

CHAPTER 8. Plan Recommendations

Introduction

Informed decisions about transportation issues and about where and when to allocate 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 Anchorage travel model.

Recognizing the broad range of transportation modes used and the dispersed travel patterns, LRTP investments need to be focused on these priorities:

- Better managing the transportation system
- Deploying new technologies for traffic signal control
- Increasing road capacity
- Expanding transit service and infrastructure
- Providing improved and expanded pedestrian and bicycle facilities
- Facilitating efficient freight handling and movement

- Improving traveler choices and options
- Better integrating transportation facilities and services with community planning and design

Analyses identified the following transportation-related findings about current and future conditions:

- Travel from Chugiak-Eagle River and the Mat-Su Borough is rapidly increasing.
- Travel patterns are broadly dispersed, with at least six major activity centers in Anchorage that attract large numbers of trips. Contrary to common belief, the downtown Central Business District is not the destination of most trips within the Anchorage Bowl.
- 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.

The 20-year LRTP will guide \$3 billion in transportation investments for Anchorage.

- Improving transit is important to mobility. Transit provides options for all users of the transportation system, relieves congestion along freeways and arterials, and reinforces Anchorage 2020 comprehensive plan goals and objectives. Widely dispersed activity centers and travel patterns and the relatively low residential densities present challenges for providing effective transit. Reducing door-to-door travel times by transit is key to attracting new riders.
 - Expanding and maintaining the sidewalk and multi-use trail network are important to the community. These improvements encourage walking and provide better transit access. The community highly values open space and the existing Anchorage trail system. Filling in gaps will create better continuity, improve safety for pedestrians and bicyclists, and create a more integrated multimodal system.
 - Attaining Anchorage 2020 visions and goals will involve more effective system management, availability of and access to alternative travel options, freight network improvements, traveler behavior shifts, and reduced automobile dependence

A Call to Action—Managing Systems More Effectively

The cumulative investment in the existing transportation system is very large. The first priority is to obtain the best possible performance from the existing system. Continuous refinements must include the following:

- Paying attention to traffic signal timing
- Running transit as efficiently as possible
- Implementing a corridor management plan for Tudor Road
- Using technology to help manage and operate the transportation systems
- Responding quickly to resolve “pinch points” or 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 daytime hours, weekdays versus weekends, and seasonally—can reduce traveler delay by upwards of a million traveler hours annually.

Complete signal timing reviews and updates need to be scheduled at least every 4 years.

More than 250 intersections have traffic signals in Anchorage. Getting the timing right is critical for minimizing delay, improving safety, and protecting pedestrians. The MOA is currently undertaking a systemwide signal timing update, the first in 10 years. Complete signal timing reviews and updates need to be done at least every 4 years.

Transit System Operation

The MOA now budgets more than \$15 million per year to operate People Mover, AnchorRIDES, and Share-A-Ride programs. The cost is partially offset by operation revenues from passenger fares and advertising. People Mover is implementing its route restructuring plan (documented in *The People Mover Blueprint: A Plan to Restructure the Anchorage Transit System*, 2002, by RLS and Associates, Inc., 2002; discussed in Chapter 7) to realign routes, coordinate bus schedules, increase service frequencies, and improve service availability and accessibility. These combined efforts represent the first significant service improvements in a decade.

Interim results show significant progress. In 2004, People Mover ridership was the fifth highest in MOA history. Patronage in the first quarter of 2005 was 23 percent higher than in 2002, before restructuring began. The number of riders per bus-hour of transit service is also on the rise, indicating that service productivity is increasing. But the restructuring plan is only partially complete; more improvements remain to be implemented.

Complete 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

Additional buses will be required to provide 30-minute service frequency on all routes. The bus fleet will need to be expanded by 12 vehicles.

Also, about 40 percent of the existing People Mover fleet is due for replacement by 2007-2008. The fleet updating expenditure of \$9 million will be supported by 80 percent federal capital grant funding, but the MOA will need to provide \$1.8 million in matching funds. New buses and marketing promotions will further reinforce gains in riders.

Transit Funding

Funding is the critical issue for People Mover within the next 2 to 3 years. 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 service operation at that level, and secure funding for new buses.

Tudor Road Corridor Management

Tudor Road from Minnesota Drive to Muldoon Road is often congested with heavy traffic. Future traffic projections show the congestion will increase. Several intersection and other improvement projects are currently under way or planned along Tudor Road. The next step is a corridor-wide traffic management program that builds on current improvement efforts and provides a cohesive system management approach for the entire route. The plan will apply advanced traffic management tools and techniques to improve traffic operations, safety, and flow on the corridor.

The following activities should be included in the Tudor Road Corridor Management Plan:

- Update traffic signal timing and coordination along the corridor
- Upgrade signal controller hardware and software with modern technology, including

automated data collection, communications, and surveillance

- Reconfigure intersection lane layouts to eliminate split-phase signal arrangements wherever possible
- Implement access management to consolidate existing access points where possible, limit future driveway access, and apply traffic-calming initiatives
- Implement a positive barrier or raised median along the length of the corridor to control turning locations and U-turns
- Develop alternative circulation and rear-access arrangements for abutting properties north and south of Tudor Road
- Remove or limit access to Tudor Road from some side streets and connect other side streets to one another
- Locate bus stops or turnout bays on the far sides of intersections (past the traffic signals) wherever possible
- Install pedestrian signals with count-down crossing displays at critical locations and provide pedestrian refuge space in the median area as appropriate

Identify staffing and resources required for technical support, monitoring, maintenance, enforcement, and incident management for the complete corridor

Signal System Technology Upgrade

The importance of an efficient arterial street network operation is evident from that fact that about two-thirds of congested hours of travel in Anchorage occur on arterial and collector streets. Traffic signals are the principal instrument for managing street 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 Intelligent Transportation System (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 transit buses needs to be part of the upgrade package.

The benefits of this technology upgrade investment will include significant staffing productivity gains and reduction in travel delay. These benefits are realized through automated data acquisition for timely decisions, real-time capability to monitor traffic operations, quickly adapting signal-control strategies to traffic conditions, and adjusting timing patterns by time of day, daily cycles, seasonal changes, emergencies, and special events.

Fixing Pinch Points

Transportation network performance is often hindered by critical bottlenecks that constrict travel flow and create network bottlenecks. Transitions from freeways to arterials and highly congested intersections are good examples of pinch points. A continuing Pinch Point Fixes program is recommended to resolve trouble spots as quickly as possible. Suggested strategies to fix, or at least mitigate, these pinch points 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.

LRTP Elements and Projects

Brief overviews for each transportation element in the LRTP are presented in the following pages.

Roads

The roadway network is the backbone of the MOA transportation system. Projected 2025 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 freeway 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. If collectors need upgrades to meet current standards, but do not add new capacity, safety, or connectivity, they are not included in the recommended LRTP project list. 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 20 years.)

Projects already funded and still under development are also included. Most, but not all, of the projects have been included in prior plans; the detailed analyses for the LRTP has ratified their merit. Some projects proposed in previous planning documents have been eliminated as a result of this current and more exhaustive analysis, and others have been made unnecessary by inclusion of new projects.

Road projects are summarized in Figure 8-1 by geographic areas within the Anchorage Bowl. Some projects are for infrastructure preservation and rehabilitation; others add pedestrian, bicycle, and related enhancements (as components of projects that are building or rebuilding adjacent roads); and

some add capacity to critical segments. Table 8-1 (at the end of this chapter) provides a detailed list of recommended road projects.

Road Improvement Highlights

The recommended road improvements program accomplishes the following:

- Completes missing segments to reduce the need to expand other streets
- Interconnects the upgraded Seward Highway with Minnesota Drive and adds three new east-west street connections across the Seward Highway to provide better circulation
- Connects the Glenn and Seward highways to provide needed capacity and more efficient freight distribution
- Adds improvements to the Seward Highway south of Rabbit Creek to the AMATS boundary to address safety issues and provide bicycle facilities
- Improves 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
- Expands access to Ted Stevens Anchorage International Airport (TSAIA) with Minnesota Drive and International Airport Road projects
- Eases the Glenn Highway corridor commute

Two especially important projects are the Glenn-Seward highways connection and the Glenn Highway corridor project to the north.

Figure 8-1. Recommended Road Projects

Northwest Anchorage

- Spenard Road and Fireweed Lane projects help create neighborhood friendly commercial areas.
- Enhancements to freight routes in the Ship Creek area improve freight movement access to and from the Port of Anchorage.
- Minnesota Drive and Tudor Road interchange and Minnesota improvements lessen congestion in these key corridors and transition freeway roadway to major arterial roadways.

Northeast Anchorage

- The Glenn-Seward highway connection effectively carries traffic from the Glenn Highway to Downtown, Midtown, and University-Medical District area, removing traffic from local streets.
- Lake Otis Parkway improvements and connection to the Glenn Highway relieve congestion, improve pedestrian and transit movement, and safely connect pedestrians to parks, trails, and retail areas.
- Tudor Road Congestion Management Plan reduces traffic friction and provides safer pedestrian movement and better transit operations.
- Muldoon Road landscaping and pedestrian improvements enhance travel alternatives and transit use, as well as opportunities for beautification.

Southwest Anchorage

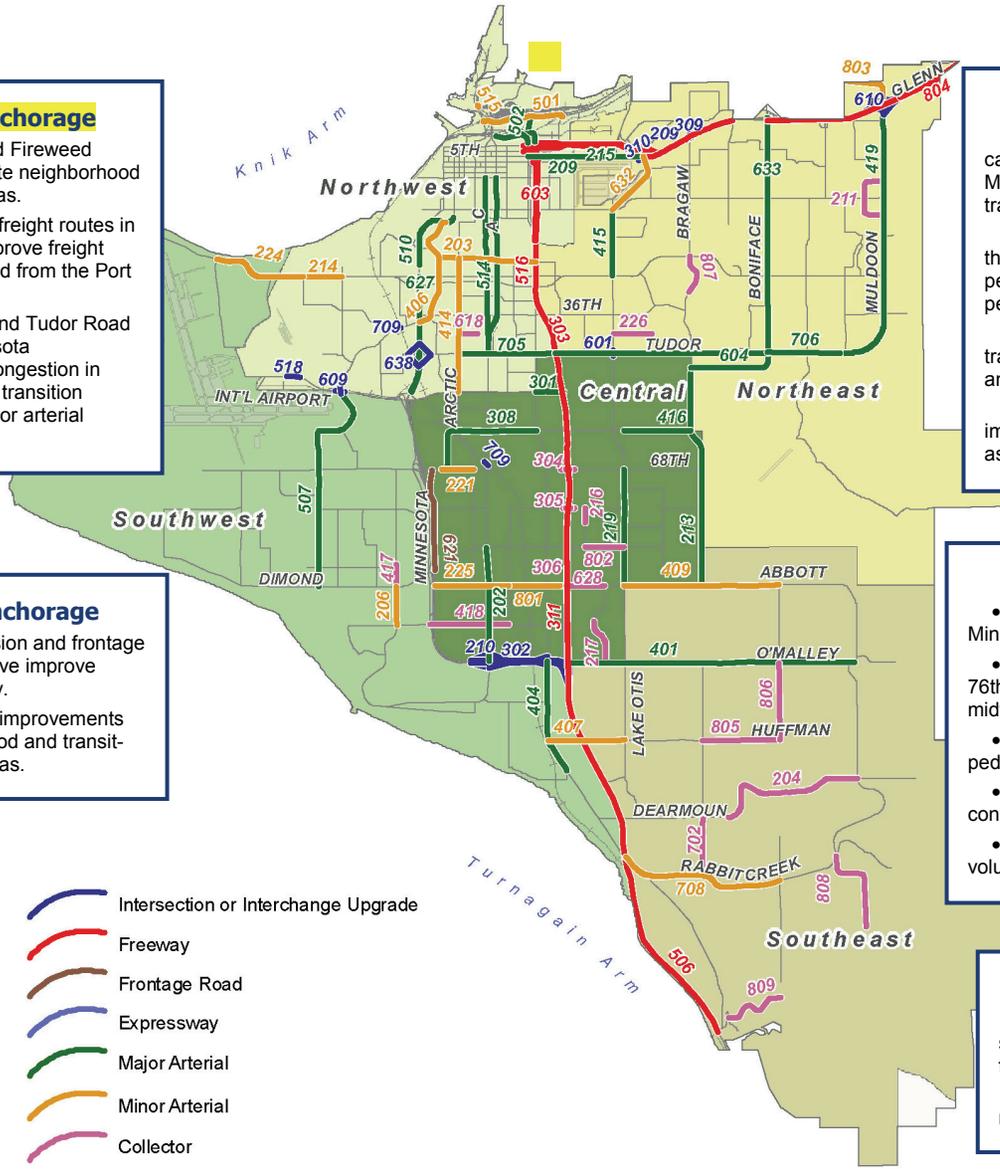
- Northwood extension and frontage roads on Minnesota Drive improve north-south connectivity.
- Jewel Lake Road improvements help create neighborhood and transit-friendly commercial areas.

Central Anchorage

- Dowling Road extension from Abbott Loop Road to Minnesota Drive improves east-west travel options.
- Connectivity under the Seward Highway at 92nd, 76th, and 68th avenues offers more route choices to midtown and downtown destinations.
- C Street extension offers connectivity for cars, transit, pedestrians, and bicyclists.
- Extensions of 92nd and 100th avenues improve connectivity and freight movement.
- Seward Highway improvements handle high traffic volume in the corridor.

Southeast Anchorage

- Elmore Road extension improves connectivity to several schools and assists emergency response and fire safety on the Hillside.
- Predominant east-west arterials are upgraded to meet demand, and missing links are added.



- Intersection or Interchange Upgrade
- Freeway
- Frontage Road
- Expressway
- Major Arterial
- Minor Arterial
- Collector

Source: CH2M HILL

The numbers on the map identify specific projects in Table 8-1.

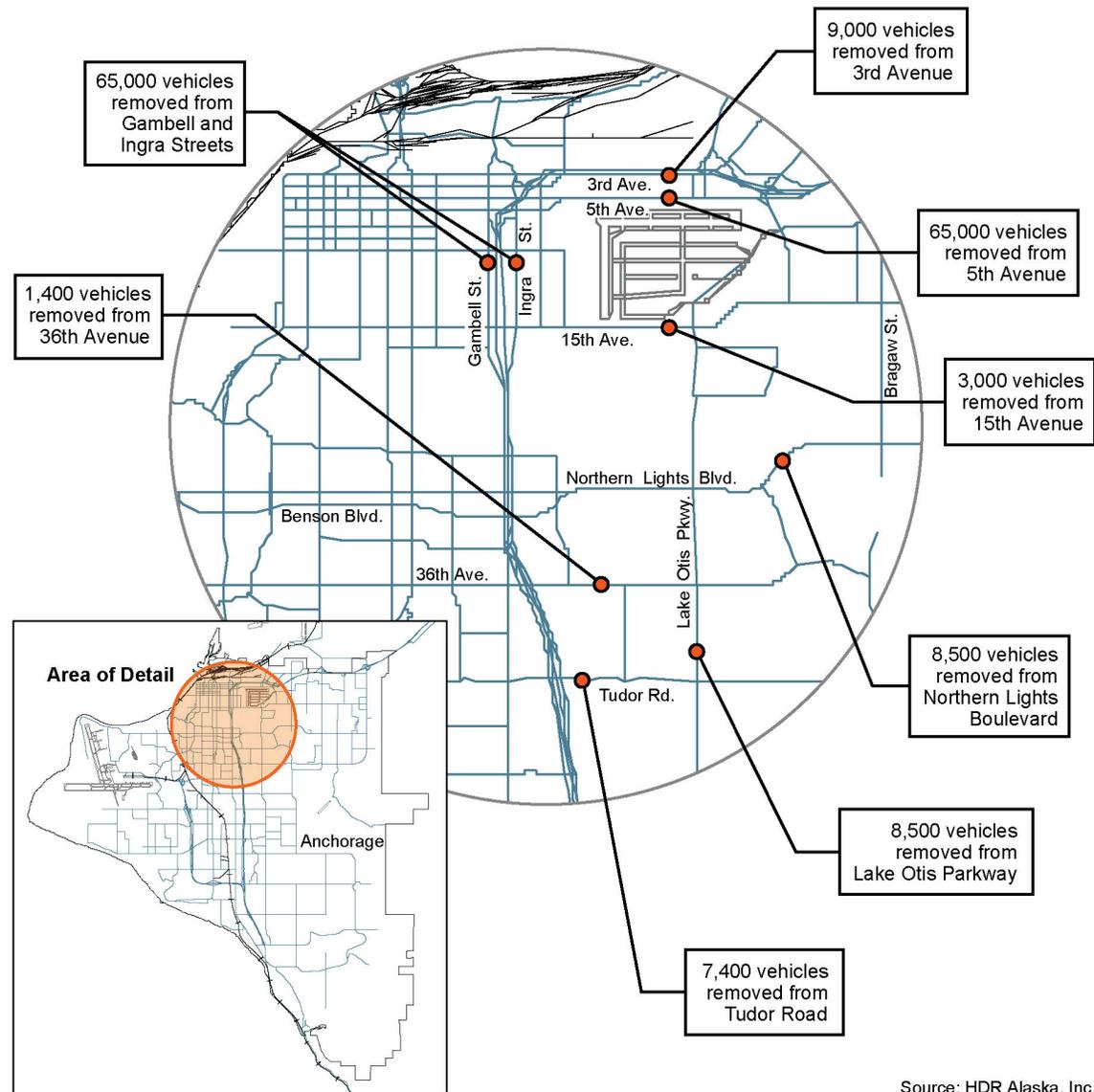
The highlighting identifies text revised in the 2027 LRTP. See the Revisions chapter at the end of the book.

Building the Glenn–Seward Highway Connection

The Glenn and Seward highways together form Anchorage’s longest and most multifaceted transportation corridor. Both highways are part of the National Highway System, 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 approach one-half million people by 2025. That’s 140,000 more people than live in these areas today – 85,500 more people for Anchorage alone – and 400,000 more trips every day on our transportation system. The traffic at the junction of the Glenn and Seward highways 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 contain Anchorage congestion. See Figure 8-2.

Figure 8-2. Vehicles Removed Through Improved Connections



Source: HDR Alaska, Inc.

The red dots indicate the locations where vehicles were counted.

The Concept. The connection concept uses topography to trench, burrow, and depress a new, high-capacity expressway on a unique alignment 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 8-3.) 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 and real opportunities are 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 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 will be severely reduced.

- Traffic on local streets and in neighborhoods is reduced because cut-through traffic is eliminated and longer trips will 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 reduces 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, high-occupancy vehicle (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 2020 comprehensive plan and the 2005 draft Anchorage Bowl Land Use Plan Map depict portions of the eastern Downtown and western Fairview areas 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 Anchorage 2020 policies for infill, redevelopment, and an enhanced urban environment. Timely completion of this 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 Anchorage 2020 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.

Figure 8-3. Benefits of the Connecting Corridor



Source: HDR Alaska, Inc.

- 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).

Easing the Glenn Highway Corridor Commute

Travel in the Glenn Highway corridor between Chugiak-Eagle River and the Anchorage Bowl is projected to double over the next 20 years, as suburban development flourishes. The demand will exceed the capacity of the existing six-lane freeway by 1,600 vehicles in the 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); phased provision of dedicated lanes for express buses and HOVs; and assessing the potential of commuter rail.

Figure 8-4 illustrates components of the Glenn Highway corridor plan. The components are also described below:

- **Express bus service**, a new high-frequency commuter transit service from Chugiak-Eagle River and the Mat-Su Borough direct to Downtown, Midtown, and University-Medical District employment centers. New-design commute buses run at 6- to 10-minute frequency during commute periods. Park-and-ride lots and weather-protected shelters are provided at outlying locations. A Third Street bus-only lane enables faster bus travel in the downtown area.
- **Commute options incentive program**, consisting of value rewards, commute shift incentives, and strong employer partnerships to foster flex work hours, telecommuting, and other employee incentives to lessen solo-driver commutes
- **Expanded vanpool and carpool programs** working in collaboration with major employers to provide viable options to drive-alone commuting
- **Facilitation of broad implementation of federal tax-benefit credits** for vanpool and transit commuters to reinforce non-drive commuting

- **Road improvements** that include a third highway lane in each direction between Hiland Road and Artillery Road, incorporating bridge widening, interchange and access improvements, ramp extensions, and related spot improvements to improve traffic capacity, flow, and safety

- **Traffic management system** that monitors corridor traffic operation conditions and includes incident-response strategies (cameras, response coordination, public information dissemination, and traffic advisories)

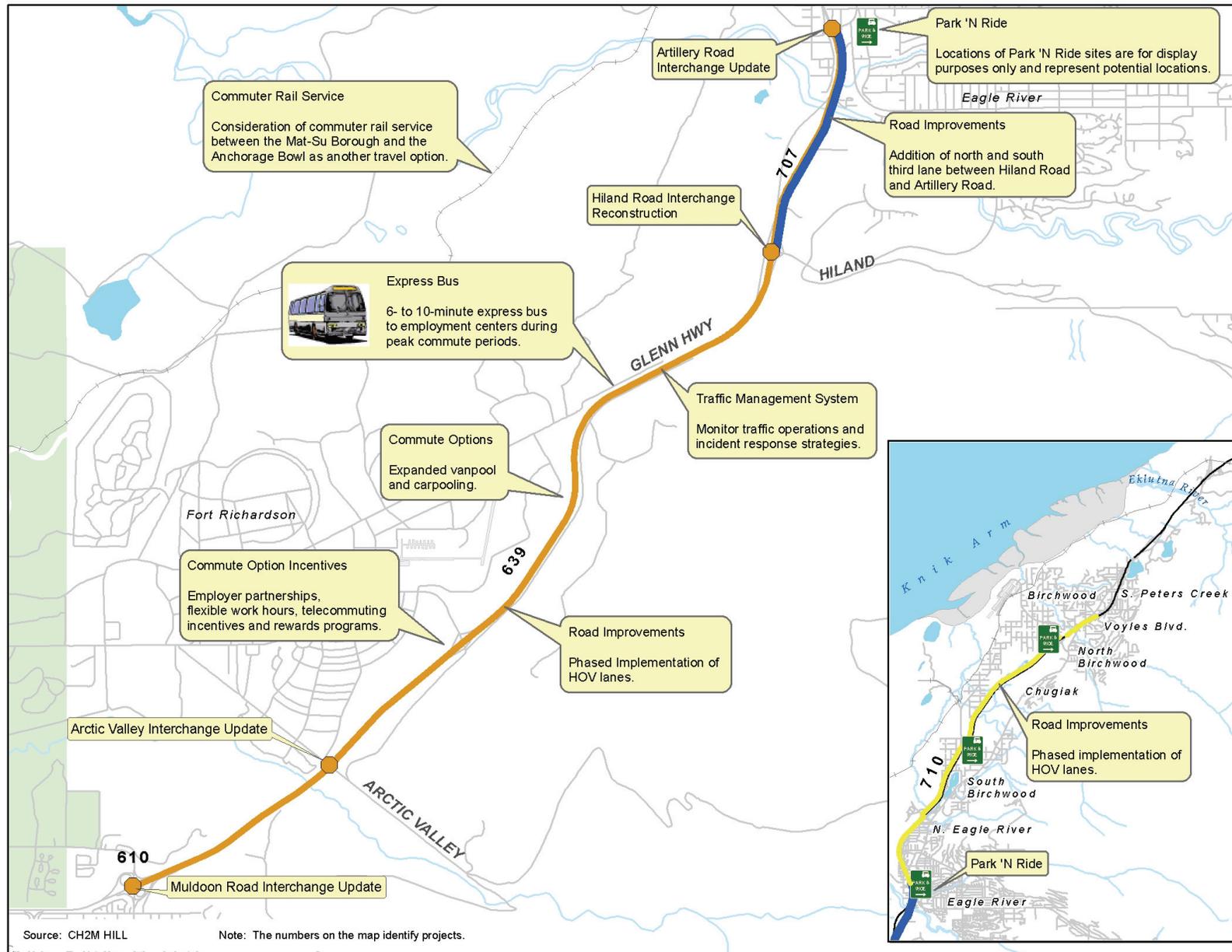
- **Commercial Vehicle Intelligent System Network (CVISN)** that includes automated safety information exchange, electronic credentialing, and electronic screening upgrades to roadside weigh and inspection facilities

- Reconsideration of the **Glenn Highway weigh station investments** for the long term because relocation appears to be necessary

- **Phased implementation of HOV lanes**, express bus lanes, or both to reduce solo driver automobile use and make commute alternatives more attractive

- Consideration of **commuter rail service** between the Mat-Su Borough and the Anchorage Bowl as another travel option

Figure 8-4. Easing the Glenn Highway Commute



Public Transportation

The Anchorage bus transit system has shown recent significant improvements in terms of ridership and efficiency. Transit is expected to play an increasing role in meeting transportation demand in the future as the city matures and the higher-density residential and employment goals of Anchorage 2020 are achieved.

Four core challenges for public transit guide scoping of the LRTP transit element:

- Funding determines what level of transit service is possible.
- Public policy and public perceptions of transit service value define the willingness to support public funding.
- Improved transit service operations and service delivery can increase riders.
- Attracting more riders and sustaining or improving service productivity are the key transit performance benchmarks.

The Critical Balancing Act

The critical balance for transit service has three determinants: (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.

This balance is at the crux of policy about the minimum necessary transit service and how much more can be realistically provided. A core mission of public transit is to ensure that all segments of our

community have available transportation and access to community opportunities. The People Mover route restructuring plan with 30-minute frequency throughout the day (weekdays) does that. A second mission is to help reduce congestion by offering viable transportation alternatives to as many travelers as possible. Transit 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 transit.

Transit Riders Can be Doubled

Many future scenarios have been analyzed with the Anchorage travel model and projections of 2025 development. Transit patronage can likely be doubled from 2002 levels, perhaps tripled. But to get the higher number of riders, public funding will need to expand from about \$8.6 million annually (2002) to \$26.5 million (2025). More funding is required if even higher levels of transit service are desired. Within the constraints of available funding, there are opportunities to improve service, increase riders, and help alleviate traffic congestion.

What is the best transit service choice for Anchorage? The recommended LRTP transit 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 transit operating productivity. 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 that corridor's peak-period commuters.

Success in executing these priorities to grow ridership can be the springboard for future service improvements.

Beyond Committed Route and Service Restructuring

When implementation of the restructuring plan is completed (currently scheduled for 2007), a gain of about 28 percent more annual riders aboard People Mover than in 2002 is anticipated. Public funding support of about \$14 million per year will be needed to sustain the planned level of service. This amount represents an increase of about \$5.5 million over current funding levels.

Continuing to boost transit ridership is the primary goal for the next steps. These characteristics are important:

- Service frequency. Travelers have an aversion to scheduling constraints, waiting, and especially unreliable service. Time is the dominant factor influencing travelers' choice of travel mode. In choosing a travel mode, people weigh time for "walking and waiting" as being two to three times more important than the time spent in a vehicle. Transit research and experience demonstrate that 15-minute frequency is a threshold for travelers who have freedom to choose between automobile and transit travel.
- Direct service to destination. A transfer from one bus to another to reach a destination has a highly negative effect on rider choice. Few riders

are willing to accept the inconvenience, added waiting delay and uncertainty, and longer journey time.

- Transit versus automobile travel time. Bus travel times in 2002 were about two and a half to three times longer than times for the same journeys made by automobile. That disparity needs to be significantly reduced to attract more riders. Longer spacing between bus stops and transit priority at signalized intersections can help improve transit speed.

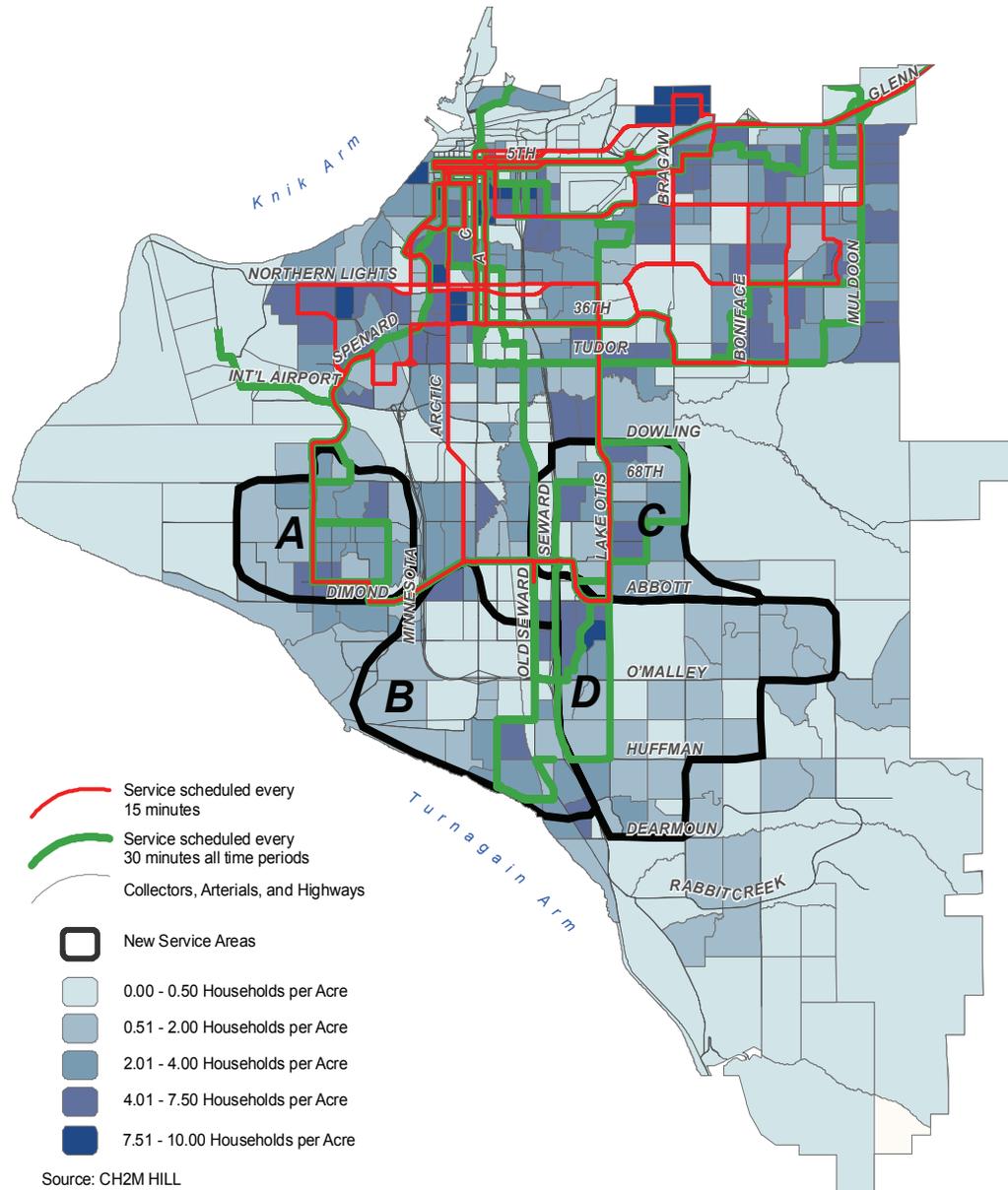
- Accessibility. The maximum walking distance acceptable to people is typically one-quarter mile. Bus stops – both for the origination and the destination of travel – need to be reachable by sidewalks that are safe. The walking environment matters, too, especially during winter.

Dependability, comfort, value. On-time reliability (dependability), creature comforts, and cost value perceptions contribute to traveler assessments of service. These factors generally are subordinate to time and direct routing, but nonetheless come into play when assessing whether to use transit instead of a personal vehicle (with contoured bucket seats that may be heated, radio, CD player, and other amenities).

Priority Routes and Corridors

Improving transit service frequency to 15 minutes during peak weekday periods on selected routes. Figure 8-5 displays the recommended transit routes. Each route shown in red should have 15-minute peak service by 2013.

Figure 8-5. Recommended Transit Routes and New Service Areas



In year 2011, replacement of 23 buses will be needed. A peak fleet of 77 People Mover buses will be required to operate the system with upgraded 15-minute frequency during peak periods on the seven priority corridors. People Mover at this stage will be operating 52 percent more service than in 2002. Annual riders are estimated to increase to 6.6 million passengers by 2025.

Fine-Tuning Route Operation and Improving Service Frequency

A detailed transit operations analysis should precede introduction of more frequent service on each transit route. Diligent planning and detailed examination and refinement of route operations can fine-tune service delivery and help boost the number of riders. More frequent service, more direct service, reduced travel time, better accessibility, on-time reliability – these are the performance objectives.

Bus travel time and delay statistics should be collected to identify locations and causes of delay (congestion, traffic signals, time at stops, and traffic flow variability). Major boarding and alighting points should be identified and bus stop locations assessed to obtain the best tradeoff between stops that are spaced farther apart that improve bus speeds and the optimum locations to minimize rider access and egress times. Census population demographic and socioeconomic profiles should be used to identify potential rider markets and locations. When available, traffic signal preemption

for buses should be implemented to smooth bus flow. Opportunities to enable buses to bypass congestion should be investigated. Route alignments should be straightened wherever possible, and operating schedules should be tightened by using the new information and analyses. As capability becomes available, on-board technology for vehicle locations should be exploited to automate data acquisition.

Procedures for these fine-tuning analyses should be established and integrated in a mapping database (geographic information system). Periodic monitoring of route operations should be performed following service changes to continually refine service delivery.

Expanding People Mover Service

Consideration of further service improvements should be guided by growth of ridership and evaluation of route productivity. Service should be increased where there is good rider response on a case-by-case basis. Expanded services should be introduced on a trial period basis and continued if ridership gains are realized.

New Service Areas

A strategy for providing transit services in new areas is needed. The key principles are to base these decisions on the following:

- Community service requests and socioeconomic and trip-making analyses
- Introduction of service on a limited-time period trial basis



A new express-service vehicle with amenities for passenger comfort.

- Establishing specific service performance standards as the basis for continued operation

Flexibly routed “ride-by request” services (similar to the current People Mover DART services) are recommended for initial service offerings in new areas. Transition to fixed route service may be warranted when operating productivity standards can be achieved.

Figure 8-5 also shows potential service areas for ride-by-request services. Community requests for service and outreach by People Mover will likely dictate how actual services are deployed.

Express Bus Service in the Glenn Highway Corridor

High-performance, frequent commuter bus service in the Glenn Highway corridor is the cornerstone of the solution to ease commuter congestion in the corridor. Express buses running at 10-minute intervals or less during commuter peak periods from Chugiak-Eagle River, as well as from the Mat-Su Borough, will be needed to forestall serious congestion. Express service routes will go directly to Downtown, Midtown, and University-Medical District employment centers in the Anchorage Bowl. Aggressive efforts will be pursued to provide broad implementation of transit advantages. Federal tax-free benefits for commuter fares, employer-supported bus passes and other incentives, experimentation with cash incentives for non-solo driving, and phased provision of express bus and HOV-only lanes will reinforce the express bus program. A Third Street bus-only lane is included to enable faster bus travel in the downtown area.

Custom commuter coaches with reading lights, upholstered seating, and other amenities will be used for the express bus service. Park-and-ride locations will be needed in Chugiak-Eagle River. Similar regional transportation service for commuters will need to be provided from the Mat-Su Borough, the source of about 40 percent of commuters in the corridor. By 2025, a fleet of 30 vehicles will be needed.

Annual operating cost for the Chugiak-Eagle River express bus service is estimated at \$0.65 million (in 2004 dollars); similar or somewhat lower

costs would apply for equivalent Mat-Su Borough service. MOA and Mat-Su Borough officials will need to negotiate cost sharing, operating agreements, service coordination, and management and marketing arrangements.

Mobility for Youth and School Transportation

More than 141,000 student trips to and from schools will be made each weekday in 2025. Nearly 29,000 of these trips will be on school buses operated by the Anchorage School District. The School District's open enrollment program will make school bus scheduling more difficult. School buses together with People Mover will be important contributors to mobility for youth in the community. Those who are not yet of driving age also rely largely on safe walking and bicycle paths to get around.

Mobility for Seniors and Disabled Persons

Retirees and other residents in their senior years will compose an increasing share of Anchorage's population over time. Affordable and appropriate housing, supportive community features and services, and adequate mobility options facilitate their personal independence and engagement in civic and social life. Mobility services are essential to enable older and disabled persons in the community to stay connected and involved. 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 MOA AnchorRIDES program provides demand-responsive, curbside service for seniors and disabled persons. The number of annual rides provided has grown steadily during the past 5 years, reaching more than 200,000 by 2004. The need can be expected to continue to increase with the aging population. The required AnchorRIDES vehicle fleet of specially equipped vehicles will exceed 50 units.

Funding comes primarily from the MOA general funds and the Alaska Commission on Aging; rider fares, donations and Medicaid also contribute to revenues. Increasing annual budgets will be needed to provide AnchorRIDES services. By 2020, the service cost in 2004 dollars will be \$3.2 million.



AnchorRIDES provides demand-responsive service for seniors and disabled persons.

Photo courtesy of MOA Department of Public Transportation

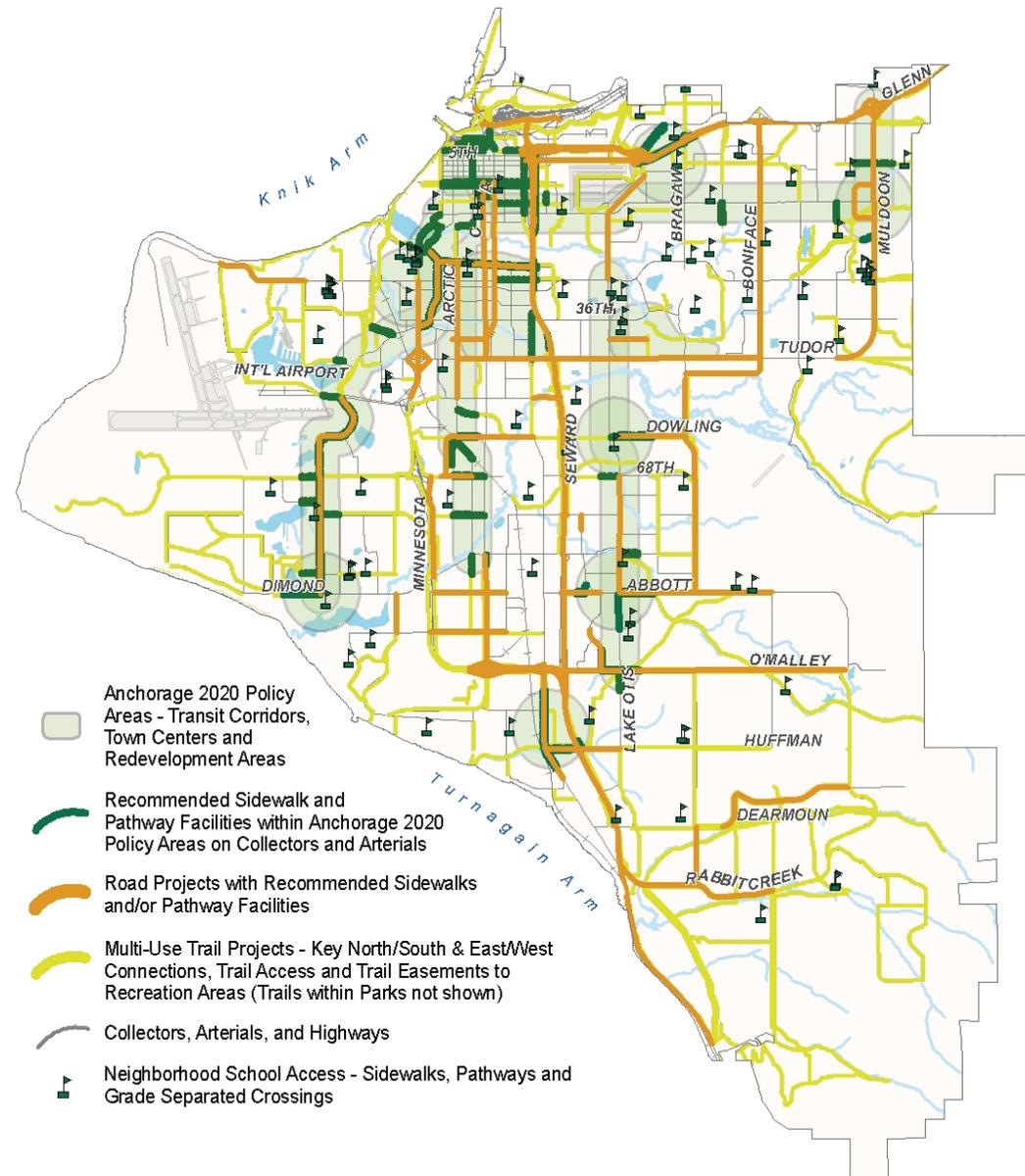
Pedestrian and Bicycle Facilities

Pedestrian and bicycle 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 transit system, schools, parks, and other destinations. The primary thrust of pedestrian and bicycle 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. See Figure 8-6 and Table 8-2 (at the end of this chapter) for recommended trails and sidewalk projects.

This LRTP recommends the following:

- Funding of transportation enhancements that does not exceed 10 percent of the monies allotted to AMATS in the Transportation Improvement Program (TIP)
- Preparation of pedestrian plan that develops pedestrian design guidelines, inventories missing sidewalk links, and prioritizes sidewalk projects to implement
- Preparation of a commuter bicycle plan that sets priorities for project implementation

Figure 8-6. Recommended Pedestrian and Bicycle System



Source: CH2M HILL, MOA GIS

- Updates to the Areawide Trails Plan (newly named the Anchorage Non-motorized Transportation Plan) to establish the following as high priorities:
 - Safe walking paths along major connections in areas without sidewalks
 - 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 (Street Smarts) program for bicycle 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 be necessary to ensure year-round access for pedestrians and bicyclists. This LRTP 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 trail and sidewalk system are included in recommended road projects. These improvements will contribute 163 miles of sidewalk and multi-use pathways in the MOA. The road project trail and sidewalk improvements do not complete all missing links. The recommended pedestrian plan and update to the 1997 MOA *Areawide Trails Plan* will establish priorities for other missing link connections in sidewalks, bike routes, and recreational multi-use trails.

Pedestrian Plan and Sidewalk Projects

The MOA is developing a pedestrian plan called for in Anchorage 2020. This plan will inventory the existing pedestrian infrastructure and establish priorities for pedestrian projects to accomplish the following:

- Build missing links in the sidewalk system
- Remedy safety hazards such as those along the Northern Lights and Benson boulevards couplet, which has a high incidence of pedestrian and bicycle crashes
 - Coordinate pedestrian facilities with transit stops and facilities
 - Provide safe connections for walking to schools
 - Recommend projects and priorities for missing links on arterials and collectors

The Pedestrian Plan will include recommendations for design of pedestrian facilities to meet safety and Americans with Disabilities Act

(ADA) requirements and amenities to encourage pedestrian trips and enhance the aesthetics of our streets.

Anchorage Bicycle Plan

A parallel effort to the Pedestrian Plan is a focus on commuter bicycle routes to employment centers, commercial districts, transit stations, institutions, and recreational destinations.

The Anchorage Bicycle Plan will provide an inventory of the existing bicycle routes, identify and prioritize future projects, formulate policies and enforcement, investigate safety issues, describe education program needs, and implement updates of bicycle ordinances and design standards.

Update of the Areawide Trails Plan and Projects

The 1997 MOA *Areawide Trails Plan* will be updated in 2006 and will re-examine the Top 50 recommended projects. Projects may be added or deleted at that time. The following projects that were formally identified in the 1997 *Areawide Trails Plan*, the Top 50 trail projects, are some of the projects recommended for completion:

- Coastal Trail/Ship Creek Trail: 2nd Avenue via Ship Creek to Glenn Highway at Boniface Parkway
- Campbell Creek Trail: Old Seward Highway to Tudor Road
- A-C Couplet Midtown Trail
- Coastal Trail lighting
- DeArmoun Road: E. 140th Avenue to Birch Road, unpaved trail
- Hillside Trail (Chugach Rim)

- Huffman Road: Birch Road to Elmore Road
- Minnesota Bypass: Old Seward Highway to Tudor Road
- O'Malley: Birch Road to Hillside Drive
- O'Malley Road: Lake Otis Parkway to Birch Road
- Potter Marsh Nature Trail Extension/Connection
- Rabbit Creek Road: Old Seward Highway to Goldenview Drive
- Section 36 Interpretive Trails
- Tudor Road crossing connections to Chester Creek southwest of University Lake and to Far North Bicentennial Park
- University Drive: Providence Drive to Northern Lights Boulevard
- Upper Huffman Trailhead

In addition, the MOA will work cooperatively with the ARRC to identify trail opportunities within the ARRC right-of-way.

Establishing and Connecting Major Trail Corridors

Major cross-town trail corridors provide recreational opportunities and also allow bike, ski, and pedestrian commuters to reach employment centers. Major existing trails to be improved include the east-west Tour of Anchorage trail system and the north extension of the Coastal Trail.

Trail and Pathway Easements

Easements are a critical component to the connectivity of our recreational trail system. 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 are especially important.

Freight Movement

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 and consolidate Anchorage's role and position in global commerce. Companion LRTP projects include improving access to the port, airport, and railroad terminals and connections to the National Highway System. The costs of moving goods directly affect end-user costs as well as economic vitality.

Design standards and connectivity via 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 7-32 portrays road improvement projects that are especially relevant to freight operations.

The recent establishment of an AMATS Freight Advisory Committee is intended to provide a forum for continuing interaction with the freight community and dialog on issues and concerns affecting freight operations.

Regional Connections

Airport Access Improvements

The LRTP includes three major improvements to accommodate airport access from International Airport Road. At the junction of Jewel Lake and Spenard roads, a grade-separated interchange will replace the existing signalized intersection. This improvement also will separate the grade of the Alaska Railroad passenger rail service to the airport. A second International Airport Road interchange at Postmark Drive will accommodate freight shipments to and from air parcel and freight carriers, the post office, and delivery warehouses. It also will improve traffic flow into and out of the TSAIA passenger terminals and parking areas. The third grade-separation project of the Seward Highway and International Airport Road will

provide more direct access from the freeway to the airport.

Another road improvement, connection of Dowling and Raspberry roads, will enhance TSAIA access from the south.

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 Glenn and Seward highways.

National Highway System Continuity and Improvements

The LRTP materially improves National Highway System connectivity and design consistency through Anchorage. The Glenn–Seward highways connection closes a long-standing continuity gap and establishes a limited-access corridor serving the entire MOA and region.

The Seward Highway is upgraded to six lanes north of O’Malley Road to accommodate increasing demand. Additionally, a system interchange linking the Seward Highway and Minnesota Drive, further strengthens the National Highway System connectivity. All of these projects improve access and connections with the port and airport intermodal terminals.

Knik Arm Crossing

The LRTP endorses completion of ongoing environmental and engineering studies for the Knik Arm crossing concept. These studies will produce information about the alignment, configuration,

components, costs, and other features to support future decisions. Following completion of the necessary environmental documents, the crossing can be considered for inclusion in the LRTP by amendment. This step involves thorough public review and comments on all aspects of the potential project.

Commuter Rail Services

Commuter rail between the Mat-Su Borough and the Anchorage Bowl is another potential travel option. As recommended transit 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 LRTP endorses future studies of the feasibility and funding of commuter rail service between the Mat-Su Borough and Anchorage.

Anchorage and Mat-Su Borough Collaboration on Common Interests

A convergence of physical growth and common interests is occurring between the MOA and the 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.

Congestion (Mobility) Management

The crux of our transportation network congestion problem is coping with weekday surges that occur during AM and PM weekday commute hours. Congestion arises where there is more traffic than there is corresponding road capacity. For most hours of the day, our transportation network capacity is adequate and travel is relatively unrestricted.

Alternatives to Building More Capacity

Adding road and transit 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 moderate travel impacts.

Managing the System

Management and operation of our 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 for traffic operations and transit to make them as efficient as possible should be a continuing function.

The highlighting identifies text revised in the 2027 LRTP. See the Revisions chapter at the end of the book.

Traffic Performance Monitoring. A system upgrade of signal control technology is needed by 2010. It should include updated control equipment, management software, and 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 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. There is ample experience pertinent to the effectiveness and cost of these solutions.

Roadway Railroad Crossings. Roadway-rail intersection warning and preemption systems improve safety at at-grade rail crossings where grade-separation projects are not feasible. Roadway-rail intersection projects recommended include two road projects – Arctic Boulevard/Dowling Road and International Airport Road – and two stand-alone projects – C Street and Spenard Road.

ITS Deployment. Responding to incident delay, weather and traffic reporting, CVISN, 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 be completed throughout the MOA.

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 traffic operations. Accordingly, careful scheduling, management, and public communications are important to minimize impacts on the community and travelers.

Special Events. Special events can create large traffic impacts. Thoughtful planning and scheduling are needed to mitigate community and travel disruption.

Traveler Options Program

The purpose of the Traveler Options Program is to consider and apply appropriate means to improve travel choices and stimulate commuter demand for alternative transportation options. Initiatives would rely on public feedback and observed commuting response to specific programs and identifiable opportunities. Efforts to increase use of alternative transportation modes may be targeted to specific locales of the MOA or areawide. The traveler options program must be guided by results and scientific research to produce the greatest return on the investment.

Commuters need reasonable choices to get them to shift from driving. Better transit, employer-based incentives, and ride-share options will encourage employees to consider available alternatives for commuting.

Primary Program Elements

The primary program thrust will be the areas discussed below.

Support for Transit Ridership. Boosting the number of transit riders reduces traffic congestion and improves operating efficiencies. The proposed 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 programs.

Employer Partnerships. Proof is abundant that proactive employer participation is critical to success in changing commuter travel behavior. The

program will develop individual employer and employer group advocacies as catalysts for commuter change and will implement incentives and supportive programs to influence change. Telecommuting and flex schedules are two examples.

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 larger groups and eliminate 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 corridor improvement 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 and other incentives.

Guaranteed Ride Home Program. Getting commuters to ride share 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 discussed in

Chapter 7 adds that backup when needed in Anchorage. 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 program will encourage healthy exercise. High school student parking is another potential demand reduction area.

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, gauge markets, guide design pilot projects, and evaluate results of initiatives.

Targeting Specific Problems

The traveler behavior change program will identify specific problems, develop strategies, and target actions to address those problems. Two target problems have been identified:

- Changing solo-driver commute demand on the Glenn Highway
- Reducing vehicle demand on Northern Lights Boulevard between the Seward Highway and Bragaw Street

Other targets will be delineated as the Congestion Management Program moves forward.

Transportation and Anchorage 2020

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 LRTP will help the MOA Planning Department refine and implement Anchorage 2020.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Funded Projects (2005–2009)				
202	C St. Extension Phase III	O'Malley Rd.	Dimond Blvd.	Add new facility—extend C St. as a 4-lane limited access arterial to O'Malley Rd.; 2005 construction; Purpose: Circulation, access, and freight; Facility class: Major arterial (3); Length of project: 1.5 miles; Length of new sidewalk: 1.5 miles; Length of new pathway: 1.5 miles; Estimated cost: ^a \$3.15; Funding source: GARVEE Bond; Linked project(s): None.
203	Fireweed Ln. Surface Rehabilitation	Spenard Rd.	Seward Hwy.	Reconstruct roadway to improve surface and safety for automobiles and non-motorized users; Purpose: Maintenance and safety; Facility class: Minor arterial (4); Length of project: 1.25 miles; Length of new sidewalk: 1.25 miles; Length of new pathway: 1.25 miles; Estimated cost: ^a \$9.2; Funding source: TIP; Linked project(s): 406, 429, and 514.
204	DeArmoun Rd. Reconstruction Phase II	140th Ave.	Hillside Dr.	Reconstruct the existing alignment, pavement, and pedestrian facilities (3R project); 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; Estimated cost: ^a \$10.7; Funding source: TIP; Linked project(s): None.
206	Victor Rd.	100th Ave.	Dimond Blvd.	Upgrade roadway to minor arterial standard with a minimum of 2 lanes with a center turn lane; Purpose: Capacity; Facility class: Minor arterial (4); Length of project: 0.5 mile; Length of new sidewalk: 0.5 mile; Length of new pathway: 0.5 mile; Estimated cost: ^a \$7.6; Funding source: TIP; Linked project(s): 417.
209	Glenn Hwy.	Ingra St./Gambell St.	McCarrey St.	Reconstruct with one additional lane in each direction; Purpose: Capacity and freight; Facility class: Major arterial (3) and freeway (1); Length of project: 2.4 miles; Length of new sidewalk: 2.4 miles; Length of new pathway: 2.4 miles; Estimated cost: ^a \$22.4; Funding source: TIP; Linked project(s): 309.
210	Minnesota/C St. Interchange	C St.	C St.	Add new facility—interchange at Minnesota Dr./O'Malley Rd. and C St.; Purpose: Circulation, access, and freight; Facility class: Freeway (1); Length of project: 0.6 mile; Length of new sidewalk: 0.6 mile; Length of new pathway: 0.6 mile; Estimated cost: ^a \$26.5; Funding source: GARVEE Bond; Linked project(s): 202.
211	Creekside Parkway	DeBarr Rd. at Creekside	DeBarr Rd. at Muldoon	Add new facility—collector loop providing access within Creekside Town Center; Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.9 mile; Length of new sidewalk: 0.9 mile; Length of new pathway: 0.9 mile; Estimated cost: ^a \$17.2; Funding source: TIP; Linked project(s): None.
213	Abbott Loop Extension	Abbott Rd.	E. 48th Ave.	Add new facility—extension of Bragaw Rd. from 48th Ave. to Abbott Rd.; 3 lanes between Abbott Rd. and 68th Ave., and 4 lanes between 68th Ave. and 48th Ave.; 2005 construction start; Purpose: Circulation and access; Facility class: Major arterial (3); Length of project: 1.05 miles; Length of new sidewalk: 1.05 miles; Length of new pathway: 1.05 miles; Estimated cost: ^a \$37.5; Funding source: State bond; Linked project(s): 416 and 604.
214	Northern Lights Blvd.	Nathaniel Ct.	Wisconsin Ave.	Upgrade to urban standards with center turn lane; 2005 construction; Purpose: Capacity; Facility class: Minor arterial (4); Length of project: 0.5 mile; Length of new sidewalk: 0.5 mile; Length of new pathway: 0.5 mile; Estimated cost: ^a \$9.1; Funding source: MOA Bond; Linked project(s): 427 and 509.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Funded Projects (2005–2009) (continued)				
215	3rd Ave. Surface Rehabilitation	Post Rd.	Reeve Blvd.	Restripe from 4 lane to 3 lane, including sidewalk addition/improvements; 2005 construction; Purpose: Capacity and freight; Facility class: Minor arterial (4); Length of project: 0.75 miles; Length of new sidewalk: 1.5 miles; Length of new pathway: 0 miles; Estimated cost: ^a \$3.3; Funding source: Bond; Linked project(s): 603.
216	Hartzell Rd. Extension	Lore Rd.	79th Ave.	Add new facility—2-lane collector between Lore Rd. and 79th Ave.; 2005 construction; Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.2 mile; Length of new sidewalk: 0.2 mile; Length of new pathway: 0.2 mile; Estimated cost: ^a \$2.2; Funding source: Bond; Linked project(s): None.
217	Independence Dr. Extension	Abbott Rd.	O'Malley Rd.	Add new facility—rehabilitate surface from Colony Lp. to Abbott Rd. and extend Independence Dr. from Colony Lp. to O'Malley Rd., including a study on connection with O'Malley Rd.; 2005 construction; Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.4 mile; Length of new sidewalk: 0.4 mile; Length of new pathway: 0.4 mile; Estimated cost: ^a \$1.3; Funding source: Bond; Linked project(s): None.
219	Lake Otis Pkwy. Surface Rehabilitation	Abbott Rd.	68th Ave.	Rehabilitate pavement and add traffic signal at 72nd Ave; rehabilitate sidewalks to meet ADA standards; 2005 construction; Purpose: Maintenance and safety; Facility class: Major arterial (3); Length of project: 1.5 miles; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$5; Funding source: Bond; Linked project(s): 409 and 425.
221	Raspberry Rd. Extension	Rovenna St.	Arctic Blvd.	Add new facility—reconstruct and extend to meet future demands; 2005 construction; Purpose: Circulation, access, and freight; Facility class: Minor arterial (4); Length of project: 0.5 mile; Length of new sidewalk: 0.5 mile; Length of new pathway: 0.5 mile; Estimated cost: ^a \$1.5; Funding source: Bond; Linked project(s): 308.
224	Northern Lights Blvd.	Postmark Dr.	Nathaniel Ct.	Reconstruct pavement; add shoulders and turning pockets where needed; Purpose: Circulation, access, and safety; Facility class: Minor arterial (4); Length of project: 1.2 miles; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$18.4; Funding source: Bond; Linked project(s): None.
225	92nd Ave.	Minnesota Dr.	King St.	Add new facility—upgrade missing minor arterial to urban standards; Purpose: Circulation, access, and freight; Facility class: Minor arterial (4); Length of project: 2 miles; Length of new sidewalk: 0 miles; Length of new pathway: 0 miles; Estimated cost: ^a \$6.5; Funding source: Bond; Linked project(s): None.
226	40th Ave. Extension	Lake Otis Pkwy.	Piper St.	Add new facility—2-lane collector connection from Lake Otis Pkwy. to Piper St. to serve University-Medical District; Purpose: Circulation and access; Facility class: Collector (5); Length of project: 1 mile; Length of new sidewalk: 2 miles; Length of new pathway: Not applicable; Estimated cost: ^a \$4.5; Funding source: Bond; Linked project(s): None.
309	Bragaw Rd./Glenn Hwy. Interchange	Airport Heights Rd.	Bragaw Rd.	Add new facility—Bragaw Rd. interchange; Purpose: Circulation, access, and freight; Facility class: Ramps (7&8); Length of project: 0.3 mile; Length of new sidewalk: 0.3 mile; Length of new pathway: 0.3 mile; Estimated cost: ^a \$33.2; Funding source: TIP; Linked project(s): 209 and 603.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Short-Term Projects (2006–2015)^b				
301	International Airport Rd. Extension	Old Seward Hwy.	Brayton	Add new facility—grade separation and extension of International Airport Rd. from Homer Dr. to Brayton Dr. (part of 303); Purpose: Circulation, access, and freight; Facility class: Major arterial (3); Length of project: 0.35 mile; Length of new sidewalk: 0.7 mile; Length of new pathway: 0 miles; Estimated cost: ^a \$34.9; Funding source: TIP; Linked project(s): 303.
303	Seward Hwy.	O'Malley Rd.	36th Ave.	Reconstruct and widen from 4 to 6 lanes from Tudor Rd. to O'Malley Rd.; minor pathway south of O'Malley Rd.; frontage road improvements, landscaping, and possible noise walls; Purpose: Capacity and freight; Facility class: Freeway (1); Length of project: 4.5 miles; Length of new sidewalk: 4.5 miles; Length of new pathway: 4.5 miles; Estimated cost: ^a \$81.7; Funding source: TIP; Linked project(s): 201, 301, 305, 306, 311, 516, and 603.
304	68th Ave. Extension	Homer Dr.	Brayton Dr.	Add new facility—grade separation and extension of 68th Ave. from Homer Dr. to Brayton Dr. (part of 303); Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.3 mile; Length of new sidewalk: 0.6 mile; Length of new pathway: 0 mile; Estimated cost: ^a \$23.4; Funding source: TIP; Linked project(s): 311.
305	76th Ave. Extension	Homer Dr.	Brayton Dr.	Add new facility—grade separation and extension of 76th Ave. from Homer Dr. to Brayton Dr. (part of 303); Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.1 mile; Length of new sidewalk: 0.2 mile; Length of new pathway: 0 miles; Estimated cost: ^a \$23.4; Funding source: TIP; Linked project(s): 303.
306	92nd Ave. Extension	Homer Dr.	Brayton Dr.	Add new facility—grade separation and extension of 92nd Ave. from Homer Dr. to Brayton Dr. (part of 303); Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.1 mile; Length of new sidewalk: 0.2 mile; Length of new pathway: 0 miles; Estimated cost: ^a \$23.4; Funding source: TIP; Linked project(s): 303.
308	Dowling Rd. Extension	Raspberry Rd.	Old Seward Hwy.	Add new facility—extend Dowling Rd. from Old Seward Hwy. to Minnesota Dr., improve the rest of the facility, and replace one bridge; Purpose: Circulation, access, and freight; Facility class: Major arterial (3); Length of project: 1.65 miles; Length of new sidewalk: 1.65 miles; Length of new pathway: 1.65 miles; Estimated cost: ^a \$115; Funding source: TIP; Linked project(s): 201, 221, and 416.
401	O'Malley Rd.	Seward Hwy.	Hillside Dr.	Reconstruct to improve safety and capacity. 3-lane section east of Lake Otis Pkwy. and 5-lane section between Seward Hwy. and Lake Otis Pkwy.; Purpose: Capacity; Facility class: Major arterial (3); Length of project: 3.65 miles; Length of new sidewalk: 3.65 miles; Length of new pathway: 3.65 miles; Estimated cost: ^a \$20; Funding source: TIP; Linked project(s): None.
404	Old Seward Hwy.	Brandon St.	O'Malley Rd.	Reconstruct to a multi-lane facility; Purpose: Capacity; Facility class: Major arterial (3); Length of project: 1.5 miles; Length of new sidewalk: 1.5 miles; Length of new pathway: 1.5 miles; Estimated cost: ^a \$15; Funding source: TIP; Linked project(s): 407 and 312.
405	Eklutna River Bridge	New Glenn Hwy.	New Glenn Hwy.	Add commercial vehicle bridge clearance warning system; Purpose: Maintenance, safety, and freight; Facility class: Not applicable; Length of project: 0.3 mile; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$0.35; Funding source: TIP; Linked project(s): None.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Short-Term Projects (2006–2015)^b (continued)				
406	Spenard Rd. Surface Rehabilitation	Minnesota Rd.	Minnesota Rd. Onramp	Reconstruct from 4 to 2 lanes with a center turn lane, plus pedestrian facilities, including Spenard Rd./36th Ave. couplet; Purpose: Capacity; Facility class: Minor arterial (4); Length of project: 0.15 mile; Length of new sidewalk: 0.15 miles; Length of new pathway: 0.15 miles; Estimated cost: ^a \$2.5; Funding source: TIP; Linked project(s): None.
407	Huffman Rd.	Old Seward Hwy.	Lake Otis Pkwy.	Increase from 2 to 4 lanes and improve intersections and pedestrian facilities; Purpose: Capacity; Facility class: Minor arterial (4); Length of project: 1 mile; Length of new sidewalk: 1 mile; Length of new pathway: 1 mile; Estimated cost: ^a \$7.5; Funding source: TIP; Linked project(s): 404.
409	Abbott Rd.	Lake Otis Pkwy.	Birch Rd.	Increase from 2 to 4 lanes and improve intersections and pedestrian facilities; Purpose: Capacity; Facility class: Minor arterial (4); Length of project: 2 miles; Length of new sidewalk: 2 miles; Length of new pathway: 2 miles; Estimated cost: ^a \$13.5; Funding source: TIP; Linked project(s): 219.
414	Arctic Blvd. Surface Rehabilitation	Fireweed Ln.	International Airport Rd.	Rehabilitate from 4 to 2 lanes plus a center turn lane from Fireweed Ln. to 36th Ave. (2006 construction); upgrade from 4 to 5 lanes from 36th Ave. to Tudor Rd. (2008 construction); upgrade from 4 to 5 lanes from Tudor Rd. to Raspberry Rd., and southbound right-turn lane at Tudor Rd. (2005 construction); Purpose: Maintenance and safety; Facility class: Minor arterial (4); Length of project: 3 miles; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$15.2; Funding source: TIP; Linked project(s): 221 and 423.
415	Lake Otis Pkwy.	Northern Lights Blvd.	DeBarr Rd.	Reconstruct and increase capacity, bridge over Chester Creek, Lake Otis/Northern Lights Blvd. intersection and pedestrian/landscape facilities; Purpose: Capacity; Facility class: Major arterial (3); Length of project: 0.85 miles; Length of new sidewalk: 0.85 mile; Length of new pathway: 0.85 mile; Estimated cost: ^a \$24.3; Funding source: TIP; Linked project(s): 603 and 632.
416	Dowling Rd. Extension	Laurel St.	Abbott Lp. Rd.	Add new facility—extend Dowling Rd. from Laurel St. to Abbott Loop Rd.; Purpose: Circulation and access; Facility class: Major arterial (3); Length of project: 0.9 mile; Length of new sidewalk: 0.9 mile; Length of new pathway: 0.9 mile; Estimated cost: ^a \$20; Funding source: State general fund; Linked project(s): 201 213, and 308.
417	Northwood Dr. Extension	88th Ave.	Dimond Blvd.	Add new facility—extend Northwood Dr. from Dimond Blvd. to 88th Ave; Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.5 mile; Length of new sidewalk: 1 mile; Length of new pathway: 8.9 miles; Estimated cost: ^a \$11.8; Funding source: Bond; Linked project(s): None.
418	100th Ave. Extension	Minnesota Dr.	King St.	Add new facility—extend 100th Ave. between Minnesota Dr. and King St.; Purpose: Circulation, access, and freight; Facility class: Collector (5); Length of project: 0.95 mile; Length of new sidewalk: 0.95 mile; Length of new pathway: 0.95 mile; Estimated cost: ^a \$9.1; Funding source: Bond; Linked project(s): None.
419	Muldoon Rd. Improvements	Tudor Rd.	Glenn Hwy.	Landscaping and pedestrian improvements; Purpose: Maintenance and safety; Facility class: Major arterial (3); Length of project: 3.55 miles; Length of new sidewalk: 3.55 miles; Length of new pathway: 3.55 miles; Estimated cost: ^a \$6.5; Funding source: TIP; Linked project(s): None.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Short-Term Projects (2006–2015)^b (continued)				
507	Jewel Lake Rd.	Dimond Blvd.	International Airport Rd.	Reconstruct Jewel Lake to operate as a 2 lane with center turn lane; Purpose: Maintenance and safety; Facility class: Major arterial (3); Length of project: 2.9 miles; Length of new sidewalk: 2.9 miles; Length of new pathway: 2.9 miles; Estimated cost: ^a \$19.9; Funding source: Bond; Linked project(s): 640.
603	Glenn Hwy./Seward Hwy. Connection	Glenn Hwy./Bragaw St.	Seward Hwy./Tudor Rd.	Construct freeway connection between Airport Heights Rd. and 36th Ave.; includes interchanges at Airport Heights Rd. and 36th Ave., freeway access and egress ramps elsewhere along the alignment; depressed segments of freeway that include the construction of bridges and decking above freeway for cross streets, community amenities, and redevelopment over highway airspace (see the section in this chapter titled Building the Glenn-Seward Highway Connection” for further discussion); Purpose: Circulation, access, and freight; Facility class: Freeway (1) and Ramps (7 & 8); Length of project: 4.9 miles; Length of new sidewalk: 4.9 miles; Length of new pathway: 4.9 miles; Estimated cost: ^a \$581; Funding source: TIP/National Highway System; Linked project(s): 209, 215, 303, 309, and 502.
604	48th Ave./Boniface Pkwy. Extension	48th Ave./Bragaw Rd.	Boniface Pkwy./Tudor Rd.	Add new facility—extend Boniface Pkwy. as an expressway parallel to Tudor Rd. connecting at the intersection of 48th Ave. and Bragaw Rd.; Purpose: Circulation and access; Facility class: Major arterial (3); Length of project: 1.2 miles; Length of new sidewalk: 1.2 miles; Length of new pathway: 1.2 miles; Estimated cost: ^a \$13.9; Funding source: TIP; Linked project(s): 213, 416, and 633.
618	40th Ave. Extension	Arctic Blvd.	Eureka St.	Add new facility—extend 40th Avenue from Arctic Blvd. to Eureka St.; Purpose: Capacity; Facility class: Collector (5); Length of project: 0.4 mile; Length of new sidewalk: 0.4 mile; Length of new pathway: 0.4 mile; Estimated cost: ^a \$2.7; Funding source: Bond; Linked project(s): None.
628	92nd Ave./Academy Dr. Extension	Brayton Dr.	Abbott Rd.	Add new facility—extend 92nd Avenue from Brayton Dr. to Abbott Rd.; Purpose: Circulation and access; Facility class: Collector (5); Length of project: 0.45 mile; Length of new sidewalk: 0.45 mile; Length of new pathway: 0.45 miles; Estimated cost: ^a \$4; Funding source: TIP; Linked project(s): None.
633	Boniface Pkwy. Access Management	Tudor Rd.	Glenn Hwy.	Add access management and related local circulation access to preserve capacity on Boniface Pkwy; Purpose: Capacity; Facility class: Expressway (2); Length of project: 3.1 miles; Length of new sidewalk: 3.1 miles; Length of new pathway: Not applicable; Estimated cost: ^a \$20; Funding source: TIP; Linked project(s): 604.
705	Tudor Rd. Access Management	Seward Hwy.	Arctic Blvd.	Add access management and turn restrictions; modify local connections to make adjacent property access to other roads; east-west or north-south in lieu of direct access from Tudor Rd. wherever practical; Purpose: Circulation, access, and freight; Facility class: Major arterial (3); Length of project: 1.25 miles; Length of new sidewalk: 1.25 miles; Length of new pathway: 1.25 miles; Estimated cost: ^a \$12.5; Funding source: TIP; Linked project(s): None.

The highlighting identifies the location of added text. See the Revisions chapter at the end of the book.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Short-Term Projects (2006–2015)^b (continued)				
706	Tudor Rd. Access Management	Seward Hwy.	Patterson St.	Add access management and turn restrictions; modify local connections to make adjacent property access to other roads; east-west or north-south in lieu of direct access from Tudor Rd. wherever practical; Purpose: Circulation, access, and freight; Facility class: Major arterial (3); Length of project: 3.7 miles; Length of new sidewalk: 3.7 miles; Length of new pathway: 3.7 miles; Estimated cost: ^a \$37; Funding source: TIP; Linked project(s): None.
707	Glenn Hwy. at Eagle River	Hiland Rd.	Artillery Rd.	Make necessary improvements at Hiland Rd. and Artillery Rd. interchanges and add a 3rd lane northbound and southbound between Hiland Rd. and Artillery Rd.; bridge improvements at Eagle River interchange, Hiland Rd. interchange, and 2 Eagle River bridges; Purpose: Circulation, access, and freight; Facility class: Freeway (1); Length of project: 2 miles; Length of new sidewalk: Not applicable; Length of new pathway: 4 miles; Estimated cost: ^a \$65; Funding source: TIP; Linked project(s): 639, 710, and 804.
801	92nd Ave.	King St.	Seward Hwy.	Add new facility—extend 92nd Ave. from King St. to Seward Hwy. and evaluate grade separation crossing of railroad; Purpose: Circulation, access, and freight; Facility class: Minor arterial; Length of project: 0.75 mile; Length of new sidewalk: 1.5 miles; Length of new pathway: 0 mile; Estimated cost: ^a \$15; Funding source: Bond; Linked project(s): 225 and 306.
802	84th Ave.	Hartzell Rd.	Lake Otis Pkwy.	Reconstruct existing road and add new segment; Purpose: Circulation and access; Facility class: Collector; Length of project: 0.5 mile; Length of new sidewalk: 1 mile; Length of new pathway: 0 mile; Estimated cost: ^a \$7; Funding source: TIP; Linked project(s): None.
803	Oilwell Rd.	North of Muldoon Rd. Interchange	Elmendorf Air Force Base Access Gate	Upgrade existing facility; Purpose: Safety and capacity; Facility class: Minor arterial; Length of project: 1 mile; Length of new sidewalk: 0 mile; Length of new pathway: 1 mile; Estimated cost: ^a \$5; Funding source: TIP; Linked project(s): 610.
804	Glenn Hwy. Interchange Operational Analysis and Improvements	Muldoon Rd. Interchange	Eklutna	Perform an operational and safety evaluation of all interchange facilities on the Glenn Hwy., including Thunderbird Falls exit and North Peters Creek; Purpose: Safety and capacity; Facility class: Freeway; Length of project: Not applicable; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$5; Funding source: TIP; Linked project(s): 707.
805	Huffman Rd.	Elmore Rd.	Birch Rd.	Reconstruct road; Purpose: Safety; Facility class: Collector; Length of project: 1 mile; Length of new sidewalk: 0 mile; Length of new pathway: 1 mile; Estimated cost: ^a \$7.1; Funding source: TIP; Linked project(s): 702 and 806.
806	Birch Rd.	Huffman Rd.	O'Malley Rd.	Reconstruct road; Purpose: Safety; Facility class: Collector; Length of project: 1 mile; Length of new sidewalk: 0 mile; Length of new pathway: 1 mile; Estimated cost: ^a \$8; Funding source: TIP; Linked project(s): 805.
807	North Access to University-Medical District	Providence Dr.	Northern Lights Blvd.	Add new facility—north access to University-Medical District; Purpose: Circulation, capacity, and safety; Facility class: To be determined; Length of project: 0.5 mile; Length of new sidewalk: 0.5 mile; Length of new pathway: 0.5 mile; Estimated cost: ^a \$25; Funding source: TIP; Linked project(s): None.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Short-Term Projects (2006–2015)^b (continued)				
808	Mountain Air Dr.	Rabbit Creek Rd.	E. 164th Ave.	Add new facility—extend Mountain Air Dr. from Rabbit Creek Rd. to E. 164th Ave. (extended); Purpose: Circulation and access; Facility class: Collector; Length of project: 1 mile; Length of new sidewalk: 0 mile; Length of new pathway: 1 mile; Estimated cost: To be determined; Funding source: To be determined; Linked project(s): None.
809	Unnamed (Heritage Land Bank/Mental Health Trust/Private)	Goldenview Dr.	Potter Valley Rd./Old Seward Hwy.	Add new facility from Goldenview Dr. to Potter Valley Rd./Old Seward Hwy.; Purpose: Circulation and access; Facility class: Collector; Length of project: 1 mile; Length of new sidewalk: 0 mile; Length of new pathway: 1 mile; Estimated cost: To be determined; Funding source: To be determined; Linked project(s): None.
Long-Term Projects (2016–2025)				
302	Seward Hwy./O'Malley Rd. Interchange	Old Seward Hwy.	Seward Hwy.	Add freeway system interchange at Seward Hwy. and O'Malley Rd., and interchange at Old Seward Highway and O'Malley Rd.; Purpose: Circulation, access, and freight; Facility class: Ramps (7&8); Length of project: 3.9 miles; Length of new sidewalk: 3.9 miles; Length of new pathway: 3.9 miles; Estimated cost: ^a \$60.6; Funding source: TIP; Linked project(s): 210 and 311.
311	Seward Hwy.	O'Malley Rd.	Rabbit Creek Rd.	Add ramp and pedestrian facility improvements from O'Malley Rd. to Rabbit Creek Rd.; Purpose: Circulation, access, and freight; Facility class: Freeway (1); Length of project: 3 miles; Length of new sidewalk: 3 miles; Length of new pathway: 3 miles; Estimated cost: ^a \$9.5; Funding source: State general fund; Linked project(s): 303.
501	Whitney Rd.	North C St.	Post Rd.	Upgrade Whitney Rd. to urban industrial standards; may include relocation of the Whitney Rd.; Purpose: Maintenance, safety, and freight; Facility class: Collector (5); Length of project: 1.05 miles; Length of new sidewalk: 1.05 miles; Length of new pathway: 1.05 miles; Estimated cost: ^a \$7; Funding source: TIP; Linked project(s): 502; Priority: Long term (2016-2025)
502	Ingra-Gambell Extension	3rd Ave.	Whitney Rd.	Add new facility—extend Ingra St./Gambell St. to Ship Creek Ave. and Whitney Rd.; Purpose: Circulation, access, and freight; Facility class: Major arterial (3); Length of project: 0.6 mile; Length of new sidewalk: 0.6 mile; Length of new pathway: 0.6 mile; Estimated cost: ^a \$26; Funding source: TIP; Linked project(s): 209, 215, 501, and 603; Priority: Long term (2016-2025)
506	Seward Hwy.	Potter Weigh Station	Rabbit Creek Rd.	Reconstruct and widen Seward Hwy. between Potter Weigh Station and Rabbit Creek Rd.; Purpose: Circulation, access, and freight; Facility class: Freeway (1); Length of project: 2.65 miles; Length of new sidewalk: 2.65 miles; Length of new pathway: 2.65 miles; Estimated cost: ^a \$35; Funding source: TIP; Linked project(s): 303 and 311; Priority: Long term (2016-2025)
510	Minnesota Dr. (Northbound)	26th Ave.	16th Ave.	Reconstruct and add one lane to improve capacity northbound; Purpose: Capacity and freight; Facility class: Major arterial (3); Length of project: 0.7 mile; Length of new sidewalk: 0.7 mile; Length of new pathway: 0.7 mile; Estimated cost: ^a \$16.7; Funding source: TIP; Linked project(s): None; Priority: Long term (2016-2025)

The highlighting identifies the location of added text. See the Revisions chapter at the end of the book.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Long-Term Projects (2016–2025) (continued)				
514	A/C St. Couplet Restripe	Tudor Rd.	9th Ave.	Restripe to include 4 lanes in each direction; Purpose: Capacity and freight; Facility class: Major arterial (3); Length of project: 4.5 miles; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$0.48; Funding source: TIP; Linked project(s): None.
515	C St./Ocean Dock Rd. Access Ramp	C St. Viaduct	Ocean Dock Rd.	Reconstruct the ramp at Ship Creek; Purpose: Maintenance, safety, and freight; Facility class: Collector (5); Length of project: 0.05 mile; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$10; Funding source: TIP; Linked project(s): None.
518	Postmark Dr./International Airport Rd. Grade Separation	Postmark Dr.	International Airport Rd.	Add grade separation of International Airport Rd. over Postmark Dr; Purpose: Circulation, access, and freight; Facility class: Not applicable; Length of project: Not applicable; Length of new sidewalk: 0 mile; Length of new pathway: 0 mile; Estimated cost: ^a \$21; Funding source: TIP; Linked project(s): None.
609	Jewel Lake Rd./International Airport Rd. Grade Separation	Jewel Lake Rd.	Northwood St.	Construct interchange at International Airport Road and Jewel Lake incorporating a grade separation of the railroad and construct a grade separation of International Airport Road near Northwood street with realignment of railroad to the south side of International Airport Rd.; Purpose: Circulation, access, and freight; Facility class: Not applicable; Length of project: Not applicable; Length of new sidewalk: 0 miles; Length of new pathway: 0 miles; Estimated cost: ^a \$45; Funding source: TIP; Linked project(s): None.
610	Muldoon Rd. Interchange	Glenn Hwy.	at Muldoon Rd.	Reconstruct ramps at the intersection of Glenn Hwy. and Muldoon Rd. to meet current safety standards; Purpose: Capacity and freight; Facility class: Ramps (7 & 8); Length of project: Not applicable; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$5.1; Funding source: TIP; Linked project(s): None.
621	Minnesota Dr. Frontage Road	Dimond Blvd.	Raspberry Rd.	Add new facility on the east side of Minnesota Dr. only; one-way frontage road parallel to Minnesota Dr. between Dimond Blvd. and Raspberry Rd.; Purpose: Capacity; Facility class: Frontage (10); Length of project: 3.1 miles; Length of new sidewalk: 3.1 miles; Length of new pathway: 3.1 miles; Estimated cost: ^a \$16.8; Funding source: TIP; Linked project(s): None.
627	Minnesota Dr. Corridor	International Airport Rd.	Northern Lights Blvd.	Extend controlled access from International Airport Rd. through an interchange at Tudor Rd. and widen the arterial to 8 lanes north of Tudor Rd.; Purpose: Capacity and freight; Facility class: Frontage (10); Length of project: 1.6 miles; Length of new sidewalk: 3.2 miles; Length of new pathway: Not applicable; Estimated cost: ^a \$19.9; Funding source: TIP; Linked project(s): 406 and 638.
632	Lake Otis Pkwy. Extension	DeBarr Rd.	Glenn Hwy.	Add new facility—extend Lake Otis Parkway to Glenn Hwy. interchange at Airport Heights Rd.; Purpose: Circulation and access; Facility class: Minor arterial (4); Length of project: 0.7 mile; Length of new sidewalk: 0.7 mile; Length of new pathway: Not applicable; Estimated cost: ^a \$16; Funding source: TIP; Linked project(s): 415 and 603.

Table 8-1. Recommended Road Improvement Projects

Project Number	Facility Name	From	To	Project Purpose and Description
Long-Term Projects (2016–2025) (continued)				
638	Minnesota Dr./Tudor Rd. Interchange	Minnesota Dr.	at Tudor Rd.	Add new facility—construct grade-separated interchange; Purpose: Capacity and freight; Facility class: Major arterial(3) Ramps (7&8); Length of project: Not applicable; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$25; Funding source: TIP; Linked project(s): 627.
639	Glenn Hwy. HOV Lane	Boniface Pkwy.	Eagle River; Artillery Rd. Interchange	Widen with lanes to the inside with 1 lane each direction designated non-SOV, includes Ship Creek Bridge improvements; Purpose: Capacity and freight; Facility class: Freeway (I); Length of project: 11.3 miles; Length of new sidewalk: 0 mile; Length of new pathway: Not applicable; Estimated cost: ^a \$38.3; Funding source: TIP; Linked project(s): 610, 707, and 710.
702	Elmore Rd. Extension	Rabbit Creek Rd.	DeArmoun Rd.	Add new facility—extend Elmore Rd. from Rabbit Creek Rd. to DeArmoun Rd.; Purpose: Circulation and access; Facility class: Collector (5); Length of project: 1 mile; Length of new sidewalk: 2 miles; Length of new pathway: Not applicable; Estimated cost: ^a \$8; Funding source: TIP; Linked project(s): 805.
708	Rabbit Creek Rd.	Seward Hwy.	Goldenview Dr.	Upgrade to 3-lane arterial; Purpose: Capacity; Facility class: Minor arterial (4); Length of project: 1 mile; Length of new sidewalk: 1 mile; Length of new pathway: 1 mile; Estimated cost: ^a \$4.5; Funding source: TIP; Linked project(s): 702.
709	Railroad. Grade Separation at Spenard Rd. and at C St.	Spenard Rd.	at C St.	Add railroad grade separation at Spenard Rd. near 36th Ave. (\$105), and at C St. near Raspberry Rd. (\$25); Purpose: Maintenance, safety, and freight; Facility class: Not applicable; Length of project: Not applicable; Length of new sidewalk: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$130; Funding source: Other; Linked project(s): None.
710	Glenn Hwy. HOV Lane	Eagle River; Artillery Rd. Interchange	Mile 21.5 S. Peters Creek Interchange (Voyles Rd.)	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: Not applicable; Length of new pathway: Not applicable; Estimated cost: ^a \$61.8; Funding source: TIP; Linked project(s): None.
Projects for Which the Funding Priority Is Undetermined				
601	Lake Otis Pkwy./ Tudor Rd. Intersection	Lake Otis Pkwy.	Tudor Rd.	Add left- and right-turn lanes where needed to improve capacity and efficiency of existing intersection; finished configuration will have 2 left-turn lanes and one free right-turn lane at each approach; Purpose: Circulation and access; Facility class: Not applicable; Length of project: Not applicable; Length of new sidewalk: 0 miles; Length of new pathway: 0 miles; Estimated cost: ^a \$10; Funding source: Bond/TIP; Linked project(s): 705 and 706. (The MOA Traffic Engineer, in consultation with DOT&PF, shall provide a report to AMATS Policy Committee within 6 months after Project 213 is open for public use to identify the congestion relief accomplished or expected to be accomplished with full completion of Projects 213 and 416 and quantifying the additional congestion relief that may be accomplished through Project 601.)

^a Estimated costs are in millions of 2004 dollars.^b Some short-term projects will be completed after 2015.

Note: In addition to the recommended projects identified in this list, existing roadways that are currently not constructed to urban standards may need to be upgraded during the time covered by the LRTP (through 2025). Road upgrade projects typically result in the same number of lanes for the road. Improvements may also include sidewalks, pathways, and accommodations that comply with requirements of the Americans with Disabilities Act.

Source: CH2M HILL

The highlighting identifies text revised. See the Revisions chapter at the end of the book.

Table 8-2. Recommended Pedestrian and Trail Projects—Improvements Associated with Recommended Road Projects

Project Number	Facility Name	From	To	Sidewalk Miles	Separated Pathway Miles
202	C St. Extension Phase III	O'Malley Rd.	Dimond Blvd.	1.5	1.5
203	Fireweed Ln. Surface Rehab.	Spenard Rd.	Seward Hwy.	1.25	1.25
204	DeArmoun Rd. Reconstruction Phase II	140th Ave.	Hillside Dr.	2.4	2.4
206	Victor Rd.	100th Ave.	Dimond Blvd.	0.5	0.5
209	Glenn Hwy.	Ingra St./Gamble St.	McCarrey St.	2.4	2.4
210	Minnesota/C St. Interchange	C St.	C St.	0.6	0.6
211	Creekside Town Center Couplet	DeBarr Rd. at Creekside	DeBarr Rd. at Muldoon	0.9	0.9
213	Abbott Loop Extension	Abbott Rd.	E. 48th Ave.	1.05	1.05
214	Northern Lights Blvd.	Nathaniel Ct.	Wisconsin Ave.	0.5	0.5
215	3rd Ave. Surface Rehab.	Post Rd.	Reeve Blvd.	1.5	0
216	Hartzell Rd. Extension	Lore Rd.	79th Ave.	0.2	0.2
217	Independence Dr. Extension	Abbott Rd.	O'Malley Rd.	0.4	0.4
221	Raspberry Rd. Extension	Rovenna St.	Arctic Blvd.	0.5	0.5
226	40th Ave. Extension	Lake Otis Pkwy.	Piper St.	2.0	NA
301	International Airport Rd. Extension	Old Seward Hwy.	Brayton	0.7	0
302	Seward Hwy./O'Malley Rd. Interchange	Old Seward Hwy.	Seward Hwy.	3.9	3.9
303	Seward Hwy.	O'Malley Rd.	36th Ave.	4.5	4.5
304	68th Ave. Extension	Homer Dr.	Brayton Dr.	0.6	0
305	76th Ave. Extension	Homer Dr.	Brayton Dr.	0.2	0
306	92nd Ave. Extension	Homer Dr.	Brayton Dr.	0.2	0
308	Dowling Rd. Extension	Raspberry Rd.	Old Seward Hwy.	1.65	1.65
309	Glenn Hwy. Corridor Improvements	Ingra St./Gamble St.	McCarrey St.	0.3	0.3
311	Seward Hwy.	O'Malley Rd.	Rabbit Creek Rd.	3	3
401	O'Malley Rd.	Seward Hwy.	Hillside Dr.	3.65	3.65
404	Old Seward Hwy.	Brandon St.	O'Malley Rd.	1.5	1.5

Table 8-2. Recommended Pedestrian and Trail Projects—Improvements Associated with Recommended Road Projects

Project Number	Facility Name	From	To	Sidewalk Miles	Separated Pathway Miles
406	Spenard Rd. Surface Rehab.	Minnesota Rd.	Minnesota Rd. Onramp	0.15	0.15
407	Huffman Rd.	Old Seward Hwy.	Lake Otis Pkwy.	1	1
409	Abbott Rd.	Lake Otis Pkwy.	Birch Rd.	2	2
415	Lake Otis Pkwy.	Northern Lights Blvd.	DeBarr Rd.	0.85	0.85
416	Dowling Rd. Extension	Laurel St.	Abbott Lp. Rd.	0.9	0.9
417	Northwood Dr. Extension	88th Ave.	Dimond Blvd.	1	8.9
418	100th Ave. Extension	Minnesota Dr.	King St.	0.95	0.95
419	Muldoon Rd. Improvements	Tudor Rd.	Glenn Hwy.	3.55	3.55
501	Whitney Rd.	North C St.	Post Rd.	1.05	1.05
502	Ingra-Gambell Extension	3rd Ave.	Whitney Rd.	0.6	0.6
506	Seward Hwy.	Potter Weigh Station	Rabbit Creek Rd.	2.65	2.65
507	Jewel Lake Rd.	Dimond Blvd.	International Airport Rd.	2.9	2.9
510	Minnesota Dr. (Northbound)	26th Ave.	16th Ave.	0.7	0.7
603	Glenn Hwy./Seward Hwy. Connection	Glenn Hwy./McCarrey St.	Seward Hwy. (36th)	4.9	4.9
604	48th Ave./Boniface Pkwy. Extension	48th Ave./Bragaw Rd.	Boniface Pkwy./Tudor Rd.	1.2	1.2
618	40th Ave. Extension	Arctic Blvd.	Eureka St.	0.4	0.4
621	Minnesota Dr. East side Frontage Road	Dimond Blvd.	Raspberry Rd.	3.1	3.1
627	Minnesota Dr. Corridor	International Airport Rd.	Northern Lights Blvd.	3.2	NA
628	92nd Ave./Academy Dr. Extension	Brayton Dr.	Abbott Rd.	0.45	0.45
632	Lake Otis Pkwy. Extension	DeBarr Rd.	Airport Heights Rd.	0.7	NA
633	Boniface Pkwy. Access Management	Tudor Rd.	Glenn Hwy.	3.1	NA
702	Elmore Rd. Extension	Rabbit Creek Rd.	DeArmoun Rd.	2	NA
705	Tudor Rd. Access Management	Seward Hwy.	Arctic Blvd.	1.25	1.25
706	Tudor Rd. Access Management	Seward Hwy.	Patterson St.	3.7	3.7
707	Glenn Hwy. at Eagle River	Hiland Rd.	Artillery Rd.	NA	4

Table 8-2. Recommended Pedestrian and Trail Projects—Improvements Associated with Recommended Road Projects

Project Number	Facility Name	From	To	Sidewalk Miles	Separated Pathway Miles
708	Rabbit Creek Rd.	Seward Hwy.	Goldenview Dr.	1	1
801	92nd Ave.	King St.	Seward Hwy.	1.5	NA
802	84th Ave.	Hartzell Rd.	Lake Otis Pkwy.	1.0	NA
803	Oilwell Road	north of Muldoon Rd. interchange	Elmendorf Air Force Base Access Gate	1.0	NA
			Total Miles	82.7	76.9

NA = Not applicable

Source: CH2M HILL