

## 2.4 Transportation

The transportation system is a key factor in planning future development, land uses, and public services. West Anchorage contains surface roads, which serve private transportation, public transportation, and freight distribution. The area also includes railroad tracks and facilities, TSAIA, a major floatplane base, and a diversity of non-motorized transportation facilities.

### 2.4.1 Roads

It is estimated that of the more than 1 million trips taken within the Bowl each typical weekday (including Mat-Su Valley commuters), 90% are made in personal vehicles. The remaining trips are a combination of walking (6%), school bus (2%), public transit (1%), and bicycle (1%).



International Airport Road, eastbound (Robinson, 2009)

The State and the Municipality have been encouraging the use of other modes of travel (transit, carpools, vanpools, etc.) since these can reduce congestion and contribute to a more efficient use of the existing transportation system. Bicycle and pedestrian use is increasing, but gaps in the pathway/sidewalk system, major road crossings, inadequate snow removal, signage, and lighting still need to be addressed in order to improve the number of non-motorized trips.

#### Road Classification

The *Official Streets and Highways Plan* (OS&HP) identifies the functional street classifications and minimum right-of-way widths required to convey traffic volumes as areas of Anchorage are developed. Projected traffic volumes are based on land uses designated on the Municipality's official Land Use Plan Map and population projections. The OS&HP functional street classification supports land use objectives by providing a serviceable road network with appropriate physical characteristics. Exhibit 2-6 depicts the official Municipal road classifications.

The LRTP recommended the functional classifications in the OS&HP be augmented to include street typology or design elements applied to the full right-of-way in each street. Street typologies describe not only lane configuration, but also how the street relates to the adjacent land use by setting priorities for certain design elements. This is the process for Context Sensitive Solutions. A list of street typologies, representative design features, and built examples are highlighted in Table 2.4-1. Street typology does not override decisions about street design. Rather, it is a tool used in conjunction with engineering specifications, plans like the LRTP and *Non-Motorized Transportation Plan*, physical constraints of the ROW, the context of adjacent land uses, and feedback from the community.

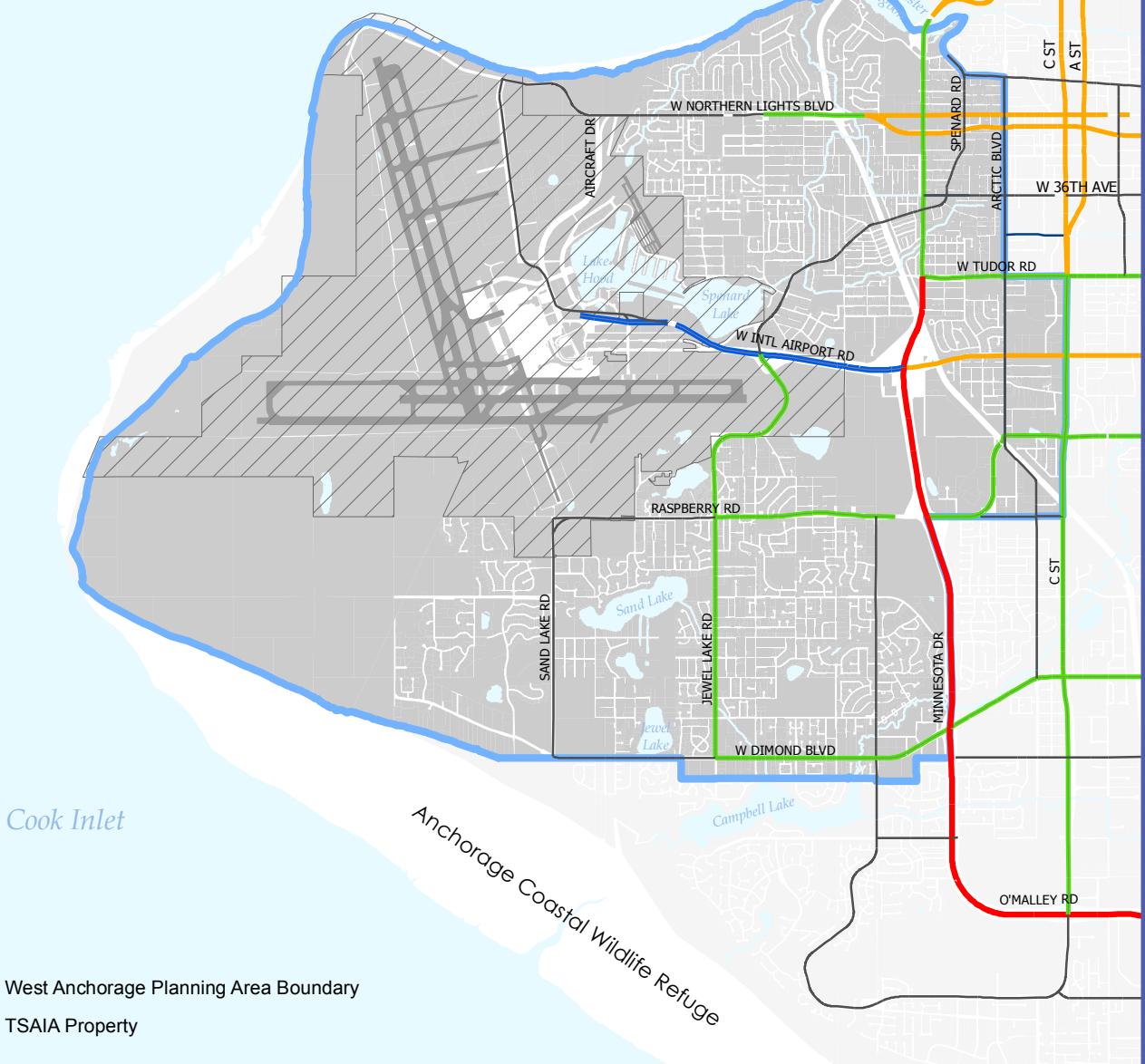
### Official Streets and Highway Classifications

- Freeway (V)
- Expressway (IV)
- Major Arterial - Divided (III, IIIA)
- Major Arterial - Undivided (IIIB, IIIC)
- Minor Arterial (II, IIA)

*Knik Arm*

**Note:**

Dashed lines indicate segments that have been changed since the last comprehensive LRTP update.



**Table 2.4-1**  
**Road Typology Examples**

Street Typology	Purpose	Potential Design Features	Example
<i>Residential Street</i>	Balance need for land access with multimodal mobility and pedestrian-orientation; more pedestrian-oriented than commercial streets.	Two travel lanes; greater emphasis on walking, biking, and land access.	Wisconsin Street
<i>Commercial Street</i>	Balance need for traffic mobility with land access.	Three to six lanes divided by a landscaped median or continuous center lane for left turns; frequent intersections.	Dimond Blvd,
<i>Industrial Street</i>	Accommodate significant volumes of large trucks and trailers; infrequent bicycle and pedestrian use.	Two to four (wider-15 to 20 feet) travel lanes without bicycle lanes or on-street parking; narrower sidewalks.	C Street – industrial major arterial
<i>Main Street</i>	Medium-intensity retail and mixed land uses as defined by the Town Center designation in <i>Anchorage 2020</i> ; promote walking, bicycling and transit within an attractive landscaped corridor.	Two to four travel lanes; on-street parking; wider sidewalks (10 feet or greater); street furniture, plazas, and other features concentrated within a two- to eight-block area.	West Dimond Boulevard at Jewel Lake Road – main street major arterial
<i>Transit Corridor</i>	Accommodate of alternative modes of transportation the highest concern.	Two to four travel lanes; increased use of pedestrian, bicycle, and transit design features.	Jewel Lake Road – transit corridor major arterial
<i>Mixed-Use Street</i>	Mix of high-intensity commercial, retail, and residential with substantial pedestrian activity.	Two to four travel lanes; on-street parking and wide sidewalks; trees, lawns, and street furniture.	Spenard Road – mixed-use street minor arterial
<i>Park Land Street</i>	Minimize disturbance to the natural setting; accommodate low to moderate amounts of traffic.	Natural vegetation landscaping to reduce noise, air pollution, and visibility of the road; grade-separated crossing for recreationist and wildlife collision prevention measures.	Raspberry Road (west of Sand Lake Road) – park land street collector

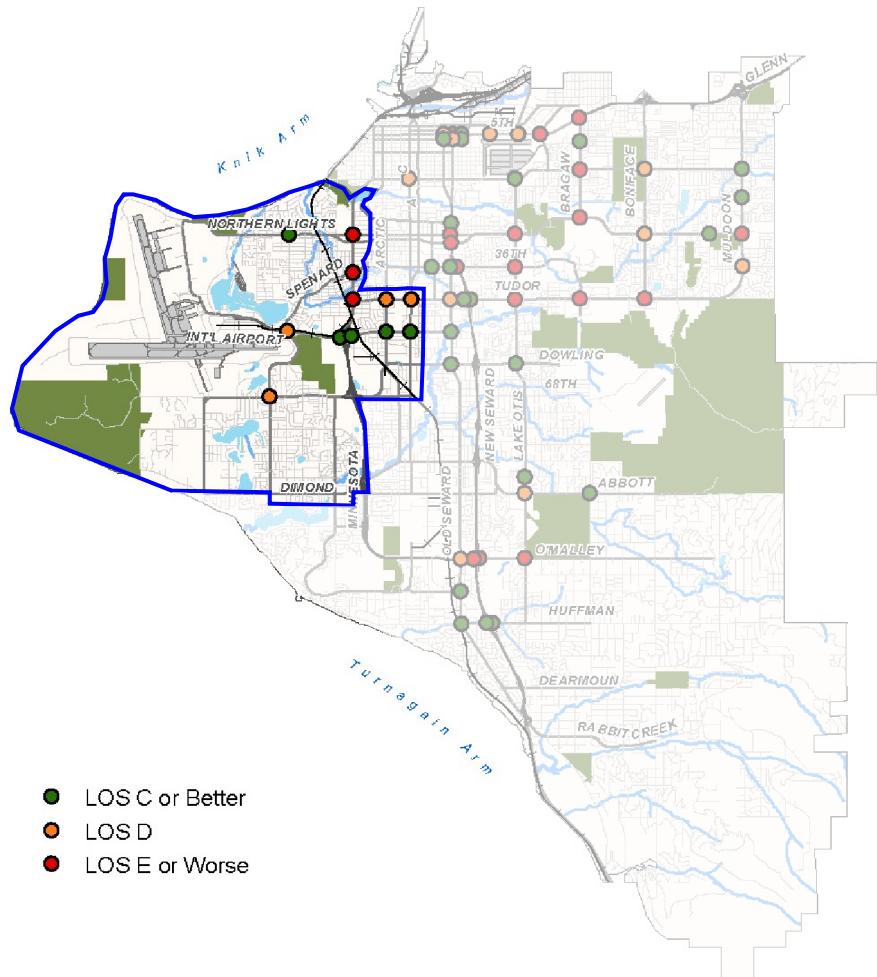
Source: LRTP (MOA, 2005)

### Level of Service

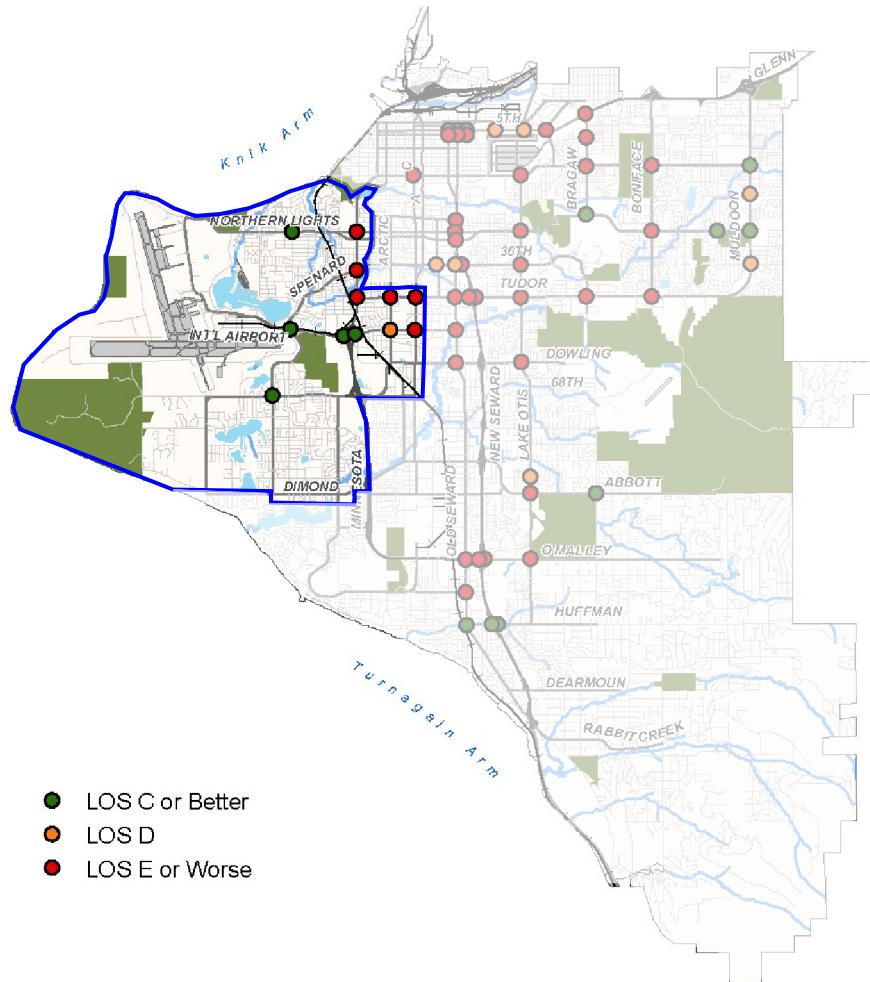
For transportation planning, “level of service” (LOS) is a measure of how well traffic flows on a road based on its design and capacity. LOS ranges from “A” or “under capacity” to “F” or “over capacity.” For example, Minnesota Drive from International Airport Road to West Dimond Boulevard experiences LOS “D” (i.e., congested conditions stall traffic) during afternoon peak periods.

Based on analysis for congestion management, Anchorage Metropolitan Area Transportation Solutions (AMATS) found that LOS at intersections is the key determinant of congestion in Anchorage. Throughout the Bowl, intersections of major east-west and north-south arterials cause bottlenecks or delays. Intersection congestion appears to be worse in the afternoon, particularly along east-west arterials like Northern Lights Boulevard. Exhibit 2-7 shows intersection LOS for morning and afternoon rush hours.

Morning Peak Hour Intersection Level of Service



Afternoon Peak Hour Intersection Level of Service



## Road Maintenance

Road maintenance includes signing, lighting, street and walkway/trailway sweeping, traffic signal system operation, snow clearing, pothole/general repair, and landscaping. The responsibility for maintaining roadways in Anchorage is shared by the MOA and the ADOT&PF according to ownership with a few formal agreements to exchange maintenance responsibilities for efficiency. State and municipal road ownership is shown on Exhibit 2-8.

The MOA and ADOT&PF have improved communication and coordination of snow removal efforts. For example, the MOA authorized ADOT&PF to use municipal snow dump facilities to shorten the distance for snow hauling. However, problems with sidewalk snow removal persist. This is due to a variety of reasons including: equipment incompatibility, tenants that do not plow in front of their properties, and street/sidewalk design that does not accommodate snow storage or equipment. Snow management (sanding, salting, piling, and melting) can have environmental management consequences related to runoff, trash accumulation, and airborne particulates. The Public Works' Street Maintenance website <http://www.muni.org/departments/works/operations/streets> contains maps that demonstrate the areas that are plowed for snow, as well as bus stop, sidewalk, and trail snow removal priorities.

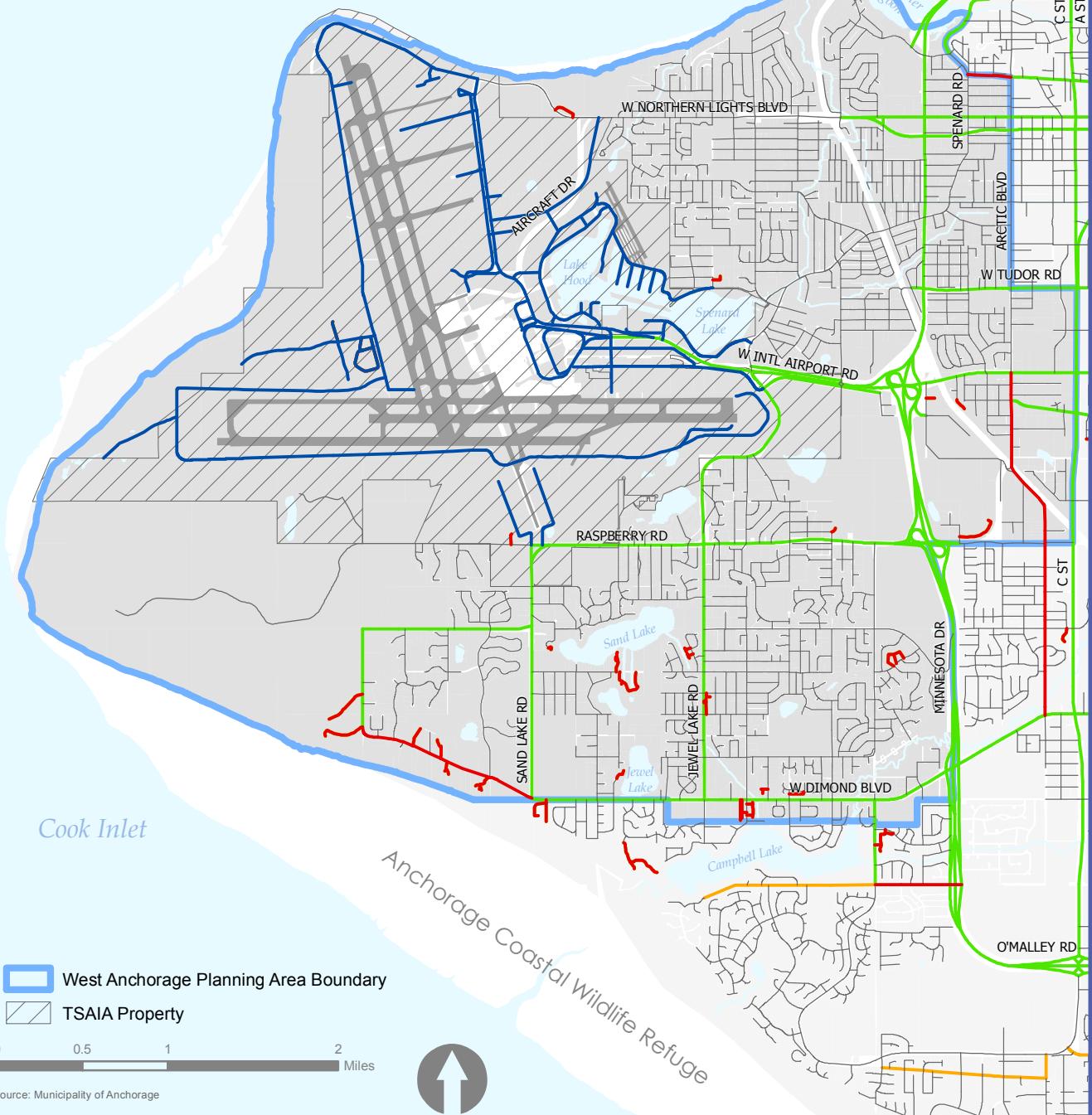
## Road Improvements

Surface road improvements are funded through the Statewide Transportation Improvement Program (federal) and/or Capital Improvement Program (MOA). Federally funded projects are prioritized through AMATS. Each of these agencies has a public process for the design and reconstruction of roads. The Municipality adopted a context sensitive design (CSD) planning process that focuses on early public engagement and the relationship between land use and transportation systems. The *WADP* helps establish the context for future road projects by recommending a long-range vision and land use patterns that need to be considered early in the road design process.

## Summer and Winter Road Maintenance

- State TSAIA - Summer and Winter
- MOA - Summer, State DOT&PF - Winter
- MOA - Summer and Winter
- State DOT&PF - Summer, MOA - Winter
- State DOT&PF - Summer and Winter

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## 2.4.2 Freight Distribution

Ninety percent of the total volume of goods entering Anchorage comes through the Port of Anchorage. Daily truck traffic is highest on the Glenn and Seward Highways and around the Port – all outside the planning area.

Most air cargo flights using TSAIA are merely stopping to refuel before continuing to their final destination. The smaller percent of goods intended for the Alaska market are distributed by truck from the airport to several nearby freight distribution centers in West Anchorage.

**Permitted for Commercial Vehicles** – The functional classification of each street, as determined by the OS&HP, determines whether or not a street can be used by commercial vehicles, including double-loaded trucks.

## 2.4.3 Public Transportation

Public transit accounts for over 1% of typical weekday trips in Anchorage, and school buses account for approximately 2%. People Mover is the fixed route bus service for Anchorage; funded by local and federal dollars and operated by the MOA. Unlike most metropolitan transit systems, People Mover's operating expenses are not funded by the State.

People Mover has two bus routes that run on the half-hour (6 a.m. to 11 p.m.) through West Anchorage connecting the downtown Transit Center and Dimond Center. The route to the airport is hourly. Most of West Anchorage has limited bus service due to the small number of routes. The most heavily used bus routes are along Spenard Road and Jewel Lake Road, where many existing bus shelters are inadequate.

More information on public transportation services can be found in the *Anchorage Human Services Transportation Coordination Plan* online.



*ARRC Double Track Project Concept<sup>5</sup>*

During summer months, several trains per day can run from the airport spur and a total of 20 trains per day can run from Milepost 110 (near International Airport Road and Minnesota Drive) to Milepost 114 in Ship Creek.<sup>5</sup> Residents in close proximity to the tracks have complained about noise and vibrations.

#### 2.4.4 Railroad

The Alaska Railroad Corporation (ARRC) main line track runs from the Intermodal Center in Ship Creek, through Turnagain and Spenard neighborhoods and the industrial areas south of International. The airport spur, which is used primarily for seasonal cruise ship charter service to the airport, runs west from the mainline at Minnesota Drive to the airport. It follows the north edge of International Airport Road until it crosses Jewel Lake/Spenard Road and then switches to the south edge of International Airport Road.

ARRC is considering an addition of 10 miles of double-track on both sides of its terminals to accommodate the busiest segment in the ARRC system. This second track would be achieved within the existing ROW to accommodate the projected increase in passenger traffic and a modest increase in freight.

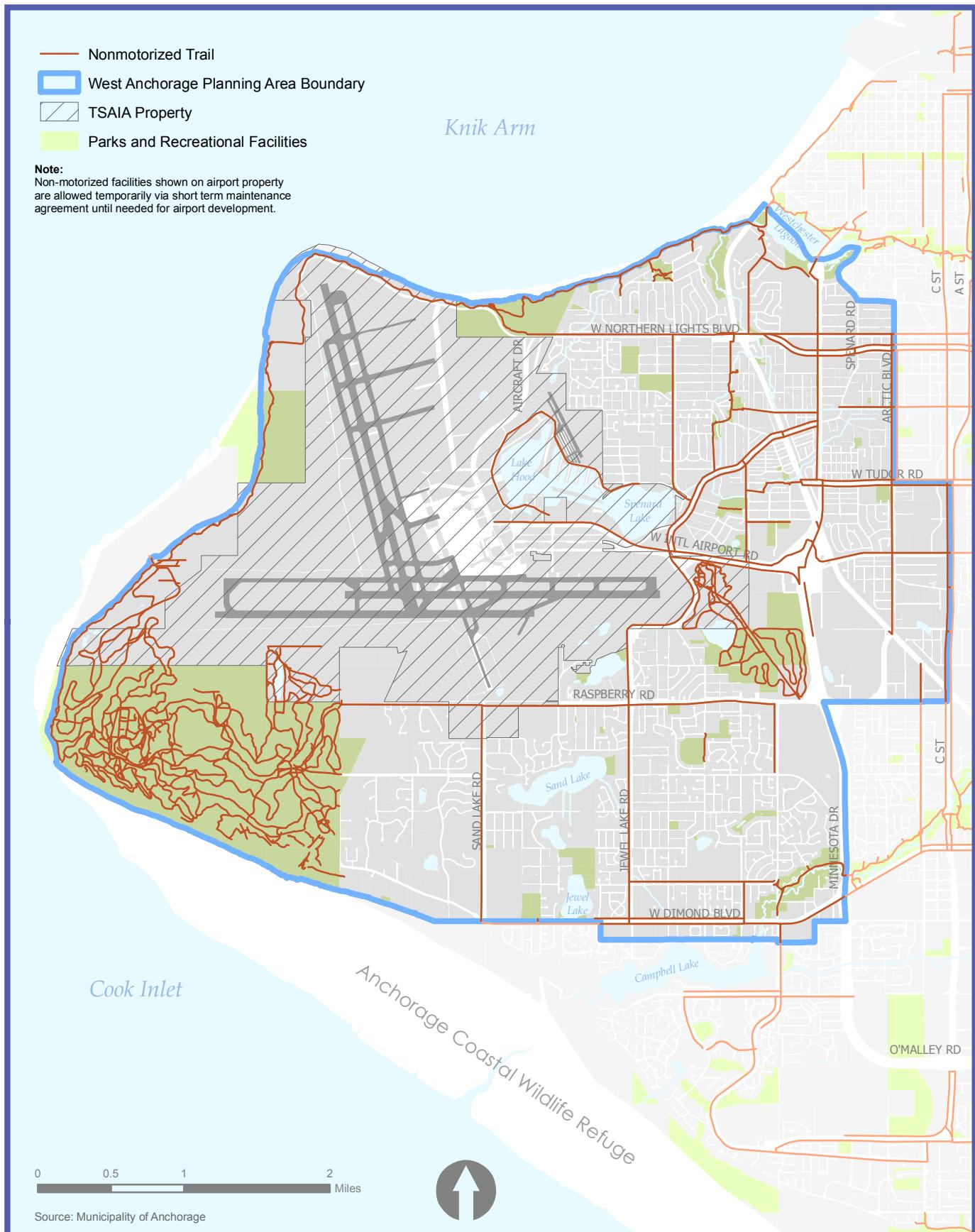
The International Airport Road transportation corridor remains a critical access point to the airport for both rail and truck. The at-grade rail crossings are a safety issue, but future passenger and material freight have not been substantial enough to justify a project to construct above-grade crossings or rail realignment to the south side of International Airport Road.

Another long-term project is the creation of a commuter rail system connecting Anchorage to the Mat-Su Valley. After creation of a "regional transit authority," a full-corridor scenario that includes intermodal service to Girdwood, Dimond Center, the airport, and Spenard is envisioned in an updated *ARRC Southcentral Rail Network Commuter Study and Operation Plan*. A timeline and any land acquisition requirements are not underway at this time.

An LRTP goal is to provide viable transportation choices among various modes. To implement this goal, the MOA developed a three-part *Non-Motorized Transportation Plan*. This includes the Anchorage Pedestrian Plan adopted in 2007, the Anchorage Bicycle Plan adopted in 2010, and the Areawide Trails Plan adopted in 1997 (a revision process should be completed in 2012-2013..

Walking accounts for about 6% of the trips within Anchorage and bicycles account for about 1%. Fourteen percent of students surveyed in 2002 reported walking to school in the spring. The pedestrian facilities in Anchorage are divided into three categories: pathways (including multi-use paved pathways/walkways and sidewalks), paved greenbelt trails, and unpaved trails shown in Exhibit 2-9. This is a map of existing and proposed pedestrian facilities in West Anchorage. Bicyclists utilize a number of types of pedestrian facilities as

<sup>5</sup> Source: Anchorage Railroad Corporation, 2008. "Project Facts: Anchorage Rail Capacity Improvements MP 114-110"



well as the shoulder of roadways. The *Anchorage Bicycle Plan* includes a “core” network shown in Exhibit 2-10.<sup>6</sup>

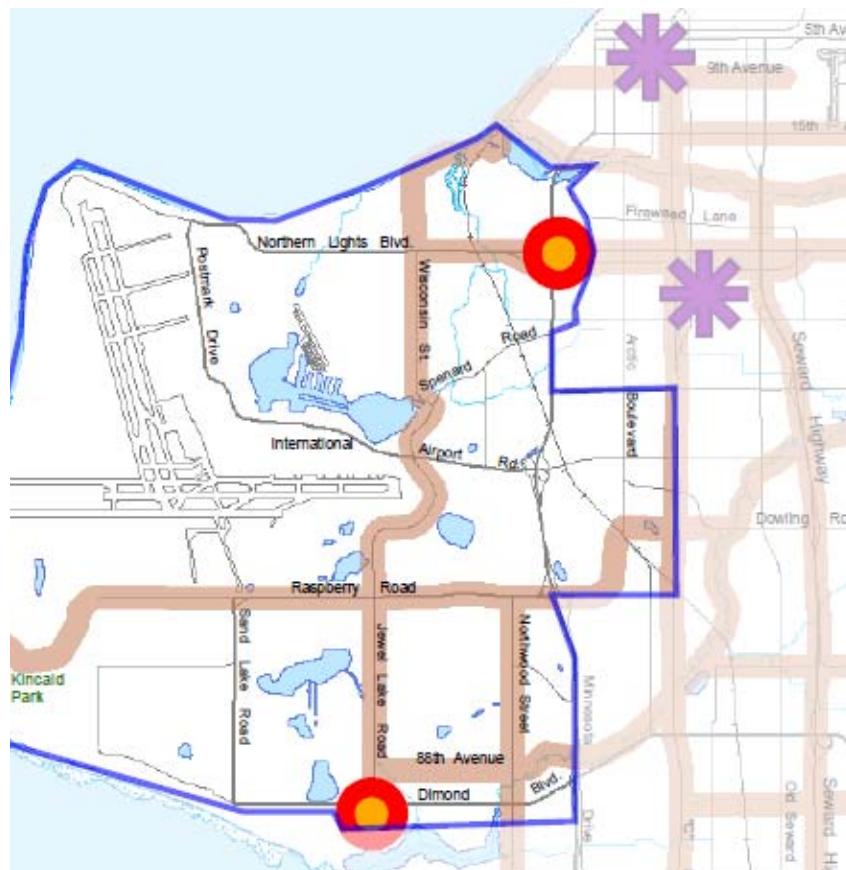


Exhibit 2-10 Core Bicycle Network from the *Anchorage Bicycle Plan*

pedestrian facilities are found in the Sand Lake Community Council area.

Under today's subdivision standards, the requirement to build a sidewalk along a local street depends on the number of average daily vehicle trips. Streets with low volumes are not required to have sidewalks, while other streets must have sidewalks on only one side of the street. Streets carrying more than 1,000 average daily trips are required to have sidewalks on both sides of a street. Impediments to pedestrian facilities include snow storage, utility poles, trash containers, and mailboxes. A complete list of priority projects to connect walkways and sidewalks, as well as requisite lighting and safe road crossings, are found in the Appendix of the Anchorage Pedestrian Plan.

### Paved and Unpaved Trails

There are about 180 miles of multi-use paved trails in the Bowl located within parks, greenbelts, and within road ROWs. Popular paved trails in West Anchorage include:

- The Tony Knowles Coastal Trail.
- Fish Creek Greenbelt Trail.
- Jewel Lake Road separated pathway.
- Lake Hood separated walkways and widened road around Lake Hood.
- Campbell Creek Trail.

The *Anchorage Pedestrian Plan* notes that compact development increases the likelihood of walking trips. The lowest rate of non-motorized travel in West Anchorage is in the Sand Lake area due to its low housing density and lack of mixed land uses and established sidewalk/multi-use trail system.

Pedestrian facilities are discontinuous in much of Anchorage due to the history of the development of the Bowl, which did not include common urban infrastructure elements such as sidewalks. Streets that serve as collectors are now typically developed with pedestrian facilities on both sides.

However, many examples of collectors without pedes-

<sup>6</sup>The bicycle core network is overlaid on the *Anchorage 2020 Land Use Policy Map* with the town centers indicated with red circles.

The 1997 *Areawide Trails Plan* will be updated as the last of three elements of the new *Non-Motorized Transportation Plan*. In general, unpaved trails are utilized for winter and summer recreational purposes like walking/jogging, cross-country skiing, equestrian use, and mountain biking. The predominant unpaved trails in West Anchorage are located in Kincaid Park, on Heritage Land Bank and airport property near Kincaid Park, and around Connors Bog.

## 2.4.6 Aviation Facilities

### General Overview

West Anchorage contains the largest air transportation facility in the State of Alaska. ADOT&PF owns and operates Ted Stevens Anchorage International Airport (TSAIA/ANC).<sup>7</sup> It serves local, regional, state, national, and international aviation needs. TSAIA is an essential asset to the MOA and a major contributor to the local economy. Its direct and indirect economic impact on Anchorage is substantial generating over 18,400 jobs on- and off-site (1 in 8 local jobs) as well as contributing \$850 million in annual payroll (\$1 of every \$8 in wages). TSAIA plays a key role in international aviation activities, being located within 9.5 hours of 90% of the industrialized world. It ranks as the fifth largest airport worldwide in cargo throughput.

### Airport Facilities

The TSAIA airfield complex includes three runways and an extensive system of taxiways, aprons, buildings, and navigational equipment. These elements accommodate an active national and international fleet of commercial passenger and cargo jet aircraft. The Lake Hood Seaplane Base (LHD) accommodates the General Aviation (GA) component at TSAIA consisting mostly of small, privately owned, fixed-wing aircraft. The LHD components include Lake Hood and Lake Spenard allowing takeoffs and landings by aircraft fitted with pontoons in the summer and skis in the winter, as well as a small GA runway and related aircraft tie down areas. The general location of airport facilities is shown in Exhibit 2-2.

### Airport Growth Trends

TSAIA has grown steadily since its inception in the 1950s. Between 1990 and 2005, total operations (takeoffs and landings) at TSAIA increased from 221,259 to 246,019. This reflected a slight decrease in passenger operations but was more than offset by increases in air cargo activity, which more than doubled over the same time period. Lake Hood GA operations decreased from 89,959 in 1996 to 69,502 in 2005. In 2008 and 2009, operational trends saw a marked downturn in response to the weak global economy but have since rebounded and are approaching pre-recession levels.

### Air Cargo Service

Air cargo traffic flowing from Asia to North America accounts for the majority of such traffic at TSAIA. The airport often ranks first in the nation for cargo landed weight and ranked fifth in the world for total cargo weight in 2008. This cargo is divided between transfer traffic (FedEx, USPS) and refueling traffic. U.S. air cargo operators include FedEx, UPS, and major airline air cargo divisions; foreign carriers include Korean Air China Cargo, China Cargo, Cathay Pacific Cargo, and others. Cargo "landed weight" tonnages at TSAIA peaked in 2006, but overall cargo tonnages at TSAIA have been the major revenue generator for TSAIA and have remained strong for the last 10 years. Table 2.4-2 shows the combined cargo volumes from 2006 to April 2010. Although cargo operations showed a severe

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<sup>7</sup> The acronym TSAIA represents the operating/managing body and ANC represents the international code for the airport. Lake Hood Seaplane Base is operated by TSAIA, but its airport code is LHD.

decrease during 2009, the trend had reversed itself and was approaching near normal levels by mid 2010.

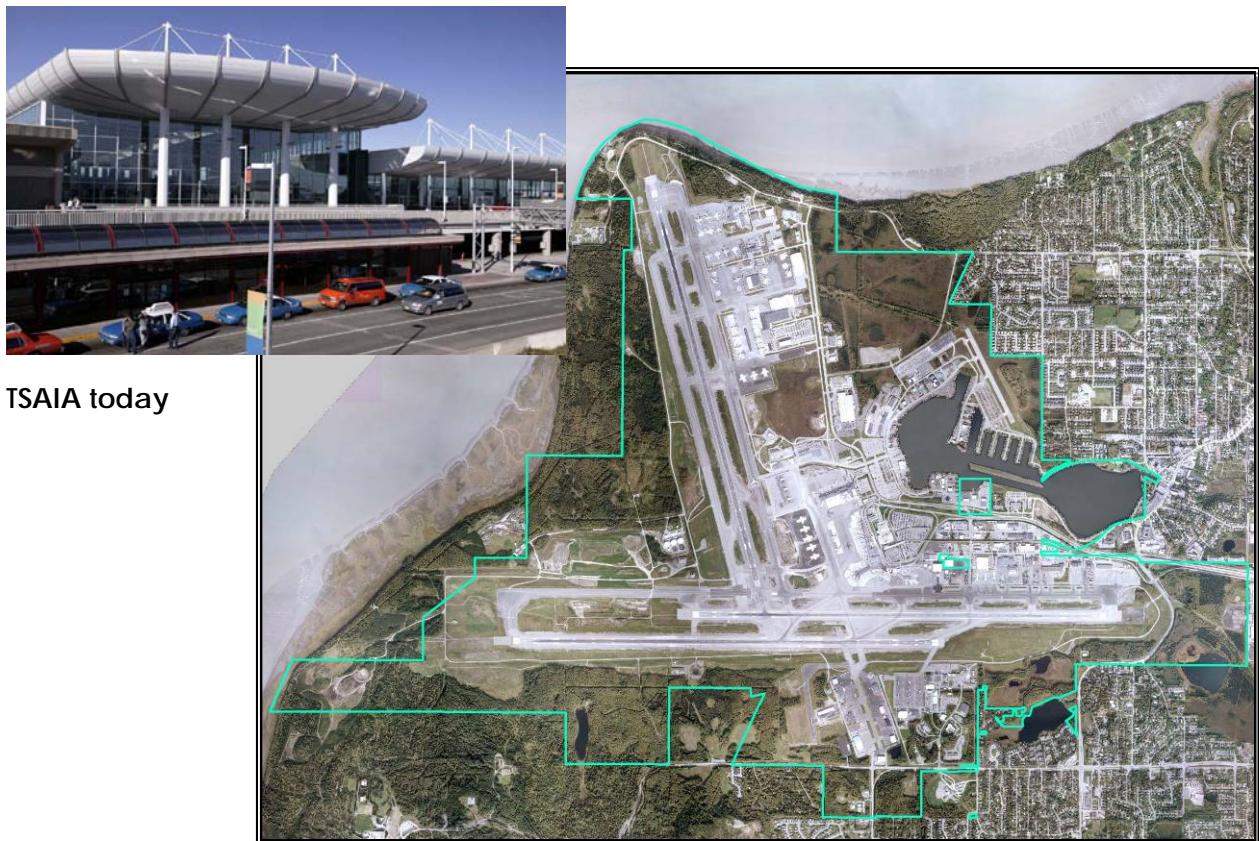
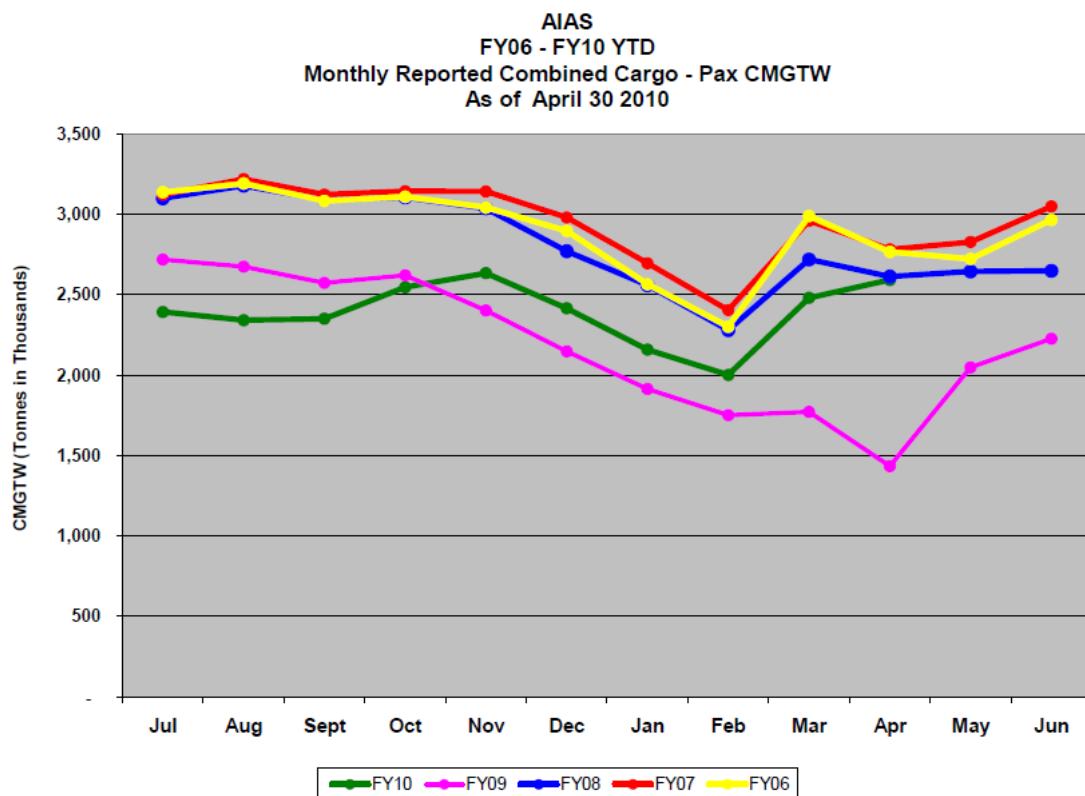


TABLE 2.4-2 – TSAIA MONTHLY COMBINED CARGO/PAX VOLUMES (2006-2010)



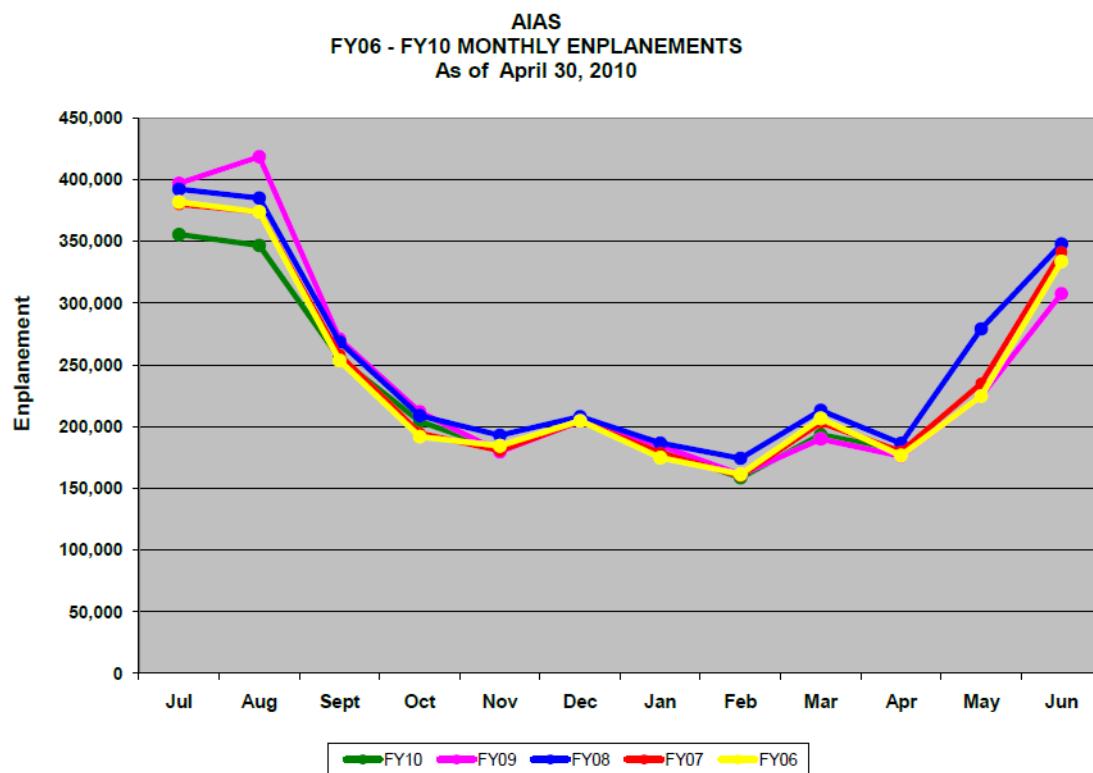
### Passenger Service

Aviation serves as a common means of transport within the State of Alaska. Intra-state aviation travel is used in rural communities for the same purposes that surface travel is used for communities on the road system, including recreation, health care, shopping, and attending events. Historically, intra-state travel is not substantially affected by fuel prices or national economy; trends show slow but steady growth in this sector.

Tourism represents a smaller percentage of passengers. In 2005, there were approximately 802,000 passengers on intra-state flights originating or ending at TSAIA. (The total population of the MOA in 2005 was around 266,000.)

International transit passengers have decreased substantially in the last 10 years due to the introduction of long-range aircraft that do not require refueling in Anchorage and the opening of Russian airspace to Asia-Europe flights. From 1998 to 2008, there was an average annual 6.0% decline in this sector. However, since 2006, overall passenger volumes have remained constant (Table 2.4-3).

TABLE 2.4-3 TSAIA MONTHLY PASSENGER VOLUMES (2006-2010)



### General Aviation Service

West Anchorage is home to Lake Hood Seaplane Base, one of the busiest floatplane bases in the world. According to the General Aviation Master Plan, LHD and TSAIA generate a large portion of general aviation (GA) traffic in the Anchorage area, in part because the largest number of active pilots and registered aircraft in the State are based in the Anchorage area (ADOT&PF, 2006). Approximately 1,090 general aviation aircraft are based at TSAIA and LHD with floatplanes, ski planes, and large turbojet business aircraft flown by private or recreational pilots.

General aviation activity provides access for Anchorage area residents and tourists to roadless areas of the State. To a smaller degree, GA provides rural residents access to the Anchorage area. Overall GA activity has declined steadily since a peak in 1991, due to a number of factors, including socioeconomic, aircraft utilization, maintenance and purchase costs, and pilot trends. The *GA Master Plan* that found GA operations at LHD declined about 2.4% per year from 1989-2003, and GA operations at TSAIA declined an average of 1.4% per year over the same period.

### Height Restrictions

The Federal Aviation Administration (FAA) conducts aeronautical studies to identify and address obstructions to regulated airspace, and to establish electronic and procedural navigation requirements and aircraft hazard standards under Federal Aviation Regulations Part 77. This is documented by the mapping of three-dimensional imaginary surfaces that reflect the operating characteristics of aircraft at a given airport. The imaginary airspace surfaces typically appear as a series of concentric elevations that become progressively higher with distance from the airport.

In Anchorage, the MOA has identified and codified the airspace zones around TSAIA and other local airports in Title 21, Chapter 65, "Airport Height Zoning Regulations." This portion of Title 21 includes an FAA-certified airport height map (which reflects the FAR Part 77

surfaces). Based on this, the ordinance regulates the permissible height of new structures near airports, prohibiting those that would pose a hazard to aircraft operations. The heights vary depending on location and ground surface elevation of the site. In general, structures cannot exceed 35 feet or the height established on the airport height map, whichever is greater. Any proposed structure within three nautical miles of an airport that exceeds 200 feet above a federally established airport reference point, requires individual FAA approval. The MOA Airport Height Map elevation contours are reflected in Exhibit 2-11.

### **Access and Safety**

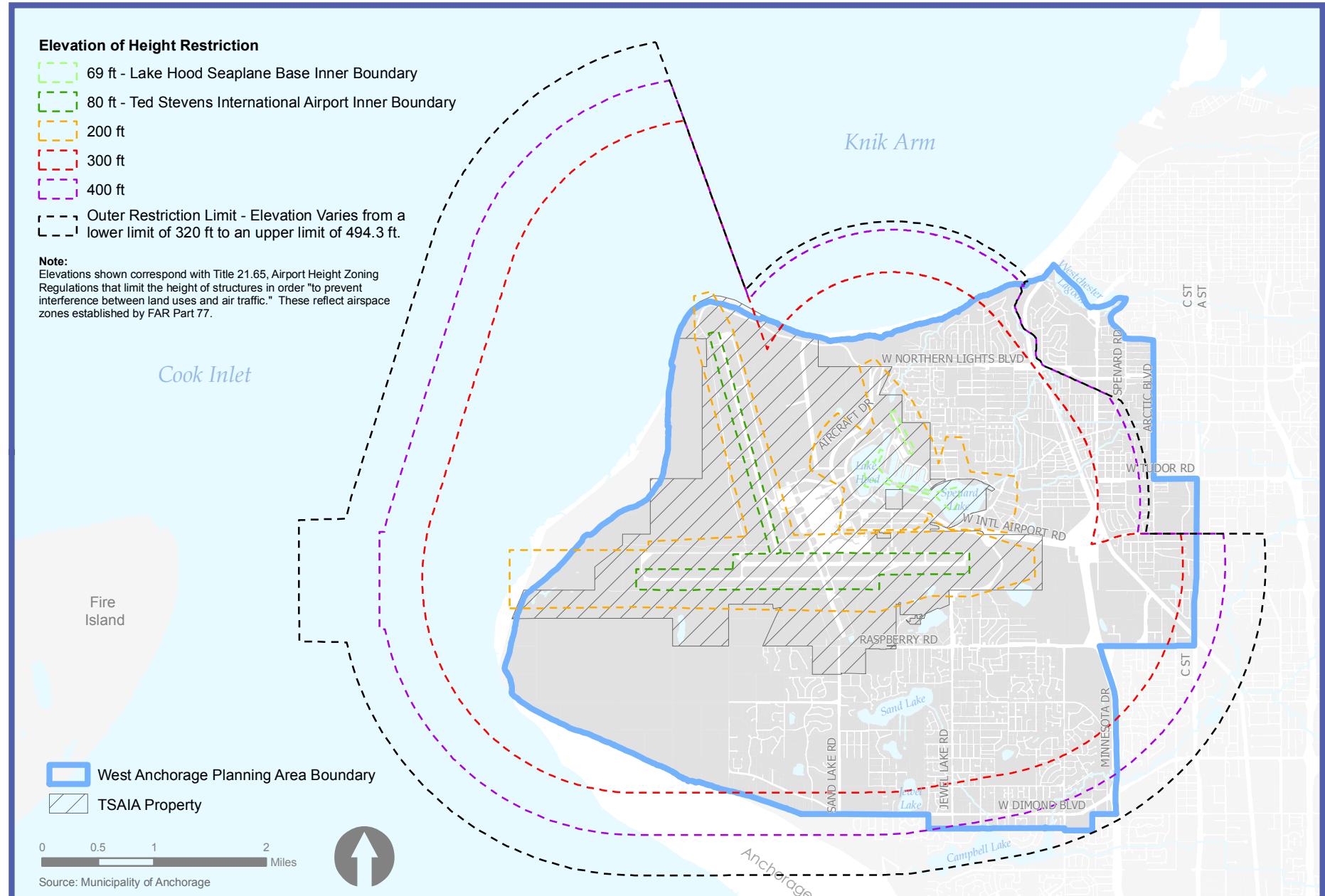
The TSAIA Aircraft Operations Area is surrounded by an eight-foot high security fence. Inside the fence, access is restricted to airport personnel, per Transportation Security Administration (TSA) regulation. While the perimeter fence is required for airport security, it has secondary effects on wildlife movement (predominantly moose) along the coast. Animals are constrained by the coastal bluff on the west and the airport fence on the east becoming narrowest near the end of both runways. Animals traveling along the fence are channeled toward the Tony Knowles Coastal Trail at these locations, increasing the number of human/wildlife interactions.

Lake Hood Seaplane Base is a popular attraction for both residents and visitors. There is a well-used, but unofficial, public walking route around Lake Hood and an existing picnic area on the northern shoreline of Spenard Lake (formerly under maintenance agreement with the Lions Club but presently without a sponsor). TSAIA management believes that controlled access to allow public viewing of aircraft is important to motivate and inspire the next generation of pilots; however, they are concerned about the interaction of pedestrians with aircraft and vehicles since the public frequently uses active taxiways and access roads for jogging, dog walking, and sightseeing. TSAIA initiated a Lake Hood Pedestrian Study in 2010 and is implementing a gateway/signage/pathway plan in 2011 to provide better safety for pilots, vehicles, and pedestrians in the GA area.

### **Airport Noise**

Aircraft are a significant noise source in Anchorage. Within a six-mile radius in the Anchorage Bowl, there are 11 airfields (including TSAIA, LHD, Elmendorf Air Force Base, and Merrill Field Municipal Airport) that operate a diverse fleet of aircraft with carefully orchestrated airspace boundaries to meet federal aviation safety standards. In West Anchorage, airport noise is associated with aircraft and ground activities at TSAIA and GA operations at LHD. The number of GA operations and exposure to its noise fluctuates greatly during the year, peaking during the summer months. Noise in general (and airport noise in particular) can be difficult to manage due to the behavior of sound waves, the high noise levels generated by aircraft operations and the necessity of residential overflights during takeoffs and landings.

The FAA's Part 150 regulation establishes a voluntary program available to airports to mitigate the impacts of airport noise on surrounding communities. The program provides funding to document and assess aircraft noise and to provide enhanced sound insulation to eligible residences. Part 150 results in the creation of Noise Exposure Maps that depict DNL noise contours around an airport. These DNL contours are developed using a nationally standardized method for calculating aircraft noise levels based on noise averaging over the course of a year. Noise is described by the average annual day-night sound level (DNL). DNL is an average measure of noise (in decibels [dB]) during a 24-hour day, with night noise adjusted to account for the sensitivity of people sleeping. Sources of airport noise associated with ground operations have not historically been included as part of Part 150 studies, but TSAIA has prepared a separate ground noise study addressing these sources.



West Anchorage District Plan

## Exhibit 2-11: Airport Height Restrictions



These average noise contours are intended to identify those residences with the greatest ongoing noise exposure for FAA sound insulation funding. Currently the funding threshold applies to residences exposed to airport noise exceeding 65 DNL and is only available to residences constructed prior to 1998. As of 2008, approximately 550 of the nearly 700 residential units lying within the TSAIA 65 DNL contour benefited from the Part 150 sound insulation program. The latest TSAIA Noise Exposure Map, approved by FAA in 1999, is reflected in Exhibit 2-12 and illustrates noise contours at 60 DNL and above.

The U.S. Environmental Protection Agency (EPA) sets National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants: carbon monoxide (CO), ozone, sulfur dioxide, nitrogen dioxide, lead, and particulate matter. The airport produces less than 100 tons per year of each criteria pollutant for stationary sources, allowed under the Alaska Department of Environmental Conservation, Owner Request Limited (Alaska Statute 46.14 and 18 AAC50.225). Although Anchorage is in "attainment" for all NAAQS pollutants, the airport is a significant contributor of CO, which is discussed further in Section 2.7.2 and Table 2.7-1. Efforts to reduce airport CO are described in the *Airport Master Plan*. The presence of air toxics is also discussed in Section 2.7.2. Many older cargo planes that use TSAIA are at least partially exempted from current air quality regulations, which may present a further source of local pollutants.

## 2.5 Parks, Recreation, and Open Space

Exhibit 2-13 shows the 767 acres of parks and open space located in West Anchorage, excluding airport lands currently used for recreational purposes. One of Anchorage's largest parks, Kincaid Park, is located in West Anchorage and consists of large tracts of natural open space, summer/winter recreational trails, a race stadium, and a soccer field complex.

The Northwest Parks District contains a high concentration of parks, but most are characterized as being mini (one to five acres). The Spenard Recreation Center, which is a valuable athletic and community meeting space, is in this area.

The Southwest Parks District is characterized by well-developed recreation trail systems. It has a large concentration of Natural Resource Use areas (areas designated for preservation rather than public use), but a low amount of developed parks available for active recreational use.

Several park and trail facilities occur within the airport boundaries on state-owned land reserved for future airport development, including: Spenard Lake Beach, Point Woronzof parking and overlook, Connors Bog, DeLong Lake, and Little Campbell Lake as well as portions of the Tony Knowles Coastal Trail and Sisson Loop Trail system. These recreational facilities are available for public use through short-term monthly maintenance agreements granted to the Municipality by the State, many of which are expired in holdover status. Other sections of undeveloped land within the airport provide natural buffers. These include areas not under formal lease agreement for such uses, including parts of Turnagain Bog and wooded areas along Point Woronzof Drive, Raspberry Road and near Kulis.

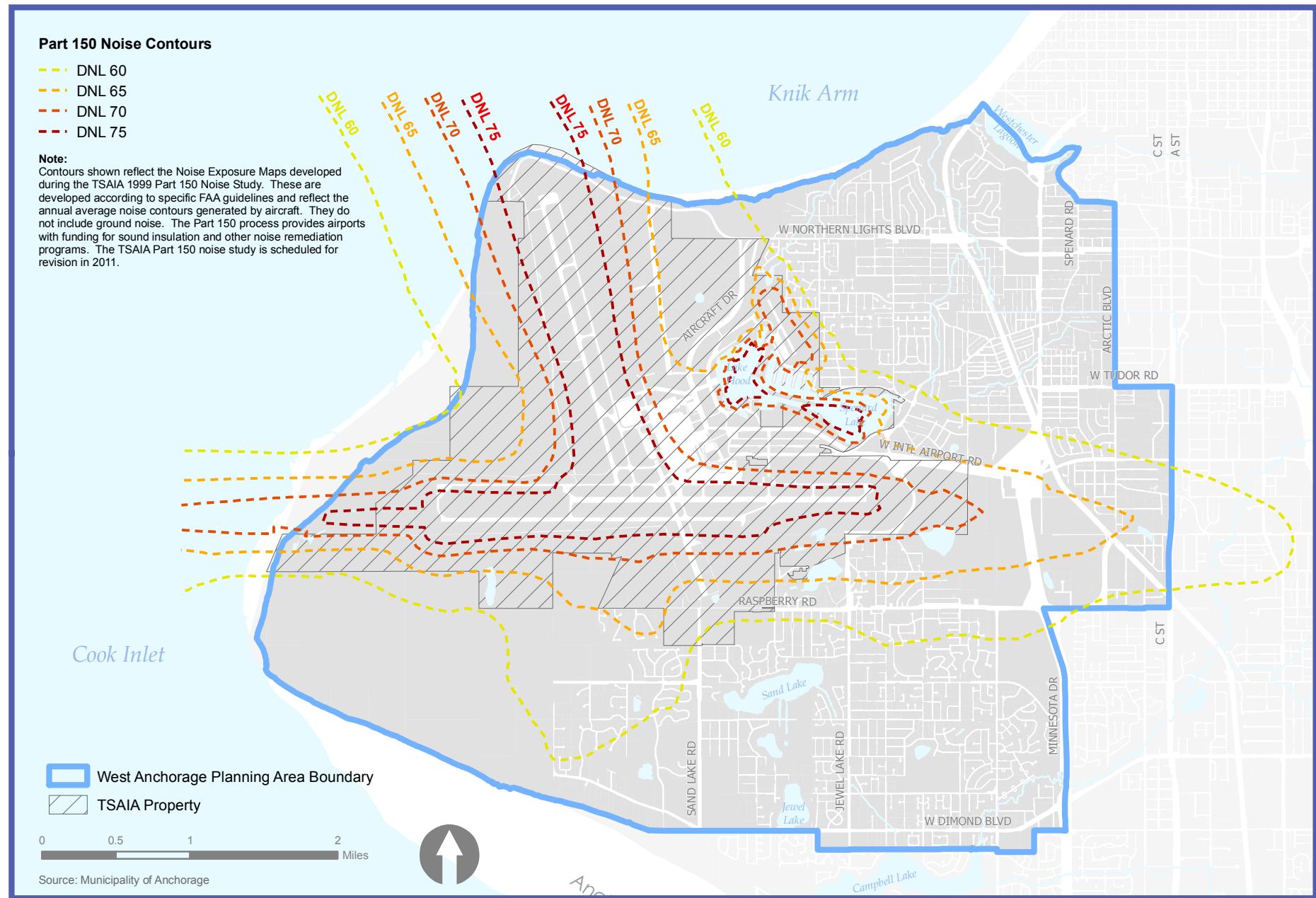
There is a known archeological site in the planning area located along the bluff south of the AWWU facility in Pt. Woronzof Park. The site is deliberately not highlighted or shown in publications for its long term protection. Some preliminary excavation work has occurred at this Dena'ina site, which includes three structures as part of what was a seasonal fishing camp. State and federal regulations would apply to the protection and consideration of this site during any future potential development in the vicinity. The site's location may impact a future runway's alignment or Coastal Trail relocates.

### Part 150 Noise Contours

- - DNL 60
- - DNL 65
- - DNL 70
- - DNL 75

#### Note:

Contours shown reflect the Noise Exposure Maps developed during the TSAIA 1999 Part 150 Noise Study. These are developed according to specific FAA guidelines and reflect the annual average noise contours generated by aircraft. They do not include ground noise. The Part 150 process provides airports with funding for sound insulation and other noise remediation programs. The TSAIA Part 150 noise study is scheduled for revision in 2011.



West Anchorage District Plan

