

Summary Report Camino Area Parallel Capacity/Safety Study

Prepared for



Prepared by



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TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	Purpose of the Report.....	1
1.2	Responsible Agency.....	1
1.3	Agency Coordination.....	1
1.4	Project Limits.....	1
1.5	Corridor Description.....	2
2	BACKGROUND.....	2
2.1	Project History.....	2
2.2	Caltrans Freeway Conversion Project.....	3
2.3	Caltrans RRR Project.....	3
2.4	Regional & System Planning.....	3
3	TRANSPORTATION ISSUES.....	5
3.1	Existing Conditions.....	5
3.2	Traffic Analysis.....	7
3.3	Accident History.....	8
3.4	Need for the Project.....	9
4	SAFETY IMPROVEMENT ALTERNATIVES.....	9
4.5	Solutions Precluded from Further Analysis.....	16
5	ENVIRONMENTAL ISSUES/CONSIDERATIONS	17
6	COMMUNITY INTERACTION.....	18
7	NEXT STEPS.....	19

LIST OF APPENDICES

- A. VICINITY MAP/PROJECT OVERVIEW MAP**
 - Project Limits
- B. EL DORADO COUNTY GENERAL PLAN CIRCULATION MAP**
- C. ACCIDENT ANALYSIS**
 - Collision Diagram
 - Collision Analysis Spreadsheet
- D. 2003 CALTRANS PROJECT REPORT ALTERNATIVES**
 - Modified C
 - Modified E
- E. 2003 CALTRANS PROJECT REPORT TRAFFIC DATA**
 - Existing Thursday PM Peak Hour Traffic Counts
 - Existing Sunday PM Peak Hour Traffic Counts
 - No-Build Alternative 2029 Sunday PM Peak Hour Forecasts
 - Alternative C 2029 Sunday PM Peak Hour Forecasts
 - Alternative E 2029 Sunday PM Peak Hour Forecasts
- F. RAW ACCIDENT DATA**
 - Traffic Accident Surveillance and Analysis System (TASAS) Table B Summaries
 - California Highway Patrol Accident Summary Sheet
- G. SAFETY STRATEGY MATRIX**
- H. U.S. 50/STILL MEADOWS ROAD ACCELERATION LANE IMPROVEMENTS**
 - Planning Level Cost Estimates
- I. U.S. 50/STILL MEADOWS ROAD ALTERNATIVE**
 - Newtown Road Connection Alternatives Map
- J. U.S. 50/LOWER CARSON ALTERNATIVE**
 - Conceptual Undercrossing Graphics (1-3)
 - Planning Level Cost Estimates
 - Profiles
- K. U.S. 50/CAMINO HEIGHTS ALTERNATIVE**
 - Camino Heights – Newtown Alternatives Map
 - Camino Heights – Newtown Alternatives Evaluation Matrix
- L. CORRESPONDENCE**
 - Caltrans Signal letter
 - El Dorado County Transit Authority Letter
 - El Dorado Union High School District Letter
- M. TRANSPORTATION PROJECT TIMELINE**

1. Introduction

1.1 Purpose of the Summary Report

This Summary Report (hereinafter referred to as Report) has been prepared by the El Dorado County Transportation Commission (EDCTC), in collaboration with the El Dorado County Department of Transportation (DOT) and the California Department of Transportation (Caltrans), as an informational piece to identify relatively lower cost, near term alternatives addressing existing safety issues on the U.S. 50 corridor in the Camino area. The purpose of the report is not to identify preferred strategies, but rather discuss the issues related to each alternative presented. The report presents information resulting from work completed by the consultant team of David Evans & Associates, Inc. (DEA) since June 2006, but also utilizes a significant amount of information from prior studies, plans and associated documents, portions of which are included in the Appendix.

1.2 Responsible Agency

This report was prepared under the direction of the EDCTC, the Regional Transportation Planning Agency (RTPA) for El Dorado County. EDCTC represents the regional transportation planning interests, and is responsible for coordinating regional transportation for the western slope of El Dorado County and the City of Placerville. The Commission consists of three members appointed by the El Dorado County Board of Supervisors and three members appointed by the City of Placerville. The District Director of Caltrans, District 3, or their designated representative, and a representative from the City of South Lake Tahoe are non-voting members of the Commission.

As the owner/operator of the State Highway System (SHS), and according to Streets & Highways Code Section 92, Caltrans, “*May do any act necessary, convenient or proper for the construction, improvement, maintenance or use of all highways which are under its jurisdiction, possession or control.*”

This provides Caltrans with the ability to construct and/or approve any recommended improvements within the U.S. 50 right of way.

1.3 Agency Coordination

A phase of this report was initiated by the EDCTC in May 2006, but was amended soon thereafter upon successful award of a Federal Highway Administration (FHWA) Partnership Planning Grant in June 2006. The combination of the EDCTC-initiated study and planning grant brought together the EDCTC, El Dorado DOT, and Caltrans to build upon previous studies and reports, with the common purpose to identify lower cost, near term solutions to identified safety issues within the project limits. One of the early steps taken during the report process was the creation of a Technical Advisory Committee (TAC). TAC members include staff from EDCTC, El Dorado DOT, DEA, and Caltrans. As this report deals with issues on U.S. 50, and the project limits lay just outside of the Placerville city limits, members of the California Highway Patrol (CHP) and the City of Placerville also serve on the TAC.

1.4 Project Limits

This report builds upon previous analyses by Caltrans, El Dorado County and EDCTC, which involves the segment of U.S. 50 in the Camino area that has not yet been upgraded to a freeway or divided with a median barrier. The western project limits begin just east of the Smith Flat Road Interchange and extend to east of the Upper Carson Road/Camino intersection, for a distance of approximately 4.5 miles. (See Appendix A for a map of the project limits.)

1.5 Corridor Description

U.S. 50 is the “backbone” transportation facility in El Dorado County, providing east-west connections to Sacramento County and the State of Nevada. It accesses recreation areas and tourist attractions for visitors from Sacramento and the San Francisco Bay Area. U.S. 50 is also the major commute route to employment locations in the greater Sacramento area and a major shipping route for the movement of goods by truck. It is the primary transportation corridor extending through El Dorado County and serves all of the County’s major population centers, including El Dorado Hills, Cameron Park, Diamond Springs, Placerville, Camino, and South Lake Tahoe. Peak month Average Daily Traffic (ADT) ranges from 80,000 at the west end of the County at Latrobe Road to 14,700 near Echo Summit¹.

The section of U.S. 50 through the project limits is designated as an expressway between the Smith Flat and Cedar Grove interchanges. The segment lies between two freeway segments; a 2.75 mile section to the west toward the City of Placerville and a 6.40 mile section to the east. The popular Apple Hill Area lies north of U.S. 50 adjacent to the project area, and the Camino Heights and Camino Hills subdivisions lie south of U.S. 50 (See Vicinity Map, Appendix A). Other important local east/west roadways are Newtown Road south of U.S. 50 and Carson Road north of U.S. 50.

2. Background

2.1 Project History

1965	A freeway agreement was executed between the State of California and El Dorado County. An interchange at U.S. 50 and Camino Heights Drive was proposed as part of that agreement.
1985	The Camino/Fruitridge Area Plan recommended an interchange at Camino Heights Drive.
1988	Proposed amendments to the Camino/Fruitridge Area Plan included the Placerville Loop Road proposal from Newtown Road to Camino Heights.
1992	Caltrans planned to install center median barricades between the Smith Flat and Cedar Grove interchanges to reduce access to U.S. 50. The center median was proposed to be closed except at the intersections of Camino Heights Drive and Carson Road.
1993	To Improve access to U.S. 50, as well as increase safety, a Project Study Report (PSR) for a proposed interchange in the Camino Heights area was approved by Caltrans in December 1993. Four at-grade intersections (Paul Bunyan/5 Mile Road, Camino Heights Drive, Lower Carson/Sierra Blanca and Upper Carson/Camino) were proposed to be completely closed. Interchange alternatives ranged from \$8-13 million.
1998 to 2000	EDCTC initiated a project in 1998 to address safety and traffic operations on U.S. 50 by converting it from an expressway to a freeway, to include an interchange, from east of the Smith Flat interchange to west of the Cedar Grove Interchange. A PSR was approved in June 2000, which was utilized by EDCTC to program \$1.9 million for the Project Approval/Environmental Documentation (PA/ED) phase.
2000 to 2003	Caltrans utilized the programmed funds to initiate a Draft Project Report (PR) for the Camino freeway conversion project. The Draft PR concluded that an interchange and overcrossing at Camino Heights was not cost effective. Instead, the study recommended an undercrossing east of Camino Heights Drive. The estimated capital cost of the alternatives ranged from \$42.3 to \$48.3 million in 2003 dollars. Due to limited funding, the Draft PR, as well as the

¹ EDCTC 2005 Regional Transportation Plan

	prior Value Analysis Report completed in 2001, concluded that a four-phased approach to the freeway conversion was necessary. The first phase included an undercrossing compatible with the ultimate interchange proposed under Alternative Modified C (Appendix D). Estimated capital cost of Phase 1 was \$18 million.
2003	A \$17 million Resurfacing, Restoration, and Rehabilitation (RRR) project, funded through the State Highway Operation Protection Program (SHOPP), was completed by Caltrans in January 2003.
2005	As a result of high accident numbers, Caltrans contacted El Dorado County and EDCTC to express their intent to limit access at the U.S. 50/Still Meadows Road Intersection.
2006	Using a combination of State Planning Grants and local funding the EDCTC initiated the Camino Area Parallel Capacity/Safety Study to identify relatively lower cost, near term alternatives addressing existing safety issues on U.S. 50 in the Camino area.

2.2 Caltrans Freeway Conversion Project

For the past several years the EDCTC, Caltrans, El Dorado County DOT, and the Camino-area community have worked together to identify long-term improvements to U.S. 50 to improve safety and connectivity using traditional means and funding sources. The most recent project under consideration, a preliminary Draft Project Report prepared in June 2003, identified several alternatives for a freeway conversion project ranging in cost from \$40 to \$60 million dollars. These improvements included eliminating all at-grade access to U.S. 50, a new interchange near Camino Heights Drive, a continuous median barrier on U.S. 50 to improve safety by reducing the severity of collisions, and the construction of frontage or local road improvements, which would ultimately connect with the existing local road system to provide residents with an alternative to utilizing U.S. 50 as a connection to Placerville.

The project’s \$40-60 million estimate, coupled with statewide transportation funding shortages and multiple priorities, effectively stopped the Project Report’s progress prior to completion of an environmental document.

2.3 Caltrans Resurfacing, Restoration, and Rehabilitation (RRR) Project

The 2003 RRR project limits, from Paul Bunyan Road to .25 miles east of the Snows Road undercrossing, overlap the proposed freeway conversion project as described in the Caltrans Draft Project Report (June 2003). The RRR project constructed \$17 million in improvements on U.S. 50, and improved traffic operations by providing widened shoulders, installing new signing and striping, improving sight distance at intersections, lengthening left turn pockets and adding right turn pockets. The project also installed median barrier between the upper and lower intersections of Carson Road and U.S. 50.

2.4 Regional and System Planning

System

U.S. 50 is designated as a part of the National Highway System, and the segment within the project limits has been given State Scenic Highway status by State statute and local governing agency resolutions. California’s Scenic Highway Program was created by the Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from change which would diminish the aesthetic value of lands adjacent to highways. A scenic highway can create a positive image for a community, preserve and protect environmental assets and encourage tourism. Minimum requirements for scenic corridor protection include: 1) Regulation of land use and density of development; 2) Detailed land and site

planning; 3) Control of outdoor advertising (including a ban on billboards); 4) Careful attention to and control of earthmoving and landscaping; and 5) Careful attention to design and appearance of structures and equipment.

State Planning

The California Transportation Plan (CTP) 2025, prepared by Caltrans, includes the goal to, “Enhance public safety and security” on the State Highway System. The key indicators identified to achieve that goal are fatal/injury collisions and fatalities/injuries – rates and totals. The data utilized in this report is consistent with the CTP’s key indicators.

The District System Management Plan (DSMP) is the Caltrans District 3 policy document. It catalogs the existing transportation system, identifies issues and challenges, reiterates the District's transportation goals, and proposes strategies to improve the system within a 20-year planning horizon. The Caltrans' 1998 District System Management Plan (DSMP) identifies U.S. 50 as a high priority route connecting major urban areas and carrying high commuter and recreational traffic volumes. U.S. 50 is a freeway between Sacramento and Pollock Pines with exception of two gaps, which have been categorically downgraded to expressways. One gap is the portion of U.S. 50 through central Placerville and the other gap is from Smith Flat to Camino. The DSMP recommends that both gap sections of U.S. 50 be upgraded from expressway standards to full freeway standards.

Regional Planning

Caltrans’ 1998 Route 50 Transportation Concept Report (TCR) identifies the 20-year concept facility for the segment of U.S. 50 from Smith Flat to Camino as a four-lane expressway. The level-of-service (LOS) is not expected to seriously decline within the planning period (i.e. LOS E or better).

The proposed freeway conversion project is included in the approved Sacramento Area Council of Governments (SACOG) 2006 Metropolitan Transportation Plan (MTP) and the 2005-2025 Regional Transportation Plan (RTP) for El Dorado County.

Local Planning

The 2004 El Dorado County General Plan includes a proposed interchange on U.S. 50 in the vicinity of Camino Heights, as well as a four lane freeway classification on U.S. 50 within the project limits (Appendix B). It should be noted that this Summary Report does not include a full interchange alternative. However, to be compatible with previous and current planning documents, the undercrossing alternative(s) identified in this report would be compatible with a future interchange, if required.

Transit Planning

The Report does not identify additions and/or changes to existing transit facilities. EDCTA staff have expressed the desire to expand transit service to the Camino Heights/Hills area. Improved transit service helps to fulfill the EDCTC RTP goal to, “Promote effective, convenient and desirable public transit for residents of and visitors to El Dorado County.”

3. Transportation Issues

3.1 Existing Conditions

The segment of U.S. 50 from Smith Flat to Camino was constructed approximately 45 years ago through several interconnected construction projects. The average daily traffic has increased from about 10,000 vehicles per day in 1963 to about 29,000 vehicles per day in 2006². These high traffic volumes on U.S. 50 impact the connectivity within the Camino area and between Camino and Placerville. The California Highway Patrol confirms the at-grade connections cause extended wait times and back-ups for vehicles connecting onto and traveling through on U.S. 50. High volumes of interregional traffic traveling to and from South Lake Tahoe and recreational destinations in El Dorado County co-mingling with local and regional through traffic increases the accident potential in the project area. In addition, many local Camino residents wishing to travel to Placerville must use U.S. 50 because no alternate routes are available.



This at-grade condition is best exemplified at Still Meadows Road, the access point to the Apple Café. Recently, Caltrans attempted to limit access to right in/right out only at Still Meadows Road because 14 vehicle collisions occurred, including one fatality, between July 1, 2000 and June 30, 2003. Many of these collisions were a result of vehicles exiting Still Meadows Road and turning left across eastbound lanes on U.S. 50 to travel westbound into Placerville on U.S. 50. This dangerous situation, where slow-moving local traffic must cross U.S. 50 and merge with rapidly approaching U.S. 50 traffic, is similar for many of the at-grade intersections in the project area.

Data for this report was obtained from the Traffic Accident Surveillance and Analysis System (TASAS) for accidents occurring within the project limits between July 2000 and October 2006 to identify the numbers of accidents at specific locations along the corridor, as well as the accident type, primary factor, date, time of day, and other associated factors. A graphic of the accidents along the corridor, together with a spreadsheet summarizing the TASAS data, is included as Appendix C. It shows various vehicle-related issues along the corridor, and also identifies four locations on U.S. 50 where accident numbers are more notable - Still Meadows Road, Camino Heights Drive, Lower Carson and Upper Carson Roads.

² Caltrans Traffic & Vehicle Data Systems Unit, 2006

3.1.1 Still Meadows Road/Apple Cafe Intersection Geometry and Accident Analysis

Still Meadows Road and the Apple Café driveway share the same access location to U.S. 50. Still Meadows Road is a private road that provides access to approximately 25 residential properties south of U.S. 50. Accidents were evenly distributed on the westbound and eastbound side of the highway. “Failure to Yield” was listed as the primary collision factor for approximately 70% of the accidents, with all but one of those listed as broadside collisions. Figure 1 illustrates examples of the typical accidents at this location.

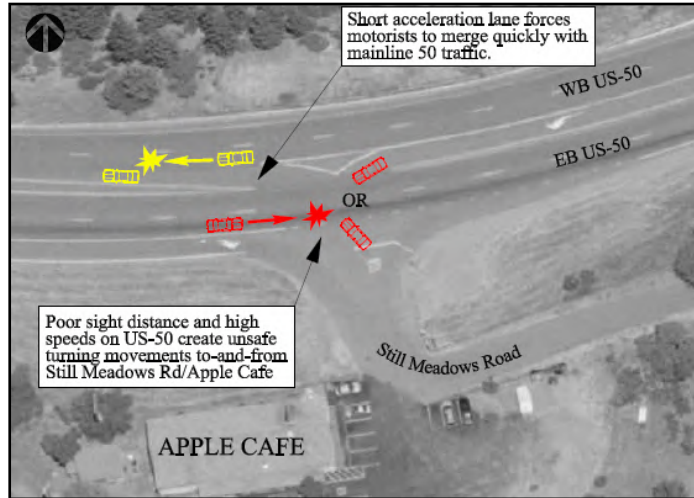


Figure 1
Typical Collision
Diagram

3.1.2 Lower Carson Road Intersection Geometry and Accident Analysis

Carson Road parallels and is connected to U.S. 50 via short hook ramps. Turn pockets exist for vehicles exiting eastbound and westbound U.S. 50 onto Lower Carson Road. Left turns from Lower Carson to eastbound U.S. 50 are not permitted. Traffic on Carson Road is controlled by stop signs in both directions to provide vehicles leaving U.S. 50 the right of way. 81% of the accidents occurred on the westbound side of the highway, with all but one listed as “Failure to Yield” or “Improper Turn.” 64% of the accidents were broadside collisions. The remainder were rear-end and head-on collisions. Figure 2 illustrates examples of the typical accidents at this location.



Figure 2
Typical Collision
Diagram

3.1.3 Camino Heights Drive

Intersection Geometry and Accident Analysis

Camino Heights Drive is a two lane public road that provides access to the Camino Heights and Camino Hills subdivisions south of U.S. 50. The subdivisions are comprised of approximately 210 residential parcels and 7 commercial parcels. Turn pockets exist for vehicles exiting eastbound and westbound U.S. 50 onto Camino Heights Drive. A long acceleration lane also exists for vehicles entering westbound U.S. 50. Camino Heights Drive has no secondary outlet. Accident numbers were relatively low for this intersection during the timeframe analyzed. However, broadside collisions occurred in the eastbound lanes as a result of left-turn movements across U.S. 50.

3.1.4 Upper Carson Road

Intersection Geometry and Accident Analysis

Carson Road parallels U.S. 50 and is connected by short hook ramps. Turn pockets exist for vehicles exiting eastbound and westbound U.S. 50 onto Upper Carson. Left-turning vehicles from Carson Road to eastbound U.S. 50 are provided a 500 foot long acceleration lane. There is a gap in the median barrier to accommodate these left turns. Accidents were evenly distributed on the westbound and eastbound side of the highway. “Speeding” was listed as the primary factor for approximately half of the collisions. Figure 3 illustrates examples of the typical accidents at this location.



Figure 3
Typical Collision
Diagram

3.2 Traffic Analysis

The June 2003 Draft Project Report included a preliminary draft traffic operational analysis for the proposed interchange alternatives- Modified C and Modified E. The Modified C Alternative proposed an interchange with an undercrossing near the location of the Lower Carson Road connection. The Modified E Alternative proposed an interchange with an undercrossing a few hundred feet further east of the location for Alternative Modified C (See Appendix D for a display of the proposed interchange locations).

The PR traffic analysis included existing (year 2000) Thursday PM peak hour (5:00) traffic counts, as well as existing (year 2001) Sunday PM (2:00) traffic counts during Apple Hill season, to account for the increase in seasonal traffic during the Fall. The analysis also included future traffic forecasts for weekday and Sunday PM peak hours for the No Build, Modified C, and Modified E Alternatives. The forecasts were identified for the years 2019 and 2029. Existing counts and traffic forecasts for these scenarios are included in Appendix E.

The traffic analysis showed, for the year 2029, that the proposed Modified C and E Alternatives would increase traffic at the intersection of Carson Road where the proposed undercrossing road would be located. Intersection and roadway traffic levels are measured using a Level-of-Service (LOS) designation. LOS is rated from “A” through “F,” with “A” the best conditions and “F” representing significant delays. With operational improvements to the proposed interchanges included, the Undercrossing Road/Carson Road intersection will operate at LOS C in 2029. The full interchange alternatives assumed access would be eliminated at the current U.S. 50/Lower Carson connection. An updated traffic analysis and travel demand forecast will be completed for alternatives identified in a future PSR.

3.3 Accident History

Caltrans utilizes the factor of ‘collision rate per million vehicle miles traveled’ (col/mvm) to compare the accident rates on similar roadway facilities statewide. The factor provides a separate number for fatal accidents, fatalities plus injuries (F+I), and the total of both. Tables 1 and 2 display the accident rates within the project limits of the 2003 Caltrans RRR project, which extended approximately 6.2 miles from Paul Bunyan Road to just east of the Snows Road Undercrossing. This data does not include accident numbers at Still Meadows Road, as improvements to that intersection were not included as part of the RRR project. Table 1 displays accident rates prior to the construction of the RRR project, and Table 2 displays the rates after the RRR project’s completion.

Table 1- July 1, 1998 through June 30, 2001

Postmile Limits	Actual Collision Rate			Statewide Average Collision Rate		
	Fatal	F+I	Total	Fatal	F+I	Total
PM 22.7 – 28.899						
<u>Location</u> Paul Bunyan to Snows Road U/C	0.027	0.51	.92	0.016	0.25	.57

Note: Rates are in collisions per million vehicle miles

Table 2- Oct. 1, 2003 – Sept. 30, 2006

Postmile Limits	Actual Collision Rate			Statewide Average Collision Rate		
	Fatal	F+I	Total	Fatal	F+I	Total
PM 22.7 – 28.899						
<u>Location</u> Paul Bunyan to Snows Road U/C	0.007	0.31	.66	0.016	0.25	.56

Note: Rates are in collisions per million vehicle miles

Table 3 identifies accident rates within the same time period as Table 2, but the limits extend from Still Meadows Road to Upper Carson Road, in order to capture the accident rate for the section of U.S. 50 with the highest accident numbers.

Table 3- Oct. 1, 2003 – Sept. 30, 2006

Postmile Limits	Actual Collision Rate			Statewide Average Collision Rate		
	Fatal	F+I	Total	Fatal	F+I	Total
PM 22.00 - 24.9						
<u>Location</u> Still Meadows to Upper Carson Road	0.000	0.37	.70	0.017	0.29	.65

Note: Rates are in collisions per million vehicle miles

Tables 1 and 2 show a reduction in both Fatal and Fatal + Injury (F+I) accidents over the six year period during which the RRR project was constructed. However, the F+I and Total collision rates remain above the statewide average. A similar pattern exists for the shorter segment in Table 3. Fatalities are reduced, but the F+I and Totals exceed the statewide average. The TASAS summaries are included as Appendix F.

It could be interpreted that the reduction shown is, in part, due to the construction of the RRR project. However, traffic safety professionals caution the practice of interpreting trends in accident patterns, as accidents can occur on a random and/or cyclical basis. For example, a total of 106 accidents occurred within the project limits between January 1998 and December 1999. Of those, 4 accidents resulted in fatalities and 40 resulted in injuries. The accident information indicated a total of 29 accidents at four at-grade intersections (Paul Bunyan/5 Mile Road, Camino Heights Drive, Lower Carson/Sierra Blanca and Upper Carson/Camino) during the three-year period. In comparison, the California Highway Patrol recently submitted a summary sheet of accidents within the project limits from January 5, 2007 to May 29, 2007 (Appendix F). Within this five-month period, 21 accidents were recorded by the CHP, with one confirmed fatality near the Camino Heights Drive intersection. Caltrans PR (June 2003) identified approximately 62% of the accidents within the project limits occur between Paul Bunyan/Five Mile Road and the Upper Carson Road connection. This percentage is consistent with accident data compiled from 2003 to the present.

3.4 Need for the Project

Travel forecasts indicate the average daily traffic on U.S. 50 will increase to about 38,000 vehicles per day by 2019 and about 45,000 vehicles per day by 2029 for the segment between Smith Flat and Camino Heights³. Growth in the area and increased seasonal traffic from Apple Hill events will increase the potential for conflicts at intersecting roads along this segment of U.S. 50.

Additionally, El Dorado County Transit Authority (EDCTA) and El Dorado High School staff have suggested that their respective services and operations could be improved by safety improvements in the Camino area. Currently, EDCTA does not provide service to the Camino Heights/Hills area because of the potentially unsafe turning movements for their buses across U.S. 50. A letter from EDCTA is included in Appendix L confirming their support for safety projects providing improved access for EDCTA vehicles. The El Dorado Union High School District owns approximately 32 acres south of U.S. 50 and currently gains access from Ponderado Road. A letter from the School District (Appendix L) states the school plans to expand its services by constructing a Natural Resources and Land Management Program and supports safety improvements in the area to provide their students with safer access across U.S. 50 to and from the site.

To address these issues on a proactive, local level, EDCTC and El Dorado DOT are pursuing safety improvements within the project limits that can be implemented within the next several years, given current funding levels and assumptions.

4. Safety Improvement Alternatives

Utilizing the accident report data, a safety strategy matrix (Appendix G) was developed, which lists the four intersections, as well as the U.S. 50 corridor within the project limits. Accident types and their primary factors are included in the matrix, as well as recommended strategies to address these factors, their relative effectiveness, implementation issues, estimated cost, environmental and right of way factors.

³ Caltrans Draft Project Report, June 2003

Detailed descriptions and discussion of the strategies for each intersection are presented in section 4.1. To help the reader review the alternatives, the matrix line items corresponding to the improvement are included within each discussion.

4.1 *Still Meadows Road/Apple Cafe*

Speed Monitoring Display (SMD)

This alternative would install a speed monitoring display on U.S. 50 east of Still Meadows Road in the westbound direction. This strategy does not address the significant number of broadside collisions at this location. Although speed does not appear to be the primary collision factor, an SMD located in the westbound U.S. 50 direction just east of the Still Meadows Road intersection may help to reduce the speeds of westbound traffic. Caltrans cautioned the use of SMD's to modify driver behavior, as prior studies show SMD's to have a low effectiveness as a behavior modification tool. SMD's, according to Caltrans, are effective tools when the roadway geometry (i.e. tight curves, etc) warrants speed reduction to prevent run-offs. In that application, the SMD may be most effective in reducing vehicle speeds prior to the tight westbound curve immediately west of the U.S. 50/Still Meadows intersection.



Portable signs, similar to the ones shown, can be as inexpensive as \$10,000 to put in place. For permanent ground-placed signs, costs typically run between \$60- \$80,000. Permanent overhead SMD's may be as high as \$130 - \$150,000 including integration. As the owner and operator of the State Highway System, Caltrans has the ultimate discretion as to the location, type of device used, and message displayed within the U.S. 50 right of way.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Speed Monitoring Display	LOW	Current accident data does not show speed to be a contributing factor to the accidents. However, SMDs may heighten driver awareness while traveling through the corridor, which ultimately could reduce the number of accidents at this location.	Conflicting movement is not addressed.	\$60,000-150,000	Coordination with Caltrans

Median Refuge Area / Westbound Acceleration Lane

This alternative, which was recommended by a community member at the first public meeting, would widen U.S. 50 to provide an additional refuge area and acceleration lane for those entering westbound 50 from Apple Café and/or Still Meadows Road. The existing acceleration lane is approximately 75 feet long for vehicles entering westbound traffic. The 2001 Value Analysis Report recommended extending the RRR project to Parkway Drive, to include lengthening the acceleration lane. The VA report noted that the area is very sensitive for cultural resources and that the environmental document for the project could take three to five years. This alternative would potentially reduce broadside collisions with

westbound U.S. 50 traffic; however, it would not address broadside collisions with eastbound U.S. 50 traffic. A schematic of this alternative and estimated construction costs is included as Appendix H.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Median Refuge/WB Acceleration	MEDIUM	This will make entering into WB traffic from Still Meadows safer.	Does not address broadside collisions with EB U.S. 50 traffic	\$3,000,000	Funding, environmental resources

Median Barrier Gap Closure

This alternative would significantly reduce broadside collisions at this location by extending the existing median barrier to just east of the Lower Carson/Sierra Blanca intersection. Existing access for Apple Café patrons and Still Meadows residents would be reduced to right in/right out only. Caltrans’ recent proposal to reduce access at this location created the need for westbound travelers to exit eastbound from Still Meadows Road and make a U-Turn at either County Road 1022 or Braeburn Road. To fully prevent broadside collisions, the median barrier should be extended eastbound to Upper Carson Road to complete the gap closure. This alternative would increase out-of-direction travel for vehicles exiting Still Meadows Road to travel westbound on U.S. 50, as well those wishing to enter Still Meadows/Apple café from points east.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Median Barrier to eliminate left turn movements	MEDIUM HIGH	Removes the conflicting turn movements at Apple Café. This will provide a reduction of 90% of all accidents at this location and eliminates cross median head-on collisions that caused one fatal accident here.	<u>SIDE EFFECT</u> - Traffic that turned left out of Still Meadows to travel WB may travel EB to the nearest location to make a U-turn to travel back downhill. This just moves the safety issue to another location. <u>MITIGATION</u> - Local road connection to Newtown Road.	\$450,000	Would likely require relocation of Apple Café as EB U.S. 50 access would be eliminated and could effect business.

Local Road Connection

In order to augment this reduced access, a local road connection may be constructed from Still Meadows to Newtown Road, possibly utilizing Walkabout Way as shown in the 2003 Draft PR local road alternatives. The most direct route would utilize the existing grade adjacent to, and just downhill from the existing El Dorado trail (See Appendix I, Alternative A). According to the 2003 Draft PR, the number of vehicles utilizing this segment would be approximately 150 per day. This alternative is consistent with the Caltrans Draft Project Report, as well as the Value Analysis Report conducted in 2001, which recommended reducing the frontage/local road to include only the area of greatest need.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Local Road Connection	MEDIUM	Combined with median barrier extension for maximum effectiveness	Less direct route than U.S. 50 for destinations west.	\$5-10 million	Biological, El Dorado Trail, hydrology, County funding

4.2 Lower Carson Road

Median Barrier Gap Closure

This alternative would eliminate broadside collisions at this location by extending the median barrier to just west of Still Meadows Road. Right in/right out access at Lower Carson would be maintained; however, eastbound U.S. 50 travelers wishing to turn left onto Lower Carson would have to access Carson Road either from points further west, such as the Schnell School or Smith Flat Road interchanges, or continue east to the Cedar Grove Interchange.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Median Barrier Gap Closure	MEDIUM HIGH	Eliminates left turns across U.S. 50 at this location, reducing broadside collision potential	SIDE EFFECT- Out of direction travel for vehicles accessing Lower Carson MITIGATION- Undercrossing	\$450,000	Coordination with Caltrans

Undercrossing Alternative(s)

In order to augment this reduced access, an undercrossing of U.S. 50 may be constructed to provide access to Carson Road for residents, businesses and visitors south of U.S. 50, as well as those traveling eastbound U.S. 50 to reach Apple Hill/Camino destinations. A grade-separated facility (i.e. interchange, under/overcrossing) in the Camino area has been studied for decades, as shown in Table 1, Project History. Several potential crossing locations have been identified in previous studies between Camino Heights Drive and Upper Carson Road, based on topography, right of way, roadway geometry, and Caltrans’s standards for spacing of interchanges in rural areas (Smith Flat and Cedar Grove). The grade-separated location(s) are almost precisely halfway between the Smith Flat interchange to the west and the Cedar Grove interchange to the east.

Earlier studies analyzed an overcrossing of U.S. 50, either at or just east of Camino Heights Drive. The more recent Value Analysis (VA) Report conducted in April through May, 2000 recommended modifying Alternative E in the 2000 PSR by incorporating an undercrossing rather than an overcrossing as part of

the proposed interchange in Camino Heights. Preliminary design of this alternative showed that an undercrossing minimized impacts and better fit the topography north of U.S. 50. Further studies showed an undercrossing required less right of way and less cost compared to an overcrossing. The consultant team remained consistent with this approach by identifying a suitable undercrossing location. As this study focuses on strategies to improve existing safety issues, the report includes an undercrossing of U.S. 50, and not a full interchange, complete with on and offramps. However, in order to be consistent with Caltrans' prior freeway conversion studies, the undercrossing would be constructed so as to not preclude a full interchange at that location, if needed.

Conceptual diagrams, profiles and estimated costs of the undercrossing alternatives, to include variations based upon potential traffic demand, are included as Appendix J.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Undercrossing	HIGH	Combined with median barrier extension for maximum effectiveness	Focuses local and interregional traffic to location north of U.S. 50	\$10-15 million	Funding, environmental resources, traffic analysis

4.3 Camino Heights Drive Newtown Road Connection

This alternative would construct a local road connection from Camino Heights to Newtown Road to provide secondary access to/from the Camino Heights/Hills subdivisions. As a safety/parallel capacity alternative, the local road alignment serves primarily the residents of Camino Hills and Camino Heights, and does not provide substantial benefit to regional and interregional travelers. This connection, or a portion thereof, has been proposed several times, the earliest being part of the Camino Heights subdivision improvements in 1964/65. In 1988, the El Dorado County Board of Supervisors adopted a resolution identifying the Board's intention to consider an amendment to the Camino Fruitridge Area Plan, adopted in 1985, which included the conceptual alignment of the extension of Ray Lawyer Drive (also known as the Placerville Loop Road) from Newtown Road to U.S. 50 via Camino Heights Drive.

In the 2003 Draft PR for the freeway conversion study, a frontage road option and a local road option were included for each freeway conversion alternative. For the local road option, a segment common to both alternatives was proposed, extending from Still Meadows Road via Walkabout Way to Newtown Road. The local road was proposed to run parallel, and several yards downslope of Michigan/California Railroad alignment, otherwise known as the El Dorado Trail.

For this Summary Report, four local road alternative alignments were initially developed from Camino Heights to Newtown Road. As a result of public input during the study's outreach process, a fifth alignment (D) was added. The alternatives are highlighted on the attached map (Appendix K), and are as follows:

Alternative A – Extend Camino Heights Drive west to Newtown Road, terminating west of Parkway Drive.

Alternative A2 – Extend Camino Heights Drive west to Newtown Road, terminating east of Parkway Drive.

Alternative B – Extend Camino Heights Drive southwest to Newtown Road, terminating at Ivy

Knoll Drive.

Alternative C – Extend Verde Robles Drive south to Newtown Road, terminating at Mining Brook Road.

Alternative D – Local road alignment along the existing El Dorado Trail.

The attached comparative matrix (Appendix K) discusses the potential benefits/impacts of each alternative. As the matrix shows, all of the alternative alignments for this local road connection strategy have individual issues. However, their common component is that they originate from Camino Heights Drive. Camino Heights Drive is currently a two lane local road with an average right of way of 50 feet. The road currently has on-street parking, with an average travel lane width of 12 feet.

In the Caltrans 2003 Draft PR, it was noted that approximately 150 vehicles per day would utilize a new local road connection. Due to the low estimated daily usage, it was determined this was not a cost effective alternative. This point was echoed by many community members during the first public meeting, as they expressed their aversion to using a low speed, local road facility when they have direct access to U.S. 50 and perceived safer turning movements as a result of Caltrans 2003 Resurfacing, Restoration and Rehabilitation project.

Many community members expressed concern with the potential increase in traffic through Camino Heights and subsequent impacts to Newtown Road as a result of a new local road connection. Future land use and development concerns in the Study Area were also vocalized during the public outreach process. Other public members, however, feel the local road connection is necessary as a secondary route out of the Camino Heights/Hills subdivisions in the event of an emergency on U.S. 50 and/or Camino Heights Drive.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Local Road Connection	LOW	Caltrans 2003 Project Report estimated 150 vehicles per day would utilize this road segment. Many community members voiced their opposition to this alternative.	Does not address broadside collisions with EB U.S. 50 traffic	\$6-10 million	Biological, El Dorado Trail, hydrology, R/W

4.4 Upper Carson Road

Speed Monitoring Display (SMD)

This alternative would install a speed monitoring display on U.S. 50 east of Upper Carson Road in the westbound direction. As speed is listed as the primary factor in half of the collisions, an SMD located in the westbound U.S. 50 direction just east of Upper Carson may help to reduce the speeds of westbound traffic. Caltrans cautioned the use of SMD's to modify driver behavior, as prior studies show SMD's to have a low effectiveness as a behavior modification tool. SMD's, according to Caltrans, are effective tools when the roadway geometry (i.e. tight curves, etc) warrants speed reduction to prevent run-offs.

Portable signs, similar to figures 4 and 5 above, can be as inexpensive as \$10,000 to put in place. For permanent ground-placed signs, costs typically run between \$60- \$80K. Permanent overhead SMD's may be as high as \$130 - \$150K including integration. As the owner and operator of the State Highway System, Caltrans has the ultimate discretion as to the location, type of device used and message displayed within the U.S. 50 right of way.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Speed Monitoring Display	LOW - MEDIUM	Current accident data shows speed to be a contributing factor to the accidents. SMD's may slow drivers down and heighten driver awareness through the project limits.	Does not address conflicting turn movements	\$60-150,000	Coordination with Caltrans

Active Cross Traffic Detection Device

This alternative would install an active cross traffic detection device on U.S. 50 east of Upper Carson Road in the westbound direction. The intent behind this strategy is to raise the awareness of drivers on U.S. 50 that they are entering an undivided, at-grade segment of U.S. 50, which may help to reduce their speed. Signs are currently in place at each end of the project limits notifying drivers of “Cross Traffic Ahead.” In March 2000, the El Dorado County Department of Transportation installed flashing yellow lights on the signs to raise driver awareness of the at-grade conditions within the Camino area. This alternative builds upon those principles by utilizing radio frequency technology (Figure 6) and/or loop sensors (Figure 7) to detect cross traffic ready to make a left turn across the highway. A vehicle’s presence would trigger a warning device, such as a flashing beacon or dynamic message sign, which would alert drivers on U.S. 50 of potential cross traffic. Estimated cost for this alternative is approximately \$75,000 - \$100,000 each, which could be installed at the intersections on each end of the project limits (Still Meadows, Upper Carson), for a cost of approximately \$200,000 for both units. This alternative will not eliminate turning movements across U.S. 50, but may modify driver behavior to the point that accidents are reduced.



**Figure 6
Radar Sensor**



**Figure 7
Loop Sensor in
Roadway**

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Cross-Traffic Detection	LOW - MED	This will raise awareness of oncoming drivers that active cross traffic is present. This may slow mainline traffic to some degree when active which ultimately may reduce the number of broadside accidents.	Does not address conflicting turn movements	\$100,000	Coordination with Caltrans

Grade Modifications

This alternative would improve the intersection by modifying the existing grade on U.S. 50. Although Upper Carson is the more logical entry point for access into the Camino area and Sierra Pacific Industries plant, logging and large delivery trucks currently utilize the Lower Carson intersection due to the superelevated left turn lane at Upper Carson. A modification to the existing grade may improve sight distance for eastbound traffic turning left across U.S. 50 to Carson Road; however, it is highly speculative to determine if improvements such as grade modifications to this intersection will reduce the number of accidents. Any proposed improvements at other locations that would potentially shift traffic to Upper Carson would need to consider grade modifications as mitigation.

Solution Strategy	Effectiveness		Traffic Side Effects / Mitigation	Cost	Implementation Issues
Grade Modification	LOW	May alleviate some of the sight distance issues that EB motorists have while turning left onto Carson Rd due to the adverse grades on the superelevated curve of US-50.	Does not address conflicting turn movements	\$500,000+/-	

4.5 Solutions Precluded from Further Analysis

Several comments and suggestions to improve safety were received during the study’s public outreach process. After reviewing the recommendations with the TAC members and representatives of the responsible agencies, the following strategies are not recommended for further study:

Increased CHP Enforcement

One of the most frequent requests from the public during the outreach process was for additional CHP speed enforcement on the U.S. 50 corridor. The at-grade section of U.S. 50 within the project limits is currently posted for 55 mph. According to the detailed accident reports, speed was identified as the primary collision factor at the Upper Carson intersection. Therefore, increased enforcement would be the most effective at this location.

CHP representatives were provided with this public input and responded that, at present, the stretch of U.S. 50 in the Camino area is the most heavily enforced segment of highway in El Dorado County. According to CHP representatives, additional enforcement is not feasible with current budget and staffing levels. Additional CHP enforcement is beyond the control and jurisdiction of EDCTC, El Dorado DOT and/or Caltrans; therefore, this alternative was identified in the safety strategy matrix as having a low effectiveness.

Traffic Signals on U.S. 50

Similar to the speed enforcement request, several members of the public, as well as some TAC members, requested one or more traffic signals on mainline U.S. 50 to reduce speeds and better control turning movements across U.S. 50. In a meeting with Caltrans staff on February 28, 2007, the traffic signal option was discussed. In a follow up letter, dated August 2, 2007 (Appendix L), Caltrans states that signal warrants are not met, or anticipated to be met, at the primary intersections with U.S. 50 in the project area. The letter concludes that signal installation studies are not recommended for these locations. Therefore, this alternative is not a viable solution.

Reduced speed limit on U.S. 50

This alternative was also presented by the public. The speed limit within the project limits is currently 55 mph. Speed limits in California are governed by the California Vehicle Code, Sections 22348 through 22413 which state that, when determining whether to increase or decrease the speed limit, Caltrans shall take into consideration the results of an engineering and traffic survey. According to Caltrans, a speed survey was recently completed and, as a result, the speed limit will be increased to 65mph within the next few months. Therefore, reducing the speed limit at this location is not a viable alternative.

5. Environmental Issues/Considerations

Due to the relatively low impact of several of the safety improvement alternatives (speed monitoring display, increased CHP enforcement, cross traffic detection device), a discussion on environmental impacts is limited to the Camino Heights-Newtown local road connection, median refuge at Still Meadows Road, and the Undercrossing alternative (s).

5.1 Camino Heights – Newtown Local Road Connection

The 2004 El Dorado County General Plan identifies the area south of the El Dorado Trail, between Los Trampas Drive and Ivy Knoll Road, as an Important Biological Corridor. Camino Heights – Newtown Alternatives A, A2, and B (Appendix K) lie within this overlay. General Plan Policy 7.4.2.9 states that lands located within this overlay shall be subject to the following provisions⁴:

- Higher canopy-retention standards and/or different mitigation standards/thresholds for oak woodlands
- Lower thresholds for grading permits
- Higher wetlands/riparian retention standards and/or more stringent mitigation requirements for wetlands/riparian habitat loss
- Greater protection for rare plants
- No hindrances to wildlife movement

These requirements should be reviewed and considered for potential roadway improvements within this overlay, as they may impact the type of environmental process undertaken, as well as the corresponding cost and schedule to deliver the project.

Camino Heights – Newtown Alternative D (Appendix K) proposes an alignment along the former Michigan/California Railroad Corridor, otherwise known as the El Dorado Trail, from Los Trampas Drive to Newtown Road. Construction of an 8 foot Class I bike path is scheduled for August 2007 on the segment of the El Dorado Trail from Parkway to Los Trampas Drive. El Dorado County owns the right-of-way for this segment, which was purchased with funds under the California Wildlife Coastal and Park

⁴ Not all policies are included. Please see General Plan for complete list

Land Conservation Bond Act of 1988. The program’s procedural guide states, “Applicant will use the property only for the purposes of the Wildlife, Coastal & Park Land Conservation Act and make no other use, sale, or other disposition of the property except as authorized by specific act of the State Legislature.” Prior to initiating detailed studies on the feasibility of Alternative D, the specific requirements of the aforementioned funds should be investigated to determine the compatibility of roadway improvements within this right-of-way.

5.2 Median Refuge/Westbound Acceleration Lane

The 2001 Value Analysis (VA) report included this alternative as part of an overall project to extend the RRR project further west. The VA report discussed the sensitivity to cultural resources, which may pertain to the Rupley House west of the intersection. This site is also prone to slope slump and slippage due to the poor drainage and number of natural springs in the area.

5.3 Undercrossing

The 2001 PSR identified the location of Alternative C as the highest potential location for exposure to asbestos issues. In addition, Alternative C was the only alternative identified by Caltrans that could not avoid at least one hazardous waste impact site. This assessment was based upon a full interchange design. An undercrossing alternative without the associated ramp structures may have a significantly less impact. An Initial Site Assessment will be required during the Environmental Phase of the project to determine if there are any known or potential hazardous materials within the proposed project limits.

6. Community Interaction

Stakeholder Involvement

In an effort to involve a broad range of interests, prior to initiating the Study, the EDCTC compiled a list of groups and individuals to serve as liaisons on the Camino Stakeholder Advisory Committee (SAC). The SAC representatives, ratified by the EDCTC in September 2006, include:

- Trails Now
- Apple Hill Growers Association
- El Dorado County Planning Commission
- Sierra Pacific Industries
- El Dorado County Chamber of Commerce
- Camino Heights Community Advisory Committee
- Environmental Representative
- Office of Emergency Services
- Citizen Representatives (2)
- El Dorado Irrigation District
- Ivy Knoll Road Association

The purpose of the SAC is to provide both policy and technical guidance to the EDCTC during the Study process. Two SAC outreach opportunities were held for the Camino Study as precursors to two public meetings, one early in the project’s timetable and a second workshop later in the project to provide the public with the potential solutions and to continue to obtain feedback and input prior to drafting the Summary Report. A SAC meeting was held on October 4, 2006 at the Camino School prior to the first public meeting. In addition to SAC members, approximately 70 members of the community attended.

August 2007

For the second round of SAC outreach, prior to the second public meeting, the consultant team met with SAC members in groups and/or individually.

Public Meetings

EDCTC held the first of two public open houses for the Camino Area Parallel Capacity/Safety Study on November 14th, 2006 at the Camino Elementary School. To promote the meeting, EDCTC mailed 1,215 newsletters to community leaders and property owners and noticed the meeting on the EDCTC website and through the Mountain Democrat and Sacramento Bee newspapers. Approximately 130 individuals attended the open house. The primary focus of the first meeting was to present the Camino Heights – Newton Road local road alternatives. A majority of the people in attendance, as well those who submitted written comments after the meeting, were opposed to the local road connector concepts.

The second public open house was also held at the Camino Elementary School on April 12, 2007. Approximately 1,200 postcards announcing the open house were mailed to community members and key stakeholders, as well as hand delivered to key locations such as the EDCTC and County Supervisors' offices. Media announcements were sent and published in the Sacramento Bee and Mountain Democrat, and posted on the 50 Corridor Transportation Management Association and EDCTC websites. Approximately 150 reminder phone calls were also made prior to the meeting. As a result of these efforts, approximately 85 members of the community attended the meeting along with project staff and team members. The focus of the second meeting was to present safety alternatives along the U.S. 50 corridor, to include Intelligent Transportation Systems (ITS)- related solutions, speed enforcement, median barrier extension, and an undercrossing of U.S. 50, among other alternatives. Many of the individuals present requested additional CHP enforcement, traffic signals, and reduced speed limits on U.S. 50. The undercrossing alternative received mixed reviews, with those opposed primarily due to potential traffic impacts on the local road network and land use changes in the area related to the transportation improvements.

Agency Meetings

The consultant team, along with EDCTC staff, met with Caltrans representatives on February 28, 2007 to present the strategies developed to date, and to get feedback on those strategies from the various Caltrans functional units (i.e. design, traffic safety, etc.). Caltrans was supportive of the median barrier and undercrossing alternatives, with the understanding that significant traffic impact analysis and design review will be taking place during subsequent project phases. They were not supportive of additional traffic signals on U.S. 50, as shown by their letter, dated August 2, 2007, included in Appendix L.

7. NEXT STEPS

Subsequent to presentations of the Summary Report to the EDCTC and El Dorado County Board of Supervisors, the Report will be presented to the stakeholder group and general public in the Fall of 2007 to provide the public with additional opportunity to review and comment on the alternatives and related information contained in the report. The consultant team will utilize and consider this information to prepare a Project Study Report Scoping Memo, which will then be presented to EDCTC at their December 2007 meeting. Should EDCTC decide to move forward with the PSR, it will analyze and include the following components:

- Purpose and Need discussion
- Discussion of Project Alternatives
- Coordination with statewide, regional, and local planning efforts
- Identification of existing known hazardous waste sites
- Determination of the need for a Traffic Management Plan during future construction

- Identification of environmental issues
- Identification of funding sources and milestone schedule for the project

A PSR is an engineering report, the purpose of which is to document agreement on the scope, schedule, and estimated cost of a project so that the project can be included in a future State Transportation Improvement Program (STIP) or State Highway Operations Protection Program (SHOPP) funding cycle. The PSR is completed early in the transportation project delivery timeline. Refer to Appendix M for a graphic of typical transportation project phases and their respective timeframes.

7.1 *Funding Issues*

An important consideration when moving forward with the development and construction of transportation projects is the type and availability of funding. These considerations can have significant impacts on the speed and timing of the project's completion. A brief description of potential fund sources available for the alternatives presented in the report, along with their constraints/criteria, is included below:

Regional Surface Transportation Program (RSTP)

RSTP was established by the 1991 Federal Intermodal Surface Transportation Efficiency Act (ISTEA) and continued with the passage of TEA 21 in 1997 and SAFETEA-LU in 2005. Of all the federal funding programs, RSTP is most flexible. Examples of projects eligible for RSTP include highway projects; bridges (including construction, reconstruction, seismic retrofit and painting); transit capital improvements; carpool, parking, bicycle, and pedestrian facilities; safety improvements and hazard elimination; research; traffic management systems; surface transportation planning; transportation enhancement activities and control measures; and wetland and other environmental mitigation. The estimated annual program level is \$320 million statewide and \$1 million for El Dorado County, which is currently administered by the EDCTC to jurisdictions within El Dorado County on a competitive basis. The primary use of these funds by El Dorado County DOT is currently for roadway rehabilitation and maintenance.

Congestion Mitigation/Air Quality (CMAQ) Program

The Congestion Mitigation and Air Quality (CMAQ) Improvement Program was also established by ISTEA and reauthorized with the passage of TEA-21 and SAFETEA-LU. Funds are directed to transportation projects and programs which contribute to the attainment of maintenance of National Ambient Air Quality Standards in non-attainment or air quality maintenance areas for ozone, carbon monoxide, or particulate matter under provisions in the federal Clean Air Act. As part of the Sacramento Valley air basin, which is in non-attainment for ozone, El Dorado County is eligible for CMAQ funds.

Eligible federal-aid projects include public transit improvements; high occupancy vehicle (HOV) lanes; Intelligent Transportation Infrastructure; traffic management and traveler information systems (i.e., electric toll collection systems); employer-based transportation management plans and incentives; traffic flow improvement programs (signal coordination); fringe parking facilities serving multiple occupancy vehicles; shared ride services; bicycle and pedestrian facilities; flexible work-hour programs; outreach activities establishing Transportation Management Associations; fare/fee subsidy programs; and under certain conditions, Particulate Matter-10 projects. The estimated annual program level is \$360 million statewide and \$1.8 million for El Dorado County.

State Transportation Improvement Program (STIP)

The STIP is a multi-year capital improvement program that assists state and local entities with planning for and implementation of transportation improvements to utilize resources in a cost effective manner. All STIP projects must be capital projects (including project development costs) needed to improve transportation. These projects generally may include, but are not limited to, improving state highways, local roads, public transit, intercity rail, pedestrian and bicycle facilities, grade separations, transportation system management, transportation demand management, soundwalls, intermodal facilities, safety, and environmental enhancement and mitigation, including TEA projects.

STIP funding is split 25% to the Interregional Transportation Improvement Program (ITIP) for projects nominated by Caltrans, and 75% to County Shares for the State’s 58 counties for projects nominated in each county’s Regional Transportation Improvement Program (RTIP), as decided by regional agencies. The overall STIP is adopted by the California Transportation Commission (CTC). The estimated annual program level for El Dorado County, including both RTIP and ITIP, is \$10.2 million.

State Highway Operations and Protection Program (SHOPP)

The SHOPP is a ten year program developed by Caltrans for the expenditure of transportation funds for major capital improvements that are necessary to preserve and protect the state highway system. Projects included in the SHOPP are limited to capital improvements relative to maintenance, safety, and rehabilitation of state highways and bridges which do not add capacity to the system. The estimated annual program level for El Dorado County is \$6.4 million.

Proposition 1B – State/Local Partnership

The Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006, approved by the voters as Proposition 1B (Prop 1B) on November 7, 2006, includes \$1 billion for a newly created State-Local Partnership Program Account. The funds will be appropriated by the State Legislature and available to the California Transportation Commission for allocation over a five-year period to eligible transportation projects nominated by an applicant transportation agency. A dollar for dollar match of local funds is required for an applicant transportation agency to receive Prop 1B funds under this program. The Legislature is developing guidelines for the State-Local Partnership account, which currently indicate that the El Dorado County Transportation Commission is an eligible applicant and Traffic Impact Mitigation fees are an eligible local match.

Traffic Impact Fees

Under state law, jurisdictions may impose fees on development that mitigate their impacts on local services. One common impact fee is for traffic generated by the new development on the road system. Fees must be backed by a traffic study that provides a nexus of the improvements to the traffic generated by the development, as required by AB 1600. The 2004 El Dorado County General Plan Traffic Impact Mitigation Fee Program consists of eight fee zones, and includes funding for improvements to the local road system, as well as the State Highway System. The estimated program level for El Dorado County’s new fee program is \$39.6 million per year, up to the year 2015.

Table 4 identifies the most appropriate fund sources for each alternative. Most alternatives would be eligible for multiple fund sources; however, the application and programming of these funds to alternatives in the report is dependent upon the priorities and approval of the respective agencies. Therefore, this table should not be considered as a recommendation for future programming decisions.

Table 4 – Transportation Fund Sources

<u>Alternative</u>	<u>RSTP</u>	<u>CMAQ</u>	<u>STIP</u>	<u>SHOPP</u>	<u>Prop 1B</u>	<u>Impact Fees</u>
Speed Monitoring Display	X			X		
Median Barrier	X		X	X		
WB Acceleration Lane/Refuge	X		X	X	X	
Local Road Connection	X		X		X	X
Undercrossing	X		X		X	X
Cross Traffic Detection	X	X	X	X		

References

California Department of Transportation. *Draft Project Study Report, U.S. 50 Freeway Conversion Project*. 2003

California Department of Transportation. *Project Study Report (PDS only), Conversion to Freeway in Camino*. June 2000

California Department of Transportation. *Value Analysis Report, El Dorado 50 Conversion to Freeway at Camino*. August 2001

Kimley-Horn and Associates. *Final Road Safety Assessment, follow up to Caltrans RRR project*. March 2006

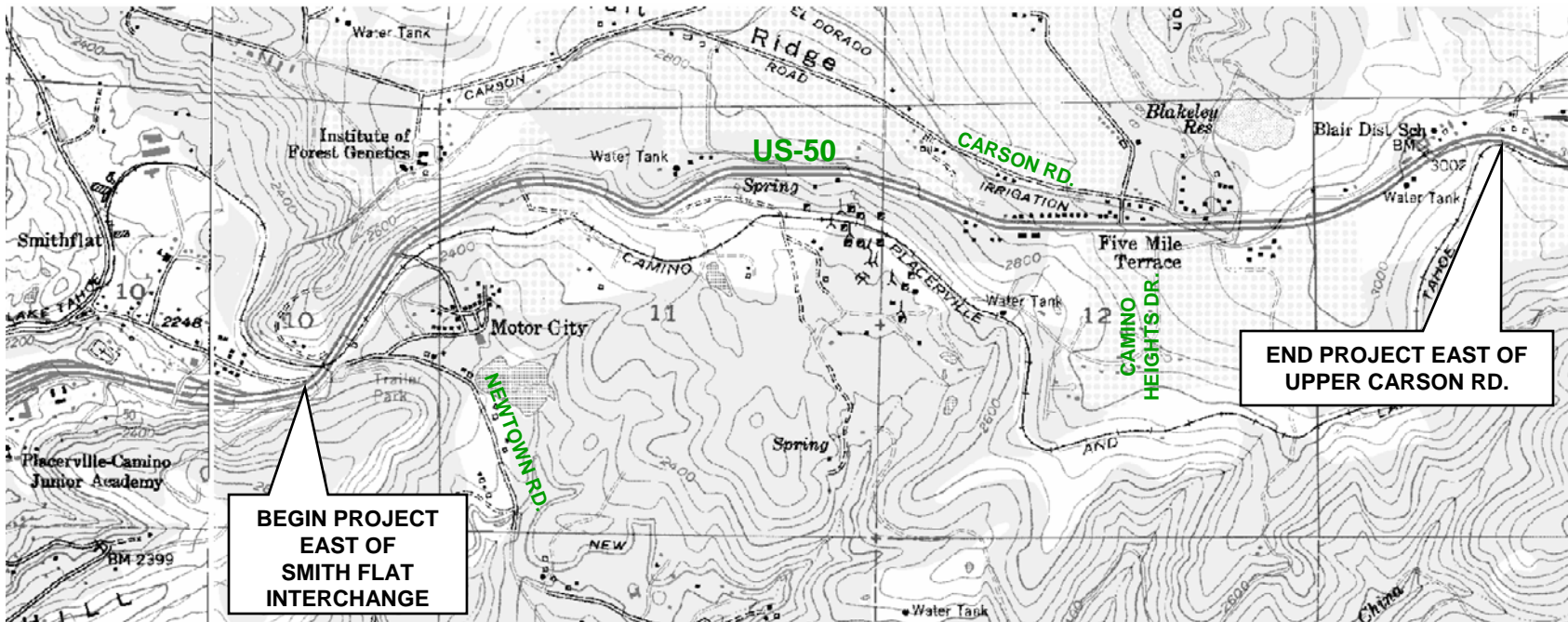
El Dorado County. *General Plan*, July 2004

El Dorado County Transportation Commission. *2005 – 2025 Regional Transportation Plan*. October 2005

APPENDIX A



VICINITY MAP

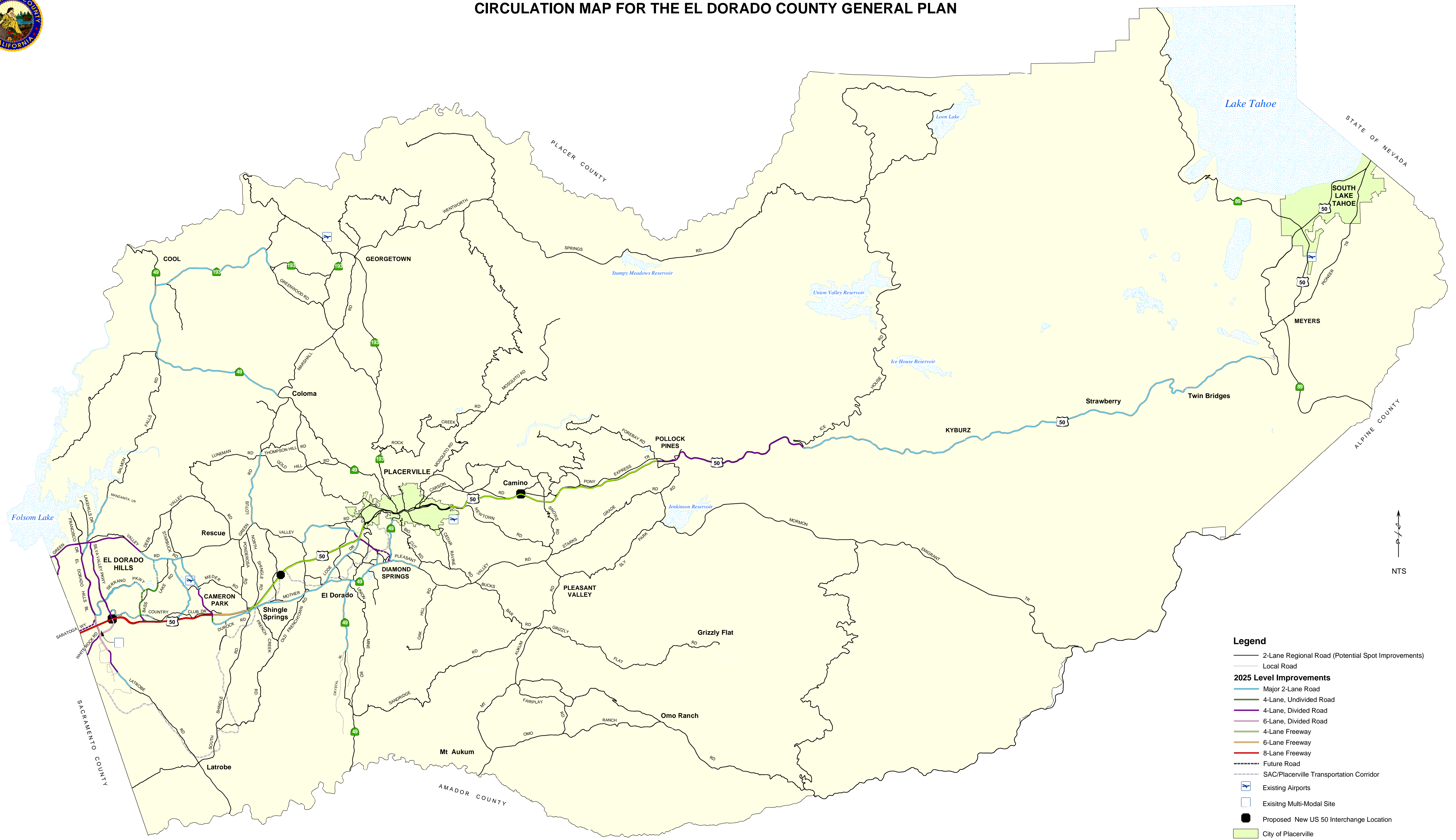


PROJECT LIMITS

APPENDIX B



Figure TC - 1
 CIRCULATION MAP FOR THE EL DORADO COUNTY GENERAL PLAN



- Legend**
- 2-Lane Regional Road (Potential Spot Improvements)
 - Local Road
 - 2025 Level Improvements**
 - Major 2-Lane Road
 - 4-Lane, Undivided Road
 - 4-Lane, Divided Road
 - 6-Lane, Divided Road
 - 4-Lane Freeway
 - 6-Lane Freeway
 - 8-Lane Freeway
 - Future Road
 - SAC/Placerville Transportation Corridor
 - ✈ Existing Airports
 - Existing Multi-Modal Site
 - Proposed New US 50 Interchange Location
 - City of Placerville
 - City of South Lake Tahoe
 - Lakes

Source: El Dorado County Department of Transportation
 July, 2004

Note: This is a reduced version of the Circulation Map provided for reference purposes.
 The official Circulation Map is on file and available for review at the Department of Transportation.

APPENDIX C



- Legend**
- Accidents pre-Caltrans 3R project (completed January 2003)
 - Accidents post-Caltrans 3R project (completed January 2003)

Collision Diagram Symbols

	Motor Vehicle Moving Ahead		Head-on Sideswipe
	Pedestrian		Rear End
	Parked Vehicle		Overtaking Sideswipe
	Fixed Object		Broadside
	Fatal Accident		Approach Turn
	Property Damage Only Accident		Overtaking Turn
	Injury Accident		Out of Control
	Head-on		Vehicle Turned Over
			Motor Vehicle Backing Up

Camino Collision Data

Still Meadows Road - (PM 22.00 - 22.10)

Post Mile	File Type	Side of Highway	Accident Date	Day of Week	Time Of Day	No. Vehicles Involved	Primary Collision Factor	Other Associated Collision Factors	Movement Preceding Accident	Weather	Lighting	Road Surface	Type of Collision
22.040	Highway	WB	2/7/2001	Wednesday	8:05:00 PM	2	Improper Turn	None Apparent	Making U-turn	Clear	Dark - No Street Light	Dry	Rear-ended another vehicle, left lane
22.040	Highway	WB	4/28/2002	Monday	11:15:00 AM	4	Speeding	None Apparent	Proceeding Straight	Snowing	Daylight	Snowy, icy	Hit the guardrail to the drivers right
22.040	Highway	WB	1/9/2003	Thursday	12:35:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Cloudy	Daylight	Wet	Sideswiped vehicle in right lane
22.040	Highway	WB	6/22/2003	Sunday	10:55:00 AM	2	Other violations	Improper Turn	Changing Lanes	Clear	Daylight	Dry	Sideswiped vehicle in left lane
22.050	Highway	WB	11/30/2001	Friday	2:20:00 PM	2	Failure to yield	Other Violation	Making Left Turn	Cloudy	Daylight	Dry	Broadside another vehicle on the left
22.050	Highway	EB	11/26/2002	Tuesday	6:25:00 PM	3	Other violations	Other Violation	Cross into Opposing Lane	Clear	Snowing	Dry	Head-on accident with another vehicle beyond the median to the left
22.050	Highway	WB	6/10/2003	Tuesday	12:30:00 PM	4	Other violations	None Apparent	Ran off road	Clear	Daylight	Dry	Hit a fence, beyond the shoulder, to the driver's left
22.050	Highway	WB	10/17/2003	Friday	2:05:00 PM	2	Failure to yield	None Apparent	Entering from shoulder	Clear	Daylight	Dry	Rear-ended another vehicle, beyond the shoulder, to driver's left
22.056	Intersection	EB	10/23/2001	Tuesday	2:10:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle traveling in the right lane
22.056	Intersection	EB	3/22/2002	Friday	5:20:00 PM	2	Failure to yield	None Apparent	Entering from shoulder	Cloudy	Daylight	Wet	Broadside by another vehicle traveling in the right lane
22.056	Intersection	EB	2/19/2003	Wednesday	1:00:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Cloudy	Daylight	Wet	Broadside by another vehicle
22.056	Intersection	EB	2/14/2004	Saturday	11:20:00 AM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle, beyond median, to the left
22.056	Intersection	EB	8/12/2004	Thursday	6:15:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle traveling in the right lane
22.056	Intersection	EB	1/19/2005	Wednesday	3:45:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle traveling in the right lane
23.056	Intersection	EB	8/16/2005	Tuesday	10:53:00 AM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle traveling in the right lane

Lower Carson Rd. Connection - (PM 23.290 - 23.490)

Post Mile	File Type	Side of Highway	Accident Date	Day of Week	Time Of Day	No. Vehicles Involved	Primary Collision Factor	Other Associated Collision Factors	Movement Preceding Accident	Weather	Lighting	Road Surface	Type of Collision
23.390	Highway	EB	10/29/2004	Friday	6:21:00 PM	2	Influence of Alcohol	Speeding	Stopped	Clear	Daylight	Dry	Rear-end another vehicle
23.400	Intersection	EB	8/45/2000	Tuesday	10:56:00 AM	4	Other than driver	None Apparent	Making Left Turn	Clear	Daylight	Dry	Overturned vehicle, No unusual roadway conditions or obstructions
23.400	Intersection	WB	8/27/2000	Sunday	12:55:00 PM	2	Failure to yield	Inattention	Making Left Turn	Clear	Daylight	Dry	Head-on accident, beyond median, to the left
23.400	Intersection	EB	10/6/2000	Friday	5:45:00 AM	2	Improper Turn	Inattention	Making Left Turn	Clear	Daylight	Dry	Rear-end another vehicle, while making a left turn
23.400	Intersection	WB	3/12/2001	Monday	8:25:00 AM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle, beyond the median
23.400	Intersection	WB	2/5/2002	Tuesday	6:35:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Dark - Street light	Dry	Broadside by another vehicle, in the right lane
23.400	Intersection	WB	6/20/2002	Thursday	11:00:00 PM	2	Failure to yield	Other Violation	Making Left Turn	Clear	Dark - No Street light	Dry	Broadside by another vehicle, in the right lane
23.400	Intersection	WB	8/1/2002	Thursday	1:10:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle, beyond the median
23.400	Intersection	WB	4/21/2003	Monday	5:55:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Cloudy	Daylight	Wet	Broadside by another vehicle in left lane
23.400	Intersection	WB	6/8/2003	Sunday	1:15:00 PM	3	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle, beyond the median
23.400	Intersection	WB	12/18/2003	Thursday	7:50:00 PM	2	Failure to yield	Other Violation	Proceeding Straight	Clear	Dark - Street light	Dry	Broadside by another vehicle, in the right lane
23.470	Highway	WB	9/23/2002	Monday	4:25:00 PM	4	Improper Turn	None Apparent	Cross into Opposing Lane	Clear	Daylight	Dry	Hit barrier, beyond the shoulder to driver's left
23.490	Highway	EB	2/1/2003	Saturday	8:36:00 PM	2	Other violations	Speeding	Proceeding Straight	Cloudy	Dark - No Street light	Snowy, icy	Head-on accident, left lane
23.400	Intersection	WB	10/30/2005	Sunday	3:20:00 PM	2	Failure to yield	None Apparent	Making Left Turn	Clear	Daylight	Dry	Broadside by another vehicle, in the left lane
23.450	Intersection	WB	7/4/2006	Tuesday	11:43:00 AM	2	Failure to yield	Stop & Go traffic	Entering from shoulder	Clear	Daylight	Dry	Head-on accident with another vehicle beyond the right lane

Upper Carson Rd. Connection - (PM 23.950 - 24.100)

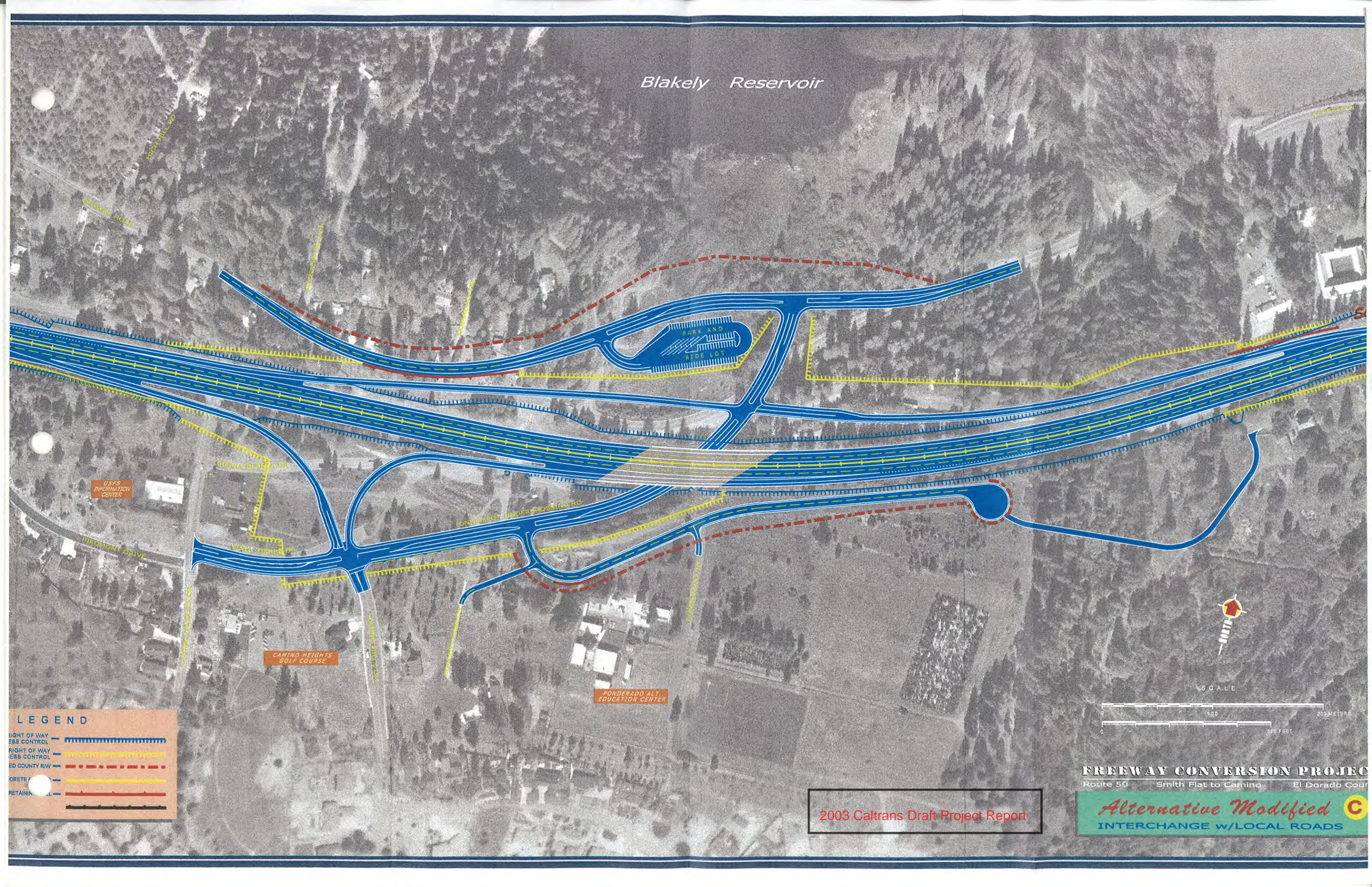
Post Mile	File Type	Side of Highway	Accident Date	Day of Week	Time Of Day	No. Vehicles Involved	Primary Collision Factor	Other Associated Collision Factors	Movement Preceding Accident	Weather	Lighting	Road Surface	Type of Collision
23.950	Highway	WB	3/7/2002	Thursday	5:35:00 PM	4	Other violations	Improper Turn	Ran off road	Other	Daylight	Snowy, icy	Hit trees, beyond the shoulder to driver's right
23.960	Highway	EB	1/20/2003	Monday	10:30:00 AM	2	Other violations	None Apparent	Other	Clear	Daylight	Dry	Sideswipe vehicle in right lane
24.010	Highway	WB	7/24/2004	Saturday	12:00:00 PM	2	Speeding	None Apparent	Changing Lanes	Clear	Daylight	Dry	Rear-end vehicle, beyond shoulder, to the left
24.050	Intersection	WB	7/26/2003	Saturday	2:15:00 PM	2	Failure to yield	None Apparent	Enter from Shoulder	Clear	Daylight	Dry	Broadside, by another vehicle in the right lane
24.050	Intersection	WB	8/1/2003	Friday	12:45:00 PM	2	Other violations	None Apparent	Changing Lanes	Cloudy	Daylight	Dry	Sideswipe vehicle in left lane
24.050	Intersection	EB	8/1/2003	Friday	3:35:00 PM	4	Improper Turn	Other violation	Ran off road	Cloudy	Daylight	Dry	Hit sign, beyond shoulder to driver's right
24.050	Intersection	WB	8/15/2003	Friday	8:25:00 PM	2	Failure to yield	Influence of Alcohol	Making left turn	Clear	Dark - No streetlight	Dry	Broadside, by another vehicle in the right lane
24.050	Intersection	WB	11/21/2003	Friday	11:20:00 AM	4	Speeding	Enter/Leave Ramp	Ran off road	Clear	Daylight	Dry	Hit curb, beyond shoulder to driver's right
24.050	Intersection	EB	12/31/2004	Friday	10:35:00 AM	2	Improper Turn	Failure to yield	Making left turn	Cloudy	Daylight	Wet	Broadside, by another vehicle in the right lane
24.060	Highway	WB	7/7/2000	Friday	1:55:00 PM	2	Speeding	None Apparent	Making right turn	Clear	Daylight	Dry	Rear-end vehicle, interior lanes
24.070	Highway	EB	2/11/2004	Sunday	8:40:00 PM	4	Speeding	None Apparent	Ran off road	Cloudy	Dark - streetlight	Snowy, icy	Hit barrier, beyond shoulder, to left
24.070	Highway	EB	8/14/2002	Wednesday	11:00:00 AM	2	Other violations	None Apparent	Other unsafe turn	Clear	Daylight	Dry	Sideswipe vehicle in left lane
24.070	Highway	EB	5/6/2004	Thursday	5:03:00 PM	2	Speeding	Stop & Go traffic	Proceeding straight	Clear	Daylight	Dry	Rear-end vehicle in interior lanes
24.100	Highway	EB	2/11/2001	Thursday	8:45:00 PM	2	Speeding	Previous Collision	Stopped	Cloudy	Dark - streetlight	Snowy, icy	Rear-end vehicle in interior lanes
24.050	Intersection	EB	9/21/2005	Wednesday	4:25:00 PM	4	Other violations	None Apparent	Ran off road	Clear	Daylight	Dry	Went over embankment, over-corrected, and then struck a tree

Fall Harvest Season
 Thursday - Sunday
 9:00 AM - 8:00 PM

Speeding
 Failure to Yield
 Improper Turn

APPENDIX D

Blakely Reservoir



LEGEND

- RIGHT OF WAY LESS CONTROL
- RIGHT OF WAY LESS CONTROL
- EXISTING COUNTY RW
- CRETE
- RETAINING WALL

US SCALE

0 100 200 METERS

0 500 FEET

2003 Caltrans Draft Project Report

FREWAY CONVERSION PROJECT
 Route 50 Smith Flat to Camino El Dorado Court

Alternative Modified

INTERCHANGE W/LOCAL ROADS

Blakely Reservoir

ROUTE 50

PARKING LOT

PARK AND RIDE LOT

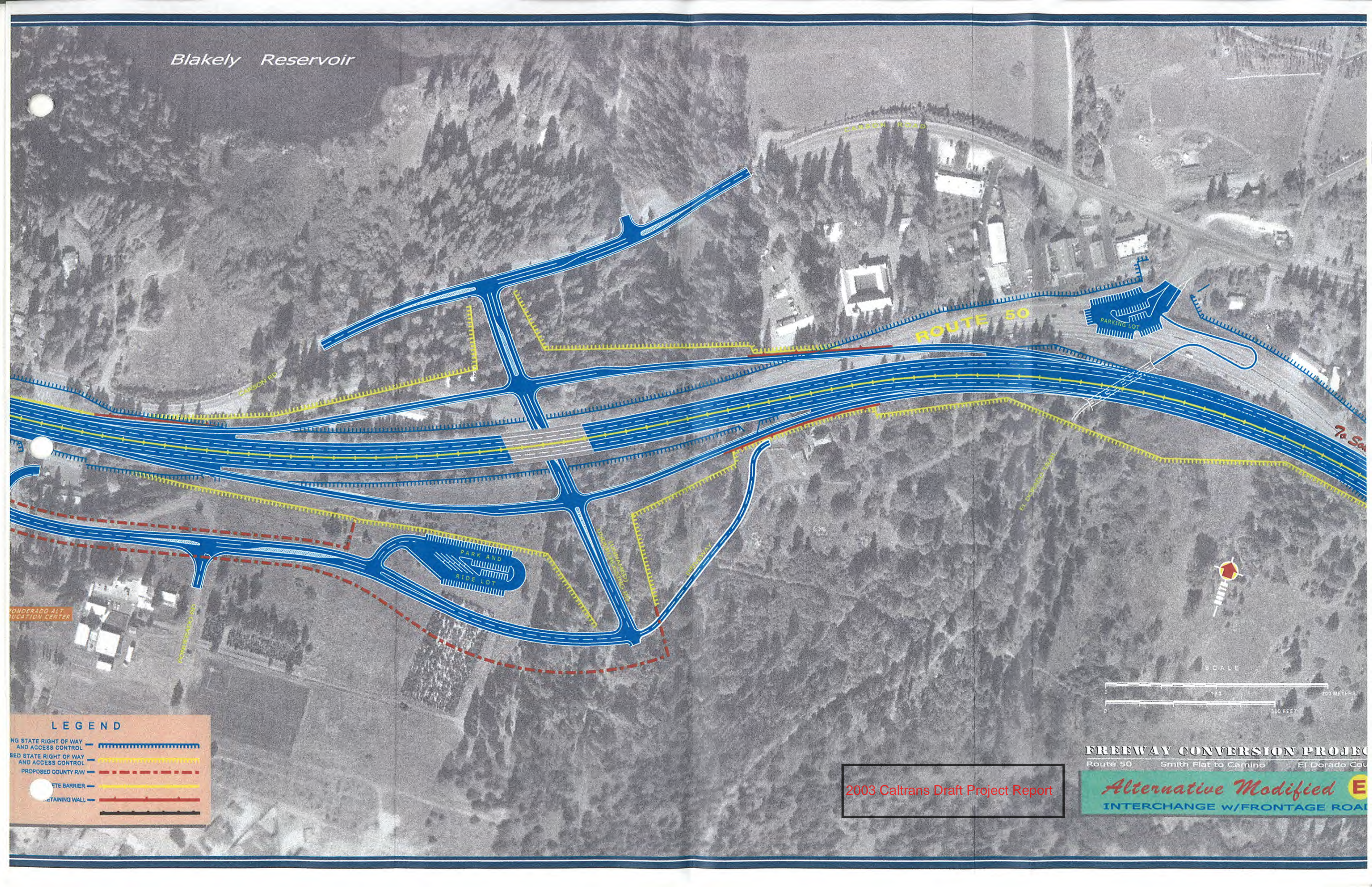
LEGEND

- EXISTING STATE RIGHT OF WAY AND ACCESS CONTROL
- PROPOSED STATE RIGHT OF WAY AND ACCESS CONTROL
- PROPOSED COUNTY RW
- CONCRETE BARRIER
- RETAINING WALL

SCALE

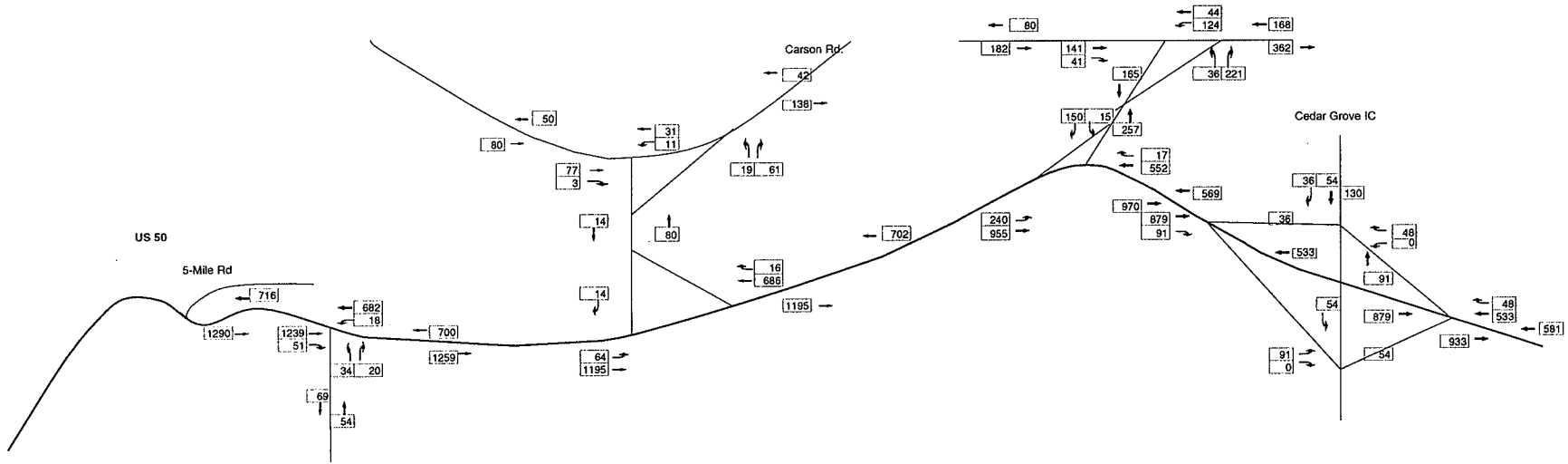
FREEWAY CONVERSION PROJECT
 Route 50 Smith Flat to Camino El Dorado Co
Alternative Modified **E**
 INTERCHANGE W/FRONTAGE ROAD

2003 Caltrans Draft Project Report



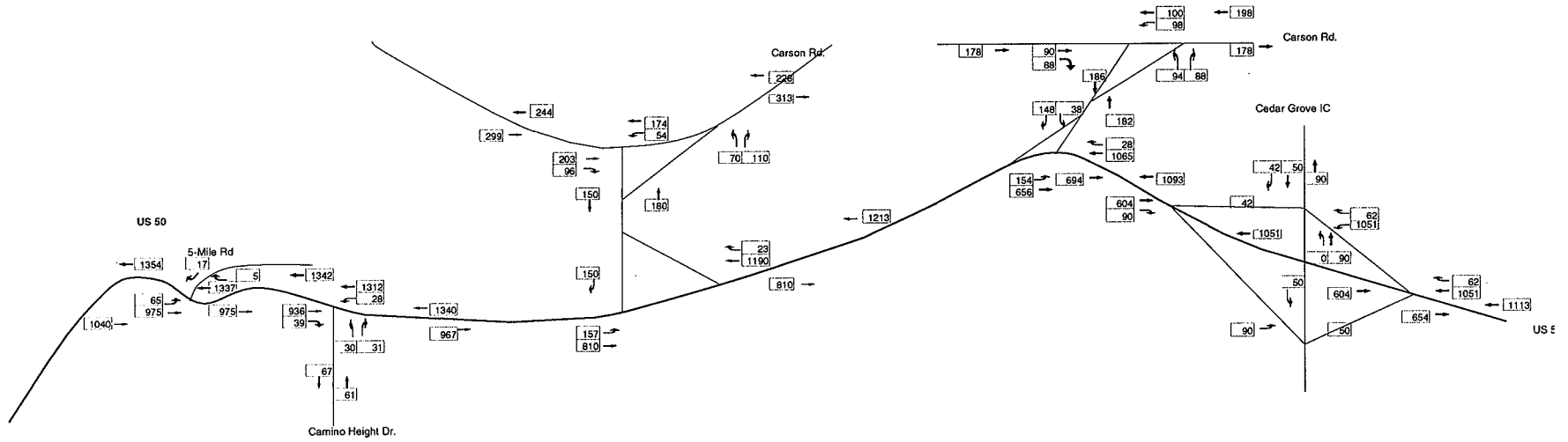
APPENDIX E

Camino Freeway Conversion 03-ELD-50 PM 21.0\25.5
 Thursday Commute PM Peak Hour (1700) 2000 Traffic Count
 EA: 03-367400



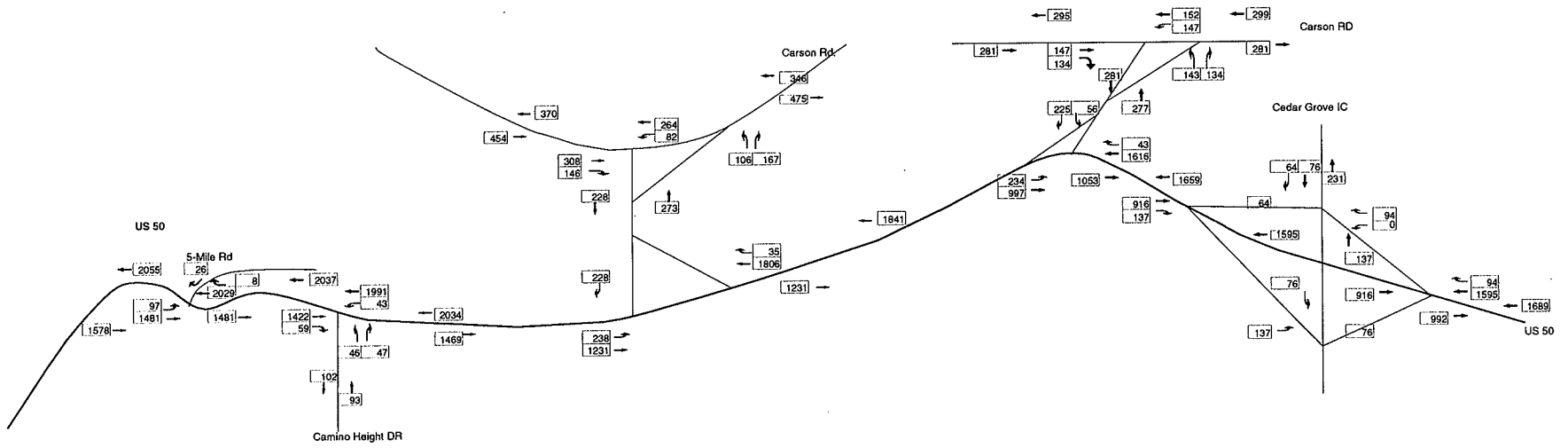
Camino Freeway Conversion 03-ELD-50 PM 21.0/25.5

Apple Hill Sunday PM Peak Hour (1400) 2001 traffic count
EA: 03-387400



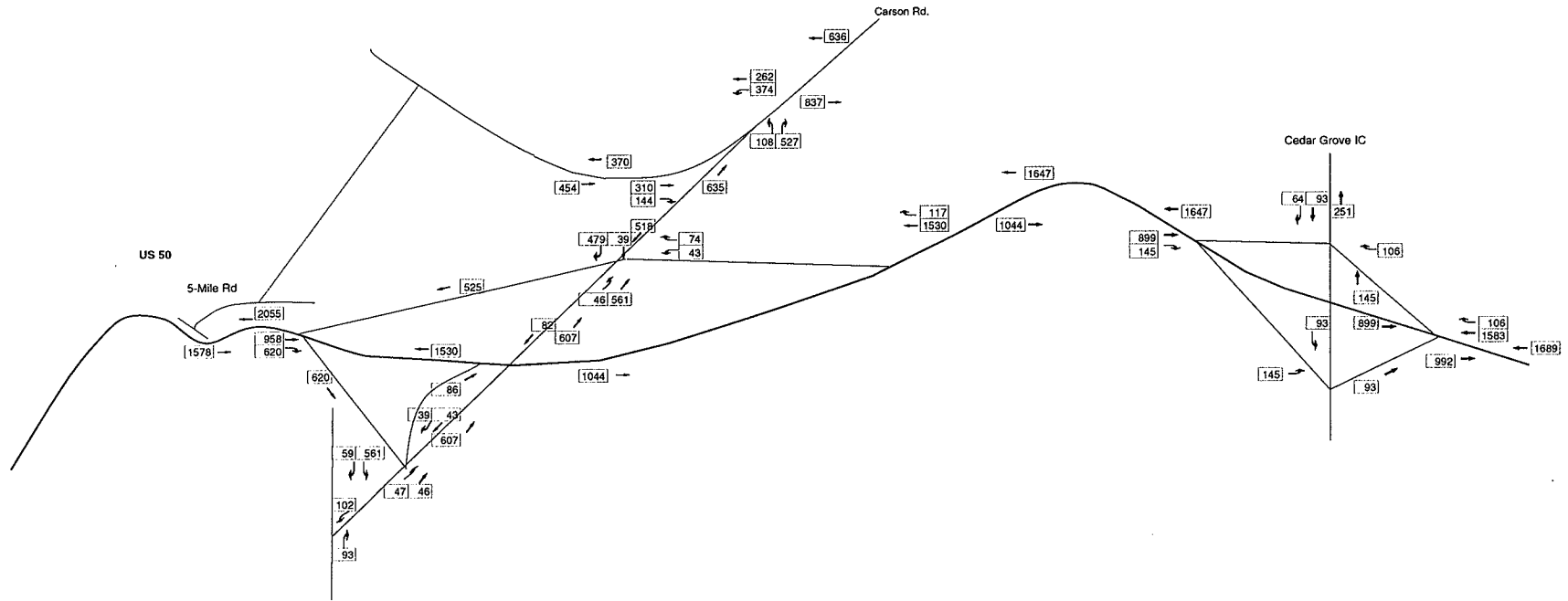
Camino Freeway Conversion 03-ELD-50 PM 21.0/25.5

NB 2029 Sunday PM Peak Hour Travel Demand Forecast
EA: 03-367400

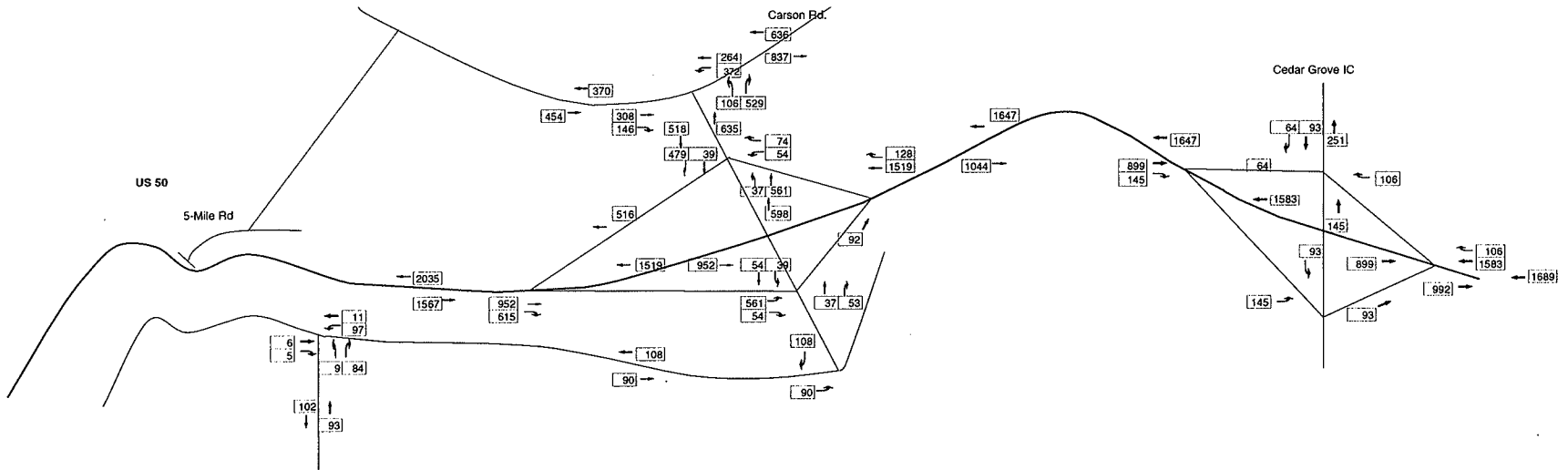


California Department of Transportation

Camino Freeway Conversion 03-ELD-50 PM 21.025.5
 Alt. C 2029 Sunday P. M. Peak hour Travel Demand Forecast
 EA: 03-367400



Camino Freeway Conversion 03-ELD-50 PM 21.0\25.5
 Alt. E 2029 Sunday P. M. Peak hour Travel Demand Forecast
 EA: 03-367400



APPENDIX F

Location Description	Rate Group (RUS)	No. of Accidents / Significance									Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates				
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Fat	Actual F+I				Tot	Fat	F+I	Tot	
03 ED 050 022.700 - 03 ED 050 R028.899 0050-0001 1998-07-01 2001-06-30	36 mo. 6.200 MI H R	135 H99	4	71 H99	75 H99	53	9	36	4 144	21.7	147.46	0.027	.51	.92	0.016	.25	.57	
03 ED 050 022.700 - 03 ED 050 R028.899 0050-0002 2003-10-01 2006-09-30	36 mo. 6.200 MI H R	92 H92	1	42 H92	43 H90	34	14	26	1 56	20.4	138.5	0.007	.31	.66	0.016	.25	.56	

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

Location Description	Rate Group (RUS)	No. of Accidents / Significance									Pers Kld Inj	ADT Main X-St	Total MV+ or MVM	Accident Rates				
		Tot	Fat	Inj	F+I	Multi Veh	Wet	Dark	Fat	Actual F+I				Tot	Fat	F+I	Tot	
03 ED 050 R022.000 - 03 ED 050 024.899 0050-0001 2003-10-01 2006-09-30	2.896 MI H 45 R 36 mo.	48	0	25	25	26	7	12		0	21.6	68.42	0.000	.37	.70	0.017	.29	.65

Accident Rates expressed as: # of accidents / Million vehicle miles

+ denotes that Million Vehicles (MV) used in accident rates instead (for intersections and ramps).

For Ramps RUS only considers R(Rural) U(Urban)

Area Information System
Placerville Area

Log Number	Date	Time	Officer	Status	Evidence #	Occured On	Cross Street
2007050148	05/29/07	1155	Pedretti T (013342)	I		US-50	Russell Street
2007050141	05/27/07	0145	Brandon T (011480)	I		US-50	Paul Bunyon Road
2007050113	05/23/07	2355	Russell S (011619)	S		US-50	Camino Heights Drive
2007050110	05/23/07	1440	George J (012833)	R		US-50	Camino Heights Drive
2007050108	05/22/07	1800	George J (012833)	F		US-50	Smith Flat Road
2007050068	05/13/07	1120	Nichols G (009122)	F		US-50 To Sly Park Road	Sly Park Road
2007050054	05/09/07	1155	Flahavan T (013505)	F		US-50	Smith Flat Road
2007050004	05/01/07	1735	Davenport R (013279)	F		US-50	Eight Mile Road
2007040136	04/26/07	0940	Brandon T (011480)	F		US-50	Broadway
2007040129	04/25/07	1438	Davenport R (013279)	F		US-50	Carson Road
2007040126	04/23/07	1340	Lopez D (013833)	F		US-50	Sierra Blanca Drive
2007040170	04/19/07	1000	Werner M (010717)	I		US-50	Newtown Road
2007040040	04/08/07	1540	Padilla C (013147)	F		US-50	Camino
2007040012	04/02/07	1135	Brandon T (011480)	F		US-50	County Road 1929a
2007040006	04/01/07	1200	Brandon T (011480)	F		US-50	Carson Road
2007030144	03/31/07	1610	Blood D (012382)	F		US-50	Camino Heights Drive
2007030134	03/28/07	1630	Lacey R J (008982)	F		US-50	Carson Road
2007030106	03/21/07	2240	Kennedy D W (011301)	F		US-50	Carson Road
2007030052	03/14/07	1030	Brandon T (011480)	F		US-50	5 Mile Road
2007030041	03/11/07	0500	Flahavan T (013505)	F		US-50	Still Meadow Road
2007030011	03/04/07	0130	Brandon T (011480)	F		US-50	Still Meadows Drive
2007020142	02/27/07	0810	Stark D (013463)	F		US-50	Camino Heights Drive
2007020124	02/24/07	1515	Russell S (011619)	F		US-50	Carson Road
2007020117	02/22/07	1000	Balerlein R E (010386)	F		US-50	Eight Mile Road
2007020081	02/16/07	1305	Stark D (013463)	F		US-50	Forest Road
2007020004	02/01/07	1850	Kennedy D W (011301)	F		US-50	Still Meadow Road
2007010130	01/30/07	0936	Jong K L (010825)	F		US-50	Still Meadows Road
2007010103	01/22/07	1550	Dougherty K R (009204)	F		US-50	Still Meadow Road
2007010087	01/18/07	0405	DeCosta M (011895)	F		US-50	Still Meadow Road
2007010078	01/17/07	1215	Rodriguez F (012720)	F		US-50	Smith Flat Road
2007010071	01/15/07	1825	Ussher S (010059)	F		US-50	Smith Flat Road
2007010050	01/11/07	1440	Dougherty K R (009204)	F		US-50	Smith Flat Road
2007010023	01/05/07	0810	Brandon T (011480)	F		US-50	Carson Road

APPENDIX G

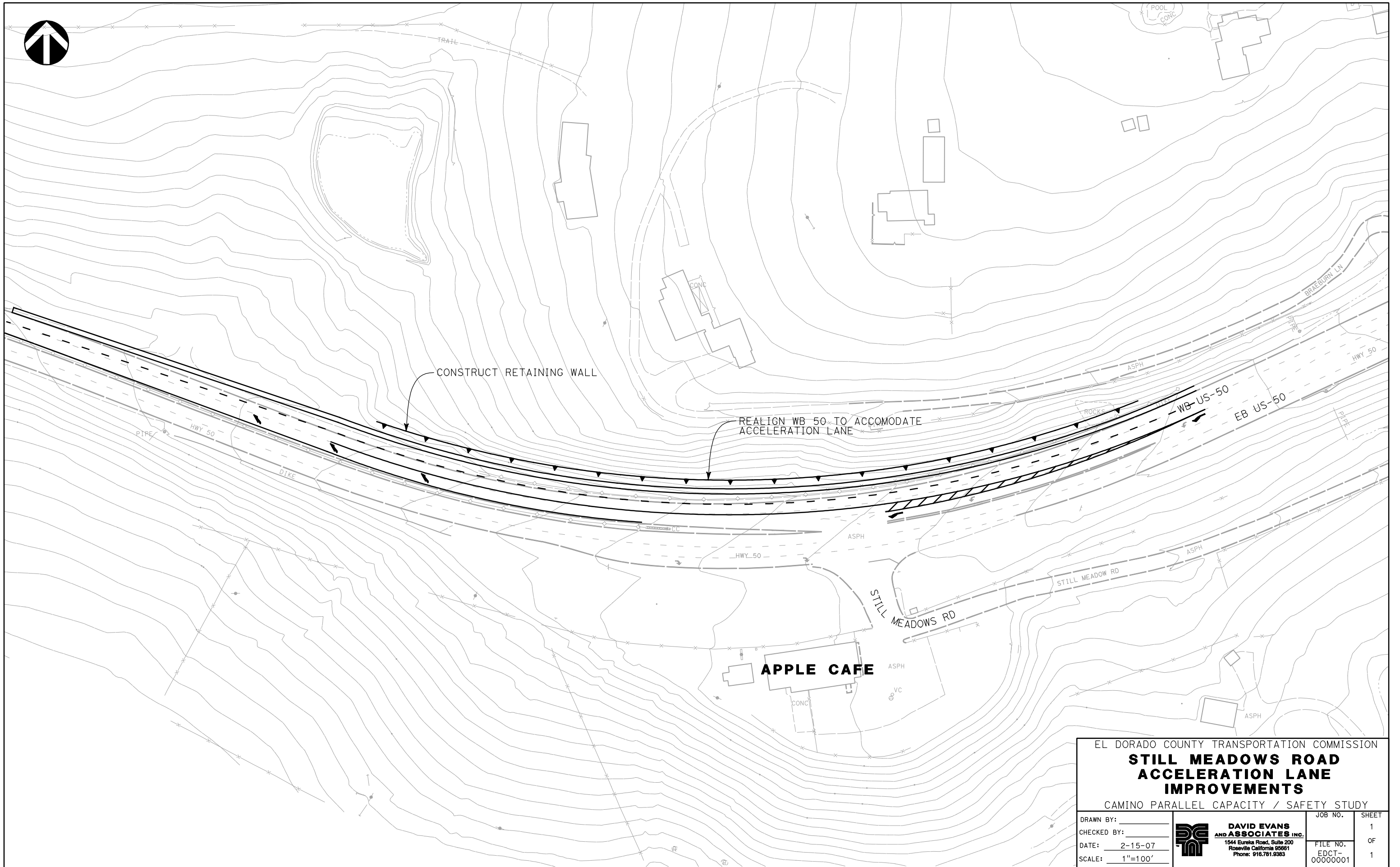
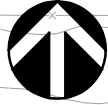


CAMINO PARALLEL CAPACITY / SAFETY STUDY US-50 CORRIDOR STRATEGY MATRIX



Location	Accident History	Solution Strategy	Effectiveness	Traffic Side Effects / Mitigation	Cost	Implementation Issues	
US-50 / Still Meadows Road (Apple Café) (PM 22.05)	Broadside collisions between motorists entering/exiting Still Meadows Rd/Apple Café with EB & WB US-50 traffic	Redirect CHP Enforcement	LOW	Current accident data does not show speed to be a contributing factor to the accidents. However, CHP presence may slow drivers down and heighten driver awareness through the project limits. Conflicting movement is not addressed. CHP resources are currently not available for full time presence. CHP periodically patrols the project limits.		\$100,000/year	CHP Resources
		Speed Monitoring Display (SMD)	LOW	Current accident data does not show speed to be a contributing factor to the accidents. However, SMDs may heighten driver awareness while travelling through the corridor, which ultimately could reduce the number of accidents at this location. Conflicting movement is not addressed.		\$60,000-150,000	Coordination with Caltrans
		Active Cross Traffic Detection Device (Alerts mainline traffic of cross traffic movements)	LOW-MEDIUM	This will alert oncoming drivers that active cross traffic is present to increase awareness (not just a static flashing beacon). This may slow mainline traffic to some degree when active which ultimately may reduce the number of broadside accidents. Conflicting movement is not addressed.		\$100,000	Coordination with Caltrans
		Median Refuge / WB Acceleration Lane	MEDIUM	This will make entering into WB traffic from Still Meadows safer. However, approx. 40% of the accidents occur with oncoming EB US-50 traffic, which this does not address.		\$3,000,000	Funding, cultural resources
		Median Barrier to eliminate left turn movements	MEDIUM-HIGH	Removes the conflicting turn movements at Apple Café. This will provide a reduction of 90% of all accidents at this location and eliminates cross-median head-on collisions that caused one fatal accident here.	<p>SIDE EFFECT- Traffic that turned left out of Still Meadows to travel WB may travel EB to the nearest location to make a U-Turn to travel back downhill. This just moves the safety issue to another location.</p> <p>MITIGATION- Local road connection to Newtown Road</p>	\$5-10 million +/- (includes local road)	Would likely require relocation of Apple Café as EB US 50 access would be eliminated and could affect business. Funding
US-50 / Lower Carson Road (PM 23.40)	Broadside collisions between EB US-50 motorists turning left and oncoming WB traffic.	Additional CHP Enforcement	LOW	Current accident data does not show speed to be a contributing factor to the accidents. However, CHP presence may slow drivers down and heighten driver awareness through the project limits. Conflicting movement is not addressed.		\$100,000/year	CHP Resources
		Active Cross Traffic Detection Device (Alerts mainline traffic of cross traffic movements)	LOW-MEDIUM	This will alert oncoming drivers that active cross traffic is present to increase awareness (not just a static flashing beacon). This may slow mainline traffic to some degree when active which ultimately may reduce the number of broadside accidents. Conflicting movement is not addressed.		\$100,000	Coordination with Caltrans
		Median Barrier to eliminate left turn movements	MEDIUM-HIGH	Removes the conflicting turn movement and would provide a reduction of 90% of all accidents at this location.	<p>SIDE EFFECT- Diverts traffic to Cedar Grove Interchange</p> <p>MITIGATION- Undercrossing of U.S. 50</p>	\$450,000	
US-50 / Camino Heights Dr (PM 23.25)	Broadside collisions between motorists entering/exiting Camino Heights Dr with EB & WB US-50 traffic.	Camino Heights-Newtown Local Road Connection	LOW	Caltrans 2003 Project Report estimated 150 vehicles per day would utilize this road segment. Many community members voiced their opposition to this alternative. Conflicting turn movements are not addressed.		\$6-10 million	Biological and cultural resources, El Dorado Trail and other Right-of-Way issues, hydrology
US-50 / Upper Carson Road (PM 24.05)	Broadside and Sideswipe accidents for vehicles entering/exiting Carson Road (East)	Grade Modifications to adjust fully superelevated left-turn lane to a more level lane	LOW	May alleviate some of the sight distance issues that EB motorists have while turning left onto Carson Rd due to the adverse grades on the superelevated curve of US-50.		\$500,000 +/-	
		Signalize Intersection	MEDIUM	This would address the cross-traffic broadside collisions at this location.	Adding a signal may increase the potential for rear end accidents, especially in the WB direction where motorists are traveling downhill as they approach this intersection and excessive speed seems to be an issue.	\$150,000-250,000	Caltrans is opposed to a signal on US-50, which they hope to eventually upgrade to continuous freeway status. Low broadside accident numbers at this location may not warrant Caltrans to grant an approval for the signal.
	Errant vehicles running off road as a result of excessive speed	Speed Monitoring Display (SMD) for WB US-50	LOW-MEDIUM	Current accident data shows speed to be a contributing factor to the accidents. SMDs may slow drivers down and heighten driver awareness through the project limits.		\$60,000-150,000	Coordination with Caltrans
		Additional CHP Enforcement	LOW-MEDIUM	Current accident data shows speed to be a contributing factor to the accidents. CHP presence may slow drivers down and heighten driver awareness through the project limits.		\$100,000/year	Agreement with CHP
Driveways & Other Conflict Points (PM 22.05 - 24.05)	Cumulative accident problems associated with driveway & local road access	Median Barrier / Undercrossing	HIGH	This strategy addresses the problem of cross-traffic movements by eliminating them at all locations. This is compatible with Caltrans ultimate freeway conversion configuration.		\$12 million +/-	Funding

APPENDIX H



EL DORADO COUNTY TRANSPORTATION COMMISSION

**STILL MEADOWS ROAD
ACCELERATION LANE
IMPROVEMENTS**

CAMINO PARALLEL CAPACITY / SAFETY STUDY

DRAWN BY:		 DAVID EVANS AND ASSOCIATES INC. 1544 Eureka Road, Suite 200 Roseville California 95661 Phone: 916.781.9383	JOB NO.	SHEET
CHECKED BY:				1
DATE:	2-15-07		FILE NO.	OF
SCALE:	1"=100'		EDCT-0000001	1



CAMINO PARALLEL CAPACITY / SAFETY STUDY PLANNING LEVEL COST ESTIMATES

Alternative: WB Acceleration Lane @ Still Meadows

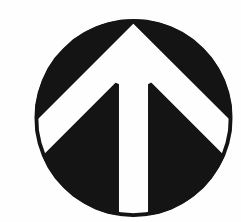
Proposed Improvements: Strategy that provides a WB acceleration lane for motorists exiting Still Meadows Rd. and wanting to travel WB on US-50. Due to the nature of topography, requires a realignment of US-50 and an extensive earth retaining structure.

Item Description	Quantity	Unit	Unit Cost	Total
Stage Construction/Traffic Control	1	LS	\$500,000	\$500,000
Erosion Control	5.0	acre	\$10,000	\$50,000
Roadway Excavation	11,000	CY	\$20	\$220,000
Asphalt Concrete	1,150	TON	\$110	\$127,000
Class 2 Aggregate Base	1,300	CY	\$80	\$104,000
Storm Drainage	1	LS	\$75,000	\$75,000
Signing	1	LS	\$10,000	\$10,000
Striping & Pavement Markers	1,500	LF	\$5	\$8,000
Construct Retaining Wall (Type 1)	1,000	LF	\$1,000	\$1,000,000

Subtotal	\$2,094,000
10% Mobilization	\$160,000
30% Contingency	\$677,000
TOTAL	<u><u>\$3,000,000</u></u>

* This estimate is an opinion of the probable construction cost based on preliminary quantities and historical units for similar work. Actual construction cost may be higher or lower subject to changed site conditions and market fluctuations beyond the control of the Engineer.

APPENDIX I

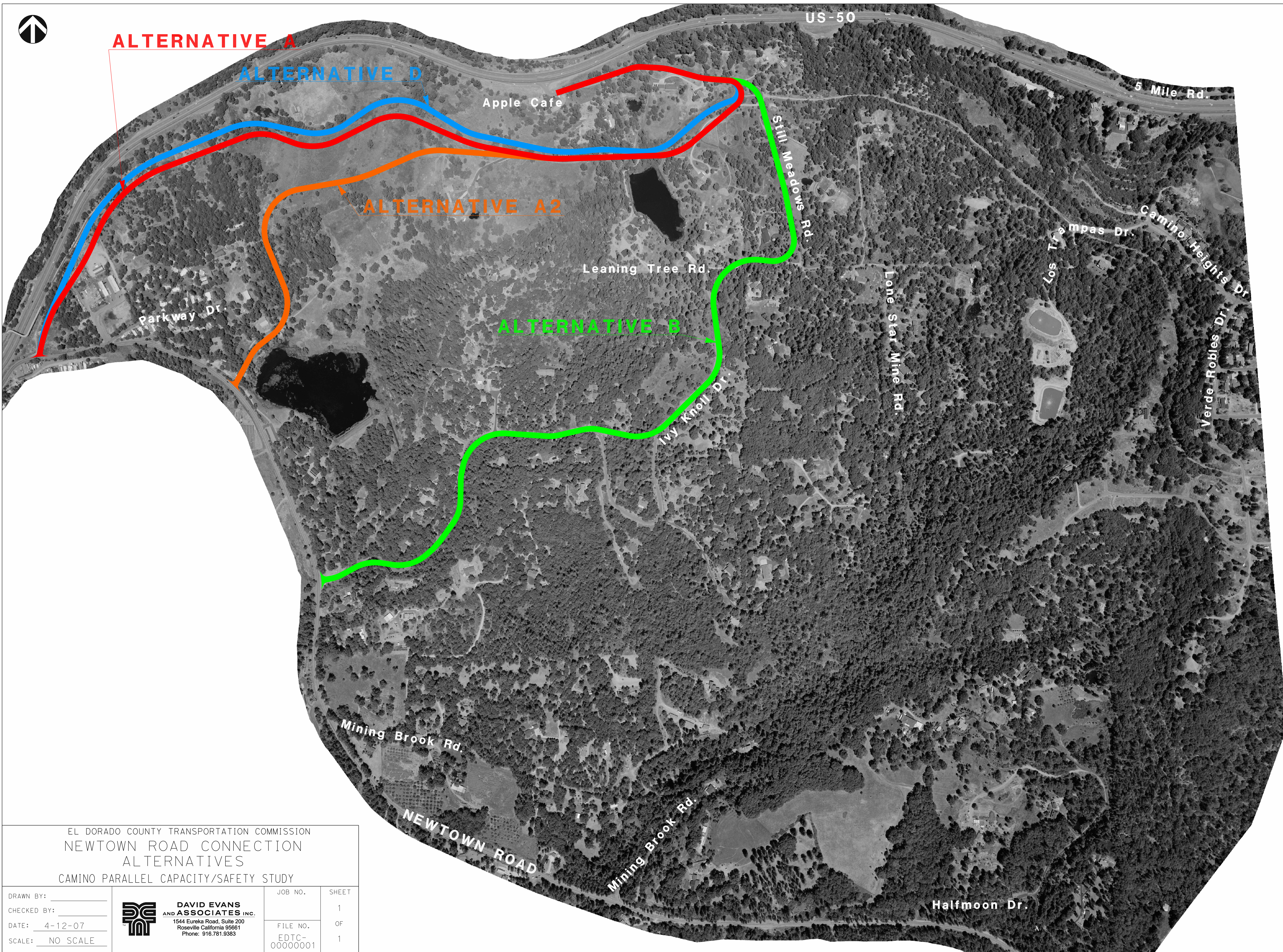


ALTERNATIVE A

ALTERNATIVE D

ALTERNATIVE A2

ALTERNATIVE B



EL DORADO COUNTY TRANSPORTATION COMMISSION
NEWTOWN ROAD CONNECTION
ALTERNATIVES
CAMINO PARALLEL CAPACITY/SAFETY STUDY

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CHECKED BY: _____
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SCALE: NO SCALE

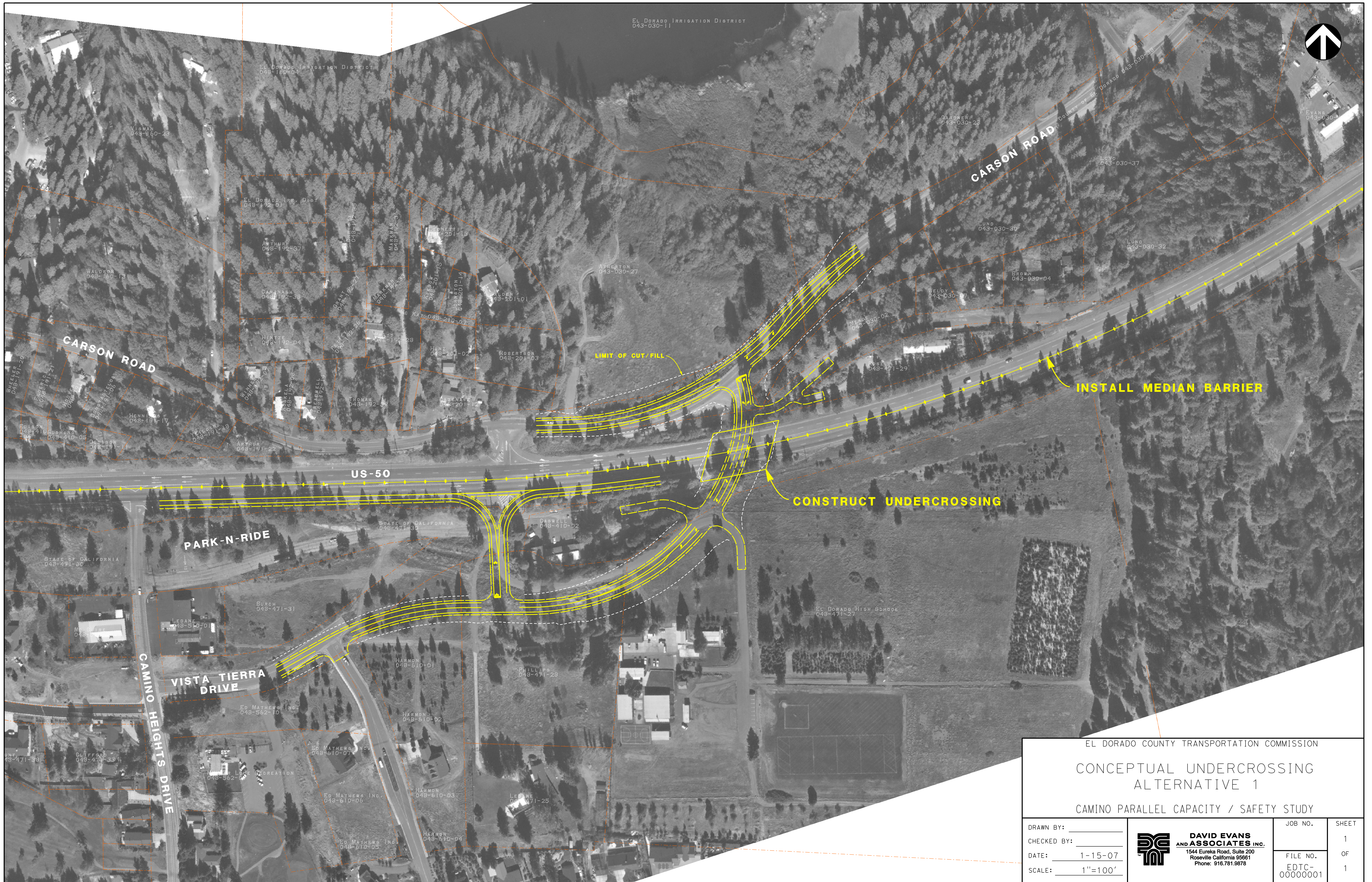



DAVID EVANS
AND ASSOCIATES INC.
1544 Eureka Road, Suite 200
Roseville California 95661
Phone: 916.781.9383

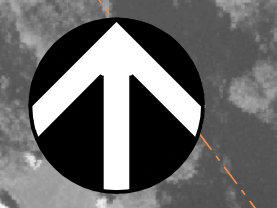
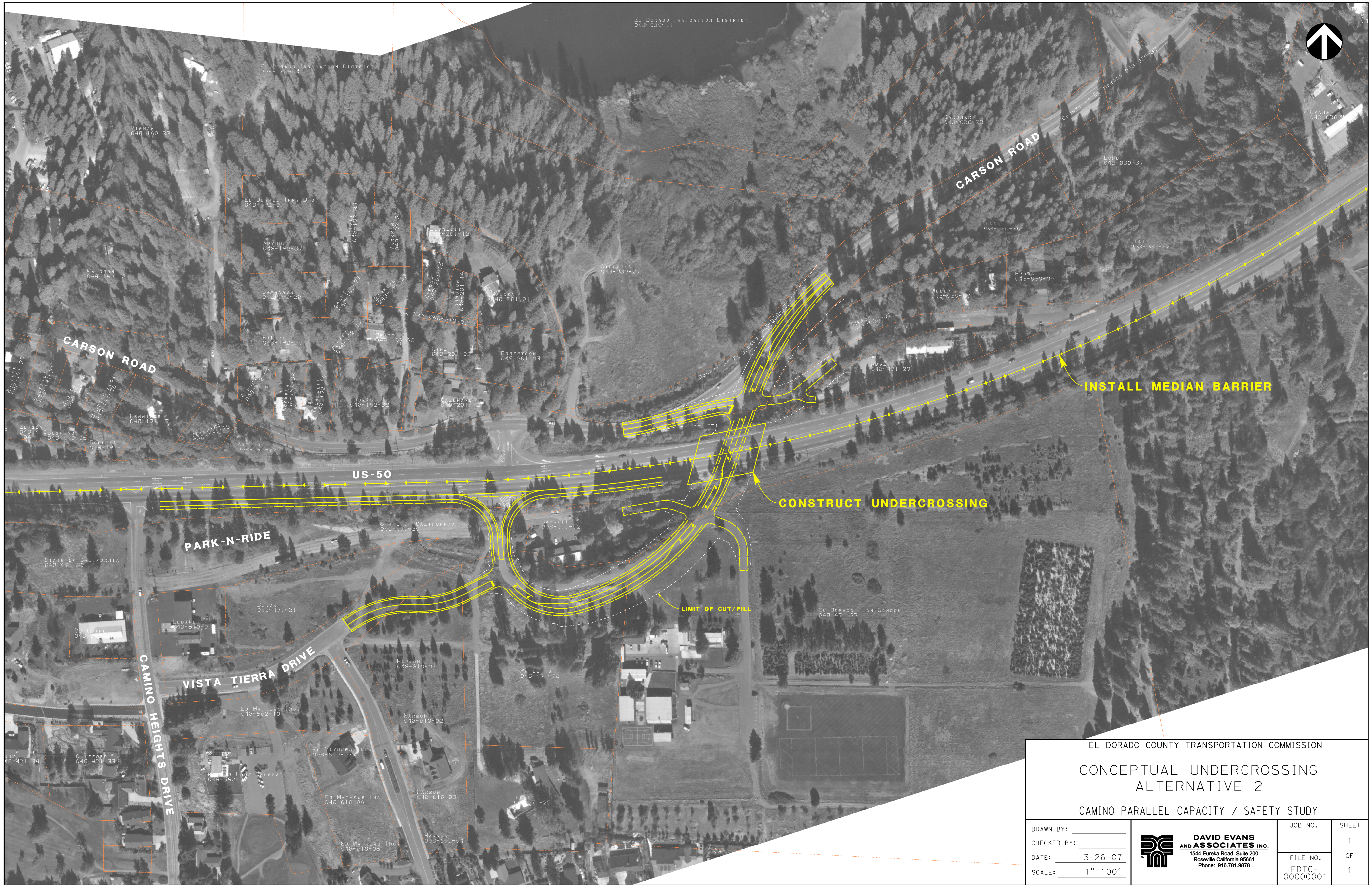
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FILE NO.	OF
EDTC-0000001	1

Halfmoon Dr.

APPENDIX J

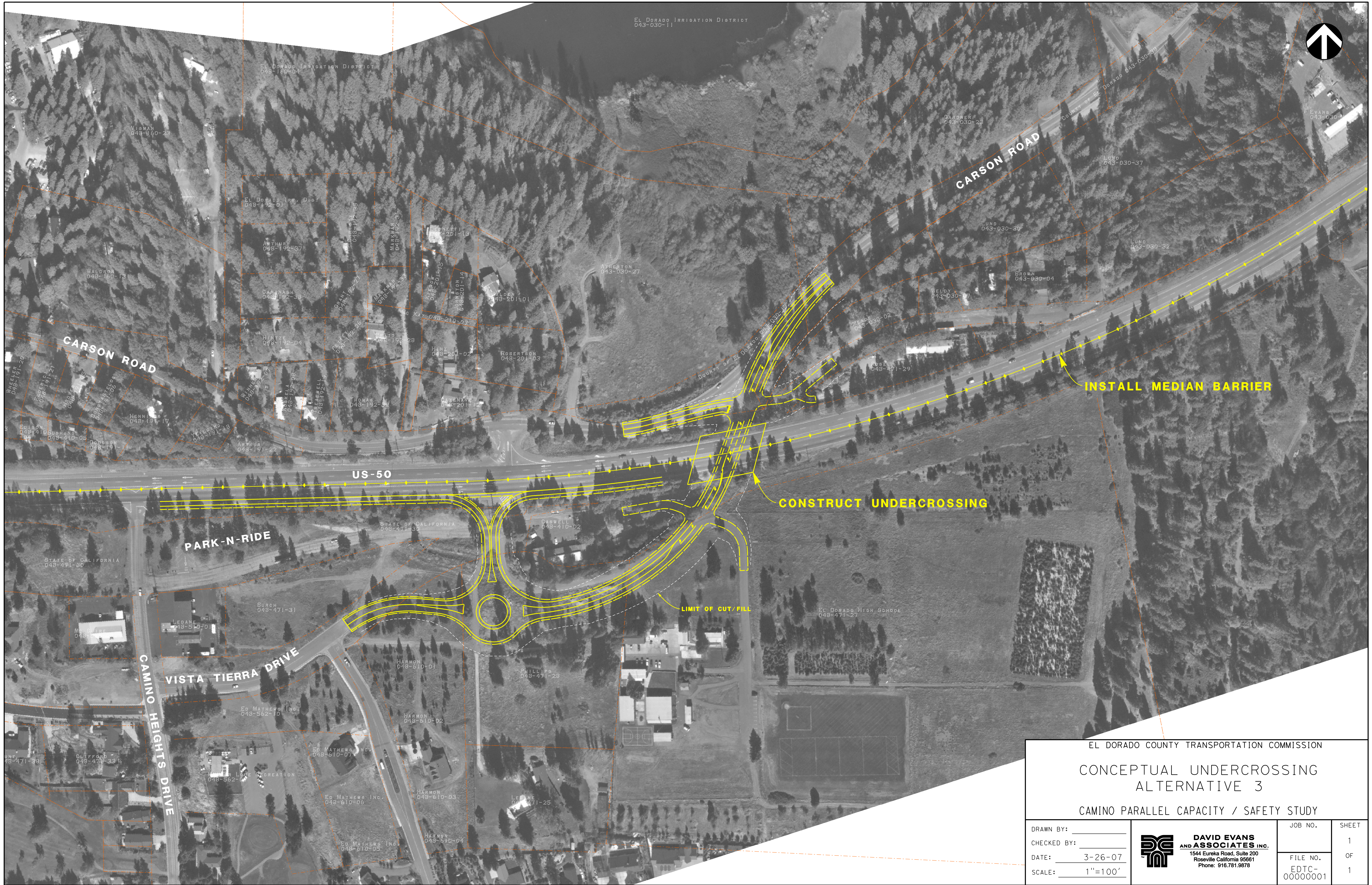



EL DORADO COUNTY TRANSPORTATION COMMISSION			
CONCEPTUAL UNDERCROSSING ALTERNATIVE 1			
CAMINO PARALLEL CAPACITY / SAFETY STUDY			
DRAWN BY: _____	 DAVID EVANS AND ASSOCIATES INC. 1544 Eureka Road, Suite 200 Roseville California 95661 Phone: 916.781.9676	JOB NO.	SHEET
CHECKED BY: _____		FILE NO.	OF
DATE: 1-15-07		EDTC-	1
SCALE: 1"=100'		0000001	



EL DORADO COUNTY TRANSPORTATION COMMISSION			
CONCEPTUAL UNDERCROSSING ALTERNATIVE 2			
CAMINO PARALLEL CAPACITY / SAFETY STUDY			
DRAWN BY:	_____	JOB NO.	SHEET
CHECKED BY:	_____		1
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SCALE:	1"=100'	EDTC-0000001	1

DAVID EVANS AND ASSOCIATES INC.
 1544 Eureka Road, Suite 200
 Roseville California 95661
 Phone: 916.781.9676



EL DORADO COUNTY TRANSPORTATION COMMISSION			
CONCEPTUAL UNDERCROSSING ALTERNATIVE 3			
CAMINO PARALLEL CAPACITY / SAFETY STUDY			
DRAWN BY: _____	 DAVID EVANS AND ASSOCIATES INC. 1544 Eureka Road, Suite 200 Roseville California 95661 Phone: 916.781.9676	JOB NO. _____	SHEET
CHECKED BY: _____		FILE NO. _____	1
DATE: 3-26-07		EDTC-0000001	OF
SCALE: 1"=100'			1



CAMINO PARALLEL CAPACITY / SAFETY STUDY PLANNING LEVEL COST ESTIMATES

Alternative: Undercrossing Alternatives 1, 2, & 3

Proposed Improvements: Phase 1 of Caltrans Freeway Conversion Project. Place concrete median barrier throughout corridor, construct an undercrossing structure of US-50, and construct a local road connecting Camino Heights Rd. and Carson Rd.

Item Description	Quantity	Unit	Unit Cost	Total
Traffic Control System	1	LS	\$100,000	\$100,000
Stage Construction	1	LS	\$500,000	\$500,000
Clearing & Grubbing	1	LS	\$50,000	\$50,000
Erosion Control	5.0	acre	\$10,000	\$50,000
Roadway Excavation	42,000	CY	\$20	\$840,000
Asphalt Concrete	3,000	TON	\$110	\$330,000
Class 2 Aggregate Base	3,000	CY	\$80	\$240,000
Storm Drainage	1	LS	\$150,000	\$150,000
Signing	1	LS	\$10,000	\$10,000
Striping & Pavement Markers	2,500	LF	\$5	\$13,000
Concrete Median Barrier	9,000	LF	\$50	\$450,000
Remove Concrete Barrier	1,500	LF	\$30	\$45,000
Remove Retaining Wall	200	LF	\$250	\$50,000
CIP/PS Box Girder Undercrossing Structure	20,000	SF	\$225	\$4,500,000
R/W Acquisition	5	acre	\$350,000	\$1,750,000

Subtotal	\$9,078,000
10% Mobilization	\$848,000
30% Contingency	\$2,978,000

TOTAL \$13,000,000

* This estimate is an opinion of the probable construction cost based on preliminary quantities and historical units for similar work. Actual construction cost may be higher or lower subject to changed site conditions and market fluctuations beyond the control of the Engineer.

"UC" & "CR" LINES

CAMINO PARALLEL CAPACITY / SAFETY STUDY

DRAWN BY: JB
 CHECKED BY: GO
 DATE: 2-15-07
 SCALE: HORIZ. 1"=200'
 VERT. 1"=20'



DAVID EVANS AND ASSOCIATES INC.
 1544 Eureka Road, Suite 200
 Roseville California 95661
 Phone: 916.781.9383

JOB NO. _____ SHEET 1 OF 1
 FILE NO. EDCT-00000001

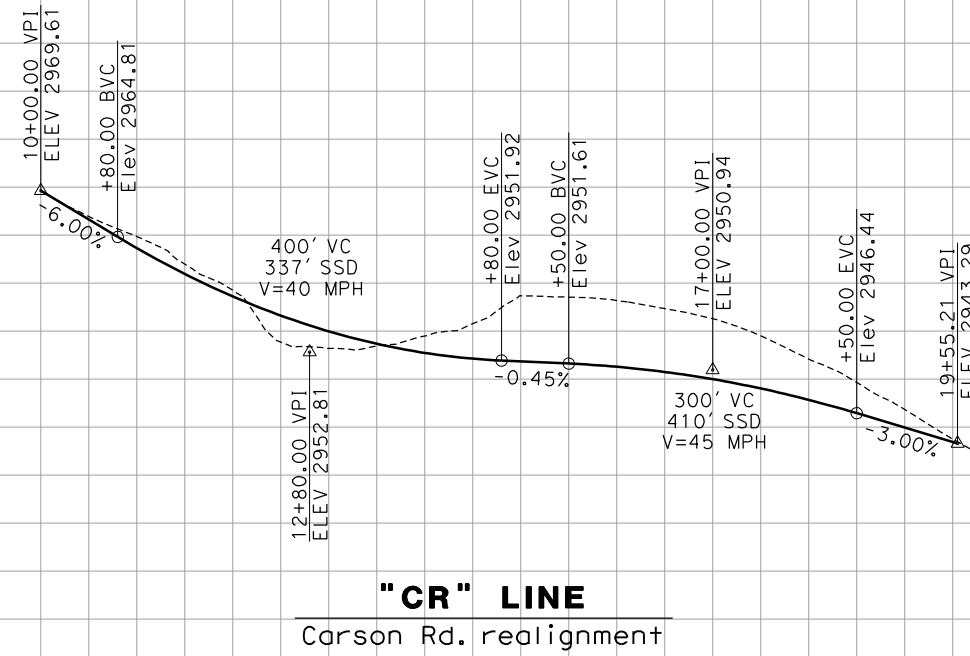
2970

2960

2950

2940

2930



"CR" LINE
 Carson Rd. realignment

Station 10+00 15+00 20+00

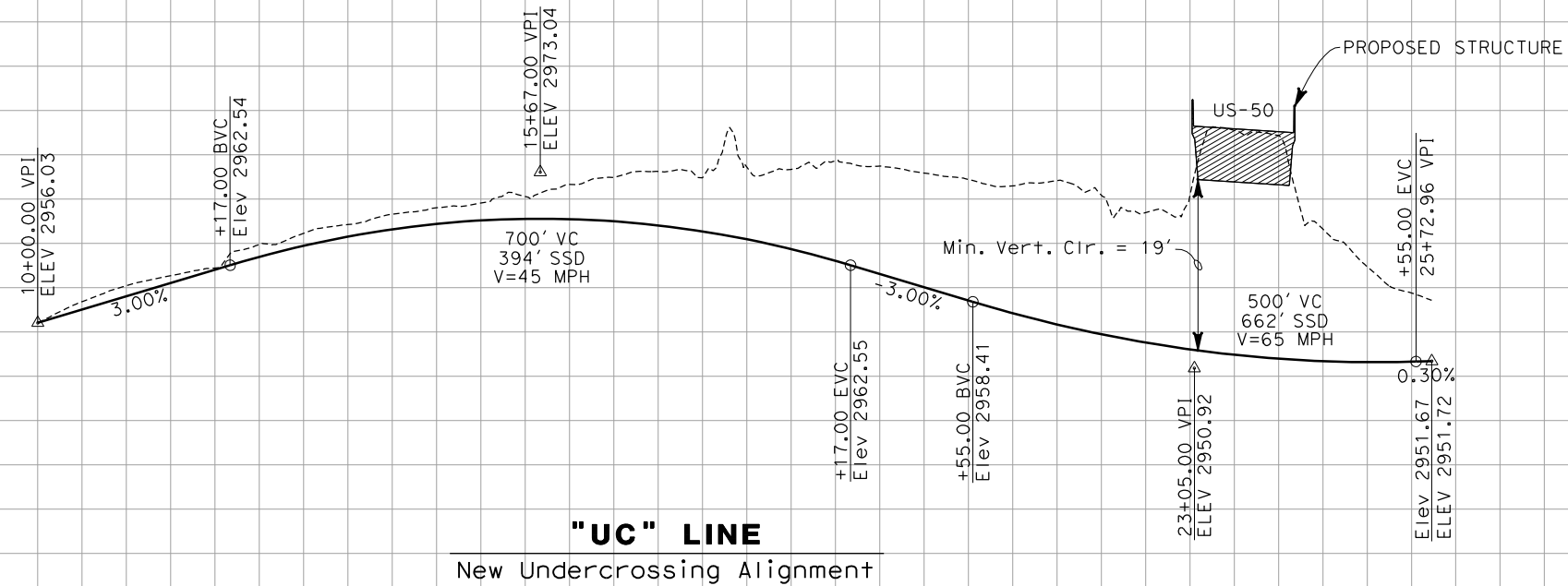
Exc
 Emb

2980

2970

2960

2950



"UC" LINE
 New Undercrossing Alignment

Station 10+00 15+00 20+00 25+00

Exc
 Emb

2960

2950

2940

2930

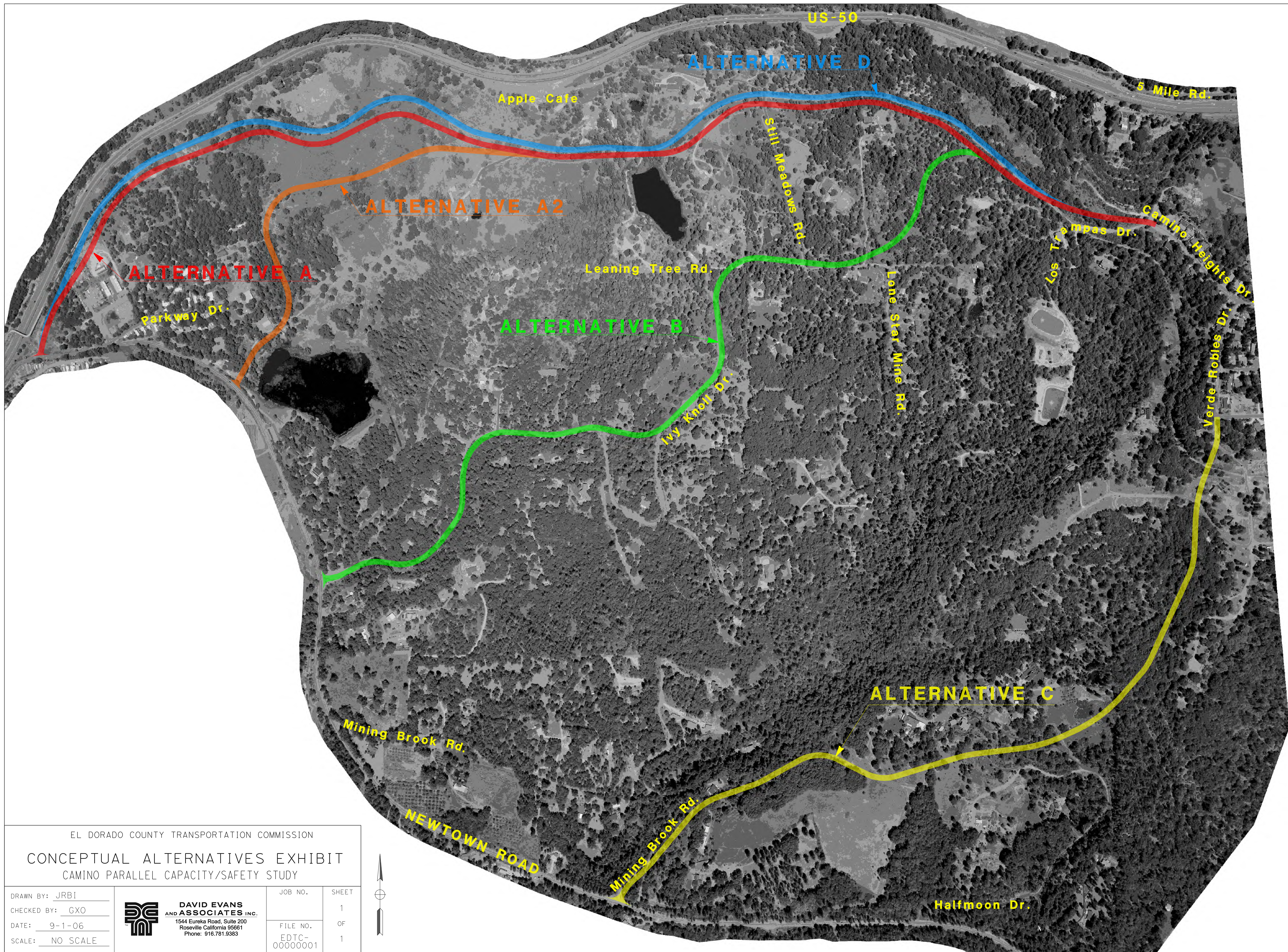
2980

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APPENDIX K



EL DORADO COUNTY TRANSPORTATION COMMISSION

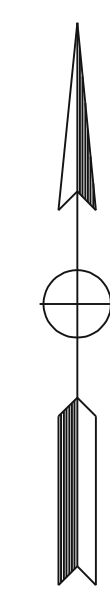
CONCEPTUAL ALTERNATIVES EXHIBIT
CAMINO PARALLEL CAPACITY/SAFETY STUDY

DRAWN BY: JRBI
CHECKED BY: GXO
DATE: 9-1-06
SCALE: NO SCALE



DAVID EVANS
AND ASSOCIATES INC.
1544 Eureka Road, Suite 200
Roseville California 95661
Phone: 916.781.9383

JOB NO.	SHEET
FILE NO.	OF
EDTC-0000001	1



CAMINO PARALLEL CAPACITY / SAFETY STUDY ALTERNATIVES EVALUATION MATRIX

	ALTERNATIVES				
	A	A2	B	C	D
Design Facts					
Alignment Length	9330'	8210'	7950'	6340'	9480'
Average Grade	3.6%	5.2%	6.4%	9.2%	3.6%
Maximum Grade	10%	10%	15%	15%	10%
Total elevation loss along alignment from Camino Heights	340'	430'	510'	585'	340'
Purpose and Need Issues					
Access to Still Meadows residents	YES	YES	YES	NO	YES
Access to Camino Heights residents	YES	YES	YES	YES	YES
Trip length from Camino Heights to Newtown Rd. @ Parkway Drive	1.9 miles	2.0 miles	2.2 miles	2.7 miles	1.9 miles
Natural, Environmental & Physical Impacts					
Impacts to El Dorado Trail - % of alignment adjacent to El Dorado Trail	95%	60%	20%	0%	100%
New Crossing of El Dorado Trail	YES	YES	YES	YES	NO
Direct Environmental Impact (quantity of earthwork in cubic yards)	71,000	71,000	58,000	140,000	50,000
Proximate to saturated soils / springs / mine shafts & tunnels	YES	YES	YES	NO	YES
Impacts to Important Biological Corridor (IBC) - % of alignment within Important Biological Corridor	50%	50%	95%	100%	50%
Property Impacts (Number of impacted parcels incl. slope easements)	17 Parcels	17 Parcels	29 Parcels	17 Parcels	26 Parcels
New Crossing of New Weber Ditch (El Dorado Irrigation District)	NO	NO	YES	YES	NO
Planning-Level Cost Estimate					
Right-of-Way	\$ 1,280,000	\$ 1,130,000	\$ 1,100,000	\$ 880,000	\$ 250,000
Slope Easement	\$ 530,000	\$ 490,000	\$ 310,000	\$ 770,000	\$ 400,000
Roadway Construction (incl. mobilization & 30% contingency)	\$ 6,890,000	\$ 6,480,000	\$ 5,590,000	\$ 8,050,000	\$ 5,750,000
TOTAL COST	\$ 8,700,000	\$ 8,100,000	\$ 7,000,000	\$ 9,700,000	\$ 6,400,000

APPENDIX L

DEPARTMENT OF TRANSPORTATION**DISTRICT 3**

703 B STREET

P. O. BOX 911

MARYSVILLE, CA 95901-0911

PHONE (530) 741-5710

FAX (530) 741-5761

TTY (530) 741-4509

*Flex your power!
Be energy efficient!*

August 2, 2007

Kathryn Mathews, Director
El Dorado County Transportation Commission
2828 Easy Street, Suite 1
Placerville, CA 95667

REC'D AUG - 6 2007

Re: Camino Area Parallel Capacity/Safety Study

Dear Ms. Mathew:

This letter is in response to EDCTC's request for Caltrans position on the feasibility of signals on mainline US50, specifically at the Still Meadows Road (PM22.05), Camino Heights/West Carson Road (Lower PM 23.40), and East Carson Road (Upper PM 24.05) intersections.

The preliminary/draft operational analysis dated June 26, 2003 prepared by CT Rural Highway Operations for the SR50 Freeway Conversion Project concluded that, for the 'No Build' scenario (existing configuration), no signal warrants would be satisfied through the year 2029 at the West Carson Road and East Carson Road intersections. Presently, the Still Meadows Road intersection does not meet signal warrants and likely nor will it meet any warrants through the Year 2029.

US50 through this area is a high-speed facility situated in a mountainous area. Installing signals in this area could increase safety problems, not decrease them. Considering the steep terrain and safety implications, doing a study for the installation of signals at the above locations is not recommended by Caltrans.

If you have any questions or need further information please e-mail (rick_montre@dot.ca.gov) or call Mr. Rick Montre at (530) 741-5745.

Sincerely,

Handwritten signature of Andrew Brandt in black ink.

ANDREW BRANDT

Traffic Operations, Office Chief

c: Robert Peterson, Traffic Safety

Clark Peri, PPM

Dave Gamboa, Signal Ops



EL DORADO TRANSIT

6565 COMMERCE WAY
DIAMOND SPRINGS, CA 95619-0454
(530) 642-5383
(888) 246-BUSS
FAX (530) 622-BUSS
www.eldoradotransit.com

June 21, 2007

Ms. Kathryn Mathews, Executive Director
El Dorado County Transportation Commission
2828 Easy Street, Suite 1
Placerville, CA 95667

Re: Camino Area Parallel Capacity/Safety Study

Dear Ms. Mathews:

The El Dorado County Transit Authority (EDCTA) currently operates a deviated fixed route service between Pollock Pines and Placerville. In the eastbound direction, the route includes a stop at the park and ride lot adjacent to Camino Heights Drive. However, in the westbound direction, EDCTA buses do not stop at Camino Heights due to serious safety concerns of a left turn across state route highway 50 traffic, both entering and exiting Camino Heights Drive.

EDCTA supports any potential improvement(s) that will enhance the existing intersection and provide an opportunity for safe access for public transit buses to enter and exit the Camino Heights and Camino Hills subdivisions. The existing park and ride lot, El Dorado Trail, potential future El Dorado High School campus and proximity to state route highway 50 make this a viable location for students, commuters and transit-dependent individuals to utilize EDCTA's services.

Please consider these factors when evaluating alternatives to improve public safety and operations in the Camino area.

We appreciate your time and consideration. Feel free to contact me with any comments or concerns at mjackson@eldoradotransit.com or (530) 642-5383 extension 210.

Sincerely,

Mindy Jackson
Transit Director

EL DORADO UNION HIGH SCHOOL DISTRICT

BOARD OF TRUSTEES

www.eduhsd.k12.ca.us

SUPERINTENDENT

TIMOTHY M. CARY
KIRBY L. EHLER
MARY T. MUSE
MADELINE T. RESTAINO
LORI M. VEERKAMP

SHERRY J. SMITH

August 2, 2007

REC'D AUG - 7 2007

Kathryn Mathews
Executive Director
El Dorado County Transportation Commission
2828 Easy Street, Suite 1
Placerville, CA 95667

RE: Camino Area Parallel Capacity/Safety Study

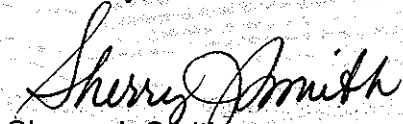
Dear Ms. Mathews:

El Dorado Union High School District (EDUHSD) owns a large plot of land adjacent to Highway 50 in the Camino Heights area. Currently, student use of this site is at a minimal level. However, this area will most likely see an increase in student activity related to a new Natural Resource and Land Management program being developed at El Dorado High School. This site offers wonderfully unique and practical learning opportunities for our students.

EDUHSD supports any improvements designed to provide for safe exit and entry onto Highway 50. The existing options provide either eastbound only lanes or cross highway entry for westbound travel. Safe transportation options for students are vital to expanding the opportunities afforded by this location.

We appreciate the time and energy put forth to determine the best plan for this corridor. Please feel free to contact Matthew Barnes at El Dorado High School (530-622-3634, ext. 1025, or mbarnes@eduhsd.k12.ca.us) if you have any questions or require additional information.

Sincerely,



Sherry J. Smith
Superintendent

/st

APPENDIX M

TRANSPORTATION PROJECT TIMELINE

REGIONAL TRANSPORTATION PLAN
A 25 YEAR PLAN

FUNDING WAITING PERIOD
6 MONTHS - 10 YEARS

PROJECT STUDY REPORT
6 - 18 MONTHS

STATE TRANSPORTATION
IMPROVEMENT PROGRAM
3 MONTHS - 3 YEARS

ENVIRONMENTAL PHASE
1-10 YEARS

ENVIRONMENTAL
STUDIES

ENVIRONMENTAL
IMPACT

PUBLIC
HEARINGS

SELECTION OF
ALTERNATIVE

RIGHT OF WAY ACQUISITION &
PLAN SPECIFICATIONS ESTIMATES
2 - 4 YEARS

CONSTRUCTION
1 - 3 YEARS