4.2 Traffic and Circulation

Introduction

This section present an evaluation of the potential transportation impacts associated with adopting the proposed project, as well as the potential impacts resulting from growth under the existing General Plan. The regulatory setting provides a description of the applicable local and State regulatory policies and is followed by the environmental setting, which provides a brief description of conditions on the existing transportation system in the county. The following section also includes the transportation impacts and mitigating policies for each analysis scenario, which are assessed against the relevant standards and policies provided by the County and the proposed project. As a programmatic EIR for a general plan update, the following analysis does not describe site-specific design or transportation improvements in detail. Consequently, site-specific transportation impacts, such as adequacy of on-site parking or driver sight distance, are not provided in this section.

The reader of this DEIR is referred to Section 4.5 "Noise" for a description of the environmental impacts related to aviation noise. The reader is also directed to Section 4.8 "Hazardous Materials and Public Safety" for a description of the environmental impacts related to aviation safety in the County.

Summary of NOP Comments

No specific comments related to traffic and circulation issues were received as part of the public and agency comments received during the NOP scoping period.

Summary of Impact Conclusions

A summary of the traffic and circulation impacts described in this section are provided below in **Table 4.2-1**.

TABLE 4.2-1
SUMMARY OF TRAFFIC AND CIRCULATION IMPACTS

Impact Number	Impact Topic	Impact Conclusion	Impact After Mitigation
Impact 4.2-1	Traffic and LOS Standards (Existing Plus Proposed Project)	Potentially Significant	Significant and Unavoidable
Impact 4.2-2	Rural Road Safety (Existing Plus Proposed Project)	Less Than Significant	Less Than Significant
Impact 4.2-3	Conflicts with At-Grade Railroad Crossings and Inadequate Emergency Access (Existing Plus Proposed Project)	Less Than Significant	Less Than Significant
Impact 4.2-4	Traffic and LOS Standards (Cumulative Plus Proposed Project)	Potentially Significant	Significant and Unavoidable
Impact 4.2-5	Rural Road Safety (Cumulative Plus Proposed Project)	Less Than Significant	Less Than Significant
Impact 4.2-6	Conflicts with At-Grade Railroad Crossings and Inadequate Emergency Access (Cumulative Plus Proposed Project)	Less Than Significant	Less Than Significant

Regulatory Setting

Federal Regulations

Federal Highway Administration

The Federal Highway Administration (FHWA) is the agency of the United States Department of Transportation (DOT) responsible for the federally-funded roadway system, including portions of the primary State highway network. FHWA funding is provided through the MAP-21 (Moving Ahead for Progress in the 21st Century). MAP-21 funding programs can be used to fund local transportation improvement projects, such as projects to improve the efficiency of existing roadways, bikeways, and transit system upgrades. Management of individual transportation elements receiving Federal funding is a responsibility of state and local entities.

Federal Aviation Administration

The Federal Aviation Administration (FAA) is the federal agency which regulates civil aviation to promote safety, provide an air traffic control system for both military and civil aircraft, and to respond to aircraft crash incidents. The FAA regulations are intended to ensure aircraft are suitable for flight, reduce the risk of crash hazards, and ensure that airports are sited and operated in a manner that minimizes risk to the public.

State Regulations

California Department of Transportation

The California Department of Transportation (Caltrans) has responsibility for planning, designing, constructing, and maintaining all State highways. Any federally-funded transportation improvements are subject to review by Caltrans staff and the California Transportation Commission. As any improvements or modifications to the state highway system need to be approved by Caltrans, local jurisdictions have no ability to unilaterally make improvements to the state highway system.

Caltrans has developed a series of Transportation Concept Reports that cover the state highways in Plumas County. In general, Caltrans strives to attain Level of Service (LOS) C or better on state highways in Plumas County. Caltrans also has a well developed series of design standards that are applied to projects along the state highway system. Although Caltrans expresses preferences for particular levels of service on various state highway and freeway facilities, Caltrans has no authority over local land use. As a result, there is no legal impediment to cities and counties approving land use decisions that create traffic on Caltrans facilities in excess of Caltrans' preferred LOS.

Caltrans also plays a role in setting the standards and guidelines for policy making regarding bicycle master plans. An adopted bicycle master plan is a requirement for a jurisdiction to be eligible for State bicycle funding,

Caltrans Division of Aeronautics

The Caltrans Division of Aeronautics performs a variety of functions to promote aviation safety and to implement the State Aeronautics Act. These functions include issuing permits, providing airport inspection and design regulations, planning to ensure consistency with federal regulations, and providing grants to airports to improve safety.

California Public Utility Commission

The California Public Utility Commission (CPUC) is a State agency that regulates railroads, rail transit, and passenger transportation companies throughout California.

Local Regulations

Plumas County does not currently have an adopted LOS standard. Instead, the County will often review traffic volume forecasts along proposed and existing roads resulting from project development. These volumes will then be compared to the maximum volumes identified for each roadway classification (Class 1 through 11) identified in Section 9-4.403 of the *Plumas County Code*. This methodology does not pertain to state highways.

The City of Portola also does not have an adopted LOS standard. While the *2020 General Plan* presents a discussion of LOS, no specific standard is identified.

Draft Plumas County Bicycle Transportation Plan (2001)

The *Plumas County Bicycle Transportation Plan* outlines a series of bicycle paths and routes in all areas of the county, along with staging and parking areas. This document is currently in draft form, and has not been adopted at the present time. The overall goal of the draft plan is to *be an integral part of a safe, effective, efficient, balanced and coordinated transportation system, at reasonable cost, that serves the needs of the bicyclists and motorists within Plumas County and the City of Portola."*

Plumas County Transportation Commission, 2010 Regional Transportation Plan

The 2010 Regional Transportation Plan (RTP) produced by the Plumas County Transportation Commission (PCTC) identifies the major transportation projects that are planned to occur throughout Plumas County. It provides a financially-constrained list of projects through 2030, as well as an unconstrained list of desired projects beyond 2030. RTPs are generally updated every three to five years. The 2010 RTP addresses the areas of transportation planning, funding, and management to help the County attain its overall transportation goals:

1. A safe, efficient and convenient countywide roadway system that enhances the lifestyle of the residents and meets the travel needs of people and goods through and within the region.
2. An efficient, convenient, regionally and locally coordinated transit service that connects residential areas with employment centers, serves key activity centers and facilities, and offers a viable option to the drive-alone trip.

3. Available and convenient rail service.
4. Promote general and commercial aviation facilities and services that complement the countywide transportation system.
5. A safe, convenient and efficient non-motorized transportation system for bicyclists and pedestrians, which is part of a balanced overall transportation system.

The key strategy of the RTP is to focus limited financial resources on system preservation and safety.

Environmental Setting

The following subsections describe the key elements of the County's transportation system and contain information regarding the existing travel trends throughout the County.

Roadways

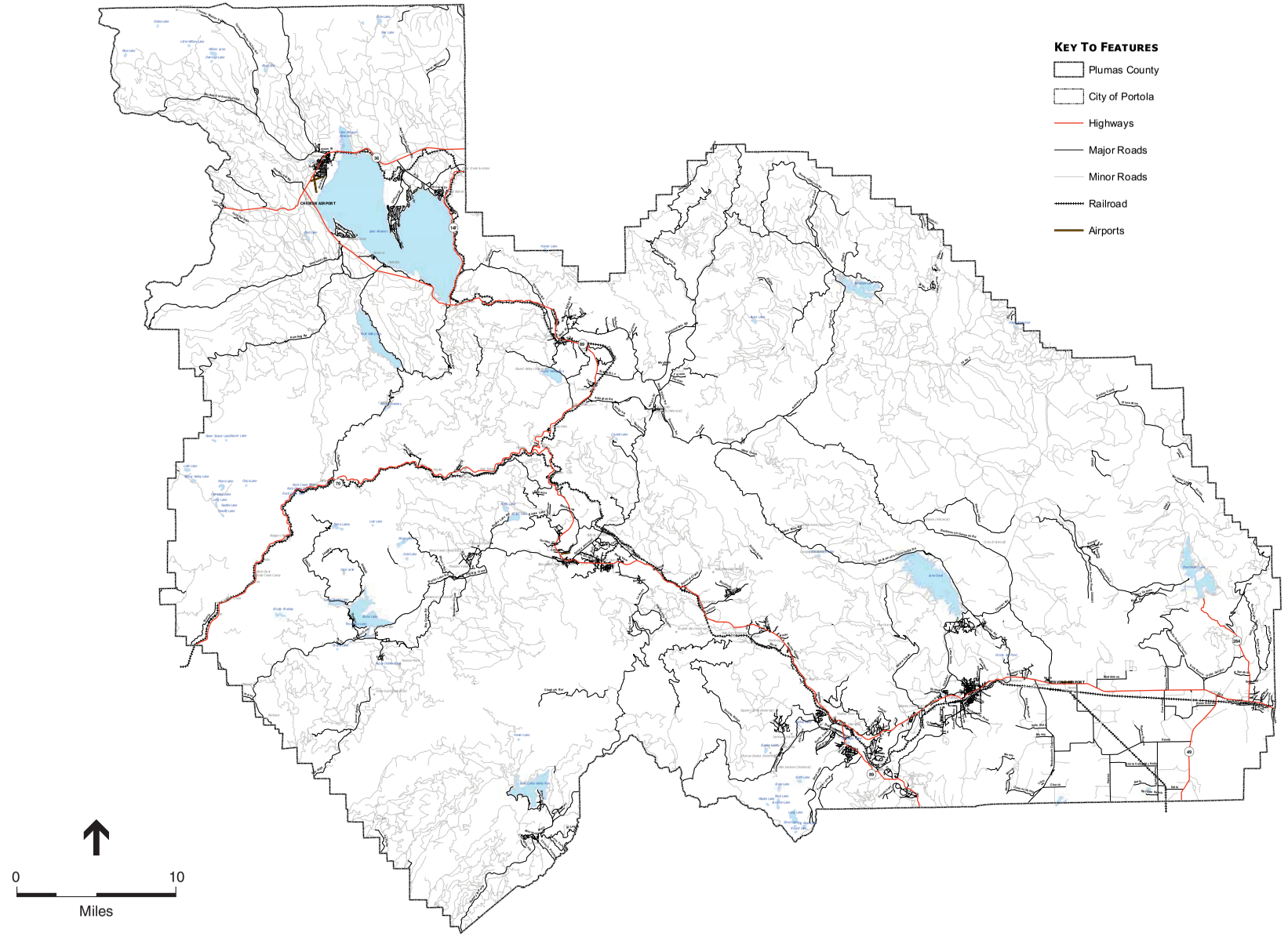
The state highway system provides the key inter-community roadway links between Plumas County communities. However county roads (and city roads in Portola) also provide important access, as do Forest Service roads. In total, there are 1,823 miles of public roadway in Plumas County, including 935 miles of U.S. Forest Service Roads, 674 miles of county roadways, and 182 miles of state highways. The County's Circulation Diagram is shown in **Figure 4.2-1**, with circulation details provided for the Chester, Greenville, La Porte, City of Portola, and Quincy Planning Areas (as shown in **Figures 4.2-2** through **4.2-6**).

Traffic Volumes and Trends

Due to the relative sparse nature of the county, traffic congestion is generally not an issue, with the exception of "bell times" at some school areas, as well as locations around Lake Almanor during the summer months.

State Route (SR) 70 in Quincy is the busiest highway in Plumas County, with a peak-month (typically August) Average Daily Traffic (ADT) volume of 12,200. Other relatively busy locations are SR 37 in Chester (7,900 ADT) and SR 70 in Portola (7,800 ADT). Overall, peak month volumes on Plumas County state highways have declined by 12 percent between 1998 and 2008.[1] This decline has been seen in all regions of the county, but particularly in the northern and central portions of the county.

[1] Caltrans website (http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/index.htm) accessed on Oct. 30, 2009



SOURCE: Lumas & Associates, 2012; Plumas County, 2012; and ESA, 2012

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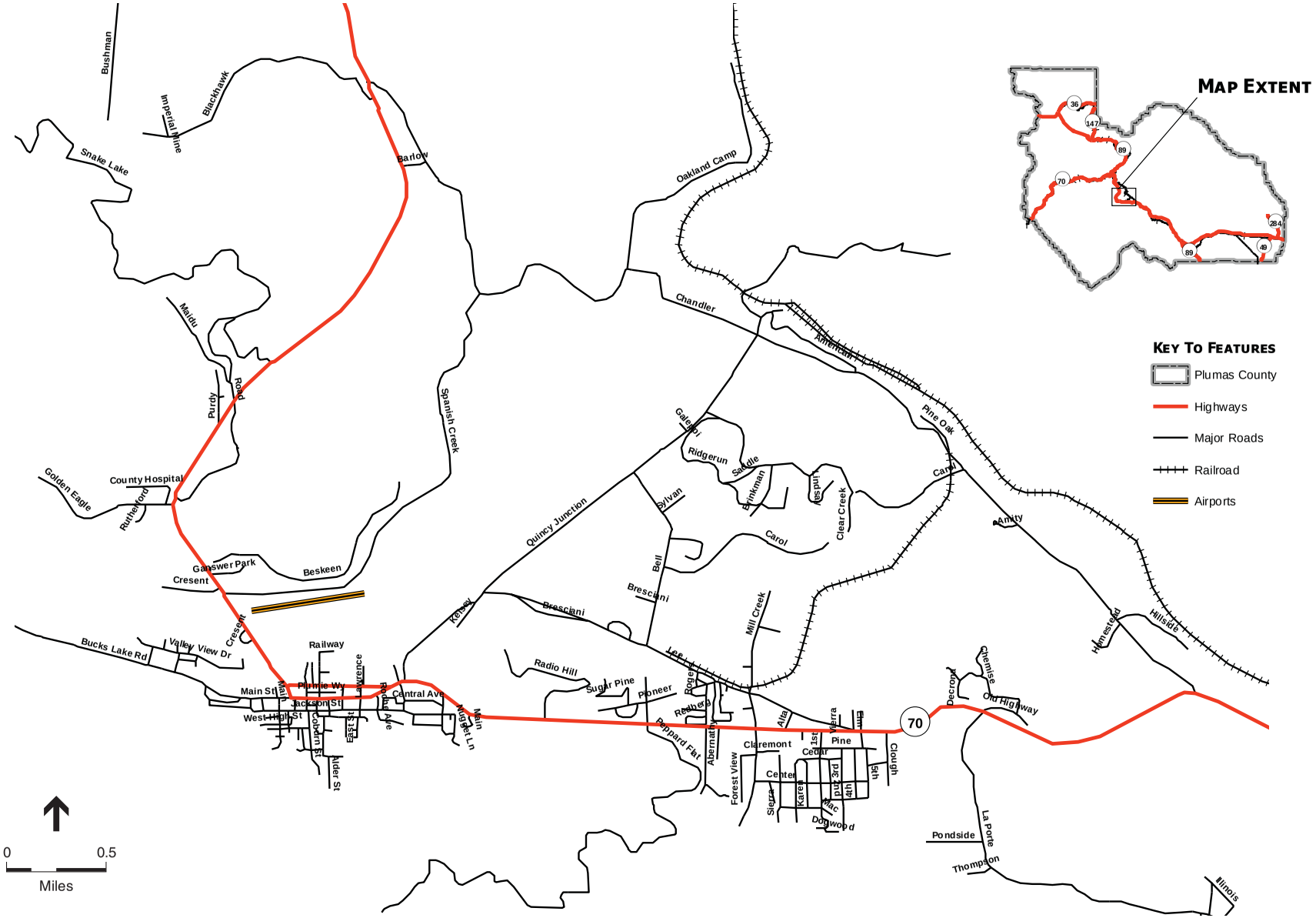
Figure 4.2-1

Circulation Diagram – Overview



SOURCE: Lumas & Associates, 2012; Plumas County, 2012; and ESA, 2012

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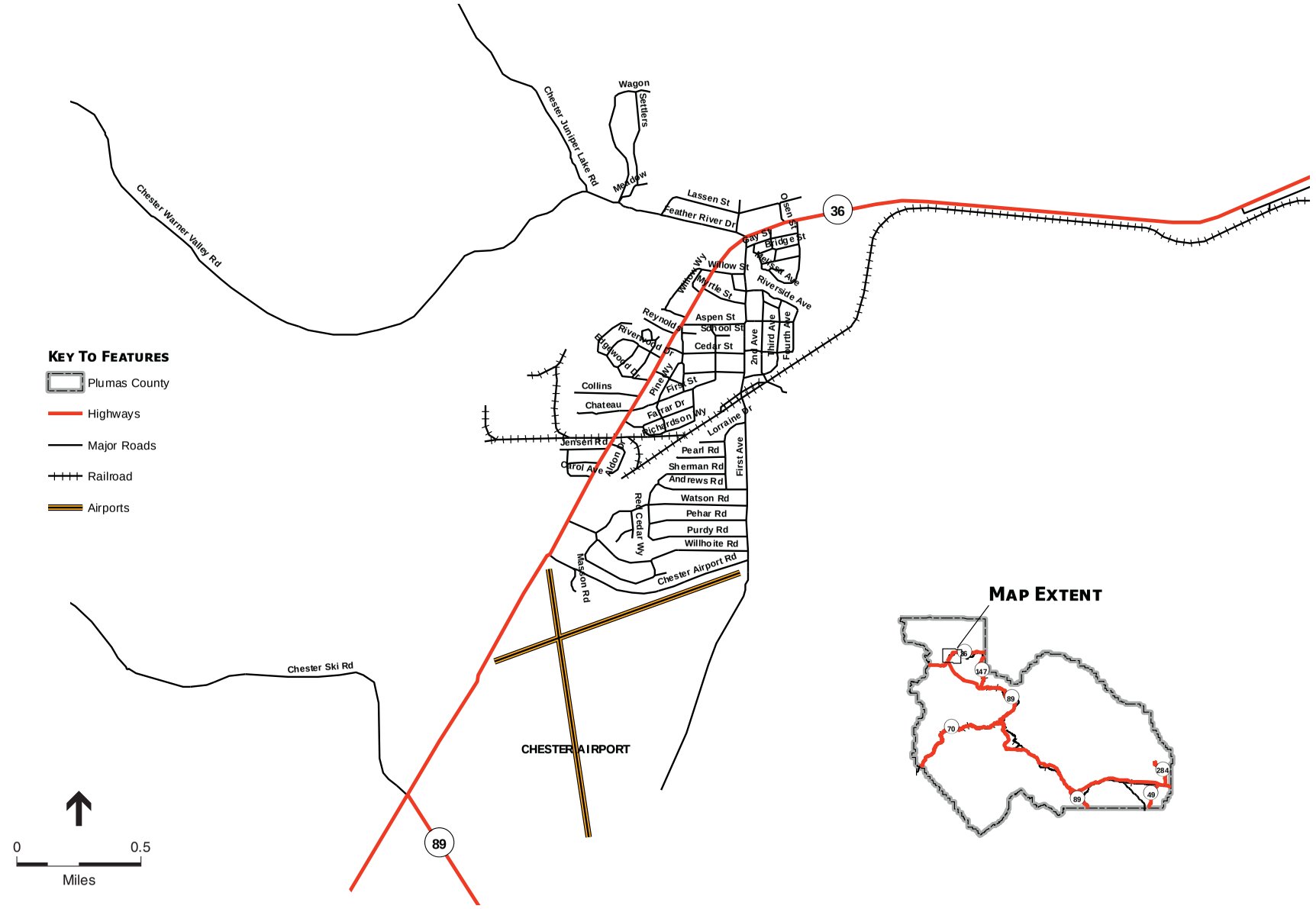
Figure 4.2-2

Circulation Diagram – Quincy



SOURCE: Lumas & Associates, 2012; Plumas County, 2012; and ESA, 2012

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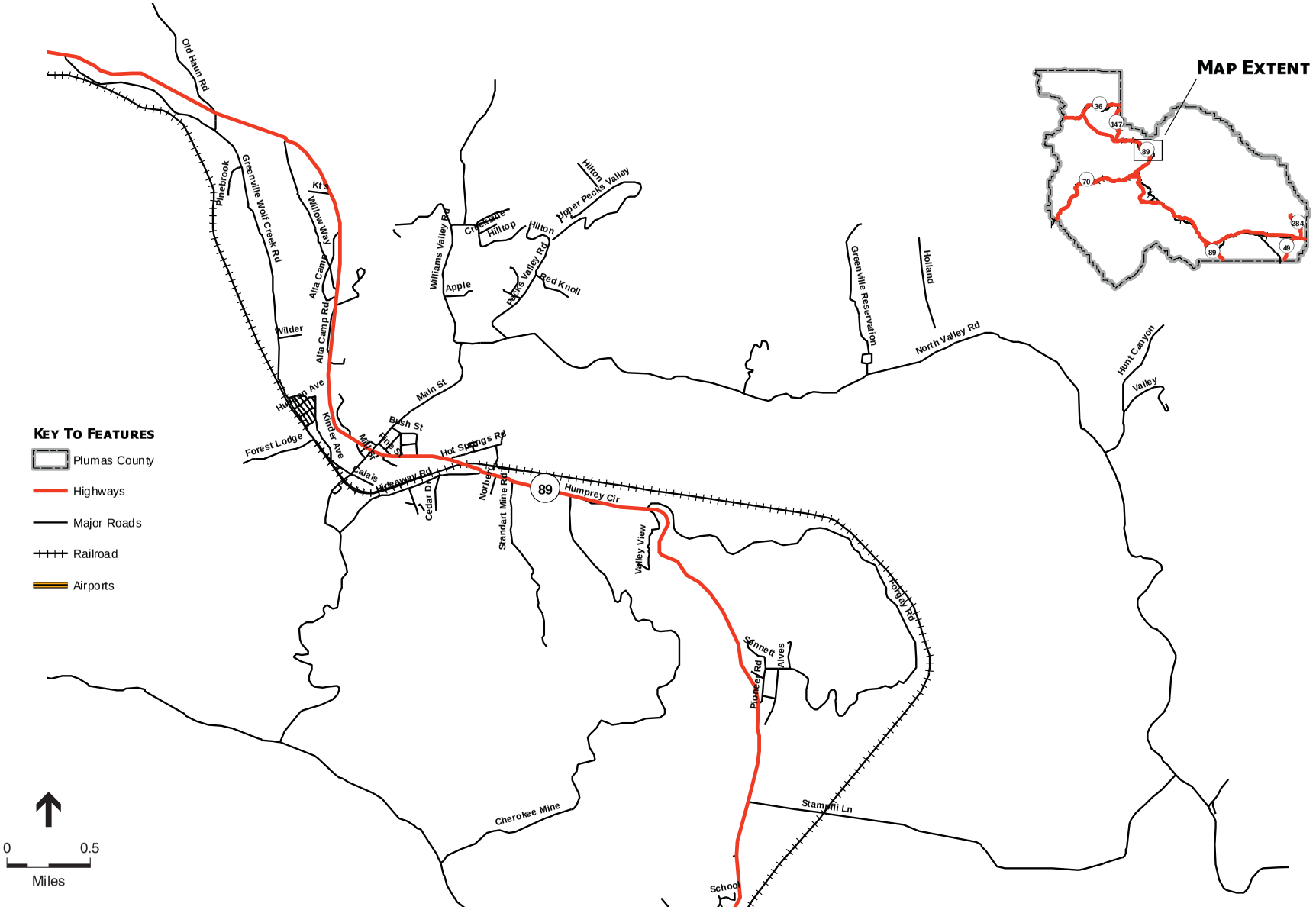
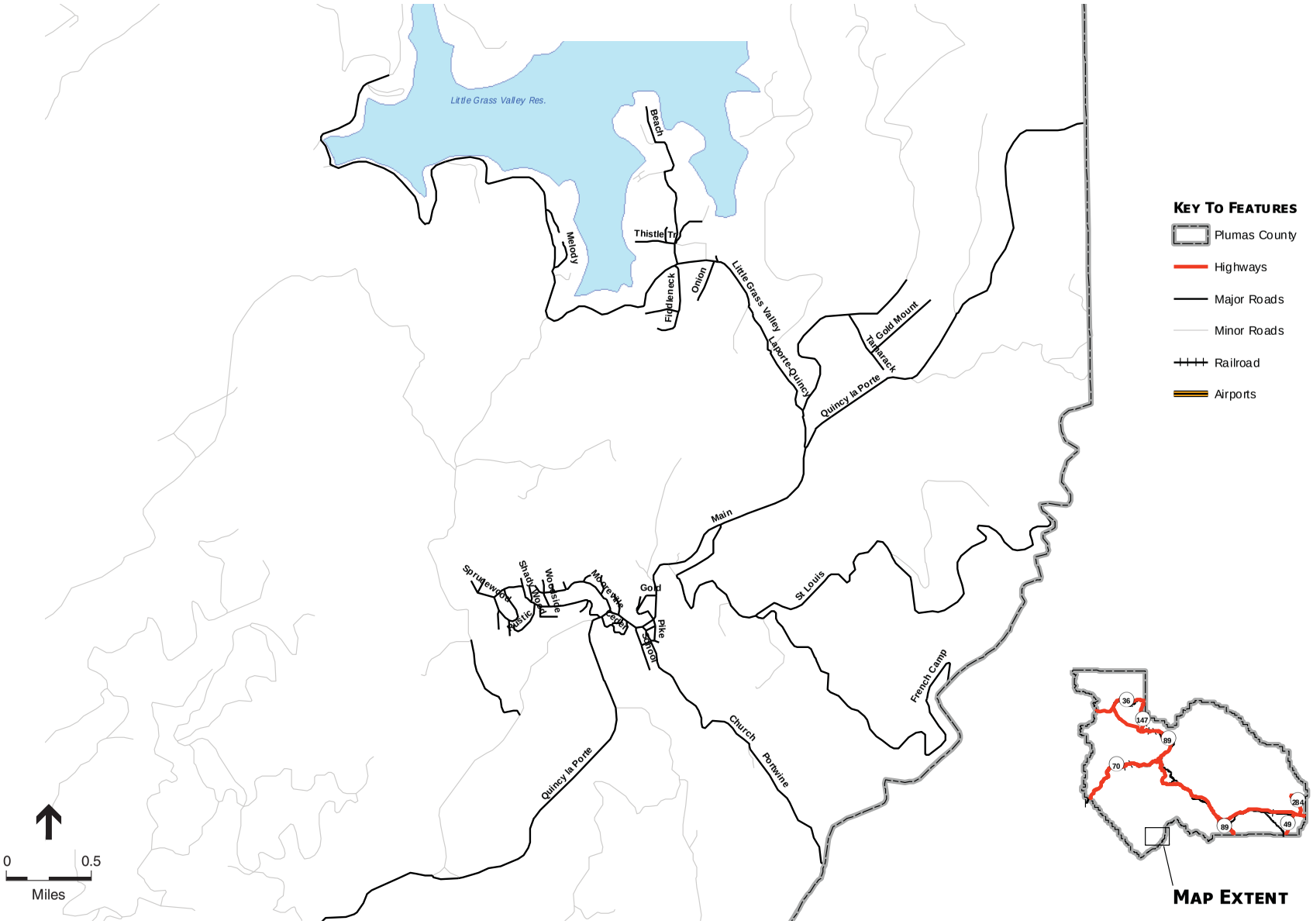
Figure 4.2-3

Circulation Diagram – Chester



SOURCE: Lumas & Associates, 2012; Plumas County, 2012; and ESA, 2012

Figure 4.2-4
Circulation Diagram – Greenville



SOURCE: Lumas & Associates, 2012; Plumas County, 2012; and ESA, 2012

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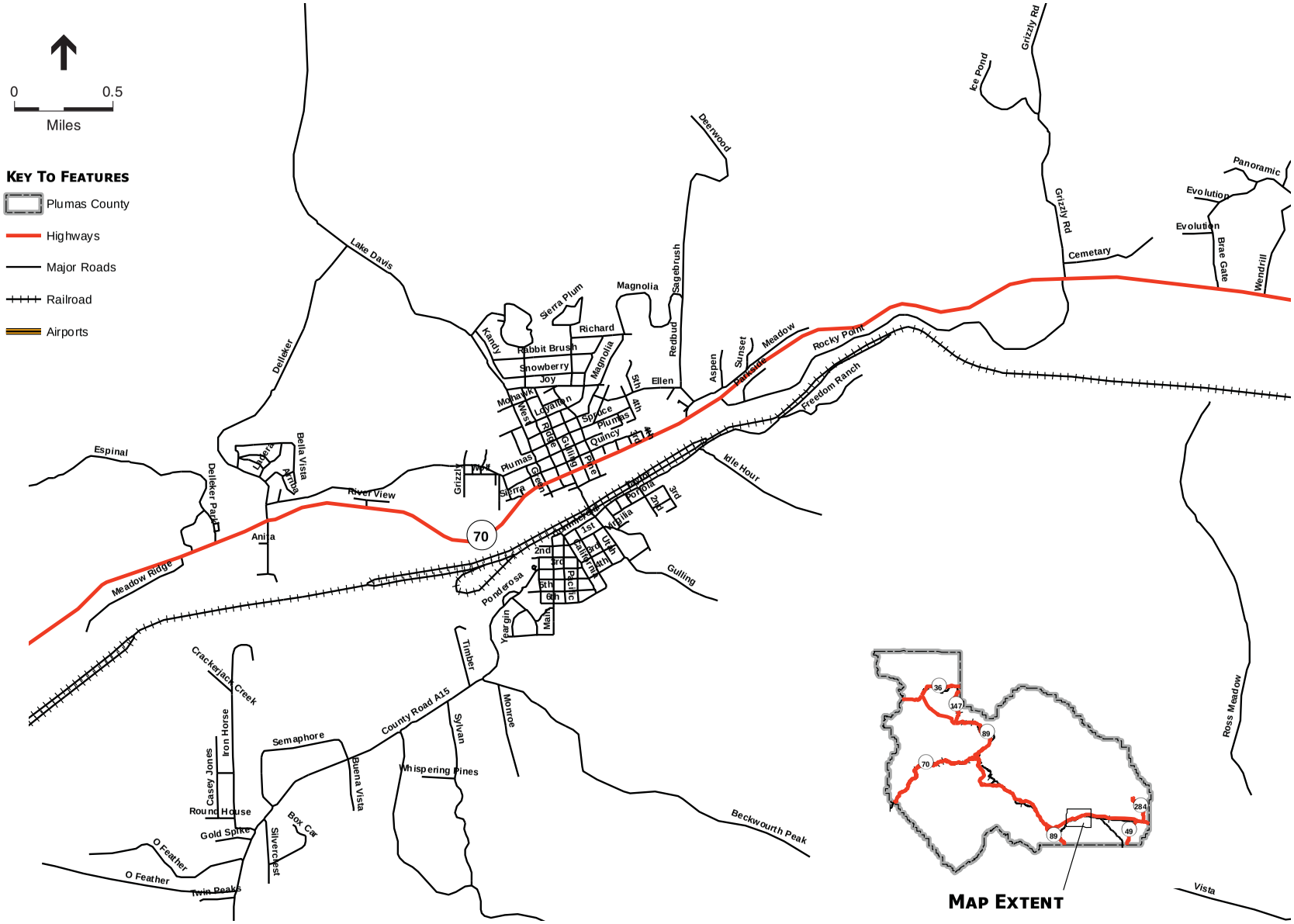
Figure 4.2-5

Circulation Diagram – La Porte



SOURCE: Lumas & Associates, 2012; Plumas County, 2012; and ESA, 2012

Figure 4.2-6
Circulation Diagram – Portola

Truck Trends

Caltrans counts of all trucks countywide have declined by 15 percent since 1992. However, the number of the largest (5 axle and above) trucks has climbed by 45 percent over this same period, particularly along SR 70.[2]

Public Transit Services

Several public transit deviated fixed-routes are operated by Plumas Transit Services, a division of Plumas Rural Services. Buses provide a total of 15 daily round trips within Quincy, 3 daily round trips between Quincy and Portola as well as 3 daily round trips between Chester and Quincy. Connections are available to Lassen County transit service at Hamilton Branch and Chester. This service carries approximately 46,000 passenger-trips annually and is available to all, with much of the ridership generated by human service agency clients and Feather River College Students.

Freight Rail Operations

Although there is no passenger rail service in Plumas County, there are two active freight rail operations. Union Pacific operates a line connecting Roseville, California to the west with Salt Lake City, Utah to the east. Burlington Northern Santa Fe (BNSF) Railroad operates track north from Keddie, along SR 89 and Lake Almanor and into Lassen County.

Bicycle and Pedestrian Facilities

While there are many hiking trails in Plumas County, bicycle and pedestrian facilities along main travel corridors and in communities are very limited. A key new element is the Feather River College / Gansner Pathway in the Quincy area, currently under development.

Impacts and Mitigation Measures

Methodology

This section describes the analysis methodology used to evaluate the study roadway segments. The full analysis is presented in *Plumas County General Plan Traffic Analysis*[3], and included herein as **Appendix C**. To summarize, this methodology evaluates future land uses under the proposed project to assess the vehicle-trips generated in various areas, the resulting changes in traffic volumes on key roadways, and the associated changes in LOS. The study area considered in this analysis is the entirety of Plumas County. Areas beyond Plumas County are also evaluated as necessary to assess the cumulative effects on traffic conditions in Plumas County,

Capacity and Level of Service

The primary method used to measure the traffic flow conditions of a roadway facility is Level of Service (LOS). LOS is a qualitative measure, based on quantitative measures of traffic flow such as times of delay, used to describe the operating condition of transportation facilities. LOS ranges

2 Caltrans website (http://www.dot.ca.gov/hq/traffops/saferesr/trafdata/truck2007final.pdf) accessed on Oct. 30, 2009
3 LSC Transportation Consultants, Inc., October 19, 2012

from A through F, from the best conditions to the worst conditions, respectively. In general, LOS A represents free-flow conditions with good roadway geometrics, and LOS F represents severe delay caused by stop-and-go conditions. The LOS grades for all roadway types and facilities are generally defined as follows:

- **LOS A** represents free flow travel for vehicles. Individual users are virtually unaffected by others in the traffic stream.
- **LOS B** represents stable flow, but the presence of other users in the traffic stream begins to be noticeable.
- **LOS C** continues to represent stable flow, but it is the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream.
- **LOS D** represents high-density, stable flow, at a volume that is approaching unstable conditions.
- **LOS E** represents unstable operating conditions at or near the capacity level where maneuverability is severely limited and short periods of low traffic speeds may occur.
- **LOS F** is used to define forced or a breakdown traffic flow where roadway volumes have exceeded the maximum roadway capacity for the particular functional class.

At a regional level, traffic conditions in Plumas County are defined by roadway level of service, rather than the level of service of individual intersections. Reflecting the planning (or programmatic) nature of a general plan over an extensive rural county, the LOS analyses focus on key roadway segments. These segments were identified to reflect the key constraint segments, through a review of the Transportation Concept Reports for the various State Highways, as well as the Almanor Regional Transportation Assessment (Caltrans, 2008)

LOS was calculated for key roadway segments within the County's roadway system to evaluate existing traffic conditions using the methodology contained in the *Highway Capacity Manual* (HCM). The HCM 2010 methodology is the prevailing measurement standard used throughout the United States. These segments were identified, through review of previous traffic analyses and Caltrans Transportation Concept Reports, as the critical segments with relatively poor existing LOS.

Existing Conditions

The evaluation focuses on key roadway links as indicators of overall traffic conditions. The analysis focuses on roadway segments, rather than intersections, as (1) the large majority of traffic delays in Plumas County are associated with travel along roadways between communities, rather than at specific intersections, (2) the implications of solving traffic issues along roadway segments (such as adding climbing or passing lanes) are much greater than the relatively straightforward solutions to intersection issues and (3) the general nature of land use forecasts associated with a countywide general plan make it possible to forecast traffic volumes for roadway segments, but difficult to forecast traffic volumes for specific intersections. Key

roadway segments were selected for analysis, based upon previous traffic analyses presented in the *Almanor Regional Transportation Assessment* [4]as well as the Route Concept Reports and Transportation Concept Reports for the various state highways in Plumas County.[5]

Existing peak-hour directional traffic volumes were drawn from recent Caltrans traffic counts. Roadway characteristics were identified based upon the various Transportation Concept Reports and Route Concept Reports, the *Almanor Regional Transportation Assessment*, as well as data collection by LSC Transportation Consultants, Inc. Applying the *Highway Capacity Manual* 2010 Two-Lane Methodology and Multi-lane Methodology yields the LOS results shown in **Table 4.2-2**. As shown, all key roadway segments attain LOS standards, with the exception of SR 36 west of Chester (between the eastern junction with SR 89 and the western end of the existing 4-lane section), which operates at LOS D.

TABLE 4.2-2
ROADWAY SEGMENT LOS – EXISTING CONDITIONS

Roadway Segment	Eastbound/ Northbound LOS[1]	Westbound/ Southbound LOS[1]
1. SR 36 – West of Chester	D	**D**
2. SR 36 – East of Chester	B	B
3. SR 89 – South of Canyondam	A	B
4. SR 147 – Lake Almanor East Shore	B	A
5. SR 89 – Graeagle Area	C	C
6. SR 70 – North of Keddie	B	B
7. SR 70 – East Quincy	A	A
8. SR 70 – Sloat Area	B	B
9. SR 70 – Portola	A	A

1. Level of Service based on the *Highway Capacity Manual* (Transportation Research Board, 2010)
Shading indicates that the roadway segment operates unacceptably. Bold text indicates a significant impact.

Analysis Scenarios

The following section presents an evaluation of existing and future transportation conditions with various levels of land use growth. The land use and transportation network assumptions are described below for each scenario.

Existing Plus Proposed Project

Traffic impacts are also assessed assuming the land uses expected to be developed by 2035 under the proposed project are fully developed without any improvements to the existing roadway network, or growth in through traffic or traffic associated with development outside of Plumas

4 Almanor Regional Transportation Assessment Final Report September 2008, Prepared in partnership by Lassen County Plumas County and Caltrans District 2. This study presents a traffic analysis of cumulative land use development in northern Plumas County and southwestern Lassen County, as it was forecast to occur at the time.

5 These roadway segments differ (are more specific) than the roadway segments analyzed in the *State Route 36 Transportation Concept Report* (Caltrans District 2, January 2012). As a document encompassing the 249-mile length of SR 36, the *Transportation Concept Report* evaluated longer roadway segments that effectively "averaged" LOS of specific segments. By focus on shorter segments of limited capacity, the traffic analysis conducted for this EIR provides conservative analysis of the most critical roadway elements.

County. The total number of dwelling units is expected to remain consistent with the figures identified for the Existing General Plan. However, several changes in land use policies would shift some future land use development from outlying rural areas into the identified Planning Areas (see Chapter 3 "Project Description" of this DEIR).

Cumulative Plus Project Scenarios

The Cumulative scenarios are based on the expected development through 2035 under the proposed project, in addition to other regional growth outside of Plumas County. This other growth consists of development of a portion (Phase I) of the approved Dyer Mountain development (in Lassen County), as well as growth in through traffic.

The roadway network for this scenario includes the fully funded improvements identified in Appendix E of the *Regional Transportation Plan* (Plumas County Transportation Commission, 2010). Focusing on maintenance and rehabilitation projects, these improvements will not change the traffic capacity of roadway segments.

Significance Criteria

The significance criteria for this analysis were developed from criteria presented in the "Environmental Checklist Form," of the CEQA Guidelines and based on the professional judgment of Plumas County and its consultants. The significance criterion varies by jurisdiction. The significance criteria for Plumas County and Caltrans are described below.

Plumas County

The significance criteria for this analysis were developed from criteria presented in Appendix G, "Environmental Checklist Form", of the *CEQA Guidelines* and based on the professional judgment of the County of Plumas and its consultants.

A transportation or circulation impact would be considered significant if any of the following conditions (as identified in Appendix G of the State CEQA Guidelines, Caltrans guidance or Plumas County policies and plans) would result with implementation of the proposed project:

- Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;
- Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways; or
- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

For this DEIR, the proposed project would be considered to have a significant impact on intersection or roadway segment operations if:

- The project-generated traffic would degrade operation of an intersection or roadway segment from an acceptable LOS C or better to an unacceptable LOS D, E or F. This LOS standard is consistent with Caltrans policy, and has typically been applied by County staff in the review of traffic conditions; or
- The project traffic exacerbated conditions at an intersection or roadway segment already operating at LOS D, E, or F.

Transportation level of service is often affected by a variety of factors, including general plan land use designations and policies, specific plan requirements, zoning regulations and enforcement, and regional land use, goals, and programs. Specific development projects resulting from implementation of the proposed project would result in temporary changes in local transportation conditions during construction of specific project. However, given the relatively short-term nature of these construction-related activities, construction-related transportation impacts are considered less than significant.

State of California

The six state highways within Plumas County are under the jurisdiction of Caltrans. Caltrans has prepared Transportation Concept Reports (TCRs) or Route Concept Reports that describe its standards for all facilities within the State transportation network. These are 20-year planning documents that identify both the existing and future needs of a roadway facility, as well as LOS standards, referred to as "route concept LOS," that determine the minimum acceptable operating conditions for existing State controlled transportation facilities. Minimum acceptable LOS for Caltrans facilities in Plumas County is LOS C.

Existing Plus Proposed Project

This section describes the traffic analysis and resulting impacts associated with development resulting from implementation of the proposed project, if it were to occur exclusive of growth beyond Plumas County. The analysis steps, as detailed in Appendix C (Plumas County General Traffic Analysis) of this DEIR, can be summarized as follows:

- A review of the proposed project indicates that several new policies (LU 1.1.1, LU 1.1.2, and LU 1.5.3) would tend to direct some future development from more rural areas and into more urban areas (Planning Areas) than would occur under the existing General Plan. These policies would not materially change the *total* development over the analysis period, but would shift the location of some expected development.
- GIS data was obtained from the County and evaluated to identify those areas with a lower potential for future development under the proposed project than under the existing General Plan, and parallel nearby areas with adequate development capacity to accommodate the shift in development. The number of dwelling units that would change in each location was estimated.
- The trip generation of the shifted units was calculated for both the area with lower development and the area with higher development. As the potential for non-auto travel is

generally greater in the more central areas, this would result in a reduction in overall trip generation.

- The changes in trip generation were then assigned to the key roadway segments and summed over all areas of land use change, to identify the change in roadway volumes associated with the proposed project. Adding these changes to the volumes for the existing General Plan yielded the traffic volumes under the proposed project

Operations Analysis Summary

Traffic operating conditions on study roadway segments were analyzed. The operations analysis was conducted using the methodologies described above. **Table 4.2-3** summarizes the operating LOS based on capacity thresholds. As shown, all roadways would operate within acceptable LOS, with the exception of SR 36 west of Chester. For this roadway segment, traffic growth associated with future development would exacerbate the existing deficiency. While LOS grade would not degrade, the addition of traffic would increase the percent time drivers must follow another vehicle from 64 percent of the time to 68 percent of the time in the eastbound direction, and from 61 percent of the time to 65 percent of the time in the westbound direction.

TABLE 4.2-3
ROADWAY SEGMENT LOS – EXISTING + PROPOSED PROJECT CONDITIONS

	Existing		Existing Plus Proposed Project	
Roadway Segment	**Eastbound/ Northbound LOS[1]**	**Westbound/ Southbound LOS[1]**	**Eastbound/ Northbound LOS[1]**	**Westbound/ Southbound LOS[1]**
SR 36 – West of Chester	D	D	**D**	**D**
SR 36 – East of Chester	B	B	B	C
SR 89 – South of Canyondam	A	B	B	B
SR 147 – Lake Almanor East Sho	B	A	B	A
SR 89 – Graeagle Area	C	C	C	C
SR 70 – North of Keddie	B	B	B	B
SR 70 – East Quincy	A	A	A	A
SR 70 – Sloat Area	B	B	C	B
SR 70 – Portola	A	A	A	A

1. Level of Service based on the *Highway Capacity Manual* (Transportation Research Board, 2010)

Shading indicates that the roadway segment operates unacceptably. Bold text indicates a significant impact.

Truck Operations

Development under the proposed project would result in an increase in the number of vehicles on the roadway system in Plumas County, including an increase in the number of delivery trucks travelling to the retail uses within the county. The proposed plan would not change existing truck routes. Changes in overall truck travel times (as reflected in the LOS analysis summarized in Table 4.2-3) would be modest. It can therefore be concluded that the proposed project would not adversely impact an existing truck route or result in unsafe conditions for truck operations.

Transit

Implementation of the proposed project would result in the potential for increased transit ridership. At present, Plumas County Transit carries an average of approximately 8 passengers per transit trip, using a fleet with seating capacity of up to 22 passengers. Given that second home development will not generate an increased demand for transit services, and given the modest forecast level of permanent population growth (approximately 12%), any increase in ridership will be within the existing capacity of the Plumas County Transit vehicles. In addition, the proposed project would not result in changes to existing roadways used for transit routes. It is therefore concluded that the development of the plan would not result in impacts to existing transit facilities, interfere with planned transit routes or facilities, or result in unsafe conditions for transit vehicles or transit users.

Rail Facilities

The development under the proposed project would result in increased vehicles, bicycles and pedestrians at existing at grade crossings of railroad tracks in the Plumas County. This could result in an increase in conflicts between trains and vehicles, pedestrians, and bicycles, creating potentially unsafe conditions.

Bicycle and Pedestrian

Future development under the proposed project would result in more pedestrians and bicyclists on the roadways. The existing bicycle and pedestrian network is incomplete and could result in users needing to walk or ride on roadways that do not adequately accommodate pedestrians or bicyclists creating potentially unsafe conditions.

Impact 4.2-1: Traffic and LOS Standards (Existing Plus Proposed Project)

SU	**The proposed project could result in a substantial increase in vehicular traffic. This would result in a significant impact to SR 36 west of Chester.**
	Level of Significance Before Mitigation: *Potentially Significant*
	Required Additional Mitigating Policies and Implementation Measures*: No Additional Mitigation Available*
	Resultant Level of Significance: *Significant and Unavoidable*

As shown in Table 4.2-3, the addition of project-related traffic would exacerbate unacceptable operations (LOS D) on the roadway segment of SR 36 between the eastern intersection with SR 89 and the western end of the four-lane segment west of Chester. As shown in **Table 4.2-4**, the Circulation Element includes a variety of policies designed to address traffic and roadway operation impacts resulting from implementation of the proposed project. Circulation policies CIR-4.1.1 through CIR-4.1.7 require the County to annually update roadway classification and conditions to help identify and address roadway deficiencies. The Circulation Element also includes a number of comprehensive policies requiring new development to identify and mitigate (i.e., contribute their fair share to both construction of new roadway facilities and for on-going roadway maintenance – see Policy CIR-4.1.4) development-related circulation impacts.

Additionally, consistent with the rural nature of the County, the Circulation Element also includes several policies designed to promote complete street concepts for new development. For example, Policy 4.2-1 "Complete Street Design" identifies a number of complete street design elements (such as, a balanced roadway design to accommodate a variety of non-motorized transportation uses, low-impact street lighting, and landscaping that minimizes runoff/erosion). Finally, the Circulation Element includes a number of circulation policies designed to enhance local/regional environmental issues. For example, Policy CIR-4.6.2 requires the County to review roadway pavement standards based on roadway traffic volumes and surrounding land uses to help minimize air and water quality impacts resulting from unpaved roadways. In combination, these policies serve to decrease the number of trips by vehicle and decrease the total length of trips, which in turn minimizes degradation of LOS. The policies included as part of the proposed project also provide a funding mechanism, through implementation of a countywide traffic impact fee, and coordination with a regional traffic impact fee, which are intended to provide funding for transportation improvements.

TABLE 4.2-4
MITIGATING POLICIES

Circulation (CIR) and Conservation and Open Space (COS) Elements	
Policies designed to minimize this impact through the maintenance of an adequate roadway system and promote complete street concepts (consistent with AB1358) include the following:	
CIR-4.1.1 Roadway Classification System	CIR-4.1.6 Roadway Elements Eligible for Developer Fee Programs
CIR-4.1.2 Level of Service Standard	CIR-4.1.7 General Plan Road Standards
CIR-4.1.3 Required Roadway Access	CIR-4.2-1 Complete Street Design
CIR-4.1.4 Developer Participation in Roadway Improvements	CIR-4.2.2 Support of Multimodal Projects
CIR-4.1.5 Developer Coordination with Roadway Plans	
Policies designed to minimize this impact through the enhancement of a Countywide transit system include the following:	
CIR-4.3.1 Enhancement of Transit Service	CIR-4.3.3 Improvement of Bus Stops
CIR-4.3.2 Expansion of Transit Service to Urban Areas	CIR-4.3.4 Ridesharing
Policies designed to minimize this impact through the enhancement of a non-auto transportation network include the following:	
CIR-4.4.1 Bicycle and Pedestrian Facility Network	COS-7.8.2 Planning for Multiuse Trail Needs within the County
CIR-4.4.2 Bicycle and Pedestrian Facilities in New Development	COS-7.8.3 Prioritize Trail Development
CIR-4.4.3 Inclusion of Bicycle and Pedestrian Access in New Transportation Projects	COS-7.8.4 Public Safety
COS-7.8.1 Regional Trail Network	COS-7.8.5 Trail Signage
	COS-7.8.6 Trail Fencing
Policies designed to minimize this impact through the consideration of environmental resources in the future planning, construction, and use of the County's transportation infrastructure include the following:	
CIR-4.6.1 Minimizing of Environmental Impacts	CIR-4.6.3 GHG Reductions
CIR-4.6.2 Paving of Additional Roadways to Improve Environmental Quality	CIR-4.6.4 Climate Action Plan

Significance Determination

Development and land uses implemented under the proposed project would increase traffic volumes on County roads, City of Portola roads, and regional or State roadways (including those external to the County). This added traffic would cause a roadway segment to exceed an adopted LOS standard. Implementation of the policies identified above support alternative modes of travel including public transit, bicycle, and pedestrian modes to reduce the use of automobiles. While this impact to SR 36 could be mitigated by widening the roadway, Caltrans (the agency with jurisdiction over SR 36) has no plans to widen this segment and the Plumas County RTP does not include this project under the RTP's constrained project list. Therefore, the County cannot guarantee construction of this roadway improvement. Therefore, no mitigation is currently available to reduce the significance of this impact to a less than significant level. Therefore, this is a ***significant and unavoidable*** impact.

Significance Conclusion

Overall, policies included as part of the proposed project have been developed to avoid and minimize adverse impacts on transportation and circulation impacts to the maximum extent feasible. However, the possible traffic impacts to SR 36 would be an irreversible consequence associated with implementation of the proposed project through the 2035 Planning Horizon. No feasible mitigation is available to reduce the significance of this impact to a level of less than significant. Therefore, this remains a ***significant and unavoidable*** impact.

Impact 4.2-2: Rural Road Safety (Existing Plus Proposed Project)

LTS	**The proposed project could result in increased conflicts between vehicles/pedestrians and vehicles/bicycles which could result in unsafe conditions.**
	Level of Significance Before Mitigation: *Less than Significant*
	Required Additional Mitigating Policies and Implementation Measures*: None*
	Resultant Level of Significance: *Less than Significant*

Implementation of the proposed project would cause an increase in vehicle/pedestrian and vehicle/bicycle conflicts on roadways located within the County. As development occurs, pedestrian and bicycle facilities should be constructed to meet demand. As shown in Table 4.2-4 (see above), the Circulation Element includes a variety of policies designed to address a variety of road safety issues including potential conflicts between vehicles, bicycles, and pedestrian resulting from implementation of the proposed project. These policies include Implementation Measure CIR 1, which requires the County to complete and adopt an updated Bicycle and Pedestrian Transportation Plan focusing on non-motorized travel within and between communities. The plan would also be used to assist in future funding decisions to help enhance the non-motorized network.

Significance Determination

Development and land uses implemented under the proposed project would increase traffic volumes on County roads, City of Portola roads, and regional or State roadways (including those external to the County). This added traffic could result in possible conflicts between vehicles, bicycles, and pedestrians along roadway facilities in the County. However, the proposed project provides for policies to prevent or reduce these impacts by supporting a variety of bicycle and pedestrian facilities through amendments to County Code (supporting safe pedestrian and bicycle facilities) and requirements for new development projects to incorporate non-motorized transportation infrastructure (i.e., trails, bike racks, etc.). This impact is considered ***less than significant***. No additional mitigation measures are required.

Significance Conclusion

Implementation of the proposed project (including the various policies and implementation measures would not result in increased conflicts between vehicles/pedestrians and vehicles/bicycles which could result in unsafe conditions. Therefore this impact would be ***less than significant***.

Impact 4.2-3: Conflicts with At-Grade Railroad Crossings and Inadequate Emergency Access (Existing Plus Proposed Project)

LTS	**The proposed project could result in increased conflicts between trains and vehicles, pedestrians, and bicycles which could result in unsafe conditions.**
	Level of Significance Before Mitigation: *Less than Significant*
	Required Additional Mitigating Policies and Implementation Measures*: None*
	Resultant Level of Significance: *Less than Significant*

The proposed project would cause an increase in travel demand across existing at-grade railroad crossings and impact the response time for emergency vehicles on roadways affected by additional vehicle traffic. However, a review of all reported rail crossing accidents from 2007 through 2011, as compiled by the Federal Railroad Administration, identified no such accidents in Plumas County over this five year period, indicating that rail crossing safety in Plumas County is currently good. In addition, there are already programs in place to address rail crossing safety in Plumas County:

- Plumas County, the California Public Utilities Commission's Rail Crossing Safety staff, and the two railroads (BNSF and UPRR) cooperatively participate in monitoring and review of public crossings within Plumas County. Based on the resulting project list, the Caltrans Division of Rail administers the program.
- Both the CPUC and Caltrans are notified through the State Clearinghouse of proposed land use development projects that could impact traffic/bicycle/pedestrian activity at rail crossings.

Additionally, as shown in **Table 4.2-5**, the Circulation Element includes a variety of policies designed to address traffic and roadway safety and access issues resulting from implementation of the proposed project. Circulation policies CIR-4.1.1 through CIR-4.1.7 require the County to annually update roadway classification and conditions to help identify and address roadway deficiencies. Policy CIR-4.1.3 "Required Roadway Access" identifies general roadway standards to help address emergency response and safe ingress/egress. The Circulation Element also includes a number of comprehensive policies requiring new development to identify and mitigate (i.e., contribute their fair share to both construction of new roadway facilities and for on-going roadway maintenance – see Policy CIR-4.1.4) development-related circulation impacts. These policies included as part of the proposed project also provide a funding mechanism, through implementation of a countywide traffic impact fee, and coordination with a regional traffic impact fee, which are intended to provide funding for transportation improvements including those that may be required to address rail crossings.

TABLE 4.2-5
MITIGATING POLICIES

Circulation (CIR) Element	
Policies designed to minimize this impact through the maintenance of an adequate roadway system with sufficient roadway access include the following:	
CIR-4.1.1 Roadway Classification System	CIR-4.1.6 Roadway Elements Eligible for Developer Fee Programs
CIR-4.1.2 Level of Service Standard	CIR-4.1.7 General Plan Road Standards
CIR-4.1.3 Required Roadway Access	CIR-4.2-1 Complete Street Design
CIR-4.1.4 Developer Participation in Roadway Improvements	CIR-4.2.2 Support of Multimodal Projects
CIR-4.1.5 Developer Coordination with Roadway Plans	
Policies designed to minimize this impact through the consideration of environmental resources in the future planning, construction, and use of the County's transportation infrastructure include the following:	
CIR-4.6.1 Minimizing of Environmental Impacts	CIR-4.6.2 Paving of Additional Roadways to Improve Environmental Quality

Significance Determination

Development and land uses implemented under the proposed project would increase traffic volumes on County roads, City of Portola roads, and regional or State roadways (including those external to the County). This additional vehicle traffic could result in potential conflicts with at-grade railroad crossings, inadequate emergency access, and by creating traffic congestion that slows emergency response time. However, rail crossing safety is not currently a significant problem in Plumas County and there are several ongoing programs to address crossing safety. Considering the variety of policies designed to address adequate roadway capacity and improvements (see Table 4.2-5), this impact is considered ***less than significant***. No additional mitigation measures are required.

Significance Conclusion

Implementation of the proposed project (including the various policies and implementation measures) would not result in increased conflicts between at-grade railroad crossings and additional vehicles/pedestrians/bicycles which could result in unsafe conditions. Therefore, this impact would be ***less than significant***.

Cumulative Plus Proposed Project

This section describes the traffic analysis and resulting impacts associated with the forecast development under the proposed project, under cumulative conditions. In addition to the future development within Plumas County under the proposed project, as described above, this scenario includes traffic volumes from the following two additional sources:

- **Growth in Adjacent Counties** -- Given the geography of the Plumas County and the land use plans of nearby counties, the only planned development external to Plumas County that is expected to have a substantial impact on traffic volumes within the county is the Dyer Mountain project. Consistent with the assumption in the *Amador Regional Transportation Assessment*, Phase I of the Dyer Mountain development plan is assumed to be constructed by 2035. The pertinent section of the Dyer Mountain EIR (North Fork Associates, 2008) was reviewed to identify the traffic volumes associated with this phase of development.
- **Through Traffic** -- There will also be a modest growth in traffic passing entirely through Plumas County. For the northern portion of the County, estimates were drawn from those presented in the *Amador Regional Transportation Assessment*. For the remainder of the County (along SR 70 and SR 89 south of SR 70), the increase in through traffic was estimated based upon an evaluation of travel times using state highways through southern Plumas County versus other route options.

Operations Analysis Summary

Traffic operating conditions on study roadway segments were analyzed. The operations analysis was conducted using the methodologies described above. **Table 4.2-6** summarizes the operating LOS based on capacity thresholds. As shown, all roadways would operate within acceptable LOS, with the exception of SR 36 west of Chester and SR 36 east of Chester. For the western roadway segment, traffic growth associated with future development would exacerbate the existing deficiency. While LOS grade would not degrade, the addition of traffic would increase the percent time drivers must follow another vehicle from 64 percent of the time to 72 percent of the time in the eastbound direction, and from 61 percent of the time to 73 percent of the time in the westbound direction. For the section east of Chester, LOS would degrade from LOS C to LOS D.

TABLE 4.2-6
ROADWAY SEGMENT LOS – CUMULATIVE + PROPOSED PROJECT CONDITIONS

Roadway Segment	Existing		Cumulative Plus Proposed Project	
	Eastbound/ Northbound LOS[1]	Westbound/ Southbound LOS[1]	Eastbound/ Northbound LOS[1]	Westbound/ Southbound LOS[1]
SR 36 – West of Chester	D	D	**D**	**D**
SR 36 – East of Chester	B	B	C	**D**
SR 89 – South of Canyondam	A	B	B	C
SR 147 – Lake Almanor East Shore	B	A	B	A
SR 89 – Graeagle Area	C	C	C	C
SR 70 – North of Keddie	B	B	C	B
SR 70 – East Quincy	A	A	A	A
SR 70 – Sloat Area	B	B	C	C
SR 70 – Portola	A	A	B	A

1. Level of Service based on the *Highway Capacity Manual* (Transportation Research Board, 2010)
Shading indicates that the roadway segment operates unacceptably. Bold text indicates a significant impact.

Additional analysis indicates that this future LOS D condition on SR 36 east of Chester only occurs with the addition of traffic generated by the Dyer Mountain project in Lassen County. In other words, adequate LOS C conditions can be maintained in the future with development of the proposed project in Plumas County as well as growth in through traffic (exclusive of Dyer Mountain).

Truck Operations

Development under the proposed project along with cumulative growth in through traffic would result in an increase in the number of vehicles on the roadway system in Plumas County, including an increase in the number of delivery trucks travelling to the retail uses within the county. The proposed plan would not change existing truck routes. Changes in overall truck travel times (as reflected in the LOS analysis summarized in Table 4.2-6) would be modest. It can therefore be concluded that the proposed project would not adversely impact an existing truck route or result in unsafe conditions for truck operations.

Transit

Implementation of the proposed project under cumulative conditions would result in the potential for increased transit ridership. At present, Plumas County Transit carries an average of approximately 8 passengers per transit trip, using a fleet with seating capacity of up to 22 passengers. Given that second home development will not generate an increased demand for transit services, and given the modest forecast level of permanent population growth (approximately 12%), any increase in ridership will be within the existing capacity of the Plumas County Transit vehicles. In addition, the proposed project would not result in changes to existing roadways used for transit routes. It is therefore concluded that the development of the plan would

not result in impacts to existing transit facilities, interfere with planned transit routes or facilities, or result in unsafe conditions for transit vehicles or transit users.

Rail Facilities

The cumulative development under the proposed project would result in increased vehicles, bicycles and pedestrians at existing at grade crossings of railroad tracks in the Plumas County. This could result in an increase in conflicts between trains and vehicles, pedestrians, and bicycles, creating potentially unsafe conditions.

Bicycle and Pedestrian

Future development under the proposed project would result in more pedestrians and bicyclists on the roadways. The existing bicycle and pedestrian network is incomplete and could result in users needing to walk or ride on roadways that do not adequately accommodate pedestrians or bicyclists creating potentially unsafe conditions.

Impact 4.2-4: Traffic and LOS Standards (Cumulative Plus Proposed Project)

SU	**The proposed project could result in a substantial increase in vehicular traffic. This would result in a significant impact to SR 36 west of Chester and to SR 36 east of Chester.**
	Level of Significance Before Mitigation: *Potentially Significant*
	Required Additional Mitigating Policies and Implementation Measures*: No Additional Mitigation Available*
	Resultant Level of Significance: *Significant and Unavoidable*

As shown in Table 4.2-6, the addition of project-related traffic would exacerbate unacceptable operations (LOS D) on the roadway segment of SR 36 between the eastern intersection with SR 89 and the western end of the four-lane segment west of Chester, and will degrade the segment between County Road A-13 and SR 147 east of Chester to an unacceptable LOS D condition. As shown in Table 4.2-4 (shown above), the Circulation Element includes a variety of policies designed to address traffic and roadway operation impacts resulting from implementation of the proposed project.

Significance Determination

Similar to Impact 4.2-1 (more fully described above), the impacts to SR 36 could be mitigated by widening the roadway. As the segment east of Chester is operating at acceptable levels at present, it would be possible to generate funds for improvements in this segment through developer fees. The County has taken steps to provide funding for widening the segment east of Chester, as evidenced by the Development Agreement for the Lake Front project.[6] Similar agreements on other future development in Plumas County, in addition to the mitigation measures identified for the Dyer Mountain project, could potentially mitigate the impact on this roadway segment.

[6] Development Agreement By and Between the County of Placer and Lake Almanor Associates LP, a California Limited Partnership Relative to the Development Known as Lake Front at Walker Ranch, April 10, 2012 Effective Date.

However, Caltrans (the agency with jurisdiction over SR 36) has no plans to widen the segment west of Chester and the Plumas County RTP does not include this project under the RTP's constrained project list. Therefore, the County cannot guarantee construction of this roadway improvement. Therefore, no mitigation is currently available to reduce the significance of this impact to a less than significant level. Therefore, this is a ***significant and unavoidable*** impact.

Significance Conclusion

Overall, policies included as part of the proposed project have been developed to avoid and minimize adverse impacts on transportation and circulation impacts to the maximum extent practicable. However, the possible traffic impacts to SR 36 west of Chester would be an irreversible consequence associated with implementation of the proposed project through the 2035 Planning Horizon. No feasible mitigation is available to reduce the significance of this impact to a level of less than significant. Therefore, this remains a ***significant and unavoidable*** impact.

Impact 4.2-5: Rural Road Safety (Cumulative Plus Proposed Project)

LTS	**The proposed project could result in increased conflicts between vehicles/pedestrians and vehicles/bicycles which could result in unsafe conditions.**
	Level of Significance Before Mitigation: *Less than Significant*
	Required Additional Mitigating Policies and Implementation Measures*: None*
	Resultant Level of Significance: *Less than Significant*

Implementation of the proposed project would cause an increase in vehicle/pedestrian and vehicle/bicycle conflicts on roadways located within the County. As development occurs, pedestrian and bicycle facilities should be constructed to meet demand. As shown in Table 4.2-4 (see above), the Circulation Element includes a variety of policies designed to address a variety of road safety issues including potential conflicts between vehicles, bicycles, and pedestrian resulting from implementation of the proposed project. These policies include Implementation Measure CIR 1, which requires the County to complete and adopt an updated Bicycle and Pedestrian Transportation Plan focusing on non-motorized travel within and between communities. The plan would also be used to assist in future funding decisions to help enhance the non-motorized network.

Significance Determination

Similar to Impact 4.2-2 (more fully described above), additional project-related traffic could result in possible conflicts between vehicles, bicycles, and pedestrians along roadway facilities in the County. However, the proposed project provides for policies to prevent or reduce these impacts by supporting a variety of bicycle and pedestrian facilities through amendments to County Code (supporting safe pedestrian and bicycle facilities) and requirements for new development projects to incorporate non-motorized transportation infrastructure (i.e., trails, bike

racks, etc.). This impact is considered ***less than significant***. No additional mitigation measures are required.

Significance Conclusion

Implementation of the proposed project (including the various policies and implementation measures would not result in increased conflicts between vehicles/pedestrians and vehicles/bicycles which could result in unsafe conditions. Therefore this impact would be ***less than significant***.

Impact 4.2-6: Conflicts with At-Grade Railroad Crossings and Inadequate Emergency Access (Cumulative Plus Proposed Project)

LTS	**The proposed project could result in increased conflicts between trains and vehicles, pedestrians, and bicycles which could result in unsafe conditions.**
	Level of Significance Before Mitigation: *Less than Significant*
	Required Additional Mitigating Policies and Implementation Measures*: None*
	Resultant Level of Significance: *Less than Significant*

The proposed project would cause an increase in travel demand across existing at-grade railroad crossings and impact the response time for emergency vehicles on roadways affected by additional vehicle traffic. However, a review of all reported rail crossing accidents from 2007 through 2011, as compiled by the Federal Railroad Administration, identified no such accidents in Plumas County over this five year period, indicating that rail crossing safety in Plumas County is currently good. In addition, there are already programs in place to address rail crossing safety in Plumas County:

- Plumas County, the California Public Utilities Commission's Rail Crossing Safety staff, and the two railroads (BNSF and UPRR) cooperatively participate in monitoring and review of public crossings within Plumas County. Based on the resulting project list, the Caltrans Division of Rail administers the program.

- Both the CPUC and Caltrans are notified through the State Clearinghouse of proposed land use development projects that could impact traffic/bicycle/pedestrian activity at rail crossings.

Additionally, as shown in Table 4.2-5 (see above under Impact 4.2-6), the Circulation Element includes a variety of policies designed to address traffic and roadway safety and access issues resulting from implementation of the proposed project. Circulation policies CIR-4.1.1 through CIR-4.1.7 require the County to annually update roadway classification and conditions to help identify and address roadway deficiencies. Policy CIR-4.1.3 "Required Roadway Access" identifies general roadway standards to help address emergency response and safe ingress/egress. The Circulation Element also includes a number of comprehensive policies requiring new development to identify and mitigate (i.e., contribute their fair share to both construction of new

roadway facilities and for on-going roadway maintenance – see Policy CIR-4.1.4) development-related circulation impacts. These policies included as part of the proposed project also provide a funding mechanism, through implementation of a countywide traffic impact fee, and coordination with a regional traffic impact fee, which are intended to provide funding for transportation improvements including those that may be required to address rail crossings.

Significance Determination

Development and land uses implemented under the proposed project would increase traffic volumes on County roads, City of Portola roads, and regional or State roadways (including those external to the County). This additional vehicle traffic could result in potential conflicts with at-grade railroad crossings, inadequate emergency access, and by creating traffic congestion that slows emergency response time. However, rail crossing safety is not currently a significant problem in Plumas County and there are several ongoing programs to address crossing safety. Considering the variety of policies designed to address adequate roadway capacity and improvements (see Table 4.2-5), this impact is considered ***less than significant***. No additional mitigation measures are required.

Significance Conclusion

Implementation of the proposed project (including the various policies and implementation measures) would not result in increased conflicts between at-grade railroad crossings and additional vehicles/pedestrians/bicycles which could result in unsafe conditions. Therefore this impact would be ***less than significant***.