

**Attachment 1_Reno Gazette Industrial Boom
Article**



Industrial Boom

Storey County's next big chapter in development

Susan Voyles

RENO GAZETTE-JOURNAL

5/8/2005 12:41 am

PATRICK - Just beyond the Tracy power plant east of Reno, Lance Gilman sounds like a submachine gun as he points out the sights on this high plateau in Storey County's back country.

To the left, the sagebrush-covered land is for an industrial plant. That, over to the right, is sold.

For several miles on the under-construction highway, Gilman ticks off one land sale after another 20, 40, 60 and even 100 acres of industrial sites at the Tahoe-Reno Industrial Center.

The business park sold or has in escrow more than 1,000 acres of industrial land since Wal-Mart announced in December plans to build a major distribution center here, said Gilman, who owns the park with Don Roger Norman. Selling that much industrial land took 11 years at Reno's South Meadows Business Park when the two partners developed it in the 1990s, he said.

Economic development officials say the park will have an impact on business in the Reno-Sparks area. While most of the park's customers are expected to be new businesses to the area, some local businesses can be expected to relocate to the park if they need to build larger facilities. And that will leave empty buildings in town to be filled with new businesses or razed for other uses.

But overall, the monster-sized industrial park is expected to boost the economy as a whole, providing thousands of new jobs.

About 600 trucks a day will leave Wal-Mart's 1 million square-foot distribution center, loaded with goods destined for northern California and Nevada.

"When you walk up and down the aisles of Wal-Mart, you'll see who's coming," Gilman said. "You'll see who's going to be opening manufacturing centers, moving merchandise out one back door and into another."

He expects thousands of new jobs will be created, paying rates of \$15-\$20 an hour.

First, the road

In landing the 160-acre site for Wal-Mart, construction began on a four-lane highway called USA Parkway that eventually will open up most of the 104,000-acre private industrial-park, which the developers claim is the world's largest. The back door of the park will be at Silver Springs, 18.5 miles away.

The road's first five miles of the road should be finished by the end of the summer. Construction of Wal-Mart is scheduled to begin Aug. 1 and about six other companies will start work soon after.



Andy Barron/Andy Barron

Workers prepare land for a new road last month at the Tahoe-Reno Industrial Park in Storey County.

TAHOE-RENO INDUSTRIAL CENTER/FEATURES

* Redundant electrical power. Sierra Pacific Power Co. operates the Tracy power plant and the Pinion Pines plant. Barrick Gold Corp. is building a natural gas powered plant. And the Naniwa natural gas plant sits ready for use for any emergency on the West Coast.

Natural gas is available in two lines, including a pressurized line. A company in the park refines mixed vehicle fuels from the Sparks Tank Farm and sells it at a discount.

* Water comes from three water wells on site. Two water storage tanks sit on top of hills and one more is being built, for a total of four million gallons. More are planned. A \$1 million study by the U.S. Geological Survey will determine the extent of a sustainable groundwater supply of the Patrick-Tracy hydro basin, including the industrial park. Results of the six-year study are to be released within a few months.

Depending on the results, the state will rule on the park's applications for 18,000 acre-feet of groundwater. About 3,000 acre-feet are now permitted. Water and sewer treatment facilities are paid for by park users through the TRI General Improvement District. The sewer plant will be expanded this fall to treat one million gallons per day.

* A railroad line through the park will be extended another 3.6 miles by this fall. About 2.8 miles of track already has been built as well as a bridge over the tracks.

* A mountain top is being leveled for gravel and rock to build the park - and will be sold as a prime office spot when cleared. A cement plant is expected to be built within a year.

By the end of the year, the first 5,000 acres could be sold on the high plateau. So far, 2,000 acres have been sold, Gilman said. The first plants were built around Sierra Pacific Power Co.'s Tracy power plant. That 5,000 acres would eventually be home to 100 million square feet of industrial buildings. That compares with 58.5 million square feet of industrial buildings in Reno and Sparks.

For this first phase, Gilman said Norman will have invested about \$70 million in building roads and utilities. He bought 102,000 acres for \$20 million in 1998. Gilman said Norman was the only one of five bidders who brought cash when Gulf Oil Co. offered it for sale. Gulf Oil had planned a big-game preserve.

The park will have two more phases and is mapped for 31,000 acres of industrial space.

"It's 160 square miles. From Interstate 80, nobody would ever dream there was all this developable property up here," Gilman said. Only the highway being built to the high plateau and a future Wal-Mart is visible to motorists passing on Interstate 80.

James Hardie Industries opened six months ago a plant to make concrete-based siding.

"We love the location," plant manager Harv Shelton said. "We love the employees we are getting from Reno, Sparks and Fernley."

The lowest-paid jobs start at \$12.55 an hour. Shelton's only complaint is a railroad spur for bringing in supplies and shipping product was delayed, partly due to the harsh winter and flooding. The spur should be done by July, he said.

One location advantage is that Nevada Cement Co., its main supplier, is just a few miles away in Fernley.

Business from Washoe

While most of the companies are new to the region, Gilman also expects to draw businesses from Washoe County. The industrial center, nicknamed the TRI park, offers inexpensive land, lower property-taxes and nobody nearby to bother, Gilman said. As some Reno-area businesses migrate, he expects the abandoned land could be turned into retailing or housing.

Chuck Alvey, Economic Development Authority of Western Nevada executive director, said companies looking to build big buildings are forced to the region's outskirts, such as Stead, northern Spanish Springs, Fernley and the TRI park. Within central Reno and Sparks, he said, sites are unavailable.

Alvey said EDAWN will put together a campaign this fall to fill vacated spaces in Reno and Sparks with offices and high-technology businesses. The region has a big card to play: It recently was named the No. 1 place to do business by Inc. Magazine. Regionwide, he said, the building and development is unprecedented. He compared it with Phoenix's boom days in the early 1990s.

Dave Simonsen, Alliance Commercial Industrial Group vice president in Reno, said land prices factor into the park's success. TRI is selling land for \$1.95-\$2.10 per square foot versus \$3.34 per square foot in Stead, \$3.50 in Spanish Springs and \$2.50 in Fernley.

He said a drawback could be the drive to the park, about 15-20 miles from downtown Reno.

Warehouses and distributors want to pay workers about \$9 an hour, but "they have to pay a little more out there," said Simonsen, a local industrial real-estate broker for 15 years.

Alvey doesn't believe the commute will affect wages because of workplace supply-and-demand.

Gilman said the industrial park could absorb hundreds of former Reno casino workers, some now working at convenience stores or in other low-paying jobs. Washoe County has lost 8,400 gaming jobs since 2001.

An industrial setting

The park is heavy-duty industrial compared with the more stylish South Meadows Business Park, which mixes commercial and industrial space. At TRI, steel buildings and outdoor storage areas are allowed. Gilman also has sold the top of two knolls for offices that are to be built with factories.

Sales at the park were slow at first, Gilman said. The Sept. 11 attacks virtually stopped business expansion for two years. He

said he quit going to trade association conventions.

Gilman, in charge of sales, is the front man in his partnership with Norman. He detoured into the Harley-Davidson business in the 1990s, opening a Carson City shop that later was sold. He became a minister in 1997 to wed couples on their Harleys in the store's chapel. He opened the Wild Horse Resort & Spa, next to the TRI park, in 2003. His office is in a house behind the brothel, managed by his girlfriend Susan Austin.

At the Double Diamond Ranch, including the South Meadows park, Norman bought his first 500 acres in Reno in 1988 and then took ownership of all of 2,300 acres in 1994. Norman and Gilman also developed commercial properties in San Diego.

Gilman said the brothel hasn't hurt sales. The land along the road to the brothel is sold and soon will be developed, he said. Working with the Flying J company, he plans to build a truck shop next to the brothel.

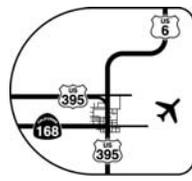
Vince Griffith, the project's engineer, said he expects people will live in new housing in Fernley, Dayton and Reno-Sparks.

Five national home builders are interested in buying more than 7,000 acres on the park's fringes, Gilman said.

"Everybody is aware Inc. Magazine has named the area No. 1 for business in the nation," he said, including the home builders.

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Attachment 2_Restricting Trucks to the #1 Lane



BISHOP AREA

ACCESS & CIRCULATION STUDY

Pros and Cons of Restricting Trucks To The Number 1 Lane Through The City of Bishop

February 2006

The posted restriction of trucks to the inside lane through Bishop's central business district (CBD) has frequently been raised as a possible way to reduce their perceived impact to pedestrian users of the corridor. In the CBD, the existing narrow right of way (R/W) does not allow for a full shoulder. The proximity of the outside travel lane edge to the sidewalk can make pedestrian activities uncomfortable. Barriers, disguised as planters, have been placed along the sidewalk edge to provide separation between traffic and pedestrians. Additionally, the nearness of traffic combined with the "canyon effect" of Bishops tall buildings, makes traffic noise levels seem excessively loud to pedestrians. The restriction of trucks to the inside lane seems an obvious solution to these problems. However, Bishops narrow R/W and the US 395/US 6 junction proximity to the CBD make this obvious solution just one more option with negative aspects. This paper has been prepared to provide some understanding of the consequences of posting truck lane restrictions within Bishop's CBD.

The existing Main Street/US 395 R/W is very restricted in the Bishop CBD between Line Street and East Elm Street. At one point the R/W is as little as 67 feet. In order to provide a center turn lane and not reduce the existing width of the sidewalk, a design exception was obtained to stripe some lanes less than the 12 ft minimum required by Caltrans design standards. Currently, at the narrowest point of the R/W, the road is striped with a 10 ft center turn lane, 10 ft NB and SB inside lanes, and 12 ft NB and SB outside lanes. Leaving only 6.5 feet for each of the sidewalks and gutters along existing Main Street at that location.

To conform to current minimum Caltrans design criteria for a 5-lane section with sidewalks 96 ft would be needed. This minimum cannot be met without the partial demolition of one side of Bishops downtown corridor. Existing Main Street's roadway is constrained by buildings located at the right of way line on both sides. Many of these buildings are from the early 20th century and were constructed when average daily traffic (ADT) volumes were low and congestion was nonexistent. Building at the edge of the R/W wasn't a problem when Main Street ADTs were low enough to only need one lane of traffic in each direction. With just a 2-lane road it was possible to have parking along each side of the street and room for sidewalks within that 67 feet. Bishop has changed over the decades. With current ADTs nearing 18,000, not only is parking on Main Street impossible, traffic congestion (even with 4 lanes and a center turn lane) is a problem we deal with everyday. The restricted R/W Caltrans currently has in the CBD just cannot do everything being required of it; much less what is desired of it.

As previously stated, it has been suggested, in order to avoid the perception of too narrow sidewalks and to possibly reduce noise levels, that Caltrans restrict truck traffic to the inside lanes. Reversing the existing striping to make the inside lane a full 12 ft and the outside lane 10 ft. This idea, along with re-striping all lanes to 11 ft, has been discussed repeatedly at Caltrans. The issue just is not as simple as it may seem. The overall safety of all users of the CBD needs to be considered before an informed decision can be made to change the existing striping and signing.

The California Vehicle Code requires trucks to use the outside lane except to pass. For trucks to legally travel in the inside lane there must be a sign allowing, or restricting, them to that lane.

Delivery trucks would not be bound by these rules if their deliveries were to a side street within the lane restriction area. Currently, Bishop is posted to allow trucks to travel in either lane through the downtown core. A spot study done on February 24, 2006 showed that 26% of truck drivers choose to use the inside lane. See tables below. This percentage of use is fairly high considering the inconvenience and difficulty to truck drivers involved in lane changing and that it's a permissive situation. Posting truck lane restriction to the inside lane would certainly obtain higher usage of the inside lane, but to gain full compliance there would need to be strong enforcement. Without extensive enforcement, many trucks will probably continue to do what is easiest, which is to stay in the outside lane. Without full compliance faster cars may "slalom" through truck traffic decreasing the safety of the cars by increasing the lane changes made by them.

Consideration should also be given to the reduction in safety to trucks that may occur with the forced lane changing lane restriction would require. Inside lane restrictions would result in trucks being required to make two lane changes that many normally wouldn't need to make. The reduced safety of lane changing is also compounded with the problem of NB US 6 trucks that would only have a fairly short length to move back to the outside lane to make the US 6 turn at the Wye. With about half of the trucks traveling through Bishop destined for US 6, many trucks would be trying to change back to the outside lane past the Bishop CBD in order to make the turn at US 6. Anyone who has tried to change lanes to make the right turn onto US 6 on a Friday evening during ski season, or fishing season, or mule season, knows the trouble even a car can have in making this movement. To try and do it in a semi using only right side mirrors to check for breaks in the faster moving cars passing them on the right would be much more difficult.

If, in addition to the lane restriction, the lanes are re-stripped with the inside lane 12 ft and the outside lane 10 ft, without good truck compliance, the negative result of placing non-compliant trucks even closer to the sidewalk occurs. Even if good compliance is obtained, one result of slower moving trucks traveling in the inside lane would be the shift of the faster moving cars to the outside lanes. Not only are these cars faster but in order to make the inside lane larger the outside lane edge line will have been shifted even closer to the sidewalk. Additionally, since most drivers use the lane lines to center their vehicles, all other vehicles not restricted to the inside lane (including cars, motor homes, and vehicles towing trailers) will center themselves in the narrower outside lane and be even closer to the sidewalk.

Another possibility is to stripe all the lanes 11 ft. This would distribute the limited lane width available equitably. Increasing the inside lane width by 1 foot may make the inside lane more attractive to trucks and perhaps more trucks would choose to use the inside lane even if they aren't restricted to it. Decreasing the outside lane width by 1 foot would also minimize the "centering shift" of all the other vehicles traveling in the outside lane. Distributing the lane widths equally does not however fix the problem of faster cars passing trucks on the right or the reduction in safety that would be experienced by trucks in changing lanes. In fact, by making the inside lane more attractive to trucks, but not restricting them to that lane, trucks may be distributed evenly into both lanes. This could result in faster moving cars "slaloming" through truck traffic decreasing the safety of the cars by increasing the lane changes made by them. As stated previously without strong local enforcement, even if the CBD were posted for truck lane restriction to the inside lane, it is unlikely that full compliance will be obtained and car "slaloming" would happen in this situation also.

Another consideration is that since the sidewalks are so close, it would be best to keep the most experienced drivers closest to the sidewalks and keep less experienced drivers further from the sidewalk. Truck drivers do have stricter licensing requirements and generally have more experience driving than the average car driver. Even though what they are driving is large they spend more time in, and are more familiar with, their vehicles than the average driver. Restricting trucks to the inside lane would put the less "tested", less experienced, and faster drivers closer to pedestrians.

In conclusion, there is no easy answer. The overriding problem of not having enough right of way remains. None of the options available are true solutions. All options have negative aspects that reduce the safety of some users. The only real solution to reducing the impact of trucks to pedestrians in Bishop's CBD is to provide trucks with a separate route away from pedestrians.

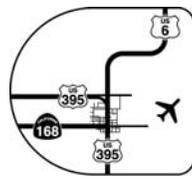
Lane Distribution of Trucks on US 395 in Downtown Bishop*
February 24, 2006

Time	NB #1	NB #2	NB Total	NB #1% Use	NB #2% Use	SB #1	SB #2	SB Total	SB #1% Use	SB #2% Use
1320 To 1420	8	13	21	38	62	3	13	16	19	81
1430 To 1530	4	15	19	21	79	9	20	29	31	69
1530 To 1630	4	9	13	31	69	3	16	19	16	84
Total	16	37	53	30	70	15	49	64	23	77

Count All #1	Count All #2	Total Count	Total #1% Use	Total #2% Use
31	86	117	26	74

*Counts taken between Academy and East Pine Street.

**Attachment 3_Economic Impact Factors in
Rural Community Bypass Scenarios**



BISHOP AREA

ACCESS & CIRCULATION STUDY

Economic Impact Factors in Rural Community Bypass Scenarios

A compilation of relative points and factors extracted from a variety of study summaries

November 7, 2003

This list is a compilation of selected relative and key extractions from a variety of reports and studies addressing the issues of bypassing communities/cities. There are a lot of methods used to come to some conclusions in these documents, but all admit that these models and study methods are completely subjective and that no one scenario can be directly applied to another. Fortunately, there are some general conclusions (general being the key word) that may be helpful to observe.

Note: As identified in the 2000 Census, the total population of the incorporated area of the City of Bishop is 3,575, whereas the total population of the immediate Bishop service area is 10,851 (this is the total population of the study area or the immediate surrounding unincorporated area and the incorporated City area of Bishop combined). Another important factor to note concerning the Bishop Area is the unique land use scenario. Inyo County as a whole has only 4% of the total land base in private holdings. The vast majority of the land in the valley floor is owned and managed by the Los Angeles Department of Water and Power (LADWP), surrounded then by primarily the Bureau of Land Management, the United States Forest Service, and the United States Parks Service lands. In particular, most of the land in the Bishop Area is owned by LADWP. In the case of a potential Bishop bypass, this land use scenario will prove most advantageous. In no other case studies found have bypassed communities had this type of an advantage to fend of the potential for satellite development.

BYPASS POINTS

Wisconsin Bypass Study Major Conclusions

- In most communities, highway bypasses have little adverse impact on overall economic activity. The economies of smaller communities [less than 2,000 population] have a greater potential to be adversely impacted by a bypass.
- Very little retail flight has occurred in bypassed communities, meaning that few businesses have relocated or developed new operations in areas adjacent to the bypass route.
- Communities view their bypasses as beneficial overall, while at the same time communities and individual businesses understand that the bypasses presented changes that must be addressed proactively.
- Communities and business districts that have a strong identity as a destination for visitors or for local shoppers are the ones that are most likely to be strengthened due to the reduction in traffic delays through their centers. However, there is also a broad

perception that adequate signing to the bypassed business center is an important need (and concern) for ensuring its continued success.

Kansas Bypass Study Primary Findings

- In the long term, typical bypasses in Kansas probably do not have significant negative effects on the local economy. Most counties and many towns may have benefited in the long term from the construction of bypasses.
- In the short term, effects on individual firms are different from effects on the aggregate work force. In Kansas towns, bypasses probably did not have negative short-term effects on the town as a whole. Bypasses probably did have transitory negative impacts on selected firms. The negatively impacted firms are concentrated in travel-related businesses, including restaurants, bars, motels, and service stations. However, not all travel-related firms in bypassed towns were negatively impacted.
- Many other factors other than bypasses affect the economy of small towns and individual firms, and these various factors together are substantially more important than bypasses [these other factors may include regional and national economic trends, population movements away from small towns, and shifts in retailing toward large chain stores].

Iowa Bypass Study Findings

- The results from analyzing the secondary data indicate that the overall levels of retail sales in a community are not significantly affected by the presence of a bypass.
- The benefits of an improved flow of traffic from bypasses around rural communities along a transportation corridor does not appear to be offset by losses of retail sales in the aggregate.... Businesses serving the local trade area and those dependent on repeat customers are actually likely to benefit from an improved downtown shopping environment. A transfer among individual business owners appears to be occurring in these communities where certain businesses along the old highway close and others open along the new bypass. Over time, the majority of merchants appear to be adjusting to the new situation and report being in favor of the bypass.
- The overall majority of respondents favored the bypass. Regardless of [their] location, a majority of merchants agreed that the traffic volume and noise had decreased since the bypass. They thought the shopping environment and accessibility of suppliers and delivery trucks to their places of business had improved or not changed since the opening of the bypass.

Texas Bypass Study Conclusions

- The economic impact of highway bypasses on small cities in a rural setting is not uniform across cities and in most cases appears to be rather minor. The way in which a social and business community responds to a highway bypass is complex and involves the interaction of several factors.
- Individual case studies show that local communities might not necessarily perceive bypasses as negative. Rather, the construction of a bypass is seen as one of many

factors contributing to the overall economic performance of a city in a rural setting. The initial decreases in certain types of sales were often counteracted by reorientation of local stores. Political and business leadership in a given area seems to play an important role in the evolution of the city after bypass opening.

- The ratio of the distance on the relief route to the distance on the old route has a positive impact on per capita sales for the service sector, but does not significantly impact other indicators. Basically, the closer the bypass route is to the business district or downtown core, the better. This being a potential positive factor, needs to be coupled with good access and signing from the new route to the old route.

Oregon DOT Bypass Study Conclusion

- This study verifies the importance of supporting bypass facilities through land use planning and of acquiring and maintaining access control.

National Transportation Research Board Bypass Study Conclusions

- For the most part, bypasses seem to have favorable impacts on rural communities and small urban areas, but evidence in these studies is often weak.
- In most bypass cases adverse effects on otherwise viable bypassed businesses appeared to be largely recouped by improved ambiance for patrons and residents in the community, although individual businesses may suffer when a new bypass is opened.

United States Chamber of Commerce Bypass Study Notes

- A large share of traffic on the average City Street is local in nature and cannot be bypassed.

Advantages:

- *Business activity generally increased* due to improved traffic conditions. The loss of tourist trade is usually more than offset by increase in local trade, and truck drivers don't normally shop in the business centers anyway.
- *Pedestrian safety and convenience increased* through reduced volume of heavy, fast through traffic.
- *Parking made more convenient*, due to reduced conflicts between parking vehicles and through traffic.
- *Fewer traffic accidents and delays* on city streets due to separation of local and through traffic.
- *Reduced hazards* of explosion, fire and gas leaks from trucks (carrying liquefied petroleum gas and other explosive or inflammable products) traveling through crowded streets in business districts.

Disadvantages:

- The principle disadvantage of bypasses occurs where the bypass is installed where or when it is not needed. In this case some business activity may suffer. Disadvantages

to all concerned may be realized, therefore, where inadequate planning result in improper bypass location and design.

- Where bypass construction is justified, about the only drawback, more feared than realized, is the possible loss of revenue from tourists and other through traffic.
- There is no doubt that a certain amount of trade may be lost to some few individuals; however, businessmen point out that this is generally more than offset by benefits to the entire community, assuming, of course, that construction of the bypass is warranted.

Caltrans Bypass Study Summary

- A bypass can enhance overall economic activity, or a community's perception of economic health, but there is no strong statistical evidence showing bypasses to have this effect, especially in smaller communities.
- Overall, communities generally consider bypasses to be beneficial, with some dissent among traffic-serving business owners along the bypassed routes.
- Local leaders can influence the effects a bypass might have through access management, land use, and development guidelines.
- The geographic location and existing economic health of a community have a large role in determining the effects a bypass might have.
- Small communities (under 2,000 in population) are most likely to be adversely impacted by a bypass.

Compilation of key points condensed from all studies:

- The main question concerning whether to bypass or not is: Is it needed?
- A large share of traffic on the average City Street is local in nature and cannot be bypassed.
- Bypasses that are warranted are likely to have a positive affect on the community as a whole, in communities with a population of over 2,000.
- The closer the bypass route can be located to the old route/downtown core, the better the likelihood of economic prosperity.
- Well-planned and designed access from the new route to the old route and downtown is very important for accommodating continued downtown commerce.
- The more of a proactive approach a community and it's leaders take in planning for a bypass the more positive the economic effects will be.
- Communities that are destinations usually experience positive economic effects.
- Communities as a whole usually prosper from the effects of a bypass, while some traffic oriented businesses may suffer.
- The biggest issue with most all bypasses is the socioeconomic impact factor.
- The issues that effect the success or failure of a bypass vary greatly and are too specific to a particular case to directly compare one to another.
- The geographic location and existing economic health of a community have a large role in determining the effects a bypass might have.
- Supporting bypass facilities through land use planning and acquiring and maintaining access control is very important to the success of a bypass.

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9. *How Bypasses Affect Business*. United States Chamber of Commerce (1956).

**Attachment 4_Traffic Study Report, Inyo US
395**

Memorandum

To: DONNA HOLLAND
Design

Date: November 17, 2005

File: 09-31460K

From: 
STEPHEN WINZENREAD
Traffic Operations

Subject: Traffic Index (TI) Calculations and Design Designation

Attached you will find the Traffic Index (TI) Calculations and Design Designation for the above referenced project.

Data Year.....	2004 AADT = 17300
Construction Year AADT.....	2025 AADT = 21320
5 Year AADT.....	2030 AADT = 22410
10 Year AADT.....	2035 AADT = 23550
20 Year AADT.....	2045 AADT = 26010
5 Year TI.....	2030 TI = 9.5
10 Year TI.....	2035 TI = 10.5
20 Year TI.....	2045 TI = 11.5
Construction Year DDHV.....	2025 DDHV = 1260
5 Year DDHV.....	2030 DDHV = 1320
10 Year DDHV.....	2035 DDHV = 1390
20 Year DDHV.....	2045 DDHV = 1540
2004 Directional Split = 63.23 %	
2004 Trucks = 6.0 %	

If you have any questions, please do not hesitate to call me. I may be reached at (760) 872-0711 or CALNET 8-627-0711.

Attachment

c: File

TRAFFIC INDEX and DESIGN DESIGNATION CALCULATION SHEET

CO-RTE-PM Iny-395-111/122.3
EA 09-31460K
JOB NAME BAACS

Requested by: Donna Holland
Unit: Design
Date: 11/17/05

Census Year 2004
Construction Year 2025
Complete Construction Year 2025
2 Way AADT 17,300
Lane Distribution Factor 1.0 (Table 603.3B, Highway Design Manual)

	AM Peak	PM Peak
Peak Hour Percent, K	9.33	10.01
Directional Split, D	63.23	58.28
Product of K and D, KD	5.90	5.83
DDHV = AADT x K x D	1021	1009

PERCENT TRUCKS (%) 6.0
1 WAY TRUCK VOLUME 656
GROWTH FACTOR, %/Year 1.0

-----TRAFFIC INDEX CALCULATIONS-----

Traffic Index Calculations are based on completion of construction per HDM 103.2

FIVE YEAR TRAFFIC INDEX

Vehicle Type	Trucks (%)	Present ADT One Way	Expansion Factor	Expanded ADT One Way	5 Year Constant	Lane Factor	ESALs
2 axle	30	197.0	1.2634	249.0	345	1	85,905
3 axle	10	66.0	1.2634	83.0	920	1	76,360
4 axle	1	7.0	1.2634	9.0	1470	1	13,230
5 axle	59	387.0	1.2634	489.0	3445	1	1,684,605
TOTALS	100	657.0		830.0			1,860,100

Five Year TI **9.5**

TEN YEAR TRAFFIC INDEX

Vehicle Type	Trucks (%)	Present ADT One Way	Expansion Factor	Expanded ADT One Way	10 Year Constant	Lane Factor	ESALs
2 axle	30	197.0	1.2953	255.0	690	1	175,950
3 axle	10	66.0	1.2953	85.0	1840	1	156,400
4 axle	1	7.0	1.2953	9.0	2940	1	26,460
5 axle	59	387.0	1.2953	501.0	6890	1	3,451,890
TOTALS	100	657.0		850.0			3,810,700

Ten Year TI **10.5**

TWENTY YEAR TRAFFIC INDEX

Vehicle Type	Trucks (%)	Present ADT One Way	Expansion Factor	Expanded ADT One Way	20 Year Constant	Lane Factor	ESALs
2 axle	30	197.0	1.3613	268.0	1380	1	369,840
3 axle	10	66.0	1.3613	90.0	3680	1	331,200
4 axle	1	7.0	1.3613	10.0	5880	1	58,800
5 axle	59	387.0	1.3613	527.0	13780	1	7,262,060
TOTALS	100	657.0		895.0			8,021,900

Twenty Yr TI **11.5**

SHOULDER TIs

Design Life	2% ESALs	TI
5 Year	37,202	6.0
10 Year	76,214	6.5
20 Year	160,438	7.0

-----DESIGN DESIGNATION-----

Design Designation is based on year of construction per HDM 103.1

Construction Year AADT.....	AADT (2025) = 21320
Five Year AADT.....	AADT (2030) = 22410
Ten Year AADT.....	AADT (2035) = 23550
Twenty Year AADT.....	AADT (2045) = 26010
Construction Year DDHV.....	DDHV (2025) = 1260
Five Year DDHV.....	DDHV (2030) = 1320
Ten Year DDHV.....	DDHV (2035) = 1390
Twenty Year DDHV.....	DDHV (2045) = 1540
D = 63.23 %	
T = 6.0 %	

Stephen Wingman

TRAFFIC OPERATIONS

November 17, 2005

DATE

TRAFFIC DATA

Project: Bishop Area Access and Circulation Study – Highway 395 – 09-31460K
 INY – 395 – KP 178.79/KP R 196.82 (PM 111.10/PM T 122.30)

The traffic information was compiled using the following sources:

Traffic Data/Index:

2004 Traffic Volumes & 2004 Annual Average Daily Truck Traffic

	Data Year 2004	10 Year 2035	20 Year 2045
AADT	17,300	23550	26010
Peak Hour	1,750	-	-
Peak Month ADT	19,000	-	-
Trucks (% Total AADT)	6%	-	-
Traffic Index, TI	-	10.5	11.5
Growth Rate (per year)	1.0%	-	-

Notes: Data Year = 2004
 Ten and Twenty Year dates from Year of Construction

Speed:

There are nine different speed zones within the project limits and speed surveys will be addressed heading north.

<u>Description</u>	<u>Post mile</u>	<u>Observed (MPH)</u>	<u>85 % (MPH)</u>
65 MPH Zone	111.11 – 113.90	45 – 79	71
55 MPH Zone	113.90 – 114.08	N/A	N/A
45 MPH Zone	114.08 – 114.83	33 – 62	52
35 MPH Zone	114.83 – 115.20	19 – 40	34
25 MPH Zone	115.20 – 116.20	22 – 40	34
35 MPH Zone	116.20 – 116.51	25 - 52	42
45 MPH Zone	116.51 – 118.55	33 – 64	52
55 MPH Zone	118.55 – 118.81	45 – 72	62
65 MPH Zone	118.81 – 122.30	50 – 73	66

TRAFFIC DATA

(Continued)

Accident Data:

3 year Table B – 04/01/02 to 03/31/05

Summary: One hundred five (105) collisions during the three-year period resulted in the total accident rate (0.70) being below the statewide average rate (1.04).

Thirty-seven (37) injury collisions (62 injured) combined with four (4) fatal collisions (4 fatalities) resulted in the actual F&I rate (0.27) being below the statewide average rate (0.47). The actual fatal rate (.026) was below the statewide average rate (.027).

79% (83) occurred when the weather was clear
19% (20) occurred while cloudy
2% (2) occurred when snowing

66% (69) occurred during hours of daylight
24% (25) occurred while dark – no lighting
10% (11) occurred while dark - lighting

94% (99) occurred when the pavement was dry
4% (4) occurred when the pavement was snowy/icy
2% (2) occurred when the pavement was wet

53% (56) were multi-vehicle collisions

56% (59) were traveling S/B

31% (33) were hit object type collisions:

(4 each) hitting a:

- Utility pole
- Cow in roadway
- Traffic sign/post
- Fence
- Dike/curb

(3) Hitting a deer in the roadway

(2) Over embankment

(1 each) hitting a:

- Wall
- Paddle marker
- Embankment
- Wood in roadway
- Utility box
- Light or signal pole
- Sign – not traffic
- Golf ball

28% (29) were broadside collisions

TRAFFIC DATA

(Continued)

Summary (cont.):

- 15% (16) were rear end collisions
- 8% (8) were sideswipe collisions
- 8% (8) were auto vs. pedestrian collisions
- 5% (5) were auto vs. bicycle collisions
- 3% (3) were head-on collisions
- 3% (3) was an overturn collision

Primary collision factors were:

- 30% (32) Failure to yield R/W
- 25% (26) Improper turn
- 18% (19) Unsafe speed
- 6% (6) Driving under the influence
- 4% (4) Other than driver – vs. cow
- 3% (3) Fell asleep
- 3% (3) Other than driver – vs. deer
- 2% (2) Failure to ride on right side of roadway
- 2% (2) Pedestrian failure to yield right-of-way
- 1% (1 each):
 - Failure to ride closest to right shoulder
 - Failure to stop at red light
 - Driving with known medical condition
 - Pedestrian not walking on shoulder
 - Unsafe starting movement
 - Other than driver – vs. golf ball
 - Unsafe lane change
 - Unsafe passing

Recommendations:

Consideration should be given to the following:

- Widen shoulders
 - Pave
 - Install rumble strips
- Improve clear recovery zones
 - Remove/relocate fixed objects
- Improve access to highway
 - Provide safe intersection sight distance
 - Provide adequate truck turning radius
 - Pave approaches
- Preserve/provide appropriate highway delineation
- Enhance pedestrian/bike facilities
 - Provide sidewalks
 - Provide bike lane

Attachment 5_Traffic Study Report, Inyo US
6

Memorandum

To: DONNA HOLLAND
Design

Date: November 30, 2005

File: 09-31460K

From: 
STEPHEN WINZENREAD
Traffic Operations

Subject: Traffic Index (TI) Calculations and Design Designation

Attached you will find the Traffic Index (TI) Calculations and Design Designation for the above referenced project.

Data Year.....	2004 AADT = 3750
Construction Year AADT.....	2025 AADT = 4160
5 Year AADT.....	2030 AADT = 4270
10 Year AADT.....	2035 AADT = 4380
20 Year AADT.....	2045 AADT = 4600
5 Year TI.....	2030 TI = 9.0
10 Year TI.....	2035 TI = 10.0
20 Year TI.....	2045 TI = 11.0
Construction Year DDHV.....	2025 DDHV = 420
5 Year DDHV.....	2030 DDHV = 430
10 Year DDHV.....	2035 DDHV = 440
20 Year DDHV.....	2045 DDHV = 460
2004 Directional Split = 73.91 %	
2004 Trucks = 12.0 %	

If you have any questions, please do not hesitate to call me. I may be reached at (760) 872-0711 or CALNET 8-627-0711.

Attachment

c: File

TRAFFIC INDEX and DESIGN DESIGNATION CALCULATION SHEET

CO-RTE-PM Iny-6-0/5.6
EA 09-31460K
JOB NAME BAACS

Requested by: Donna Holland
Unit: Design
Date: 11/30/05

Census Year 2004
Construction Year 2025
Complete Construction Year 2025
2 Way AADT 3,750
Lane Distribution Factor 1.0 (Table 603.3B, Highway Design Manual)

	AM Peak	PM Peak
Peak Hour Percent, K	13.67	17.83
Directional Split, D	73.91	56.67
Product of K and D, KD	10.10	10.10
DHV = AADT x K x D	379	379

PERCENT TRUCKS (%) 12.0
1 WAY TRUCK VOLUME 333
GROWTH FACTOR, %/Year 0.5

-----TRAFFIC INDEX CALCULATIONS-----

Traffic Index Calculations are based on completion of construction per HDM 103.2

FIVE YEAR TRAFFIC INDEX

Vehicle Type	Trucks (%)	Present ADT One Way	Expansion Factor	Expanded ADT One Way	5 Year Constant	Lane Factor	ESALs
2 axle	12.9	43.0	1.1244	48.0	345	1	16,560
3 axle	4	13.0	1.1244	15.0	920	1	13,800
4 axle	0	0.0	1.1244	0.0	1470	1	0
5 axle	83.1	276.0	1.1244	310.0	3445	1	1,067,950
TOTALS	100	332.0		373.0			1,098,310

Five Year TI **9.0**

TEN YEAR TRAFFIC INDEX

Vehicle Type	Trucks (%)	Present ADT One Way	Expansion Factor	Expanded ADT One Way	10 Year Constant	Lane Factor	ESALs
2 axle	12.9	43.0	1.1385	49.0	690	1	33,810
3 axle	4	13.0	1.1385	15.0	1840	1	27,600
4 axle	0	0.0	1.1385	0.0	2940	1	0
5 axle	83.1	276.0	1.1385	314.0	6890	1	2,163,460
TOTALS	100	332.0		378.0			2,224,870

Ten Year TI **10.0**

TWENTY YEAR TRAFFIC INDEX

Vehicle Type	Trucks (%)	Present ADT One Way	Expansion Factor	Expanded ADT One Way	20 Year Constant	Lane Factor	ESALs
2 axle	12.9	43.0	1.1672	50.0	1380	1	69,000
3 axle	4	13.0	1.1672	15.0	3680	1	55,200
4 axle	0	0.0	1.1672	0.0	5880	1	0
5 axle	83.1	276.0	1.1672	322.0	13780	1	4,437,160
TOTALS	100	332.0		387.0			4,561,360

Twenty Yr TI **11.0**

SHOULDER TIs

Design Life	2% ESALs	TI
5 Year	21,966	5.5
10 Year	44,497	6.0
20 Year	91,227	7.0

-----DESIGN DESIGNATION-----

Design Designation is based on year of construction per HDM 103.1

Construction Year AADT.....	AADT (2025) = 4160
Five Year AADT.....	AADT (2030) = 4270
Ten Year AADT.....	AADT (2035) = 4380
Twenty Year AADT.....	AADT (2045) = 4600
Construction Year DDHV.....	DDHV (2025) = 420
Five Year DDHV.....	DDHV (2030) = 430
Ten Year DDHV.....	DDHV (2035) = 440
Twenty Year DDHV.....	DDHV (2045) = 460
D = 73.91 %	
T = 12.0 %	

Stephen Wingman

TRAFFIC OPERATIONS

November 30, 2005
DATE

TRAFFIC DATA

Project: Bishop Area Access and Circulation Study – Highway 6 – 09-31460K
 INY – 6 – KP 0.00/KP 9.01 (PM 0.00/PM 5.60)

The traffic information was compiled using the following sources:

Traffic Data/Index:

2004 Traffic Volumes & 2004 Annual Average Daily Truck Traffic

	Data Year 2004	10 Year 2035	20 Year 2045
AADT	3,750	4380	4600
Peak Hour	360	-	-
Peak Month ADT	4,000	-	-
Trucks (% Total AADT)	12%	-	-
Traffic Index, TI	-	10	11.0
Growth Rate (per year)	0.5%	-	-

Notes: Data Year = 2004
 Ten and Twenty Year dates from Year of Construction

Speed:

There are four different speed zones within this location and speed surveys will be addressed heading north.

<u>Description</u>	<u>Post mile</u>	<u>Observed (MPH)</u>	<u>85 % (MPH)</u>
35 MPH Zone	00.00 – 00.30	31 – 43	42
45 MPH Zone	00.30 – 00.50	44 – 56	55
55 MPH Zone	00.50 – 02.10	54 – 70	66 – N/B 68 - S/B
65 MPH Zone	02.10 – 05.60	55 – 74	66 – N/B 67 - S/B

Accident Data:

3 year Table B – 04/01/02 to 03/31/05

Summary: Ten (10) collisions during the three-year period resulted in the total accident rate (0.62) being below the statewide average rate (1.02).

TRAFFIC DATA (Continued)

Accident Data (cont.):

Summary (cont.):

One (1) injury collision (1 injured) combined with no fatal collisions resulted in the actual F&I rate (0.06) being below the statewide average rate (0.50) and the actual fatal rate (.000) being below the statewide average rate (.038).

80% (8) occurred when the weather was clear
20% (2) occurred while cloudy

50% (5) occurred during hours of daylight
50% (5) occurred while dark

90% (9) occurred when the pavement was dry
10% (1) occurred when the pavement was wet

70% (7) were solo vehicle collisions

50% (5) were traveling N/B

60% (6) were hit object type collisions:

- (3) Hitting a deer
- (1) Hitting a utility pole
- (1) Hitting a dike or curb
- (1) Hitting a cow in the roadway

30% (3) were broadside collisions

10% (1) was an overturn collision

Primary collision factors were:

30% (3) Other than driver – vs. deer

20% (2 each)

Driving under the influence

Failure to yield R/W

Improper turn

10% (1) Other than driver – vs. cow

Recommendations:

Consideration should be given to the following:

- Improve horizontal alignment
- Reduce radius of curves

TRAFFIC DATA (Continued)

Recommendations (cont.):

- Widen shoulders
 - Pave
 - Install rumble strips
- Improve clear recovery zones
 - Lessen degree of slopes/embankments
- Preserve/enhance safe passing sight distance
- Improve access to highway
 - Provide safe intersection sight distance
 - Provide adequate truck turning radius
- Preserve/provide appropriate highway delineation

Compiled by: Steven Wisniewski/Traffic Operations & Safety

**Attachment 6_Preliminary Environmental
Analysis**



Preliminary Environmental Analysis Report

Project Information

District 09 County Inyo Route 395/6 Kilometer Post (Post Mile) 181.5/196.9 and 0.0/6.3
(112.8/122.4 and 0.0/3.95) EA 09-31460k

Project Title: Bishop Area Access and Circulation Study.

Project Manager Brad Mettam Phone # (8#) 827-5214

Project Engineer Donna Holland Phone # (760) 872-0759

Environmental (Manager) Office Chief Juergen Vespermann Phone # (559) 243-8157

Environmental Planner Generalist Matthew Palmer Phone # (559) 243-8232

Project Description

Purpose and Need: To Reduce vehicular and truck traffic congestion on US 395 in the Bishop area between approximately PM 113 and PM 122. Increasing levels of truck traffic in the Bishop area along US 395 has resulted in traffic congestion, a sense of hazard to pedestrians and bicyclists, and an increase in noise and air pollution. Combined, these factors decrease the sense of a livable, walkable, downtown district, and make deliveries to local businesses difficult for commercial traffic. In addition, the turn radius at the intersection of Main Street (U.S. 395) and Line Street (SR 168), which is the access for the Bishop airport, is deficient for large commercial vehicles. This deficiency results in large commercial vehicles taking indirect routes along Bishop City streets in order to access the Bishop airport.

Project Goals:

- Improve the circulation and safety for all modes of transportation in the downtown area.
- Accommodate commercial truck traffic for US 395 and US 6.
- Plan for downtown improvements (i.e. landscaping, parking, pedestrian facilities, etc.) along with rerouting of truck traffic.
- Facilitate ground access improvement to the airport and it's associated development improvements.
- In order to encourage potential downtown commerce visitation, keep services in Bishop visible for through traffic on any route and have easy on/off connections.

Study Background

The Bishop Area Access and Circulation Study (BAACS) was initiated as a result of steady increases in traffic along the U.S. 395 corridor, the perception of congestion in the downtown core, and the removal of on street parking on Bishop's Main Street. In 2002, the Inyo County Local Transportation Commission, with the support from the City of Bishop and Inyo County, requested that Caltrans study transportation in the Bishop area.

Work on BAACS began in spring 2003 to examine traffic and circulation concerns, look at ways to potentially improve the movement of through-traffic (particularly truck traffic), and improve the safety and accessibility for all modes of transportation.

Alternatives

There are six proposed alternative routes; two alternatives around the west side of Bishop and four on the east side of Bishop. Improvement to the downtown district is independent of the alternative routes:

- **Alternative 1:** A new full speed 2-lane facility, an alternate Route 395 that is west of Bishop, west of Red Hill Road and east of Rocking K. Beginning at the south end at existing 395 near Gerkin Road and connecting back to existing 395 easterly of Ed Powers Road and westerly of the Bishop Gun Club facility. Signage would be placed on 395 directing 395 through trucks along this new route.
- **Alternative 2:** A new full speed 2-lane facility, an alternate Route 395 that is west of Bishop and east of Red Hill. Beginning at existing 395 near Gerkin Road and connecting back to existing 395 easterly of Ed Powers Road and westerly of the Bishop Gun Club facility. Signage would be placed on 395 directing 395 through trucks along this new route.
- **Alternative 3:** A new full speed 2-lane facility, an alternate route 6 that is east of Bishop, east of the wastewater facility and west of the Airport. Beginning at the south end at existing 395 near Gerkin Road and connecting to the north at existing route 6 either easterly of 5 Bridges road or southerly of 5 bridges road. Signage would be placed on 395 at the south end directing through trucks along this new route. Trucks bound for 395 could use this facility up to Wye Rd. where they would again be connected to 395.
- **Alternative 4:** A new full speed 2-lane facility, an alternate route 6 that is east of Bishop, west of the wastewater facility, east of Johnston Dr and west of the Airport. Beginning at the south end of the alignment at existing 395 near Gerkin Road and connecting to the north at existing route 6 either easterly of 5 bridges road or southerly of 5 bridges road. Signage would be placed on 6 at the north end directing through trucks along this new route. Trucks bound for 395 could use this facility up to Wye Rd where they would again be connected to 395.
- **Alternative 5:** Schober Lane/395 intersection would be improved and Schober Lane to the east would be improved to a new reduced speed 2-lane truck route. Easterly of the canal the road would turn to the north and travel east of Johnston Drive and west of the Airport. This road would connect back to 395/6 at Wye road or continue north to connect 6 either north of the Ford Dealership or south or east of 5 bridges road. Trucks bound for 395 could use this facility up to Wye Rd where they would again be connected to 395.
- **Alternative 6:** A new intersection and road would be added just south of the existing County Yard facility. This new road would be a reduced speed 2-lane truck route heading in an easterly direction. Easterly of the canal the road would turn to the north and travel east of Johnston Drive and West of the Airport. This road would connect back to 395/6 at Wye road or continue north to connect to 6 either north of the Ford Dealership or south of 5 bridges road. Trucks bound for 395 could use this facility up to Wye Rd where they would again be connected to 395.
- **Link from 395 to 6, north of Bishop:** This link would be a full speed 2-lane facility. The easterly connection to 6 could be north of the Ford dealership or between Dixon Lane and 5 Bridges Road or east of 5 Bridges Road. The new facility could connect to, or parallel Riverside Road north of the Dixon area and south of the Owens River continuing westerly and connecting to 395 easterly of Ed Powers Road and westerly of the Bishop Gun Club facility.

- **Plan for Downtown improvements:** The project goals as listed in the project description above were developed by the project development team at the beginning of this study prior to any data collection. It became apparent after the first traffic count collection that the goal for downtown streetscape improvements would be a challenge. Changes that may affect traffic operation downtown are not feasible without a major reduction in traffic volumes.

The project sponsors (City of Bishop, Inyo County, and the Local Transportation Commission) initially believed that if we could remove the majority of commercial trucks from downtown onto an alternate route, the downtown corridor could then be enhanced with landscaped center medians, on-street parking, and other pedestrian friendly improvements that would significantly affect the operation of the highway. Initial traffic analysis clearly indicates that the traffic volumes downtown include a major local traffic component and that a truck route alone would not reduce traffic volumes enough to provide for the significant operational changes the team desired.

To obtain the team's goal of downtown improvements, significant changes to local circulation patterns (City and County roads) would be required in order to reduce local traffic volumes on Main Street to the point that operational changes could be made. Since local circulation on City and County roads is not under Caltrans' jurisdiction and the alternate truck routes alone do not provide enough of a decrease in traffic volumes downtown, the third bulleted goal on page 1 is not explicitly addressed by the alternatives in this study. This goal is still something to strive towards, but will require efforts on multiple organizational fronts. For the purpose of the study this goal will remain as originally crafted by the project development team with the understanding that an alternate truck route alone cannot attain it.

Anticipated Environmental Approval

- | | |
|---|---|
| <p><u>CEQA</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Categorical/Statutory Exemption <input type="checkbox"/> Negative Declaration / focused ND <input checked="" type="checkbox"/> Environmental Impact Report | <p><u>NEPA</u></p> <ul style="list-style-type: none"> <input type="checkbox"/> Categorical Exclusion <input type="checkbox"/> Finding of No Significant Impact <input checked="" type="checkbox"/> Environmental Impact Statement |
|---|---|

PSR Summary Statement

The anticipated environmental document for the proposed project is an Environmental Impact Report/Environmental Impact Statement, due to the potential for adverse impacts to cultural and biological resources for the range of alternatives currently being considered if this feasibility study were to be programmed as a project. Early elimination of alternatives has the potential to significantly reduce cost and timeframes for environmental studies. The timeline for an environmental determination could vary anywhere from 72 months and up to 120 months for the full range of alternatives presented. The Federal Highways Administration and the California Department of Transportation would act as lead agencies in the preparation of a joint CEQA/NEPA (California Environmental Quality Act/National Environmental Policy Act) environmental document. Changes to the scope of this project will necessitate additional investigations and result in delays to completion of the environmental document and changes in production costs.

Risks

Before this project is programmed, the project's cost, scope, and schedule will need to be re-evaluated to ensure that the project is properly resourced and sufficient manpower in Caltrans and consultant staff is available to perform the work.

Special Considerations

The project has the potential to require extensive coordination with external resource agencies. The level of coordination is highly dictated by the project's level of impact and the significance of the particular resource. Below is a summary of the coordination that will most likely be required on this project with information about the responsible agency:

Section 404. Wetlands have legal protection in accordance with Section 404 of the Clean Water Act (33 U.S.C. Section 1344). A permit from the Army Corps of Engineers (ACOE) is required for most activities that will impact wetlands. The term "waters of the U.S." is also discussed in Section 404. Waters are currently described as any areas that might be considered waterways, either for commerce or recreation, even on a limited scale. Wetlands are a subcategory of waters. Frequently, the term "wetlands and other waters of the U.S." is used when describing areas under ACOE jurisdiction. Delineation of waters and wetlands results in "potential jurisdictional areas" which must be verified by the ACOE. Upon verification, these areas are referred to as "jurisdictional areas." A Section 404 permit is required from the ACOE when a project requires fill or other modification of waters, including wetlands. There are two types of permits issued by the ACOE, individual and general. This project would fall under the requirements of an individual permit.

Individual permits are the most complex. They cover projects affecting more than three acres, resulting in potentially significant impacts. The process of obtaining an individual permit usually takes many months. Special Conditions of the permit may include mitigation activities that need to be monitored for a five to ten year period for the most complex and/or controversial projects.

Initiation of a request for an ACOE permit to affect wetlands involves other resource and regulatory agencies as a part of the interagency review process. The ACOE submits permit applications to the Environmental Protection Agency (EPA), Department of Fish and Game (DFG), National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (FWS) for review and comment. Time periods and extent of commenting required by these agencies varies depending upon the permit type. Individual permits are the most lengthy and involved. Applications for ACOE permits may be prepared and submitted by the Project Engineer, the District Biologist, or others, using information on delineated wetlands and other waters of the U.S. as prepared by the biologist. The Project Engineer provides information on the extent of the construction impacts responsible for proposed fill. The District Biologist is the key liaison with resource and regulatory agency staff regarding the wetland habitat impacts and potential mitigation.

Section 401. Section 401 of the Clean Water Act (33 U.S.C. 1341) requires any applicant for a Federal license or permit to conduct any activity that may result in a discharge of a pollutant into waters of the United States to obtain certification from the State in which the discharge originates. As a result, proposed fill in waters and wetlands requires coordination with the appropriate Regional Water Quality Control Board (RWQCB) that administers Section 401 and provides certification. The RWQCB also plays a role in review of water quality and wetland issues, including avoidance and minimization of impacts. Section 401 certification is required prior to issuance of a Section 404 permit. The Project Engineer may be responsible for this coordination, with assistance from the District Biologist, regarding specific impacts and mitigation.

Sections 1602 of the Fish and Game Code. Under this section of the Fish and Game Code, Caltrans and other agencies are required to notify DFG prior to any project that would divert, obstruct or change the natural flow, bed, channel, or bank of any river, stream, or lake. Preliminary notification and project review generally occur during the environmental process. When an

existing fish or wildlife resource may be substantially adversely affected, DFG is required to propose reasonable project changes to protect the resource. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications and bid documents for the project.

Federal Endangered Species Act of 1973. This act and subsequent amendments provide guidance for the conservation of endangered and threatened species and the ecosystems upon which they depend. Section 7 requires Federal agencies, in consultation with, and with the assistance of the Secretary of the Interior or the Secretary of Commerce, as appropriate, to insure that actions they authorize, fund, or carry out are not likely to jeopardize the continued existence of threatened or endangered species or result in the destruction or adverse modification of critical habitat for these species. The U.S. Fish and Wildlife Service (FWS) and National Marine Fisheries Service (NMFS) share responsibilities for administering the Act. Regulations governing interagency cooperation under Section 7 are found at 50 CFR Part 402. The opinion issued at the conclusion of consultation will include a statement authorizing take that may occur incidental to an otherwise legal activity.

Section 106 of the National Historic Preservation Act. Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties and afford a reasonable opportunity to comment on such undertakings. The section 106 process seeks to accommodate historic preservation concerns with the needs of Federal undertakings through consultation among the agency official and other parties with an interest in the effects of the undertaking on historic properties, commencing at the early stages of project planning. The goal of consultation is to identify historic properties potentially affected by the undertaking, assess its effects and seek ways to avoid, minimize or mitigate any adverse effects on historic properties.

The State Historic Preservation Officer (SHPO) reflects the interests of the State and its citizens in the preservation of their cultural heritage. In accordance with section 101(b)(3) of the act, the SHPO advises and assists Federal agencies in carrying out their section 106 responsibilities and cooperates with such agencies, local governments and organizations and individuals to ensure that historic properties are taking into consideration at all levels of planning and development.

Anticipated Project Mitigation

Preliminary environmental assessment of the project area identified visual, cultural, biological, and paleontological resources that would be adversely affected by the proposed alternatives. The following summarizes the level of mitigation anticipated for each resource. The estimated costs and duration of work is premised on costs and time experienced on past projects within District 9 and other parts of the State.

Visual: A visual impact assessment will be required (**3 months**). The time necessary to perform this evaluation will be concurrent with the environmental clearance process.

Aesthetic enhancements proposed as part of the downtown improvement plan are estimated at approximately **\$1,000,000**. These enhancements could potentially include wider sidewalks, center medians with landscaping, etc., depending upon operational constraints and acceptance of maintenance responsibility by a local agency. These costs are not associated with the costs identified later in this document as part of the roadway construction project.

Cultural: Phase III Data Recovery Plan and excavation are required for all eligible sites adversely impacted by the project. Several archaeological sites that will be NRHP eligible are anticipated and will require mitigation. Estimated duration of study would be **2 years and 6 months**. Draft and Final Phase III reports will be produced. Estimated Cost of Phase III is expected to be **\$1,000,000**. An additional estimate of **\$100,000** is anticipated for construction and Native American monitoring.

Paleontology: Major excavation in the older dissected alluvial fan and lakebed deposits that lie along the southern boundary of the project area might encounter sensitive vertebrate fossils. If there will be construction excavation activity in the south and southwest portion of the project area additional study would be recommended. Alternatives 1 and 2, which pass south and west of Bishop, would have the greatest impact on this area. Alternatives 3 and 4 would impact this area in the south where they intersect the existing highway. Alternatives 5 and 6 near the airport would likely not have an impact. If necessary, mitigation costs are estimated to be approximately **\$150,000** for paleontological monitoring and additional studies for Alternatives 1, 2, 3, and 4 if excavation is to include significant excavation more than a few feet deep.

Biology: Mitigation for temporary and permanent impacts to sensitive biological resources (wetlands, riparian vegetation, regulated plants and animals) will be required. Mitigation for impacts to waters of the United States may be required. For this project, mitigation could include restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement. Current survey information has determined that wetland habitat does exist within the study area. The options available to mitigate for permanent large-scale impacts to wetland habitat in Inyo County are virtually non-existent. Current estimates for wetland mitigation elsewhere in the state are approximately **\$250,000** per hectare (**\$100,000** per acre) impacted. At this stage of the project it is very difficult to assess the complete impacts to wetlands within the project area. The table below roughly estimates the acreage potentially included within the proposed right of way for each alternative and provides a rough estimate of what the costs may be based on preliminary field surveys and project mapping available at this time.

Alternative	Potential R/W Impact Hectare (Acre)	Mitigation Cost (\$)
1	8 (20)	2,000,000
2	16 (40)	4,000,000
3	81 (200)	20,000,000
4	81 (200)	20,000,000
5	20 (50)	5,000,000
6	20 (50)	5,000,000

Taking the worst case into consideration, the project would require approximately **\$250,000** per hectare (**\$100,000** per acre) impacted to cover the biological mitigation anticipated for this project. An additional **\$1,250,000** would need to be reserved for proposed mitigation on cultural and paleontological resources if necessary.

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects. This report is to provide a preliminary level of environmental analysis to supplement the Project Study Report. Changes in project scope, alternatives, or environmental laws will require a re-evaluation of this report.

Reviewed by:



 Project Manager

Date: 7/3/06



 Environmental Branch Chief

Date: 7-21-06

Environmental Technical Reports or Studies Required

	Study	Document	N/A
Community Impact Study	✓	<input type="checkbox"/>	<input type="checkbox"/>
Farmland	<input type="checkbox"/>	✓	<input type="checkbox"/>
Section 4(f) Evaluation	<input type="checkbox"/>	<input type="checkbox"/>	✓
Visual Resources	✓	<input type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input type="checkbox"/>	✓	<input type="checkbox"/>
Floodplain Evaluation	✓	<input type="checkbox"/>	<input type="checkbox"/>
Noise Study	✓	<input type="checkbox"/>	<input type="checkbox"/>
Air Quality Study	<input type="checkbox"/>	✓	<input type="checkbox"/>
Paleontology	✓	<input type="checkbox"/>	<input type="checkbox"/>
Wild and Scenic River Consistency	<input type="checkbox"/>	<input type="checkbox"/>	✓
Cumulative Impacts	<input type="checkbox"/>	✓	<input type="checkbox"/>
Cultural			
ASR	✓	<input type="checkbox"/>	<input type="checkbox"/>
HSR	✓	<input type="checkbox"/>	<input type="checkbox"/>
HASR	✓	<input type="checkbox"/>	<input type="checkbox"/>
HRER	✓	<input type="checkbox"/>	<input type="checkbox"/>
HPSR	✓	<input type="checkbox"/>	<input type="checkbox"/>
Section 106 / SHPO	✓	<input type="checkbox"/>	<input type="checkbox"/>
Native American Coordination	✓	<input type="checkbox"/>	<input type="checkbox"/>
Other			
Finding of Effect	✓	<input type="checkbox"/>	<input type="checkbox"/>
Data Recovery Plan	✓	<input type="checkbox"/>	<input type="checkbox"/>
Hazardous Waste			
ISA (Additional)	<input type="checkbox"/>	✓	<input type="checkbox"/>
PSI	<input type="checkbox"/>	<input type="checkbox"/>	✓
Other	<input type="checkbox"/>	<input type="checkbox"/>	✓
Biological			
Endangered Species (Federal)	✓	<input type="checkbox"/>	<input type="checkbox"/>
Endangered Species (State)	✓	<input type="checkbox"/>	<input type="checkbox"/>
Species of Concern (CNPS, USFS, BLM, S, F)	✓	<input type="checkbox"/>	<input type="checkbox"/>
Biological Assessment (USFWS, NMFS, State)	✓	<input type="checkbox"/>	<input type="checkbox"/>
Biological Opinion	✓	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands	✓	<input type="checkbox"/>	<input type="checkbox"/>
Invasive Species	✓	<input type="checkbox"/>	<input type="checkbox"/>
Natural Environment Study	✓	<input type="checkbox"/>	<input type="checkbox"/>
NEPA 404 Coordination	✓	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	✓

Permits

401 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
404 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nationwide <input type="checkbox"/> Individual <input checked="" type="checkbox"/>			
1602 Permit Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
City/County Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
State Coastal Permit Coordination	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
NPDES Coordination	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
US Coast Guard (Section 10)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Section 2081	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Discussion of Technical Review

Socio-economic and Community Effects. The project has the potential to divert more than just commercial traffic flow away from Bishop's Central Business District. A Community Impact Assessment (CIA) study should be completed to document the potential negative or positive results expected from proposed project. The Community Impact Assessment would assure that consequences to the social fabric of the area are given consideration with other environmental impacts. Estimated duration of the study would be approximately **12 months** to be conducted concurrently with the environmental clearance process. Results of the study would be incorporated into the Environmental Document.

Farmlands. Alternatives proposed to swing east and around the community of Bishop may impact some land currently in agricultural use. A farmland assessment will be required during the preparation of the environmental document. Further design engineering is required to determine the extent of lands impacted. Once total impact areas are known, Form AD 1006 will be completed and submitted to the appropriate Natural Resources Conservation Service Field office for verification of prime and unique farmlands impacted by the proposed project. Completion of the farmland assessment should be approximately **six months** and would be conducted concurrently with the environmental clearance for the project. Conversion of farmlands subject to the Farmland Protection Policy Act will require coordination with the U.S. Army Corps of Engineers.

4(f) Impacts. The project is not expected to have any effects on resources subject to Section 4(f).

Paleontology. Most of the project area is covered by Quaternary nonmarine terrace deposits and alluvium; Quaternary alluvium is generally ranked as low sensitivity in the CSUF (2000) database because of the low probability of encountering fossils of scientific interest in the upper few feet. However, scientifically significant fossils have been found in Quaternary alluvium in Inyo County. There are two University of California Museum of Paleontology vertebrate fossil localities about 10 miles southeast of the project area that have yielded fossils of Rancholabrean age.

The southwestern portion of the project area is underlain by older dissected alluvial fan and lakebed deposits, some of which may be of late tertiary age. The depositional environment of the lakebed deposits, from ancient Lake Waucobi, appears the same as other pluvial lakes of the Basin-ranges and Mojave Desert provinces. Some of these lakebeds such as Lake Manix and Owens Lake, have yielded abundant vertebrate fossils. Some of the older sedimentary deposits may be part of the Coso Formation that has yielded important tertiary age vertebrate fossils from localities near Owens Lake.

Major excavation in the older dissected alluvial fan and lakebed deposits might encounter sensitive vertebrate fossils. If there will be construction excavation activity in the south and southwest portion of the project area additional study would be recommended. Alternatives 1 and 2, which pass west of Bishop, would have the greatest impact on this area. Alternatives 3 and 4 would impact this area in the south where they intersect the existing highway. Alternatives 5 and 6 near the airport would likely not have an impact. Estimated duration of additional study would be **6 months** at an estimated cost of **\$150,000.00**.

Visual Effects. A review was performed on the above referenced project. The project is located near Bishop from Warm Springs Road to Ed Powers Road in the high desert terrain of the Eastern Sierra. The surrounding landscape includes steep slopes, areas with gently rolling terrain, and

areas that are relatively flat. Vistas and views of the adjacent Inyo National Forest are seen from all parts of the proposed project study area. Perennial rivers and wetland areas dot the landscape where natural riparian vegetation occurs. These pockets of riparian vegetation are surrounded by vegetation typical of a high desert. Both of these landscapes, riparian as well as high desert, offer a unique visual experience to the user of the highway facility.

A preliminary visual resource assessment was conducted for this project. The follow items were identified and pertain to the construction of this project:

- According to the typical cross sections included in the preliminary studies, all slopes will be constructed at 1:4. This is shown for each of the alternatives. In this case, structural reinforcements to the slopes will not be necessary. However, if the design cross sections change to include slopes steeper than 1:4 or rock cutting, structural alterations may be required. To alleviate the effects of any rock slope stabilization, construction efforts such as rock staining and 'Soil Nail Walls' may be required. Staining of the newly exposed rock may be required to blend the color of the newly cut rock into the adjacent areas. Where steep slopes are being cut into, retaining walls or 'Soil Nail Walls' may be used. This will help minimize disturbance to the native vegetation and also minimize the visual impact of the construction. Terracing or benching these slopes may also be required. The cost of rack staining and 'Soil Nail Walls' will be incorporated with the cost for roadway construction.
- The Highway Design Manual, Topic 304 and the NPDES Storm Water Permit require written concurrence of the District Landscape Architect for slopes steeper than 1:4. The District Landscape Architect should be involved early in the PDT meetings to help make the determination on slope design. For this project, the emphasis will be to minimize disturbance and protect the existing vegetation.
- A preliminary review reveals that there will be vegetation removed by the construction of this project. Care must be taken to repair any areas where vegetation removal is required. These costs will be identified as part of the roadway construction project. Vegetation removal must be kept to a minimum.
- Additional revegetation requirements beyond biological revegetation will be necessary. This Visual Mitigation Planting will be in addition to the biological revegetation planting. Visual Mitigation Planting will be concurrent with the biological revegetation and will be accomplished as a separate project from the roadway construction project and must follow directly after the completion of the roadway construction project. Funding for this mitigation project is to be identified and set aside from the funds for the construction project. The amount required for Visual Mitigation Planting will vary depending upon which alternative is selected and whether or not the downtown improvement is included in the project. An estimated preliminary cost for the downtown improvement is **\$1,000,000**. A three-year plant establishment period will be provided to ensure the survival of the newly planted vegetation.
- Appropriate Environmental agency requirements, including but not limited to the California Department of Fish and Game (DFG) 1602 agreement, may be applicable to the biological revegetation portion of the project. The visual

mitigation planting will be accomplished under the requirements of the Caltrans Highway Design Manual. The final Environmental Document should be clear that DFG agreement requirements are applicable exclusively to areas of river banks or those areas defined by the 1602 agreement, not the entire project limits.

- All areas disturbed during the construction of this project will require an Erosion Control application. As part of this process, the top 300-mm of topsoil (duff) (12 inches) shall be stockpiled and replaced on the finished slopes prior to the application of Erosion Control. The funding for the erosion control will be separate from the funding for Visual Mitigation Planting. The cost will be identified as part of the roadway construction project.
- Some of the identified alternatives will require the service of structures design. Bridges, walls and all other structures that are required for the construction of the selected build alternative must receive special aesthetic treatments. Visual enhancement of structures should be coordinated through a designated Landscape Architecture representative.

At the time the Project Report is being developed, a "Visual Impact Assessment" will be required. The time necessary to perform this evaluation will be approximately **three months** and will be concurrent with the environmental clearance process.

Water Quality and Erosion. A temporary reduction in water quality is expected during the construction of the proposed alternatives from various stream channel crossings. The impacts would be temporary and not constitute a significant impact. Caltrans and the future contractor for the project should comply with all requirements specified within permits obtained from regional resource agencies. All appropriate best management practices should be utilized to minimize water quality impacts.

The project alternatives encroach upon Bishop Creek and various pasture irrigation ditches. These areas cannot be avoided due to the nature of the perpendicular crossing of these streams by the various alternatives. The impacts to these stream channels should be kept to the minimum amount required to provide a safe facility for the traveling public. Environmentally Sensitive Areas (ESAs) would be required to minimize potential impacts. The ESAs shall be established at the existing or new right of way boundary where possible or approximately 15 feet beyond the construction area where stream channel realignment is required. These ESAs shall be delineated on contract plans and protected during construction by not allowing any construction activities within the designated areas.

Typical of the high desert, the area is somewhat sparsely vegetated and, therefore, easily eroded by wind and water. Newly created slopes and other areas where the vegetation is disturbed by construction will be more susceptible to soil erosion by these forces. To mitigate this situation, construction of high slopes should be 3:1 or flatter through most of the project area and slopes should be kept to the minimum height required to attempt to balance earthwork quantities. The vegetation and top 300 mm (12 inches) of soil (duff) from the excavation areas should be set aside during construction and then later used to cover the finished highway slopes. This will aid in hastening the revegetation of disturbed areas by incorporating organic matter and what natural seed are present in the soil. A mixture of native seed (grasses and shrubs) and straw should then be punched into these slopes and disturbed areas. This approach has been used with considerable success on other highway projects in the region.

Floodplain. A floodplain evaluation report will need to be prepared to analyze the effects of the proposed alternatives on the 100-year floodplain. FEMA has Flood Insurance Rate Maps (FIRM) for both the City of Bishop and the unincorporated areas of Inyo County surrounding the city. The proposed east side alignments cross over floodplain zones A and B. Zone A is an area designated as 100 year floodplain and Zone B is an area between the limits of a 100 year flood and 500 year flood.

- Alignment 3E crosses Zone A floodplain a total of approx. 2,900 feet and Zone B for approx. 13,300 ft.
- Alignment 4E crosses Zone B for approx. 12,180 lineal feet.
- Alignment 5E crosses Zone B for approx. 12,180 lineal feet.
- Alignment 6E crosses Zone B for approx. 9,690 lineal feet.
- None of the alternatives encroach longitudinally on the floodplain.

The design of the roadway shall be done in such a way to prevent significant increase of the base (100 year) floodplain elevation, especially in those areas that traverse FEMA designated floodplains. Adequate drainage facilities are necessary to convey the 100 year flow to prevent the new roadway embankment from causing objectionable backwater flooding.

Bridges or reinforced concrete box culverts are recommended at the Bishop Creek crossings, major canal crossings, and the Bishop flood bypass channel crossing. Pipe culverts are recommended at other drainage crossings. Estimated duration of study would be **2 months**.

Air and Noise. The project limits lie within the Great Basin Air Pollution Control District. The region encompassing Inyo County is a PM 10 non-attainment area. The project limits are within an area of non-concern for PM 2.5 for USEPA due to specific Air District requirements and the lack of receptors within the project limits. A short-term degradation of air quality can be expected due to construction activity: equipment exhaust, the nature of the work, the grading operations and newly created bare slopes. These short-term conditions can be minimized by enforcement of Caltrans dust control specifications during construction. The proposed project will not have any significant long-term impacts to any of the parameters for Air Quality.

The projected Peak Hour noise levels are below FHWA requirements for all receptors within the vicinity of the proposed alternatives. The no-build alternative is projected to have noise levels so similar to the proposed project that the difference would not be discernible to most human ears and therefore not create a significant noise impact.

Wild and Scenic River. N/A

Cultural Resources. The study area has not been completely surveyed for cultural resources, however recorded surveys and inventories of previous projects identify known cultural resources within and in the vicinity of the Archaeological APE and Architectural APE of the proposed project. Cultural sensitivity within the project area is high. Completion of cultural resource compliance would be a critical path item for completion of the environmental document. Anticipated duration of Cultural Studies is **87 months** and does not include Phase III studies. Phase III studies will be conducted after PAED and before construction, and will require an additional **30 months**. Estimated cost of mitigation is **\$1,000,000.00**. Estimated cost of monitoring is **\$100,000.00**.

The following are anticipated studies and time frames necessary for cultural resource compliance during the environmental process:

- A complete Phase I (Archaeological Survey Report) would be required within the project Area of Potential Effect including areas of new right of way acquisition. Estimated duration of study would be **1 year and 6 months** due to a large area (approximately 10873 acres) requiring survey, research and archaeological site recordation, Draft ASR and Final ASR requirements.
- A Phase II excavation to determine sites' eligibility to the National Register of Historic Places would be required. Anticipating many archaeological sites that will require NRHP Section 106 evaluation. Estimated duration of study would be **2 years and 6 months**. Draft and Final Phase II reports produced.
- Additional studies and reports required for preparation of HPSR:
 - Historic Architectural Survey Report (HASR) **6 months**.
 - Historic Study Report (HSR) **6 months**.
 - Historic Resource Evaluation Report (HRER) **6 months**.
 - Historic Property Survey Report (HPSR) **1 year 6 months**.
- Phase III Data Recovery Plan and excavation required for all eligible sites adversely impacted by the project. Anticipate several archaeological sites that will be NRHP eligible and will require mitigation. Estimated duration of study would be **2 years and 6 months**. Draft and Final Phase III reports produced.
- Consultation:
 - Native American Community **240 hours**
 - DWP/SCE/Private Property Owners **180 hours**

The following is a breakdown of time and costs for Phase I, II, and III Cultural Resource Studies:

<u>Phase</u>	<u>Cost</u>	<u>Time Requirements</u>
I	\$150,000.00*(consultant) \$5,000.00* (CT support cost)	2780 hours (consultant) 1020 hours (Caltrans PQS)
II	\$2,000,000.00*(consultant) \$5,000.00* (CT support costs)	4660 hours (consultant) 1020 hours (Caltrans PQS)
III	\$1,000,000.00*(consultant) \$5,000.00* (CT support costs)	3000 hours (consultant) 1020 hours (Caltrans PQS)
Construction	\$100,000.00* (monitoring)	3000 hours (consultant- includes Native American Monitor) 1020 hours (Caltrans PQS)

* These figures represent 2004 costs and will increase incrementally from year to year.

Native American Coordination. Extensive Native American consultation would be required. Construction monitoring would also be needed by a Caltrans archaeologist or qualified replacement. Hours and estimated cost included in breakdown above.

Hazardous Waste/Materials. Initial review has identified one site on the southwest corner of U.S. 6 and Wye Road that is known to contain polluted soils. This site, a gas station, is currently being improved under the direction of the Lahontan Regional Water Board. It is anticipated that the site's pollution will be reduced below action levels by the time this project is constructed. There are no additional known sources of significant hazardous wastes within the project limits. An updated ISA will be required during the environmental phase of the project to confirm this condition still exists. Estimated duration of study would be **12 months**.

Biological Resources. A search for special-status species was conducted using the Natural Diversity Database, the California Native Plant Society Electronic Inventory of Rare and Endangered plants, and the California Department of Fish and Game maps of Areas of Special Biological Importance for Mono and Inyo Counties. Based on the search described, the following list of potential project impacts was developed:

- Special-status species identified:
 - Northern harrier
 - Golden eagle
 - Willow flycatcher
 - Owens tui chub
 - Owens sucker
 - Pale big-eared bat
 - Panamint alligator lizard
 - Fish Slough springsnail
 - Swainson's hawk
 - Prairie falcon
 - Bank swallow
 - Owens speckled dace
 - Owens pupfish
 - Owens Valley vole
 - Owens Valley springsnail
 - Hall's meadow hawksbeard
 - Fish Slough milk-vetch
 - Owens Valley checkerbloom
 - Frog's-bit buttercup
 - Nevada oryctes
 - Hot springs fimbristylis
 - Prairie wedge grass
 - Silver-leaved mild-vetch
 - Torrey's blazing star
 - July gold
 - Alkali ivesia
 - Single-spiked sedge
 - Inyo County star-tulip
 - Hillside wheat grass
- Other Species to Consider:
 1. Tule Elk - The study area includes habitat for tule elk and delineated tule elk calving areas.
 2. Deer – Deer winter range does exist within the study area.
 3. Fisheries – Owens River
- Wildlife Crossings and other Considerations:
 1. Any structure (bridge, box culvert, etc.) should take into consideration wildlife usage.
- The following Contract Special Provisions should be included in the final project:
 1. Swallow Contract Special Provisions
 2. Duff Contract Special Provisions

3. Migratory Bird Contract Special Provisions

- The following special habitats were identified within the project study area:
 1. Alkali meadow
 2. Transmontane alkali marsh
 3. Wetland habitat
 4. Riparian

- Wetlands. A delineation of jurisdictional wetlands and waters of the United States needs to be done. Executive Order 11990 requires an avoidance alternative analysis for wetland impacts unless there is no practicable alternative available. Impacts to waters of the U.S. and wetlands from the project and any temporary access roads will need to be quantified. Within Inyo County the viable options to mitigate for permanent large scale impacts to wetland habitat are virtually non-existent. District 9 has pursued many avenues to mitigate for permanent impacts to wetland habitat to no avail. The Army Corps of Engineers is currently estimating costs for wetland mitigation to be approaching **\$250,00 per hectare (\$100,000 per acre)**. Currently survey information has determined that wetland habitat does exist within the study area:
 - Alternative 1W = 20 acres
 - Alternative 2W = 40 acres
 - Alternative 3E = 200 acres
 - Alternative 4E = 200 acres
 - Alternative 5E = 50 acres
 - Alternative 6E = 50 acres

- Mitigation. Mitigation for temporary and permanent impacts to sensitive biological resources (wetlands, riparian vegetation, regulated plants and animals) will be required. Mitigation for impacts to waters of the United States may be required. For this project, mitigation could include restricted construction scheduling, habitat enhancement, habitat restoration, or habitat replacement

In regard to the worst case scenario, a total of **33,000 Caltrans hours** and **90,000 Consultant hours** are estimated to complete the various biological tasks (see WBS breakdown). Total duration of biological studies is estimated to be **48 months**, consisting of:

Botanical surveys	36 months
Fauna surveys	36 months
Writing Biological Contracts	12 months
Document writing and associated tasks	24 months

Species with potential to occur within or adjacent to the project area					
Common Name	Scientific Name	Status			Survey Period
		State	Federal	Other	
Hall's meadow hawkbeard	<i>Crepis runcinata ssp. Hallii</i>			2	May-July
Silver-leaved mil-vetch	<i>Astragalus argophyllus var. argophyllus</i>			2	May-July
Spiny-leaved milk-vetch	<i>Astragalus kentrophyta var. elatus</i>			CNPS 2	
Fish Slough mil-vetch	<i>Astragalus lentiginosus var. piscinensis</i>		FT	1B	June-July
Broad-keeled milk-vetch	<i>Astragalus playtropis</i>			CNPS 2	
Cushion daisy	<i>Erigeron compactus var. compactus</i>			CNPS 2	
Poison Canyon stickseed	<i>Hackelia brevicula</i>			CNPS 3	
Torrey's blazing star	<i>Mentzelia torreyi</i>			2	June-Aug
Inyo phacelia	<i>Phacelia inyoensis</i>			CNPS 1B	
Nevada ninebark	<i>Physocarpus alternans</i>			CNPS 2	
Small-flowered rice grass	<i>Piptatherum micranthum</i>			CNPS 2	
Parish's popcorn-flower	<i>Plagiobothrys parishii</i>			CNPS 1B	
Owens Valley checkerbloom	<i>Sidalcea covellei</i>	SE		1B	April-June
July gold	<i>Dedeckera eurekaensis</i>	SR	FSC	1B	June-Aug
Frog's-bit buttercup	<i>Ranunculus hydrocharoides</i>			2	June-Sept
Alkali ivesia	<i>Ivesia kingii var. kingii</i>			1B	June – Aug
Nevada oryctes	<i>Oryctes nevadensis</i>			2	April – June
Single-spiked sedge	<i>Carex scirpoidea ssp.</i>			2	July- Sept
Hot springs fimbriylis	<i>Fimbristylis thermalis</i>			2	July-Sept
Inyo County star-tulip	<i>Calochortus excavatus</i>		FSC	1B	April – July
Prairie wedge grass	<i>Sphenopholis obtusata</i>			2	April – July
Foxtail thelypodium	<i>Thelypodium integrifolium ssp. Complanatum</i>			CNPS 2	June-Oct.
McGee Meadows lupine	<i>Lupinus magnificus var. hesperius</i>			CNPS 1B	April-June
Hillside wheat grass	<i>Leymus salinus ssp. mojavensis</i>			2	May – June
Common Name	Scientific Name	State	Federal	Survey Period	
California floater	<i>Anodonta californiensis</i>				
Northern harrier	<i>Circus cyaneus</i>	SC			March – Aug
Swainson's hawk	<i>Buteo swainsoni</i>	ST	FSC		March – Aug
Golden eagle	<i>Aquila chrysaetos</i>	SC			March – Aug

Prairie falcon	<i>Falco mexicanus</i>	SC		March – Aug
Willow flycatcher	<i>Empidonx traillii</i>	SE		March – Aug
Bank swallow	<i>Riparia riparia</i>	ST	FSC	March – Aug
Owens tui chub	<i>Gila bicolor snyderi</i>	SE	FE	March – Aug
Owens speckled dace	<i>Rhinichthys osculus ssp.</i>	SC		March – Aug
Owens sucker	<i>Catostomus fumeiventris</i>	SC		March – Aug
Owens pupfish	<i>Cyprinodon radiosus</i>	SE	FE	March – Aug
Pale big-eared bat	<i>Corynorhinus townsendii pallescens</i>	SC	FSC	March – Sept
Owens valley vole	<i>Microtus californicus vallicola</i>	SC		March – Aug
Panamint alligator lizard	<i>Elgaria panamintinus</i>	SC		March – Aug
Owens Valley springsnail	<i>Pyrgulopsis owensensis</i>			March – Aug
Won's springsnail	<i>Pyrgulopsis wongi</i>			
Fish Slough springsnail	<i>Pyrgulopsis perturbata</i>			March – Aug
Leopard frog	<i>Rana pipiens</i>		SC	
American badger	<i>Taxidea taus</i>			
Burrowing owl	<i>Athene cunicularia</i>		SC	

Key to Status

FE = Federal Endangered SE = State Endangered 1B = CNPS Rare or Endangered in
 FT = Federal Threatened ST = State Threatened California and elsewhere
 FSC = Federal Species of Concern SC = Species of Concern

Right-of-Way Relocation or Staging Area. A new Right-of-Way is indicated for this project. Material sites and disposal sites are indicated, but not identified. These areas, which must be identified prior to initiating environmental studies, will require complete environmental evaluation as part of this project.

Permits. Permits from the State Department of Fish and Game (1602 agreement), U. S. Army Corps of Engineers (an individual 404 Permit will be required because wetland/waters impacts may exceed the threshold acreage), and the Regional Water Quality Control Board (401) will be required. Additional permits for the material site and disposal site may be required.

List of Preparers

Hazardous Waste Review by Dan Holland	December 23, 2004
Biological Review by Wendy Philpott	July 7, 2003
Cultural Review by Tom Mills	December 15, 2004
Paleontology by Pete Hansen	February 24, 2005
Visual Review by Lori Butler	March 28, 2005
Floodplain Review by Truman Denio	February 15, 2005
Air, Noise, and Water review by Dan Holland	December 23, 2004

Attachment 7_Right of Way Summary Report

Memorandum

To: Brad Mettam
Project Manager – Bishop

Date: January 9, 2006
File Ref.: Inyo 395 PM 111.12/122.3
Inyo 06 PM 0.0/5.6
EA: 09-31460k
Alt No.: 1 thru 6

Attention: Bart Dela Cruz, Design Manager – Bishop
Donna Holland, Project Engineer – Bishop

From: **DEPARTMENT OF TRANSPORTATION**
Division of Right of Way, Central Region – Bishop

Subject: Approximate Right of Way Data Costs for the Bishop Area Access & Circulation Study

We have completed an estimate of the right of way costs for the above-referenced circulation study based on the Right of Way Data Sheet Request Form dated: 11/04/02 “Bishop Area Access and Circulation” – developing circulation and alternate access for the City of Bishop; near Bishop from Schober Lane to Barlow Lane (KP183.9/198.6) – six alternates proposed. The following costs have been identified:

A. Alternate 1 W:

◆ Acquisition:	\$ 835,091.00	(14 A type, 1 B type)
◆ Mitigation:	\$ 57,500.00	(4 A type – 5 acres in size; 20 acres total)
◆ Utility Relocation (State’s Share)	\$1,872,200.00	(electric and phone – towers/poles)
◆ Relocation Assistance	\$ 0.00	
◆ Clearance/Demolition	\$ 0.00	
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	
Total RW Costs	\$2,765,791.00 =	<u>\$ 2,766,000.00 rounded</u>
◆ Environmental permit/filing fees:	\$ 8,000.00	
◆ Construction Contract Work:	\$ 30,000.00	

B. Alternate 2 W:

◆ Acquisition:	\$ 800,229.00	(22 A type, 2 B type)
◆ Mitigation:	\$ 115,000.00	(8 A type – 5 acres in size; 40 acres total)
◆ Utility Relocation (State’s Share)	\$ 391,000.00	(electric – poles)
◆ Relocation Assistance	\$ 0.00	
◆ Clearance/Demolition	\$ 0.00	
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	
Total RW Costs	\$1,307,229.00 =	<u>\$ 1,308,000.00 rounded</u>
◆ Environmental permit/filing fees:	\$ 8,000.00	
◆ Construction Contract Work:	\$ 30,000.00	

C. Alternate 3 E – Wye:	South of Wye	Wye Connect	(Most costly alternate)
◆ Acquisition:	\$ 577,441.00	\$3,923,613.00	(11 A, 3 B type)
◆ Mitigation:	\$ 215,625.00	\$ 57,500.00	(10 A– 5 ac each; 50ac total)
◆ Utility Relocation (State’s Share)	\$ 161,000.00	\$ 294,400.00	(electric/phone – poles)
◆ Relocation Assistance	\$ 0.00	\$ 57,500.00	(RAP for 3 businesses)
◆ Clearance/Demolition	\$ 0.00	\$ 47,150.00	(3 structures)
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>	
Total RW Costs	\$ 955,066.00	\$4,381,163.00	combined = <u>\$5,337,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00		
◆ Construction Contract Work:	\$ 30,000.00		

D. Alternate 3 E – North:	South of Wye	North Connect	
◆ Acquisition:	\$ 577,441.00	\$ 682,813.00	(20 A, 1 B type)
◆ Mitigation:	\$ 215,625.00	\$ 359,375.00	(40 A–5 ac each; 200ac total)
◆ Utility Relocation (State’s Share)	\$ 161,000.00	\$ 207,000.00	(electric/phone – poles)
◆ Relocation Assistance	\$ 0.00	\$ 0.00	
◆ Clearance/Demolition	\$ 0.00	\$ 0.00	
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>	
Total RW Costs	\$ 955,066.00	\$1,250,188.00	combined = <u>\$2,206,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00		
◆ Construction Contract Work:	\$ 30,000.00		

E. Alternate 4 E – Wye:	South of Wye	Wye Connect	
◆ Acquisition:	\$ 428,806.00	\$3,923,613.00	(12 A, 3 B type)
◆ Mitigation:	\$ 215,625.00	\$ 57,500.00	(10 A–5 ac each; 50ac total)
◆ Utility Relocation (State’s Share)	\$ 115,575.00	\$ 294,400.00	(various – elec/phone etc.)
◆ Relocation Assistance	\$ 0.00	\$ 57,500.00	(RAP for 3 businesses)
◆ Clearance/Demolition	\$ 0.00	\$ 47,150.00	(3 structures)
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>	
Total RW Costs	\$ 761,006.00	\$4,381,163.00	combined = <u>\$5,143,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00		
◆ Construction Contract Work:	\$ 30,000.00		

F. Alternate 4 E – North:	South of Wye	North Connect
◆ Acquisition:	\$ 428,806.00	\$ 682,813.00 (20 A, 1 B type)
◆ Mitigation:	\$ 215,625.00	\$ 359,375.00 (40 A–5 ac each; 200ac total)
◆ Utility Relocation (State’s Share)	\$ 115,575.00	\$ 207,000.00 (electric/phone – poles)
◆ Relocation Assistance	\$ 0.00	\$ 0.00
◆ Clearance/Demolition	\$ 0.00	\$ 0.00
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>
Total RW Costs	\$ 761,006.00	\$1,250,188.00 combined = <u>\$2,012,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00	
◆ Construction Contract Work:	\$ 30,000.00	

G. Alternate 5 E – Wye:	South of Wye	Wye Connect
◆ Acquisition:	\$ 224,071.00	\$3,923,613.00 (11 A, 3 B type)
◆ Mitigation:	\$ 86,250.00	\$ 57,500.00 (10 A–5 ac each; 50ac total)
◆ Utility Relocation (State’s Share)	\$ 109,825.00	\$ 294,400.00 (various -elec/phone, etc.)
◆ Relocation Assistance	\$ 0.00	\$ 57,500.00 (RAP for 3 businesses)
◆ Clearance/Demolition	\$ 0.00	\$ 47,150.00 (3 structures)
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>
Total RW Costs	\$ 421,146.00	\$4,381,163.00 combined = <u>\$4,803,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00	
◆ Construction Contract Work:	\$ 30,000.00	

H. Alternate 5 E – North:	South of Wye	North Connect
◆ Acquisition:	\$ 224,071.00	\$ 682,813.00 (20 A, 1 B type)
◆ Mitigation:	\$ 86,250.00	\$ 359,375.00 (40 A–5 ac each; 200ac total)
◆ Utility Relocation (State’s Share)	\$ 109,825.00	\$ 207,000.00 (various -elec/phone, etc.)
◆ Relocation Assistance	\$ 0.00	\$ 0.00
◆ Clearance/Demolition	\$ 0.00	\$ 0.00
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>
Total RW Costs	\$ 421,146.00	\$1,250,188.00 combined = <u>\$1,672,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00	
◆ Construction Contract Work:	\$ 30,000.00	

I. Alternate 6 E – Wye:	South of Wye	Wye Connect
◆ Acquisition:	\$ 197,551.00	\$3,923,613.00 (9 A, 3 B types)
◆ Mitigation:	\$ 86,250.00	\$ 57,500.00 (10 A–5 ac each; 50ac total)
◆ Utility Relocation (State’s Share)	\$ 75,325.00	\$ 294,400.00 (various -elec/phone, etc.)
◆ Relocation Assistance	\$ 0.00	\$ 57,500.00 (RAP for 3 businesses)
◆ Clearance/Demolition	\$ 0.00	\$ 47,150.00 (3 structures)
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>
Total RW Costs	\$ 360,126.00	\$4,381,163.00 combined = <u>\$4,742,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00	
◆ Construction Contract Work:	\$ 30,000.00	

J. Alternate 6 E – North:	South of Wye	North Connect
◆ Acquisition:	\$ 197,551.00	\$ 682,813.00 (9 A, 3 B types)
◆ Mitigation:	\$ 86,250.00	\$ 359,375.00 (40 A–5 ac each; 200ac total)
◆ Utility Relocation (State’s Share)	\$ 75,325.00	\$ 207,000.00 (various- elec/phone, etc.)
◆ Relocation Assistance	\$ 0.00	\$ 0.00
◆ Clearance/Demolition	\$ 0.00	\$ 0.00
◆ Title/Escrow Fees	<u>\$ 1,000.00</u>	<u>\$ 1,000.00</u>
Total RW Costs	\$ 360,126.00	\$1,250,188.00 combined = <u>\$1,611,000.00</u>
◆ Environmental permit/filing fees:	\$ 8,000.00	
◆ Construction Contract Work:	\$ 30,000.00	

The following assumptions and limiting conditions were identified:

1. Contractor needs to be aware that USA Alert has to be contacted prior to any digging. This information should go in the specials.
2. Project is listed in the Wednesday September 14, 2005 Bishop “Status of Projects” on page 1. It shows a r/w certification date set for: not given, project is Feasibility Study only.
3. These costs are for the 2005 year and are not escalated. The addendum pages in RW Estimate Report break out the two components for Alternates 3 and 4 and escalate RW costs out 3 years for all of the Alternates. There are no addendum pages for Alternates 5 and 6 in the RW Estimate Report, which the Project Engineer has broken out into components on their tally sheet. Alt’s 5 and 6 have been broken down into components on this sheet, following Project Engineers style.

4. Environmental filing/permit processing fees have been determined at a standard rate of \$ 8,000.00 for 2006.
5. Right of Way activities (regular or "reg." right of way work) can commence upon receipt of completed Certificate of Sufficiency. Anticipated Lead Times for this project will be –
 - ◆ Preparation of Right of Way Maps to Reg. R/W (beginning of regular right of way work). 12 Months
 - ◆ Reg. Right of Way (beginning of r/w work) to Right of Way Certification. 24 Months

NOTE: The last chance to submit map/project changes to Right of Way, without jeopardizing r/w certification date, is 3 months after start of regular right of way work.

ANTICIPATED Right of Way LEAD - TIME will require a minimum of 24 months after we receive certified Appraisal Maps, the necessary environmental clearances have been obtained, and freeway agreements have been approved.



NANCY ESCALLIER

Field Office Chief

Right of Way, Central Region - Bishop

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