7

ROADS, STREETS, TRAILS AND PEDESTRIAN SYSTEMS

This chapter describes the systems that will provide for motor vehicle circulation, for bicycling and skiing, and for walking in Girdwood Valley in the future. In each case, particular attention is given to establishing a grid or network of facilities that provide direct and continuous routes to residential and commercial sites with a high degree of connectivity and safety.

THE VALLEY TRAIL SYSTEM

Trails will play a unique dual role in Girdwood Valley in the future. The trail network will support development of a recreational activity base that is critical to achievement of the community's strategy for low-impact, environmentally based tourism in Girdwood. At the same time, the valley's trails will support a growing volume of utilitarian travel (commuting to work, shopping, travel to school, etc.) by bicycling, skiing and walking.

The trail system will function differently in the winter than it does in warm weather months, a fact that has implications for both design and maintenance. Bicycling and Nordic skiing are activities that attract tens of thousands of visitors to resort destinations throughout North America. Mountain communities have used trail networks successfully to attract both summer and winter visitors.

Nordic skiing, in particular, is growing as a resort destination activity and many resorts are providing miles of ski tracks. In many cases these trails are groomed and include direct connections to lodging (Breckenridge, Snowmass Village), schools (Aspen, Jackson) and Alpine skiing resort base areas (numerous resorts).

The cross-country and back-country skiing potential of Girdwood Valley has hardly been tapped. With its flat valley floor surrounded by majestic mountain scenery and with its reliably abundant snowfall, Girdwood could be an international destination for Nordic skiing. However, this will require a conscious effort to provide appropriate infrastructure and support services, as well as marketing programs to increase public awareness. Girdwood's winter trail market may currently be made up primarily of Anchorage area residents, but in the future could extend to the Lower 48 and other countries with appropriate advertising.

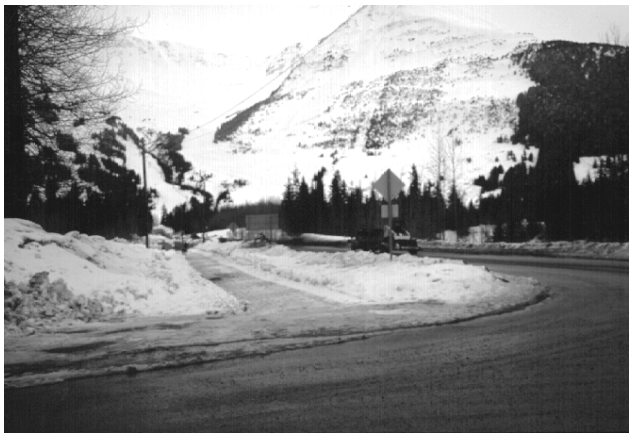
Similarly, bicycling -- both mountain biking on trails and forest roads and road biking on paved trails and lanes -- is increasingly a source of economic activity in resort towns. Many mountain communities in North America have established trail networks and support services designed to attract bicyclists. The demographics of this market are attractive and offer an opportunity to diversify Girdwood's appeal beyond Alpine skiing, increasing the number of visitors and protecting against downturns in skiing activity (say, in poor snow years).

The trail system in Girdwood Valley will be expanded incrementally over time, but emphasis should be placed on a foundation network of major trails that provide continuity over significant distances and serve double duty as recreational and utilitarian facilities. Map 9 shows the primary Girdwood Valley trails

which should receive the highest priority for completion. For recreational use, the Iditarod Trail along Glacier Creek will help put Girdwood on the map, as it will be a trail in an unparalleled natural setting with good length and excellent connections to other local and regional trails. This trail has significant potential as a destination facility - people will travel to Girdwood *because of* this trail.

The informal Beaver Pond and Moose Meadows winter trails also have potential to become destination facilities for winter skiing. Linking the Beaver Pond Trail to the Valley Entry Multimodal Center and into Girdwood's downtown would create a convenient facility with good connections at each end. This trail should eventually be improved to serve summer uses as well by providing improved alignment in some locations and by providing drainage where needed and a granular surface.

Fig. 7-1
The year-round trail along Alyeska Highway



The paved trail along Alyeska Highway and Arlberg Road will continue to be an important link in the Valley network. Both summer and winter bicycling and pedestrian use will increase on this trail as commuters, students and others follow a national trend toward non-motorized travel in resort communities.

As the Municipality works with Valley residents and businesses to develop Girdwood's trail system, several specific issues should be addressed in the Municipality's capital program and in annual maintenance budgets:

- Discontinuities and poor connections must be avoided. Many communities make the mistake of leaving missing links in their trail networks because specific sections are controversial, expensive or difficult to build. However, a trail system can be significantly handicapped by failed connections and missing sections, especially in its foundation network of primary facilities (e.g., those shown on Map 9). In most cases, providing these missing links will increase activity levels by orders of magnitude.

- The goals of the Girdwood Trails Committee include the construction and maintenance of a high quality 'progressively primitive' trail network that provides a year-round recreational access to the areas in, and adjacent to, the Girdwood valley on relatively undeveloped trails and allows for alternate forms of transportation within the established Girdwood community on more highly developed trails.

- Any trail that is intended to serve utilitarian travel should have a hard surface, though not necessarily paved. While residents value the rural character of the Valley, the local climate, soils and drainage conditions mandate that a hard surface be provided on any trail that is intended for use by bicyclists and pedestrians in the summer and fall months.

- Major trails should receive winter maintenance. In the case of paved utilitarian trails, this should include aggressive snow removal and ice management. In the case of winter Nordic trails, this should include base preparation, grooming and winter signage.

- Major trails should receive summer maintenance. This includes both paved and unpaved trails. Periodic resurfacing, cleaning of drains and ditches, and maintenance of signage are important to the success of destination facilities and should be planned and budgeted. Soft-surface trails also require routine annual

maintenance to restore surfaces in the spring, deal with the inevitable drainage problems and keep signage in good shape.

THE PEDESTRIAN ENVIRONMENT

To be successful today, resort communities -- anywhere in the world, but especially in snow country -- must provide high quality pedestrian environments. The examples set in the North American mountain villages at Whistler, Park City, Vail, Breckenridge and Aspen -- not to mention the many fine resort villages in Switzerland, Italy, France, Germany, Austria and Norway -- have shown that today's travelers crave a friendly walking environment (summer and winter) and will pay top dollar to get to places that provide it.

A good pedestrian environment also serves a practical function. Given a choice, people in resort settings will make many short trips (trips of less than a half mile) by walking -- even in inclement weather. This relieves the roads and streets of the unnecessary burden of short vehicle trips, reducing congestion and improving circulation.

Today, the walking environment in Girdwood is poor and will likely worsen as traffic grows in the future unless the pedestrian system is given a higher priority. To achieve a high-quality walking environment in Girdwood Valley, the Municipality should place priority on:

- *Sidewalks in commercial areas.* The downtown (New Townsite), the old resort base and the new resort base must have a complete network of good sidewalks providing access to all retail establishments, connections to lodging, access from vehicle parking (keeping in mind that fact that one source of pedestrians is parked cars), and connections to trails located nearby. In the downtown area, this plan calls for a system of arcades and boardwalks along the retail front to provide for all-season pedestrian circulation. Establishing this sidewalk network will require both public and private expenditure and should become a minimum requirement of master plans for major development projects, including those in residential areas.

- *Crosswalks.* Road and street crossings are critical barriers to pedestrian travel, and no good walking system can be established without providing for safe, convenient pedestrian crossings. This is most critical on roadways that carry significant traffic and also transect commercial areas where pedestrian activity is needed (i.e. Alyeska, Arlberg and Hightower). In particular, the intersections of Alyeska Highway with Crow Creek Road, Hightower Road and Arlberg Road should be high priorities.

- *Maintenance.* Girdwood Valley features climatic conditions in both summer and winter that will defeat attempts to create a pedestrian environment if adequate maintenance is not provided. Paved surfaces, drainage systems, signage and vegetation must all be managed routinely and frequently.

Fig. 7-2 Pedestrians in Hightower Road

- *Land development patterns.* Many of the recommendations contained in the companion Commercial Areas Master Plan (Chapters 8 - 12) are designed to achieve a development pattern that is conducive to the creation of a good pedestrian environment. Key requirements are mixed use commercial areas where

housing and lodging help activate the area and where a mix of stores, restaurants and bars encourage circulation.

- *Pedestrian underpass of Alyeska Highway.* A pedestrian underpass should be built under Alyeska Highway at the New Townsite (see Fig. 7-6 and Chapter 9). This facility will provide for pedestrian circulation between the areas north and south of the highway and will complement the surface crosswalks, which will also be provided at Crow Creek Road and at Hightower Road. The underpass will play a particularly significant role during the Forest Fair and other special events. During certain times of the year, the underpass may be temporarily flooded and will be closed. This will not diminish its overall utility or importance.

ROADS AND STREETS PLAN

Girdwood Valley today is a place that is almost entirely dependent on automobiles (and pick-ups and SUVs) for mobility. While this will change in the future as the improvements described above and in Chapter 6 are made, safe and efficient motor vehicle circulation will always be essential to the needs of residents and visitors in the Valley.

Map 10 shows the arterial and collector streets that will make up the principal roadway network in the Valley. Of course, new local streets (not highlighted on the map) will continue to be developed as commercial, residential and recreational development occurs.

Fig. 7-3 View west down the Alyeska Highway corridor through the New Townsite

Although traffic in the future will be significantly higher than it is today, future levels of traffic and congestion will not be high enough to warrant new roads solely to alleviate congestion or reduce traffic volumes. This is an important consideration in the Transportation Master Plan recommendations for the Girdwood Valley road system. The 1997 Girdwood Transportation Study provides forecasts of traffic to the year 2016. Even under the "No Action" alternative, the busiest intersections in the Valley will operate at good levels of service.

Instead, this Transportation Master Plan addresses these major roadway system issues and discusses them in the following sections:

- Emergency access and egress;
- Commercial area auto parking;
- Paving new townsite streets;
- Neighborhood connectivity and traffic distribution; and,
- Alyeska Highway -- speeds and traffic calming

Emergency Access and Egress

Girdwood Valley's location and environment expose it to the potential for natural occurrences and events. Two types of issues are relevant to a consideration of roadway system needs:

Access to sites in the Valley for emergency service vehicles (police, fire, ambulance).

Evacuation from the Valley for general emergencies and disasters.

The kinds of emergencies that would give rise to a general need for either emergency service in, or for evacuation of, Girdwood Valley include flood, forest fire, structure fire, seismic events, avalanches and earth slides. Combinations, such as

seismic and flood, or earth slide and flood events, are also possible.

Most of Girdwood is accessible for motor vehicles only via the Alyeska Highway. Areas east of the Glacier Creek bridge (including residential areas accessed via Timberline, Donner, Alpine and Alyeska Avenue, the old ski base and the Alyeska Prince/new ski base area) could all be isolated by forest fire, by major flooding of Glacier Creek, or by the loss of either the California Creek or Glacier Creek bridges.

The New Townsite could be cut off if California Creek floods. The community school is located at the end of Hightower Road and could be isolated by fire or by flooding in the California Creek/Glacier Creek systems. The lower part of Arlberg Road (at the old ski base) lies in a zone of moderate avalanche hazard. Of particular concern should be the two large buildings that lie at the ends of roadways: the Prince Hotel and the public school.

Implementation of this plan will greatly improve the redundancy of the Valley road network for emergency services/evacuation purposes. (In addition to the roadways described below, the potential implementation of a rail spur would provide some service redundancy and evacuation capacity. See Chapter 6.) Six new roadway projects are proposed in this plan and described below. (Note that locations shown on Map 10 are conceptual. Final details of facility location will be established as part of engineering and design.)

1. Crow Creek – Arlberg Connector

This project has been included in several past plans, including the Girdwood Community Impact Study (1993), the Girdwood Area Plan (1995), and the Girdwood Transportation Study (1997). It will provide a new roadway from Crow Creek road across upper Glacier Creek north of the airport to Arlberg Road in the vicinity of the Alyeska Prince Hotel. In 1993, this project was estimated to cost $3.4 million. Some widening and reconstruction of Crow Creek Road as well as reconstruction of the intersection of Crow Creek Road and Alyeska Highway would also be needed. This project will provide an alternative route to and from the Alyeska Prince Hotel and new ski base. This project is recommended only when additional resort development occurs which warrants this route. The second bridge over Glacier Creek will make a key contribution to safety in the Valley. Consideration should be given to building this bridge as a single structure for the rail spur and the new roadway. Even if separate facilities are to be built, they should be co-located to minimize impacts to Glacier Creek and to trails in this area.

This new roadway (which will need a name) will be classified as a “residential collector” (category I).

Some improvement of Crow Creek Road will be warranted as part of this project. Specifically, Crow Creek Road should be paved (two lanes) and the bridge over California Creek replaced. Care should be taken to preserve the character of the area along the road by avoiding an overly wide cross-section and by designing the roadway for low speeds.

2. Hightower – Crow Cr. Connector

This project was recommended in the Girdwood Area Plan (1995). It will provide a two-lane connection between Hightower Road and Crow Creek Road just north of the New Townsite. The new roadway will establish a critically important alternative route to and from the community school and to the New Townsite. Building the road will establish another bridge over California Creek.

This new roadway (which will need a name) will be classified as a “commercial collector” (category IA).

3. South Access to South Townsite

This project was recommended in the Girdwood Area Plan (1995) as the Ruane-Glacier Creek Connector. It will provide a new two-lane road from Alyeska Highway somewhere north of the wastewater treatment plant east and north to reconnect with Alyeska Highway at the

Hightower Road intersection. A version of this project is currently planned as part of the proposed recreational (golf course) and commercial development along Glacier Creek.

This new roadway (which will need a name) will be classified as a "residential collector" (category I).

4. Southside Townsite Connector

This roadway is not called for in either the Girdwood Community Impact Study (1993) or the Girdwood Area Plan (1995) although at least a portion (where it connects with Alyeska Highway) has been platted. The roadway is needed to better distribute traffic in the core area and to support the vitality of the southside commercial area. Building the road will involve solving stream and wetland issues associated with the crossing of the California Creek floodplain. It may be that a relatively long bridge or pier structure will be needed.

During public workshops, residents identified potential alternative alignments for this roadway that would place its connection with Alyeska Highway further from the curves, in a location that would reduce residential impacts and might also reduce the amount of structure required to get across California Creek. The Municipality should place priority on studying the alignment of this roadway so that, if it is feasible, right of way for it can be preserved.

This new roadway (which will need a name) will be classified as a "residential collector" (category I).

5. Second Valley Roadway along the East Side of the Valley

This will provide a second roadway corridor into the Valley east of Glacier Creek. Such a project was described in the 1993 Girdwood Community Impact Study and was included in the 1995 Girdwood Area Plan. Construction costs were estimated at $8.8 million in 1993.

Although the roadway has historically been shown in plans as a project running from Seward Highway north directly to Alyeska Highway (the "New Girdwood Access Road" in the Girdwood Area Plan), it may be that the essential objectives of emergency redundancy could be met by other means. There is some potential for a significant amount of residential development in the area east of Glacier Creek and south of Virgin Creek. Should that occur, there would be a clear need for a connection into the core area, with connections into the existing local street grid in the Timberline/Alpine areas.

There may also be some value in a connection directly to Seward Highway. However, the overall corridor could be developed in a manner that would render it slow enough and indirect enough that it would not be attractive as an alternative cut-through route between Seward and Alyeska Highways. Such a roadway would be of value for emergency redundancy and yet might avoid impacts to established neighborhoods in the Timberline/Alpine area.

This new roadway (which will need a name) will be classified as a "residential collector" (category I).

6. Airport Access Collector

This roadway will provide a more direct access to the airport from the north, reducing impacts from airport traffic on the residential area to the south and east. This new roadway (which will need a name) will be classified as a "residential collector" (category I).

7. Gold Avenue Extension

This roadway will provide access to the Valley Entry Multimodal Center described in Chapter 6. It will be aligned with Gold Avenue to the east of Alyeska Highway to establish a single intersection. Gold Avenue will be classified as a "residential collector" (category I) west of Alyeska Highway and as a "neighborhood collector" (category IC) east of the highway. Gold Avenue east of the highway will be classified as a collector only as far as Main Street in the original townsite, a change from the previous Roads and Streets Plan.

Another potential collector roadway in which residents had an interest and which was studied as part of this plan was a connection of Hightower Road north to the Crow Creek - Arlberg Connector along the west side of Glacier Creek. That roadway is not included in this plan for several reasons. It would have direct impacts to the Iditarod Trail in this area, would traverse an environmentally sensitive landscape, and would increase traffic on the part of Hightower accessing the school's campus. Since traffic on Crow Creek Road will increase in any event, the more logical strategy is to rely on Crow Creek Road and the Crow Creek - Arlberg Connector for route redundancy and traffic distribution.

Upon full implementation of this plan, including the six roadway projects listed above, most of the issues associated with emergency access to points in the Valley will have been resolved. There will be two routes to the Prince Hotel and the new resort base over two different Glacier Creek bridges. The school will be accessible via two routes and two different bridges over California Creek. Every area in the Valley will have more than one potential access/egress route.

Commercial Area Parking

Automobile parking is essential to the success of commercial development. Although public transit, walking and bicycling will all increase in the Valley in the future, automobile access will still be essential to the achievement of local objectives for commercial development. Two areas currently experience parking problems that are addressed by this plan:

New Townsite (Downtown)

The commercial parking issue in the New Townsite is one of the principal reasons the area has not developed in the years since it was platted. The parcel size in the area is too small to allow good commercial development to occur with parking requirements met on-site.

A 1995 report to the Municipal Assembly recommended that about 80 supplemental parking spaces be provided on municipally owned lands around the New Townsite Square (the report's Alternative A). These spaces would be used to meet the parking requirements of the municipal parking ordinance, thereby removing a key deterrent to further commercial development and redevelopment in this area. The commercial development plan for the New Townsite (Chapter 9) shows the layout of this parking system. Development of the parking would be closely integrated with pedestrian improvements, park improvements and local street improvements.

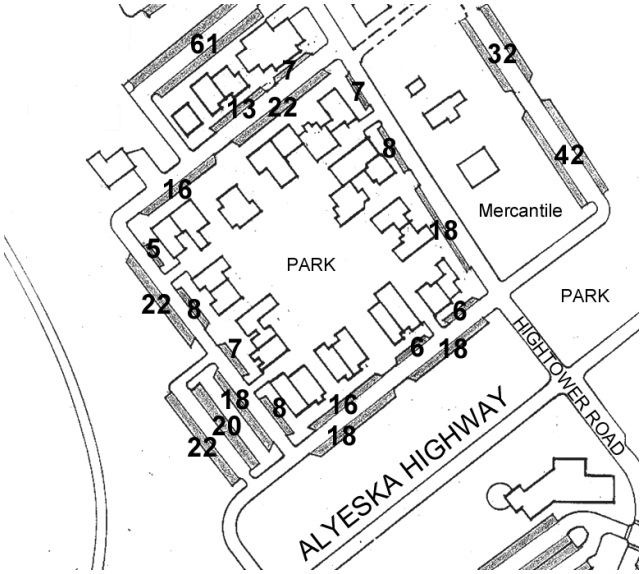


Fig. 7-4
New Townsite parking improvements. Numbers indicate parking spaces added on-street and in public lots to the east and west

Implementing this plan may require establishment of a parking benefit district in the new townsite with both taxes and payments in lieu of on-site parking used to fund the supplemental parking supply.

Olympic Circle Area

There is a need to increase the capacity of the current surface lot, which is poorly configured. Required improvements include paving, improving access, better signage and providing for pedestrian circulation around and within this facility. Over the long term, the complete redevelopment of the resort base and Olympic Circle areas could be encouraged and greatly enhanced by the development of an underground parking structure here.

New Townsite Streets

In the three and a half decades since it was platted, the New Girdwood Townsite has waited in vain for commercial development. Improvements along the Seward Highway into Anchorage may provide some impetus for development in Girdwood's downtown, but there are other reasons that may explain why commercial development has not happened. Principal among these may be the condition of the local streets themselves.

Paving of New Townsite Streets

The streets around the New Townsite Square (Hightower Road, Holmgren Avenue, Lindblad Avenue and Girdwood Place) should be paved to improve winter driving and walking conditions and to reduce particulate pollution in the summer and fall. This plan calls for the development of boardwalks and arcades along the retail frontage to provide a pedestrian environment. Snow storage should be accomplished in the space between the boardwalk and the edge of the street. Drainage systems will eventually be required as part of the development of these streets, but could be postponed to a later phase.

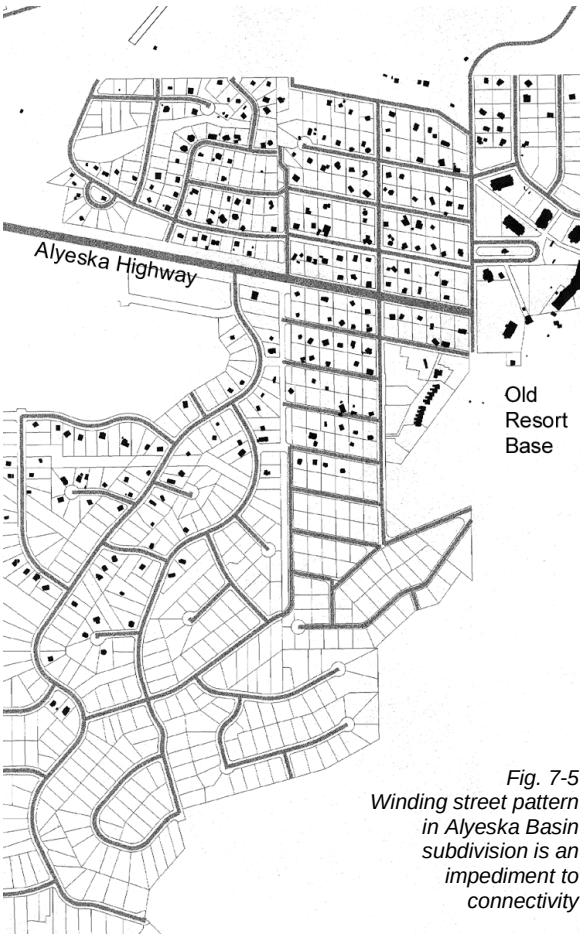


Fig. 7-5
Winding street pattern in Alyeska Basin subdivision is an impediment to connectivity

Reconstruction of Hightower Road

This key local road from Alyeska Highway to the community school should be reconstructed in the New Townsite area to provide on-street parking and good sidewalks (as well as a more defined roadway edge). This will be help to encourage linear commercial development along Hightower as a new "Main Street" in the New Townsite. (See Chapter 9.)

Neighborhood Connectivity and Distribution of Traffic

A glance at the graphic of local roads in the Timberline/Alpine neighborhood gives an indication of how residential development might proceed if there were no guidelines to the contrary. While roads near the old resort based are gridded and well connected to one another, roadways to the south and west are circuitous and discontinuous. The entire subdivision is poorly connected to Alyeska Highway and to the rest of the community. While this may seem attractive to property owners because it conveys exclusivity and privacy, it is poor design in terms of traffic distribution and auto dependence.

Winding, poorly connected road systems discourage walking and cause auto trips to be long and indirect. They also cause conflicts as additional residential projects are developed in disconnected pods. Connecting roadways, which are needed, are opposed by nearby property owners. The overall result is a confusing, disconnected local street system that places all traffic, including local traffic, on collectors and arterial roadways. This has not yet been a serious problem in the Girdwood Valley because little residential development has occurred. However, in the future, if a better road network is not developed, this will become a significant

problem detracting from quality of life in the Valley and contributing to an unsustainable settlement pattern.

To prevent an undesirable pattern of development and an unworkable road system, the Municipality will impose three design requirements on local commercial and residential development projects:

- Collector roadways mapped on the roadway plan shall be built as part of any project through which the roadway passes (each landowner's segment being that owner's responsibility) and shall be developed to the standards contained in the Official Streets and Highways Plan and the Title 22 Girdwood Land Use Regulations.

- Within contiguous residential and commercial developments, no local roadways may be developed that are longer than 150 feet unless they are connected to another roadway at each end.

- Within contiguous residential and commercial developments, local roadways shall have at least 14 intersections per mile.

The combination of a 150-foot limit on dead-end streets with a requirement for at least 14 intersections per mile will result in a well connected street grid with blocks of about 350 to 400 feet in length. These design requirements do not mandate a rectilinear grid, or even an overly uniform grid. They will, however, result in a network that will distribute traffic evenly and equitably and will ensure good access for emergency services equipment. Such a street network will reduce the daily miles of vehicular travel in the valley by providing direct, non-circuitous routes for drivers and by encouraging walking and bicycling.

Alyeska Highway: Speeds and Traffic Calming

As traffic grows on Alyeska Highway through the core area (ultimately to over 10,000 vehicles per day), the land uses along it are in danger of becoming overly auto-dominated. It will be important to residents and visitors that steps be taken to control speeds and safety. The New Townsite downtown area will thrive only if pedestrians are comfortable walking near and across the highway.

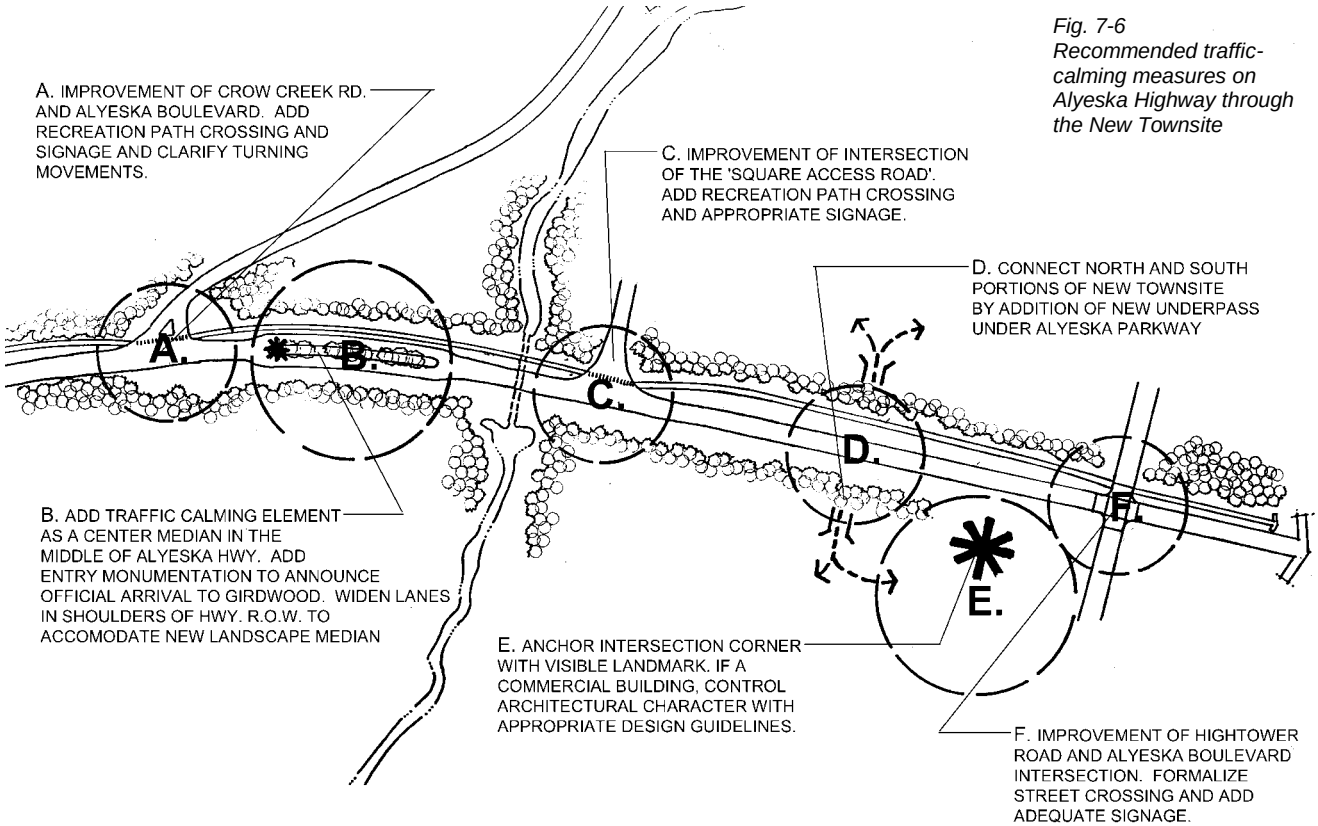


Fig. 7-6
Recommended traffic-calming measures on Alyeska Highway through the New Townsite

Alyeska Highway was originally designed to meet rural highway standards, which are no longer appropriate as the Valley becomes a more residential and commercial community. The portion of the highway that is east of the Crow Creek Road intersection should be reconstructed to an urban cross-section, with sidewalks and crosswalks for pedestrians and with choke points at several places in the corridor. In this way it will begin to function more like a downtown street. Posted speeds will be lowered in connection with these physical changes. Bus pullout bays would be provided at key points in the corridor.

As part of this reconstruction, the Crow Creek Road/Alyeska Highway intersection will be reconfigured. The intersection will mark the boundary between the rural highway section and the "downtown street" section. Reconstruction of the intersection will include improved intersection layout as well as an entry or gateway feature that announces to drivers that they are entering a community neighborhood and must slow down.

Reconstruction of the Alyeska Highway/Hightower intersection will also be critically important and should be given a high priority. This plan calls for curb extensions and patterned crosswalks at this intersection.

Over time, if the New Townsite is to thrive and become the Valley's downtown, the Alyeska Highway must be tamed and speeds calmed to accommodate a higher number of vehicular turning movements and to provide a safer environment for pedestrians. A wide, straight road with no visual obstructions is an invitation to speed. The entire highway segment from the curve at Crow Creek to its intersection with Arlberg Road should eventually be retrofitted with traffic calming design features that cause drivers to slow down and reduce pedestrian crossing times.

Projects and Roadways No Longer Planned

The Transportation Master Plan proposes the elimination of roadway segments that had been previously planned or considered. These include:

Link from the New Townsite to Crow Creek Road

Various maps have in the past shown a direct roadway connection from Lindblad Avenue in the New Townsite up to Crow Creek Road. The physical feasibility of this connection is doubtful due to the grade difference between the two roadways. However, a pedestrian trail connection exists in this corridor.

Timberline to Alyeska Highway Collector

The Municipality's *Official Streets and Highways Plan* includes a proposed collector street running south from Alyeska Highway along the western edge of Alyeska Basin Subdivision, turning west and crossing Glacier Creek to reconnect with the highway just north of the water and sewer plant. (See Map 10.) This Plan proposes to delete that roadway, as other recommendations for emergency egress will make it redundant.

Reconfiguation of the Alyeska Hwy. / Arlberg Road Intersection

There has been interest in reconfiguring the "T" intersection at the end of Alyeska Highway to improve vehicular flow, to improve wayfinding, and to improve access to ski base parking. However, no clear strategy or design that would address this issue without significant impacts to private property has been identified.

Extension of Gold Avenue East of the Original Townsite

Previous Official Streets and Highways Plans included the extension of the Gold Avenue collector roadway into the wetlands along the Seward Highway and east of the original townsite. This no longer appears warranted by anticipated development patterns.