2.0 PURPOSE AND NEED

The purpose of improving O'Malley Road is to provide a roadway that accommodates projected 2031 traffic levels, provides enhanced transportation for pedestrian and non-motorized traffic, and improves safety. Reconstruction would improve pavement, drainage, and road foundations, and improve line-of-sight by widening shoulders, flattening and clearing side slopes, and reducing steep grades. Left turn lanes would be added to improve intersection safety and capacity.

Public comments revealed the need for a user-friendly paved pathway for non-motorized traffic on both sides of the road. An increasing number of bicyclists, pedestrians, skiers, and horseback riders use this area for recreation. Some bicycle commuters use the O'Malley corridor during the summer months. Providing a separate pathway for recreational traffic improves mobility for these users and satisfies the need for safety improvements.

The proposed project addresses three needs for O'Malley Road:

- Increased O'Malley Road capacity;
- Enhancement of pedestrian and non-motorized transportation; and
- Safety.

The following paragraphs further detail the needs for O'Malley Road improvements.

2.1 INCREASED O'MALLEY ROAD CAPACITY

According to the MOA, Hillside is the fastest growing residential area in Anchorage. The population of the Hillside area grew about 96 percent from 1980 to 1990 and 19 percent between 1990 and 1996 (MOA, 1997). The MOA expects the Hillside area population to continue growing at an average annual rate of three percent over the next 20 years (1998 to 2018). The Anchorage Bowl Comprehensive Plan (MOA, 2000a) cites the fact that the Hillside area contains two-thirds of the residential developable land in Anchorage as the reason for the growth (Figure 2).

As noted in Section 1.0, Introduction, Senate Bill 226 requires that the design life for the project be 25 years. Re-evaluated traffic forecasts for O'Malley Road provide for a 2006 construction year and a 2031 design year for the 25-year life specified in the new state statute. Table 1 displays the annual average daily traffic (AADT) volumes for 2001 and projected AADT volumes for construction year 2006 and design year 2031.

TABLE 1
FORECAST ANNUAL AVERAGE DAILY TRAFFIC*

		Average Daily Traffic (Vehicles per day)		
Facility	Link	Current Year (2001)	Construction Year (2006)	Design Year (2031)
O'Malley Road	New Seward Hwy to Lake Otis Pkwy	15,253	16,000	20,600
	Lake Otis Pkwy to Elmore Road	12,883	13,400	15,200
	Elmore Road to Hillside Drive	8,668	8,900	11,000

*With Abbott Loop (Bragaw) Extension
Source: Lounsbury & Associates, Operational Analysis Addendum, June 2003

Current and projected traffic volumes indicate that the capacity of O'Malley Road should be increased to obtain an adequate level of service. The American Association of State Highway and Transportation Officials (AASHTO) characterizes existing and planned roadway conditions by the "Level of Service" (LOS) provided. LOS value is a qualitative measure describing operational conditions within a traffic stream as perceived by motorists. AASHTO defines six levels of traffic conditions (Table 2). DOT&PF established a planning objective for Hillside roads as LOS D or better. The 2001-2003 Transportation Improvement Program (MOA, 2000b) recommends that O'Malley Road be upgraded to accommodate future traffic levels.

TABLE 2
AASHTO ROADWAY CONDITION DESCRIPTIONS

LOS	Traffic Condition
A	Free flow with low volumes and speeds controlled by the speed limit
B	Stable flow, but drivers have reasonable freedom to select speed and lane of operation
C	Stable flow, but most drivers are restricted in their freedom to select speed or change lanes
D	Approaching unstable flow with little room to maneuver
E	Capacity, unstable flow, momentary disruptions, stoppages
F	Forced flow, stoppages, and low speeds

O'Malley Road currently operates at capacity during evening peak hours (LOS D to E) between the New Seward Highway and Lake Otis Parkway. This means that traffic is congested and the road does not allow for efficient travel. As traffic increases, vehicle movement slows and travel times increase. Some residents felt that an extension of Huffman Road to Hillside Drive would alleviate some of this congestion (Appendix A). However, traffic forecasts still place O'Malley

Road in the LOS D category in 2031 with this and other improvements to Hillside roads including Elmore Road extension between Huffman and Rabbit Creek. These improvements were modeled during development of the Municipality of Anchorage Long-Range Transportation Plan (LRTP) and the subsequent evaluation included in the Hillside Roads Traffic Forecast Report (Lounsbury, 2000b) and again in 2003 to comply with changes in state statute (Lounsbury, 2003). Figure 3 displays the Hillside Roads traffic forecasts for 2001, 2006, and 2031 average daily traffic volumes.

Traffic models predict O'Malley Road from New Seward Highway to Lake Otis Parkway will operate at a LOS D in the vicinity of Lake Otis Parkway by 2031 and from Lake Otis Parkway to Hillside Drive will to continue to operate under capacity through the design year (Lounsbury 2003). However, from Lake Otis Parkway to Hillside Drive, numerous access points create a demand for left turn movements into residential neighborhoods, private residences, churches, and public parks. Exclusive left turn lanes do not exist along the corridor except at Lake Otis Parkway, Elmore Road, and Birch Road. Other than the two signalized intersections, all public roads intersecting O'Malley Road are stop controlled. As the traffic along O'Malley Road increases, the LOS on these minor approaches will deteriorate.

A left-turn warrant analysis was performed at intersections with major residential streets. Both proposed build alternatives develop left-turn treatments where warranted at these public streets. The primary operational difference between the two build alternatives is the treatment of mid-block left turns. Left-turn treatments will increase the capacity and safety of both alternatives by providing a means of safe deceleration outside the through lanes and providing a means of separating movements at unsignalized intersections. However, the extent of mid-block improvements is difficult to quantify with current capacity analysis modeling.

2.2 ENHANCEMENT OF PEDESTRIAN AND NON-MOTORIZED TRANSPORTATION

Hillside residents use informal pathways within the road ditches and the road shoulders for walking, biking, and horseback riding. These informal pathways and shoulders provide access to bus stops for school buses and public transportation (when routes serve the area); bicycle and pedestrian access to the Alaska Zoo and equestrian access to the Ruth Arcand Park and the equestrian center near Placer Place. Residents expressed a need for pedestrian and non-motorized facilities that would be used for transportation purposes, i.e., commuting to work. The public also expressed support for pedestrian and non-motorized facilities for recreational purposes. The Anchorage Area Wide Trails Plan (MOA, 1997) acknowledged these uses and proposed a separated multi-use pathway along the south side of O'Malley Road.

2.3 SAFETY

An important goal of street and highway projects is improving safety. The Preliminary Engineering Report (Lounsbury, 2001) provides an evaluation of safety based on collision history for O'Malley Road, existing roadway geometry and features. In addition, the public provided anecdotal safety concerns at public meetings and in correspondence, which are documented in the Scoping Summary (Appendix A) and the Public Participation Summary (Brooks, 2001). The following is a summary of the safety problems along O'Malley Road.

Between 1995 and 1997, the Anchorage Police Department reported 205 collisions along O'Malley Road. The collision analysis looked at segments and intersections where data demonstrated problems occur. Of the collisions, 153 were intersection related and 22 involved vehicle/moose collisions. The analysis showed the Lake Otis Parkway and O'Malley Road intersection was the only intersection exceeding both the statewide collision average and the critical accident rate. The public, however, identified safety concerns where the following roadways intersect O'Malley Road—Commodore, Cange, Birch, Our Road, Elmore Road, Rock Ridge Drive and entrances to at the Alaska Zoo and Anchorage Golf Course. The public noted that much of the safety concern stems from the combination of left turning traffic and high-speed through traffic.

Hillside residents also reported concerns about the many vehicle/moose encounters (Appendix A). Vehicle/moose collisions occurred near Commodore Drive, mid-block at various locations along O'Malley Road with concentrations near Hane Street (3 collisions) Jerome Street (2 collisions), Alaska Zoo driveway (2 collisions), and east of Birch Road (3 collisions).

In the portion of O'Malley Road between Seward Highway and Lake Otis Parkway, all the vertical curves are below current standards, the roadway has minimal shoulders, and a separated pathway exists only on the north side. In the portion of O'Malley Road between Lake Otis Parkway and Hillside Drive, five vertical curves are below current standards, there are minimal shoulders along the road and no formal pedestrian facilities. Intersections along O'Malley Road with illumination include Lake Otis Parkway, Elmore Road, Birch Road and Hillside Drive. Throughout the roadway vegetation encroaches within the right-of-way. This lack of roadway shoulders, poor lighting and visibility, encroaching vegetation and poor sight distances within hilly areas contribute to the safety problems for vehicles.

Residents using O'Malley Road suggested adding street lights at the intersections without causing light pollution (Appendix A) as a solution to perceived and documented safety problems at intersections and driveways. Residents in the O'Malley area have also stated their concern with the 50 mile per hour (mph) speed limit. Residents believe that pulling out onto O'Malley Road with poor lighting and visibility is dangerous with oncoming traffic traveling at this speed.

Another public safety concern was vehicles driving at high speeds during icy conditions while children are waiting at bus stops in the dark months of the school year. Residents believe that the potential for a accidents along O'Malley Road is high in the winter and suggest the speed limit be reduced near schools and school bus stops.

There is no recorded history of pedestrian accidents along O'Malley Road, although the majority of the roadway lacks separated pedestrian facilities. The roadway safety would be improved by implementing the Anchorage Area-Wide Trails Plan (MOA, 1997) which proposes a separated multi-use paved pathway on the south side of the road. This feature is included in the proposed build alternatives.

The proposed build alternatives would bring O'Malley Road up to current urban minor arterial design standards. The project design would widen shoulders, add left-turn lanes at major residential streets intersections, improve visibility, safety, and capacity and address intersection lighting and drainage needs.