

Bishop Area Access & Circulation Feasibility Study



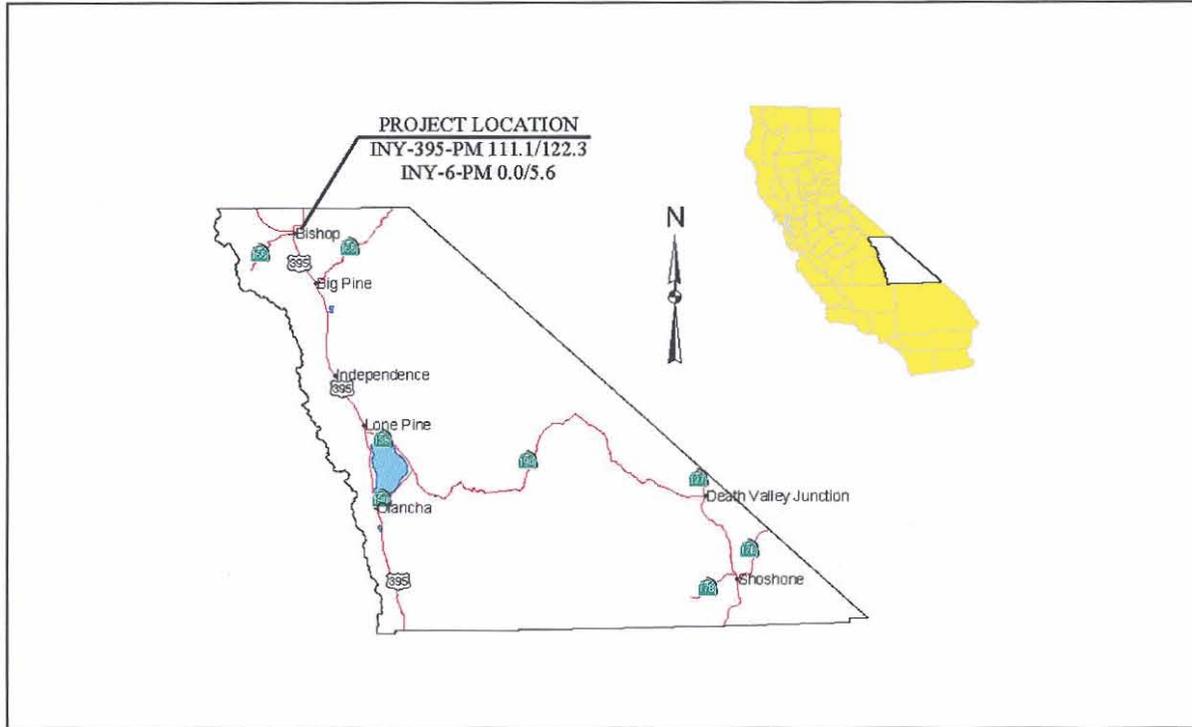
July 13, 2007



California Department of Transportation
District 9
500 South Main Street
Bishop, CA 93514

FEASIBILITY STUDY REPORT

This document can NOT be used for programming purposes. A Project Study Report will need to be written to serve as the programming document.



In Inyo County on Route 395 from 1.2 miles south of Sunland Road to 0.04 miles south of Pleasant Valley Dam Road and on Route 6 from the Junction of Route 6 and 395 to 0.25 miles north of Jean Blanc Road.

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This Feasibility Study Report has been prepared under the direction of the following registered civil engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.


REGISTERED CIVIL ENGINEER

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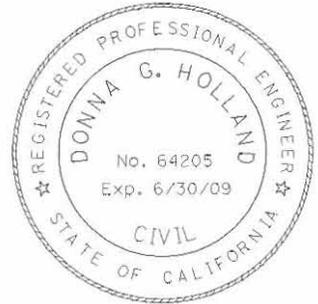


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ABBREVIATIONS

AADT	Annual Average Daily Traffic
ADT	Average Daily Traffic
BAACS	Bishop Area Access and Circulation Study
Bishop Airport	Eastern Sierra Regional Airport
CBD	Central Business District
CEQA	California Environmental Quality Act
DDHV	Directional Design Hourly Volume
FAP	Federal Aid Primary
FHWA	Federal Highways Administration
IMT	Inyo Mono Transit
IRRS	Interregional Road System
LADWP	Los Angeles Department of Water and Power
LOS	Level of Service
LTC	Local Transportation Commission
MHP	Mobile Home Park
MVM	Million Vehicle Miles
NB	Northbound
NEPA	National Environmental Policy Act
PA/ED	Project Approval and Environmental Document
PCIA	Preliminary Community Impact Assessment
PDT	Project Development Team
PID	Project Initiation Document
PM	Post Mile
R/W	Right of Way
SB	Southbound
SCE	Southern California Edison
SHELL	Subsystem of Highways for the Movement of Extra-Legal Permit Loads
STAA	Surface Transportation Assistance Act
TCR	Transportation Concept Report
TI	Traffic Index
WWF	Waste Water Facility

Executive Summary

In 2003 the Inyo County Local Transportation Commission, with the support of the City of Bishop and Inyo County, requested that Caltrans District 9 conduct the Bishop Area Access and Circulation Study. The study was developed in a collaborative fashion with the project proponents mentioned above, the Bishop Paiute Tribe, local Chamber of Commerce and businesses, local public service entities, local schools, the general public, and others. Five Study Objectives were defined at the beginning to guide the process:

- Improve 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 the rerouting of truck traffic.
- Facilitate ground access improvements to the airport and its associated development improvements.
- Keep services in Bishop visible for through-traffic on any route and have easy on/off connections.

The process employed to develop the study included: a project development team, which included key stakeholders; research on history, similar studies, and other related subjects; data collection and analysis; an extensive public participation program involving public meetings, surveys, consultation, presentations, a focus group, and continual public input; alternatives developed for both alternate truck routing and local circulation improvements; development of a traffic simulation model for the entire study area (used to assist in determining problem areas and the effect certain solutions might have on them); initial scoping of alternative costs, environmental concerns (including a Preliminary Community Impact Assessment), other considerations; and final report development with recommendations.

A large amount of information and data have been developed during this study to assist those with the responsibility of insuring safe and efficient access and circulation in the Bishop area. The information contained in this study should aid in the decision-making process so that investments of public funds solve real problems with viable solutions benefiting the local community and traveling public alike.

The recommendation of this study includes three main concepts to meet the goals set forth by the study (refer to pages 45 through 49 for further details on recommendations):

1. A two-lane eastern alternative truck route beginning somewhere between Gerkin Road and Schober Lane and connecting back to US 6 and US 395 at the Wye Road location. This new route should be developed as a City/County road to Caltrans standards in order to allow the City and County the option to exchange this route for Main Street/US 395 at sometime in the future. This would accomplish reducing the amount of commercial truck traffic downtown, accommodate access to the airport, and minimize negative economic impacts.

2. Improved access between the City and the housing areas to the west (i.e. South Barlow, Manor, McLaren, Highlands/Glenwood, Meadow Creek, Bishop Reservation, etc.). This recommendation includes the development of new local roads to provide options other than SR 168/West Line Street and US 395/North Sierra Highway to get into town. This would accomplish alleviating some traffic congestion on West Line Street, Main Street, and at the intersection of Main and Line, particularly at periods of peak congestion.
3. Improved City street alternatives to Main Street/US 395 that accommodates north/south movements of local traffic on either side of Main Street. Besides the development of a “B Street” along the canal, this concept is the most difficult to implement due to potential impacts to private property. However, this would accomplish reducing locally generated traffic on Main Street, particularly related to short trips between Main Street corridor establishments.

Some other interim recommendations include: better alignment of the Wye Road/US 6 intersection and the eventual reconfiguration of the US 6/US 395/ Wye Road intersection; the aligning of side streets off of Main Street/US 395 to create at least one more full four way intersection; extending See Vee Lane north of US 395; signaling the See Vee/US 395 intersection; and defining access along the North Sierra Highway corridor with sidewalks and driveways.

As noted in the Potential Constraints (pg. 25) and Environmental Determination (pg. 50) sections, some major obstacles associated with environmental clearance/mitigation and right of way costs challenge the ability to implement the recommended eastern alternative truck route with a Wye Road connection. The ability to mitigate wetland impacts and gain environmental clearance for the new roadway alignment is subject to great uncertainty due to the current lack of opportunities to create suitable mitigation wetlands. In addition, right of way costs for the Wye Road connection could be significant due to the private/commercial land acquisitions that may be required in order to reconfigure the Wye Rd./US 6/US 395-intersection for the increased traffic an eastern alternative with Wye Road connection would bring to that area.

Since one of the study goals was related to improving circulation and safety for all modes of transportation, it should be noted that many of the surveys and other activities conducted indicated a high level of community support for bicycle facilities around town that connect to western housing nodes, schools, work, shopping, etc. These sources also indicated a high degree of support for transit services as an option. Improvements in these areas could act as a measure to provide modal options and relieve locally generated traffic congestion.

It is likely that a staged, multi-pronged approach, combining several of these recommendations, could accomplish most of the goals set forth by the study. However, it is unlikely that significant operational changes to Main Street, such as on street parking or median landscaping, can occur until the alternate route for US 395/US 6 is the primary route for through traffic.

Introduction

In 2003 the Inyo County Local Transportation Commission, with the support of the City of Bishop and Inyo County, requested that Caltrans District 9 conduct the Bishop Area Access and Circulation Study. The LTC asked that Caltrans study US 395 from the junction of Schober Lane to the junction of Barlow Lane in order to reduce motorized congestion, create a more livable/walkable downtown area, improve safety to traffic, bicyclists and pedestrians, and improve ground access to the Eastern Sierra Regional Airport (Bishop Airport). Of special interest was the routing of interregional commercial vehicles away from Bishop's downtown core. This document examines six build alternatives for a truck route around the City of Bishop. Two alternatives are to the west of Bishop and four alternatives are to the east. There are two connection possibilities for the eastern alignments. All alternatives proposed are for a two-lane facility. However, right of way (R/W) to build a full four-lane controlled access facility would be acquired at the outset. This will protect the R/W needed for future expansion and provide the City and County the option to exchange this route for Main Street/US 395. When the City and County are ready for the transfer, the State can relinquish the old US 395 corridor to the City and the County in exchange for the new facility. The seventh alternative is the no build. Also included in this document are recommendations for local street improvements.

Any eventual truck route would likely be funded jointly with the City of Bishop, County of Inyo and the State. Total current cost estimates for western alternatives range from \$38 to \$44 million. Eastern alternatives with a Wye Road connection range from \$27 to \$49 million. Eastern alternatives with a north connection range from \$44 to \$71 million. The LTC indicates that this project's priority would be high after the completion of the four-laning of US 395 in Inyo County.

Background

History

The idea of routing traffic around the downtown core of Bishop is not new. The California Division of Highways did a study for a bypass of Bishop in the 1960's (See Appendix 1). At the time of this early study the Bishop community was in strong opposition to all the proposed alternatives due to economic and development considerations. Fearing loss of tourism dollars, the community did not support a route that would remove any of the traveling public from the Main Street/US 395 corridor. Additionally, the proposed alternatives required large amounts of either tribal lands or scarce private lands slated for development. None of the six alternatives proposed by the California Division of Highway's 1966 study could be built now, as they crossed lands that have been heavily developed. The costs associated with the R/W acquisition of heavily developed lands would make the construction of any of the 1966 alignments prohibitive. Additionally, the current environmental justice process would prevent the construction of all of these old alignments because there is not enough private land available to replace the lands and homes that would be acquired to construct any of these old alignments.

Of the six alternatives proposed, three crossed through tribal lands. All three of these alternatives would have resulted in large losses of tribal lands. The 1966 Engineer's

recommendation was one of these alternatives. This alternative had a cloverleaf interchange for US 395 and US 6 just south of the tribal lands boundary with both the new US 395 and the new US 6 alignments crossing through tribal lands. The next alternative was similar but had the cloverleaf interchange on tribal lands near See Vee Lane. The third alternative crossed through Bishop City Park, then continued west through the center of tribal lands along Diaz Lane.

Initially the Board of Trustees for the Owens Valley Paiute-Shoshone Band had requested that Tribal lands be used for the bypass of Bishop. After this request, a dissenting group developed that was in strong opposition. This group protested locally and in Sacramento and circulated a petition, obtaining a large number of tribal member signatures, opposing any "Federal or State Freeway or Highway project passing through the Reservation land". In 1966 most of the tribal lands necessary to construct the new highway alternatives were undeveloped. Now these same lands are developed to the point that the Tribe is actively seeking new lands as there is little undeveloped land left for new Tribal members.

Another route proposed in 1966 went through a large parcel of privately held land that was in the process of getting approvals for the development of a new subdivision. This alternative received a great deal of local resistance as private property was (and is now) very scarce, making housing difficult to find and expensive. Indeed, that parcel of land has been developed to its full extent creating the Highlands and Glenwood Mobile Home Parks and the Lazy A and Meadow Farms subdivisions. These developments are now the most densely populated areas of the greater Bishop area. The only western alignment proposed in 1966 went through what is now the Sunland Solid Waste Disposal Site. In the end, the Division of Highway's dropped the bypass of Bishop due to statewide funding constraints and a lack of immediate need.

A 1965 economic study done by Inlandia and sponsored by the Bishop Merchants Association, in response to the Division of Highway's bypass study, concluded that Bishop was not ready for a bypass in 1965. See Appendix 2 for the full study. The right time for the bypass recommended by this study would be when: parking was removed from Main Street/US 395, Main Street/US 395 was marked for four-lane traffic with a center turn lane, and annual average daily traffic (AADT) on Main Street/US 395 reached 18,000. Two of these indicators have already occurred. Main Street/395 was marked for four-lane with a center turn lane and parking was removed in 1994. The AADT on Main Street/US 395 in 2004 was at 17,300. At the current estimated growth rate, the 18,000 AADT the Inlandia study recommended for bypass of Bishop will be reached by 2009. If this current feasibility study moves forward as a Caltrans project, with current funding schedules for the remaining four-laning of 395, the recommended truck route would not be built until 2025. In 2025 the AADT on Main Street/US 395 is projected to be 21,320. If this truck route were a County project time lines may be different.

Local Governmental agencies have recognized the need for, at minimum, a truck route around the Bishop Central Business District (CBD) for many years. Most recently the concept of a truck route around Bishop has been identified in the 1993 City of Bishop General Plan, the 2001 Inyo County General Plan, and the 2001 Inyo County Regional Transportation Plan. With Main Street/US 395 being the only route for transport of hazardous materials through Bishop, emergency response crews have often expressed concern over the potential for incidents due to the proximity of truck traffic and the population centers of Bishop.

With growth anticipated in California as a whole and specifically in Mono County in Benton, Hammil and Chalfant Valleys, and in Inyo County in Wilkerson and the Rovana area, the anticipated traffic growth rate of 1% per year used to predict future growth in this document is reasonable assuming current conditions. However, anticipated increases in truck traffic on the US 395/US 6 corridors due to growth and development of warehousing in the Reno/Carson area of Nevada along with increased tourism to Bishop and development of the Mammoth area may make this estimate on the low side for predicting future traffic growth (see Attachment 1 for a Reno Gazette-Journal article on Nevada's new warehousing development).

Many local residents have voiced concerns for the safety of pedestrian and bicycle users in Bishop's CBD, specifically mentioning trucks as being a problem. Much of the community seems ready to support an alternative route to remove trucks and reduce congestion in the downtown area. However, Bishop merchants in general are still not supportive of an alternative route due to fears of losing interregional traveler business. In a public opinion survey sponsored by this study, the solution to downtown congestion with the greatest support by the general public was the construction of an alternative truck route with 55% of those surveyed. However, when this same solution was offered to a business focus group session, only 38% were in support of this method (see Appendix 3, Section E, 2003 Public Opinion Telephone Survey, and Section G, 2004 Business Survey).

Existing Facility

Main Street/US 395 in the Bishop CBD is a five-lane all-paved facility. There are two southbound lanes, two northbound lanes, and a center turn lane. Shoulder and sidewalk widths vary greatly. On Main Street/US 395 between Line Street and East Elm Street the R/W is the most restrictive. In the narrowest section of this segment there is only a 10-ft center turn lane and number 1 lane, and a 12-ft number 2 lane. Shoulders in this segment are less than 3 ft to the flow line of the gutter. This narrow shoulder does not allow for use of the shoulder for bicycles in the CBD. Most bicyclists ride in the traffic lane through the CBD. In order to keep the existing sidewalk widths, a design exception was required to allow the lanes, shoulders, and center turn lane to be less than the Caltrans design standard of 12 ft for lane widths and 14 ft for center turn lanes. The narrowness of the existing R/W through downtown, and the development of storefronts at the edge of the R/W, results in sharp turning radii and short sight distances to/from side streets.

The sharp turning radius at the corner of Main Street/US 395 and Line Street is one of the reasons the City and County requested this current study. Trucks, and vehicles pulling trailers, cannot make the turn off of US 395 onto East Line Street without using a portion of west bound East Line Street. Even though East Line Street is the most direct access to the Bishop Airport, trucks use other streets off of US 395, all of which are mostly residential, in order to avoid the sharp turning radius on East Line Street. The County's development of the Bishop Airport for light industrial uses will require good truck access for deliveries. The Main Street/US 395/Line Street corner is not sufficient for truck access. Another access for trucks must be developed for the County's future plans for the Bishop Airport to move forward.

Expansion of the existing US 395 facility to provide for the future's increased capacity is not possible without additional R/W. Currently Main Street/US 395 is operating with non-standard

reduced lane and shoulder widths in order to provide a center turn lane and keep historic sidewalk widths. While this does maximize the capacity of the narrow R/W currently available, it leaves no way to increase capacity. The only way to increase the capacity of the existing facility, or to satisfy Caltrans desire for standard lane and shoulder widths and maintain the wider sidewalks the locals desire is to acquire additional R/W. Additional R/W would necessitate the partial demolition of structures on one side of Main Street. Rather than destroy the character of an early California town in order to provide the additional R/W needed for a safe facility capable of handling all modes of traffic and future uses of the Bishop CBD, a truck route on a new R/W seems the better choice.

Downtown Bishop has two arteries that feed in traffic from the west Bishop area. They are West Line Street/SR 168 and North Sierra Highway/US 395. West Line Street/SR 168 is a four-lane facility from Pa Ha Lane to See Vee Lane, a three-lane facility with center turn lane from See Vee Lane to Pioneer Lane and a two-lane facility with center turn lane from Pioneer Lane to Main Street/US 395. West Line Street/SR 168 has sidewalks from Pioneer Lane to Main Street/US 395. West Line Street/SR 168 from Sunland Drive into Main Street/US 395 has problems similar to the Bishop CBD. Existing R/W is narrow with storefronts built at the edge of the R/W line. Turning radii to/from side streets are sharp and sight distances are short. North Sierra Highway/US 395 is an all paved four-lane facility with center turn lane. The existing R/W is narrow with several store fronts built on the R/W line. There are discontinuous sidewalks, and undefined driveways. Some businesses along this stretch are encroaching on the States limited R/W to provide for customer parking.

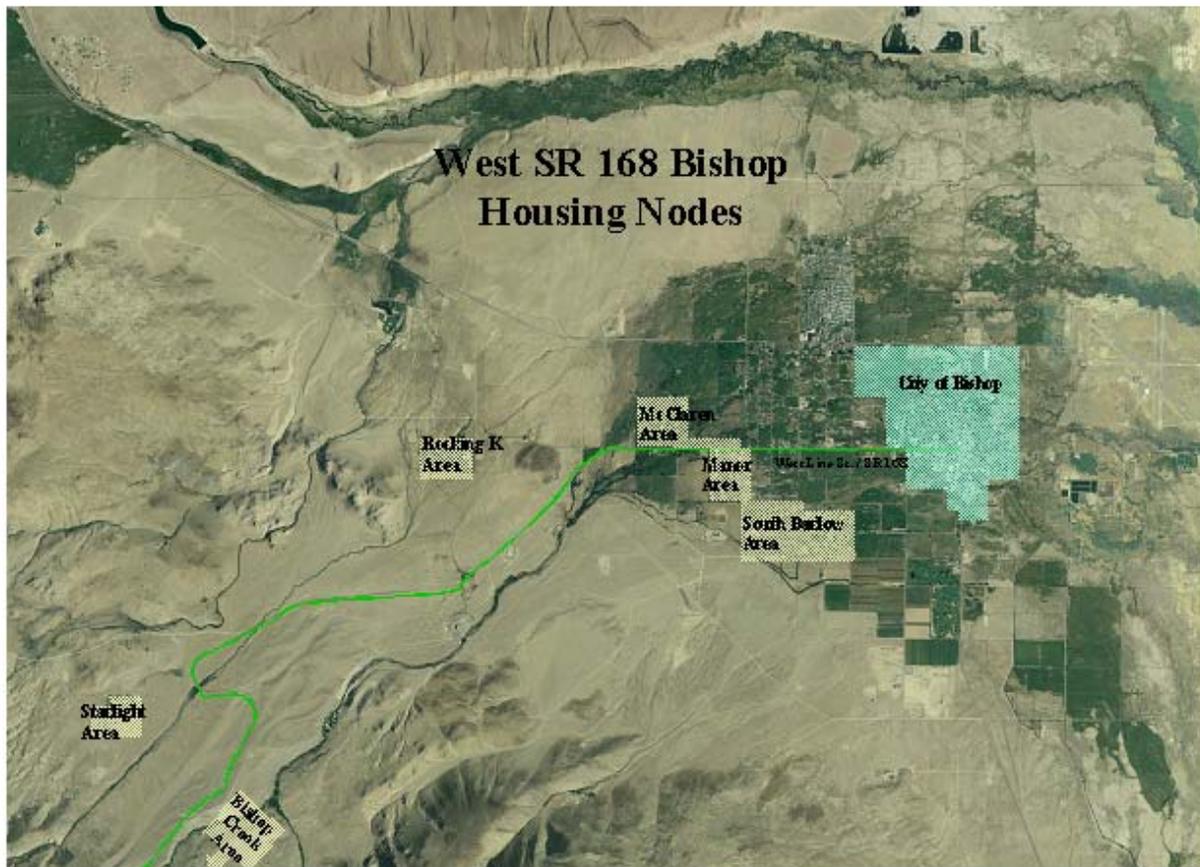
US 395 and US 6 are included in the Subsystem of Highways for the Movement of Extra-Legal Permit Loads (SHELL). The Federal Highway Administration has designated US 395 and US 6 as Surface Transportation Assistance Act (STAA) routes. This designation authorizes the system's use by larger than normal trucks and gives them access to off-route facilities. Currently, over width loads take both the travel lanes to traverse Bishop's CBD. Over height loads block traffic in both directions to weave through the traffic signals along the Main Street/US 395 corridor. Due to high turn movements from side streets additional traffic signals are anticipated for Main Street/US 395. Each new signal will be another obstruction for over height loads to weave through.

It can be anticipated that as traffic volumes on Main Street/US 395 increase, the "green time" for Main Street/US 395 will increase while the "green time" for side streets will decrease. This means that side street users will have longer delay times. This extra waiting time will create an even greater sense of congestion to side street users wishing to enter Main Street/US 395.

One of these affected side streets is West Line Street/SR 168. West Line Street/SR 168 functions as a major collector for the City of Bishop. It is the only direct access to downtown services for developments in the areas of South Barlow, Manor Market, McLaren, Rocking K, Starlight and Bishop Creek. Traffic already backs up considerably on West Line Street/SR 168 at the intersection of SR 168/US 395. Caltrans has increased the number of turn lanes on West Line Street/SR 168 to the maximum that the existing R/W can hold. An increase in the queue length because of shortened "green times" for West Line Street/SR 168 could cause gridlock west of the intersection. With the main access to the post office and schools located off of West

Line Street/SR 168, this additional time would further degrade an already congested area, especially during school start and end times.

Figure 1: West SR 168 Housing Nodes



East Line Street has many similarities to West Line Street/SR 168. East Line Street is the only reasonably close signalized intersection available for controlled left turns onto Main Street/US 395 for the vast majority of residents on the east side of Bishop. Traffic volumes are already high on this street resulting in long queues. The City has increased the number of lanes available on East Line to the maximum the existing R/W can allow. A decrease in “green time” for East Line Street could result in longer queues. While this won’t cause gridlock because the next north/south street is fairly far away, it may prevent eastbound cars from accessing the City parking lot as the queue could easily cover the entrance.

Another location on US 395 with potential for back up is the junction of US 6 and US 395. This signalized, at grade intersection has a split alignment using Wye Road west of US 6 for US 395 southbound (SB) left turns onto US 6 northbound (NB) (See Figure 2). Wye Road is also used for most of the US 6 SB right turns onto US 395 NB as the angle of intersection at the US 395/US 6 junction for this movement is very sharp. Left turns from US 395 SB onto US 6 NB are not allowed at the signal location. The total queuing length for the US 395 SB to US 6 NB movement on Wye Road is about 500 ft and requires a non-signalized left turn at the Wye

Road/US 6 intersection. The short queuing length combined with the potential for backup at the stop sign will eventually cause the Wye Road/US 6 intersection to fail due to backup onto US 395. The development of housing in Mono County will not only increase the number of vehicles on US 6 but also will also increase the number of vehicles using Wye Road west of US 6. These increasing volumes will eventual result in the failure of the Wye Road intersections. So far, traffic volumes have been low enough to allow the Wye Road intersections to function acceptably.

North Sierra Highway/US 395 (between See Vee Lane and Pa Ha Lane) is experiencing collisions at a higher rate than the statewide average for a similar facility (See Table 5). Most of these collisions can be attributed in some way to the randomness and mix of development and to high turn movements along this corridor. Development along North Sierra Highway occurred much later than the Bishop CBD and is more random in nature. Business storefronts are built at variable distances from the R/W line. Some are built to the edge and are utilizing the shoulder of the highway for parking, while others are set further back allowing parking to be completely out of the R/W. The randomness of parking locations, in addition to the lack of sidewalks and undefined driveways, make it more difficult for drivers to anticipate when and where cars from these businesses might decide to enter the highway. Lack of sidewalks makes it difficult for drivers making turn movements to see pedestrians and bicyclists. North Sierra Highway/US 395 is the only direct access to the Bishop CBD for the largest population in the unincorporated area of Bishop. The areas two largest, most densely populated, mobile home parks have their only access point directly onto North Sierra Highway/US 395. These mobile home park driveways are not clearly defined and have high turn movements.

Figure 2: Existing US 395/US 6 Junction



Existing City of Bishop Facility

Usually when congestion occurs on one route, local users will choose another route, leaving the congested areas to users who are unfamiliar with the area. This normal shifting of local traffic to side streets to reduce Main Street/US 395 congestion has only limited potential given Bishop's current traffic circulation patterns. Bishop's city street layout has inherent problems that would require radical change for most locals to choose the use of a city side street over Main Street/ US 395. Main Street/US 395 divides east and west Bishop and is the only through street connecting south to north Bishop. Line Street divides south and north Bishop and is the only through street connecting most of east Bishop to west Bishop. This lack of through streets crossing Main Street/US 395 and Line Street makes east/west and north/south connections in Bishop inefficient.

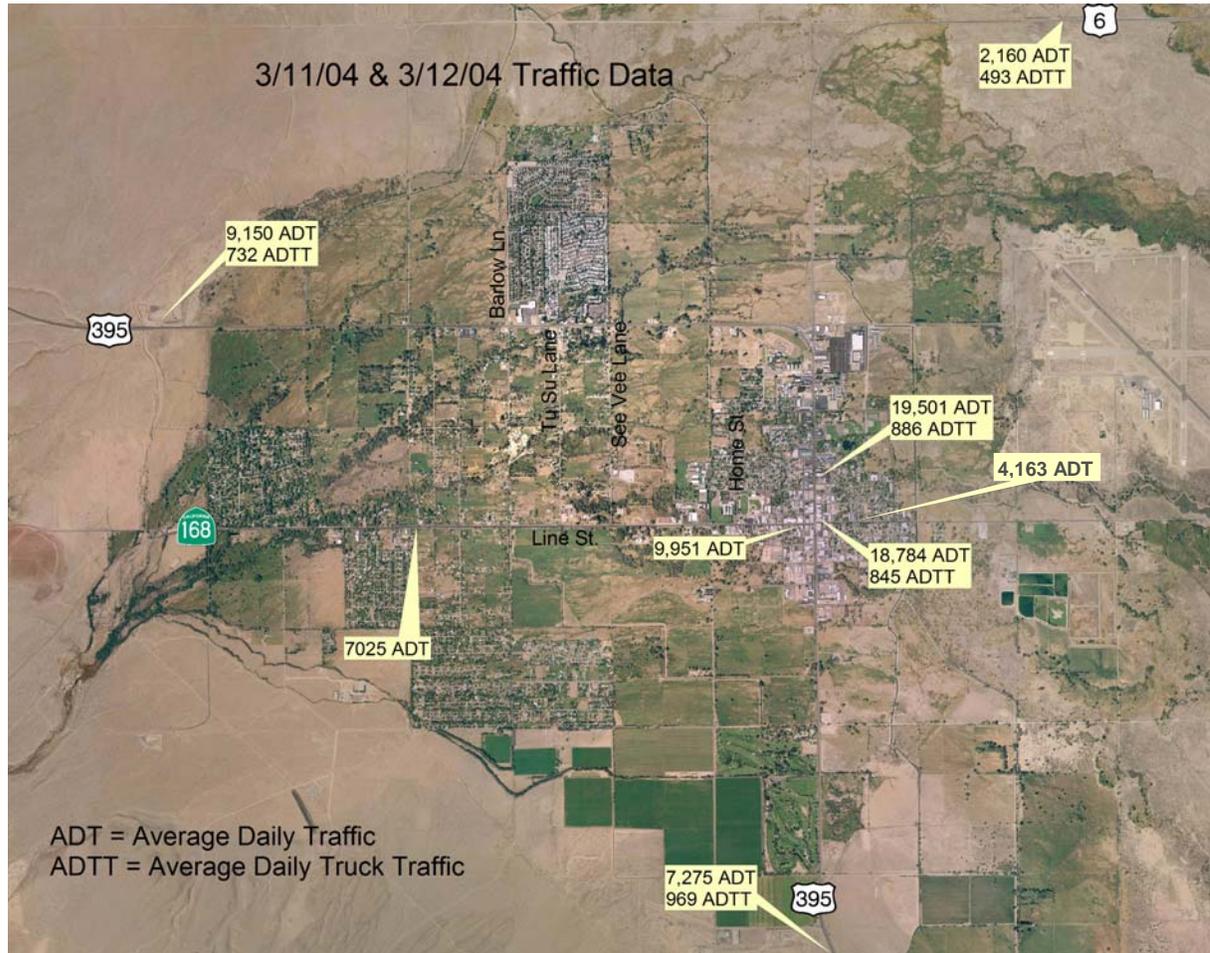
South Street, Line Street and Yaney Street are the only east/west through streets crossing Main Street/US 395. South Street only serves the residents of southeast Bishop. Line Street is the only east/west access for residents who live north of Line Street in east Bishop. Yaney Street does not serve east Bishop residents, as access to it requires traveling a considerable distance, off route, east of the Bishop City Park. All other east/west Bishop streets end in a "T"

intersection at Main Street/US 395. Most of these “T” intersections have another side street across from them that is offset. These offset distances are close enough that conflicting turn movements occur not only in the center turn lane but also from side street left turn movements. However, the offsets are large enough that the intersections must be treated separately making the placement of traffic signals on Main Street/US 395 inefficient and problematic. Inefficient because signals placed at a “T” intersections will only provide turn movement relief to one side of Bishop. Problematic since the offset side streets make signal placement, timing and triggering on Main Street/US 395 difficult. These offset side streets also force travel on US 395 in order for local traffic to make an east/west crossing of Main Street/US 395.

North/south connections in Bishop are also limited, forcing local traffic to use Main Street/US 395 for these connections. There are no through streets parallel to Main Street/US 395 connecting the full length of Bishop’s business corridor. The “T” intersections, offset side streets, and the lack of parallel side streets running the full length of Bishop, along with the concentration of businesses along Main Street/US 395, make it virtually impossible for local traffic to avoid Main Street/US 395. The same can be said for Line Street/SR 168, as it has similar issues. The high use of these two facilities by local traffic puts particular pressure near the intersection of these two roads.

The dependence of Bishop’s local traffic circulation patterns on the Main Street/US 395 and Line Street/SR 168 intersection can be seen in Figure 3, Average Daily Traffic (ADT) Volumes from March 11 and 12, 2004, and from the Bishop Area Access and Circulation Study (BAACS) Preliminary Community Impact Assessment (PCIA) (Appendix 4, Table 1). Figure 3 shows ADT’s of 19,500 just north of the Line Street/SR 168/Main Street/US 395 junction, and nearly 7,300 just south of Bishop. This means that local traffic generates about 12,200 ADT. Coincidentally, the greater Bishop area has a total population of approximately 12,200 (Table 1 in BAACS PCIA). From these numbers it would appear that every man, woman, and child living in the Bishop area drives to the corner of Line and Main at least once a day. That of course is not true, but these numbers do show the dependence and importance of local traffic circulation on the junction of Line Street/SR 168 and Main Street/US 395. So much so, that the equivalent of the entire Bishop area population uses this intersection, and Main Street/US 395 north of it, at least once a day. The CoNexus survey from the January 15, 2004 public meeting revealed that 65 % of those participating said they take 1 to 4 one-way trips on Bishop’s Main Street on a typical weekday and 20 % said they take 5 to 9 one-way trips (see Appendix 3, Section F, January 2004 Public Workshop). This survey, along with the observed high traffic volumes, certainly indicates that the access choices available to those needing downtown services are limited.

Figure 3: Average Daily Traffic (ADT) Volumes from March 11 and 12, 2004



Current Study

Overview of Traffic Findings

When the Inyo County LTC approached Caltrans with the request to consider making a truck route around the Bishop CBD, their hope was that the removal of truck traffic from Main Street/US 395 would significantly reduce traffic volumes. This reduction would then allow improvements to be made to the Bishop CBD to make it more pedestrian friendly, and thus more enticing not only to the local population, but also to area visitors and interregional travelers. Desired improvements included: the return of parking on Main Street, wider sidewalks, landscaping, bike lanes, and median improvements such as raised islands with landscaping.

Caltrans, in cooperation with Inyo County and the City, collected traffic count data at several locations in and around Bishop. The results were surprising to many. It was immediately apparent that truck traffic is not the main cause of downtown congestion (see Figure 3). Traffic

counts south and north of Bishop were significantly less than counts within the city itself. Even if all interregional traffic were removed from Main Street/US 395, traffic volumes would not be reduced to the point that significant operational changes could be made, such as the return of parking to Main Street/US 395. Even taking into account that trucks are a greater impediment than cars, (one truck being equivalent to about 4 cars), volumes would still not be reduced to a level that would allow for significant operational changes. The high volumes in the Bishop CBD are generated by local traffic and not truck or interregional traffic. This realization was a disappointment to many who had hoped the truck route would be an easy, quick solution to the perceived problem. Now it appears that even if a full bypass of Bishop were made, the City and County would still have to modify the local street system in order to make the significant operational changes to Main Street they desire.

Another surprising discovery was the high traffic volumes on East Line Street. High volumes on East Line Street are virtually all locally generated. The reasons for these high volumes are similar to the reasons for the high volumes on Main Street/US 395, and can be mostly attributed to the lack of access choices and the existing offset configurations of local streets. Another reason that volumes on East Line Street are high is that Line Street/US 395 is the only reasonably close, signalized intersection available for controlled left turns onto Main Street/US 395 for the vast majority of residents on the east side of Bishop. Many locals choose to go to East Line Street to make a left turn or cross Main Street/US 395, even though this intersection may be off their most direct route, because this intersection has a signal.

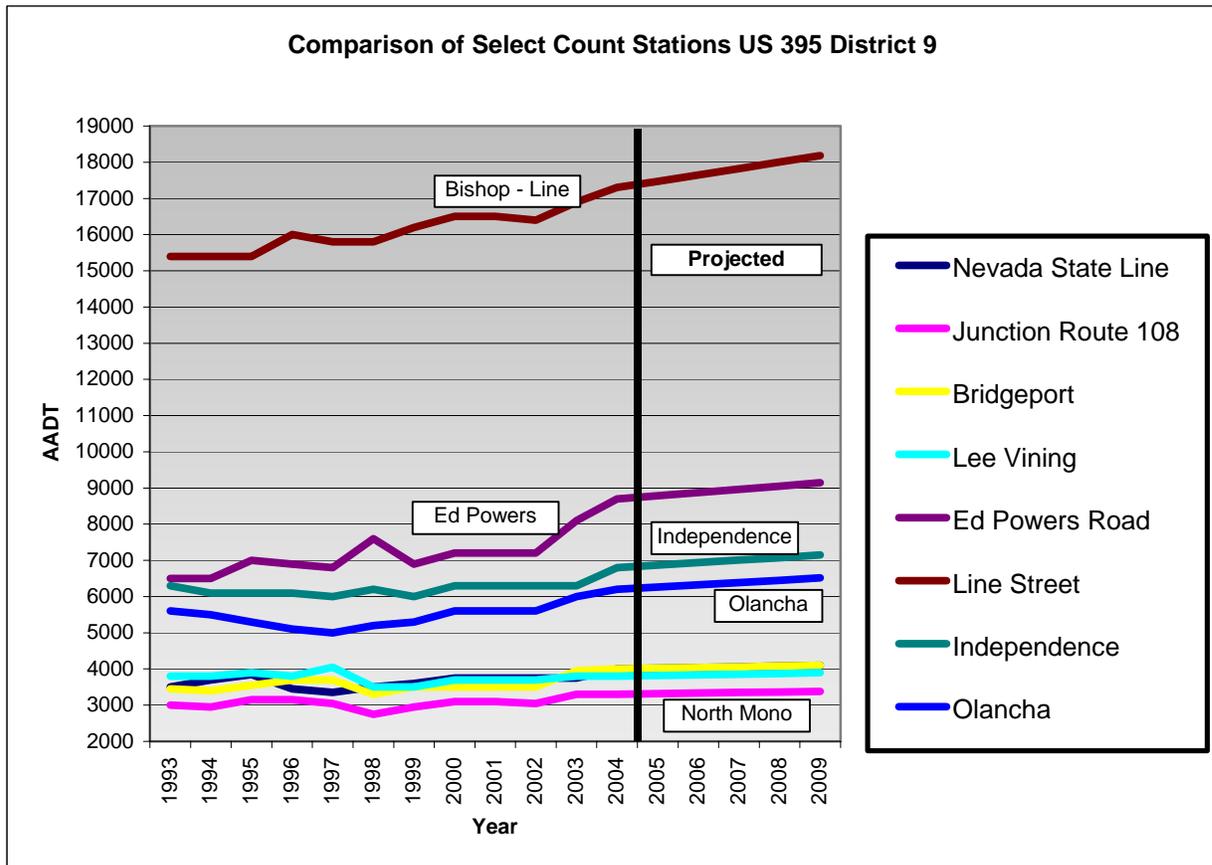
High volumes on West Line Street/SR 168 were not a surprise. West Line Street/SR 168 is a major collector for Bishop's CBD. Most locals can attest to the high traffic volumes, especially between Sunland Avenue and Main Street/US 395. These volumes are also almost all locally generated traffic. Once again, the reasons for these high volumes are similar to those for East Line Street and Main Street/US 395 and can be mostly attributed to the lack of access choices and the existing offset configurations of local streets. Additionally, some responsibility for these high volumes can be placed on the schools. All of Bishop's schools are located near Bishop's central core just off of West Line Street/SR 168. These schools contribute significantly to West Line Street/SR 168 traffic counts in the morning and the afternoon at school start and end times.

As previously stated in the existing facilities section of this document, increased traffic volumes on Main Street/US 395 will reduce "green time" to Line Street/SR 168 at the junction of Main Street/US 395 and Line Street/SR 168. This will increase congestion by increasing queue length on both West Line Street/SR 168 and East Line Street. Additionally, as traffic volumes on Main Street/US 395 increase, wait time for entry onto Main Street/US 395 from uncontrolled city side streets increases and gaps will be shorter, which will make the signal at the junction of Line Street/SR 168 and Main Street/US 395 even more attractive to local traffic. This additional traffic will also add to queue length on Line Street/SR 168 and East Line Street.

Not only do lack of access choices and local driver behavior affect Line Street/SR 168, they also affect Main Street/US 395. As Figure 4 clearly shows, the Bishop area's traffic volumes are significantly larger than volumes along US 395 at other locations. Locally generated traffic is a significant factor in the operational working of US 395 in the Bishop area. Due to high traffic

volumes, the basic operational characteristics of US 395 through the Bishop CBD cannot be changed and still maintain its safety and function as a major interstate highway. The constraints mentioned previously: limited R/W, misaligned intersections, “T” intersections and existing development prevent the expansion or significant alteration of the current system.

Figure 4: Comparison of US 395 Traffic Counts in Bishop to Other US 395 Locations



Congestion Effects

Based on calculations from the 1998 Highway Capacity Manual and current observations of the operation of the Main Street/US 395 at Line Street/SR 168, the existing system within Bishop’s CBD is capable of handling about 580 vehicles per lane per hour. On holiday weekends the volume of traffic often exceeds this capacity, resulting in queuing of traffic on Main Street/US 395 from the Main Street/Line Street intersection north toward the US 395/US 6 intersection. In approximately 2025, at an anticipated growth rate of 1 %, similar traffic conditions to those currently occurring on holidays will be experienced on a daily basis in the CBD of Bishop. As volumes increase and access to the CBD becomes more difficult due to congestion, other less congested areas may become more attractive to local and interregional travelers. Eventually businesses that can afford it may move to a new, less congested location. This could result in the loss of businesses in Bishop’s historic CBD and could result in the eventual migration of the main Bishop business district to a new, less congested location. The beginnings of this

potential trend can already be seen in the move of the old downtown Vons and old Kmart to their new north Bishop location. This new location still has commercially developable property, and ample parking. This relatively newer, less congested area may eventually attract current and potential future CBD businesses away from the historic CBD.

In order to provide a facility that would meet the future's increased traffic needs, provide full service to all users of the highway system, and address all the stated goals of this study, the separation of Main Street and US 395 would eventually need to be accomplished as one step in a multi-phased approach. This would allow US 395 to function for what it truly is, an interstate highway. It could also allow the City to develop Main Street for what it truly is; the center of local commerce, and an early western town situated in a beautiful area that is a destination location in its own right. While the separation of US 395 and Main Street alone may not allow for all the improvements the City desires, it is one step in a multi-phased approach that could eventually lead to the City's vision for Main Street.

Alternate Route Concerns

The discussion of the separation of Main Street and US 395 (or the bypass of Bishop) is still a very emotional one. The emotional response is certainly understandable since a bypass of Bishop may negatively impact the livelihoods of some of Bishop's traveler dependant businesses. However, the 1966 Inlandia Socioeconomic Study (See Appendix 2) funded by Bishop businesses at the time of the 1960's Division of Highways Bishop Bypass indicated that at 18,000 AADT a Bishop Bypass could be considered. We are rapidly nearing 18,000 AADT for US 395/Main Street, and with current projections, should reach 18,000 AADT by 2009.

While the recommended alternate truck route proposed in this document is not a bypass, careful consideration should be given to the alignment selection of this truck route. A portion of its alignment could potentially be used for a future bypass of Bishop should the City/County desire to exchange the truck route with the State for Main Street/US 395. The importance of having full cooperation of the City of Bishop, Inyo County and Caltrans in the decision process, timing, and development of the proposed alternative location cannot be overly stressed. Reserving the lands needed to build the possible future four-lane bypass at the time of the construction of the proposed truck route will help the City, County, and State plan for a efficient transportation system that will not only work for future traffic needs, but will also efficiently and affectively help with current local and interregional traffic needs. Not preparing for the future's increased traffic volume needs will most likely result in a randomly constructed, inefficient transportation system with housing and business development not properly located for best use of that system.

An alternate truck route is likely to bring forth strong opposition from the owners of Bishop's traveler-dependent businesses. Some of these business owners believe that any removal of the interregional traveler from Main Street/US 395 will result in a significant reduction in revenue, or even the failure of their business. Studies conducted on the economic effect of full bypasses on smaller communities have shown that careful development of an alternate route is critical. A summary of the effects of "bypassed" communities in several states can be found in Attachment 3. In general, cities with populations over 2,000 considered bypasses to be beneficial, with some dissent among traffic-serving business owners along the bypassed routes. These studies are for a full bypass and not for a subservient truck route such as the alternatives proposed in

this report. A subservient route leaves the through route with a turn movement and requires the conscious

decision by the driver to make that turn. A subservient truck route should dampen the effect to interregional traveler reduction (as compared to a bypass).

One concern that traveler-dependent business owners have is the development of competing businesses along the new corridor. Interregional travelers will usually not leave their route if the services they need are already on the route. Uncontrolled development of the new corridor could result in the closure of some businesses along the old corridor (see Attachment 3 for a further explanation of this phenomenon). The best way to prevent the migration of the CBD to the new corridor is to limit development and access on the new corridor. The Los Angeles Department of Water and Power (LADWP) owns nearly all the lands needed for the routes. The only privately held lands along any of the alternatives are a small amount of commercial property located along Wye Road. An access agreement between Inyo County, the City of Bishop, Caltrans and the LADWP could effectively prevent any development along the truck route and keep the CBD in its current location.

With the proposed alternate truck route subservient to Main Street/US 395, and the prevention of commercial development along the route, there would be little incentive for the interregional traveler to choose the truck route over Main Street/US 395. Furthermore, the next full services located on US 395 and US 6 are so many miles distant that, even when the time comes for a full bypass, many interregional travelers will need to leave the bypass to obtain services. Table 1 shows the distances to services on US 395 and US 6 from Bishop. The options and availability of services in Bishop make it attractive, and the distances involved, and the limited availability of services at other towns on US 395 and US 6, make them less attractive to the interregional visitor. While some interregional visitor business may be lost due to their use of the truck route, Bishop's services and unique remoteness will likely continue to keep most interregional travelers on Main Street/US 395.

Table 1: Distances to Services from Bishop on US 395 and US 6

On US 395 North	Distance to Services in Miles
June Lake Junction (Limited Services)	53
Lee Vining	64
On US 395 South	
Big Pine	15
On US 6 North	
Chalfant Valley (Limited Services)	15
Benton (Limited Services)	33
Tonopah Nevada	115

Alternate Route Development

In the past, Caltrans has developed parallel facilities such as truck routes while still maintaining the existing mainline in the State highway system. The State no longer builds or accepts the

maintenance of parallel facilities. It is recommended that the truck route proposed in this document be a County owned and maintained two-lane facility, subservient to the existing US 395, and built to Caltrans standard. This route can be signed as either Bishop Airport access, and/or truck route. While this recommendation does not meet all the goals of the study, it should remove most of the truck traffic, thereby reducing the sense of congestion in the CBD and providing truck access to the Bishop Airport. Traffic counts will continue to rise and eventually these increases may prompt the City to request the construction of a full bypass. Since the City and County will be the owners of the proposed truck route they will also be the lead in the timing of the transfer of facilities. If that time comes, pending concurrence with the State, the City and County would take over the operation and maintenance of existing US 395/Main Street. Caltrans would then take over maintenance and responsibility of the truck route, upgrade it to a four-lane facility, realign the interchanges south and north of Bishop (making existing US 395/Main Street the subservient route), and possibly build the North Connection and the new US 395/US 6 junction, thereby creating a full US 395 four-lane bypass. Signage could be placed on the new US 395 directing travelers to “Business 395”.

Part of this exchange process would include a new route adoption. When the exchange process begins, current route adoption procedures will need to be followed. Route adoption procedures are described in the Project Development and Procedures Manual, Chapter 23, Article 5. Additionally, route continuity for SR 168 would need to be addressed. This could be accomplished by the adoption of East Line Street as an extension of SR 168 to the new US 395 alignment, or by retaining South Main Street to the new US 395, designating and adopting it as an extension of SR 168.

Study Development Guidance

A project development team (PDT) was created at the initiation of this project and it was the PDT that developed the purpose and need statement. Members of the PDT included representatives from the following organizations: City of Bishop, City of Los Angeles, County of Inyo, Bishop Paiute Indian Tribe, Bishop Chamber of Commerce, Inyo County LTC and Caltrans. During the two-year study process, regular meetings were held with the PDT in order to provide information and gather direction. The PDT decided at the initiation of this project to include the public in the information process early and continuously. Input has been incorporated into the alternatives from local agencies and all sectors of the public.

Caltrans used Jones and Stokes, an outside consultant firm, to assist with public outreach, data gathering, and information distribution. The details of Caltrans public outreach efforts are documented in Appendix 3. These efforts included four public meetings, an information booth at the Tri-County fair that included a short public survey, telephone surveys of the local population and of Bishop business owners, a focus group of local business owners, and a survey of Mammoth visitors. Several letters and comment cards were received during the course of the study and are also included in Appendix 3.

In addition to public outreach, Jones and Stokes was contracted to write a Preliminary Community Impact Assessment (PCIA). The full document is located in Appendix 4. The findings of this assessment showed no significant adverse impacts by any of the proposed BAACS truck routes to land use planning, population and housing, or community facilities and services. However, there may be an impact to businesses that are highly dependent on

interregional travelers (i.e. fast food, service stations, souvenir shops, etc.). This impact would result from the loss of travelers who would possibly have decided to stop, but chose the truck route rather than going through town.

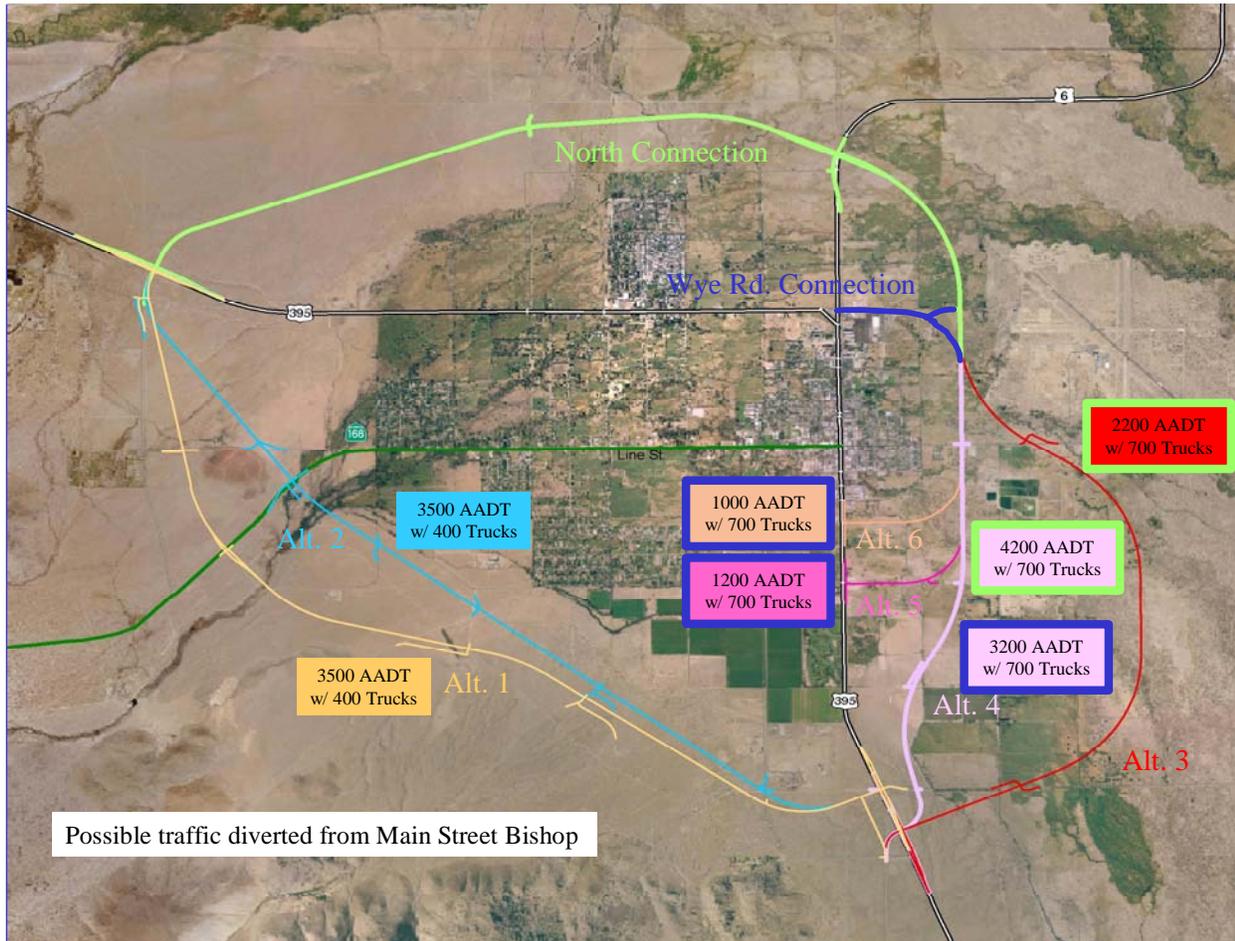
Potential Traffic Diversion Estimates

Caltrans assembled a team to estimate the possible reduction in traffic counts to Main Street/US 395 should a truck route be built. Truck routes can be enforced to require all through trucks use them, but cannot exclude private vehicles. Since some private vehicles may choose to use the truck route, some reduction of interregional travelers on Main Street/US 395 can be anticipated. The potential use of the truck route by interregional travelers is highly dependent on the location and design of the truck route's intersection with the existing facility. For the purposes of this diversion estimate, at-grade intersections -- with the truck route being the subservient route -- were used to estimate potential diversion numbers. Using the most recent traffic counts available and the destination study done in 2001, rough estimates of the percentage of traffic diverted were made for each of the truck route alternatives proposed.

Western alternatives would have a larger diversion of traffic from Main Street/US 395 as compared to eastern alternatives with a Wye Road connection. Estimates of diversion for western alternatives are about 20% of total AADT. If the eastern alternatives included a north connector, then they would have the largest diversion of traffic at about 24% of total AADT. Western alternatives divert about 39% of total truck AADT and eastern alternatives divert about 67% of total truck AADT from the CBD. Figure 5 illustrates these diversion estimates for all alternatives.

Eastern alignments remove the greatest amount of truck traffic from the CBD and provide the truck access to the Bishop Airport that the County desires. Only an eastern alignment with a north connection can remove truck traffic from both the CBD and the North Sierra Highway area. Most of the community wants to remove trucks from Main Street/US 395 to reduce the sense of congestion and noise they are currently experiencing and make the CBD more pedestrian friendly. However, the community is concerned that a service facility for these same trucks be included in any project that removes them from the CBD.

Figure 5: Estimate of US 395 and US 6 Diversion Counts



Concerns Regarding Commercial Trucks

A State rest stop at the north end of Bishop was often suggested for these truck drivers. Caltrans policy to not compete with local service industries does not allow for rest stops to be located near towns. Currently, many truck drivers use the wide dirt shoulders of US 6 near Wye Road for parking, and then walk into town. Bishop's approximate four hour drive time from the LA and Reno areas, combined with it being the last full service town with truck parking available on US 395 and US 6 for many miles, makes it a popular stopping point for many truck drivers. Another suggestion was to include a truck stop/parking facility with the proposed future Bishop Airport development. Shuttle service from the Bishop Airport to Bishop downtown businesses could then be provided.

A suggestion to reduce truck noise and make the CBD more pedestrian friendly without creating a new truck route was to restrict trucks to the number 1 lane through the Bishop CBD. This suggestion was received several times, often from those who were in strong opposition to any kind of traffic removal from Main Street/US 395. Currently the shoulder between the sidewalk and the number 2 travel lane is as little as 3 ft in some areas of the CBD. Restricting truck traffic to the number 1 lane through the CBD would provide a greater separation between trucks

and pedestrians. This has been used on US 395 in Gardnerville, NV with some success. As is often the case, one size doesn't fit all, and Gardnerville's solution to truck traffic doesn't work as well in Bishop. The restriction of trucks to the number 1 lane in Bishop would not only significantly reduce the safety for trucks but it would also create its own set of problems that do not offset the small advantages gained.

Currently Main Street/US 395 is signed to allow truck usage to both lanes. Restricting trucks to the number 1 lane would require NB trucks destined for US 6 to change lanes from the number 2 lane south of town, to the number 1 lane through the CBD, then back to the number 2 lane, in order to make the turn onto US 6. With the high traffic counts in the CBD, in addition to the short distance the maneuver must be accomplished in, truck restriction to the number 1 lane is not only impractical but also difficult to enforce. Additionally, each imposed lane change would decrease the safety of the truck and of any vehicles nearby. Attachment 2 has a more in depth discussion of truck lane restrictions specific to the Bishop CBD.

Alternatives Removed From Consideration

Alternatives along Bishop Creek Canal just easterly of Bishop's City limit:

The 1960's bypass study easterly alternatives followed along Bishop Creek Canal just east of the city limit. These alternatives were included in early versions of potential alternatives in this current study. The PDT removed these alternatives early on because of the proximity to east Bishop's residential areas and narrowness of the undeveloped area between the canal and the Johnston Drive area.

Alternatives easterly of the Bishop Airport:

These were removed from consideration because of wetland issues, bridge construction, and excessive length. These alternatives were very long as compared to existing US 395. This extra length would make these routes unappealing to truck drivers due to the extra drive time. Without strong enforcement it is unlikely that US 395 through trucks would use these alternatives as a mandatory truck route.

Easterly alternatives departing existing US 395 at South Street and Jay Street:

These were removed from consideration because of their use of residential streets. Also, because they are so close to Bishop's CBD, truck drivers would be less likely to take these alternatives since they would be significantly longer than existing Main Street/US 395.

Need and Purpose

Caltrans, in cooperation with the City of Bishop, the County of Inyo, and the Inyo County LTC, propose improvements in and around the City of Bishop to reduce congestion in the CBD and provide commercial vehicle access to the Bishop Airport.

The goals of this project as developed by the Project Development Team are to:

- 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 Bishop Airport and its 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.

US 395, from approximately PM (Post Mile) 115 to PM 117, is also the City of Bishop's Main Street. In order to promote business use in the Bishop downtown district, the City of Bishop strongly desires to make the Bishop CBD a more walkable and livable area. Increasing levels of truck traffic in the Bishop area on US 395 have resulted in traffic congestion, a sense of hazard to pedestrians and bicyclists, and a perceived increase in noise and air pollution. These factors have combined to give the impression the downtown district is less pedestrian-friendly and have made commercial deliveries difficult. In addition, the direct access to the Bishop Airport on East Line Street requires trucks make the turn at Main Street/US 395 and East Line Street. The turn radius at this intersection is insufficient for large commercial vehicles to make the turn without occupying a portion of the opposing traffic lane. This deficiency results in large commercial vehicles taking indirect routes along residential streets in order to access the Bishop Airport.

It is proposed to redirect through truck traffic away from the Bishop CBD between the intersection of Schober Lane/US 395 and Barlow Lane/US 395 and provide commercial access to existing County airport services and the proposed airport light industrial development by the addition of an access controlled alternative route. If an alternative route alone does not reduce traffic congestion to desired levels, the addition, improvement, and/or extension of existing local streets should be considered to reduce local Main Street/US 395 traffic to the point that on-street parking, landscaping and aesthetic treatments can be placed to encourage business use in the Bishop CBD. The proposed new access controlled alternate route around the City of Bishop could be a mandatory truck route. All other traffic would have the choice to continue on existing US 395 or take the alternate route.

A mandatory truck route would require that the route be constructed to Caltrans standard and that an agreement between the City, County, and Caltrans be developed in order to establish the route as a mandatory route. Trucks needing services and/or making deliveries in Bishop would still be allowed to use Main Street/US 395. The effectiveness of a mandatory truck route is highly dependent of the enforcement efforts of local enforcement agencies and the location and design of the truck route intersection. Additionally, private vehicles cannot be prohibited from using the mandatory truck route.

Traffic counts collected as a result of this study clearly show that the majority of traffic on the CBD originates in the City and surrounding areas of Bishop (See Figure 3). A route around Bishop alone will not alleviate the congestion in the downtown core. The project sponsors (City of Bishop, Inyo County, and the Inyo County LTC) initially believed that if the majority of commercial trucks were removed from downtown onto an alternative route, the downtown corridor could then be enhanced with pedestrian friendly improvements such as landscaped

center medians, and on-street parking. These enhancements, if done now with current traffic counts, would negatively impact the operation of the highway.

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 route alone will not provide enough of a decrease in traffic volumes downtown, the third bulleted goal 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 purposes of the study, this goal will remain as originally crafted with the understanding that an alternate truck route alone cannot attain it.

Traffic

Traffic volume forecasts in the tables below are estimated with a 1% growth rate. Based on California growth rates, and on local development anticipated in Inyo and Mono Counties, this is a conservative estimate and may be on the low side in predicting future growth in the Bishop area. Table 2 shows US 395 current and forecasted traffic counts beyond the estimated construction year of 2025, and Table 3 shows US 6 current and forecasted traffic counts beyond the estimated construction year of 2025.

Table 2: Current and Future Traffic Data US 395

Inyo 395	2004	Construction Year 2025	10 Year 2035	20 Year 2045
Annual Average Daily Traffic (AADT)	17,300	21,320	23,550	26,010
Peak Hour	1,750			
Peak Month ADT	19,000			
% Trucks	6%			
Traffic Index (TI)	-		10.5	11.5
Growth Rate	1%			

Table 3: Current and Future Traffic Data US 6

Inyo 6	2004	Construction Year 2025	10 Year 2035	20 Year 2045
Annual Average Daily Traffic (AADT)	3,750	4,160	4,380	4,600
Peak Hour	360			
Peak Month ADT	4,000			
% Trucks	12%			
Traffic Index, TI	-		10.0	11.0
Growth Rate	0.5%			

Based on calculations from the 1998 Highway Capacity Manual and current observations of the operation of Main Street/US 395 at Line Street/SR 168, the existing system within Bishop's CBD is capable of handling about 580 vehicles per lane per hour. The Directional Design Hourly Volume (DDHV) in 2025 is forecasted to be 1260 vehicles per hour (both lanes) or approximately 630 vehicles per lane per hour (see the attached Traffic Study Report, US 395, Attachment 4). This exceeds the 580 vehicles per lane per hour the existing CBD system can handle. The overburdening of the system will result in some delay to users on Main Street/US 395, but will mostly affect City street users attempting to enter or cross Main Street/US 395. Shortened "green time" will increase queue lengths on signalized City side streets. Shortened gaps between vehicles on Main Street/US 395 will make signalized intersections more attractive to City side street users adding to that queue length even more.

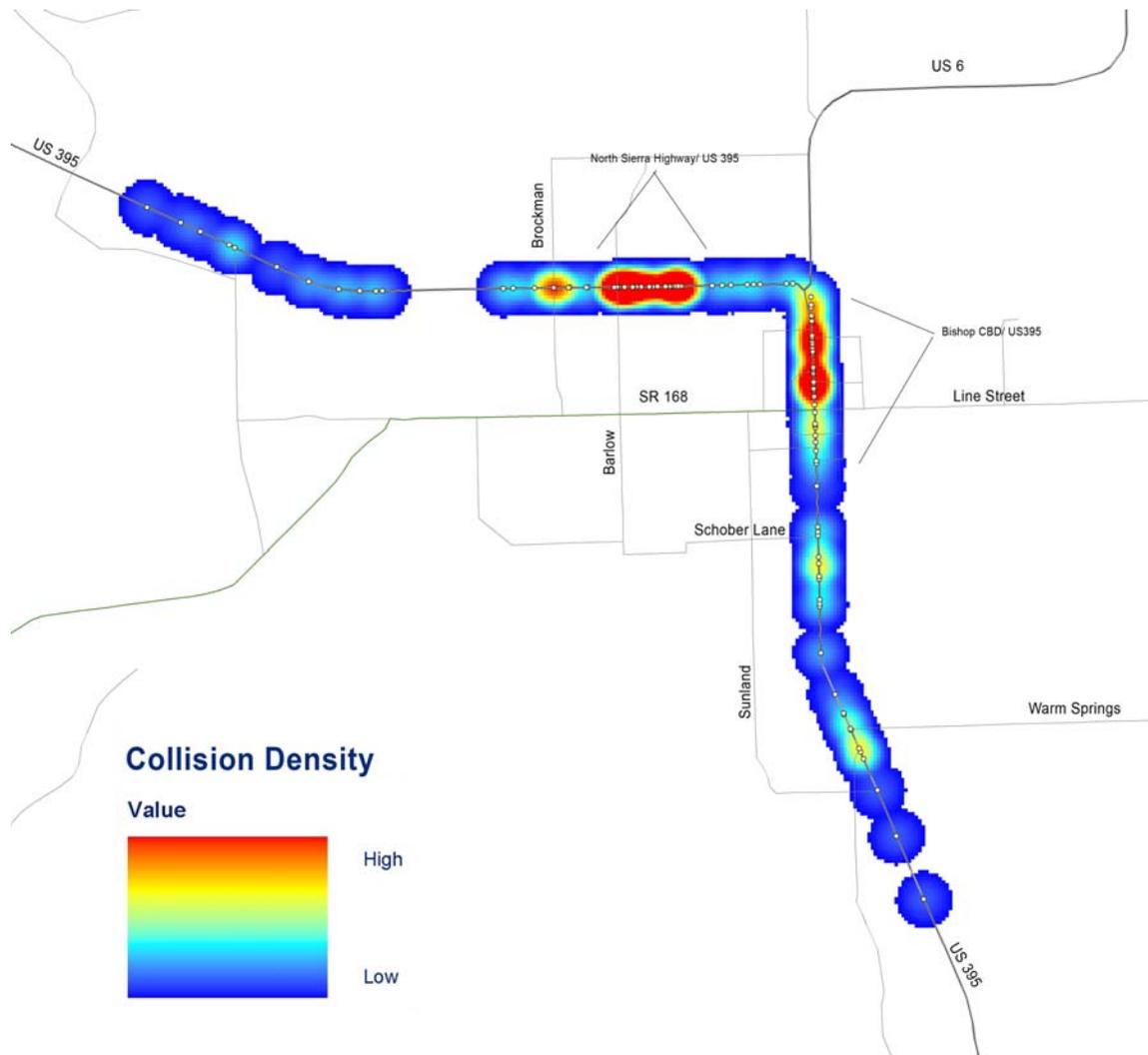
See the attached Traffic Study Report, US 395, Attachment 4, for the nine different speed zones located within the project area on US 395. In the CBD speeds were observed from 22 mph to 40 mph. The 85th percentile was 34 mph. The posted speed limit in the CBD is 25 mph. The posted speed limit on North Sierra Highway/US 395 is 45 mph. North Sierra Highway speeds were observed from 33 mph to 64 mph. The 85th percentile was 52 mph.

See the attached Traffic Study Report, US 6, Attachment 5, for the four different speed zones located within the project area on US 6. At the Wye Road area the posted speed limit is 35 mph. Speeds were observed from 31 to 43 mph with the 85th percentile being 42 mph.

For the entire length of the project on US 395, between PM 111.10/PM R 122.30, collision rates with injury/fatality were below the State wide average for a comparable facility. Figure 6 shows the areas of collision concentration over a five-year period in the Bishop area. When these collision concentration areas are examined individually, one area with a greater than expected collision rate with injury/fatality was observed. Table 4 shows collision data broken down into more specific areas along the US 395 corridor. Table 5 compares these more specific areas along the US 395 corridor to the Statewide average for a comparable facility.

Only North Sierra Highway/US 395 has a higher than expected collision with injury/fatality rate. Even though the total collisions were nearly as high in the Bishop CBD, North Sierra Highway's higher speeds are associated with increased collision severity and resulted in a higher injury/fatality rate per collision.

Figure 6: Collision Density US 395 in and Near Bishop, 1997 to 2002



The specific areas of collision concentration on Main Street/US 395 broken out for Tables 4 and 5 are:

Bishop CBD--Main Street/US 395 between PM 115.05 and 116.28. Mandich Street to the junction of US 6.

Bishop Downtown Core--Main Street/US 395 between PM 115.25 to 115.52. Clark Street to Willow Street. This area is defined in the City Plan as the area of parking exceptions. It is also an area of Main Street/US 395 with restricted R/W and less than standard lane width.

North Sierra Highway--Main Street/US 395 between PM 117.30 and PM 118.10. See Vee Lane to Pa Ha Lane.

Table 4: Collision Data US 395

Location	Number of Collisions – US 395 (04/01/02 to 03/31/05)			
	Fatal	Injury	Property	Total
BAACS Limits PM 111.1/122.3	4	37	64	105
Bishop CBD	0	8	22	30
Bishop Downtown Core	0	0	7	7
North Sierra Highway	2	21	14	37

Table 5: Collision Rate State Wide Comparisons US 395

Location	Collision Rate/Million Vehicle Miles – US 395 (04/01/02 to 03/31/05)					
	Fatal		Fatal+Injury		Total	
	Actual	State Averag	Actual	State Averag	Actual	State Averag
BAACS Limits PM 111.1/122.3	0.026	0.027	0.27	0.47	0.70	1.04
Bishop CBD	0.000	0.036	0.39	0.82	1.45	1.93
Bishop Downtown Core	0.000	0.044	0.00	0.97	0.84	2.27
North Sierra Highway	0.169	0.026	1.94	0.42	3.13	0.90

To a much lesser degree, collisions are also concentrated on US 6 near the US 395/US 6 junction. Table 6 shows collision data and Table 7 shows the collision rate with injury/fatality in comparison to the statewide average for a similar facility. From Table 6 it can be seen that over half of the collisions that occurred within the project limits occurred within 1.15 miles of the junction. The total actual collision rate is above what would be expected in a similar facility, however these collisions did not result in any injuries or fatalities.

Table 6: Collision Data US 6

Location	Number of Collisions – US 6 (04/01/02 to 03/31/05)			
	Fatal	Injury	Property	Total
BAACS Limits PM 0.00/5.60	0	1	9	10
Junction 395 to Dixon Lane PM 0.00/1.15	0	0	6	6

Table 7: Collision Rate State Wide Comparison US 6

Location	Collision Rate/Million Vehicle Miles – US 6 (04/01/02 to 03/31/05)					
	Fatal		Fatal+Injury		Total	
	Actual	State Average	Actual	State Average	Actual	State Average
BAACS Limits PM 0.00/5.60	0.000	0.038	0.06	0.50	0.62	1.02
Junction 395 to Dixon Lane PM 0.00/1.15	0.000	0.032	0.00	0.47	1.36	0.96

Potential Constraints

Initial environmental surveys indicate that all proposed alternatives might affect wetlands. The western alternatives disturb fewer potential wetland acres than the eastern alternatives. Currently in Inyo County it is difficult to obtain lands for wetland mitigation. If the wetland mitigation requirements stay as currently defined, the environmental clearance process for any alternative may be difficult.

Laws Railroad Museum is currently developing an environmental document to create a narrow gauge rail line from Laws into Bishop for the Brill Car. The proposed destination is the east side of the Bishop City Park. The Brill Car would only be operated on weekends during the summer, the main tourist season. All eastern alternatives will cross the current proposed alignment of the narrow gauge rail. Since the Brill Car would be a manually driven, intermittent trolley, it is possible that an at-grade intersection could be constructed that would maintain the truck route as the through route and a device requiring a stop would be placed on the Brill Car alignment. However, the Public Utilities Commission must clear all railroad grade crossings and they may have the final say in whether or not an at-grade intersection will be allowed. A separate grade intersection for the Brill Car crossing was not included in the cost estimates for the eastern alternatives.

The future plans and expansion of the Bishop Airport have been considered in the selection of the eastern alignments. If separate grade interchanges are proposed at or between East Line Street and Wye Road/US 6, airspace elevation restrictions will need to be considered.

Some Bishop businesses that are traveler dependent are in opposition to any diversion of traffic from the existing Main Street/US 395 corridor. However, if forced to choose, business owners preferred an eastern alternative. There are also some in the general public who are not opposed to a truck route but do not want it in their “backyard”. Most of the lands surrounding Bishop are owned by the LADWP and are available for public use. Bishop residents tend to view these lands as their own personal “backyard” and don’t want their “backyard” developed. In general, Bishop residents that live on the east side favor a western alternative, and residents on the west side favor an eastern alternative.

Regional and System Planning

This study is consistent with local planning and land use policies and concepts. Both the Inyo County Regional Transportation Plan (2001) and the City of Bishop General Plan Circulation Element (1993) generally and specifically mention many of the concepts explored and analyzed in this study. This study and its associated reports will likely be key resources for the County and City when updating their planning documents.

As to consideration of local land-use and development patterns, developed areas within or affected by the study area are well defined and unlikely to significantly change, considering the unique land ownership situation. Almost all of the land surrounding the currently developed areas is owned and managed by LADWP. Most of this land is designated open space or agricultural, and is unlikely to be transferred into private ownership. The Bishop Paiute Tribe holds the largest amount of potentially developable land to the west of the City of Bishop and has plans for housing and commercial development, but not on a significant scale. Any growth to the west of the City limits will further impact not only the States highway system, but also County, Tribe and City traffic circulation systems, compounding the issues addressed in this study and further emphasize the need to address them.

The concept facility for US 395 is a four lane, operating at Level of Service (LOS) B. Within the BAACS study area US 395’s LOS varies greatly. South of Jay Street and north of Brockman Lane, the four-lane conventional US 395 operates at LOS A with little or no congestion. US 395 through the Bishop City limits and north to Brockman Lane operates at LOS E, according to the 2000 US 395 Transportation Concept Report (TCR). This congestion is a product of recreational commuters and locally generated traffic (17,300 AADT 2004 traffic count), numerous access points, signalization and speed restrictions. The US 395 TCR Concept LOS of B is unattainable given the present facility. The communities along the US 395 are dependent on it for the delivery of all goods, materials and services with trucks comprising 16.6% of the traffic volume. The Eastern Sierra’s main economic generator is tourism. The 2000 Origination and Destination Study indicates that 54.7% of the traffic stream is recreation based and 2% is recreational vehicles.

US 395 is functionally classified as a Rural Principal Arterial and is included in the Federal Aid Primary (FAP) highway system. It is included in the State Freeway and Expressway System, and the State Scenic Highway Master Plan. This route is also considered a High Emphasis Focus Route as part of the Interregional Road System (IRRS), and connects transportation systems across four states. US 395 is included in the SHELL system, and is a STAA route which authorizes use for larger trucks and gives them access to facilities off the route.

US 6 is a route of increasing significance in District 9. It is an alternate route for Nevada bound travelers and goods movement during winter storm episodes and regularly serves the communities of Laws, Chalfant, Hammil Valley, Benton and those of west central Nevada. It currently operates at LOS B from its origin at the US 395 Junction and Wye Road PM 0.0 to PM 5.6. The US 6 TCR Concept LOS is C.

SR 168 is functionally classified as a major collector and has a junction with US 395 at the south end of Bishop. It provides access to much of the area's housing and recreational activities in the Sierra Nevada Mountains. The route is two-lane conventional with a four-lane section from PM 16.1 to PM 17.8. The two-lane section within the City of Bishop is highly commercialized. SR 168 operates at LOS A within the outer parts of the study area, but nearer to downtown (PM 17.8 to PM 18.3) it operates at LOS C.

Alternatives

Initially the PDT envisioned Caltrans as the owner/sponsor of the alternative route. As previously stated, Caltrans policy no longer allows for parallel facilities. Any of the following alternatives would therefore need to be a County/City facility until the City of Bishop and the County of Inyo accepted responsibility for the maintenance of the portions of the old US 395/US 6 within their jurisdictional area. All alternatives propose the reservation or acquisition of R/W for a full 4-lane facility.

None of these alternative routes would provide enough of a decrease in traffic volumes to allow for downtown improvements that would result in significant operational changes to Main Street/US 395. The City and County would need to make significant changes to local circulation patterns in order to reduce local traffic volumes on Main Street/US 395 to the point that operational changes could be made. Caltrans has no jurisdictional control of County and City road facilities. As part of this study, City and County traffic circulation was studied. Recommendations for improvements to the County and City traffic circulation follow the alternative route descriptions.

Figure 7 shows the proposed alternatives, including the two proposed connection locations for the eastern alternatives. Although Figures 7 through 15 depict each alternative as a single line, alternatives are not locked into this fixed location. These lines should be viewed as a corridor for a potential alignment. When more specific information is available, engineering, topographic or environmental concerns may cause an alignment to shift.

An important consideration between western and eastern alignments is the ability of the alignment to remove truck traffic from Bishop's downtown core. It is unlikely that western