

PLACERVILLE DOWNTOWN TRAIL FEASIBILITY STUDY

SUPPLEMENT

to the

CITY OF PLACERVILLE NON-MOTORIZED TRANSPORTATION PLAN

REVISED February 18, 2005

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INTRODUCTION

The purpose of this Placerville Downtown Trail Feasibility Study is to address the feasibility of developing a multi-use trail through downtown Placerville from Clay Street to Forni Road. This study is a supplement to the City of Placerville Non-Motorized Transportation Plan, which is currently being prepared by staff of the El Dorado County Transportation Commission (EDCTC). The primary goal of the Non-Motorized Plan is to improve the city's non-motorized circulation throughout the entire city limits, including addressing the need for a multi-use trail through downtown Placerville. This feasibility study will provide additional detail on downtown Placerville trail alignment issues and help to inform the larger Non-Motorized Plan process.

PLANNING AND POLICY CONTEXT

This section discusses major relevant planning documents and policies that relate to the Placerville Downtown Trail.

CITY OF PLACERVILLE GENERAL PLAN

The potential for developing a bicycle trail through downtown Placerville is discussed in the Transportation Element of the Placerville General Plan.

Goal E: To provide a safe and secure bicycle route system

Policy 7. The City shall encourage the development of a bike trail through the city utilizing the Southern Pacific and Michigan/California railroad rights-of-way. This trail could provide an opportunity to connect to other trail systems such as the American River Bikeway in Sacramento County.

Policy 8. Any future development adjacent to a bike trail shall be required to analyze impacts of the development on the bike trail and mitigate to the greatest extent possible identified impacts.

CITY OF PLACERVILLE NON-MOTORIZED TRANSPORTATION PLAN

As noted above, this feasibility study is being prepared in conjunction with the City of Placerville Non-Motorized Transportation Plan. The Plan is intended to improve the city's non-motorized circulation and provide the city with access to state and federal funding designated for the development of bikeways. As part of this effort, the EDCTC has established a Non-Motorized Transportation Advisory Committee (NMTAC) to advise staff throughout the planning process. The NMTAC is composed of staff from the City of Placerville, members of the cycling community and local advocates. They have met several times this year and will continue to work toward completion of these important efforts.

HIGHWAY 50 OPERATIONAL IMPROVEMENTS

Caltrans is currently in the design stages of a project to improve Highway 50 through Downtown Placerville. The project has a number of components, including:

- Extend Placerville Drive to connect with lower Main Street. This includes creating a new bridge over Hangtown Creek as part of the Placerville Drive extension, as well as a new Highway 50 bridge over Placerville Drive. This project will also include a Class II bike lane on each side, as well as a sidewalk/curb/gutter along the southern side of the roadway.
- Close the existing eastbound off-ramp to Main Street in the area of lower Main.
- Widening Highway 50 to provide an eastbound auxiliary/acceleration lane from the Placerville Drive on-ramp to Clay Street
- Widening of the bridges over Hangtown Creek at Canal, Spring and Bedford to provide added storage and additional turn lanes,
- Upgrading and interconnecting the traffic signals on Highway 50,
- Reconstructing the pedestrian overcrossing at Bedford Avenue to accommodate the widened Highway 50 and to comply with ADA standards.
- Realignment of the Highway 50/Bedford intersection, including dedicated turn lanes in both directions.

On November 26, 2002, the Placerville City Council conceptually approved the Highway 50 operational improvements project. The project is currently undergoing final design, with construction expected to begin in Spring 2006 and ending in 2010.

Issues related to the Highway 50 project's impact on developing a future trail within the former railroad corridor have been a key source of controversy for the highway improvement project, and some opposition to the Highway 50 project was based on the feeling that the Highway 50 project would preclude the development of a trail along the railroad corridor. Others have noted, however, that the segment of the railroad ROW between Ray Lawyer Drive and Clay Street was purchased by Caltrans with the purpose of widening and making other improvements to Highway 50, and was not intended to be developed as a trail.

Caltrans has explicitly stated that the Highway 50 project would not preclude the use of the railroad right of way for a trail. The Highway 50 Operational Improvements Project Study Report, prepared by Caltrans in December 2002, discusses the use of the former railroad right-of-way and states:

In response to this issue a memo was prepared by the Caltrans District 3 Director to the EDCTC Executive Director dated March 30, 2000. In the letter, given existing conditions, Caltrans stated it did not support the use of this area for a trail. However, more recent traffic modeling studies have since been completed causing Caltrans to reform the position on the use of the former railroad right of way. The main concern is for pedestrian and motorist safety at the intersections with Canal Street, Route 49 (Spring Street), Center Street, and Bedford Avenue. Since this area has a higher than average accident rate, pedestrian

access via a trail that runs adjacent to Highway 50 is not advisable. Of particular concern to its use as a trail is the free right turns allowed at Center Street. Driver expectations do not include the presence of pedestrians in this environment. The post construction situation will leave approximately 3.0 meters [9.8 feet] of available width in the former railroad right of way (width varies from 2.7 meters minimum [8.9 feet] to 16.9 meters maximum [55.4 feet], with a weighted average width of 7.4 meters [24.3 feet]. **Caltrans takes the position that construction of the project does not preclude the use of this area for future trails, but Caltrans recognizes these obstacles will have to be addressed in a future trail study** [emphasis added].

A memorandum prepared by the Placerville City Manager/City Attorney recommending the Council's 2002 conceptual approval of the Highway 50 project also makes several points related to the use of the former railroad right of way for a trail, and concludes that a number of safety issues related to the crossings would need to be resolved prior to designating that segment of rail corridor for a trail (see attached memorandum).

DOWNTOWN PLACERVILLE REVITALIZATION STRATEGY

The Downtown Placerville Revitalization Strategy is an action plan that includes a variety of recommendations to improve aesthetics, visual character, circulation and other elements of the Downtown Placerville area, including the area along Highway 50 and Hangtown Creek. Included in these recommendations is additional landscaping and beautification of the railroad right-of-way area to improve the image of downtown as currently seen from motorists traveling along Highway 50.

EL DORADO TRAIL CORRIDOR

The El Dorado Trail is a conceptual trail alignment that spans the entire length of El Dorado County from the western county line to the Lake Tahoe Basin. The current alignment of the El Dorado Trail includes two railroad rights-of-way, the Michigan-California railroad right-of-way and the former Southern Pacific railroad right-of-way (now known as the Sacramento-Placerville Transportation Corridor). Currently, an improved multi-use segment of the El Dorado Trail has been constructed from Mosquito Road to Parkway Drive east of Placerville, including an overpass of Highway 50. Much of the remainder of the former railroad ROWs exists as an unpaved dirt corridor that serves as a de facto recreational trail for many users.

OVERVIEW OF STUDY CORRIDOR

The Placerville Downtown Trail study corridor extends through downtown Placerville from Clay Street on the east to Forni Road on the west. **Figures 1 through 4** show aerial view of the project corridor area along with photographs of the existing conditions along the corridor.

The Placerville Downtown Trail is part of the larger El Dorado Trail corridor which consists of both existing and planned segments that generally follow the former Southern Pacific railroad right-of-way through El Dorado County. The Placerville Downtown trail would essentially be a westerly extension of the multi-use El Dorado Trail within Placerville. Currently, a paved segment of the El Dorado Trail extends from Parkway Road to Mosquito Road in the City of Placerville. From

Mosquito Road west toward downtown Placerville, the trail has not yet been improved, but the unpaved former railroad right of way serves as a de facto trail for many pedestrians, joggers, and bicyclists. The City of Placerville has plans to improve the segment of El Dorado Trail between Mosquito Road and Clay Street to a paved multi-use trail, with construction expected to begin in 2005.

The purpose of this study is to address the feasibility of designating an alignment for the El Dorado Trail to the west of Clay Street. Because of potential width and operational constraints related to the railroad right-of-way and improvements to Highway 50 through this area, the feasibility study process included not only evaluating the railroad right-of-way, but also alternate parallel on-street alignments generally extending along Main Street through downtown.

RAILROAD RIGHT-OF-WAY

The former Southern Pacific railroad right-of-way runs adjacent to the south side of Highway 50 through Downtown Placerville. This rail corridor was formerly part of the Placerville branch of the Southern Pacific line. When Southern Pacific Railroad filed paperwork to abandon the line, the Sacramento-Placerville Transportation Corridor (SPTC) Joint Powers Authority (JPA), including members from El Dorado County, the City of Folsom, Sacramento County, and Sacramento Regional Transit, was formed. The JPA purchased 28 miles of the abandoned railroad corridor from the western El Dorado County line near Latrobe to the City of Placerville at Ray Lawyer Drive. Caltrans purchased the segment within the City of Placerville between Ray Lawyer Drive and Mosquito Road. A Master Plan was developed for the 28 miles of preserved corridor, which is planned for use as an alternative transportation corridor with multiple uses including excursion trains, bicycle, pedestrian and equestrian trails, and utility easements. The proposed rail-to-trail could eventually connect to the trail network in the City of Folsom and the American River Parkway which extends to downtown Sacramento.

Through most of the project study area, the former railroad corridor exists as a level, unpaved area located between Hangtown Creek and Highway 50. The width of the railroad corridor, from the top of bank of Hangtown Creek to the existing fenced boundary of Highway 50, varies from about 18 to 35 feet. Specific segments of the railroad corridor are discussed below:

Clay Street to Bedford Street

Moving west from Clay Street, the railroad right of way is as an unpaved area currently used for parking primarily by employees of downtown area businesses. The north side of the railroad right-of-way is fenced off from an embankment leading up to Highway 50, and the south side of the right-of-way abuts Hangtown Creek. Both sides of the right-of-way through this area are heavily vegetated with trees. Within this area, vehicles park 90-degree along the north side of the right of way, and some additional vehicles pull in parallel along the south side, leaving an open travel lane area in the middle. There are no formalized parking spots, but rather the parking is informal and first come/first served. During a mid-morning field survey of the site, all available parking spaces along this segment of right-of-way were occupied.

Approximately halfway between Clay and Bedford, a narrow bridge over Hangtown Creek provides access south into a parking lot owned by the City of Placerville for the Park and Recreation Department. The bridge is approximately 18 feet wide from curb to curb, with wooden safety

railings and a concrete deck. This bridge connects to a paved parking lot that fronts onto Main Street and serves the City of Placerville Park and Recreation Department. This paved parking area is intended for parking by city employees and visitors.

Continuing west of the Park and Recreation bridge, the right-of-way narrows and parking becomes limited to only parallel parking along the north side. Approaching Bedford, most of the informal parking ends. The approach ramp from the pedestrian bridge over SR-50 lands adjacent to the railroad right-of-way at Bedford, with the ramp extending down in a westerly direction.

The intersection of Bedford and Highway 50 is signalized.

Bedford Street to Center Street

From Bedford Street westward, the north side of the right-of-way runs immediately adjacent to the eastbound shoulder of Highway 50, separated by a fence but no vegetation. From Bedford to Center Street, informal parking occurs along the south (creek) side of the right-of-way. Vehicles in this area park parallel.

Approximately halfway to Center Street, the vegetation along Hangtown Creek thins, and the back side of some downtown business buildings can be seen on the other side of the creek. Slightly farther west, the creek disappears beneath a building and continues underground. Approaching Center Street, the Center Street Parking garage structure borders the south side of the right-of-way. The creek extends underground beneath the northern wall of the parking garage. The creek re-emerges beneath the parking garage at Center Street. A pedestrian bridge extends over Highway 50 at Center Street. The bridge landing touches down at the western edge of the Center Street garage building.

Center Street forms a “T” intersection with Highway 50. Center Street is a one-block street that primarily provides access from Main Street and Highway 50 into and out of the Center Street parking garage. Center Street is one-way northbound extending from Main Street to the Stagecoach Alley/parking garage entrance. From Highway 50, Center Street is two-way, with a mandatory left turn at Stagecoach alley. The intersection of Center Street and Highway 50 is stop-controlled on northbound Center, with a right-turn-only movement permitted. For eastbound vehicles on Highway 50, the turn onto Center Street is uncontrolled, and a “free right” turn movement occurs.

Center Street to Spring Street

Hangtown Creek re-emerges beneath the parking garage after Center Street. From Center to Spring, the railroad right-of-way again extends between the vegetated bank of Hangtown Creek, and the fenced off Highway 50 right-of-way. Some informal parking occurs through this area, particularly near Center Street where the right-of-way is widest along this segment. Moving west toward Spring Street the railroad corridor narrows in at a point, before widening again. Hangtown Creek goes underground again beneath a restaurant parking lot. Just east of Spring Street, the railroad corridor widens out where an old railroad caboose is parked, and the creek reemerges in a box culvert.

The intersection of Spring Street and Highway 50 is signalized. Spring Street is designated as State Highway 49.

Spring Street to Canal Street

West of Spring Street, the creek alignment shifts slightly south of the right-of-way, and the railroad corridor extends between Highway 50 and an open landscaped area where the “City of Placerville” monument sign has been erected.

The intersection of Canal Street and Highway 50 is signalized.

Canal Street to Forni Road

West of Canal Street, the creek briefly reappears on the south side of the right-of-way (adjacent to a fast food restaurant), before shifting away again. West of Canal, the Highway 50 alignment shifts to the north, while the rail corridor continues due west. Also west of Canal, Main Street becomes Forni Road, extending away from downtown. An off-ramp of eastbound Highway 50 connects onto lower Main Street, crossing the railroad right-of-way. Once the Highway 50 Operational Improvements Project is complete, the off-ramp will be closed, removed and re-established with riparian vegetation. West of the Main Street off-ramp, the railroad right-of-way extends west along the existing historic 1906 railroad bridge and along the north side of Forni Road. From this location, the right-of-way is a narrow fire road that serves as an unpaved trail under existing conditions. This location marks the approximate western boundary of the Downtown Placerville Trail study area.

ALTERNATE ON-STREET ALIGNMENTS

As previously noted, due to planned modifications to the railroad right-of-way resulting from the Highway 50 Operational Improvements project, as well as safety concerns at the crossings along the corridor, it was determined necessary to study alternate alignments for the Downtown Placerville Trail. Because no other suitable off-street corridors were available in the vicinity, the only potential alternate alignments would be parallel on-street routes. As an initial step, the local roadway network was surveyed to determine which nearby parallel roadways could serve as a functional on-street segment of the Placerville Downtown Trail.

From the outset of this study, Main Street has been viewed as the most likely on-street alternative route for the Downtown Placerville Trail, given that it runs parallel to the railroad corridor, its directness in connecting to the rail corridor on either end, and its relatively flat grades. Main Street serves Placerville’s downtown business district. Main Street runs in an east-west direction, one block south of SR-50. The segment between Spring Street and Clay Street serves as the city’s historic downtown area. Commercial buildings ranging from one to three stories in height front Main Street. Parallel parking is available along Main Street.

Other roadways evaluated for the potential to serve as the trail alignment include Reservoir Street, Pacific Street, and Union Street. These potential alignments are discussed in more detail later in this document.

TRAIL AND BIKEWAY DESIGN

Prior to discussing specific trail alignment alternatives, it is useful to provide an overview of multi-use trail and bikeway classifications and minimum design standards for each. According to Caltrans, the term “bikeway” encompasses all facilities that provide primarily for bicycle travel. Caltrans has defined three types of bikeways in Chapter 1000 of the Highway Design Manual: Class I, Class II, and Class III. Descriptions and general design guidelines are presented below. The sources used for these design recommendations were the Caltrans Highway Design Manual and AASHTO’s Guide for the Development of Bicycle Facilities.

CLASS I BIKEWAY

Typically called a “bike path” or “shared use path,” a Class I bikeway provides bicycle travel on a paved right-of-way completely separated from any street or highway. The recommended width of a shared use path is dependent upon anticipated usage:

- 8’ (2.4 m) is the minimum width for Class I facilities
- 8’ (2.4 m) may be used for short neighborhood connector paths (generally less than one mile in length) due to low anticipated volumes of use
- 10’ (3.0 m) is the recommended minimum width for a typical two-way bicycle path
- 12’ (3.6 m) is the preferred minimum width if more than 300 users per peak hour are anticipated, and/or if there is heavy mixed bicycle and pedestrian use

A minimum 2’ (0.6 m) wide graded area must be provided adjacent to the path to provide clearance from trees, poles, walls, guardrails, etc. On facilities with expected heavy use, a yellow centerline stripe is recommended to separate travel in opposite directions.

ADDITIONAL DESIGN RECOMMENDATIONS:

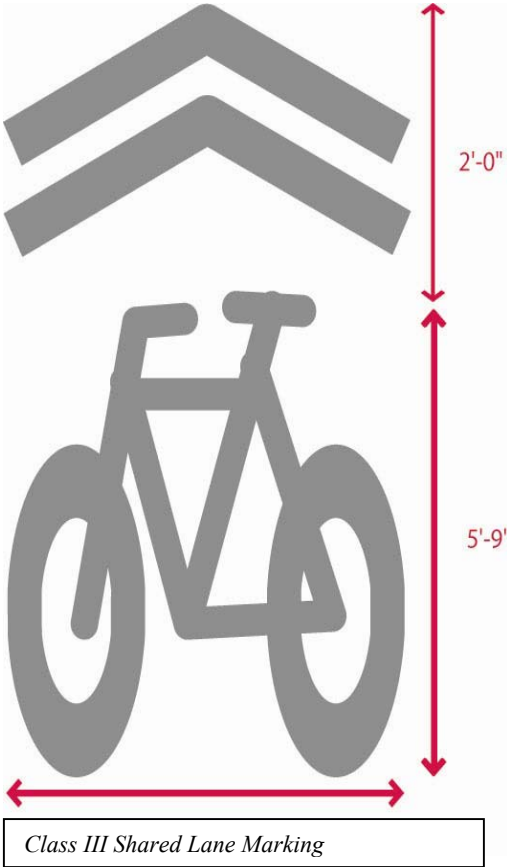
- Shared use trails and unpaved facilities that serve primarily a recreation rather than a transportation function and will not be funded with federal transportation dollars may not need to be designed to Caltrans standards. However, state and national guidelines have been created with user safety in mind and should be followed as appropriate. Wherever any trail facility intersects with a street, roadway, or railway, standard traffic controls should always be used.
- Class I bike path crossings of roadways require preliminary design review. Generally speaking, bike paths that cross roadways with average daily trips (ADTs) over 20,000 vehicles will require signalization or grade separation.
- Lighting should be provided where commuters will use the bike path in the evenings.
- Barriers at pathway entrances should be clearly marked with reflectors and be ADA accessible (minimum five feet clearance).
- Bike path construction should take into account impacts of maintenance and emergency vehicles on shoulders and vertical and structural requirements. Paths should be constructed with adequate sub grade compaction to minimize cracking and sinking.

- All structures should be designed to accommodate appropriate loadings. The width of structures should be the same as the approaching trail width, plus minimum two-foot wide clear areas.
- Where feasible, provide two-foot wide unpaved shoulders for pedestrians/runners, or a separate tread way.
- Direct pedestrians to the right side of pathway with signing and/or stenciling.
- Provide adequate trailhead parking and other facilities such as restrooms and drinking fountains at appropriate locations.

CLASS II BIKEWAY

Often referred to as a “bike lane,” a Class II bikeway provides a striped and stenciled lane for one-way travel on either side of a street or highway. To provide bike lanes along corridors where insufficient space is currently available, extra room can be provided by removing a traffic lane, narrowing traffic lanes, or prohibiting parking. The width of the bike lanes vary according to parking and street conditions:

- 4’ (1.2 m) minimum if no gutter exists, measured from edge of pavement
- 5’ (1.5 m) minimum with normal gutter, measured from curb face; or 3’ (0.9 m) measured from the gutter pan seam
- 5’ (1.5 m) minimum when parking stalls are marked
- 11’ (3.3 m) minimum for a shared bike/parking lane where parking is permitted but not marked on streets without curbs; or 12’ (3.6 m) for a shared lane adjacent to a curb face



CLASS III BIKEWAY

Generally referred to as a “bike route,” a Class III bikeway provides routes through areas not served by Class I or II facilities or to connect discontinuous segments of a bikeway.

Class III facilities can be shared with either motorists on roadways or pedestrians on a sidewalk (not advisable) and is identified only by signing. There are no recommended minimum widths for Class III facilities, but when encouraging bicyclists to travel along selected routes, traffic speed and volume, parking, traffic control devices, and surface quality should be acceptable for bicycle travel. A wide outside traffic lane (14’) is preferable to enable cars to safely pass bicyclists without crossing the centerline.

CLASS III SHARED LANE MARKINGS

Recently, “shared lane marking” stencils, an additional treatment for Class III facilities, have been introduced in California and nationally. The stencil can serve a number of purposes, such as making motorists aware of bicycles potentially in their lane, showing bicyclists the direction of travel, and, with proper placement, reminding bicyclists to bike further from parked cars to prevent “dooring” collisions. The City of Denver has effectively used the “bike-in-house” shared marking treatment for several years, and San Francisco recently tested two designs of the shared lane marking stencil for use on Class III facilities where lanes are too narrow for sharing. Based on the results of the San Francisco study, the California Traffic Control Devices Committee (CTCDC) recommended in August 2004 that the “Chevron Bicycle Symbol” design of the Shared Lane Marking be adopted by Caltrans as a standard traffic control device in California.

Guidance language recommended by the CTCDC for use of the Shared Lane Marking is as follows:

Support:

The Shared Lane Marking is intended to improve the positioning of bicyclists on roadways with significant bicycle usage and parked vehicles where the curb lanes are too narrow for motorists and bicyclists to travel side by side within the lane.

Option:

The Shared Lane Marking may be used in shared lanes to improve bicyclists’ positioning on roadways, encourages cycling in the correct direction, discourage cycling on sidewalks, and to decrease motor vehicle/bicycle conflicts by informing motorists where to expect cyclists, especially on urban and suburban roadways with narrow curb lanes.

Standard:

If used, the Shared Lane Marking shall be placed so that its center is a minimum of 3.4 meters (11 feet) from the curb face with on-street parking.

On street with no on-street parking, the marking should be placed so that it directs cyclists away from conditions alongside the curb face edge that compromise cyclists’ safety, such as drain grates and longitudinal gutter joints. If used, the Shared Lane Marking generally should be spaced at 75 meter (250 foot) intervals.

Option:

The spacing may be increased or decreased based on judgment. On streets with downgrades, higher speeds, or wide parked vehicles, the distance from the curb lane may be increased beyond 3.4 meters (11 feet).

EVALUATION OF POTENTIAL ALIGNMENTS

This section provides an evaluation of the potential alignments for an off-street or on-street trail alignment through Downtown Placerville.

RAILROAD CORRIDOR ALIGNMENT

This section discusses the potential to use the former railroad corridor alignment for a multi-use trail. Two key issues arise concerning use of the former railroad corridor: 1) whether there will be sufficient right-of-way along the corridor to accommodate a multi-use trail following completion of the Highway 50 project; and 2) concerns related to the trail crossings of Bedford, Center, Spring and Canal Streets. Each of these issues is discussed separately below. It should be noted that the Railroad Corridor alignment is evaluated with the assumption that the Highway 50 operational project will be developed in accordance with the Caltrans design plans available for review in December 2004.

AVAILABLE RIGHT-OF-WAY AFTER HIGHWAY 50 PROJECT

Following completion of the Highway 50 project, Caltrans plans to relinquish ownership of portions of the ROW not utilized for the highway improvements to the City of Placerville. Once under the ownership of the City of Placerville, these portions of the ROW could be developed for purposes such as a multi-use trail. A key factor in determining the feasibility of a multi-use trail along the ROW is to determine what the available ROW width will be following completion of the Highway 50 improvements. The most current design plans were obtained from Caltrans, along with the property Relinquishment Exhibit Maps (see attached). In general, it appears that sufficient right-of-way would be available after development of the Highway 50 improvements for a trail for most of the corridor from Clay Street on the east to Canal Street. However, several constrained “pinch points” exist along the corridor. This section is broken down into trail segments between the major crossings. (Issues related to roadway crossings are discussed in the following section.)

Clay Street to Bedford Street

From Clay Street to the Parks and Recreation bridge over Hangtown Creek, the right-of-way will be approximately 33 feet wide following completion of the Highway 50 project. As noted earlier, this area appears to be heavily used as an informal parking area by employees of downtown area businesses, with both 90-degree and parallel parking rows on either side of a travel aisle. It is not clear what long term plans are for permitting parking within the right-of-way. The November 26, 2002 memorandum from the Placerville City Attorney/City Manager to the Council notes that in 1996 the Placerville City Council accepted the recommendation of the Downtown Revitalization Committee that parking along the railroad right-of-way be eventually eliminated to construct the Highway 50 improvements and the Downtown Revitalization improvements. If parking were eliminated, there would be more than enough space within this segment of the right-of-way to develop landscaping and a multi-use trail. If this parking were lost, it is not clear where it would be displaced, but it is outside the scope of this study to assess parking displacement. To the extent that a developed recreational trail leading from residential areas of Placerville into Downtown would encourage employees and others to walk or bicycle, some of that existing parking demand would be reduced.

If retaining parking were to be necessary in this location, the 33 feet of right-of-way would still provide sufficient room for a multi-use trail and some parking configuration. At a minimum, parallel parking along one side of the corridor (preferably the north side) could be accommodated with a one-way travel aisle. Depending on the width of the parking stalls and aisle (9 to 10 foot stall width, 10 to 12 foot aisle), approximately 10 to 12 feet would be available for a multi-use trail. While angled parking (e.g. 45 degrees) would provide more parking capacity in this area, in addition to eliminating the need to perform a difficult parallel parking maneuver, it would also require more stall width than a parallel configuration. Given the relatively large size of vehicles observed parking in the right of way (several large trucks and campers), a fairly large parking stall size would be required, (18 feet of stall width plus a 10 foot aisle for a total of 28 feet), leaving less than the required 8 foot width needed for a Class I multi-use trail. The City of Placerville could explore reducing the parking stall and/or aisle dimensions in order to provide at least 8 feet within the right-of-way for a multi-use trail. Further design of this area would be needed, once it is determined whether long-term parking is a desirable use of this area.

West of the Parks and Recreation bridge, there would be very little room for parking once the Highway 50 project has been completed. Just west of the bridge the right-of-way narrows to 23 feet, then hits a pinch point of 12 feet approaching Bedford. Provided that parking was eliminated, these widths would provide sufficient room to meet (or exceed) the 8-foot Class I bikeway width and provide corridor landscaping.

Approaching Bedford, the Highway 50 project calls for the reconstruction of the Bedford Street pedestrian overcrossing. The overcrossing landing will be relocated to accommodate the widened Highway 50, and also to meet ADA standards. Based on the most current design plans for the redesigned overcrossing, it appears that the trail would need to be routed between the new pedestrian/bike bridge landing and the Highway 50 guardrail. Approximately 12 feet of distance would be available through this area, which is sufficient to meet Class I standards. It should be noted that this area is shown in the Caltrans Relinquishment Map as remaining under Caltrans ownership, and an encroachment permit would be necessary in order to construct a trail on this piece of property.

Bedford Street to Center Street

West of Bedford Street, the width of the right-of-way after Highway 50 improvements will have several narrow segments, but would meet Class I minimum standards in all cases. The area immediately west of the Bedford Street crossing (extending approximately 50 feet west of the crossing) is shown in the Caltrans Relinquishment Map as remaining under Caltrans ownership. In order to develop a trail through this area, an encroachment permit would need to be obtained from Caltrans. (As part of the encroachment for the trail, any fencing or guardrail erected by Caltrans to define their property area would need to be shifted or removed.) The right-of-way narrows to a pinch point of 11 feet through this area, which meets Class I standard but would provide limited room for landscaping or unpaved shoulders along the trail.

Continuing west of the Caltrans-controlled portion, the right-of-way will widen out to 23 feet after Highway 50 improvements, which would provide sufficient room for a Class I trail and landscaping. (It is assumed that given the narrow width of this segment, that the existing parallel parking permitted along this segment will not be permitted following the Highway 50 project.) Approximately halfway to Center Street, the right-of-way width narrows to 10.5 feet, then narrows

more to 8.5 feet just east of the Center Street intersection. These widths would meet Class I minimums, but would provide limited room for landscaping or unpaved shoulders. The solid concrete (jersey) barrier proposed by Caltrans as part of the Highway 50 project would provide the necessary vertical barrier between the trail and the Highway 50 shoulder. This barrier will be receiving aesthetic treatment and ornamental fencing, which would provide a more pleasant visual character than a standard concrete barrier.

Center Street to Spring Street

West of Center Street, the right-of-way will be 10.5 feet after Highway 50 improvements, widening out to 17 feet a short distance later. As with the segment west of Bedford, this 50-foot area is also shown on the Relinquishment Map as remaining under Caltrans ownership following the Highway 50 project. In order to develop a trail through this area, an encroachment permit would need to be obtained from Caltrans. (As part of the encroachment for the trail, any fencing or guardrail erected by Caltrans to define their property area would need to be shifted or removed.)

Past this area, the right-of-way widens to 17 feet, and then widens further to 24 feet approaching Spring Street after Highway 50 improvements. These widths would be sufficient to provide a Class I multi-use trail as well as corridor landscaping. The solid concrete (jersey) barrier proposed by Caltrans as part of the Highway 50 project would provide the necessary vertical barrier between the trail and the Highway 50 shoulder.

Spring Street to Canal Street

West of Spring Street, the right-of-way narrows to a pinch point of 11 feet, then widens out to 55 feet as the creek channel swings to the south after Highway 50 improvements. Within the constrained 11 foot area, a Class I trail could be provided with minimal landscaping. Within the wider area, a Class I trail could be provided with a large landscaped buffer separating the trail from the highway. The Relinquishment Map shows a narrow strip of land immediately west of Spring Street as remaining under Caltrans ownership following the Highway 50 project; therefore an encroachment permit would be required to route the trail through this strip of property.

Canal Street to Forni Road

West of Canal Street, the railroad right-of-way is 22 feet in width, narrowing to pinch point of approximately 10 feet after Highway 50 improvements. Following the Highway 50 project, the railroad alignment will intersect with the re-aligned Main Street/Placerville Drive connection at a point approximately 420 feet west of Canal Street. The railroad alignment continues on the south side of the re-aligned Main/Placerville extension.

TRAIL CROSSINGS

Grade-Separation

For the crossings of Bedford, Spring, and Canal, in terms of user safety and minimal impact on the operations of the Highway 50 intersections, the most preferable trail crossing type would be full grade separation. In the case of all three intersections, such a grade separation could take advantage of the rebuilt bridge crossings of Hangtown Creek that are proposed as part of the Highway 50 project to create a new trail undercrossing beneath the bridges. Vertical clearance is limited in all cases, but it appears that such undercrossings could be engineered adjacent to the creek channel.

The City of Boulder, Colorado has constructed a number of undercrossings on their trail network that are similar to the potential crossings along Highway 50, including some adjacent to creeks. In some cases, retaining walls are used to separate the creek channel and trail, and keep drainage off the trail. In other locations, the entire trail may experience seasonal flooding in winter, but in dry months are used for the trail.



Undercrossings would have high construction costs and potentially significant environmental and engineering impacts related to developing the undercrossing within a creek channel. In addition, the potential for the trail undercrossing to be closed during high water would reduce their functionality during the winter and spring months.



Boulder, Colorado trail undercrossings adjacent to creek. Source Annie Noble, City of Boulder

At-Grade Crossings

Perhaps the most significant issue that has arisen with respect to developing a trail along Highway 50 using the former railroad ROW is that of the at-grade crossings along the corridor. These crossings would include Bedford Avenue, Center Street, Spring Street, and Canal Street. Although at-grade crossings could be installed for far less cost than grade separation, there are significant issues related to pedestrian crossing safety and the affect of pedestrian crossings on vehicle storage capacity and corridor traffic signal timing at the major crossings along the Highway 50 corridor.

Clay Street

A mid-block crossing of Clay Street would be required to make the connection from the future improved El Dorado Trail, to the Downtown Placerville trail segment. Given the narrow width of this roadway and relatively low traffic volumes, no significant impacts associated with the mid-block trail crossing would be anticipated. Warning signage and a high-visibility crosswalk would be recommended. Stop signs would be required on the trail approaches to the crossing.

Bedford Avenue

The first major trail crossing would come at Bedford Avenue. Bedford Avenue is a four-way signalized intersection.

Two major concerns arise at Bedford. The first is the volume and speed of vehicles turning right off of eastbound Highway 50. The second is the queuing location of vehicles on the northbound leg of Bedford, where vehicle stacking blocks the trail alignment when waiting for the signal.

Two at-grade trail crossing options are possible: 1) to route the trail crossing directly across the intersection of Bedford and Highway 50; or 2) to route the trail to the nearby intersection, in this case Bedford and Main Street.

If the trail were routed directly across the intersection of Bedford/Hwy 50, a new crosswalk would need to be installed in this location. A crosswalk would reduce the capacity at this leg of the intersection by approximately one vehicle per lane.

Under a normal signal phasing, trail users would cross Bedford on the green phase of Highway 50 eastbound. This phase would also permit right turns from Highway 50 onto Bedford. Due to the high speeds of vehicles leaving the access-controlled highway, and the fact that motorists may not be anticipating a pedestrian crossing in this location, concerns have been raised about this pedestrian crossing movement. One possible solution would be to have a separate pedestrian-only signal phase for trail users, which could be demand actuated via a push button at the trail. However, it is not clear how such a pedestrian only phase would affect the overall signal phasing of the corridor, particularly given that a component of the Highway 50 project is to replace the signals through the corridor and better coordinate the signal phasing. There could be significant issues related to the implementation of a pedestrian-only phase, due to its affect on the overall traffic signal coordination of the Highway 50 corridor through downtown.

Routing the trail crossing to the intersection of Main Street and Bedford would eliminate the potential issues related to the Bedford/Hwy 50 crossing. The intersection of Bedford/Main already has a crosswalk across Bedford. The biggest challenge to this option would be the need to provide for the trail alignment along both sides of Bedford between Main and the right-of-way. Without upgrading the sidewalks to Class I path standards, there could be significant potential for user conflicts between bikes and pedestrians. A 4-foot sidewalk already exists along the east side of Bedford, but no sidewalk is present along the west side of Bedford. Due to adjacent property, widening/constructing full 8-foot wide Class I segments along Bedford may not be possible, particularly the west side.

Another issue with routing the crossing to Main Street is the lack of directness, and the fact that trail users may object to walking down and back a block to cross at Main. If the Bedford Trail crossing were routed to Main Street, some barrier would need to be installed along each side of Bedford, or in the median, to prevent trail users from attempting to cross at the unmarked Highway 50 intersection.

Center Street

The Center Street crossing will continue to be stop-controlled only on the Center Street approach to Highway 50, meaning that vehicles on eastbound Highway 50 will continue to have an uncontrolled free right turn onto Center Street. As with the Bedford Crossing, motorists exiting Highway 50 will be traveling at relatively high speeds and may not be anticipating pedestrians, particularly given the lack of traffic controls at this location. Because there is no signal, installing a pedestrian-only signal phase would not be an option.

At Center Street, the proximity of the Stagecoach Alley creates a good potential option for an alternate crossing location. The Stagecoach Alley is only approximately 50 feet from the Highway 50 intersection. This crossing location would eliminate the high-speed right turn crossing location,

and place the crossing in a location where speeds are lower and visibility is more direct. Vehicles turning off Highway 50 onto Center Street are required to make a left onto Stagecoach Alley, and once they have turned onto Center Street their speeds will be much lower. A new crosswalk would need to be installed across the northern leg of the Center Street/Stagecoach Alley intersection.

One potential issue with the Stagecoach Alley crossing location would be that the trail would be routed on a standard width sidewalk between the trail and the crossing. Widening the sidewalks on both sides of Center Street to 8 feet would be desirable, but may not be possible due to adjacent property. If the trail crossing were routed to Stagecoach Alley, some barrier would need to be installed along each side of Center, or in the median, to prevent trail users from attempting to cross at the unmarked Highway 50 intersection.

Spring Street

The Spring Street crossing presents a set of circumstances similar to Bedford. Spring Street is a signalized intersection with Highway 50. Routing the trail crossing directly across the intersection would require installing a new crosswalk at this location, which is already planned by Caltrans as part of the Highway 50 project. Since Caltrans is proposing a crosswalk in this location, it is assumed that a pedestrian walk phase will be included in the traffic signal timing.

In the short-term, routing the trail crossing to the nearby intersection of Spring and Main is an option. There is an existing crosswalk across Spring at this location. However, this crosswalk is proposed to be removed by Caltrans as part of the Highway 50 improvements, due to the dual uncontrolled right turns from westbound Main onto Spring. As with the other re-routed trail crossings, the sidewalks leading from the trail alignment to the crossing would need to be widened in order to meet Class I path standards. And finally, as with the other re-routed crossings, if the trail crossing were routed to Main Street, some barrier would need to be installed along each side of Spring, or in the median, to prevent trail users from attempting to cross at the unmarked Highway 50 intersection.

Canal Street

The Canal Street crossing presents a set of circumstances similar to Bedford and Spring. Canal Street is a signalized intersection with Highway 50. Routing the trail crossing directly across the intersection would require installing a new crosswalk, which would eliminate some of the vehicle storage capacity in each lane of that leg. Due to the high speeds of eastbound vehicles making right turns from Hwy 50 onto Spring, and the fact that motorists may not be anticipating a pedestrian crossing in this location, concerns have been raised about this pedestrian crossing movement. As with Bedford and Spring, a pedestrian-only signal phase would be an option, but its impacts on the overall corridor signal timing are not known. As with Bedford, there could be significant issues related to the implementation of a pedestrian-only phase, due to its affect on the overall traffic signal coordination of the Highway 50 corridor through downtown.

Routing the trail crossing to the nearby intersection of Canal and Main is an option. There is an existing crosswalk across Canal at this location. Unlike Spring Street, this intersection does not have the uncontrolled free right turns from Main onto Canal. Given that this alternate crossing location is only 40 feet from the Highway 50 intersection, it would not require trail users to go far out of their way. As with the other re-routed trail crossings, the sidewalks leading from the trail alignment to the crossing would need to be widened in order to meet Class I path standards. And finally, as

with the other re-routed crossings, if the trail crossing were routed to Main Street, some barrier would need to be installed along each side of Canal, or in the median, to prevent trail users from attempting to cross at the unmarked Highway 50 intersection.

Placerville Drive/Main Street Extension

As noted earlier, the Highway 50 Operational Improvements project would include extending Placerville Drive to connect to lower Main Street. This portion of the project would include constructing a new bridge over Hangtown Creek, and a new Highway 50 bridge over the extension of Placerville Drive. The Placerville Drive/Main Street connection will include a Class II bike lane on each side, as well as a sidewalk/curb/gutter along the southern side of the roadway.

The trail right-of-way would intersect with the Placerville Drive/Main Street connection at a point approximately 400 feet west of Canal Street. The trail would need to cross Placerville Drive extension in order to continue west along the railroad right-of-way. A mid-block crossing location may be appropriate here, but future traffic volumes and sight lines would need to be carefully studied.

It has been suggested that as part of the development of the Placerville Drive/Main Street connection, the City consider installing a box culvert in this location that could eventually accommodate a trail undercrossing. By providing for a grade-separated connection, the trail alignment would avoid the need to install a mid-block crossing at this location should the trail be developed in the future.

MAIN STREET ALIGNMENT

This section discusses the use of Main Street as an on-street alignment of the Downtown Placerville Trail. In order to serve as a fully functional multi-use connector, both pedestrians and bicyclists would need to be accommodated through the Main Street corridor. Accommodating pedestrians would be relatively straightforward, as pedestrians could utilize the existing sidewalks along Main Street. Allowing bicycle use on the sidewalks through downtown Placerville would not be appropriate, and some on-street bikeway accommodation would need to be provided. Providing on-street enhancements is especially important due to the recreational aspect of the El Dorado/Downtown Placerville trail; trail users who are traveling on the off-street trail and reach the terminus at Clay Street will be directed onto the roadway network. Some of these recreational riders may not be experienced in on-street cycling, or may be riding with young children, and it is important that this designated facility makes them feel comfortable riding on-street.

Although traffic volumes are heavy on Main Street, speeds are relatively slow given the downtown streetscape, numerous parking maneuvers, and pedestrian crossings. The slower vehicle speeds make this corridor suitable for bicycle travel, although cyclists will need to be aware of potential conflicts with side street turning movements, vehicles parking, and the pedestrian activity. For most of the project corridor, Main Street is a two-lane downtown street with parallel parking on both sides. Although a designated Class II Bike Lane would be the preferred treatment, the cross section of Main Street will not permit installing formal Class II bike lanes. Through downtown the cross section of Main Street is approximately 40 feet: 12 foot travel lanes plus 8 foot parallel parking lanes.

Although Class II bike lanes are not feasible, use of the new Shared Lane Marking would be an appropriate treatment for this corridor. As discussed above under Trail and Bikeway Design, Shared Lane Markings are an additional treatment for Class III facilities that have recently been introduced in California and nationally. The “Chevron Bicycle Symbol” is the recommended stencil design, and this symbol is intended to serve a number of purposes, such as making motorists aware of bicycles potentially in their lane, showing bicyclists the direction of travel, and, with proper placement, reminding bicyclists to bike further from parked cars to prevent “dooring” collisions. If Main Street were designated as the Downtown Placerville Trail alignment, installation of the Shared Lane Marking symbol would be recommended along the corridor.

As noted above, pedestrians could be accommodated on the Main Street corridor simply by using the existing sidewalk network. Although it does not have same characteristics as a full off-street trail, one positive aspect of the Main Street alignment is that it would allow trail users to experience the unique historic downtown character of Placerville. This alignment would also give trail users an opportunity to shop or dine at the local businesses along Main Street.

If Main Street were designated as the Downtown Placerville trail alignment, wayfinding signage would need to be installed along the route. This signage would be critical to install at the junction of the off- and on-street trails at Clay Street and the railroad right-of-way, and at the ultimate off-street trail continuation point at the west end of downtown. Trail users coming off the multi-use path would need to have clear direction as to how to continue on the trail through downtown, with directional signage at all turns such as Clay/Main Street. Along Main Street, periodic wayfinding signage should be installed to let trail users know that they are still continuing on the trail route. In addition to providing directions, the wayfinding signage also serves to alert motorists of the presence of bicyclists and pedestrians on the road and at crossing locations. Also, having Placerville Trail signage located in the busy downtown area may help to attract users to the trail who may not otherwise have seen the off-street trail segment.



OTHER POTENTIAL ALIGNMENTS

UNION STREET

Union Street is a one-block residential street that extends west off Bedford, north of Highway 50, and terminates at a private residence. Union Street was thought to be a potential alternate route on the north side of Highway 50. It was suggested that it may be possible to bring the trail alignment over the Bedford pedestrian/bike bridge, continue on Union Street west to its terminus, then possibly construct a new Class I segment from the end of Union Street to Coloma Street. Several factors led this option to be eliminated from further consideration: 1) the parcel at the terminus of Union Street is a private residence; 2) the topography between Union Street and Coloma Street consists of a steep, rocky embankment above Highway 50 that would require extensive engineering to develop a Class I bikeway; and 3) routing the trail to the north side of Highway 50 does not meet the goal of providing a trail connection through downtown, and the alignment would need to be connected back to the south side of Highway 50 in order to pick up the railroad right of way on the west side of town.

PATH ON NORTH SIDE OF ROUTE 50

An existing multi-use path segment extends along the north side of Highway 50, extending from Coloma Street to Canal Street. This path is located immediately adjacent to the highway right-of-way, and separated from the highway by a chain link fence. Based on a field review and local input, this path segment does not appear to be heavily used.

This trail segment was examined as a possible alternate alignment for the Downtown Placerville trail. One possibility would be to utilize the existing bicycle/pedestrian bridge at Center Street, connect to the existing path at Coloma, take the path along the north side of Highway 50 to Canal Street, then connect back to the railroad right-of-way at the existing at-grade pedestrian crossing of Highway 50 at Canal Street. However, as with the Union Street option noted above, routing the Downtown Trail alignment to the north side of Highway 50 was viewed as undesirable and not meeting the goal of a Downtown Trail. It would be expected that many trail users would not want to cross at the Center Street bicycle/pedestrian overcrossing, only to have to cross back over Highway 50 two blocks later at Canal Street.

HILLSIDE LEDGE SOUTH OF MAIN STREET

Another possible alternate trail alignment that has been suggested is the use of a narrow ledge that extends along the hillside to the south of Main Street between Clay and Center. According to a 1998 article in the Mountain Democrat, this trail alignment would extend up the hill to a ledge behind Tortilla Flats, and continue on the ledge all the way through downtown. The alignment would cross Highway 49, then pass behind the historical Fausel House.

A field investigation of the ledge indicated that portion of the hillside with a ledge wide enough to accommodate a trail is relatively limited. Although a wide ledge is present immediately behind the Tortilla Flat restaurant, moving to the west this ledge narrows and becomes a network of foot trails immediately upslope of Reservoir Street. Upslope of the ledge is a steep hillside leading to private property that is accessed via Pacific Street. Portions of the ledge appear to currently be used as campsites by homeless persons. The entire hillside eventually ends at a parking lot at Reservoir and Quartz Alley.

While the ledge could potentially function as a narrow foot trail, providing an 8 foot Class I multi-use trail along the ledge would require substantial engineering into the hillside. The first challenge would be getting up to the ledge, which would require cutting a patch into the hillside above the Mooney parking lot. The ledge and foot path network along the hillside would then need to be widened to meet 8 foot Class I standards, and a safety rail and other features would need to be installed. The trail would then descend the hillside into the parking lot at Quartz Alley/Reservoir Street, where it would continue on-street.

The conclusion of the field investigation was that given the substantial amount of engineering required to accommodate a Class I trail along this relatively short hillside segment between Clay and Center Streets, this would not be a feasible option for the Downtown Placerville trail alignment.

RESERVOIR STREET

Reservoir Street is an alleyway that provides access to the rear of buildings fronting the south side of Main Street. Vehicular access to Reservoir Street is via a parking lot on Sacramento Street or via Quartz Alley off Pacific Street. From Quartz Alley eastward, Reservoir Street is one-way in the eastbound direction. Reservoir Street parallels Main Street, then curves north and intersects with Main Street just west of Bedford Street. At the outset of this study, Reservoir Street was suggested as a possible alternate route running parallel to Main Street but with lower traffic volumes and no on-street parking issues.

Reservoir Street was field checked to evaluate its suitability as a bikeway. One key issue with Reservoir Street is its one-way eastbound configuration. Cyclists traveling in the westbound direction would be traveling illegally against traffic. The only suitable improvement to this situation would be to install a counterflow bike lane in the westbound direction. However, the width of Reservoir Street is only 9 feet, which would not be sufficient to install a counterflow bike lane (4 feet minimum) and still have adequate eastbound travel lane width. Another issue is sight distance, as a sharp corner near its eastern junction with Main Street creates visibility problems. This segment also extends up a short, steep hill from Main Street which may discourage cyclists from pursuing this route. Given the issues with providing two-way bicycle facilities, it is recommended that Reservoir Street not be pursued further as a trail alternative to Main Street.

PACIFIC STREET

Pacific Street is a major street that connects between Main Street and Cedar Ravine. Pacific Street extends over the hill that sits immediately south of the downtown area. Pacific Street provides access to a number of residences. Pacific Street is proposed for Class II bike lanes in the Placerville Non-Motorized Plan. Strictly based on its alignment, Pacific Street could provide an on-street alternative that is parallel to Main Street and has designated bike lanes, albeit farther away from the railroad corridor. However, Pacific Street is extremely steep; particularly in the westbound direction from Cedar Ravine. Due to the steepness, Pacific Street is not seen as a desirable alternative to a trail route through the flatter downtown corridor, and was eliminated from further consideration as part of this feasibility study.

ALIGNMENT OPTIONS AND COSTS

This section provides a discussion of the primary options to complete a continuous Downtown Placerville alignment, based on the various alternatives evaluated. Specific recommendations for the types of trail features, crossing types, signage, and other amenities are noted. Most of these options will require further engineering and environmental study prior to implementation. Figures 5 through 8 illustrate the alignment and intersection details associated with each option and sub-option. Cost estimates are provided in Table 1. Note that cost estimates are broken down by segment and sub-option so that any combination of the identified on- and off-street options could be selected, depending on future phasing opportunities.

OPTION 1: TRAIL ALONG RIGHT-OF-WAY

Under this option, the trail would be constructed along the former railroad right-of-way through downtown Placerville, from Clay Street to the re-aligned Main Street/Placerville Drive extension. This option would involve the following improvements:

- Development of an 8 foot wide paved Class I multi-use trail
- Appropriate crossing enhancements at each crossing location (as discussed in the sub-options below)

SUB-OPTION 1A: GRADE SEPARATED CROSSINGS

Under this sub-option, grade-separated crossings would be constructed across Bedford, Center, Spring, and Canal Streets. These are envisioned as undercrossings, taking advantage of the clearance provided by the rebuilt bridges over Hangtown Creek at each of these locations. Further detailed engineering studies would be required in order to evaluate the costs and specific engineering and environmental issues associated with constructing these undercrossings. Due to the limited overhead clearance, it is likely that the trail would need to extend down into the creek channel, and therefore the trail would be subject to seasonal flooding. **While the grade-separated sub-option would provide the maximum user crossing safety, due to the high cost of installing the undercrossings and the potentially significant environmental and engineering impacts of constructing a trail within the creek channel, this sub-option is not viewed as feasible.**

SUB-OPTION 1B: AT-GRADE CROSSINGS

Under this sub-option, trail users would cross the intersections at-grade. Crossing improvements would need to be made to provide for safe bicycle and pedestrian crossings at these locations. These would include new crosswalks, limit lines to ensure that queued vehicles do not block the crosswalk, and timing of the traffic signals to provide for a pedestrian crossing. Note that for the intersection of Center Street, it is recommended that the crossing take place at Stagecoach Alley, and not directly across the railroad right of way, due to the lack of a traffic signal at Highway 50. **Although the pedestrian safety issues could be addressed with properly designed crossing features, due to the significant issue of the loss of vehicle storage capacity at the side streets and disruption of the Highway 50 corridor traffic signal timing, the at-grade sub-option is not viewed as feasible.**

SUB-OPTION 1C: CROSSINGS ROUTED TO ALTERNATE LOCATIONS

Under this option, trail users would be routed to existing Main Street crossings to avoid crossing at Highway 50. At Center Street, this crossing would take place at the Stagecoach Alley. Appropriate signage and fencing would need to be installed at each crossing location in order to direct trail users toward the alternate crossing location, and to prevent users from crossing directly along the railroad right-of-way. In order to fully accommodate for all trail users, the sidewalks leading from the trail right-of-way to the alternative crossing would need to be widened (or new sidewalk segments installed in some locations). While this sub-option would avoid the issues related to vehicle storage and corridor signal timing at the Highway 50 intersections, routing two-way trail user traffic down the narrow sidewalks to Main Street could cause conflicts between bicycles and pedestrians.

Widening these sidewalk segments out to multi-use standards (and providing an appropriate barrier from the adjacent travel lane), or providing a new path in locations where no sidewalk currently exists, would be costly and would involve private property encroachment in some locations. **Because it would require substantial capital investment to improve the sidewalk connections to Main Street, and because the alignment would require trail users to go out of their way, this sub-option is not viewed as feasible.**

OPTION 2: ON-STREET ALIGNMENT

Under this option, the Placerville Downtown Trail alignment would utilize an on-street alignment for its entire length. This option would involve the following improvements:

- On-Street trail alignment through Downtown using Main Street.
- Install directional signage from existing El Dorado Trail terminus at Clay
- Install Shared Use Pavement markings on Main Street
- El Dorado Trail marking signage through Downtown Placerville

Absent any significant improvements along the railroad ROW, a Main Street alignment is viewed as the most appropriate trail connector. This alignment would provide a bicycle/pedestrian connection between the terminus of the El Dorado Trail at Clay Street, and the railroad right-of-way continuing west from Forni Road (and Placerville Drive extension), connecting to the proposed trail SPTC trail segment beginning at Ray Lawyer Drive. This alignment would not involve any substantial infrastructure changes or improvements, but would require signage and stenciling to indicate the use of the Main Street corridor as a Downtown Placerville Trail alignment.

Particularly once the El Dorado Trail is in place to Clay, it will be important to have a designated and signed route. If a formal trail ends at Clay Street, the natural inclination for trail users will be to continue along the unpaved right-of-way toward Bedford. If formal crossing improvements are not made at the crossings of Bedford, Center, Spring, and Canal, use of this corridor – formalized or not -- could pose safety hazards to users. As such, once the El Dorado Trail reaches Clay Street, it will be important to provide a designated, signed route through downtown that avoids these Highway 50 intersections. **Given that the On-Street option would not involve any substantial infrastructure changes or improvements, and would involve just signage and stenciling to indicate the use of the Main Street corridor as a Downtown Placerville Trail alignment, this option is viewed as feasible.**

OPTION 3: COMBINED ON-STREET AND OFF-STREET ALIGNMENT

This option was initially included to evaluate whether a combination of on- and off-street segments for the corridor would be feasible or would eliminate any of the issues related to the full off-street alignment. A combined on/off-street option could involve numerous sub-options – in theory, the trail could use any combination of off- and on-street segments in order to connect through downtown from Clay Street to the Main Street/Placerville Drive extension. However, it is assumed

that many of these combinations would not be desirable – for instance, one would not recommend an option to go from Clay to Bedford off-street, then from Bedford to Center on-street, then shift back off-street from Center to Spring, and so forth, zig-zagging on- and off-street along the corridor. Furthermore, the shift between the off and on-street alignment would still present the difficulties with routing trail users along narrow or non-existent sidewalk segments between the ROW and Main Street. **After evaluating these factors, it was determined that a Combined option for through-travel on the trail did not offer any significant advantages over the full on-street options, and would likely result in more potential for conflicts and more confusion for trail users. Therefore the Combined option was determined to be infeasible.**

However, it was concluded that providing a trail connection from Clay Street to the reconstructed Bedford Street pedestrian/bicycle overcrossing could provide a substantial benefit. Sub-option 3A discusses the options of providing this off-street connector link between Clay Street and the Bedford overcrossing.

SUB-OPTION 3A: OFF-STREET CONNECTOR TO BEDFORD OVERCROSSING

This option assumes that this segment of trail would be a connector to the overcrossing, and not intended as a segment of the downtown trail for through travel. Signage to this effect would need to be installed at the terminus of the Class I segment at Clay Street – one sign would direct through trail users south on Clay to Main Street to continue on-street through downtown. Another sign would point to continue on the ROW to the Bedford bicycle/pedestrian bridge. Between Clay and the Bedford bridge landing it appears that it would be possible to construct a multi-use trail adjacent to the creek, and leave sufficient width to the north to provide a one-way through travel lane and parallel parking spaces. If this option were pursued without any further improvements to the Bedford crossing, fencing would need to be erected at Bedford Street to prevent trail users from attempting to cross at Bedford Street and continue along the former railroad ROW. This fencing would be designed to channel users toward the sidewalk continuing toward Main Street. Fencing or other barrier should also be constructed on the west side of Bedford Avenue to block entry into the ROW and discourage its use as a trail. (It should be noted that this fencing on the west side of Bedford blocking the through-movement of pedestrians into the ROW is proposed by Caltrans as part of the Highway 50 project.)

In order to further discourage use of the off-street segment between Clay and Bedford by through-trail users, some consideration to the design of the area should be made to make this area a transition between the Class I trail east of Clay, and the sidewalk area along Bedford. This could involve the construction of a narrower trail (not full Class I standards), meandering the trail among landscaping, use of textured pavement material, or other design features that would serve to slow down and discourage cyclists on this segment. This segment would be intended to be simply a short connector to the bike/ped bridge, and not for high-speed through cyclist use as an alternate to Main Street. The main concern about allowing through cyclists to continue all the way to Bedford on this segment is that they would need to then use the sidewalk on the east side of Bedford to connect to Main Street, which is not desirable. As a further deterrent signage could be placed at the Bedford sidewalks stating “no bicycles on sidewalk.”

This sub-option option would only require a crossing of Clay Street, and would provide a logical connection to the reconstructed Bedford Street ped/bike bridge. The required infrastructure

improvements would be limited to crossing enhancements at Clay Street, some reconfiguration of parking within the ROW to accommodate the trail, and a barrier at Bedford Street. **This option would not cross any of the roadways that intersect Highway 50 and would not have the associated vehicle storage or traffic signal impacts. Given this, this option is viewed as feasible.**

SUB-OPTION 3B: OFF-STREET TO PARKS AND RECREATION LOT

Use of the Parks and Recreation lot has been suggested as a possible route from the right-of-way to connect to Main Street. Signage directing through-users of the trail across off the ROW, across the bridge and through the Parks and Recreation parking lot would be necessary. Some additional pedestrian enhancements, such as crosswalk-striping through the parking lot, may also be necessary. **This option is also viewed as feasible, although further study of potential conflicts of routing a trail through the parking lot should be studied.**

RECOMMENDED OPTION

Due to its low costs, minimal impacts, and ease of implementation, the overall Preferred Option for the Downtown Placerville Trail is the On-Street Main Street alignment. This alignment would provide trail users with a signed and stenciled route through the historic downtown area. The city could consider developing customized directional signage, perhaps with interpretive signage, to guide trail users from the trail ROW at Clay Street to the trail continuation westbound at Placerville Drive west of Forni.

It is highly recommended that Sub-Option 3A, installing the off-street trail from Clay to Bedford, be considered in order to provide this important connection to the reconstructed bicycle/pedestrian bridge. At this time the trail route connection through the Parks and Recreation lot to Main Street will require further study before it can be recommended. It does not appear at this time that the Parks and Recreation route offers substantial advantages over simply routing to Main Street via Clay, and use of the parking lot may result in an increased potential for conflicts.

OPTIONS NOT RECOMMENDED

As discussed above, none of the Off-Street alignment options are viewed as feasible, due to issues such as high costs, potential environmental and engineering impacts, potential safety conflicts, and impacts to the traffic signal operations along the Highway 50 corridor. Of the three Off-Street sub-options studied (Grade-Separated, At-Grade, and Route to Main Street), the Route to Main Street would be seen as the option with the fewest cost, environmental/engineering, and operational impacts. However, this option would require improvement to the sidewalk connections to Main Street in order to be able to accommodate multiple trail users without conflicts. Compared with the On-Street and Combined Options, none of the Off-Street trail options can be recommended at this time. In the future, once the Highway 50 Operations Project has been constructed, it may be appropriate to revisit the Off-Street trail alignment along the railroad right-of-way.

ADDITIONAL OPTIONS FOR CONSIDERATION

Based on this feasibility study, it is recommended that the City of Placerville implement the On-Street Main Street alignment option for the downtown segment of the trail, from Clay Street to the El Dorado Trail continuation off Forni Road/future Placerville Drive. This would involve, at a minimum, wayfinding signage directing trail users off the right-of-way and onto Main Street. In addition to the directional signage the City should consider installing Shared Lane Pavement markings as an enhancement for bicyclists. The City may also want to consider interpretive signage to tie the trail route to the historic character of downtown.

As part of the On-Street Alignment implementation, the city should further study the possibility of providing an off-street connection between Clay Street and the reconstructed Bedford pedestrian/bike bridge. This off-street connection would not be installed until after the Highway 50 widening has been completed. With minor reconfiguration and landscaping enhancements, the segment could serve as a park-like trail connection along Hangtown Creek.

The City may also wish to consider installing a pre-cast concrete box culvert at the ROW crossing location of Placerville Drive/Main Street Extension, approximately 10 feet in width and 10 feet high, to provide for a future trail undercrossing of the Placerville Drive Main Street connection. Installing a pre-cast box culvert at the time the roadway extension construction is being built will prove far less costly than trying to retro-fit an undercrossing at this location in the future, and would provide for a grade-separated crossing in the future.

As noted above, the City may choose to revisit the possibility of providing an off-street trail in the future, once the Highway 50 project has been completed, and depending on the availability of funding and other factors.