4. CIRCULATION ELEMENT

The objective of the Circulation Element is to provide long-term policies concerning the movement of people, goods, and services within the Mt. Shasta planning area. The Circulation Element addresses streets and highways, public transit, rail and air transportation, non-motorized transportation (e.g., bicycle and pedestrian circulation), and public utilities.

Each roadway is designed to accommodate different types and amounts of traffic. Generally, local and private roads direct traffic to collector and ultimately arterial roads. Typically, collector and arterial roads provide access to commercial or more traffic-intensive land uses. Arterial and collector roadways also provide connections to Interstate 5 or State Route (Highway) 89.

Table 4-1, Existing Arterial and Collector Streets, lists, and **Figure 4-1** shows, the roadway classifications for routes within the City and the planning area. In addition to existing roadways, this element includes proposed linkages that will be needed as development occurs. These future road linkages are summarized in **Table 4-4, Future Roadways**, and are also shown on **Figure 4-1**. The alignments shown in **Figure 4-1** are for graphic purposes only, and are intended to indicate that eventually a roadway connection will be needed in the general area indicated. The precise alignment of new roadways will need to be incorporated into plans for the eventual development of the area. **Table 4-5, Future Intersection Improvements,** lists intersections that may need to be improved as the City continues to grow.

A. Street Types

Roadways are designed to accommodate different types and amounts of traffic. Generally, local roads direct traffic to collector and ultimately arterial roads. Typically, collector and arterial roads provide access to commercial or more traffic-intensive land uses. In the planning area, arterial and collector roadways generally provide connections to Interstate 5 or State Route (Highway) 89 for regional traffic. The following types of roadways can be found in the planning area.

Interstate: An interstate highway is a Federal or State designated road that consists of multiple lanes with opposing traffic separated by a barrier or median. Access is derived exclusively from sanctioned interchanges. Interstate 5 is the only interstate within the planning area.

Highway: Also referred to as a State Route, a highway is designed to convey regional traffic. Lanes may be separated by a median or barrier but, in the planning area, State Route 89 is the only highway in the planning area and it is typically a rural two-lane roadway with occasional passing lanes.

Arterial: An arterial is a major street that is intended to move traffic into and through an area. An arterial road is a work-horse road or "main" street road within a community. Access to an arterial street may be limited to improve the flow of traffic.

Collector: A collector is a street designed to collect and move traffic, generally from residential areas, to an arterial street or into a business district. Access to the collector tends to be available for each parcel having frontage or easements.

Local: A local street typically connects residences to a collector or arterial street. A local street is intended for slower traffic as its role is to provide direct access to homes. Typically, a residential street is designed to discourage through traffic, but retains connectivity to ensure adequate emergency access.

Private: Private streets are not city-owned or maintained streets. They typically provide access to one or more residences and are used in areas where conventional city street standards may not work with the project design. Private streets can also provide access to commercial uses.

Table 4-1
Existing Arterial and Collector Streets
Mt. Shasta Planning Area

Arterials	Abrams Lake (North Old Stage Road to Spring Hill Drive)
	Alma Street (Cedar Street to Rockfellow Drive)
	Chestnut Street
	Everitt Memorial Highway
	Fish Hatchery Lane (I-5 to South Old Stage Road)
	Lake Street
	Lassen Lane (Pine St. to North Old Stage Road)
	Mount Shasta Boulevard (SR89 to I-5)
	North Old Stage Road (Abrams Lake to Azalea Road)
	Pine Street (Lake Street to Lassen Lane)
	Rockfellow (Alma Street to Everitt Memorial Highway)
	Spring Hill Drive (Abrams Lake to North Mt. Shasta Boulevard)
	Washington Avenue (Lake to Rockfellow)
Collectors	Ivy Street (North Mount Shasta Boulevard to Rockfellow)
	North Old Stage Road (Abrams Lake north)
	Old McCloud Highway (South Mount Shasta Boulevard to Eddie Drive)
	Pine Grove (Lassen Lane to North Old Stage Road)
	Ream Avenue (W.A. Barr to South Mount Shasta Boulevard)
	Rockfellow Drive (Everitt Memorial Highway to Jefferson Drive)
	Rockfellow Drive (Ivy Street to Alma Street)
	Siskiyou Lake Boulevard (W.A. Barr Road to South Old Stage Road)
	Ski Village Drive (North Mount Shasta Boulevard to Everitt Memorial Highway)
	W.A. Barr Road (South Old Stage to Siskiyou Lake Boulevard)
	Washington (Lake Street to Old McCloud Road)
	McCloud Avenue

B. Level of Service

1. Background

A Level of Service (LOS) rating is a guideline established by the Institute of Transportation Engineers (ITE) as a means to quantify the subjective measure of traffic tolerance. To try to prevent roads from reaching a level in which traffic moves with poor efficiency from point-to-point, cities establish guidelines at which a street or road is considered to have reached the highest service volumes that are tolerable within a community. Rated in grades from A (best) to F (worst), levels of service are based on increasing amounts of congestion and delay.

LOS E represents traffic levels at the full capacity of the road segment with the road unable to carry more traffic. Prior to reaching this level, it is important for the City to have plans to either improve the street to acceptable levels or construct another street to relieve the crowded street. **Table 4-2** shows the approximate volume of traffic that a particular roadway can usually accommodate at each level of service. These figures should be considered guidelines rather than absolute because road alignments, intersection controls, types of traffic and adjacent land uses factor into the handling capacity of a given roadway.

Table 4-2
Road Type and Approximate Average Daily Trips by Level of Service

Road Type	Average Daily Trips (ADT)				
	LOS A	LOS B	LOS C	LOS D	LOS E
4-Lane Divided Arterial w/Turn Lane	22,000	25,000	29,000	32,500	36,000
2-Lane Arterial w/Turn Lane	11,000	12,500	14,500	16,000	18,000
2-Lane Arterial	9,000	10,500	12,000	13,500	15,000
2-Lane Collector	6,000	7,500	9,000	10,500	12,000
Local	600	1,200	2,000	3,000	4,500

Notes:
1. Based on Highway Capacity Manual, Fourth Edition, Transportation Research Board, 2000.
2. All volume thresholds are approximate and assume ideal roadway characteristics. Actual thresholds for each LOS listed above may vary depending on a variety of factors including (but not limited to) roadway curvature and grade, intersection spacing, driveway spacing, percentage of trucks and other heavy vehicles, lane widths, signal timing, on-street parking, volume of cross traffic and pedestrians, etc.
3. Based on Traffic Impact Analysis Guidelines, County of Sacramento, July 2004.

2. General Plan Objectives and Programs: Level of Service

Goal CI-1: Ensure that land development does not exceed road capacities.

Policy CI-1.1: Level of service shall be the standard for judging whether a road has adequate remaining capacity for average daily traffic generated by a proposed project.

Policy CI-1.2: Level of service "C" shall be the minimum acceptable service level during normal conditions. Peak-hour reduction to level of service "D" may be permitted provided there are plans in place to make improvements required to improve the level of service.

Implementation Measures:

CI-1.2(a): Public Works, in cooperation with Caltrans and Siskiyou County, shall regularly monitor traffic volume on roads that presently have levels of service of C or D. Average Daily Trips (ADT) shall be determined and made available to the Planning Department for review of development proposals.

CI-1.2(b): When a road segment or intersection is found to be approaching Level of Service C (defined as ADT being within ten percent of the highest LOS C traffic volume threshold), or to have significant safety issues related to the volume of use, the City shall initiate plans for improvements designed to increase capacity, and/or to improve other operational features of the roadway or intersection to improve the LOS and traffic safety.

CI-1.2(c): The improvements shall be designed to be initiated by the time traffic volume is approaching Level of Service D. This may result in the generation of impact fees as a means of accumulating funds for the improvements caused by private development.

CI-1.2(d): The city shall require traffic analysis to be conducted for all projects that will generate sufficient traffic to use ten (10) percent or more of the capacity of the roadway at LOS C as shown in Table 4-2. When a project will potentially impact a state highway, consideration will be given to the Caltrans Guide for the Preparation of Traffic Impact Studies to determine when and how a related traffic study should be completed.

CI-1.2(e): Projects that will impact streets and/or intersections that currently, or are projected to operate, at below LOS C, shall prepare a traffic analysis to determine the extent to which they impact the streets and/or intersections. For facilities that are (short-term conditions), or will be (cumulative condition), operating at unacceptable Levels of Service without the project, an impact is considered significant if the

project: 1) increases the average delay at intersections by more than five seconds, or 2) increases the volume-to-capacity ratio by 0.05 or more on a roadway segment.

CI-1.2(f): If a street and/or intersection is impacted by a project for short-term conditions, and the project's pro-rata share is equal to or above twenty five (25) percent, then the project shall be required to construct the necessary improvements to maintain an acceptable level of service.

CI-1.2(g): If a street and/or intersection is impacted by a project for cumulative conditions, and the project's pro-rata share is below twenty five (25) percent, then the project shall be required to pay their pro-rata share of the cost of constructing these improvements.

CI-1.2(h): The City shall regulate truck travel as appropriate for the transport of goods, consistent with circulation, air quality, noise, and land use goals.

CI-1.2(i): The City may install, or require to be installed, traffic calming measures on existing and future streets.

C. Circulation Standards and New Roads

1. Background

Figure 4-1, General Plan Circulation Map, shows the location and classification of existing and proposed streets and other transportation facilities. Standards for local streets and highways for applicable functional classifications are shown in **Table 4-3, Street Standards**. Road rights of way are frequently reduced to avoid natural features such as mature trees or hillsides, or enlarged to provide for intersection improvements or turnouts. These modifications are proposed at the direction of the City Engineer and reviewed during project approval.

Table 4-3
Street Standards

Road Classification	*Lanes*	*Typical Right-of-Way Width (feet)*
Urban Arterial	2-4	80
Collector	2	60
Local	2	50
Private		As determined by project.

Proposed Roads and Intersection Improvements

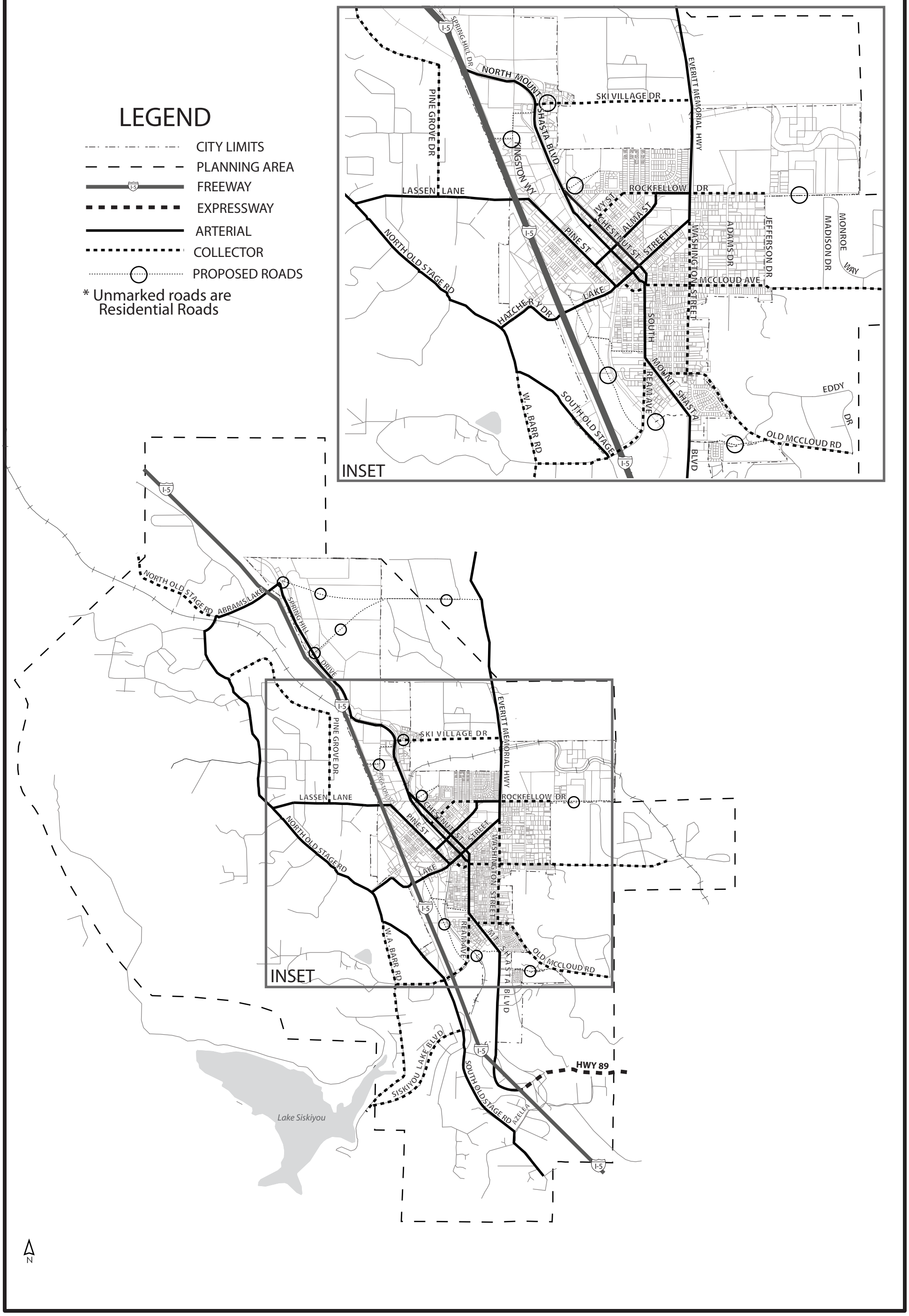
To accommodate new development within the planning area, a number of proposed new roadway and intersection improvements are shown on **Figure 4-1**. **Tables 4-4** and **4-5** list these improvements. The following applies to each of the future improvements:

- The proposed "routes" are conceptual and are not intended to designate actual proposed alignments. They are intended to indicate the intention that a road should and may be developed from a Point A to a Point B. It is recognized, however, that more detailed engineering, environmental impact analysis and, in some cases, coordination with the development plans of various property owners, is necessary to define the preferred alignment.
- The fact that the proposed roads are indicated does not imply any obligation that the City will finance and construct each road. The timing of if and when certain roads will be constructed is dependent upon various priorities and opportunities (e.g., coordination with future development projects). Some of the roads may be constructed by private developers and offered to the City or County for acceptance into their street systems. The details of when and how certain roads will be developed will also be coordinated with the Regional Transportation Plan process.
- It should be noted that the indicated proposed streets are, for the most part, proposed as public arterials and collectors. Other future roads, especially as part of private development projects, may be proposed that are not indicated in the General Plan. The case that those roads are not indicated as being proposed in this General Plan is not intended to suggest that such roads would be "inconsistent" with this Plan.

With Interstate 5 passing through the City of Mt. Shasta, and State Route 89 intersecting with I-5 just south of the City, the condition and operation of these highways is of concern to the City. In turn, development within the City and elsewhere in the planning area may impact the interchanges and ramps onto and off of those highways. **Table 4-5, Future Intersection Improvements**, notes concerns with the intersection of North Mt. Shasta Boulevard and Spring Hill Road, which is at the northbound on-ramp to Interstate 5, as well as the overpass that serves as part of the south-bound I-5 off-ramp to Mt. Shasta Boulevard. Future improvements to these traffic facilities will need to be designed in a coordinated manner to address all of the related circulation issues.

The south end of South Mt. Shasta Boulevard also functions in a close relationship with the Interstate 5/State Route 89 Interchange. Redevelopment of these interchanges will need to be coordinated and may have implications concerning land use in the vicinity. Also, land use development in this area may have issues concerning operational improvements related to the highways to accommodate increased growth.

Caltrans has noted that, as the community continues to develop, the potential impacts to highways will need to be evaluated concerning not only the interchanges discussed above, but also the Interstate 5 interchanges at Lake Street and Abrams Lake Road. When projects have the potential of impacting the state highway system, the design and environmental review processes need to consider the *Caltrans Guide for the Preparation of Traffic Impact Studies* to determine whether a traffic study is needed to evaluate potential impacts to the highway.



Source: PMC, 2006

FIGURE 4-1
CIRCULATION MAP

PMC

Table 4-4
Future Roadways

Roadway	*Discussion*
Spring Hill Area	A future arterial road should extend from a point roughly half-way between Abrams Lake Road and North Mount Shasta Boulevard. The new arterial should eventually extend to Everitt Memorial Highway.
Kingston Way Extension to North Mount Shasta Boulevard	Kingston Way is a private roadway that serves a relatively high number of residents. Connecting Kingston Way to North Mount Shasta Boulevard via Nixon Road will improve circulation and provide for emergency access for both Kingston Way and Nixon Road development. This connection, a proposed collector, would also provide for a shorter distance from north Mount Shasta to Mercy Medical Center.
North Mt. Shasta Avenue to Shasta Avenue	This future collector would extend from North Mount Shasta Boulevard just south of its crossing of the McCloud Railway line to access the area west of Shasta Avenue and north of Hinckley Street. Much of this area is currently zoned R-4, Multiple Residential and Professional District. The conceptual collector street has two alternatives: 1) to connect with the west end of Shasta Avenue, or 2) to connect with the northwest end of Kenneth Way.
Rockfellow Drive	Rockfellow Drive should be extended approximately 200 feet east to Madison Avenue. There is currently an "emergency" route with a dirt road between the east end of Rockfellow Road and the cul-de-sac at the north end of Madison Avenue. A substantial amount of residential development east of the City has occurred with McCloud Avenue serving as the only access. The extension of Rockfellow Road as a collector would provide a second access and escape route from an area known to have a high fire hazard rating.
Morgan Way to East Ream Avenue	Morgan Way is a private street that provides one of two access points into the Mt. Shasta Mall shopping center. Extension of Morgan Way as a collector to Ream Avenue would improve access to the designated proposed commercial area behind the shopping center and along Interstate 5. Extension of this route will also relieve traffic at the intersection of Morgan Way at West Lake Street.
East Ream to South Mt. Shasta Blvd.	The 1993 General Plan included, and the revised General Plan has retained, a proposed road from Ream Avenue (perhaps as a further extension of the Morgan Way extension from Lake Street) to South Mt. Shasta Boulevard. The proposed intersection with South Mt. Shasta Boulevard is vague but would conceptually be in the vicinity of Bear Springs Road. A major challenge for this section of road would be installation of another railroad crossing. However, this link would facilitate the use of Morgan Road as an alternative to South Mt. Shasta Boulevard.
New Road between Morgan Way and South Mount Shasta Boulevard	Intended as a collector street, this roadway would connect the extension of Morgan Way to the west, to South Mount Shasta Boulevard in the vicinity of Sisson Street. The access would improve circulation in south Mount Shasta and relieve pressure on South Mount Shasta Boulevard.
Bear Springs Road	This collector would connect Old McCloud Road to South Mount Shasta Boulevard.

Table 4-5 Future Intersection Improvements	
Roadway	*Discussion*
North Mt. Shasta Boulevard/Spring Hill Road Interchange	There is need for improvement of this intersection and its relation to the North Mt. Shasta Boulevard interchange with Interstate 5. The current intersection will not be suitable to handle increased traffic related to development of the Spring Hill Specific Plan Area.
Ski Village Drive/North Mt. Shasta Boulevard Intersection	Providing for a direct intersection with North Mount Shasta Boulevard will improve efficiency of this intersection.
Highway 89 Interchange	CalTrans has proposed a variety of conceptual plans to improve the Highway 89 Interchange with Interstate 5. As of 2006, however, a preferred design had not been determined. It is expected that improvement of this interchange will continue to be proposed. Some plans may affect the south end of South Mt. Shasta Boulevard.

2. General Plan Objectives and Programs: New Roads and Vacation

Goal CI-2: Designate arterial, collector and other streets, including proposed streets that are expected to be needed in the planning area.

Policy CI-2.1 The City shall recognize the Circulation Map (Figure 4-1) of this Circulation Element as designating arterial and collector streets and proposed streets in the General Plan planning area.

Goal CI-3: Ensure that newly constructed roads are built to standards meeting long-term needs.

Policy CI-3.1: Accept roads in the City-maintained road system only when constructed to City standards.

Implementation Measures:

CI-3.1(a): Where a development is required to perform new roadway construction or road widening, the entire roadway shall be completed by the developer to its ultimate planned and designated width from curb-to-curb prior to operation of the project for which the improvements were constructed, unless otherwise approved by the City Engineer. All such roadway

construction shall also provide facilities adequate to ensure pedestrian safety as determined by the City Engineer.

CI-3.1(b): Private roads may be developed provided they are constructed to an appropriate roadway standard and have an identified maintenance program with the responsible party clearly stated.

CI-3.1(c): Typically, all streets should have sufficient pavement width to provide for parking on both sides of the street and enough remaining pavement width to provide for fire and emergency access. However, the City may consider alternative street designs including narrower streets, one-way streets, restricted parking and other similar methods intended to reduce the amount of area that must be paved and maintained.

CI-3.1(d): Where traffic calming devices or techniques are employed, the City shall ensure adequate access for police and fire vehicles, and adequate maneuverability for snow removal operations.

CI-3.1(e): The City shall require the installation of traffic pre-emption devices for emergency vehicles at all newly constructed intersections.

Goal CI-4: Ensure that new roads are sited to meet demands of growth.

Policy CI-4.1: Construct, or require construction of, identified new roads as development or redevelopment occurs.

Implementation Measures:

CI-4.1(a): Construct, or require construction of, identified new roads as development or redevelopment occurs.

CI-4.1(b): If the design of the project requires that portions of the new road be constructed offsite to form a connection, the proponent shall be required to pay a proportion of the offsite costs attributable to the proposed project.

CI-4.1(c): If the cost of the improvements funded by the project proponent are greater than the project's proportional share, the City and proponent may enter into an agreement to collect future impact fees

from other projects benefiting from the improvements to be reimbursed to the proponent.

CI-4.1(d): Require connectivity between adjacent projects as appropriate to ensure adequate and safe circulation.

Goal CI-5: Abandon streets that serve no public purpose.

Policy CI-5.1: When an application is submitted to vacate a street or easement, ensure that the City has no need for the route.

Implementation Measure:

CI-5.1(a): Utilize the provisions of California law to consider the abandonment of a street or easement for which the City has no use.

D. Parking

1. Background

Parking within the City of Mt. Shasta involves both residential and commercial entities utilizing on-street and off-street parking throughout the City. Under the current zoning ordinance, residential development is required to provide off-street parking commensurate with the density level of the development. While this has resulted in less on-street parking in residential neighborhoods than might exist otherwise, there is still considerable on-street parking along residential streets throughout the City. There are also residential streets that lack adequate off-street parking because they developed prior to adoption of such regulations. Where off-street parking is limited or absent, especially along some of the narrower streets, a hazard to traffic and/or pedestrians may exist.

Provision of adequate parking in the downtown area is facilitated by the Downtown Business Improvement District (i.e. the parking district). While the City of Mt. Shasta established this district with the primary goal of ensuring adequate parking in the downtown area, the district is also responsible for beautification projects and other public improvements. The parking district is funded by annual fees charged to existing businesses and in-lieu fees charged to new businesses that cannot provide adequate off-street parking.

In conjunction with the City, the parking district owns and maintains six public parking lots with a total of 202 parking spaces. In addition to the off-street parking, the district provides 224 on-street parking spaces within the downtown area. These 426 district-owned spaces are supplemented by a lot on the northwest corner of Chestnut and Castle Streets that the City leases. This lot provides approximately 32 off-street parking spaces, for a total of 458 public parking spaces in the downtown area.

During much of the year, finding a parking space in the downtown area is a relatively simple endeavor. During the peak of the summer tourist season, however, parking spaces along the main business block of North Mt. Shasta Boulevard may be fully utilized. It is during these times that many residents and visitors get the impression that there is a shortage of available parking in the City. This perception inspired the City to conduct an informal study of the parking district during the peak of the tourist season in August 2005. According to the study, parking within the district does not exceed 55 percent capacity during periods of peak usage. This means that there are approximately 200 unused public parking spaces in the downtown area during the busiest time of the year. Given the abundance of underutilized parking areas within the downtown, proper utilization of signs directing visitors to the various parking areas would help alleviate the perceived parking problem.

Outside the downtown area, considerable on-street parking extends both directions along Mt. Shasta Boulevard. Even when off-street parking is available, it seems that drivers prefer to park their vehicles along the street in front of businesses. Given the width of Mt. Shasta Boulevard and the availability of parking lanes, on-street parking does not pose a particular hazard outside of winter storm events. It is during the times of inclement winter weather that the value of off-street parking is most evident.

2. General Plan Objectives and Programs: Parking

Goal CI-6: Maintain and enhance parking throughout the City.

Policy CI-6.1: Continue to encourage off-street downtown parking.

Implementation Measure:

CI-6.1(a): Utilize the Downtown Parking District to ensure that there are adequate funds to continue to meet long-term parking needs, and to cover the costs associated with maintenance and upkeep.

Policy CI-6.2: Ensure adequate, but not excessive, well-designed and convenient on-street and off-street parking throughout the City.

Implementation Measures:

CI-6.2(a): Develop a long-term parking plan and appropriate development fees for the entire City of Mt. Shasta.

CI-6.2(b): Develop parking areas in the perimeter of downtown to create an adequate parking supply to serve existing businesses and future development.

CI-6.2(c): On-site parking should be located to the rear or side of buildings.

CI-6.2(d): Businesses with appropriate land uses for effective shared parking should be encouraged. Examples of businesses with shared parking opportunities may include office buildings and uses such as restaurants and theaters that generate primarily an evening parking demand.

CI-6.2(e): Utilize signs to direct traffic to various parking areas around the City.

E. Public Transportation

1. Background

The Mt. Shasta area is served by public transit and freight trains but does not have aviation facilities within the planning area.

Public Transit

The Siskiyou Transit and General Express (STAGE) provides inter-city bus service within Siskiyou County serving Mt. Shasta, Dunsmuir, McCloud, Weed, Lake Shastina, Yreka, Gazelle, Grenada, Montague, Hornbrook, Scott Valley and Happy Camp. The system provides ten northbound and ten southbound runs through Mt. Shasta Monday through Friday. STAGE makes two scheduled stops within the City at the Mt. Shasta Shopping Center and Mercy Medical Center and on-call stops can be scheduled. STAGE does not have a terminal located in the area. Buses are wheelchair-lift equipped and bike racks are available.

Rail Service

The City has two rail lines running through it; the Union Pacific Railroad (UPRR, which was formerly the Southern Pacific Railroad) and the line of the McCloud Railway Company (MRC), a short line railroad based in McCloud. The UPRR north-south mainline through California runs through the City of Mt. Shasta. The UPRR line accommodates about 18-20 trains per day, many of which are approximately 5,500 feet in length. Spur lines are located in the Azalea and Pioneer areas in the vicinity of Mt. Shasta and a small yard area is located between Alma Street and Nixon Road where UPRR's line intersects with the MRC line.

Two Amtrak passenger trains pass through the City each morning on the Union Pacific Railroad line. Amtrak currently makes a single stop in Dunsmuir to serve the south County.

The MRC is a single line in the planning area connecting the community of McCloud with the UPRR line. This line runs approximately two trains per week consisting of 5 to 15 cars each. The McCloud Railway Company also operates

excursion trains including a dinner train out of McCloud, but such activities only enter into the City of Mt. Shasta on special occasions.

Air Transportation

There are no aviation facilities within the City of Mt. Shasta or the planning area. The nearest airports with scheduled commercial service are located in Redding and Medford, Oregon. Local airports serving light aircraft include the Weed Airport (Siskiyou County) and the Mott Airport (City of Dunsmuir).

2. General Plan Objectives and Programs: Public Transportation

Goal CI-7: Encourage continued public transportation in the Mt. Shasta area.

Policy CI-7.1: Support proposals to expand public transportation options.

Implementation Measure:

CI-7.1(a): When City support is requested for expansion or enhancement of public transportation facilities, provide Council support to the efforts through resolutions of support or other appropriate actions.

CI-7.1(b): Continue to work with STAGE to add transit stops as appropriate throughout the community.

CI-7.1(c): Encourage park-and-ride and shuttle services within the City.

F. Non-Motorized Circulation

1. Background

The gentle topography and natural beauty in and around the City of Mt. Shasta make walking, bicycling and other modes of non-motorized transportation attractive alternatives to vehicular travel. Currently there are few off-street trails in the City or elsewhere in the planning area. Development of a trail system would encourage both resident and visitor use of non-motorized transportation and could link homes, schools, parks and recreation areas. Planned correctly, a trail system would be one more reason for visitors to travel to Mt. Shasta.

Support for community multi-use trails in the area has been one of the most popular issues supported at community planning meetings over the last several years. During preparation of the 1993 General Plan, the City conducted an opinion survey that indicated that a trail network was considered a desired community amenity. The desire for more and better trails has also been recognized by more recent Community Action Plan workshops. An early version of a proposed trail system for the 1993 General Plan was opposed because some thought it prematurely proposed trails across portions of private property. It was

not necessarily the concept of the trail itself that opponents objected to, but that some believed the trail system could result in the taking of private property.

As proposed in the *Mt. Shasta Community Action Plan* (2002), one concept of a trail system would connect various open space elements in the City, in the sphere of influence and beyond. Popular destinations would include the City Park, Sisson Meadows, Lake Siskiyou, the State Fish Hatchery and the proposed park on the former Roseburg property (See Figure 4-2, Mount Shasta Conceptual Trail Network). Black Butte and Horse Camp have also been proposed as destinations for a comprehensive hiking trail network from downtown. In order to meet the alternative transportation needs of the community at the same time, it would be best to develop a contiguous trail network linking not only open space and recreation areas but also residential neighborhoods, schools, and employment and commercial centers. A contiguous trail network as envisioned would create an alternative transportation network that would be separate from vehicle traffic zones and would provide for safe, year-round recreation for residents, children and visitors alike. As much as possible, such a trail system should be developed "off-street" for greater safety and a more pleasant user environment. However, the acquisition of land for the creation of an off-street network may prove to be extremely difficult given the current level of development within and around the City. It may be that a mix of off-street and on-street circulation routes for non-vehicular travel is the most practical network to accomplish.

The "routes" illustrated in Figure 4-2 are conceptual only and are not intended to represent precise alignments. They illustrate how a trail or pathway could be developed between various locations within the planning area. More detailed planning, environmental impact analysis and coordination with various property owners is necessary to determine the best alignments and develop segments of the network.

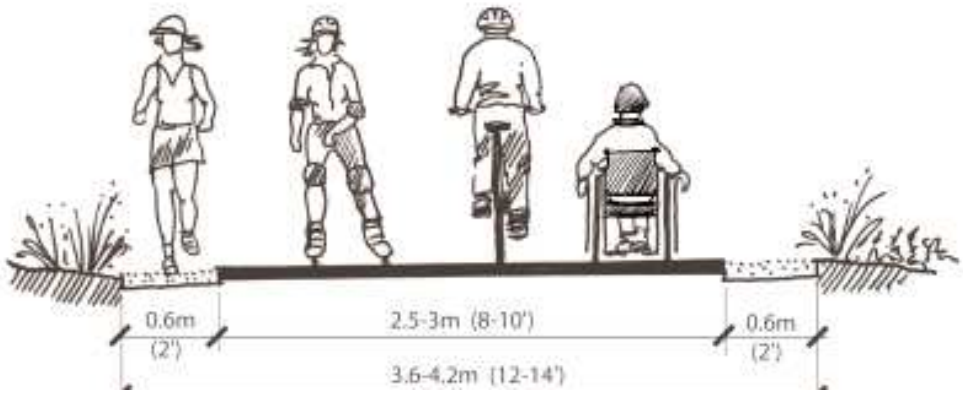
It is expected that most, if not all, trails to be developed in the area will be multi-use trails. They will need to accommodate walkers, joggers, bicycles, wheelchairs, skateboarders and other users. Some trails may be designed to also accommodate horseback riders, but the mix of equestrians with other users presents special safety and design challenges and is often not preferred. The terminology for bikeways is often used to classify different types of trails. The following section provides a description of the various bikeway classifications with illustrative examples.

Typical Bikeway and Trail Classifications

Class I - Bike Paths

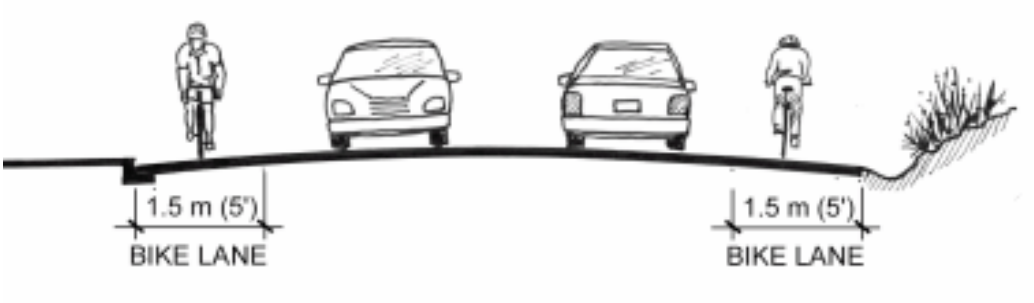
Typically referred to as "multi-use paths", this type of bikeway is separate from the road and provides an exclusive right-of-way for the use of bicyclists, pedestrians and other users. Cross-flows by motorists are minimized to the extent possible. The recommended minimum paved width for a one-way bike path is generally eight feet and a minimum of ten feet for a two-way facility. Providing an additional two

feet of gravel on either side allows for better drainage, accommodates periods of increased use, and is often preferred by joggers as a running surface.



Class II - Bike Lanes

Class II bike lanes are one-way facilities on each side of a road or street with specific lines of demarcation between areas reserved for bicyclists and motorists. When properly designed and posted with street signs, bike lanes improve the public's awareness of bicycle traffic. The minimum width of a bike lane should be five feet. Bike lanes should be located between the parking area and the traffic lane along roadways with on-street parking. Where parking is permitted and not marked, the minimum width should be 12 feet. In the case of Class II facilities, pedestrian traffic in urban areas will usually be accommodated with the use of sidewalks. In rural areas without sidewalks, the bike lanes will typically accommodate pedestrians, joggers and other non-motorized users.



Class III – Bike Routes

Bike routes are designed to provide continuity of the bikeway system along routes not served by Class I or Class II facilities. Bike routes require bicyclists to share the roadway with motor vehicles and are identified solely by the use of signs. These bikeways do little to protect bicyclists from conflicts with motor vehicles and are the least desirable of bikeway options. On arterial and collector streets where parking is permitted, a minimum 30-foot lane should be provided to accommodate a properly-signed bike route. Specifically designated bike routes are not required for

residential streets. Along roadways that have significant amounts of vehicular traffic but lack paved shoulders, shoulder paving is advisable in order to improve safety and convenience of use.

Siskiyou County Bicycle Transportation Plan

An administrative draft of a *Siskiyou County Bicycle Transportation Plan* was prepared in 2000 for the Siskiyou County Planning Department by Tom Hesseldenz and Associates. While the plan was never adopted, it nevertheless provides some recommendations for bicycle-related transportation improvements in the planning area.

The Draft Bicycle Plan had several key goals, objectives and policies relating to circulation planning. The first was to promote bicycle routes that connect residential neighborhoods with major employment centers, schools, libraries, shopping areas, commercial centers, parks, museums, government offices, post offices, and other destinations within and between communities.

Goal V of the Bicycle Plan proposed to, "Ensure effective bicycle transportation planning and design", and was supported by policies to, "Consider bicycle facility needs in the planning, design, construction, reconstruction, and maintenance of all transportation systems, with highest priority given to designated bicycle routes."

Figure 16 of the Draft Bicycle Plan addressed proposed designated bikeways in the Mt. Shasta City area, and Table 14 consisted of a list of proposed bikeways with recommended improvements. The Draft Bicycle Plan acknowledged the need to plan bicycle facilities in a manner that minimizes conflicts between users and private landowners, and contained an objective with policies concerning legal access for bicycle routes.

Figure 4-3, Conceptual Primary Bike Routes, is included in this General Plan to indicate the public streets and roads that also serve as primary bike routes in the planning area. These routes connect with schools and parks, and also provide connections to regional destinations as part of a larger network (e.g., Lake Siskiyou, Bunny Flat, Weed, Dunsmuir and McCloud. The indicated routes are not intended to be exclusive. Other routes are understood to also be commonly used by bicyclists.

This figure also does not attempt to distinguish between streets and roads that have been or that could be improved to provide "Class II" type bike lanes beside the motor vehicle roadway, or "Class III" routes where the roadway is shared by motor vehicles and bicyclists.

In addition to the primary bike routes indicated in Figure 4-3, there have been several proposals in the community for multi-purpose trails of the "Class I" variety, as suggested in Figure 4-2. One such conceptual route would connect the downtown area of the City with the City Park via a route west of the railroad tracks. Another conceptual route would extend west from South Mt. Shasta Boulevard through the "Roseburg Site" and underneath Interstate 5 to connect to South Old Stage Road.

More detailed study is needed to identify opportunities for specific improvements and proposed alignments for Class I trails, as well as Class II bike routes. The General Plan supports preparation of a master plan that provides more detailed plans for the location and development of walkways, trails and bikeways. It is expected that such a master plan will provide much more detail than, and which may vary from, the conceptual routes indicated in Figure 4-2 or Figure 4-3. Since the routes indicated in these figures are only conceptual, the development of more detailed routes will not need to be "consistent" with this figures.

Safe Routes to School

The Federal government maintains a program entitled "Safe Routes to Schools". In California the program is administered by Caltrans. The primary purposes of the program are: 1) to enable and encourage children in kindergarten through eighth grade, including children with disabilities, to safely walk, bicycle, or otherwise wheel to school and, per the Americans with Disabilities Act Guidelines, traverse to school via accessible routes; 2) to make walking and bicycling to school a more appealing mode choice, and; 3) to facilitate the planning, design, and implementation of projects that will improve safety, the environment, and overall quality of life. Expected outcomes of the program include:

- Increased bicycle, pedestrian, and traffic safety around schools.
- More children walking and bicycling to and from schools.
- Decreased traffic congestion around schools.
- Reduced childhood obesity.
- Improved air quality, community safety and security, community involvement.
- Improved partnerships among schools, local agencies, parents, community groups, non-profit organizations.

Funding opportunities are available through the program for creating operational and physical improvements to the infrastructure surrounding

schools that establish safer and fully accessible crossings, walkways, trails and bikeways, and/or that reduce speeds and potential conflicts with motor vehicle traffic. Physical improvements must be located within a two-mile radius of a school. The Safe Route to Schools program emphasizes community participation in the development and implementation of projects. Applications that have the best chance of being selected for funding are those that are developed with community participation and incorporate the key program elements of education, encouragement, engineering, enforcement, and evaluation.

2. General Plan Objectives and Programs: Non-Motorized Circulation

Goal CI-8: Promote safe and efficient pedestrian and bicycle transportation and other modes of non-motorized transportation.

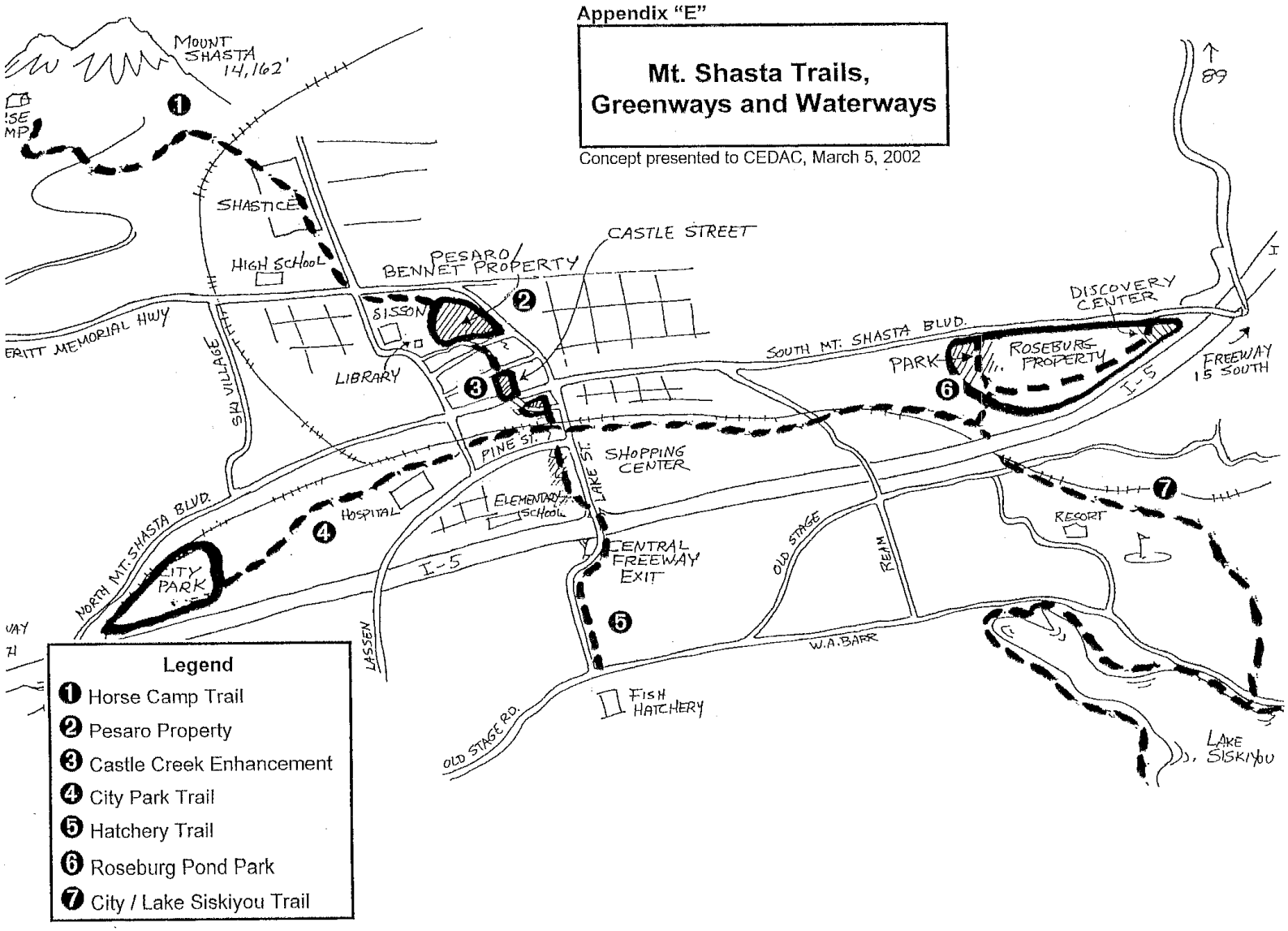
Policy CI-8.1: Promote the development of bikeways, sidewalks, pedestrian pathways and multi-use paths that connect residential neighborhoods with other neighborhoods, schools, employment centers, commercial centers and public open space, and that separate bicyclists, skateboarders and pedestrians from vehicular traffic whenever possible. Ensure that pedestrian facilities follow logical routes designed to serve pedestrian needs and are not constructed as "sidewalks to nowhere".

Implementation Measures:

CI-8.1(a): Amend the development code to require that new sidewalks, pedestrian pathways, multi-use paths and/or bikeways be constructed for new development based upon current and foreseeable future needs in the area of proposed projects.

CI-8.1(b): When siting sidewalks, pedestrian pathways, bikeways and/or multi-use paths, the City shall examine where existing facilities are located and determine if there are other more logical travel patterns that should also be served.

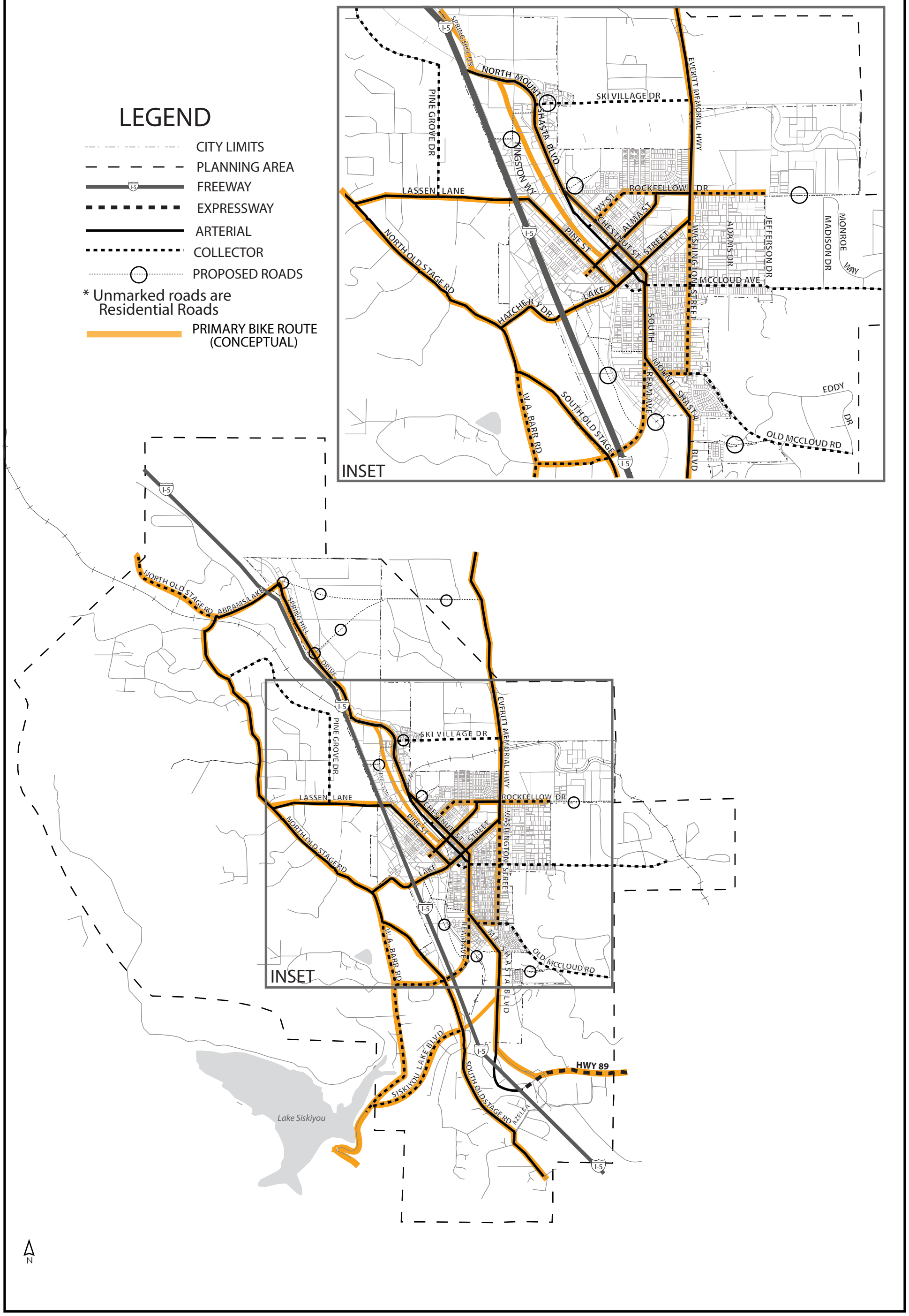
CI-8.1(c): The City should create an Alternative Transportation Advisory Committee (ATAC) to serve as an advisory body on matters relating to planning of the City's bikeway, sidewalk, pedestrian pathway and multi-use path system, as well as future modifications and expansion of that system.



SOURCE: MT. SHASTA COMMUNITY ACTION PLAN, 2002

FIGURE 4-2
MOUNT SHASTA CONCEPTUAL TRAIL NETWORK

PMC



Source: PMC, 2006

FIGURE 4-3
CONCEPTUAL PRIMARY BIKE ROUTES

PMC

CI-8.1(d): Develop a Walkways, Trails and Bikeway*s* Master Plan that incorporates the recommendations of the Community Action Plan, the draft Siskiyou County Bicycle Plan, and other planning proposals, where appropriate, to plan the location and development of future trails and alternative transportation routes in the City and the vicinity.

CI-8.1(e): When the City prepares a master plan and, prior to completion of such a plan as the City considers issues related to walkway, trail and bikeway issues, the City will consider the following needs and general objectives:

A. The city bicycle network will connect with the countywide bicycle network. The city will encourage and work with the county in development of a countywide bicycle network.
B. Signage should be provided (where automobile traffic merges with or intersects bicycle traffic) to notify automobiles of the presence of cyclists.
C. Repair or development of railroad crossings should be done in a way that allows safe crossing by bicycles.
D. The timing of traffic lights and sensitivity of traffic sensing equipment should accommodate bicycles.

CI-8.1(f): The City, local schools and concerned community organizations will seek funding opportunities through the Safe Routes to School program to facilitate the planning, design, and implementation of eligible projects to improve the safety and accessibility of pedestrian and bicycle routes to local schools.

Policy CI-8.2: If the railroad line between the City of Mt. Shasta and McCloud is ever proposed for abandonment, the City supports the conversion of the route for a public multi-purpose trail.

Implementation Measure:

CI 8.2(a): Should the McCloud Railway Company line ever be abandoned between the City and the community of McCloud, the City of Mt. Shasta shall support the retention and development of the right-of-way for a

multi-purpose public trail for non-motorized use (e.g., a "rails to trails" type of conversion).

CI-8.2(b): Continue to support rail service into Mt. Shasta, and seek passenger service and rail spur(s) as appropriate.

G. Utilities

1. Background

Utility services provided to the planning area include: water, wastewater disposal, storm drainage, electricity, cable television and telecommunication.

Water

The City of Mt. Shasta provides water services within the City and to portions of the planning area outside the city limits. Much of the planning area is served by individual wells and on-site water systems. The City water supply and distribution system is discussed in the Land Use Element (Section III). Please refer to the Land Use Element for further details pertaining to the domestic water system.

Wastewater Disposal

Wastewater disposal in the Mt. Shasta area includes a regional sewage collection and treatment system and individual on-site septic systems. Although wastewater lines are a discussion item included in the Circulation Element, this infrastructure is discussed in-depth in the Land Use Element (Section III). Please refer to the Land Use Element for further details pertaining to the wastewater disposal and treatment facilities for the City.

Stormwater Drainage

The planning area is topographically divided into drainage sub-areas including Wagon Creek, Big Springs Creek, Cold Creek, and Old Mill Creek. A series of unnamed channels drain the southern portions of the City. Most of the drainages in the planning area drain into Lake Siskiyou and all of them eventually drain into the Sacramento River. The 1993 General Plan reported that an eastside annexation study indicted that many portions of the City's drainage system are at or near capacity. Impacts of new development, particularly in areas east of the City, will likely require improvements to the storm drainage system.

The increased development of non-residential uses with large parking areas and a tendency towards leveled pads increases the amount of surface water runoff that enters the drainage system. Stormwater may carry sediment and contaminants that can impact surface water quality. The City works with the Regional Water Quality Control Board to implement best management practices for the protection of stormwater runoff during construction.

Electricity

Electrical service in the Mt. Shasta area is provided by Pacific Power and Light Company (PP&L). Power originates from a 115 kilovolt (KV) line in Weed and then is transmitted along a 69 KV line that runs along the west side of the valley. A substation interfaces with this line east of South Old Stage Road. Power is then delivered along a distribution network. PP&L has indicated that its power supply is capable of meeting projected power needs in the area. Substations and other aspects of the electrical supply infrastructure may need to be upgraded or improved in order to service the population as growth continues (PP&L, 2005).

Telephone and Internet

Telephone services to the area are provided by a number of companies.

Other Utilities

There are no gas, liquid, slurry or other commodity pipelines located in the Mt. Shasta planning area. Propane is provided through private and individual home delivery.

2. General Plan Objectives and Programs: Utilities

Goal CI-9: Ensure adequate utilities to meet community needs.

Policy CI-9.1: Encourage participation of public utilities in the project review process.

Implementation Measures:

CI-9.1(a): Provide copies of development proposals for the review and comment of public utilities about the capacity to serve the project.

CI-9.1(b): Support efforts by utilities to upgrade and improve service to the Mt. Shasta area.

Policy CI-9.2: Develop public utility master plans for water service, sewage disposal and stormwater control.

Implementation Measures:

CI-9.2(a): Complete, and update as needed, capital improvement plans for City-provided utility services including water, sewer, and stormwater.

CI-9.2(b): Require that capital improvement plans include an implementing program with target dates, estimated costs, and possible methods of financing the programs.

CI-9.2(c): When commercial development is proposed with new parking facilities, require that a site drainage plan be included with permit applications.

REFERENCES

City of Mt. Shasta, *General Plan*, 1993.

City Economic Development Advisory Committee. *Mt. Shasta Community Action Plan.* 2002.

Siskiyou County Department of Public Works. Siskiyou Transit and General Express. *Website.* http://www.co.siskiyou.ca.us/dpw/transportation.htm. 2005.

Tom Hesseldenz and Associates. *Siskiyou County Bicycle Transportation Plan (Administrative Draft) .* 2000.