

Auke Bay in the 2009 Non-Motorized Transportation Plan:

P. 3; Recommended Improvements to Non-Motorized Infrastructure (lists the 18 highest priorities borough-wide):

Juneau-Wide

1. Cross-Juneau Bikeway – Identify gaps, bring all routes up to standards add signs. This focus on a bikeway way will raise the visibility of cycling in Juneau and will encourage residents to take more trips by bicycle. (See Figure 11 and Table 8.1).

2. Paved Shoulder Lanes – Add paved shoulder on ... Glacier Highway from Lena Loop to Tee Harbor (#11)...These routes are part of the cross-Juneau bikeway and are recreation destinations. The paved shoulder will provide space for both pedestrians and cyclists.

Mendenhall Valley West

3. Glacier Highway Sidewalk Improvements Auke Bay/UAS – Sidewalk improvements in University of Alaska Southeast (UAS) and Auke Bay area including complete sidewalk system and crosswalks where needed (#2 and #12). The area includes residential and commercial uses, the UAS and an elementary school and has many pedestrians. Pedestrian improvements will make the area safer and will encourage increased pedestrian use.

4. Bike Lane Glacier Highway from Deharts to Brotherhood Bridge – Bike lane along Glacier Highway from Deharts to the Brotherhood Bridge needs to be brought up to standards for width, pavement markings and signs (#3). The paved shoulder in this area is currently variable in width and does not have consistent pavement markings and signs. This route has high traffic volumes and speeds and is part of the cross town bike route.

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POLICY 2 – STATE PROJECTS. Work with the Alaska DOT&PF Regional Director to establish a routine process to allow CBJ input at the front-end of the design stage for State road projects.

POLICY 5 – TRANSPORTATION PLANNING. Integrate motorized and non-motorized transportation planning.

POLICY 6 – EDUCATION AND SIGNAGE. Establish a bicycle/pedestrian education and signage program.

POLICY 8 – SAFE AND HEALTHY SCHOOL ACCESS. Actively support safe routes to schools programs.

POLICY 11 – ADVOCACY. Support non-motorized advocacy.

POLICY 12 – CROSS-JUNEAU BIKEWAY. Complete the cross-Juneau bikeway.

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Pedestrian Friendly Design

The specific design of pedestrian elements will depend on the type, capacity and location of the street. Arterial, minor arterial, collector and local streets each need to be designed differently to work well for pedestrians. Key design considerations are:

Safe Crossings: Crossings should include crosswalks and signage to alert all. Crossings should be carefully spaced. If they are too far apart, pedestrians will cross without them, making a dangerous situation. Curb extensions and mid-street refuge areas should be considered on busier streets with adequate right-of-way widths.

Continuous and Direct Routes: Sidewalks and separated paths should provide for continuous pedestrian movement. Gaps and missing links are dangerous for pedestrians. Wherever possible, direct connections to destinations should be provided to reduce walking distances.

Mixed Land Uses: Segregated land use increases the distance between destinations, making walking more difficult. Mixing housing, employment, shopping, schools and recreation will decrease distance between destinations and encourage people to walk.

Accessibility: Pedestrian facilities should be designed to be usable by all. Standard sidewalk widths, proper curb cuts, the absence of obstacles and good maintenance will mean that seniors, people with disabilities and others with impaired mobility are all accommodated.

Traffic Separation: On streets with high traffic speeds, sidewalks should be separated by a vegetated buffer to provide increased safety, a more pleasant walking experience and space for snow storage.

Interesting Places: The pedestrian environment can be greatly improved with the addition of street furniture, trees and landscaping, human scale lighting, awnings and overhangs, public art and other amenities. The pedestrian experience is also improved where buildings rather than parking lots are closer to the street.

Types of Bicyclists

There are three types of bicyclists: advanced, basic and children. Because the skills, confidence and preferences of users can vary, it is important to consider all types when

designing a nonmotorized transportation system. The American Association of State Highway Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities uses the following classification system.

Advanced: Advanced riders are those who use their bicycle much the same way as they use a car. Convenience, speed and direct access to a destination with minimum detour or delay are main priorities. They are generally comfortable riding with traffic, but need to have sufficient operating space on the roadway or shoulder.

Basic: Basic or less confident adult riders may also use their bicycles for transportation purposes but prefer to avoid roads with fast and busy motor vehicle traffic unless there is ample road width. Basic riders are comfortable riding on neighborhood streets and shared use paths and prefer designated facilities such as bike lanes or wide shoulder lanes on busier streets.

Children: Children on their own or with adults may not travel as fast as their adult counterparts but still require access to key community destinations and make up a major part of the non-motorized transportation use in Juneau. They often travel between neighborhoods, schools, parks, stores and recreation facilities. Residential streets with low traffic volume and speeds, linked to designated bike lanes along arterial streets and separated paths can safely accommodate children without encouraging them to travel in heavy traffic.

A single type of facility will not be able to accommodate all user types. A system of interconnected and continuous facilities is needed so that the advanced rider can ride on the road, while shoulder lanes and separated paths provide options for basic riders and children. Within any given corridor, bicyclists should be provided with a range of options.

3.3 Pedestrian Safety Issues

Accidents involving pedestrians result in injuries that tend to be more serious than in other types of accidents. According to the Federal Highway Administration, approximately 40 percent of accidents involving pedestrians occur at an intersection and 75 percent of accidents occur where there are no traffic controls. Traffic speed is a significant factor in the outcome of a pedestrian accident. If a car traveling 20 mph hits a pedestrian, there is an 85 percent survivability rate. If a car traveling at 40 mph hits a pedestrian, there is only a 15 percent survivability rate.

There are many ways to create a safer environment for pedestrians. Typically safety related improvements involve additional sidewalks and crosswalks, enforcing existing traffic rules, education programs for motorists and pedestrians and altering the design and engineering of roadways.

The Institution of Transportation Engineers lists a number of suggestions for altering the design of pedestrian crossings. Appropriate solutions will vary depending on the particular conditions at each intersection.

4.3 Traffic Calming Measures

As travel speed is a major contributor to pedestrian and bicyclist injury, traffic calming is often considered as an element of non-motorized transportation planning. Any vehicle traveling more than 30 mph poses a threat to both cyclists and pedestrians. This does not necessarily mean that in order to increase walkability, motor vehicle speed needs to be decreased. More important is total travel time, meaning a trip at lower speeds with fewer stops can be just as efficient as a trip at higher speeds with more stops.

It is difficult to alter an existing arterial to make it more usable for walkers and cyclists. In addition to timing traffic signals for a maximum 30 mph speed, there are several methods suggested by the Institute of Transportation Engineers to make existing arterials safer for nonmotorized users. These include:

- Narrower travel lanes – 11 foot lanes are adequate for traffic speeds of 45 mph or less.
- Road diets – changing a four lane into a three lane with bike lanes and a center left turning lane.
- Elimination of any free flow right hand turn lanes – this includes freeway entry or exit ramps as encouraging freeway speeds on arterial streets is dangerous.
- Median and parkway landscaping – appropriate low maintenance landscaping visually narrows the roadway.
- Curb parking – retaining curb parking provides for community access and creates a traffic calming effect.
- Engineering changes including tightening corner curb radii, raised medians, and curb extensions can also provide traffic calming.

Table 7.1

Crosswalk, Bridge, and Intersection Improvements

High Priority

#4 Fritz Cove Road and Glacier Highway

- DOT may install a roundabout at this location
- Second option would be full traffic light with signal for pedestrians or pedestrian activated light with signs and continental crosswalk markings

#5 Glacier Highway and Back Loop

- Build roundabout at this intersection

Table 7.2

Sidewalk and Streetscape Improvements

High Priority

#2 Glacier Highway (Back Loop Road to Ferry Terminal)

- Add sidewalk on both sides on Glacier Highway between Back Loop Road and the Auke Bay ferry terminal

- Vegetated buffer between street and sidewalk and continental style crosswalks should be added
- Initiate safe routes to schools program

Mid and Low Priority

#12 **Glacier Highway and Back Loop Road (UAS area)**

- Sidewalk needed on both sides of the street
- Consider added vegetated buffer along Glacier Highway where traffic volume and speeds are high
- Should be integrated with sidewalk in the Auke Bay area

Table 7.4 Bike Facility Improvements

High Priority

#1 **Back Loop Road (Mendenhall River to Glacier Highway)**

- Shoulder is already paved
- Additional pavement markings and signs
- Regular maintenance required
- Signed [sic] as part of cross-Juneau bikeway

#3 **Glacier Highway (Back Loop Road to Brotherhood Bridge)**

- Shoulder is already paved
- Additional pavement markings and signs to show that it is a bike lane
- Intersection striping according to AASHTO standards
- Regular maintenance required
- Signed as part of cross-Juneau bikeway
- Street lights are required

Table 7.5 Separated Path Improvements

High Priority

#7 **Back Loop Road (Mendenhall River to Glacier Highway)**

- Separated paved path at least 10 feet wide required on one side of the road

#8 **Glacier Highway (Back Loop Road to Brotherhood Bridge)**

- Separated paved path at least 10 feet wide required on north side of the road

Mid and Low Priority

#15 **UAS to pedestrian Bridge at Dimond Park**

- At least 10 feet wide and paved

#16 **Goat Hill to UAS Housing**

- At least 10 feet wide and paved and should connect to Auke Lake Trail