

CIRCULATION ELEMENT

VI. CIRCULATION ELEMENT

A. PURPOSE

The Circulation Element of the Horseshoe Bar/Penryn Community Plan is intended to:

1. describe existing transportation conditions and circulation features in the Plan area;
2. establish goals and policies for development of the transportation system;
3. describe future transportation conditions resulting from development of the Plan Area in accordance with proposed land uses;
4. identify development and improvement of the transportation system to insure the provision of a safe, efficient and multi-modal transportation system; and
5. identify a method of financing future transportation needs in the Plan area.

B. GOALS

1. A SYSTEM OF NATURALLY SCENIC ROADS, PATHS, AND TRAILS SHALL BE ESTABLISHED AND MAINTAINED. EXISTING RESIDENTIAL ROUTES IN THE COMMUNITY PLAN AREA SHALL BE PRESERVED AND ENHANCED AS SAFE, SCENIC ROUTES.
2. TRANSPORTATION FACILITIES SHALL BE SUFFICIENT TO ALLOW SAFE, PLEASANT, AND REASONABLY CONVENIENT TRAVEL AMONG ALL AREAS WITHIN THE HORSESHOE BAR/PENRYN COMMUNITY PLAN AREA.
3. SAFE ACCESS SHALL BE PROVIDED FOR ALL PROPERTIES WITHIN THE COMMUNITY PLAN AREA.
4. SAFE AND EFFICIENT TRANSPORTATION SYSTEMS SHALL BE PROVIDED FOR RESIDENTS OF THE PLAN AREA AND OTHERS WHO USE THE SYSTEM.
5. "THROUGH" TRAFFIC WHICH MUST PASS THROUGH THE COMMUNITY SHALL BE ACCOMMODATED IN A MANNER WHICH WILL NOT ENCOURAGE THE USE OF RESIDENTIAL OR PRIVATE ROADS, PATHS, OR TRAILS. "THROUGH" TRAFFIC SHALL BE DIRECTED TO APPROPRIATE ROUTES (SUCH AS I-80, KING ROAD, AUBURN-FOLSOM ROAD, HORSESHOE BAR ROAD, ETC.) IN ORDER TO MAINTAIN THE COMMUNITY'S RURAL QUALITY AND NATURAL ENVIRONMENT, AND TO PROVIDE FOR PUBLIC SAFETY.
6. THE CAPITAL IMPROVEMENT PROGRAM (CIP), SUFFICIENT TO ENSURE LEVEL OF SERVICE (LOS) C, SHALL BE IMPLEMENTED AS DEVELOPMENT OCCURS IN THE COMMUNITY PLAN AREA.

7. SUFFICIENT FUNDING SHALL BE MADE AVAILABLE TO FUND PROJECTS IN THE CIP.
8. A COMMUNITY TRAILS SYSTEMS SHALL BE CONSTRUCTED AND MAINTAINED TO:
 - a. FOSTER SAFE, PLEASANT, AND CONVENIENT TRAVEL BY FOOT, HORSEBACK, OR BICYCLE WITHIN THE COMMUNITY.
 - b. PROVIDE RECREATIONAL OPPORTUNITIES TO RESIDENTS OF THE COMMUNITY, AND
 - c. CONNECT LOCAL TRAILS TO REGIONAL TRAIL SYSTEMS.
9. PUBLIC AND PRIVATE TRANSIT USE SHALL BE ENCOURAGED. OPPORTUNITIES FOR PUBLIC TRANSPORTATION SHALL BE EXPANDED IF FEASIBILITY CAN BE DEMONSTRATED.
10. ROAD AND TRAIL MAINTENANCE SHALL BE ADEQUATE TO ENSURE SAFETY, ECONOMY, AND EFFICIENCY.

C. POLICIES

1. The number and extent of roadway cuts and fills required in construction, reconstruction, and road maintenance shall be kept to a minimum consistent with standard design practices.
2. Roads, trails, and paths shall be designed and constructed to minimize erosion and other disturbances to the natural terrain and vegetation. Such facilities shall be designed for economical maintenance.
3. Scenic or conservation easements over properties adjacent to the roadway may be needed to insure preservation of a vista from the road and to preserve the natural, rural character of the community.
4. The rights-of-way of roads shall be wide enough to accommodate appropriate road paving, trails, paths and bikeways, drainage, and public utility services.
5. The Community Plan road network shall provide convenience connections to the road and trail networks of adjacent areas.
6. The level of service (LOS) on major roadways (i.e., arterial and collector routes) and intersections shall be at Level "C" or better, except within one half mile of a State Highway, in which case the LOS standard shall be "D". The first priority for available funding shall be the correction of potential hazards.
7. Land development projects shall be approved only if LOS C can be sustained on the Community Plan roadways, as they are planned to be improved, including the addition of traffic from approved projects. (This may result in temporary slippage in LOS C until adequate funding has been collected for the construction of program improvements.)

8. Capital improvements shall be undertaken in response to buildout of the area. Traffic mitigation fees to fund the CIP described in this Plan shall be required as condition of approval for all land development projects within the Community Plan area. On-site and “frontage” improvements of projects which compromise the CIP shall be required as conditions of approval for all land development projects.
9. Priority and scheduling of projects from the CIP shall be determined by the Placer County Board of Supervisors.
10. Traffic mitigation fees shall be collected from all land development projects. Fee programs shall be based on potential traffic generation, and shall be collected when building permits are issued.
11. Roads shall be designed and maintained to encourage safe, alternative forms of transportation that contribute to a rural atmosphere (such as walking and bicycling).
12. Trails and paths intended for general circulation shall provide reasonably direct and convenience routes of travel for potential users. Routes for trails and paths intended primarily for recreational use should enhance recreation.
13. The trail network should facilitate travel between communities and provide access to parks. Trails may be located on or along collector or arterial roads. County or State funds should be sought for construction of trails.
14. The local public path and trail system shall be linked with the existing public regional systems and the Folsom Lake State Recreation Area trail system.
15. Trails and paths may be located in the right-of-way of roads, in their own rights-of-way, or in recorded easements over private properties.
16. As lands are developed, public dedication of trails and path easements shall be required where needed as a part of the community trail and path system. Construction of such trails and paths also shall be required by conditions of approval of land development projects.
17. The existing network of dedicated trail easements within the community, which does not yet constitute a fully usable trail system, shall be enlarged to form one. Dedicated trail easements shall not be abandoned unless there is substantial evidence of no practical use for trail purposes.
18. Bus stop turn-outs and shelters shall be required at appropriate locations as conditions of approval of development. Park-and-Ride areas shall be required at appropriate locations as conditions of approval of development. Other facilities or programs to encourage ridesharing may be required.
19. Land development projects shall be designed to minimize the number of access points onto public roadways and to incorporate roadway patterns and extensions that create an interconnected system of roadways to enhance community circulation.

20. Timing and distribution of traffic onto the road network from major traffic generators (such as schools, employment centers, etc.) shall be managed to avoid peak-periods.

D. EXISTING TRANSPORTATION SYSTEM

The transportation system which presently serves the Horseshoe Bar/Penryn Community includes a network of streets and highways, bicycle and pedestrian paths, public transit, private transit, railroads and park and ride facilities. The most prominent transportation features of the Horseshoe Bar/Penryn Community Plan area include Interstate Highway 80 and two mainline railroad alignments. The Interstate highway and the railroad tracks all traverse the Plan Area in a southwest to northeast orientation. The railroad tracks include both the "uphill" (eastbound) and "downhill" (westbound) Union Pacific Railroad (UPRR) mainline crossing of the Sierra Nevada mountain range. The eastbound rail line forms the northwestern boundary of the Plan area. As important as these features are to the inter-regional and interstate movement of people and goods, they also serve as circulation barriers within the Plan area because of the limited number of roadway crossings.

To provide a foundation for the development of future transportation needs in the Plan Area, the existing condition of each component of the transportation network is described in this section.

1. Streets and Highways

The most important element of the transportation network is the system of regional and local roadways which serve the Plan Area. Due to the predominance of large lot, low density residential development – automobile travel is the most important mode of transportation. This mode of travel relies on a system of streets and highways for local and regional travel. The system of streets and highways is ordered in a hierarchical fashion, ranging from the local roadways intended to serve only adjacent land uses to freeways which are intended to serve long distance, high speed travel and provide no access to adjacent properties. The hierarchy of the street and highway network includes freeway, arterial, collector and local roadways. Existing roadways in the plan area are described below, within this hierarchy.

- a. Freeways. Freeways are multi-lane roadways which serve to move people and goods long distances at high speeds. No direct access to adjacent properties is allowed or provided. Rather, access to freeways is provided via access ramps which connect to local and regional surface streets. All crossing of freeways are grade separated to alleviate any conflict with through travel on the freeway. Within the Plan Area, I-80 is the only freeway. It is a six lane roadway with access to the Plan Area provided only at Penryn Road, via a standard two quadrant cloverleaf interchange.

I-80 serves a variety of traffic purposes including interstate and inter-regional truck movement of goods; recreational travel to the attractions of the Sierra Nevada mountains, Lake Tahoe and Reno, Nevada areas; and weekday commute travel.

While the Penryn Road interchange is the only access to the freeway which lies within the Plan Area, other nearby freeway interchanges serve traffic to/from the Plan Area. These include interchanges at Horseshoe Bar Road in the Town of Loomis, at Indian Hill Road/Newcastle Road in the community of Newcastle, at SR 193 north of the community of Newcastle and at Sierra College Boulevard within the City of Rocklin.

Besides at the Penryn Road interchange, only two other crossings of I-80 are provided within the Plan Area. These crossings, are located at Rock Springs Road and Gilardi Road. Crossings are also provided at King Road and Sierra College, each located just outside of the Plan Area.

- b. Arterial Roadways. Arterial roadways are streets and highways that function to move traffic between regional centers. A secondary purpose of the arterial roadway is to provide access to abutting properties, although the relatively high speed of traffic can lead to a conflict in these two purposes, resulting in reduced safety. For these reasons, Placer County attempts to limit the number, location and frequency of access to arterial roadways. Arterial roadways within the plan area include:

Auburn-Folsom Road is a two lane north/south oriented roadway which serves the eastern portion of the Plan Area. Turn lanes are provided at major intersections along Auburn-Folsom Road. The roadway extends from the southern Plan Area boundary near Dick Cook Road to the Plan Area boundary near Shirland Tract Road. Auburn-Folsom Road serves regional travel between the Granite Bay area, northern Sacramento County and the City of Folsom to the Auburn area.

King Road is a two lane roadway which serves east/west travel from the Town of Loomis to Auburn-Folsom Road. West of the Plan Area, King Road crosses I-80 and extends into the Town of Loomis.

Sierra College Boulevard is an arterial roadway which begins in Sacramento County (as Hazel Avenue) and continues north to State Route 193 east of the City of Lincoln. The roadway varies in width from two to six lanes over this distance and includes an interchange with I-80 in the City of Rocklin. Within the Plan Area this roadway is a two lane roadway between the Town of Loomis boundary and the Union Pacific Railroad eastbound track tunnel, north of Del Mar Avenue.

Taylor Road is a two and four lane arterial roadway which extends from the City of Roseville at I-80 to SR 193 in the community of Newcastle. Within the Plan Area, Taylor Road is a two lane roadway from the Plan Area boundary at the Town of Loomis to the Plan Area boundary southwest of Calison Road. Taylor Road is also known as old U.S. Highway 40 and portions are along the alignment of the Lincoln Highway and is of historical interest.

Penryn Road is a two lane roadway which extends from King Road on the south to Taylor Road on the north. Freeway access is provided to I-80 via a standard two quadrant cloverleaf interchange. Penryn Road, north of Taylor Road is discussed later.

English Colony Road serves the northwest portion of the Plan Area, extending from Taylor Road at Rock Springs Road to the western boundary of the Plan Area, north of Del Mar Avenue at the UPRR railroad crossing. Beyond the Plan Area boundary, English Colony Road extends to Sierra College Boulevard.

Horseshoe Bar Road extends from the Plan Area boundary at the Town of Loomis, east to Auburn-Folsom Road and beyond to the Folsom Lake State Recreation Area. It provides east/west circulation in the southeastern Plan area, including access to I-80 west of the Plan area. The I-80/Horseshoe Bar Road interchange is a standard two quadrant cloverleaf interchange.

- c. **Collector Roadways.** Collector roadways serve to “collect” traffic from local roadways and move it to arterial roadways. Speeds are typically lower on collector roadways than on arterial roadways and an important secondary role for collector roadways is to provide access to adjacent properties. Within the Community Plan area, there are numerous collector roadways. All of the collector roadways within the Plan Area are two lane rural roadways, some with auxiliary turning lanes provided at major intersections. Each of the collector roadways serving the Plan Area are described below.

Laird Road provides north/south circulation through the Loomis Basin, linking the Town of Loomis on the north with the Granite Bay area on the south. A small segment of Laird Road is located within the Plan Area, between the Plan Area boundary and the Town of Loomis in the extreme southwest corner of the Plan Area.

Dick Cook Road is an east-west roadway along the southern boundary of the Plan Area. It extends from Val Verde Road on the west to Auburn-Folsom Road on the east.

Rattlesnake Bar Road is a collector roadway which provides north/south circulation east of Auburn-Folsom Road. It extends south from Shirland Tract Road, near Auburn-Folsom Road to the Folsom Lake State Recreation Area.

Newcastle Road extends from Rattlesnake Bar Road in a north and west orientation to an interchange at I-80 in the community of Newcastle, outside of the Plan Area boundary.

Powerhouse Road is an east/west oriented roadway which links Newcastle Road to Auburn-Folsom Road in the extreme northeast area of the Plan area. Powerhouse Road follows the Plan Area boundary from Auburn-Folsom Road to a point where it veers north and leaves the Plan Area.

Brennans Road provides north/south circulation between Newcastle Road, south of Gilardi Road to King Road, just west of Auburn-Folsom Road.

Rock Springs Road is generally an east/west oriented roadway which extends from Taylor Road at English Colony Road south and west to Brennans Road and then east to Auburn-Folsom Road south of Newcastle Road. It includes a grade separated undercrossing of I-80.

Gilardi Road follows the northern boundary of the Plan area from Newcastle Road to west of I-80, including a grade separated overcrossing of I-80, and then turns south to intersect with Rock Springs Road.

Penryn Road. There are two non-continuous sections of Penryn Road within the Plan area. The first section is a north-south roadway which is described above as an arterial roadway. The other section of Penryn Road connects Taylor Road to English Colony Road, west of Taylor Road and serves the historical downtown area of Penryn.

Rippey Road parallels the UPRR westbound tracks from Taylor Road near the Town of Loomis to English Colony near the Penryn post office. As part of the first all-weather surfaced roadway for interstate travel constructed for crossing the Sierra Mountains (circa 1915), Rippey Road is of historical interest. Portions of the original concrete roadway are still in place.

Del Mar Avenue is a north/south oriented roadway which extends from Sierra College Boulevard, just north of the Town of Loomis to English Colony Road.

Humphrey Road extends from the Town of Loomis, north into the Plan Area to a "T" intersection with English Colony Road.

Swetzer Road is generally northeast/southwest oriented, separated from, but essentially parallel to the UPRR westbound track. It is a two lane roadway which extends from the Town of Loomis to English Colony Road. The roadway serves industrially zoned land just south of the Plan Area.

Citrus Colony Road provides east/west circulation between Del Mar Avenue and Humphrey Road, north of the Town of Loomis.

Butler Road is the primary collector roadway for the area of the Community Plan located north of English Colony Road and south of the UPRR eastbound track. It provides a collector loop from English Colony Road, west of Swetzer Road (at Penryn School), north and west to English Colony Road, west of Humphrey Road. A number of palm trees are located along Butler Road and are of special interest to residents of the area. Their preservation will be a consideration in any improvement of Butler Road.

Clark Tunnel Road provides north/south circulation for the area of the Community Plan located north of Penryn and west of the westbound UPRR tracks. It extends from English Colony Road, north to the UPRR uphill track (in Clark Tunnel) and on to SR 193 outside of the Plan area. This roadway is essentially unimproved between SR 193 and the UPRR tracks.

Calison Road extends from Clark Tunnel Road to Taylor Road, just north and west of the Plan area boundary.

Sisley Lane extends from Taylor Road, north of English Colony to Calison Road near the northeast boundary of the Plan area. It serves the rural residential development located between the UPRR downhill track and Taylor Road, north of the central Penryn area. Like Rippey Road, Sisley Lane was also a part of the first all-weather surfaced roadway for interstate travel constructed for crossing the Sierra Mountains (circa 1915) and therefore, is of historical interest. Portions of the original concrete roadway are still in place.

Boyington Road is a two lane roadway which provides a frontage road along the northwest side of I-80, linking Penryn Road with King Road.

Existing traffic volumes on Plan Area roadways are presented in Exhibit H. These traffic volumes are based on recent counts conducted by the County or have been estimated based on older count data.

2. **Existing Roadway Conditions**

- a. Traffic Operations. Traffic operations are quantified in terms of levels of service (LOS). LOS is presented in terms of a letter grade ranging from LOS "A" to LOS "F", representing progressively worsening traffic operating conditions. LOS "A" is characterized by free-flow conditions and little or no delay, while LOS "F" represents forced traffic flow conditions and excessive delays. As discussed above, all of the County roadways within the Plan Area are two lane rural roadways. The level of service on these roadways is determined by using level of service threshold volumes developed as part of the Placer County General Plan (1994). A two lane rural roadway over level terrain has a level of service C volume threshold of 4,800 vehicles per day per lane. An arterial roadway with low access control has a level of service C volume threshold of 6,000 vehicles per day per lane. The existing level of service is presented in Table 1. As shown in Table 1, Plan Area roadways currently experience very good operating conditions indicative of LOS A and B.

Table 1
Existing Traffic Volumes and Level of Service

Roadway	Location	ADT	LOS
Auburn-Folsom Road	north of Newcastle Road	4,000	A
	north of King Road	6,000	A
	north of Horseshoe Bar Rd.	6,000	A
	north of Dick Cook Rd.	5,600	A
Brennens	north of Rock Springs Rd.	500	A
	north of King Rd.	1,300	A
Dick Cook	Val Verde Rd. to Auburn-Folsom Rd	500	A
English Colony Way	west of Taylor Road	2,700	A
	west of Butler Road (east)	1,000	A
	west of Butler Road (west)	900	A
Gilardi Road	west of Newcastle Road	600	A
Horseshoe Bar Rd	west of Val Verde Rd.	3,400	B
	Val Verde Rd. to Auburn-Folsom Rd.	2,400	A
Humphrey Road	north of Town of Loomis	900	A
	south of English Colony Rd.	300	A
King Road	west of Penryn Road	3,300	A
	west of Val Verde Road	4,200	A
	west of Auburn-Folsom Rd.	3,600	A
Newcastle Road	west of Auburn-Folsom Rd.	1,000	A
Penryn Road	King Road to I-80	3,300	A
	I-80 to Taylor Road	3,300	A
	Taylor Road to English Colony	500	A
Rock Springs Road	east of Taylor Road	2,000	A
	west of Auburn-Folsom Rd.	350	A
Sierra College Blvd	north of Del Mar Avenue	6,000	A
Swetzer Road	south of English Colony Rd.	850	A
Taylor Road	east of Town of Loomis	5,600	A
	west of English Colony Rd.	7,600	A
	east of English Colony Rd.	5,400	A
Val Verde Road	north of Horseshoe Bar Rd.	1,400	A
	south of Horseshoe Bar Rd	1,050	A

3. Railroads

As mentioned earlier, two rail lines pass through the Plan Area. These include the eastbound and westbound tracks of the Union Pacific Railroad mainline. These tracks serve both freight and passenger travel. Approximately 16 freight trains per day pass through the Plan Area on each of these sets of tracks. In addition, AMTRAK provides passenger service twice per day (once in each direction) through the Plan Area. There are presently no passenger rail stop locations within the Plan Area. At-grade crossings of the railroad tracks occur on English Colony Road and Calison Road, both crossing the westbound tracks. Both of these locations are controlled with crossing gates, warning bells and flashing stop lights.

Grade separate crossing of the UPRR tracks is provided on Sierra College Boulevard, English Colony Road and Clark Tunnel Road (just outside of the Plan Area). The grade separated crossings are all located on the eastbound tracks.

Intercity passenger rail service is presently offered between Colfax and Sacramento and on to San Jose. Stops are provided at Auburn, Rocklin and Roseville.

In addition, the Placer County Transportation Commission has studied the provision of passenger commuter rail service between Colfax and Sacramento to supplement the Capitol Corridor Intercity Passenger rail service. While no implementation schedule has been developed, there are no stops planned within the Plan Area. The closest proposed stops are in Rocklin and Newcastle.

4. Public Transportation

Public transportation is provided within the Plan area by Placer County Transit and the Consolidated Transportation Services Agency. Each of these is discussed below.

Taylor Road Shuttle. Public transit service is provided within the Plan area by Placer County through a contract with PRIDE Industries, serving as the Consolidated Transportation Services Agency (CTSA). A route deviated service is provided between Auburn and Sierra College along Taylor Road within the Plan area. The route operates on 2 hour headways for a total of seven runs per day on weekdays and 5 runs per day on Saturdays. The Taylor Road Shuttle connects with Placer County Transit at both Sierra College and downtown Auburn with free transfers. The bus will deviate up to 3/4 mile off of Taylor Road if requested in advance. This service is funded jointly by Placer County, the Town of Loomis and PRIDE Industries.

Commuter Bus Service. In 2003, Placer County will implement a commuter bus service in the I-80 corridor between Colfax and downtown Sacramento. This service will have two runs in each direction every weekday. A key stop on this route will be the Park N Ride lot at the Penryn/I-80 interchange (on Boyington Road at Penryn Road).

Consolidated Transportation Services Agency (CTSA). The designated Consolidated Transportation Services Agency for Placer County is PRIDE Industries. PRIDE Industries operates the service under the more commonly known name of CTSA. The CTSA is a non-profit organization that receives Transportation Development Act funds to provide local paratransit service to elderly and disabled patrons in western Placer County. The CTSA also provides regularly scheduled route and dial-a-ride services such as the Taylor Road Shuttle, under contract to Placer County.