MOA Public Transportation<br>AMATS | Ongoing   | DOT&PF                  | 6                  |
| <b>CM-J</b> Enhance the 511 Travel in the Know program for emergency roadside assistance to expedite emergency response and dissemination of traveler information advisories.   | DOT&PF                             | Ongoing   | AMATS                   | 6                  |
| <b>CM-K</b> Continue deployment and implementation of ITS strategies such as CVISN, automated data collection, incident response, and weather and traffic reporting.  | DOT&PF                             | Ongoing   | AMATS                   | 6                  |
| <b>CM-L</b> Work with Anchorage Police Department (APD) to obtain data on incident clearance times to determine if trends indicate potential problem locations, and recommend next update of ITS architecture to address incident response. | AMATS<br>APD                       | 0-2 years | AMATS                   | 2, 6               |
| <b>CM-M</b> Update the ITS architecture to include real-time traffic monitoring and parking management.   | AMATS                              | 0-2 years | MOA Traffic<br>DOT&PF   | 1, 6               |
| <b>CM-N</b> Create an ITS subcommittee as part of the AMATS committee structure.  | AMATS                              | 0-2 years | MOA Traffic<br>DOT&PF   | 6                  |
| <b>CM-O</b> Develop a concept of operations for the MOA Traffic Operations Center for a 10- to 15-year planning horizon.  | MOA Traffic                        | 2-5 years | AMATS<br>DOT&PF         | 6                  |

## 2035 Metropolitan Transportation Plan

Table 8-10 Action Item Recommendations – Congestion Management (cont.)

| ACTION   | RESPONSIBLE ENTITY | TIMEFRAME | PARTNERSHIP CONNECTIONS | APPLICABLE GOAL(S) |
|--|--------------------|-----------|-------------------------|--------------------|
| <b>CM-P</b> Evaluate methods of improving travel-time data collection.   | AMATS              | 0-2 years | MOA Traffic             | 6                  |
| <b>CM-Q</b> Investigate implementation of a freeway incident-management program.   | AMATS              | 0-2 years | APD<br>DOT&PF           | 2, 6               |
| <b>CM-R</b> Complete single-occupancy vehicle (SOV) checklist for each roadway expansion project before inclusion of the project in the TIP.   | AMATS              | Ongoing   | DOT&PF                  | 6                  |
| <b>CM-S</b> Complete DOT&PF ITS Systems Engineering Analysis checklist for each federally funded transportation project that has ITS elements. | Project Manager    | Ongoing   | AMATS<br>DOT&PF         | 6                  |

## Coordination of Local Plans

### Policy Recommendations

- Promote intermodal connectivity and efficiency at aviation, port, and rail facilities and at military bases to maintain Anchorage, regional, state, and worldwide transportation services for passengers, goods, and national security.
- Review all roadway reconstruction projects by the appropriate MOA parties or entities to ensure consistency with adopted plans and policies.
- Continue discussions between the Mat-Su Borough and the MOA on regional transportation issues.

Table 8-11

Action Item Recommendations – Coordination of Local Plans

| ACTION  | RESPONSIBLE ENTITY | TIMEFRAME          | PARTNERSHIP CONNECTIONS      | APPLICABLE GOAL(S) |
|---|--------------------|--------------------|------------------------------|--------------------|
| <b>CLP-A</b> Continue to work closely with and consider MOA land-use codes, comprehensive plans, pedestrian plans, bicycle plans, public transportation plans, freight mobility, and design standards in project selection and development. | AMATS              | Ongoing            | MOA<br>Community Development | 6                  |
| <b>CLP-B</b> Integrate MTP recommendations into the AMATS UPWP.   | AMATS              | Once every 2 years | DOT&PF                       | 6                  |

## Maintenance and Operations

Table 8-12

### Action Item Recommendations – Maintenance and Operations

#### Policy Recommendations

- Increase funding for snow clearance, sweeping, and maintenance of sidewalks to improve usability of and access to public transportation.
- Give full consideration to reducing O&M cost during the design and construction of all transportation improvements.
- Investigate strategies to reduce O&M costs through design innovations and/or maintenance and operations practices.

| ACTION   | RESPONSIBLE ENTITY               | TIMEFRAME | PARTNERSHIP CONNECTIONS | APPLICABLE GOAL(S) |
|--|----------------------------------|-----------|-------------------------|--------------------|
| <b>MO-A</b> Continue to coordinate State of Alaska, local road service area, and MOA street maintenance responsibilities, including street and sidewalk snow clearing. | MOA Street Maintenance<br>DOT&PF | Ongoing   | ASD<br>AMATS            | 2, 3, 6, 7         |
| <b>MO-B</b> Develop improved information system and records for the pavement management program to prolong existing surfaces.  | MOA Street Maintenance<br>DOT&PF | Ongoing   | AMATS                   | 3                  |

## 2035 Metropolitan Transportation Plan

### Environmental Concerns, Air Quality, and Public Health

#### Policy Recommendation

- Promote reduction of the carbon footprint resulting from the transportation system in the Anchorage metropolitan area through more efficient movement of people and goods.
  - Evaluate the impact of regionally significant roadway projects in the
- MTP on air quality, including carbon monoxide and particulate matter, and as part of the planning and design process.
- Maintain compliance with federal air quality standards for carbon monoxide (CO), particulate matter, and other air pollutants.
  - Transportation plans and future recommended projects should work in concert with the Alaska National
- Pollution Discharge Elimination System Permit.
- Promote transportation system improvements that provide opportunities for healthy, active life styles and improved public health.
  - Examine and consider new research data on the health effects of traffic-related pollutants, including particulate matter and toxic air pollutants such as benzene, as the information becomes available.

Table 8-13 Action Item Recommendations – Environmental Concerns, Air Quality, and Public Health

| ACTION  | RESPONSIBLE ENTITY   | TIMEFRAME | PARTNERSHIP CONNECTIONS                                     | APPLICABLE GOAL(S) |
|---|--|-----------|---|--------------------|
| <b>EC-A</b> Review new information on health effects of air pollution, including the development of new air quality standards, and incorporate this new information in the local transportation planning process. | AMATS Air Quality Advisory Committee<br>Department of Health and Human Services (DHHS) | Ongoing   | AMATS   | 8                  |
| <b>EC-B</b> Investigate state-of-the-art methodologies to identify the carbon footprint of the transportation system components and to serve as a baseline condition for the next Status of the System update.    | AMATS Air Quality Advisory Committee<br>DHHS   | 2-5 years | AMATS   | 8                  |
| <b>EC-C</b> Develop or work with health service providers to develop educational materials that identify the health benefits of non-motorized and public transportation system improvements.                      | AMATS Non-Motorized Transportation Committee   | Ongoing   | MOA Health Department<br>Local health care providers<br>ASD | 8                  |
| <b>EC-D</b> Comply with AMATS PPP by holding the joint AMATS Technical Advisory Committee/Policy Committee meeting with environmental and regulatory agencies annually in the fall.                               | AMATS  | Annually  | DOT&PF<br>Regulatory agencies                               | 8                  |
| <b>EC-E</b> For future road projects, address wildlife-vehicle incidents based on existing maps, traffic crash data, and consultation with DOT&PF and DF&G.   | MOA PME<br>DOT&PF  | Ongoing   | DOT&PF<br>DF&G  | 8                  |



## PROCESS—FROM THE MTP TO PROJECT IMPLEMENTATION

### Consultation and Cooperation for Environmental Mitigation Activities

Current federal requirements governing development of plans like the Anchorage MTP dictate that AMATS must consult, as appropriate, with state and local agencies responsible for land-use management, natural resources, environmental protection, conservation, and historic preservation. Among the consultation activities, the recommendations of the MTP must be compared with applicable state conservation plans or maps and available inventories of natural or historic resources to assess possible impacts of the plan.

In addition, the MTP must describe potential environmental mitigation activities. To prepare this section of the MTP, the team facilitated discussion with federal, state, and tribal entities responsible for land management and wildlife, as well as regulatory agencies, during plan development. Outreach efforts included inviting resource agency representatives to discuss major recommendations in the MTP. The locations of recommended road and public transportation improvements in the MTP were overlain on MOA Coastal Zone resource maps showing sensitive areas—consisting of habitat, wetlands, and

### Recommendations for Consultation and Environmental Mitigation Activities

The following federal, state, tribal, and local resource agencies were contacted:

- Alaska Department of Environmental Conservation, Air Quality
- Alaska Department of Fish and Game, Wildlife Management
- Alaska Department of Natural Resources, Habitat Management
- Alaska Department of Natural Resources, Office of Project Management and Permitting
- Alaska Department of Natural Resources, State Parks
- Alaska Department of Transportation and Public Facilities Statewide Environmental Office
- Alaska Mental Health Trust Land Office
- Alaska State Historic Preservation Office (SHPO)
- Anchorage Historic Preservation Commission
- Chugiak-Eagle River Historical Society
- MOA Department of Health and Human Services (DHHS), Air Quality
- MOA Heritage Land Bank
- MOA Parks and Recreation
- MOA Planning Department, Coastal Zone Planning
- MOA Public Works Department, Project Management and Engineering (PME), Watershed Management Section
- Native Village of Eklutna, Land and Environment Department
- University of Alaska Anchorage Land Management
- U.S. Army Corps of Engineers (USACE)
- U.S. Bureau of Land Management, Lands/Realty Group
- U.S. Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS)
- U.S. Department of the Interior, U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency (EPA)

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other physical features. These maps were made available to the resource agencies for review.

The resource agencies were invited to provide input, suggestions, and guidance about projects or programs (for example, congestion management, TDM, and TSM) for the MTP projects.

The consultation from the resource agencies was considered to be guidance that complemented, not replaced, other formal guidance, such as the National Environmental Policy Act (NEPA) requirements. Several agencies responded with suggestions, and their recommendations are provided in the following section.

The State of Alaska is no longer participating in the Alaska Coastal Management Program as of July 2011. This program provided guidance and coordination for development permits at the state, federal and local level. Until the state elects to reinstate the program again in the near future, this coordination between various permitting agencies must be handled solely by the project applicant. Coordination is necessary between permitting agencies to ensure compatible permit conditions and timelines that meet project deadlines.

The MOA Planning Department, EPA, and USACE recommended that the policies and maps of the Anchorage Wetlands Management Plan, new Coastal Resource Atlas maps, and Municipal Watershed Management Services Stream and Drain-

age Mapping Standards (a periodically updated database) should be consulted for potential project impacts.

They noted that projects should include early consultation with the MOA Watershed Management Section (in PME) and MOA Current Planning Section to obtain the most up-to-date information about these resources.

Proposed road improvements and trails have the potential to affect wetlands, streams, or intertidal areas, either directly or indirectly. The EPA recommends the following:

- Promote project planning and design that maximizes avoidance of aquatic areas, valuable wetlands and other environmentally sensitive areas. Where these areas cannot be avoided, negative impacts should be minimized and/or mitigated.
- Minimize direct, indirect, and cumulative impacts through planning and design, where avoidance is impracticable.
- Implement measures to offset unavoidable adverse impact.
- To avoid adverse impacts to aquatic resources, the mitigation sequence must be followed to determine the type and level of mitigation required under Section 404 of the Clean Water Act.

The EPA-recommended actions are required by Part 230.10(a), Section 404(b)

(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material, of the Clean Water Act. Compliance with this regulation is necessary to obtain USACE authorization for aquatic fill.

Permit applicants seeking authorization must include an 'alternatives analysis', which describes alternative road routes that were considered, with background data and rationale supporting the project's preferred alternative. USACE must concur with the project's alternative analysis before the applicant proposes compensatory mitigation. From information presented in the alternatives analysis, USACE can determine the Least Environmentally Damaging Practicable Alternative (LEDPA) that meets the overall purpose and need of the project. USACE will not issue a permit for actions with greater environmental damages when other alternatives are practicable.

Projects affecting wetlands identified in the Anchorage Wetlands Management Plan should comply with the enforceable policies and management strategies of the wetlands plan, and the design and construction budgets for all projects that would involve adverse impacts to aquatic areas should include funding to provide for avoidance, minimization, and compensatory mitigation measures.

Avoidance measures include the following, where practicable:

- Maximizing opportunities for forms of transportation other than automobiles
- Alignment of routes through uplands or the edges or lower value portions of wetlands
- Use of retaining walls and other features to minimize fill footprints
- Incorporation of onsite storm water treatment measures

For unavoidable impacts, compensatory mitigation measures include the following:

- Replacing or upgrading existing culverts or other structures that block or impede fish passage
- Increasing the length of existing bridges
- Restoring previously damaged reaches of streams or areas of wetlands
- Providing for permanent protection of valuable aquatic areas
- Using Wetland Mitigation Banks when appropriate and as outlined by EPA, 40 CFR Part 230, Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. A mitigation bank is a wetland, stream, or other aquatic resource area that has been restored, established, enhanced, or preserved in order to provide compensation for unavoidable impacts to aquatic

resources permitted under Section 404. The value of a bank is defined in terms of “credits.” USACE, EPA and MOA developed the Anchorage Debit-Credit Methodology (ADCM, updated 2011) to calculate debits, placing a value on impacts incurred with a project, and credits, the value of appropriate compensation to offset impacts, such as wetland preservation. Mitigation banks are a form of “third-party” compensatory mitigation, in which the responsibility for compensatory mitigation implementation and success is assumed by a party other than the permittee. This transfer of liability has been a very attractive feature for Section 404 permit-holders, who would otherwise be responsible for the design, construction, monitoring, ecological success, and long-term protection of the site. Within the Municipality, a private mitigation bank is operating now and the MOA, Heritage Land Bank is in the process of creating a mitigation bank to service the Municipality.

- The USACE may also direct an applicant to pay Fee-in-Lieu of Mitigation to offset a project’s impacts. After calculating the project’s debits with the ADCM, an overall monetary value is correlated based on the Relative Ecological Value of the aquatic resource area affected. Hence, higher value sites,

such as “A” wetlands, are more costly to compensate for in this manner. The fee is paid to a local non-profit entity who is accredited to provide stewardship and protection of comparable wetlands in perpetuity.

Specific responsibilities also are required for project management in areas with Essential Fish Habitat (EFH). The legislation, process, and recommendations of NMFS for work in EFH are described below:

The Magnuson-Stevens Fishery Conservation and Management Act (<http://www.nmfs.noaa.gov/sfa/magact>) as amended by the Sustainable Fisheries Act of 1996 (Public Law 104-267), established a new requirement to describe and identify EFH in each fishery management plan.

- An EFH consultation is triggered when a federal agency, or its designee, determines that an action to be authorized, funded, or undertaken by the agency may adversely affect EFH. For example, if the Federal Highway Administration (FHWA) is funding a road in the MOA, FHWA or the designee (consultant) would need to consult NMFS to determine whether the project would adversely affect EFH.
- An “adverse effect” is any impact that reduces the quality and/or quantity of EFH. Adverse effects may include direct or indirect physical, chemical, or biological alterations



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of the waters or substrate and loss of, or injury to, benthic organisms, prey species and their habitat, and other ecosystem components, if such modifications reduce the quality and/or quantity of EFH.

Adverse effects to EFH may result from actions occurring within EFH or outside of EFH and may include site-specific or habitat-wide impacts, including individual, cumulative, or synergistic consequences of actions.

- Early consultation (project pre-scoping or scoping phase) with NMFS personnel about EFH is highly encouraged. Early consultation can help avoid potential conflicts during the permitting process.

For more information about EFH, contact the Habitat Conservation Division at (907) 271-5006, e mail HCD\_Alaska@noaa.gov, or refer to the list of Habitat Conservation Division contact information for support staff and fisheries biologists at <http://www.fakr.noaa.gov/habitat/>. For frequently asked questions about EFH, go to <http://www.fakr.noaa.gov/habitat/efh/faq.htm>.

To determine whether projects may affect culturally sensitive sites, project managers should consult the SHPO inventory of reported sites and consult with the Native Village of Eklutna, Land and Environment Department. All potential impacts to cultural resources in a project area should be determined and should be

addressed through potential mitigation measures in project documentation.

The Alaska Department of Transportation and Public Facilities (DOT&PF) has signed a Programmatic Agreement (PA) with FHWA, the Advisory Council on Historic Preservation, and the Alaska State Historic Preservation Officer to help streamline Section 106 of the National Historic Preservation Act (36 CFR 800) processing for Federal-Aid Highway Program (Program) projects that may affect roads eligible for the National Register of Historic Places (NRHP). The agreement provides an alternative process and establishes thresholds for Program projects with low potential to affect features that may make a road eligible for NRHP listing. Interim Guidance is being established for project implementers, anticipated to be approved by first quarter 2012, and is expected to be in effect until an Alaska Historic Roads Context and Final Guidance to evaluate Alaska roads is established. The Interim Guidance will include an agreed upon list of Alaska roads to be treated as NRHP eligible during the interim period and activity lists to define projects that have no potential to cause effects to these roads and projects that have no adverse effect. Provisions for developing an Alaska Historic Transportation Routes Booklet are included for distribution to the general public. Currently roads within the AMATS planning area are not included on the proposed list of

roads to be treated as NRHP eligible, but could be added in the future.

The agreement only pertains to effects on roads. It does not apply to road related features (bridges, tunnels, etc); non-road historic properties (archaeological sites, buildings, structures, districts); portions of roads in historic districts or National Historic Landmarks. For more information about the PA, contact the DOT&PF Cultural Resources Manager, Statewide Environmental Office in Anchorage at (907) 269-6229 or the DOT&PF Environmental webpage <http://www.dot.state.ak.us/stwddes/desenvironment/resources/historicproperties.shtml>.

### Project Implementation

Before it is implemented, a project or program must first be included in one of the following funding documents: the MOA Capital Improvement Program (CIP) or the AMATS Transportation Improvement Program (TIP). The AMATS TIP is subsequently included without change in the DOT&PF Statewide Transportation Improvement Program (STIP), directly or by reference, after approval of the TIP by the MPO and the Governor.

Each funding document identifies the most likely funding source and ranks the projects and programs by priority. The CIP is funded locally with general obligation bonds or state grants. The AMATS TIP and the DOT&PF STIP are funded primarily with federal transportation dol-

lars originating from the gasoline tax paid into the Highway Trust Fund and complemented by state or local matching funds.

The funding source is important because each source requires specific project development processes. It determines whether NEPA documentation or state or local permitting processes apply to a project.

Regardless of the process, a very important component of project implementation is conformance with local plans, laws, and policies. For the Anchorage metropolitan area, applicable plans are the MTP, Anchorage Bowl and Chugiak-Eagle River comprehensive plans, the OS&HP, and the Anchorage Non-Motorized Transportation Plan.

Projects must conform to Anchorage land-use regulations (Title 21), as well as local guidance such as the Design Criteria Manual, A Strategy for Developing Context Sensitive Transportation Projects (municipal projects), Alaska Highway Preconstruction Manual, and local plans. Two important local bodies that provide review are the Planning and Zoning Commission and the Urban Design Commission. MTP projects are forwarded to these bodies for review and approval during project development, as appropriate.

## Federal Funding of Project Development

Federal funding requires that a project be completed in accordance with a process

defined by the FHWA and in accordance with the NEPA. The end result of the NEPA process is a decision document granting environmental clearance for the project to proceed to detailed design of the preferred alternative. The decision document can vary depending on the level of environmental analysis.

The decision document for an Environmental Impact Statement (EIS) or Environmental Assessment (EA) is a Record of Decision (ROD) or Finding of No Significant Impact (FONSI), respectively.

Environmental clearance can also be granted for smaller projects with smaller impacts. These projects receive a Categorical Exclusion upon completion of a Categorical Exclusion checklist and provision of supporting documentation.

For processes requiring an EIS, the decision-making follows the process shown in **Figure 8-1**; studies, planning documents, and site-specific information help form many alternatives. These alternatives are screened through environmental studies and preliminary engineering to identify reasonable alternatives that are further evaluated in the EIS or EA, resulting in selection of a preferred alternative.

Public input is sought in completing the document early in the scoping phase and after the draft and final documents are prepared. The ROD or FONSI documents the decision, allowing the next step in project development to begin.

The typical schedule for a federal-aid highway project requiring an EIS is shown in **Figure 8-2**. Some steps can be accomplished simultaneously. After ensuring all federal, state, and local requirements are met, FHWA approval is required to move the project to the next step.

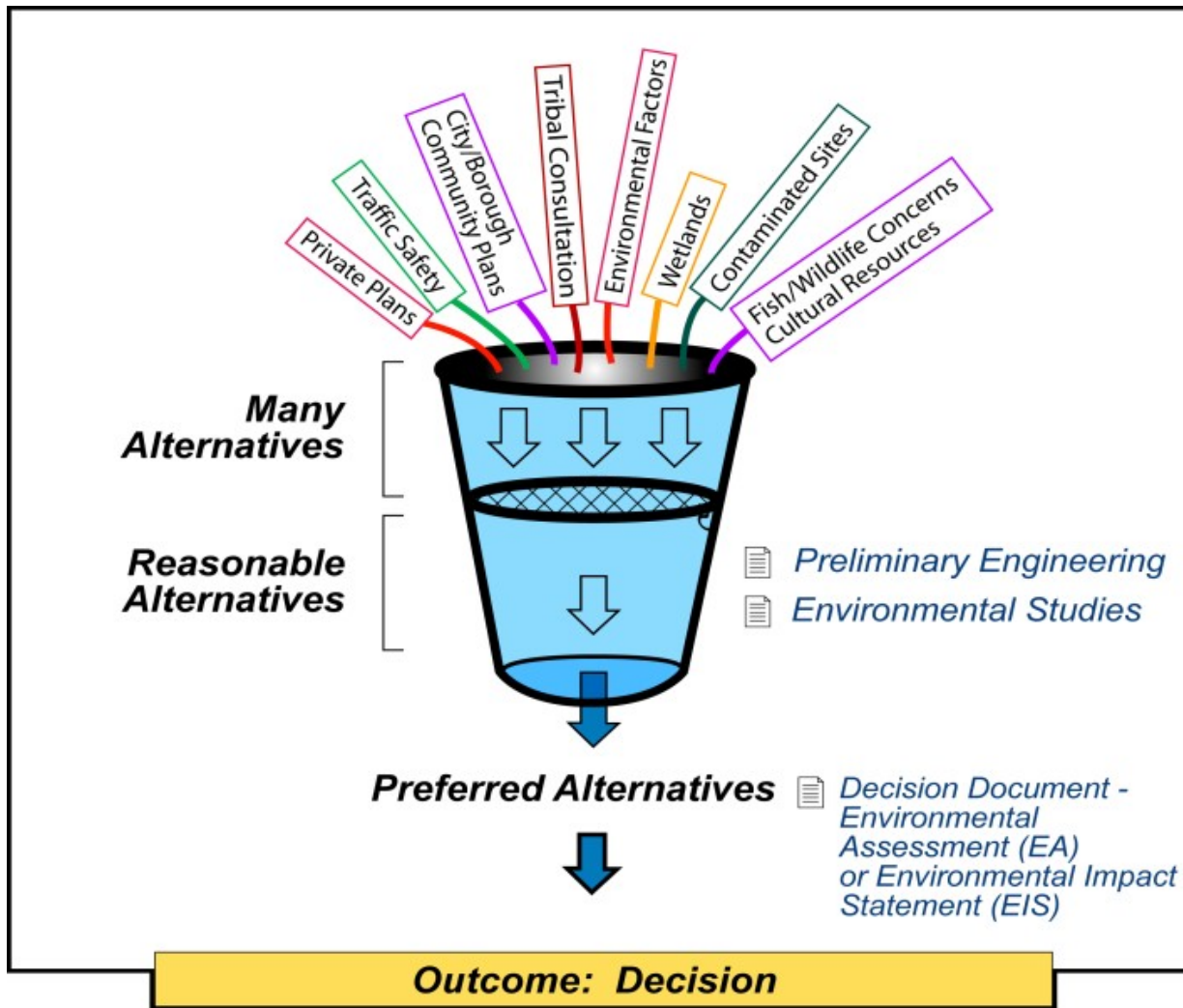
## Single-Occupancy Vehicle (SOV) Checklist and ITS Compliance Review

Regulations require review of all federally funded road improvement projects that will result in a significant increase in SOV capacity on the affected corridor. This requirement is intended to ensure that alternatives to SOVs are evaluated. For such corridors, Title 23, Section 500.105, of the Code of Federal Regulations, requires that a congestion management system provide an appropriate analysis of all reasonable strategies (including multimodal approaches) for travel demand reduction and operational management. In other words, a new highway construction project that adds general purpose lanes to an existing highway or new highway link cannot be built until it is demonstrated that travel-demand-reduction strategies cannot fully satisfy the need for additional capacity, therefore warranting additional SOV capacity.

To ensure consistency in the preparation of the required SOV analyses, an SOV analysis checklist is available. The SOV checklist should be completed for any



Figure 8-1 Project Decision-Making Process

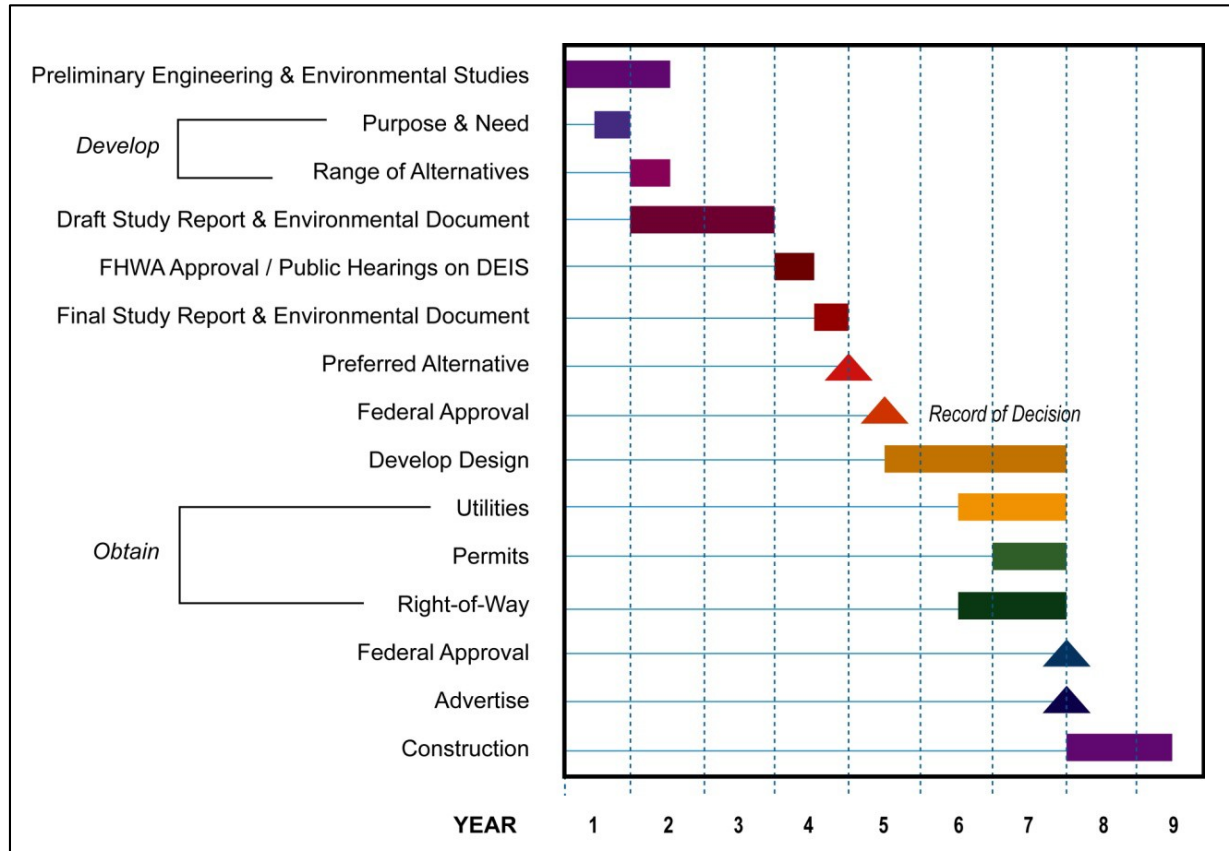


roadway expansion project before it is included in the TIP.

Also included in Appendix D, AMATS Checklists for Project Agency Sponsors, is a checklist for complying with federal ITS requirements. If a project includes any ITS elements, and uses funds from the federal Highway Trust Fund, the project must comply with federal requirements. Failure to do so could result in loss of funding for the project. Therefore, before acquisition, construction, or implementation of a road project, project agency sponsors must complete the DOT&PF Systems Engineering Analysis checklist (provided in Appendix D).

*The decision document for an EA is a Finding of No Significant Impact (FONSI); the decision document for an EIS is a Record of Decision (ROD).*

Figure 8-2 Typical Schedule for a Federal-Aid Highway Requiring an Environmental Impact Statement



Source: Brooks and Associates

## Local Funding of Project Development

Projects being developed with local funding, such as state or municipal general obligation bonds, follow a different path. The NEPA does not govern the process, but local, state, and federal permitting processes must be adhered to and required clearances must be obtained for

project components such as crossing a local stream or filling in wetlands.

Project advancement includes development of alternatives. Alternatives are created to encourage discussion, increase knowledge about project attributes, and create a means to evaluate benefits and impacts associated with different strategies. They are presented at public meet-

ings and scrutinized by technical staff during the course of project development.

Municipal projects now incorporate context-sensitive solutions (CSS). Resolutions passed by AMATS call for the integration of CSS strategies in all future project development. Additionally, the MOA Assembly adopted the policy document A Strategy for Developing Context Sensitive Transportation Projects, making it municipal policy.

## Public Involvement

An extensive public involvement process must be incorporated in the project development steps for every project in this MTP. Projects funded by either federal or local sources incorporate substantial levels of public involvement at every step.

The public involvement process identifies and includes potentially affected interests so that public concerns are articulated and thoughtful discussions are facilitated. The AMATS PPP, adopted by the MOA Assembly in February 2009, provides guidelines for the public involvement approach. In addition, public involvement is conducted consistent with Title 23, Section 450.316(b)(1), of the Code of Federal Regulations.



# Chapter



## AIR QUALITY AND THE METROPOLITAN TRANSPORTATION PLAN

Air quality in Anchorage is subject to national ambient air quality standards established by the U.S. Environmental Protection Agency (EPA). The EPA has established standards for ground level ozone, sulfur oxides, nitrogen dioxide, airborne lead, and carbon monoxide (CO), as well

as for particulate matter less than 2.5 microns in diameter (PM-2.5) and less than 10 microns in diameter (PM-10). These standards for criteria pollutants were established to protect health, particularly for those most susceptible to the effects of air pollution.

### BACKGROUND

Anchorage enjoys low levels of most types of air pollution. Although almost half of the United States population lives in areas that do not meet the ozone or PM-2.5 standard, levels in Anchorage are among the lowest in the United States. In 2010, ozone concentrations measured in Anchorage were among the lowest 2 percent in the country. In 2011, the American Lung Association ranked Anchorage as the sixth cleanest city in the United States with respect to annual average PM-2.5 pollution. Sulfur oxides and nitrogen dioxide also are not a significant concern.

The EPA recently established a much more stringent air quality standard for airborne lead. Monitoring began in An-

chorage late in 2011, and Anchorage's status related to the new lead standard will not be known until more data are collected.

CO, PM-10, and toxic air pollutants are concerns. Although Anchorage now meets air quality standards for all criteria pollutants, it does experience elevated levels of CO and PM-10. Elevated ambient or outdoor CO concentrations have been shown to cause early onset of angina or chest pain and may be associated with an increase in death rates among the elderly. Local studies suggest that doctor visits for asthma and other respiratory illnesses increase when PM-10 levels in Anchorage are high.

#### **Motor vehicles are the main source of CO pollution in Anchorage.**

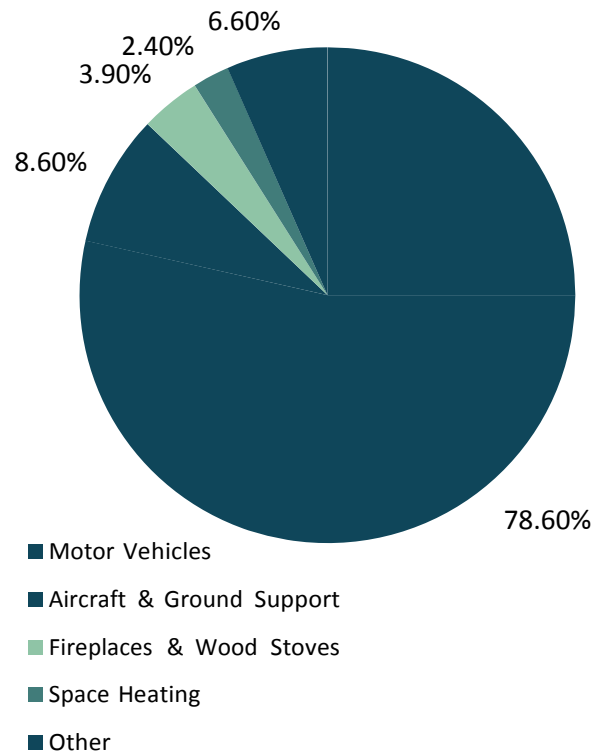
- Cars and trucks account for almost 80% of the CO emitted in the Anchorage Bowl.

Carbon Monoxide

The highest CO concentrations in Anchorage occur in mid-winter. When temperatures are cold and daylight hours are short, strong temperature inversions develop. These inversions trap vehicle emissions of CO and other pollutants close to the ground. CO emissions also increase during vehicle start-ups when engines are cold. Some of the highest CO concentrations in Anchorage are found in residential areas where vehicles parked outside are warmed-up before the morning commute. Emissions of volatile organic compounds like benzene are also high during cold starts. Estimated CO emissions by source are shown in **Figure 9-1**.

During the past two decades, Anchorage has experienced a dramatic improvement in CO air quality. In the early 1980s, Anchorage sometimes violated the standard as many as 50 times per year. Since then, concentrations have dropped more than 60 percent. In addition, no violations of the federal standard, which is set at 9 parts per million for an 8-hour average, have been measured since 1996. Continual advancements in technology to control air pollution on newer vehicles are largely responsible for this improvement. In January 2012, the EPA approved a revised CO control plan for Anchorage that showed the vehicle inspection and maintenance program was no longer necessary to meet the federal CO standard. Shortly thereafter the Anchorage Assembly discontinued the program.

Figure 9-1 Estimated CO Emissions by Source in the Anchorage Bowl (2010)



Other CO reduction measures such as the Share-A-Ride and vanpool programs continue, however. The MOA also continues to promote the use of engine block heaters when temperatures fall below 20°F (degrees Fahrenheit) to reduce cold start emissions.



Although the CO reductions have been significant, and violations of the standard no longer occur, Anchorage still experiences some of the highest concentrations in the United States. See **Table 9-1**.

Table 9-1 CO Concentrations in Selected Western U.S. Metropolitan Areas (2010)

| METROPOLITAN AREA | HIGHEST 8-HOUR CO CONCENTRATION (PPM) <sup>1</sup> |
|-------------------|--|
| Anchorage, AK     | 6.9  |
| Fairbanks, AK     | 5.0  |
| Las Vegas, NV     | 3.4  |
| Phoenix, AZ       | 3.3  |
| Reno, NV          | 2.4  |
| Portland, OR      | 2.4  |
| Spokane, WA       | 2.3  |
| Seattle, WA       | 0.8  |

<sup>1</sup> PPM = parts per million

The PM-10 levels in Anchorage approach and sometimes exceed federal air quality standards. During the late-March/early-April spring break-up period, melting snow and ice reveal a winter's worth of accumulated sand, grit, and dirt on Anchorage's roads. This material is stirred-up by traffic, especially on high-speed, high-volume arterial roadways. On occasion, dust stirred up from these roads can cause PM-10 levels to exceed the federal air quality standard, which is set at 150 micrograms per cubic meter averaged over a 24-hour period. How-



ever, because these exceedances caused by road dust occur infrequently (less than once per year on average), Anchorage is still considered to be in attainment with the standard. Nevertheless, in the past several years, during the spring break-up period when PM-10 is highest, the MOA has applied magnesium chloride brine to reduce dust emissions from major roads in Anchorage and Eagle River.

Eagle River is still officially considered a nonattainment area for PM-10 even though the last violations of the standard occurred two decades ago. In the late 1980s, dust from unpaved roads in the area led to frequent violations of the standard. These violations usually occurred in the late-fall, when temperatures fell below freezing and there was a lack of snow cover. Under these conditions a freeze-dry effect developed, increasing PM-10 emissions from these unpaved roads.

By 1991, however, most of these roads had been paved or surfaced with recycled asphalt and violations ceased. The EPA is currently reviewing a maintenance plan prepared by the MOA and State of Alaska that shows Eagle River is expected to remain in compliance with the standard indefinitely. Once the plan is approved, the EPA is expected to declare Eagle River an attainment area for PM-10.

Volcanic ash and windblown glacial dust from the Mat-Su Valley contribute to PM-10 levels. Natural events like volca-

nic eruptions and wind storms can have a significant impact on PM-10 concentrations. Anchorage is surrounded by volcanoes to the south and west. The eruptions of Mt. Redoubt in 1990 and Mt. Spurr in 1992 were responsible for numerous exceedances of the PM-10 standard both during the initial ash fall and in the months following when lingering ash was stirred up by wind or traffic.

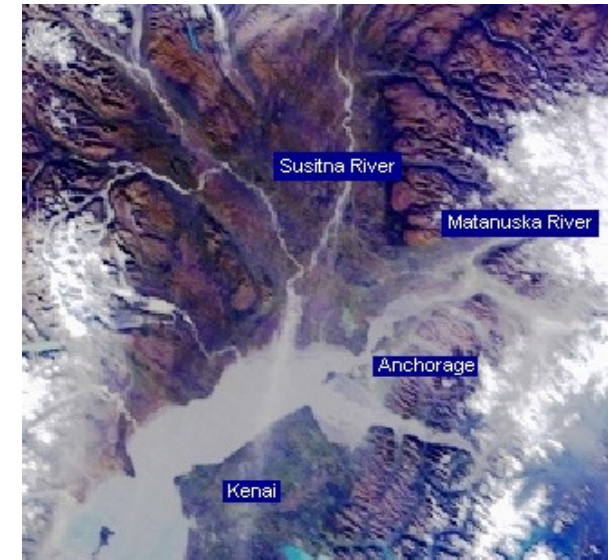
Glacial river dust is also responsible for many of the PM-10 exceedances that have occurred over the years. Under the right meteorological conditions, large amounts of dust from the Matanuska, Knik, and Susitna River valleys north of the MOA can be transported to Anchorage and Eagle River by wind. See **Figure 9-2**. The EPA waives violations resulting from volcanic eruptions or glacial river dust if the exceedances can be shown to not be caused by human actions.

The EPA is currently reviewing PM-10 air quality standards. This process could result in new, more stringent standards. Even if volcano and wind-related exceedances are waived, Anchorage is close to exceeding current PM-10 standards. A more stringent standard may make it necessary to implement additional measures to control roadway dust emissions.

### Benzene and Other Toxic Air Pollutants

Motor vehicles are a source of benzene and other toxic air pollutants. Although

**Figure 9-2** Glacial Dust Being Carried Down to Anchorage by High Winds, September 24, 2010



the EPA has not established ambient air quality standards for toxic pollutants like benzene, they are of growing concern. A 2008-09 municipal study indicated that ambient benzene concentrations in Anchorage air were among the highest in the United States. One main reason for these high ambient levels was the high benzene content of Anchorage gasoline. The 5 percent level found in Anchorage gasoline was 3 to 10 times higher than in most U.S. areas. However, the main producer of Anchorage gasoline, Tesoro, has now begun refining a lower benzene gasoline in response to new EPA requirements that require all refiners to meet a

## 2035 Metropolitan Transportation Plan

1.3 percent limit. The MOA plans a follow-up study to determine how much ambient benzene levels have dropped as a consequence of the lower benzene content in gasoline.

### IMPACT OF THE TRANSPORTATION PLAN ON AIR POLLUTANT EMISSIONS

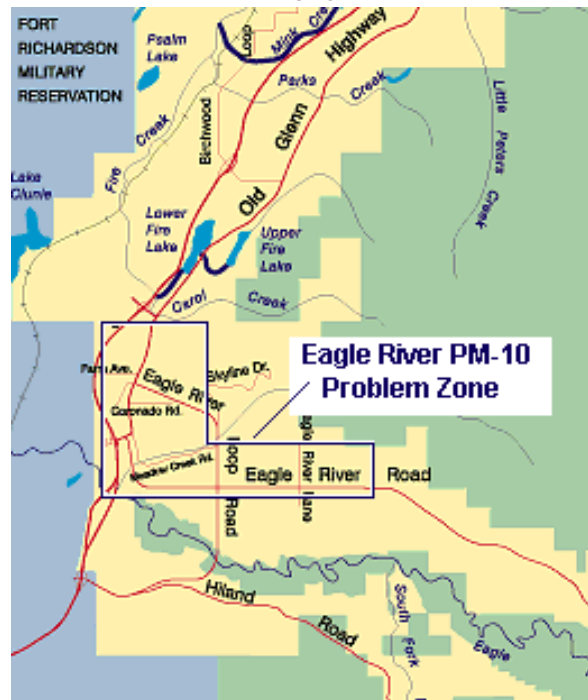
Total vehicle trips in Anchorage are expected to increase by approximately 30 percent during the planning period covered by the MTP. By 2035, approximately 235,000 more motor vehicle trips will be made each weekday compared to those trips in 2010.

Impacts of expected growth in travel activity and the transportation improvements in the MTP on emissions of CO in the Anchorage Bowl were analyzed. The EPA MOVES model was used to estimate CO emissions in the Anchorage Bowl. The MOVES model was used in conjunction with the AMATS Travel Model to estimate motor vehicle CO emissions for analysis years 2015, 2025, and 2035. This analysis shows that CO emissions will remain below the 156.5 ton-per-day budget set in the Anchorage CO Maintenance Plan. Federal regulations for air quality conformity require that projected emissions remain below this budget to help ensure continued compliance with the federal air quality standard for CO. Details of

this analysis can be found in a separate report, Carbon Monoxide and PM-10 Air Quality Conformity Determination for the 2035 AMATS Metropolitan Transportation Plan.

Although Eagle River is still officially considered a non-attainment area (see **Figure 9-3**), the EPA is currently reviewing a PM-10 plan for Eagle River, submitted in 2010, that shows future violations of the federal PM-10 standard are very unlikely even with anticipated growth in the area.

Figure 9-3 Eagle River PM-10 Problem Zone



Although the EPA has not fully completed its review of the plan, it has made a determination that the less rigorous procedures for conformity prescribed for areas with low potential for violating the PM-10 standard (called limited maintenance areas) may be used to evaluate PM-10 conformity for the MTP. This analysis shows that Eagle River meets conformity requirements for limited maintenance areas.

# Appendix



## ABBREVIATIONS, GLOSSARY, AND KNIK ARM CROSSING PROJECT INDEX

### ABBREVIATIONS

|          |   |        |   |
|----------|---|--------|---|
| ADA      | Americans with Disabilities Act                           | FONSI  | Finding of No Significant Impact          |
| AMATS    | Anchorage Metropolitan Area Transportation Solutions      | FRA    | Federal Railroad Administration           |
| APD      | Anchorage Police Department                               | FTA    | Federal Transit Administration            |
| ARDSA    | Anchorage Roads and Drainage Service Area                 | GIS    | geographic information system             |
| ARRC     | Alaska Railroad Corporation                               | GO     | general obligation                        |
| ASD      | Anchorage School District                                 | HB     | House Bill                                |
| BRT      | bus rapid transit   | HOV    | high-occupancy vehicle                    |
| CBD      | Central Business District                                 | HSIP   | Highway Safety Improvement Program        |
| CBERRRSA | Chugiak/Birchwood/Eagle River Rural Roads Service Area    | ISER   | Institute of Social and Economic Research |
| CIP      | Capital Improvement Program                               | ITS    | Intelligent Transportation System         |
| CMAQ     | congestion mitigation and air quality                     | JBER   | Joint Base Elmendorf-Richardson           |
| CO       | carbon monoxide   | KABATA | Knik Arm Bridge and Toll Authority        |
| CPI      | consumer price index                                      | LOS    | level of service                          |
| CSS      | context-sensitive solution                                | LRSA   | limited road service area                 |
| CVISN    | Commercial Vehicle Intelligent System Network             | LRTP   | long-range transportation plan            |
| DHHS     | Department of Health and Human Services                   | Mat-Su | Matanuska-Susitna                         |
| DOLWD    | Alaska Department of Labor and Workforce Development      | MOA    | Municipality of Anchorage                 |
| DOT&PF   | Alaska Department of Transportation and Public Facilities | mph    | miles per hour                            |
| EA       | Environmental Assessment                                  | MPO    | Metropolitan Planning Organization        |
| EFH      | Essential Fish Habitat                                    | MTP    | metropolitan transportation plan          |
| EIS      | Environmental Impact Statement                            | NEPA   | National Environmental Policy Act         |
| EPA      | U.S. Environmental Protection Agency                      | NGO    | non-governmental organization             |
| FHWA     | Federal Highway Administration                            | NHS    | National Highway System                   |
|          |   | NMFS   | National Marine Fisheries Service         |
|          |   | O&M    | operations and maintenance                |
|          |   | OS&HP  | Official Streets and Highways Plan        |

|            |  |       |                              |
|------------|--|-------|------------------------------|
| PC         | Policy Committee   | USACE | U.S. Army Corps of Engineers |
| PM-2.5     | particulate matter less than 2.5 microns in diameter                                     | VHT   | vehicle hours traveled       |
| PM-10      | particulate matter less than 10 microns in diameter                                      | VMT   | vehicle miles traveled       |
| PME        | Project Management and Engineering   |       |                              |
| PPP        | AMATS Public Participation Plan  |       |                              |
| P3         | public-private partnership   |       |                              |
| ROD        | Record of Decision   |       |                              |
| SAFETEA-LU | Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users |       |                              |
| SB         | Senate Bill  |       |                              |
| SHPO       | State Historic Preservation Office   |       |                              |
| SOV        | single-occupancy vehicle   |       |                              |
| STIP       | Statewide Transportation Improvement Program   |       |                              |
| TAC        | Technical Advisory Committee   |       |                              |
| TAC+       | Technical Advisory Committee Plus  |       |                              |
| TAZ        | traffic analysis zone  |       |                              |
| TE         | transportation enhancement   |       |                              |
| TEA-21     | Transportation Equity Act for the 21st Century   |       |                              |
| TDM        | transportation demand management TIP   |       |                              |
|            | Transportation Improvement Program   |       |                              |
| TRAAK      | Trails and Recreation Access for Alaska  |       |                              |
| TSAIA      | Ted Steven Anchorage International Airport   |       |                              |
| TSM        | transportation system management   |       |                              |
| UAA        | University of Alaska Anchorage   |       |                              |
| U-Med      | University-Medical   |       |                              |
| UPWP       | Uniform Planning Work Program  |       |                              |



### GLOSSARY

**Americans with Disabilities Act (ADA):** Federal civil rights legislation for disabled persons passed in 1990; calls on public transit systems to make their services more fully accessible, as well as to underwrite a parallel network of paratransit service.

**Anchorage Metropolitan Area Transportation Solutions (AMATS):** A federally mandated, multi-agency team that works together to plan and fund the transportation system in the Anchorage and Chugiak-Eagle River areas when federal funds are being used. AMATS (formerly known as the Anchorage Metropolitan Area Transportation Study) comprises representatives from a variety of organizations.

**Anchorage Municipal Code (AMC):** The legislative tool to enforce municipal policies. It is divided into 24 chapters, generally referred to as “Titles.” The key transportation-related titles are:

- AMC Title 9 is titled “Traffic Code” and covers what is considered the “traffic” aspects of transportation. Items such as traffic signs and markings, general driving regulations, and parking regulations are addressed.
- AMC Title 21 is titled “Land Use Regulation” and contains transportation requirements pertaining to various land use development issues. Requirements and standards for subdivision streets,

zoning classifications, and changes are covered in Title 21.

- AMC Title 24 is titled “Streets and Rights-of-Way.” Its content includes issues such as construction, snow removal, and landscaping.

**Anchorage Non-motorized Transportation Plan:** A collection of plans prepared by the Municipality of Anchorage addressing planning issues for non-motorized transportation: Areawide Trails Plan, 1997; Anchorage Pedestrian Plan, 2007; and Anchorage Bicycle Plan, 2010.

**Anchorage Roads and Drainage Service Area (ARDSA):** The largest Road Service Area in Anchorage. ARDSA has full maintenance and construction authority for drainage and road facilities in a geographic area that covers the Anchorage Bowl.

**Arterial:** A functional classification of a type of roadway that provides for trips of medium to moderately long length. Intersections are at-grade, and access from adjacent lots is partially controlled. Some access to adjacent major land uses may be permitted. Arterials may be divided two-directional facilities, couplets of undivided one-way roadways or, in some situations, undivided two-way roads. These facilities are often subclassified as “major arterial” and “minor arterial”. (See Major Arterial, Minor Arterial, and Official Streets and Highways Plan.)

**Bus rapid transit:** Bus service that operates vehicles with traffic signal preemption transmitters, electronic fare collection, low floors for quick passenger entry and exit, and other amenities.

**Bypass:** A road designed to go around existing development. It could be classified as a freeway or expressway.

**Capital Improvement Program (CIP):** A municipal document that addresses funding for transportation and public facilities in the Municipality of Anchorage. Most projects funded in the CIP come from local taxes.

**Categorical Exclusion:** A category of actions that do not individually or cumulatively have a significant effect on the human environment. When ability to demonstrate this status is documented, a project requires neither an Environmental Assessment nor an Environmental Impact Statement.

**Clean Air Act (CAA):** Federal legislation that requires each state with areas that have not met federal air quality standards to prepare a State Implementation Plan (SIP). The sweeping 1990 amendments to the CAA established new air quality requirements for the development of metropolitan transportation plans and programs.

**Collector:** A functional classification of a type of roadway that offers a balanced service for both moving traffic and

providing access. Relatively low-speed, short trips are accommodated. A collector collects traffic for local streets and larger properties (and in limited situations, single lots), and channels it to the arterial system. These facilities are further subclassified as “Residential,” “Industrial/Commercial,” and “Neighborhood.”

**Commute:** A repetitive home-to-work or work-to-home trip.

**Commute alternative:** Includes carpooling, van pooling, transit, bicycling, walking, and telecommuting, as well as any alternative work-hours program.

**Comprehensive Plan:** A document that serves as a guideline for community development. It is a policy document that integrates social, economic, cultural, land use, environmental, transportation, and energy concerns. The comprehensive plan identifies the issues, goals, and objectives that provide a framework for community decision-making.

**Congestion Management Program:** A set of potential actions that, if taken, would reduce congestion levels on the overall transportation network within the Municipality of Anchorage. The results of the recommended actions would have the effect of improving traffic circulation, reducing the number and cost of physical improvements to the roadway, and improving air quality.

**Congestion Mitigation and Air Quality (CMAQ):** A program that emphasizes the importance of the link between transpor-

tation and air quality. To that end, CMAQ program funding is applied to transportation projects that reduce vehicle emissions and help improve air quality. Transit and traffic flow improvement projects are included, as are projects such as ride sharing, vehicle emissions inspection and maintenance programs, bicycle and pedestrian improvements, and alternative fuels.

**Design Criteria Manual (DCM):** A municipal document that provides the engineering parameters for drainage, illumination, slope, grade, elevation, and so forth for all municipal and private development projects. A companion document is the Project Management Manual (PMM). The DCM/PMM is the Municipality of Anchorage’s equivalent to the State of Alaska’s Highway Preconstruction Manual.

**Dwelling unit:** A building, or portion of a building, that contains separate living facilities.

**Environmental Assessment (EA):** An environmental impact document prepared in compliance with to the National Environmental Policy Act. When the significance of impacts of a transportation project proposal is uncertain, an EA is prepared to assist in making this determination. If it is found that significant impacts will result, the preparation of an Environmental Impact Statement is required.

**Environmental Impact Statement (EIS):** An environmental impact document pre-

pared in compliance with to the National Environmental Policy Act. An EIS must be prepared if it is determined that a federally sponsored project with federal involvement may have a significant impact.

**Express Bus:** Bus transit service with a limited number of stops, either from a collector area directly to a specific destination or in a particular corridor with stops en route to major transfer points or activity centers.

**Expressway:** The functional classification of a divided highway that is designed primarily for through traffic, with full or partial control of access. Intersections are either at-grade or grade-separated. Expressways move traffic efficiently, but less quickly than freeways, because of at-grade intersections. Expressways do not provide access to adjacent land uses. Expressways are commonly owned and maintained by the State of Alaska, and their construction funded with federal assistance. The Highway Preconstruction Manual of the Alaska Department of Transportation and Public Facilities sets specific guidelines for acceptable design and construction of expressway facilities. International Airport Road, between the international airport and Minnesota Drive is designated as a Class IV Expressway on the Official Streets and Highways Plan.

**Federal Highway Administration (FHWA):** An agency of the U.S. Department of Transportation responsible for funding highways, trails, and ferries.

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FHWA authorizes expenditures from the Highway Trust Fund and sets deadlines for planning documents that the Anchorage Metropolitan Area Transportation Solutions (AMATS) is responsible for meeting.

**Federal Transit Administration (FTA):** An agency of the U.S. Department of Transportation that develops federal policy on public transit issues and allocates capital and operating funds for public transit projects (formerly the Urban Mass Transit Administration).

**Feeder bus:** Local bus transit service that provides passengers with connections to mainline arterial service, an express bus service station, or an express bus stop or terminal.

**Finding of No Significant Impact (FONSI):** The decision document for an Environmental Assessment. If it is determined that there will be no significant impacts from a project, a FONSI is prepared to conclude the process and document the decision. A FONSI is issued when environmental analysis and interagency review during the Environmental Assessment process finds a project to have no significant impacts on the quality of the environment.

**Freeway:** The functional classification of a limited access type of roadway that is intended to provide safe and efficient movement of substantial volumes of traffic at high speeds. Access is rigidly controlled and restricted to grade-separated

intersections (interchanges). Freeways in the Municipality of Anchorage are traditionally owned and maintained by the State of Alaska, and their construction funded with federal assistance. The Highway Preconstruction Manual of the Alaska Department of Transportation and Public Facilities sets specific guidelines for acceptable design and construction of expressway facilities. Seward Highway (Chester Creek to Rabbit Creek Road), Glenn Highway (Bragaw Street to the Mat-Sub-boundary), and Minnesota Drive (International Airport Road to Seward) are designated as Class V Freeways on the Official Streets and Highways Plan.

**Geographic information system (GIS):** GIS is an information system that is designed to work with data referenced by spatial or geographic coordinates. It may be considered a “tool” for analysis and decision making. It may be composed of maps, databases and point information.

**High-occupancy vehicle (HOV) lane:** The technical term for a car pool or commuter lane.

**Household:** All the persons who occupy a housing unit. A housing unit is a house, an apartment, a mobile home, a group of rooms, or a single room that is occupied (or if vacant, is intended for occupancy) as separate living quarters.

**Highway Preconstruction Manual (HPM):** The state manual for design guidance. Highway projects that use federal funding assistance are subject to the devel-

opment process and design standards contained in the latest version of the Highway Preconstruction Manual of the Alaska Department of Transportation and Public Facilities (DOT&PF). The HPM is the state’s equivalent to the municipal Design Criteria Manual. It affects all roadways under DOT&PF’s jurisdiction.

**Inspection and Maintenance Program (I/M Program):** An element of Anchorage’s Air Quality Plan.

**Intelligent Transportation System (ITS):** A system that uses modern electronic, communication and control technologies to provide travelers with better information on traffic condition, provide vehicles with safety equipment, and improve the transportation infrastructure.

**Intermodal:** Between or including more than one means, or mode, of transportation, such as automobile, transit, ship, bicycle, and walking.

**Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA):** Landmark federal legislation (pronounced “ice tea”) signed into law in 1991 and that made broad changes in the way transportation decisions are made. It provided funding authorizations for highways, safety, and mass transportation from the Highway Trust Fund. ISTEA emphasized diversity and balance of modes, as well as the preservation of existing systems before construction of new facilities. ISTEA expired in 1997, but much of its program



structure is carried forward in new federal legislation.

**Land Use Regulation:** Anchorage Municipal Code Title 21. (See Anchorage Municipal Code.)

**Level of service (LOS):** A standard means of measuring traffic congestion by evaluating the capacity of a road with respect to the number of vehicles using the road in a given time frame. LOS is categorized into six levels, A through F, with LOS A representing the best possible condition and F representing the worst.

**Local road:** A functional classification of a type of roadway that provides access to individual homes and other land uses and is discussed in Chapter 1 of the Design Criteria Manual. The required improvements to local roads are established in Anchorage Municipal Code (AMC) Title 21. Improvements to local roads constructed under Road Improvement Districts (RIDs) will also follow requirements as described in AMC Title 21. The Municipal Assembly is responsible for approving RIDs and granting any waivers to the standards.

**Major arterial:** A functional sub-classification of a type of roadway that provides for moderately long (inter-area), through trips between regionally significant traffic generators. Its primary function is traffic movement. A major arterial offers direct access to other arterials and collectors and limited access to adjacent land uses,

particularly major traffic generators. A major arterial may be divided or undivided, a two-directional facilities, or a one-way couplet. Major arterials are designated in the Official Streets and Highways Plan (OS&HP). In the Municipality of Anchorage, these facilities are most often owned and maintained by the Alaska Department of Transportation and Public Facilities, with construction funded by the Federal Highways Administration. (See Arterial and Official Streets and Highways Plan.)

#### **Metropolitan Planning Organization**

**(MPO):** The organizational entity designated by law (23 U.S. Code 134 and Section 8 of the Federal Transit Act) with lead responsibility for developing transportation plans and programs for urbanized areas of 50,000 or more in population. An MPO is established by agreement of the Governor and the units of general-purpose local government that together represents 75 percent of the affected population of an urbanized area. Anchorage Metropolitan Area Transportation Solutions (AMATS) is the MPO for Anchorage.

#### **Metropolitan Transportation Plan (MTP):**

A plan that covers various modes of surface transportation such as automobile and transit. The currently adopted plan identifies the long-range planning goals and addresses the general transportation needs of the community for a 20-year forecast period, through the year 2035.

Conformity to national ambient air quality standards is evaluated. This document also identifies corridor and subarea studies that provide a closer look at specific areas and identify the needs and relationship of that area to the overall transportation network. The MTP is produced by the Anchorage Metropolitan Area Transportation Solutions (AMATS) to fulfill the federal requirements. Recommendations of the MTP and ensuing studies are then used to develop the local Needs List and, subsequently, the AMATS Transportation Improvement Program (TIP).

**Minor arterial:** A functional subclassification of a type of roadway that provides for medium-length (intra-area), urban trips and serves high-intensity commercial and residential generators. Its primary function is traffic movement. A minor arterial also offers direct access to adjacent land uses, other arterials, collectors, and major residential streets. A minor arterial is generally an undivided, two-directional facility. Minor Arterials are designated in the Official Streets and Highways Plan. (See Arterial and Official Streets and Highways Plan.)

**Model:** A computerized set of equations used to forecast traffic volumes and public transit ridership in a future year.

**Multimodal:** Representing more than one mode of transportation, especially within a system or corridor.

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### **Multimodal transportation planning:**

Efforts to plan transportation improvements that consider more than one mode of travel; for example, driving, ridesharing, use of public transit, bicycling, walking, and other modes. A multimodal approach to transportation planning focuses on the most efficient way of getting people or goods from place to place, be it by truck, train, bicycle, automobile, airplane, bus, foot, or even a computer modem.

### **National Ambient Air Quality Standards (NAAQS):**

National standards for the quality of air. Primary standards set limits to protect public health, including the health of “sensitive” populations such as asthmatics, children, and the elderly. Secondary standards set limits to protect public welfare, including protection against decreased visibility, damage to animals, crops, vegetation, and buildings.

### **National Environmental Policy Act of 1969 (NEPA):**

Legislation that established a supplemental mandate for federal agencies to consider the potential environmental consequences of their proposals, document the analysis, and make this information available to the public for comment prior to implementation.

### **National Highway System (NHS):**

A network of primary highways and ferry routes designated by the Federal Highway Administration, U.S. Department of Transportation, considered most impor-

tant to interstate travel, national defense, connection with other modes of transportation, and essential to international commerce. The focus of the NHS is the long-range movement of people, goods, and services. This approximately 160,000 mile network consists of the 42,500 miles of the Interstate System, plus other key roads and arterials throughout the United States. In the Municipality of Anchorage, the programming of NHS project funding is handled by the Alaska Department of Transportation and Public Facilities in consultation with Anchorage Metropolitan Area Transportation Solutions. These principle arterials or connections to major transportation terminals include (1) the Seward Highway from Fifth Avenue to the southern Municipality of Anchorage (MOA) boundary line near Portage, (2) the Glenn Highway (Fifth/Sixth avenues) from L Street east to the MOA boundary near Knik River; (3) Minnesota Drive from Fifth Avenue to its connection with the Seward Highway, (4) Post Access from Fifth Avenue north to Hollywood Drive and the north end of the Port of Anchorage, (5) International Airport Road west of Minnesota Drive, (6) Muldoon Road, (7) Tudor Road, and (8) Boniface Parkway access to Joint Base Elmendorf-Richardson.

**Nonattainment area:** A designation of the U.S. Environmental Protection Agency indicating that a geographic region has not met the National Ambient Air

Quality Standard (NAAQS) for one or more transportation-related pollutants. In Alaska, portions of Anchorage, Fairbanks, and Juneau are so designated.

### **Non-National Highway System (non-NHS):**

The portion of the transportation system outside the National Highway System that includes the remainder of the area roadways. The Anchorage Metropolitan Area Transportation Solutions (AMATS) designates the priorities for the non-NHS, based on a project priority process used in the development of the AMATS Needs List.

### **Official Street and Highway Landscape Plan (OSHLP):**

The plan that provides guidelines for the inclusion of landscaping along primary transportation corridors for both aesthetics and slope stabilization. The Landscape Improvement Study furnishes additional guidance.

### **Official Streets and Highways Plan (OS&HP):**

The plan that identifies the location and functional classification of roadways recommended in the LRTP. The OS&HP is used during land subdivision and development to ensure that right-of-way for planned roads is properly and adequately reserved. Also intended to guide and coordinate high traffic generation development along the appropriate class(es) of roadway.

**Operating revenues:** Monies used to fund general, day-to-day costs of running transportation systems. For transit, costs



include fuel, salaries, and replacement parts; for roads, operating costs involve maintaining pavement, filling potholes, paying worker salaries, and other expenses.

**People Mover Route Restructuring Plan:**

The 2002 Municipality of Anchorage report titled *The People Mover Blueprint: A Plan to Restructure the Anchorage Transit System*. This report, prepared by RLS and Associates, Inc., presents the results of a comprehensive analysis of the People Mover route structure to identify ways to provide more of a customer focus to the bus system. The recommended route structure will increase public transportation ridership because service will be more frequent, routes will be more direct, new routes will be provided, buses will run earlier and later in the day, transfers will be easier and quicker to make, and schedules will be easier to remember.

**Planning:** A phase in transportation system development to determine the likely future transportation needs of an area.

**Planning and Zoning Commission (P&Z):**

An appointed Municipality of Anchorage body that, in one of its functions, serves as the official Citizen Advisory Committee to the Anchorage Metropolitan Area Transportation Solutions (AMATS).

**Policy Committee (PC):** The formal decisionmaking body of Anchorage Metropolitan Area Transportation Solutions (AMATS), which approves final planning and programming documents.

**Project Management Manual (PPM):** The document presenting municipal policy that guides individuals who are responsible for the development and construction of municipal projects. (See Design Criteria Manual.)

**Programming:** A phase in transportation system development when the type and level of resources needed to design and build a project are determined and the scheduling of those resources occur.

**Public Involvement Program (PIP):** A program identifying the processes and techniques required to be proactive in transportation decisionmaking.

**Record of Decision (ROD):** A document issued as the final step in the Environmental Impact Statement process. The ROD identifies the selected alternative, presents the basis for the decision, identifies all the alternatives considered, specifies the “environmentally preferable alternative,” and provides information on the adopted means to avoid, minimize, and compensate for environmental impacts.

**Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003 (SAFETEA):** Federal legislation that carries on much of the program structure begun under the Intermodal Surface Transportation Efficiency Act of 1991. Expected to be re-authorized in 2005, it provides funding authorizations for highways, safety, and mass transportation from the Highway Trust Fund.

**Single-occupancy vehicle (SOV):** A vehicle with one occupant, the driver, who is sometimes referred to as a “drive-alone.”

**State Implementation Plan for Air Quality (SIP):** The document describing the strategies necessary to bring nonattainment areas into conformity with the National Ambient Air Quality Standards. The SIP shows how the State of Alaska will meet air quality standards, as required by the 1977 Clean Air Act Amendments.

**Statewide Transportation Improvement Program (STIP):** A transportation improvement program produced by the Alaska Department of Transportation and Public Facilities (DOT&PF). The Anchorage Metropolitan Area Transportation Solutions (AMATS) holds special status under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) for program development. As an urban area with greater than 200,000 population, the Anchorage urban area falls under the Transportation Management Area (TMA) rules. Under ISTEA, AMATS is empowered to determine its own priority for projects and prepare its own Transportation Improvement Program (TIP) based on funding allocated to AMATS within the STIP. In the other 49 states, TMAs are allocated funds based on a statutory formula. ISTEA contains an exception to this requirement for Alaska, in that the allocation of funds for Alaska TMAs is determined by DOT&PF within the STIP.

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### **Surface Transportation Program (STP):**

A new categorical funding program created with the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). A specific clause found in the ISTEA legislation directs that these funds may be spent on any public road in Alaska, regardless of classification. Of the STP funds, 10 percent must be spent on Transportation Enhancement projects. Funds may be used for a wide variety of purposes, including roadway construction, reconstruction, resurfacing, restoration, and rehabilitation; roadway operational improvement; capital costs for transit projects; highway and transit safety improvements; bicycle and pedestrian facilities; scenic and historical transportation facilities; and preservation of abandoned transportation corridors. The federal funds ratio varies and is either 90.97 percent or 93.4 percent, depending on the specific category of work.

**Technical Advisory Committee (TAC):** A formal body of representatives from various agencies and interests that reviews transportation planning documents and advises the Policy Committee of Anchorage Metropolitan Area Transportation Solutions (AMATS).

**Technical Advisory Committee Plus (TAC+):** An expanded AMATS Technical Advisory Committee that represented diverse community interests and served as the primary mechanism for providing public input into plan development.

**Trails and Recreational Access for Alaska (TRAAK):** A program and component of Governor Knowles' Transportation Initiative (June 1995) established to improve access and recreational opportunities in the state. Administered by the Alaska Department of Transportation and Public Facilities, TRAAK addresses trails, scenic highways, recreational access points, and interpretive facilities. The program is funded primarily with federal dollars from the Surface Transportation Program.

**Transit Facilities Design Guidelines:** The document specifying guidelines and recommended methodology for the location and design of bus stops and other transit facilities within the Municipality of Anchorage. Items addressed include transit vehicle dimensions, location and design of bus pullouts, and other transit amenities.

**Transportation demand management (TDM):** A general term for strategies that result in more efficient use of transportation resources. Representative low-cost ways to reduce demand by automobiles on the transportation system include programs to promote telecommuting, flex time, and ridesharing.

**Transportation Enhancement:** A category of projects defined in the Intermodal Surface Transportation Efficiency Act as involving "provisions of facilities for pedestrians and bicycles; acquisition of scenic easements ... or historic sites; scenic or historic highway programs; land-

scaping and other scenic beautification; historic preservation, rehabilitation and operation of historic highway buildings, structures, or facilities (including railroad facilities); preservation of abandoned railway corridors (including the conversion and use thereof for pedestrian or bicycle trails); control and removal of outdoor advertising, archaeological planning and research; and mitigation of water pollution due to highway runoff." Transportation Enhancement projects have been of particular interest to the general public and users of nontraditional transportation-related facilities.

**Transportation Equity Act for the 21st Century (TEA-21):** The most recent comprehensive federal transportation enabling legislation, enacted on June 9, 1998. This act retains and expands many of the programs created in 1991 under the Intermodal Surface Transportation Efficiency Act (ISTEA). It reauthorizes federal surface transportation programs for 6 years (1998–2003) and significantly increases overall funding for transportation.

**Transportation Improvement Program (TIP):** A 3-year capital program of transportation projects, focused on federal funding for roadway, trails, and transit capital projects for the urbanized area. The TIP covers federal, state, and local funding for roadway, transit, trails, and enhancement projects. The document includes new projects, as well as previously

funded projects that require additional effort.

**Transportation Equity Act: A Legacy for Users of 2005 (SAFETEA-LU):** Legislation reauthorizing the federal highway and transit programs formerly authorized under Transportation Equity Act for the 21st Century (TEA-21).

**Transportation Management Area (TMA):** An area subject to special federal requirements for congestion management systems, project selection, and certification. These special requirements are for urbanized areas having a population of more than 200,000.

**Transportation system management (TSM):** A congestion management approach that focuses on identifying improvements to new and existing facilities of an operational nature. The techniques rely on better management and operation of transportation facilities to improve traffic flow and safety. Examples include traffic signal enhancements and deployment of intelligent transportation system components.

**Urban Design Commission (UDC):** A group whose members review and make recommendations for public facilities such as street and roadway landscape improvement projects. The members provide advice on urban design matters.

**Unified Planning Work Program (UPWP):** Federally required document outlining the activities to be undertaken

in support of federally funded transportation projects.

**U.S. Department of Transportation (USDOT):** The federal cabinet-level agency that is responsible for highways, mass transit, aviation, and ports and implements the nation's overall transportation policy. Headed by the Secretary of Transportation, the USDOT includes the Federal Highway Administration and the Federal Transit Administration, among others.

**U.S. Environmental Protection Agency (EPA):** The federal agency that reviews air quality conformity analysis and advises the Federal Highway Administration and Federal Transit Authority on approval of a conformity finding.

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# Appendix



## ENVIRONMENTAL JUSTICE

### INTRODUCTION

The U.S. Department of Transportation has issued a final order on Environmental Justice. This final order requires that metropolitan planning organizations, like Anchorage Metropolitan Area Transportation Solutions (AMATS), identify and address disproportionately high and adverse public health and environmental effects of transportation policies, programs, and activities on low-income and minority populations. The purpose of this appendix is to conduct such an evaluation of the 2035 Metropolitan Transportation Plan (MTP). The analysis contains two parts (1) analysis of the transportation needs of low-income and minority populations and (2) determination of whether the benefits and burdens of the existing and proposed transportation system investments (contained in the 2035 MTP) are distributed equitably among target (low-income and minority) and non-target population within Anchorage.

### Transportation Needs of Low-Income and Minority Populations

From a review of U.S. Census data and other, locally gathered survey information, it appears that low-income and minority populations are disproportionately dependent on the public transportation

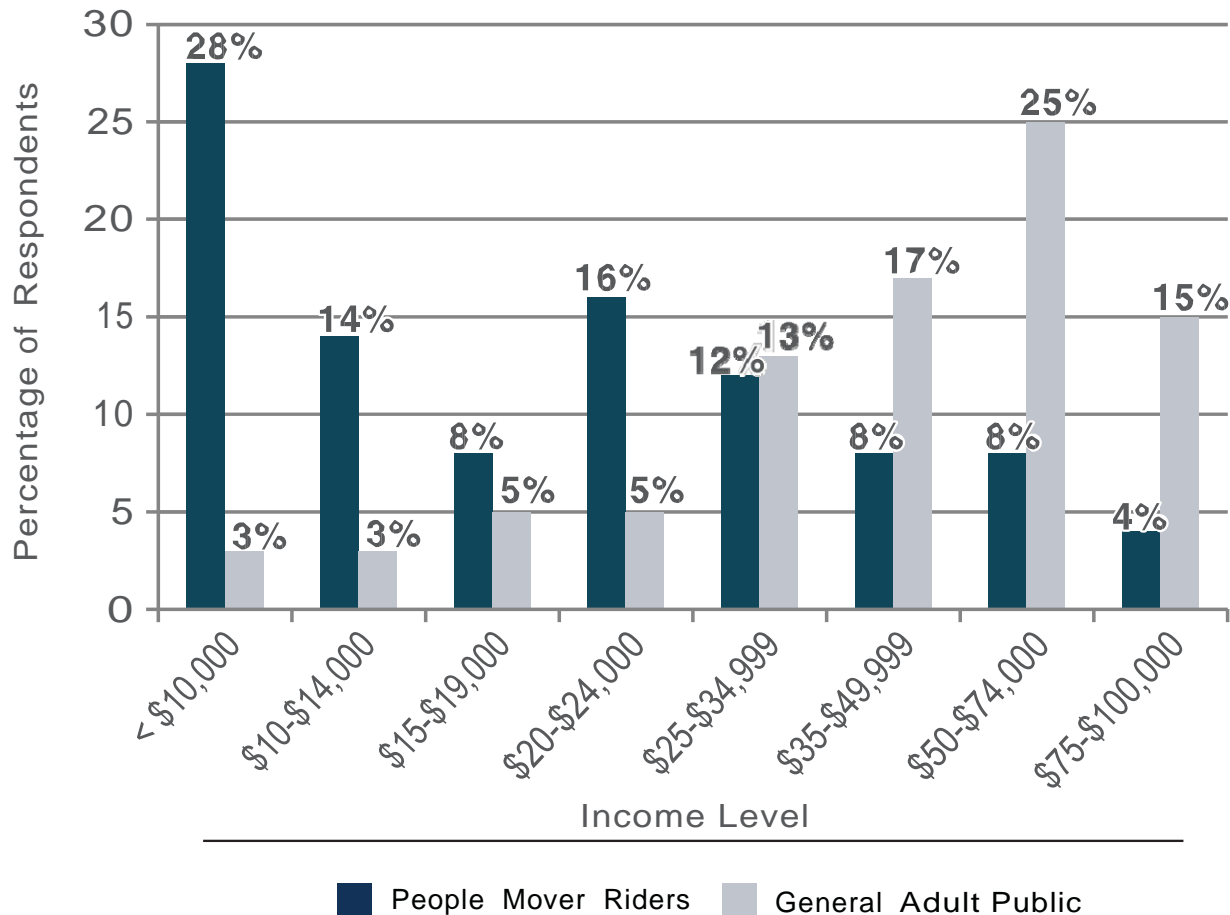
system. According to the 2005 - 2009 American Community Survey, approximately 2.5% of the minority population in the Municipality of Anchorage ride the bus to work compared to only 1% of the non-Minority population. Moreover, the majority of persons using transit to travel to work are low-income with over 62% of the transit riders making less than \$25,000 per year compared to 29% of the general population (2005 - 2009 ACS)

The ACS data is reinforced by past surveys conducted by the MOA Public Transportation Department. According to a 2001 telephone survey, there is a wide difference between the household income of People Mover riders and the general adult public. Although only 3 percent of the general adult public reported income of less than \$10,000, 28 percent of People Mover riders reported incomes at that low level (see Figure B-1). There is also a substantial difference in the ethnic composition of People Mover riders and the general adult public. Only 44 percent of People Mover riders self-identify as "white" while 79 percent of the adult public identifies itself as "white." In addition, 28 percent of the riders surveyed identify themselves as "Alaska Natives" while only 5 percent of the general adult public population identifies itself as



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Figure B-1 Comparison of People Mover Riders' Income to that of General Adult Public in Anchorage Telephone Sample



Sources: People Mover onboard survey, August 2001, and telephone household survey, July 2001

Alaska Native (see Figure B-2). Similarly, all other minority ethnic groups in the general population form a somewhat greater proportion of the People Mover ridership.

The demonstration of a higher dependence on public transportation by low-income and minority populations should not be construed to mean that these groups do not benefit from highway improvements. After all, 68 percent of

workers (16 or older) with incomes less than \$25,000 drive alone to work, compared to 76 percent of all Municipality of Anchorage workers (2005-2009 ACS).

### Benefits and Burdens of MTP Projects

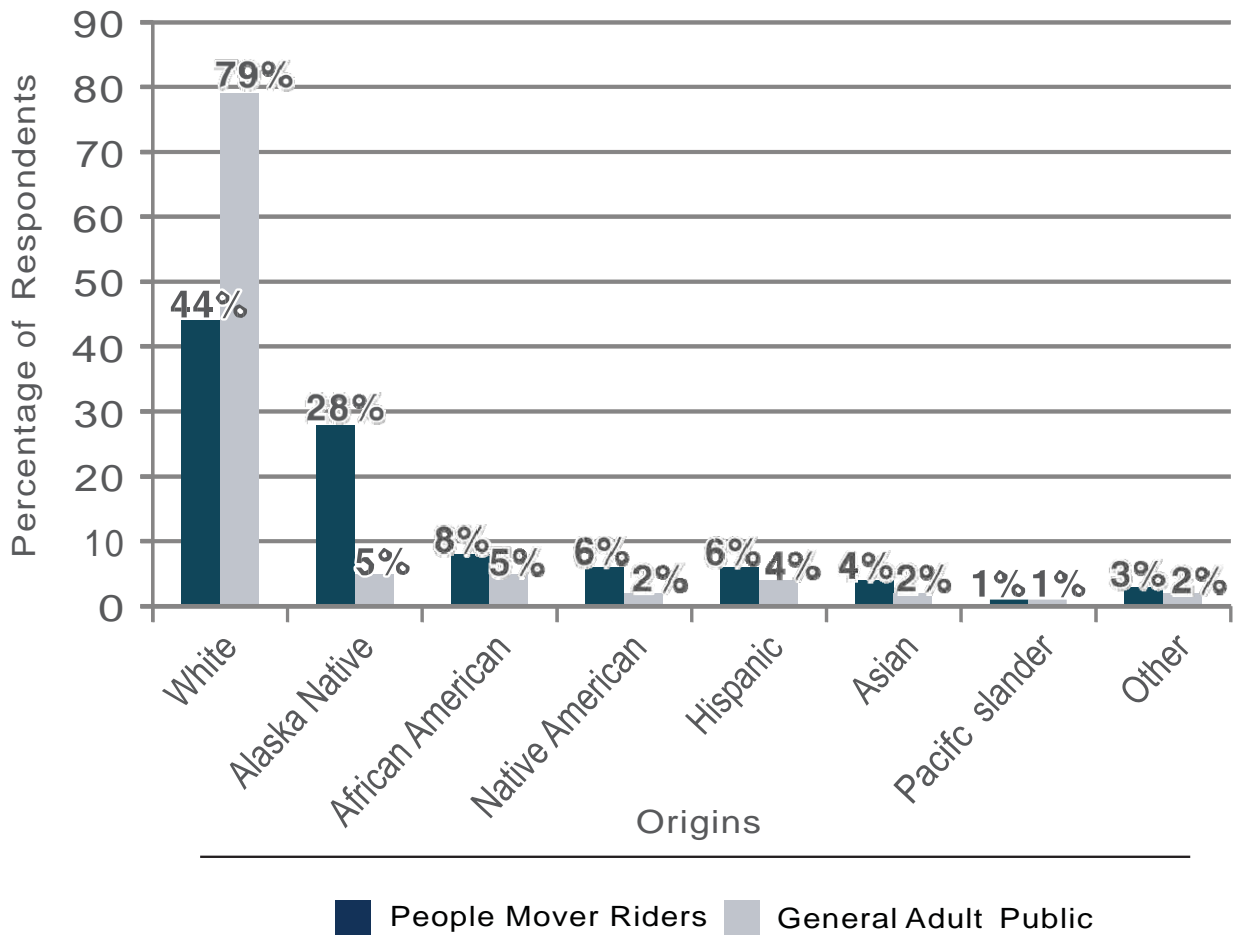
The MTP contains many recommendations for transportation improvements, including highway, transit, pedestrian, bicycle, and transportation demand management strategies. Recommendations that have the greatest impact on low-income and minority populations are typically found in the road and public transportation sections of Chapter 7.

### PUBLIC TRANSPORTATION

The People Mover bus transit system is the primary means of public transportation available to residents of Anchorage. The MTP makes many recommendations to improve the existing bus service, including the following route changes and additions

- The top transit routes that produce the highest ridership—Routes 3, 7, 9, 15, 36, 45—should move to more frequent service, 15-minute intervals in morning and afternoon commute periods and every 30 minutes in other hours.
- Other routes should operate at 30-minute frequency all day.

Figure B-2 Comparison of People Mover Riders' Ethnic Origins to those of General Adult Public in Anchorage Telephone Sample



Sources: People Mover onboard survey, August 2001, and telephone household survey, July 2001

- Express bus commuter service on the Glenn Highway (with its origin in the Matanuska-Susitna Borough) during peak periods should be implemented to provide 30 minute service to ease congestion and deliver riders to

- employment centers in the Anchorage Bowl.
- A new Hillside bus route will connect this part of town to the UMED, Midtown and Downtown Districts.

- A new express bus route will connect south Anchorage to Midtown and Downtown.
- Three new circulator routes will be initiated; Abbott-Elmore, International Airport Road-University of Alaska-Anchorage campus, and Klatt-Southport.
- A new Bus Rapid Transit service will operate between Downtown, Midtown, and the UMED District
- Restoration of local bus service in Chugiak-Eagle River

Other improvements to the bus system are system wide improvements, including

- Traffic signal preemption should be implemented to enable buses to increase speed of travel.
- Monthly passes, electronic ticketing, and easy-to-remember schedules should be part of transit service.
- Traveler information should be improved to make transit use easier, faster, and more attractive.
- Employers should be encouraged to incorporate transit incentive programs to reduce automobile dependency

The analysis of the transportation needs of low-income and minority populations discussed in the previous section indicated that the recommended improvements to the bus system listed above will deliver

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important benefits to low-income and minority populations in Anchorage. Of course, improvements to bus frequency and service must be accessible to the target population to be beneficial.

To determine the accessibility of the proposed transit recommendations (described above) the 2035 transit route service improvements were overlaid on maps of income and minority statistical data (see Figures B-3, B-4, B-5, and B-6). One of the major changes called for an increase in the frequency of service on the six most productive routes from 30 to 15 minutes. As the figures indicate, all six routes are located in areas that predominantly serve low-income and minority populations. Three of these routes (3, 36, and 45) are recommended for service upgrades in the short-term and the other three (7, 8, and 15) are recommended for service upgrades in the long-term.

Most of the areas which are currently underserved by transit are lower density areas which also happen to be higher income and contain fewer minority residents than the rest of the Municipality of Anchorage. As a result, most of the new transit routes recommended in the 2035 MTP update do not serve low-income and minority areas as well as the existing route service improvements. The new services include the Klatt Road/Southport; Abbott Road/Elmore Road; and International Airport Road/University of Alaska-Anchorage campus circulator routes; the south Anchorage

to downtown Express route; the South Anchorage/Hillside express route; and the restored Chugiak-Eagle River local bus service. The core Bus Rapid Transit (BRT) route to be implemented in the long-term is another new service improvement which will connect the downtown with the midtown and UMED employment areas. It is unclear what benefit this new service will have on meeting the transportation needs of low-income and minority populations. Finally, the new Palmer/Wasilla to Anchorage commuter express service is intended to provide a high level of transit service to the growing suburban areas of the Matanuska-Susitna Borough (MSB) in order to serve commuter demand. Previous studies have shown that MSB commuters are generally higher income individuals who can afford to commute from the MSB to Anchorage due to their relatively higher paying jobs. As a result, this new service is not expected to have a significant benefit to low-income and minority populations.

### ROAD IMPROVEMENTS

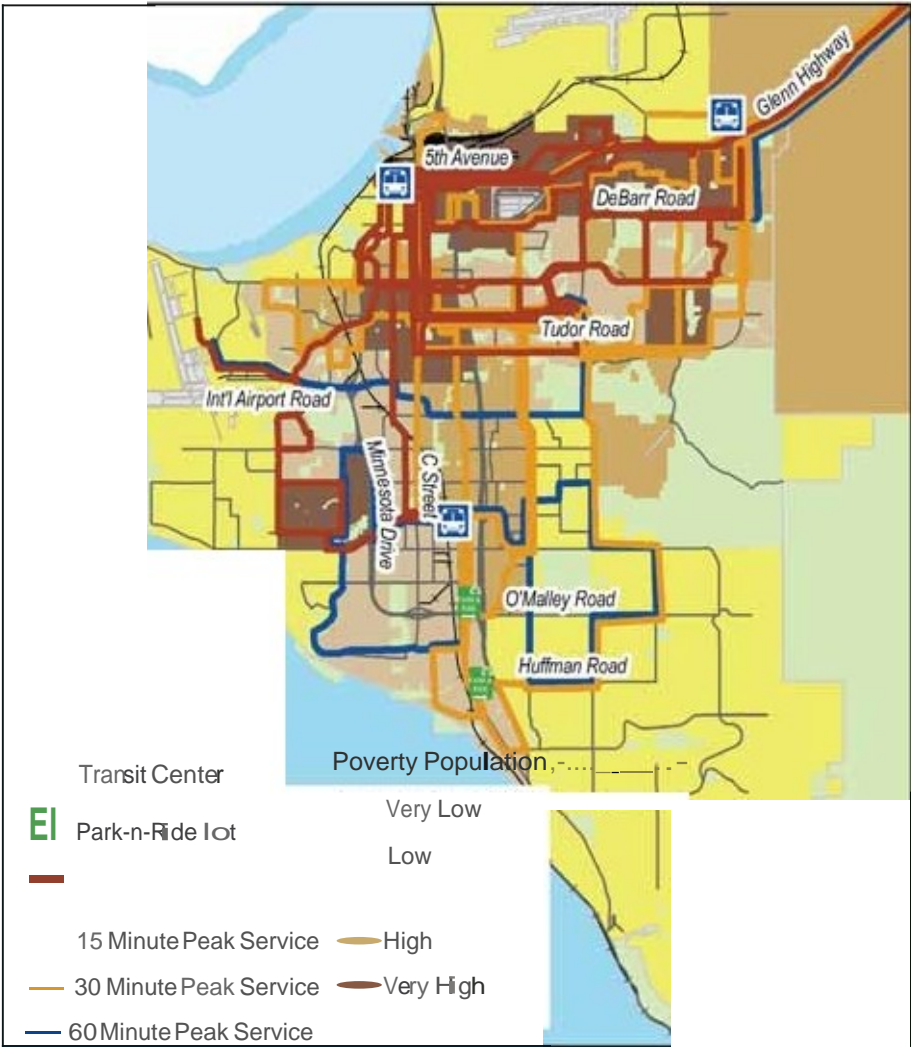
Figures B-7, B-8, B-9, and B-10 show the recommended MTP road projects overlaid on maps showing low-income and minority areas. Most of the road projects identified in the MTP are designed to meet the transportation demand of the fastest growing areas of the region. These include several projects on the Hillside (Abbott Road, Rabbit Creek Road,

O Malley Road, and Huffman Road); all of the Chugiak-Eagle River projects (Eagle River Road, and Hiland Road); as well as improvements along the Glenn Highway. The areas through which these projects traverse are almost exclusively higher income with low number of minority residents.

An exception to the above statement is the Seward Highway to Glenn Highway connection project linking the existing Glenn Highway, where the controlled access ends at Bragaw Street, with the existing Seward Highway, for which controlled access ends at 36th Avenue. Although the exact alignment of the highway-to-highway connection has not been identified, it could very likely follow the general corridor which could bisect the low-income neighborhoods of Mountain View and Fairview.

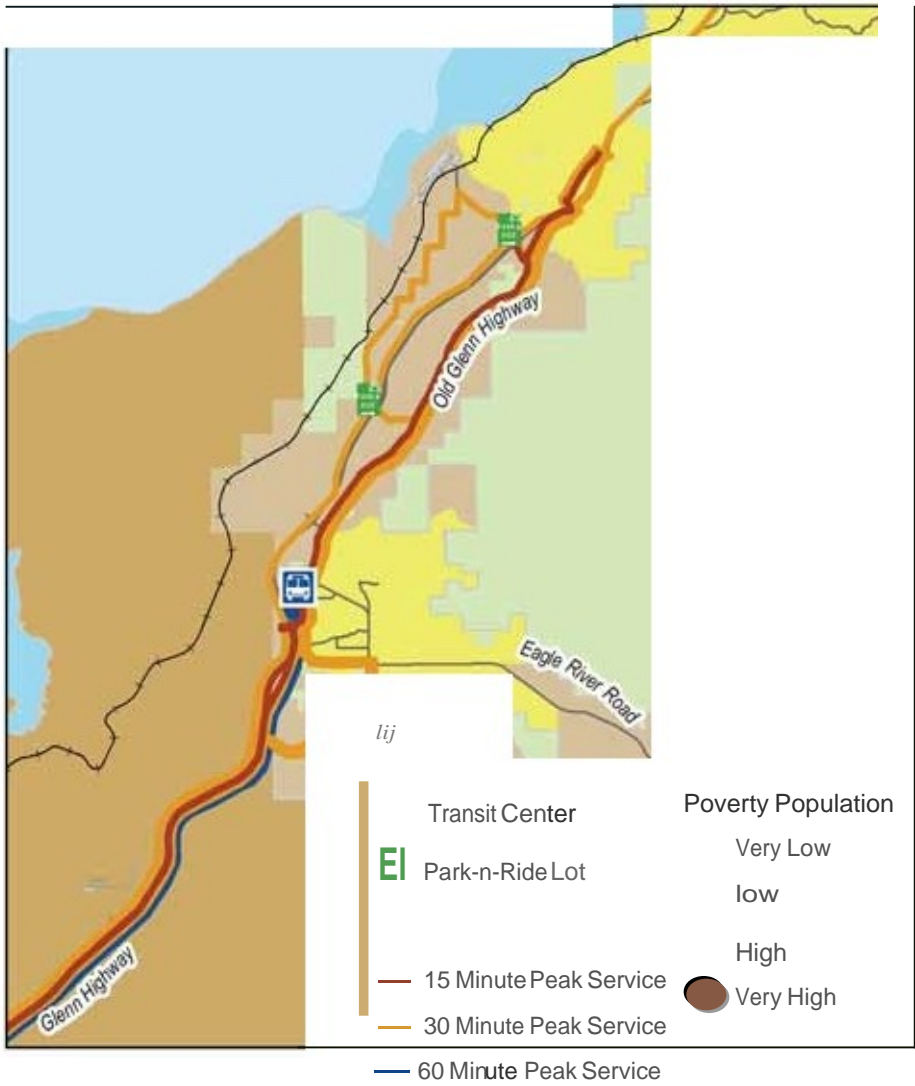
The Seward Highway to Glenn Highway connection would introduce some benefits as well as some potential burdens for the adjacent neighborhoods. The area located between the existing highways currently experiences some of the worst congestion in Anchorage. Higher-than-average traffic crashes occur because of increased congestion. Cut-through traffic trying to avoid the congested bottlenecks is also cited as a major problem in the adjacent neighborhoods. The construction of the Seward Highway to Glenn Highway connection is expected to take a significant amount of traffic (about 100,000 trips per day) off the surround-

Figure B-3 Recommended MTP Public Transportation Projects and Concentrations of Low Income Households -Anchorage Bowl



Source: MOA,  
2005-2009 American Community Survey

Figure B-4 Recommended MTP Public Transportation Projects and Concentrations of Low Income Households- Chugiak-Eagle River

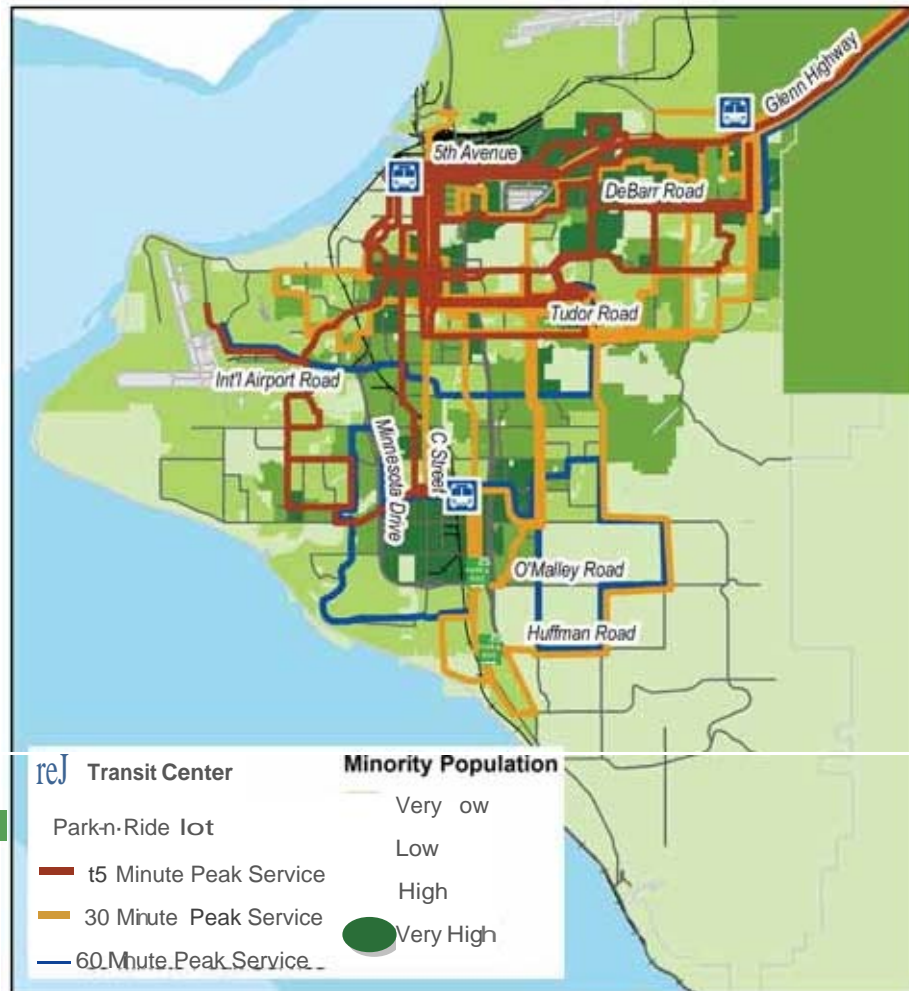


Source: MOA,  
2005-2009 American Community Survey



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Figure B-5 Recommended MTP Public Transportation Projects and Concentrations of Minority Households- Anchorage Bowl



Source: MOA, 2005-2009 American Community Survey

Note: According to the 2010 U.S. Census, the minority population represents 49% of the total Municipality of Anchorage population.

Figure B6 Recommended MTP Public Transportation Projects and Concentrations of Minority Households - Chugiak-Eagle River

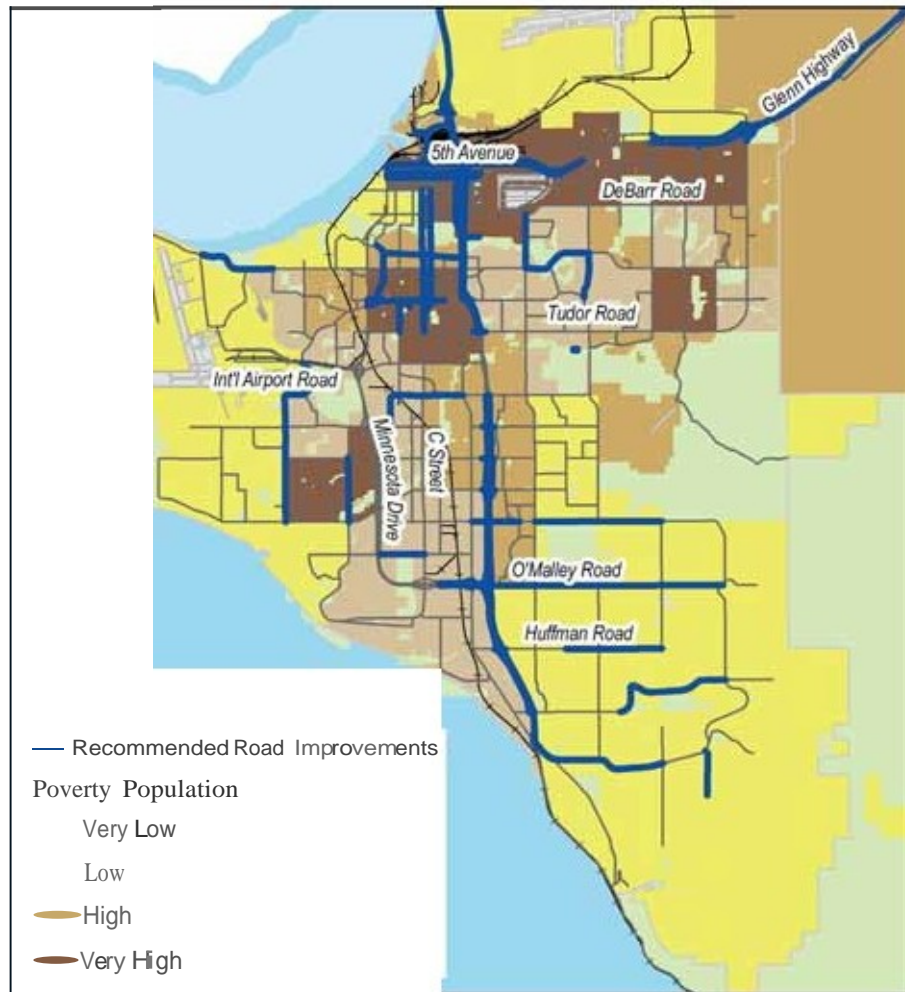


Source: MOA, 2005-2009 American Community Survey

Note: According to the 2010 U.S. Census, the minority population represents 49% of the total Municipality of Anchorage population.

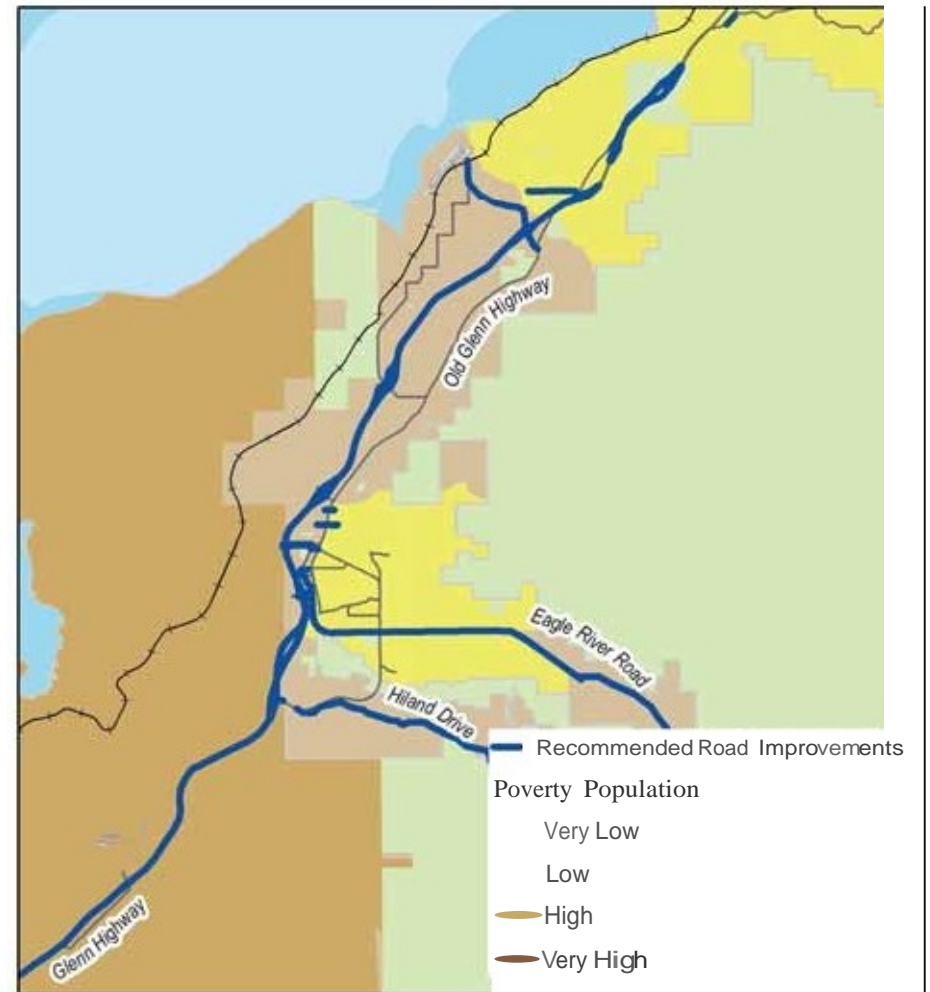


Figure B-7 Recommended MTP Road Projects and Concentrations of Low Income Households - Anchorage Bowl



Source: MOA, 2005-2009 American Community Survey

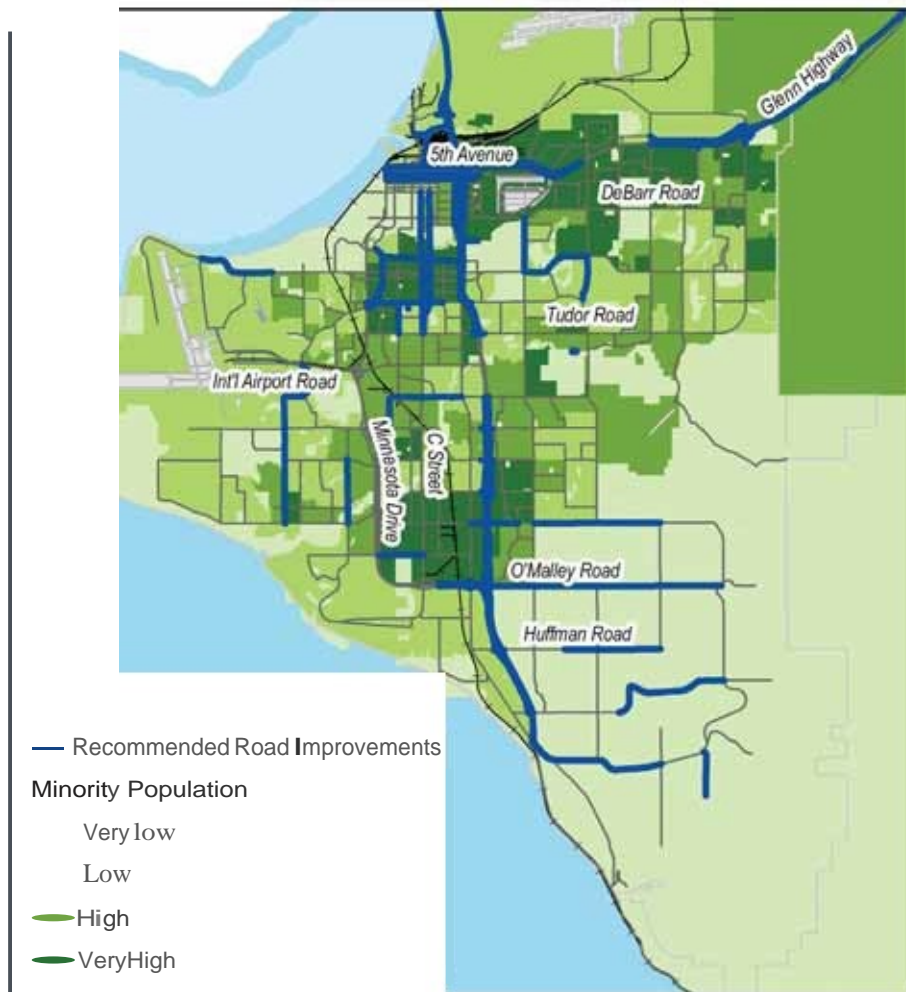
Figure B-8 Recommended MTP Road Projects and Concentrations of Low Income Households- Chugiak-Eagle River



Source: MOA, 2005-2009 American Community Survey

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Figure B-9 Recommended MTP Road Projects and Concentrations of Minority Households- Anchorage Bowl



Source: MOA,  
2005-2009 American Community Survey

Note: According to the 2010 U.S. Census, the minority population represents 49% of the total Municipality of Anchorage population.

Figure B-10 Recommended MTP Road Projects and Concentrations of Minority Households - Chugiak-Eagle River



Source: MOA,  
2005-2009 American Community Survey

Note: According to the 2010 U.S. Census, the minority population represents 49% of the total Municipality of Anchorage population.

ing arterial and collectors streets, reducing crashes and cut-through traffic problems. The MTP includes a study (Project 579) to conduct an investigation and provide recommendation for pedestrian safety improvements within the ngra-Gambell couplet corridor that may be implemented in advance of the Seward Highway to Glenn Highway connection improvements.

A substantial effort has been made to identify strategies to mitigate the adverse impacts of the Seward Highway to Glenn Highway project on adjacent neighborhoods. Strategies include depressing the highway to reduce visual blight and noise impacts; covering the freeway at strategic locations, allowing opportunities to develop parks or open spaces on top of the freeway; and the extensive use of bridges to improve pedestrian access and reconnect neighborhoods currently divided and isolated. Another strategy is to convert streets that are now heavily traveled (such as ngra and Gambell streets) into pedestrian-friendly main streets.

inevitably in a project such as the Seward Highway to Glenn Highway connection, low- to moderate-income housing would be lost. It is the intent of AMATS to actively explore replacing low- and moderate-income housing through the construction of new housing utilizing the federal housing provisions of the Uniform Relocation and Real Property Acquisition Policy Act of 1970.

## Conclusion

On the basis of the analysis described above, AMATS has determined that the recommendations contained in the 2035 MTP do not have a disproportional impact on areas of high concentration of low-income and minority populations. Furthermore, the MTP duly considers the transportation needs of low-income and minority populations and provides many recommendations that will substantially benefit these populations.





# Appendix



## PUBLIC INVOLVEMENT ACTIVITIES

## PUBLIC INVOLVEMENT ACTIVITIES THROUGHOUT MTP DEVELOPMENT

Note: All AMATS meetings are advertised on the Muni Online notices and the Anchorage Daily News two weeks prior to a meeting. In addition, email notices are sent to the AMATS email subscribers. Emails go out the Friday or Monday after a meeting, one week before the meeting, and the Wednesday before the meeting.

| DATE       | ACTIVITY   | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|--|---|--|
| Ongoing    | Online Survey  | To gather input from the community on transportation issues and funding.  | 186 responses to date.   |
| 12/02/2010 | AMATS Technical Advisory Committee Meeting                           | Request Technical Advisory Committee endorse use of Highway Connection Travel Demand Model for use in preparation of MTP update | (See AMATS Meeting minutes)  |
| 12/09/2010 | AMATS staff / Technical Advisory Committee members work session      | MTP Update / parameters for MPT assumptions   | Work session, no meeting notes developed.  |
| 12/14/10   | AMATS working meeting with KABATA consultant Wilbur Smith Associates | Model assumptions for KAC, MTP update   | Work session, no meeting notes developed   |
| 01/13/2011 | AMATS Technical Advisory Committee Meeting                           | MTP Update / Public Involvement Plan / Draft AMATS Resolution   | (See AMATS Meeting minutes)  |
| 01/15/2011 | Conversation with Alaska Homeland Security & Emergency Management    | To understand their mission and solicit input and feedback for the MTP Security Planning Factor discussion.                     | Met with John Madden, Director and George Mayberry, Security Vulnerability Assessment Team Lead. Transportation is one of several key sectors in restoring civil order and the supply chain. Key concepts: Critical Infrastructure vulnerability assessment (done by MOA, SOA); Risk assessment of transportation system, including supply chain (interdependence, weak links, e.g. bridges); Resiliency/Redundancy – how to work around outcomes to get back up running quickly. Mobility is important. |

| DATE       | ACTIVITY   | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|--|--|---|
| 01/19/2011 | Federation of Community Councils                             | Present Fact Sheet and talk about the MTP Plan Development Process.  | Addressed 23 members of area community councils. Several questions were raised. Attendees expressed an interest in status of federal funding.   |
| 01/20/2011 | Planning and Zoning Commission                               | Present Fact Sheet and talk about PZC role as Citizen Advisory Committee for AMATS   | Attendees: Six commission members and 2 staff. They expressed appreciation for combining the Anchorage Bowl and Chugiak Eagle River Transportation Plans. They want to be fully informed and believe transportation infrastructure is vital to support development. Commission wanted to be assured that coordination with utilities was part of the MTP development. They expressed concern about the impact of the Knik Arm Crossing on downtown. Requested a map showing existing MTP recommendations. |
| 01/27/2011 | AMATS Policy Committee meeting                               | MPT Update/ Public Involvement Plan / Draft AMATS Resolution   | (See AMATS Committee meeting minutes)   |
| 01/28/2011 | Conversation with Andrew Niemiec, KABATA, Executive Director | Initial conTechnical Advisory Committee with KABATA  | Discussed the toll. Current assumption is that the toll will be \$5 both ways. There will be a different toll for trucks (per axle) but didn't know what it would be.   |
| 02/02/2011 | AMATS Technical Advisory Committee+ Meeting                  | Plenary meeting: Overview of MTP project; Roles & Responsibilities of Technical Advisory Committee+; Group Work Session (Define MTP Success, Issues); Draft Goals & Objectives | (See AMATS Meeting minutes)   |
| 02/10/2011 | AMATS Technical Advisory Committee Meeting                   | MTP Time Extension   | (See AMATS Meeting minutes)   |
| 02/24/2011 | AMATS Policy Committee Meeting                               | MTP Time Extension   | (See AMATS Meeting minutes)   |
| 03/10/2011 | AMATS Technical Advisory Committee Meeting                   | MTP Time Extension   | (See AMATS Meeting minutes)   |

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| DATE       | ACTIVITY  | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|---|---|---|
| 03/16/2011 | MOA Community Diversity Advisory Commission meeting | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents | Two Commissioners present, Adam Galindo and Bishop Thomas Davis, with Karen Bretz, staff. Reverend (Bishop) Thomas Davis suggested we work with Bridge Builders, their sometime partner. Suggested MTP team talk with Bean's Café, Hispanic Culture Center in Mountain View; Darrel Hess, MOA Homeless Coordinator; give presentations at Community Centers, neighborhood recreation Centers.   |
| 03/23/2011 | MOA Senior Citizens Advisory Commission meeting     | Present Fact Sheet, Comment Form and overview; Solicit participation and feedback from the Commission and their constituents  | Attendees: 10 commissioners, 2 Health and Human Services staff, 2 students present. Transit is big issue for seniors. How will MTP use Census data? Concerns for transit riders at new Neighborhood Health Center at C and International. Identified 15 or so additional transportation issues, many related to AnchorRIDES service. Other issues pertain to night lighting and striping of roadways; seniors' ability to walk where they want to; people & City should be required to clear sidewalks; want more transit convenience; promote public transportation. Educate drivers of the community benefits of transit; senior centers see a lot of unsafe older drivers, needs to be addressed.                                |
| 03/24/2011 | Meeting with Native Village of Eklutna              | Present MTP update info, identify issues and concerns, invite feedback  | Attendees: Dorothy Cook, President; Mark Lamoreaux, Land Manager Discussed existing and future transportation issues and needs with the Native Village of Eklutna (NVE). NVE completed a BIA Road Inventory and a long-range transportation plan. NVE is waiting for approval of its BIA Road Inventory. Additional mileage can be added for tribal members living outside of the NVE (which would include Anchorage). Further development of Powder Ridge Reserve and property toward Eklutna Lake is expected. Mark Lamoreaux will provide a copy of the NVE Long-Range Transportation Plan to AMATS. Other concerns include maintaining and repairing an older fleet of vans, elder care and transportation, and global warming. |



| DATE       | ACTIVITY  | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|---|--|---|
| 03/24/2011 | Joint AMATS Technical Advisory Committee, Technical Advisory Committee+, Policy Committee meeting held in Eagle River | MTP Update /PPT Presentation: Activities since last meeting; Accomplishments since 2007; Goals & Objectives; Population & Employment projections; Base Model assumptions, results & discussion | (See AMATS meeting minutes)   |
| 03/30/2011 | Watershed Commission  | Present MTP update info and identify future appropriate times for feedback   | Attendees: 5 Commissioners, Thede Tobish.<br>Promised to provide draft language (public review draft) of some chapters and maps with projects overlaid on environmental areas |

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| DATE       | ACTIVITY   | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|--|--|--|
| 04/04/2011 | Conversation with Darrel Hess, MOA Homeless Coordinator & Diversity Advisory Commissioner, | Present Fact Sheet, Comment Form and overview; Solicit participation and feedback from them and their constituents | <p>Attendees: Darrel Hess; Corrine O'Neill, Jerry Jenkins, Anchorage. Community Mental Health Services; Trevor Storrs, Exec. Director Alaskan AIDS Assistance Assn &amp; Co-Chair of Coalition on Homelessness</p> <p>Demographics are changing: more immigrants, increasing senior population, more working poor. Alzheimer daycare will double in next 10 years. Affordable housing is big issue; new jobs are mostly service sector, low-paying. Homeless are heavily dependent on transit – but transit is inconvenient; many people would use more if express routes. Need access to work, better choices, better revenue, and better service. Spend too much time on bus, difficult for working single mothers, others. Homeless sometimes need to travel 50 miles to reach all the different agencies they need to visit. Would be great if could have one central location, linked up with transit. MOA DHHS has majority of data on homeless; Darrel can connect us with them. Need the training program to help folks learn how to use the bus, especially assisted living clients; transit has \$25k, need to get it going again. AnchorRIDES works, but is expensive. Free bus passes are great; need system to set some parameters for use. Zoning big issue. Want to increase housing for homeless, would not do that if not on bus line. Need more access to transit. Bus stops are well maintained, but sidewalk winter maintenance to get to bus stop is huge issue. No crosswalk across from Bean's café is a bad situation. Look at distribution of bus stops – why does Karluk have a stop every block, other only every 1/4 mile?</p> |

| DATE       | ACTIVITY                              | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|---------------------------------------|---|---|
| 04/06/2011 | Women's Commission meeting            | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents | Attendees: 5 Commissioners, one staff person<br>Transit has been, and continues to be, a big issue. System not convenient, lacks ease of going from point A to point B; cumbersome, especially for single mothers who have to get from home, school daycare, in a reasonable time. Routes seem to converge at the downtown transit center, forcing transfers. No connectors. Dimond Center has helped some. Schedules are hard to read, unless one is familiar with them; need to plan way ahead. Mothers with young children struggle getting on-board with strollers get yelled at by drivers, other passengers are impatient. More courtesy is extended to disabled, but not to mothers. Need to ask for ramp, but may not be aware – how to get the message to them? Not all speak English. Drivers get yelled at if they do deploy the ramps. Is transit planning just to get the most productive routes, or are we also trying to get vehicles off the roads? |
| 04/07/2011 | MOA Youth Advisory Commission meeting | Present Fact Sheet, Comment Form, and overview. Solicit participation and feedback from the Commission and their constituents | Attendees: Four Commissioners and staff<br>Transit is a big issue, along with pedestrian safety. Need to teach teens across the city to learn to ride the bus; teach teens about protecting themselves from predators or what to do in the event of an accident; reduce the time it takes to get to destinations. Many students need to be able to get to Alaska Youth Court (very effective in keep repeat offenses low). Many students would probably ride the bus if they had more information and training on how to ride the bus. There may be some language issues as well. They expressed interest in, and asked questions about, the new draft goal to consider equity among all users, and to consider Social Justice, and asked about how we know where those affected populations were.  |

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| DATE       | ACTIVITY  | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|---|---|---|
| 04/13/2011 | MOA Health and Human Services Commission  | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents | Attendees: Nine Commissioners. Expressed concern that low-income and minority voices are heard during the planning process. Suggested that we conTechnical Advisory Committeet AFACT (Anchorage Faith and Action Congregations Together) as part of our EJ outreach. Rising gas prices will affect travel and increase demand for bus service. Suggested establishing a trigger to increase transit service based on gas prices. Recommended that we look at the Obesity Plan regarding the need to increase active transportation. Suggested that we conduct an on-bus survey in order to obtain feedback on transit service and reach low-income persons. |
| 04/14/2011 | AMATS Technical Advisory Committee meeting  | MTP Update (Info item): public involvement; schedule; modeling; draft chapters; financial plan; next meeting 4/28/11          | (See AMATS meeting minutes)   |
| 04/21/2011 | Historic preservation   | Present Fact Sheet, Comment Form, and Overview; solicit input and feedback from the Commission.                               | Commissioners recommended that we conTechnical Advisory Committeet the Knik Tribe Cultural Resources specialist and JBER Cultural Resources to inform these groups of the current MTP planning process. Of concern was the potential impact from the construction of the Knik Arm Crossing to the Government Hill and Fairview communities.   |
| 04/28/2011 | Joint AMATS Technical Advisory Committee, Technical Advisory Committee+, Policy Committee | MTP Update: Model Results & Discussion; Performance Measure Work Session  | (See AMATS meeting minutes)   |
| 05/04/2011 | Bridge Builders conversation with Mary-Margaret Stein, Education Outreach Coordinator     | Present Fact Sheet, comment form, and overview; Solicit participation and feedback from their constituents                    | Bridge Builders will serve as the liaison with their federation groups, to attend the meetings with us and introduce us. The groups would probably provide translators for their people who may have comments / questions.  |

| DATE       | ACTIVITY  | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|---|---|---|
| 05/10/2011 | Bridge Builders conversation with Mary-Margaret Stein, Education Outreach Coordinator                                   | To follow up last week's meeting  | Bridge Builders committed to connect with various federations to see when their next meetings are scheduled, and to inquire about getting the MTP update on the agenda.   |
| 05/10/2011 | AFACT (Anchorage Faith and Action Congregations Together) conversation with Angela Liston, Executive Director/Organizer | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents | AFACT is in the process of conducting listening sessions with their member congregations to see what their main issues are. Sometimes transportation does surface.  |
| 05/10/2011 | MOA ADA Commission meeting  | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents | Attendees: Two commissioners and staff.<br>The Commission suggested we reach out to other language groups, specifically Spanish, Tagalog, Korean, Samoan, and Filipino. They'd like to look into buses passes for the homeless. The Commission appreciated the People Mover DVD now in production on how to use the bus.                  |
| 05/19/2011 | MOA Equal Rights Commission meeting   | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents | Attendees: Four commissioners and staff.<br>The commission suggested we make an effort to go to meet with various other language groups at their meetings. It was also suggested that AMATS look into solutions to prevent accidents at intersections for right-turn on red situations, such as bike boxes, and early stop bars for cars. |
| 05/20/2011 | National Defense Transportation Association, North Pole Chapter   | Informal comments regarding MTP update to members at Chapter meeting.   | Provided information on MTP update.   |



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| DATE       | ACTIVITY                                 | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|--|--|---|
| 05/24/2011 | Outreach with Anchorage Literacy Program | Obtain public input from underserved populations and Limited English proficiency population. | Heavy reliance on the public transit and bus system. Would like increased bus service. Most of the students live within the Mountain View, Fairview, and Muldoon areas. One student lived in Eagle River. Winter conditions and cold make it difficult to wait for the bus. Bus passes are provided to students by Catholic Social Services for the first year. Afterwards, students must purchase their own passes. Some families indicated this caused financial stress. Bus riders would like to limit the number of transfers. Once students can afford to purchase cars, they usually will drive. One student felt that another pedestrian bridge was needed near Red Apple and the school as children and individuals dash across traffic without using the cross-walk. Another student noted that the pick up and drop off at Wendler and Lake Otis Elementary caused congestion. This makes it very difficult to get back into traffic on Lake Otis. It was suggested that a traffic signal be installed at that location. Several languages are spoken at this school from Arabic, Somali, Nepali, Swahili, Korean, Thai, Spanish, Hmong, Russian, and various other African dialects and other languages. |

| DATE       | ACTIVITY        | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|-----------------|---|--|
| 06/02/2011 | HAND Commission | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents | Attendees: Seven commissioners and two staff. Commission recognizes the close relationship between transportation and housing. They are concerned with transportation as it relates to workforce housing, and the location of workforce housing in proximity to transportation corridors, public transportation, and jobs. Some commissioners did not like H2H, feeling that it is housing/neighborhood unfriendly, and that the focus should be on “beefing up” arterials to help people move around within the city, rather than helping people get through the city. Also some commissioners spoke against the KAC. Others felt like KAC might help create more work force housing. Recommended we reach out to the major housing providers to reach their constituency and get feedback: AHFC, RuralCap, NeighborWorks, Weidner, Cook Inlet Housing, other large property management companies. Stated that transportation planning is not holistic enough for the commission—needs to look more at cause/effect, is intrinsically linked to housing, needs to help create a more livable community, needs to link to workforce housing. |

## 2035 Metropolitan Transportation Plan

| DATE       | ACTIVITY                      | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|-------------------------------|---|--|
| 06/06/2011 | Outreach to ARC of Anchorage. | Teresa Brewer met with staff from the ARC of Anchorage staff to discuss current and future transportation issues. | <p>The main transportation concerns facing the ARC of Anchorage are access/egress to Arca Drive, trail and public transit improvements for clients who bicycle or walk, and encouraging additional safety measures for this vulnerable population (such as signage, flashing lights, 911 stations). First, the access to Arca Drive across Northern Lights Boulevard proves a challenge. The higher traffic volumes on NLB and the close proximity of the University of Alaska (UAA Drive) pose geometric and queuing difficulties for individuals that attempt to cross north to Arca Drive. Equally, UAA Drive backs up to the east and blocks access to Arca Drive. ARC staff asked what the accident rates were for access to Arca Drive. Also, lighting in this area is poor – they felt additional lighting would help them. According to ARC staff, the glare from oncoming vehicles in the winter is overwhelming for drivers trying to time their “dart” across NLB. ARC serves from 100-300 clients daily; about 30% arrive via private transport (with a salaried caregiver or parent), 50% use Share-A-Ride (the facility has a covered pick-up and drop-off area); 15% use People Mover, and the rest bicycle or walk to the ARC campus. In addition, ARC also has a fleet of 25 vans for transporting clients to work sites (many clients use People Mover to get to work). These vans are configured for eight individuals. Because of the danger of crossing NLB at peak hour; ARC ends events and outings early to avoid the traffic. Staff felt this shortchanged their clients of training, social interaction, and learning opportunities. ARC also has 27 group homes across Anchorage; with two additional group homes being planned for South Anchorage. Clients that live in Eagle River or the Hillside are difficult to reach in winter when the roads are not maintained. Over the past year, they have had requests from 300 more individuals for service. ARC believes that this trend will continue.</p> |

| DATE                  | ACTIVITY                              | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)  |
|-----------------------|---------------------------------------|--|--|
| 06/06/2011<br>(Cont.) | Outreach to ARC of Anchorage (Cont.). | Teresa Brewer met with staff from the ARC of Anchorage staff to discuss current and future transportation issues.<br>(Cont.) | For individuals trying to reach the ARC campus south from NLB to Arca Drive, the ARC staff suggested re-timing the light at Bragaw (no right turn on red – similar to the no right turn on red at Midtown and Wal-Mart); apparently this had been done in the past and it allowed them time to more safely cross NLB. ARC staff also recommended placing signage alerting drivers of turning traffic ahead or flashing lights alerting drivers of their special needs clients, as these individuals do walk or bicycle to the campus. It was felt that a traffic study of Arca Drive is warranted. ARC staff asked if a signal could be placed at Arca Drive. Also, ARC staff wondered if the bus pull out lane could be extended and turned into a turning lane. Most of the ARC staff supported the U-Med Access project as they believed it would relieve the congestion on NLB and allow easier and safe access to Arca Drive. Second, a shelter and bench at the People Mover bus stop on the southern side of NLB would be very helpful for their clients. Increased headways and reduced waiting times also would assist their clients – especially in winter. When berms build up in winter on the sidewalks from snowplowing, this makes it very difficult for their special needs clients to navigate on the sidewalks and through traffic. It was ARC staff observation that traffic will not stop for pedestrians caught in mid-stream crossing NLB. Additional street maintenance is highly desired. Further, the trail leading from Arca Drive to the ARC campus is full of roots and other obstructions making it difficult for special needs clients to traverse. Better maintenance and clearing of brush, bushes on the trail would help. ARC staff believed that this trail is a public easement; however, they were not entirely certain. Equally, this trail in winter is quite dark. Additional lighting would assist not only their clients, but all trail users to remain safe and see potential dangers, such as moose. Because the special needs population can be vulnerable to theft, at Technical Advisory Committee, etc. one staff member recommended 911 stations. |

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| DATE                      | ACTIVITY  | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)                         |
|---------------------------|---|--|---|
| 06/09/2011                | Catholic Social Services meeting with Program Managers                            | Present Fact Sheet, Comment Form, and overview; Solicit participation and feedback from the Commission and their constituents  | Attendees: Program directors (approx.15) and staff. |
| 06/09/2011                | AMATS Technical Advisory Committee+ Meeting                                       | Agenda:<br>1) MTP Update<br>2) Review of Workshop results on Model Deficiencies<br>3) Revenue Projections<br>4) Projects & Funding Needs<br>5) Draft Performance Measures<br>6) Next steps | (See AMATS Meeting minutes)                         |
| 06/09/2011                | AMATS Technical Advisory Committee Meeting  | Regular meeting; MTP update  | (See AMATS Meeting minutes)                         |
| 06/15/2011                | MOA Diversity Advisory Commission meeting   | Follow-up to request formal letter from Commission for their constituents' transportation issues and needs.  | Attendees: Three commissioners and staff.           |
| 07/14/2011                | AMATS Technical Advisory Committee and Technical Advisory Committee Plus meetings |  | (See AMATS Meeting minutes)                         |
| 07/28/2011                | AMATS Policy Committee meeting  |  | (See AMATS Meeting minutes)                         |
| 08/08/2011 and 08/09/2011 | Catholic Social Services HUGS event   | Outreach to low-income persons   |   |



| DATE       | ACTIVITY   | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP) |
|------------|--|---|-----------------------------|
| 08/11/2011 | AMATS Technical Advisory Committee meeting         |   | (See AMATS Meeting minutes) |
| 08/23/2011 | AMATS Technical Advisory Committee meeting (cont.) |   | (See AMATS Meeting minutes) |
| 08/25/2011 | AMATS Policy Committee meeting                     |   | (See AMATS Meeting minutes) |
| 08/29/2011 | AMATS Technical Advisory Committee meeting (cont)  |   | (See AMATS Meeting minutes) |
| 09/15/2011 | AMATS Technical Advisory Committee meeting         |   | (See AMATS Meeting minutes) |
| 09/22/2011 | AMATS Technical Advisory Committee meeting (cont)  |   | (See AMATS Meeting minutes) |
| 09/22/2011 | AMATS Policy Committee meeting                     |   | (See AMATS Meeting minutes) |
| 09/29/2011 | AMATS Policy Committee meeting (cont)              |   | (See AMATS Meeting minutes) |
| 10/01/2011 | Display ad in Anchorage Daily News                 | Announce release of MTP Public Review Draft and notice of scheduled public meetings |                             |
| 10/01/2011 | Email notice sent to AMATS subscribers             | Announce release of MTP Public Review Draft and notice of scheduled public meetings |                             |
| 10/02/2011 | Display ad in Frontiersman                         | Announce release of MTP Public Review Draft and notice of scheduled public meetings |                             |
| 10/04/2011 | ITE Alaska Meeting                                 | Present MTP to transportation engineering professionals                             |                             |

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| DATE       | ACTIVITY                                 | PURPOSE   | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|--|---|--|
| 10/05/2011 | United Way: Presentation to Directors    | Present MTP Public Review Draft and request comments                                | Met with about 12 program managers including Catholic Social Services, Lutheran Social Services, Anchorage Neighborhood Health Center, Community Action for Income United Way, Habitat for Humanity, Anchor Rides, Transportation is a key issue. Need a circulator system around Mid-Town South (south of Tudor) for clients who need to go to about 10 different agencies, including Bureau of Vital Statistics. |
| 10/06/2011 | Display ad in Anchorage Press            | Announce release of MTP Public Review Draft and notice of scheduled public meetings |  |
| 10/06/2011 | Display ad in Alaska Star                | Announce release of MTP Public Review Draft and notice of scheduled public meetings |  |
| 10/09/2011 | Display ad in Alaska Journal of Commerce | Announce release of MTP Public Review Draft and notice of scheduled public meetings |  |

| DATE       | ACTIVITY                       | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)   |
|------------|--------------------------------|--|---|
| 10/11/2011 | MOA ADA Commission             | Present MTP Public Review Draft and request comments                 | <p>Attendees: Four commissioner and staff.</p> <p>The Commission asked that the following action items from the Pedestrian Plan be included in the MTP, to elevate their importance:</p> <ul style="list-style-type: none"> <li>• Policy 1.3 Action Item #3, page 51: Continue to review signal timing to better accommodate a balance of pedestrian crossing needs with accommodations for automobile traffic</li> <li>• Policy 1.5 Action Item #4, page 51: Develop a program to review signs and devices [and vegetation, per the Commission] along highways [streets] and raise them to improve sight distance and pedestrian clearances.</li> <li>• Policy 2.2, page 52: Design streetscapes to be compatible with winter city standards and the ADA and meet all current guidelines. Action item #1: Identify and implement winter city design standards and update the Design Criteria Manual and Title 21 to include elements that encourage four-season, all-weather pedestrian activity, such as heated sidewalks, canopies, overhead shelters, solar exposure, and building height setback.</li> <li>• Policy 1.1 Action Item #1, page 49: Use a range of intersection design options to improve pedestrian safety. These features may include advance pedestrian signal phases, raised refuge island and pork chop islands, restrictive median treatments, painted stop bars placed before the intersection, pedestrian lighting, countdown pedestrian signal timers, detectable push buttons, restricted right turn on red, contracting crosswalk, passive “look” displays on sidewalks, active advance flashers and embedded crosswalk lights.</li> </ul> |
| 10/12/2011 | Planning and Zoning Commission | Present information on the Public Review Draft and answer questions. | Six commissioners were present. Commission expressed concern about the new financing plan for the KAC. The firewall regarding the future use of additional state and federal funding no longer exists.  |

## 2035 Metropolitan Transportation Plan

| DATE       | ACTIVITY   | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|--|--|--|
| 10/12/2011 | Rogers Park Community Council  | Discuss public involvement Schedule and purpose of the Plan  | Discussed opportunities to comment on the Public Review Draft. Community Council members asked questions regarding the status of the H2H project. Concern about how the first phase would work without the second phase being in place. The completion of the first phase (36th Ave. Interchange) would only cause the traffic to back up at the next intersection (Benson). Also asked how the 36th Ave. interchange would affect the amount of traffic on 36th Ave. Concern about the financing of the KAC. Not certain how the request for State availability loan would affect the amount of money the city receives for other projects. |
| 10/12/2011 | Municipal Health and Human Services Commission   | Discuss public involvement schedule and contents of the Plan   | The KAC will probably improve access to hospital services in Anchorage. However, it will also expand the catchment area and put more strain on the existing services. The KAC will also cause the migration of development from Anchorage to the MSB. What implications does this have on Anchorage population and ability to fund services?   |
| 10/13/2011 | Catholic Social Services: Presentation to Program Directors  | Present MTP Public Review Draft and request comments   | Attendees: CSS program directors (about 14) and Director.  |
| 10/13/2011 | AMATS Joint Technical Advisory Committee, Technical Advisory Committee+ and Policy Committee Work Session on MTP, followed by Technical Advisory Committee meeting | During the Technical Advisory Committee meeting, questions raised during the Work Session by Assemblyman Patrick Flynn and others were discussed |  |
| 10/13/2011 | Newspaper insert in Anchorage Press  | Summary of MTP and process   | Circulation: 20,000  |
| 10/13/2011 | Newspaper insert in Alaska Star  | Summary of MTP and process   | Circulation: 6,000   |
| 10/14/2011 | Newspaper insert in Anchorage Daily News   | Summary of MTP and process   | Circulation: 35,950  |

| DATE       | ACTIVITY  | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|---|--|--|
| 10/14/2011 | Newspaper insert in Frontiersman  | Summary of MTP and process   | Circulation: 5,000   |
| 10/16/2011 | Newspaper insert in Alaska Journal of Commerce                                | Summary of MTP and process   | Circulation: 5,200   |
| 10/18/2011 | Display ad in Frontiersman  | Announce public meetings   |  |
| 10/19/2011 | Distribution of Newspaper Inserts translated into Korean, Tagalog and Spanish | Raise awareness of availability of the Public Review Draft MTP   | Wells Fargo Bank, Hispanic Cultural Center, ethnic grocery stores, restaurants, People Mover Buses   |
| 10/19/2011 | Historic Preservation Committee   | MTP Public Involvement Outreach  | The commissioners asked about the uPolicy Committee meeting schedule and requested that they be invited to the environmental agency meeting on Monday, October 24, 2011.   |
| 10/19/2011 | Display ad in Anchorage Daily News  | Announce public meetings   |  |
| 10/20/2011 | Display ad in Anchorage Press   | Announce public meetings   |  |
| 10/21/2011 | United Way Third Friday Services event Mt. View Community Center              | Booth for residents from various parts of the community. Plan to have translated MTP outreach documents available. |  |
| 10/21/2011 | Email notice to AMATS subscribers   | Announce public meetings   |  |
| 10/24/2011 | Agency Focus Group Meeting  | Present MTP Public Review Draft to resource agencies for input   | Team presented a summary of the MTP and also maps of the recommended improvements overlaid on top of environmental resources such as wetlands, habitat, fisheries, etc. Written and oral comments were received. |
| 10/24/2011 | Public Meeting—City Hall, Downtown Anchorage, 12:00 to 4:00 pm                | Present summary of MTP Public Review Draft and solicit feedback  | 34 people signed in. Team presented a summary of the MTP. Written and oral comments were received.   |



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| DATE       | ACTIVITY   | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|--|--|--|
| 10/24/2011 | Public Meeting—Wendler Middle School, Midtown Anchorage, 6:00 to 8:00 pm                             | Present summary of MTP Public Review Draft and solicit feedback                | 48 people signed in. Team presented a summary of the MTP. Written and oral comments were received.   |
| 10/25/2011 | Public Meeting—Eagle River Community Center, Eagle River/Chugiak Downtown Anchorage, 4:00 to 8:00 pm | Present summary of MTP Public Review Draft and solicit feedback                | 15 people signed in. Team presented a summary of the MTP. Written and oral comments were received.   |
| 11/01/2011 | Anchorage Area Legislators briefing  | Briefing on MTP to Anchorage area legislators                                  |  |
| 11/04/2011 | House Transportation, Transportation Infrastructure Fund Subcommittee                                | Brief the committee on the MTP   | Team presented the MTP and highlighted the financial assumptions, which show a shift from federal funding to state funding during the life of the MTP.   |
| 12/09/11   | Meeting with KABATA staff on housing and employment allocation                                       | Review KABATA household and employment data and compare it to AMATS allocation | Compared the KABATA 2035 household and employment allocation with the AMATS allocation. Discussed the shift in households to the KAC travel shed. Discussed the employment numbers at Point McKenzie. Pointed out the differences in the allocation of households and employment in the Anchorage Bowl and CER. Decided that the MSB allocation differences probably had a greater impact on the bridge traffic than the allocation differences on the Anchorage side. |
| 12/15/11   | Meeting with MSB Transportation Planning Staff   | Review KABATA household and employment data and compare it to AMATS allocation | Discussed with the MSB Planning Department the allocation of households and employment by Traffic Analysis Zone comparing the AMATS allocation to the KABATA allocation. Staff present did not recall consultation with KABATA on the allocation. They questioned the amount of employment in Point MacKenzie and expressed an interest in comparing the KABATA allocations to land use allocations underway as part of the Wasilla multi-modal corridor project.      |
| 12/15/11   | CBERRRSA Board   | Update the Board on the MTP progress.  | Staff made presentation to the full CBERRRSA board.  |

| DATE       | ACTIVITY  | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)  |
|------------|---|--|--|
| 12/17/11   | Equal Rights Commission                                   | Provide update on the status of the MTP.   | Staff provided an update on the MTP.   |
| 12/17/11   | AMATS Policy Committee                                    | Update AMATS Policy Committee on plan progress. Request release of MTP Public Hearing Draft. | (See AMATS Meeting minutes)  |
| 12/21/11   | AMATS Policy Committee (continuation of 12/17/11 meeting) | Update AMATS Policy Committee on plan progress. Request release of MTP Public Hearing Draft. | See AMATS Meeting minutes)   |
| 12/21/11   | MSB Transportation Advisory Board                         | Present MTP Public Review Draft and respond to questions.                                    | MSB TAB members (all were present) asked questions regarding Glenn Hwy improvement projects, commuter rail between the Valley and Anchorage, and the Seward Highway/Glenn Highway Connection project. The chairman appreciated the effort to coordinate with the MSB due to the strong linkages between the two communities. |
| 01/09/2012 | Planning & Zoning Commission                              | Public Hearing on Public Hearing Draft document  | (See Planning & Zoning Commission meeting notes)   |
| 01/12/2012 | AMATS Technical Advisory Committee                        | Provide MTP Update   | (See AMATS Meeting Minutes)  |
| 01/26/2012 | AMATS Policy Committee                                    | Provide MTP Update   | (See AMATS Meeting Minutes)  |
| 01/30/2012 | Planning & Zoning Commission                              | Commission action to approve the MTP as an element of the Anchorage Comprehensive Plan       | (See Planning & Zoning Commission meeting notes)   |
| 02/09/2012 | AMATS Technical Advisory Committee                        | Provide MTP Update   | (See AMATS Meeting Minutes)  |
| 02/23/2012 | AMATS Policy Committee                                    | Provide MTP Update   | (See AMATS Meeting Minutes)  |
| 02/28/2012 | Anchorage Assembly  | Agenda item to present Assembly Ordinance pertaining to Knik Arm Crossing                    | (See Municipal Assembly meeting minutes)   |

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| DATE       | ACTIVITY   | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP)                 |
|------------|--|--|---|
| 03/08/2012 | AMATS Technical Advisory Committee   | Provide MTP Update   | (See AMATS Meeting Minutes)                 |
| 03/09/2012 | Municipal Assembly Work session  | Work session to review and answer questions about the Public Hearing Draft document                                      | Work session only, no formal meeting record |
| 03/22/2012 | AMATS Policy Committee   | Provide MTP Update   | (See AMATS Meeting Minutes)                 |
| 04/02/2012 | AMATS Air Quality Committee  | Air Quality Committee met to review and discuss the Air Quality Conformity Determination Report.                         | (See AMATS Meeting Minutes)                 |
| 04/10/2012 | Municipal Assembly Public Hearing and formal action on Public Hearing Draft document | Assembly received public testimony and approved the MTP with recommended changes.  | (See Municipal Assembly meeting minutes)    |
| 04/12/2012 | AMATS Air Quality Committee  | The Air Quality Committee recommended approval of the Air Quality Conformity Determination Report with minor amendments. | (See AMATS Meeting Minutes)                 |
| 4/12/2012  | AMATS Technical Advisory Committee continued to 4/20/2012                            | Review Assembly recommended changes  | (See AMATS Meeting Minutes)                 |

| DATE       | ACTIVITY                           | PURPOSE  | PUBLIC COMMENTS (FOLLOW-UP) |
|------------|------------------------------------|--|-----------------------------|
| 04/20/2012 | AMATS Technical Advisory Committee | Continued review of Assembly recommended changes and prepared recommendation for AMATS Policy Committee approval, The Technical Advisory Committee recommended approval of both the Air Quality Conformity Determination Report and the MTP. | (See AMATS Meeting Minutes) |
| 05/03/2012 | AMATS Policy Committee             | Review and approval of the Air Quality Conformity Determination Report and the MTP.  | (See AMATS Meeting Minutes) |





# Appendix



## PUBLICATIONS AND OTHER SOURCES

## SOURCES PRESENTED BY TITLE

| TITLE  | AUTHOR   | DATE OF PUBLICATION/<br>ADOPTION |
|--|--|----------------------------------|
| <i>Alaska Highway Preconstruction Manual</i>   | State of Alaska, Department of Transportation and Public Facilities  | 2005, with 2011 updates          |
| <i>AMATS Public Participation Plan</i>   | Anchorage Metropolitan Area Transportation Solutions   | Feb. 12, 2009                    |
| <i>Americans with Disabilities Act Paratransit Plan</i>                                | Municipality of Anchorage, Public Transportation Department  | 1992; annual updates 1993–1997   |
| <i>Anchorage 2020: Anchorage Bowl Comprehensive Plan</i>                               | Municipality of Anchorage  | Feb. 20, 2001                    |
| <i>Anchorage Bicycle Plan</i>  | Anchorage Metropolitan Area Transportation Solutions; Municipality of Anchorage, Traffic Department  | March 2010                       |
| <i>Anchorage Bowl 2025 Long-Range Transportation Plan</i>                              | CH2M HILL team; prepared for Alaska Department of Transportation and Public Facilities and Municipality of Anchorage, Anchorage Metropolitan Area Transportation Solutions | Sept. 26, 2005                   |
| <i>Anchorage Bowl 2025 Long-Range Transportation Plan with 2027 Revisions</i>          | CH2M HILL team; prepared for Alaska Department of Transportation and Public Facilities and Municipality of Anchorage, Anchorage Metropolitan Area Transportation Solutions | April 2007                       |
| <i>Anchorage Coastal Management Plan</i>   | Bristol Environmental & Engineering Services Corporation and LaRoche & Associates  | July 2007                        |
| <i>Anchorage Coastal Resource Atlas (maps)</i>   | Municipality of Anchorage, Planning Department, Physical Planning Division   | Various dates                    |
| <i>Anchorage CO Maintenance Plan</i>   | Municipality of Anchorage, Department of Health and Human Services   | July 13, 2011                    |
| <i>Anchorage Commuter Rail Operations Concept, Working Paper 1, Ridership Forecast</i> | Wilbur Smith Associates; prepared for Alaska Railroad Corporation  | 2005                             |
| <i>Anchorage Midtown District Plan, Public Review Draft</i>                            | Municipality of Anchorage; with assistance from HDR Alaska, Inc., Agnew::Beck, Land Design North, Dyett-Bhatia, Development Strategies, and Spring Planning Services       | September 2009                   |

| TITLE  | AUTHOR  | DATE OF PUBLICATION/<br>ADOPTION                  |
|--|---|---|
| <i>Anchorage Pedestrian Plan</i>   | Anchorage Metropolitan Area Transportation Solutions;<br>Municipality of Anchorage, Traffic Department  | October 2007                                      |
| <i>Anchorage Wetlands Management Plan</i>  | Municipality of Anchorage, Department of Community<br>Planning and Development  | April 1996  |
| <i>Areawide Trails Plan</i>  | Municipality of Anchorage, Department of Community<br>Planning and Development  | 1997  |
| <i>Carbon Monoxide and PM-10 Air Quality<br/>Conformity Determination for the 2035<br/>AMATS Metropolitan Transportation Plan</i>              | Municipality of Anchorage, Community Development<br>Department, Transportation Planning Section, and Department<br>of Health and Human Services,<br>Air Quality Section | May 3, 2012                                       |
| <i>Chugiak-Eagle River 2027 Long-Range<br/>Transportation Plan</i>   | Municipality of Anchorage, Traffic Department, Transportation<br>Planning Division; in cooperation with Alaska Department of<br>Transportation and Public Facilities    | June 14, 2007                                     |
| <i>Chugiak-Eagle River Comprehensive Plan</i>  | Municipality of Anchorage   | 1993  |
| <i>Chugiak-Eagle River Comprehensive Plan<br/>Update</i>   | Municipality of Anchorage, Planning Department, Physical<br>Planning Division   | December 2006                                     |
| <i>Design Criteria Manual</i>  | Municipality of Anchorage, Project Management & Engineering<br>Department   | January 2007                                      |
| <i>Destination Downtown: Anchorage<br/>Downtown Comprehensive Plan</i>   | Municipality of Anchorage, Planning Department,   | Dec. 11, 2007                                     |
| <i>Eagle River Central Business District and<br/>Residential Core Circulation Study</i>  | Municipality of Anchorage   | 2011  |
| <i>East Anchorage District Plan</i>  | Municipality of Anchorage   | in planning stages                                |
| <i>Economic and Demographic Projections for<br/>Alaska and Greater Anchorage 2010–2035</i>   | University of Alaska Anchorage, Institute for Social and<br>Economic Research   | December 2009                                     |
| “Environmental Forces Associated with<br>Adults Participation in Physical Activity: A<br>Review,” American Journal of Preventative<br>Medicine | Nancy Humpel, Neville Owen, Eva Leslie  | April 2002<br>(Vol. 22, No. 3, pages 188-<br>199) |
| <i>Government Hill Neighborhood Plan</i>   | Municipality of Anchorage   | in planning stages                                |
| <i>HCM2010: Highway Capacity Manual</i>  | Transportation Research Board, National Research Council  | 2010  |

## 2035 Metropolitan Transportation Plan

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|--|--|--|
| <i>Hillside District Plan</i>  | Municipality of Anchorage, with assistance from MWH; Agnew: : Beck Consulting, LLC; HDR Alaska, Inc.; Larsen Consulting Group, LLC; and Blue Skies Solutions | April 13, 2010                             |
| <i>Hillside Subarea Transportation Study</i>   | USKH; prepared for Municipality of Anchorage, Traffic Department   | October 2006                               |
| <i>Human Services Coordination Transportation Plan, Phase 1, 2007-2008</i>                       | Municipality of Anchorage, Public Transportation Department  | May 10, 2007                               |
| <i>Knik Arm Crossing Final Environmental Impact Statement and Final Section 4(f) Evaluation</i>  | Knik Arm Bridge and Toll Authority and Alaska Department of Transportation & Public Facilities; prepared for Federal Highway Administration                  | Dec. 18, 2007                              |
| <i>Official Streets and Highways Plan</i>  | Municipality of Anchorage, Traffic Department, Transportation Planning Division  | 1996, with amendments through October 2005 |
| <i>Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth</i>                        | Reid Ewing   | 1999                                       |
| <i>The People Mover Blueprint: A Plan to Restructure the Anchorage Transit System</i>            | RLS & Associates, Inc.; prepared for Municipality of Anchorage, Public Transportation Department   | 2001                                       |
| <i>People Mover Route Restructure Plan Update</i>  | RLS & Associates, Inc.   | October 2009                               |
| <i>Public Transportation and Land Use Policy</i>   | Boris S. Pushkarev and Jeffrey M. Zupan; published by Indiana University Press (Bloomington)   | 1977                                       |
| <i>South Central Rail Network Commuter Study and Operation Plan</i>                              | Wilbur Smith Associates, Harding ESE, Debbie Bloom Consulting, Nancy Whelan Consulting, and Craciun Research Group; prepared for Alaska Railroad Corporation | Jan. 15, 2002, updated 2005                |
| <i>State Implementation Plan</i>   | State of Alaska, Department of Environmental Conservation  | 2011                                       |
| <i>Status of the System, 2010</i>  | Anchorage Metropolitan Area Transportation Solutions   | July 2011                                  |
| <i>A Strategy for Developing Context Sensitive Transportation Projects</i>                       | Brooks and Associates  | 2008                                       |
| <i>Ted Stevens Anchorage International Airport 2008 Master Plan Study Report, Draft</i>          | WH Pacific, HNTB Corporation, and DOWL Engineers   | January 2009                               |
| <i>Traffic Calming Protocol Manual</i>   | DOWL Engineers; prepared for Municipality of Anchorage, Traffic Department   | March 2001                                 |
| <i>Transit-oriented Development in the United States: Experiences, Challenges, and Prospects</i> | R. Cervero, S. Murphy, C. Ferrell, N. Goguts, and Y.H. Tsai; prepared for Transportation Research Board, TCRP Report 102                                     | 2004                                       |

| TITLE   | AUTHOR   | DATE OF PUBLICATION/<br>ADOPTION |
|---|--|----------------------------------|
| <i>2010 Urban Mobility Report</i>                         | D.L. Schrank, T.J. Lomax, S.M. Turner; published by the Texas Transportation Institute | December 2010                    |
| <i>West Anchorage District Plan, Public Hearing Draft</i> | URS Corporation; prepared for Municipality of Anchorage                                | July 2011                        |

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| Anchorage Metropolitan Area Transportation Solutions   | Feb. 12, 2009                    | <i>AMATS Public Participation Plan</i>   |
| Anchorage Metropolitan Area Transportation Solutions   | July 2011                        | <i>Status of the System, 2010</i>  |
| Anchorage Metropolitan Area Transportation Solutions; Municipality of Anchorage, Traffic Department  | October 2007                     | <i>Anchorage Pedestrian Plan</i>   |
| Anchorage Metropolitan Area Transportation Solutions; Municipality of Anchorage, Traffic Department  | March 2010                       | <i>Anchorage Bicycle Plan</i>  |
| Bristol Environmental & Engineering Services Corporation and LaRoche & Associates  | July 2007                        | <i>Anchorage Coastal Management Plan</i>   |
| Brooks and Associates  | 2008                             | <i>A Strategy for Developing Context Sensitive Transportation Projects</i>                       |
| Cervero, R.; S. Murphy, C. Ferrell, N. Goguts, and Y.H. Tsai; prepared for Transportation Research Board, TCRP Report 102  | 2004                             | <i>Transit-oriented Development in the United States: Experiences, Challenges, and Prospects</i> |
| CH2M HILL team; prepared for Alaska Department of Transportation and Public Facilities and Municipality of Anchorage, Anchorage Metropolitan Area Transportation Solutions | Sept. 26, 2005                   | <i>Anchorage Bowl 2025 Long-Range Transportation Plan</i>  |
| CH2M HILL team; prepared for Alaska Department of Transportation and Public Facilities and Municipality of Anchorage, Anchorage Metropolitan Area Transportation Solutions | April 2007                       | <i>Anchorage Bowl 2025 Long-Range Transportation Plan with 2027 Revisions</i>                    |
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| Ewing, Reid  | 1999  | <i>Pedestrian- and Transit-Friendly Design: A Primer for Smart Growth</i>   |
| Humpel, Nancy; Neville Owen; Eva Leslie  | April 2002<br>(Vol. 22, No. 3, pages 188-199) | “Environmental Forces Associated with Adults Participation in Physical Activity: A Review,” American Journal of Preventative Medicine |
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| Municipality of Anchorage, Planning Department, Physical Planning Division   | December 2006                                 | <i>Chugiak-Eagle River Comprehensive Plan Update</i>  |
| Municipality of Anchorage, Project Management & Engineering Department   | January 2007                                  | <i>Design Criteria Manual</i>   |
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| Municipality of Anchorage; with assistance from HDR Alaska, Inc., Agnew::Beck, Land Design North, Dyett-Bhatia, Development Strategies, and Spring Planning Services | September 2009               | <i>Anchorage Midtown District Plan, Public Review Draft</i>   |
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| Municipality of Anchorage, Community Development Department, Transportation Planning Section, and Department of Health and Human Services, Air Quality Section       | May 3, 2012                  | <i>Municipality of Anchorage, Community Development Department, Transportation Planning Section, and Department of Health and Human Services, Air Quality Section</i> |
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