



Transportation Concept Report
State Route 182
District 09
May 2016



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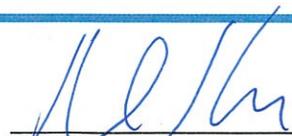
California Department of Transportation
 Caltrans Improves Mobility Across California

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**State Route 182
Transportation Concept Report**

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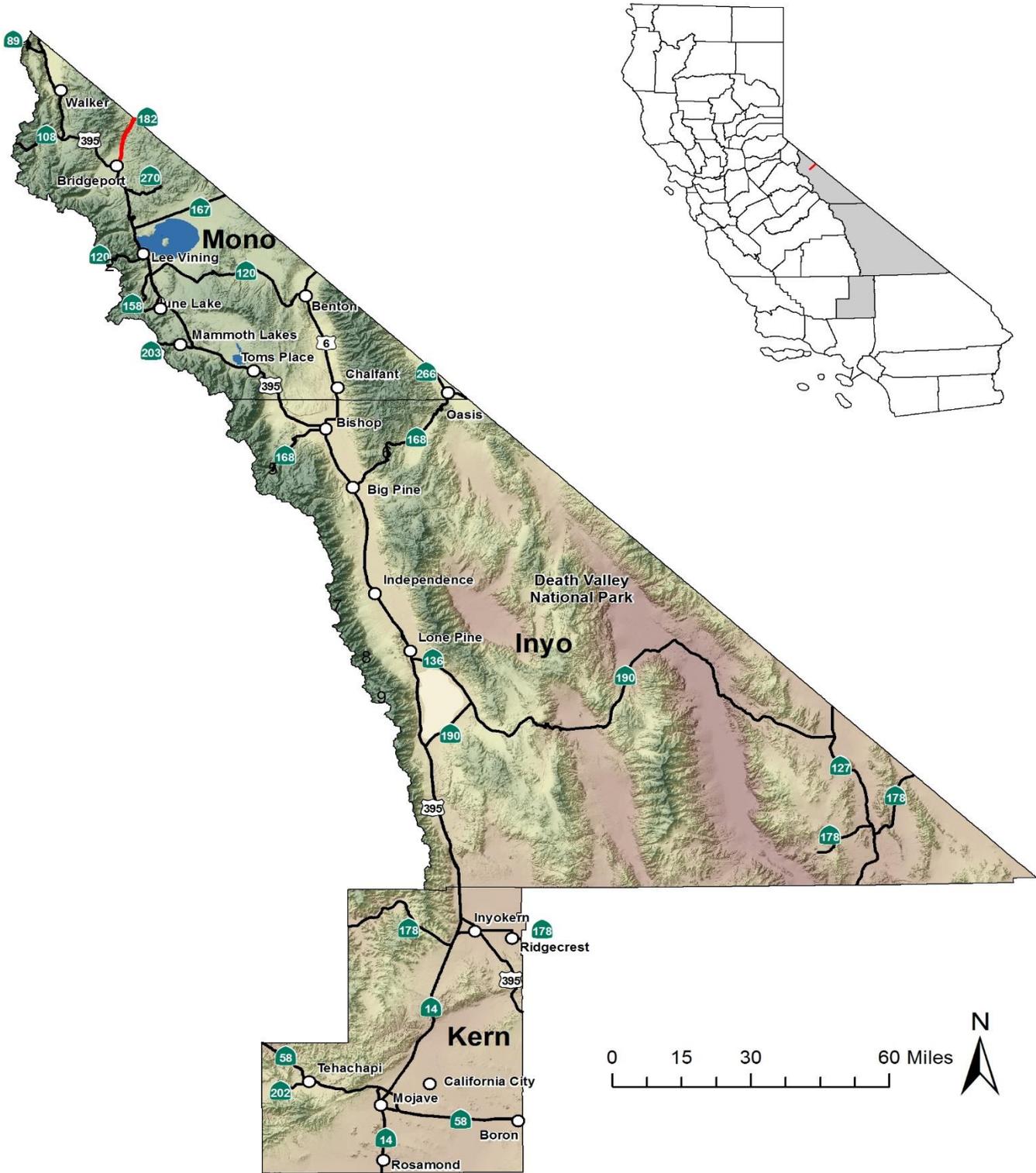
For individuals who need this information in a different format, it is available in various languages, Braille, large print, on audio-cassette, or computer disk. To obtain a copy in one of these alternate formats, please contact the Equal Employment Opportunity Officer at the above address or phone number.

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State Route 182 Location Map

Caltrans District 9



ABOUT THE TRANSPORTATION CONCEPT REPORT

System Planning is the long-range transportation planning process for the California Department of Transportation (Caltrans). The System Planning process fulfills Caltrans' statutory responsibility as owner/operator of the State Highway System (SHS) (Gov. Code §65086) by evaluating conditions and proposing enhancements to the SHS. Through System Planning, Caltrans focuses on developing an integrated multimodal transportation system that meets Caltrans' goals of safety and health; stewardship and efficiency; sustainability, livability and economy; system performance; and organizational excellence.

The System Planning process is primarily composed of four parts: the District System Management Plan (DSMP), the Transportation Concept Report (TCR), the Corridor System Management Plan (CSMP), and the DSMP Project List. The district-wide **DSMP** is strategic policy and planning document that focuses on maintaining, operating, managing, and developing the transportation system. The **TCR** is a planning document that identifies the existing and future route conditions as well as future needs for each route on the SHS. The **CSMP** is a complex, multi-jurisdictional planning document that identifies future needs within corridors experiencing or expected to experience high levels of congestion. The CSMP serves as a TCR for segments covered by the CSMP. The **DSMP Project List** is a list of planned and partially programmed transportation projects used to recommend projects for funding. These System Planning products are also intended as resources for stakeholders, the public, and partner, regional, and local agencies.

TCR Purpose

California's State Highway System needs long range planning documents to guide the logical development of transportation systems as required by CA Gov. Code §65086 and as necessitated by the public, stakeholders, and system users. The purpose of the TCR is to evaluate current and projected conditions along the route and communicate the vision for the development of each route in each Caltrans District during a 20-25 year planning horizon. The TCR is developed with the goals of increasing safety, improving mobility, providing excellent stewardship, and meeting community and environmental needs along the corridor through integrated management of the transportation network, including the highway, transit, pedestrian, bicycle, freight, operational improvements and travel demand management components of the corridor.

STAKEHOLDER PARTICIPATION

Internal and external stakeholder participation was sought throughout the development of the State Route (SR) 182 TCR. As information for the TCR was gathered, some stakeholders were contacted for input related to their particular specializations, and to verify data sources used and data accuracy. Prior to document finalization, primary stakeholders were asked to review the document for consistency with existing plans, policies, and procedures. The process of including and working closely with stakeholders adds value to the TCR, allows for external input and ideas to be reflected in the document, increases credibility, and helps strengthen public support and trust. Stakeholders in the SR 182 planning area are community member and agencies, including, but not limited to:

- Army Corps of Engineers (USACE)
- Bridgeport Regional Planning Advisory Committee (RPAC)
- Bureau of Land Management (BLM)
- California Department of Fish and Wildlife (CDFW)
- Lahontan Regional Water Quality Control Board (LRWQCB)
- Mono County Local Transportation Commission (LTC)
- Native American Tribes
- Nevada Department of Transportation
- US Forest Service (USFS)
- Walker River Irrigation District (WRID)

EXECUTIVE SUMMARY

State Route (SR) 182 is a two-lane conventional highway. SR 182 begins at the junction of US 395 near Bridgeport in Mono County extending 12.65 miles to the Nevada state line. It is a northeasterly major collector linking Mason Valley and western Nevada to US 395 in California. Light commercial and rural goods movement share SR 182 with recreational travelers and local traffic. Also, SR 182 functions as an alternate route in the event of emergency closures on US 395 north of Bridgeport. Segment 1 of the route provides access to Bryant Field Airport, Bridgeport Indian Colony, local housing, and recreational areas around Bridgeport Reservoir. Segment 2 provides access to the central-western Nevada region. Recent traffic data was analyzed using 2014 as a base year (BY) and 2034 as a horizon year (HY) for projecting operational conditions.

Concept Summary

Segment	Segment Description	Existing Facility	20-25 Year Facility Concept
1	Junction at US 395 Near Bridgeport to End of Bridgeport Reservoir	2C	2C, Widen Shoulders and Maintain
2	End of Bridgeport Reservoir to Nevada State Line	2C	2C, Widen Shoulders and Maintain

TABLE 1: CONCEPT SUMMARY

Concept Rationale

The Bridgeport Indian Colony is in the early stage of planning future developments on federal trust land along the highway. The route receives relatively low traffic volume and an increase is not foreseen in the near future. The majority of the land in the area is publicly owned (96%) and growth will be very slow if it is to occur at all. For these reasons, the route is expected to remain a two-lane, conventional highway.

Proposed Projects and Strategies

Currently, there are no planned or programmed projects for SR 182. Maintaining the current facility, including a cold in-place recycle (CIR) project, is the long range strategy for this route. Raising the grade, PM 7.2/8.5, to avoid flooding during heavy runoff years is a recommended route improvement. In addition, widening shoulders to improve the route for all modes of transportation and delineating access to the route in the area of the Bridgeport Reservoir for the ingress and egress of recreational travelers is recommended. Furthermore, Mono County's 2015 Regional Transportation Plan proposes enlarging the existing turnout/parking area and including interpretive facilities at the Bridgeport Reservoir.



Near Bridgeport Reservoir at PM 3.35

CORRIDOR OVERVIEW

ROUTE SEGMENTATION

For the purpose of this report, SR 182 is divided into two segments.

Segment #	Location Description	County_Route_ Beg. PM	County_Route_ End PM
1	Junction at US 395 Near Bridgeport to End of Bridgeport Reservoir	MNO_182_0.00	MNO_182_5.10
2	End of Bridgeport Reservoir to Nevada State Line	MNO_182_5.10	MNO_182_12.65

TABLE 2: ROUTE SEGMENTATION

ROUTE DESCRIPTION

Route Location:

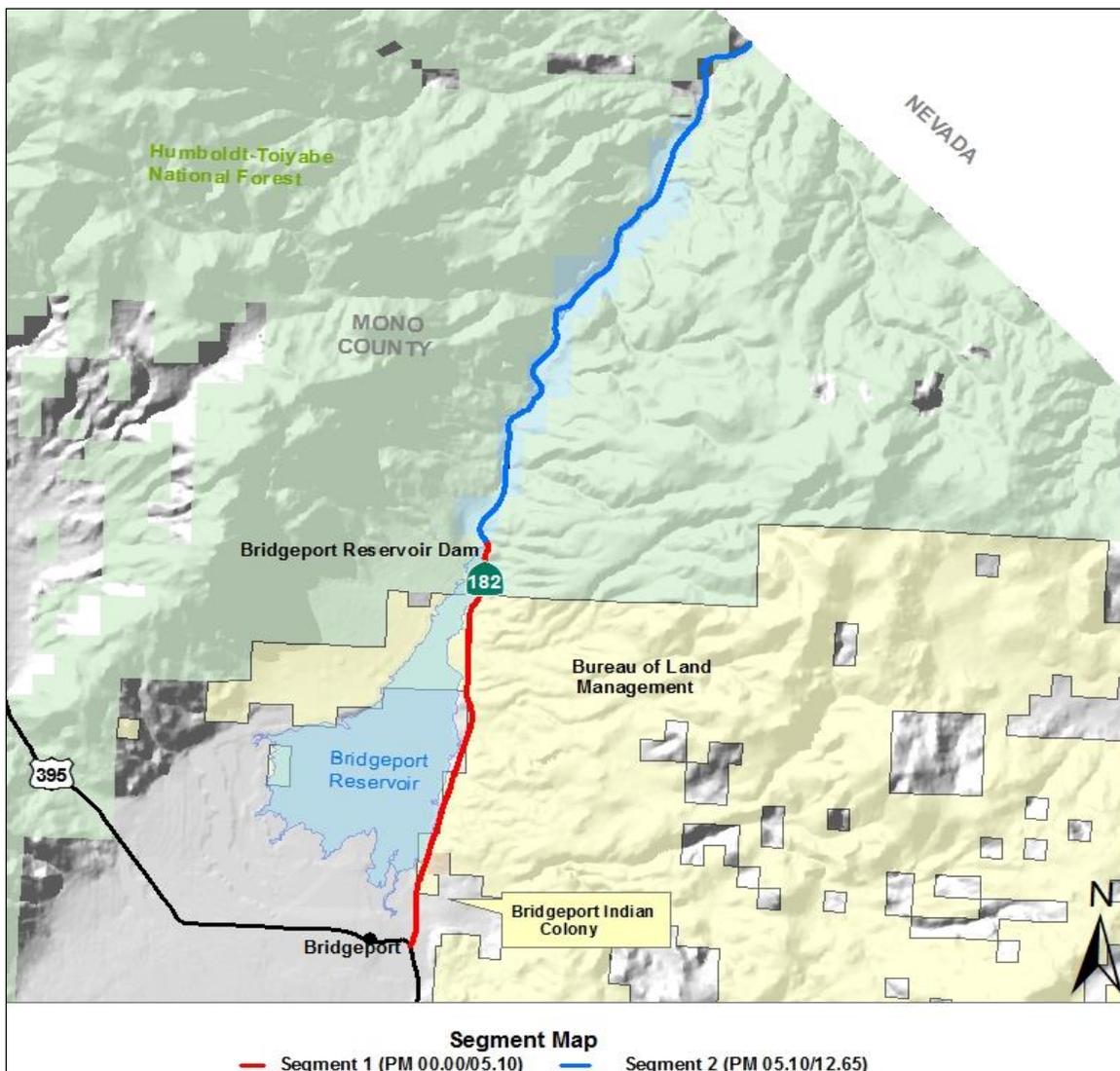
SR 182 begins at the junction of US 395, near Bridgeport in Mono County, and runs in a northeasterly direction for 12.65 miles to the Nevada state line. The first segment of the route (PM 0.00 to 5.10) provides access to Bryant Field Airport, Bridgeport Indian Colony, local housing, the Bridgeport Reservoir, and recreational areas around the reservoir. The Bridgeport Reservoir is located adjacent to SR 182 on the East Walker River and has one privately owned marina/camp ground and a privately owned Recreational Vehicle (RV) Park. The second segment of the route (PM 5.10 to 12.56) ends at the California/Nevada state line and becomes Nevada State Route 338. This segment is adjacent to the East Walker River and the Humboldt Toiyabe National Forest.

Route Purpose:

SR 182 serves the Bridgeport Valley community. The route provides access to recreational opportunities for tourists visiting Bridgeport Valley and facilitates the movement of goods and people between California and Nevada. Along SR 182, there are many recreational opportunities such as the Bridgeport Reservoir, East Walker River which is a popular place for fly fishing and associated natural resources in the surrounding area. SR 182 is identified as an alternate route when US 395 is closed in Walker Canyon, north of Bridgeport. It carries light commercial and rural goods movement and is identified as a Terminal Access (Surface Transportation Assistance Act) route. Pedestrians and bicyclists are allowed on all of SR 182 as it is a shared roadway.

Major Route Features:

SR 182 is functionally classified as a Major Collector and is a two-lane conventional highway with speed limits ranging from 45 to 60 miles per hour. There are unrestricted and undefined ingress and egress access points at the reservoir on the northwest side of the highway and at the East Walker River. The road is maintained via annual crack sealing projects. There are three Mainline Detection (full-time count stations) Transportation Management System (TMS) elements on the route. Electric vehicle charging stations do not exist.



Route Designations and Characteristics:

Segment #	1	2
Freeway & Expressway System – California Streets & Highways Code Section 250-257	No	No
National Highway System	No	No
Strategic Highway Network	No	No
Scenic Highway	No	No
Interregional Road System	No	No
Priority Interregional Highway	No	No
Federal Functional Classification	Major Collector	Major Collector
Goods Movement Route	Yes	Yes
Truck Designation	Terminal Access	Terminal Access
Rural/Urban/Urbanized	Rural	Rural
Metropolitan Planning Organization	N/A	N/A
Regional Transportation Planning Agency	Mono County LTC	Mono County LTC
County Transportation Commission	Mono County LTC	Mono County LTC
Local Agency	Mono County	Mono County
Tribes	Federally Recognized	Bridgeport Indian Colony Washoe Tribe of Nevada Tuolumne Band of Me-Wuk Indians
	Non-Federally Recognized	Mono Lake Kutzadikaa
Air District	Great Basin Unified Air Pollution Control District	Great Basin Unified Air Pollution Control District
Terrain	Flat	Rolling

TABLE 3: ROUTE DESIGNATION



East Walker River Bridge at PM 6.20

COMMUNITY CHARACTERISTICS

Bridgeport Indian Colony is a federally recognized Native American tribe with land adjacent to SR 182. Also, Bridgeport Valley, with a population of 575, lies along the first segment. There is a significant amount of high-quality agricultural land in the Bridgeport Valley, all of which is privately owned. Also, in the first segment, the Bridgeport Reservoir and Bryant Field Airport are located near SR 182. Recreational opportunities include fishing, hunting, kayaking, boating, sailing and bird watching. There is a recreational area, Bridgeport Ballfields & Skate Park, within one mile of the first segment at Aurora Canyon Road. It is maintained by the Mono County Department of Public Works. A major portion of the East Walker River on SR 182, one of the best trophy brown trout streams in California, flanks the second segment of the route. In 1994, the CA Department of Fish and Wildlife purchased seven miles of riverfront property to preserve public access for fishing.



Bridgeport Valley community at PM 0.20

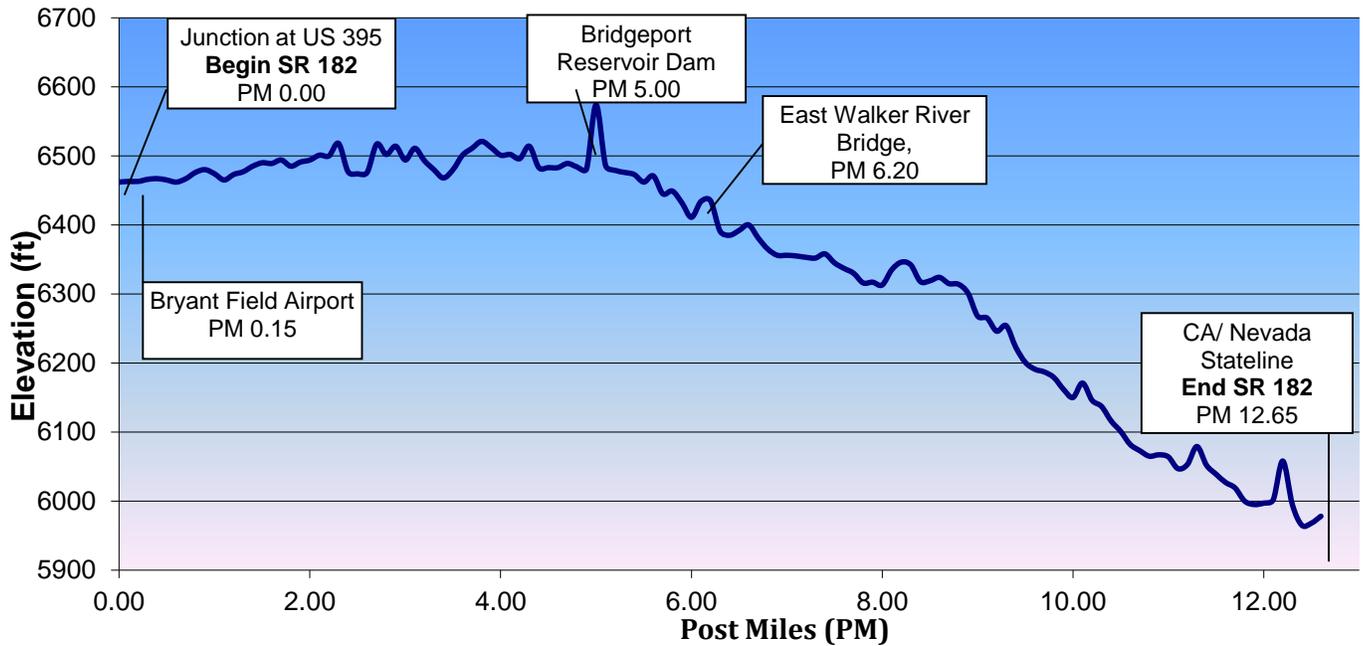
LAND USE

Land use along the route is predominately agricultural, resource management, open space, and low density residential. About 96% of the land is publicly owned and, as a result, there will be little private development. The Bureau of Land Management (BLM) and the US Forest Service (USFS) manage the public lands along the route. Most of the private land along SR 182 is centered around the Bridgeport Valley. Forty acres of land is held by the Bridgeport Indian Colony, a federal Reservation, adjacent to the route at Bridgeport. The Bridgeport Indian Colony

is looking into potential land use developments including a recreation center and RV park. The elevation of SR 182 varies between 5950 and 6560 feet.

SR 182 Elevation Profile

Mono County
PM 0.00 - 12.65



Segment 1: PM 0.00-5.10; Segment 2: PM 5.11-12.65

SYSTEM CHARACTERISTICS

SR 182 is a two-lane conventional highway for its entire length. The majority of the road is smooth and well maintained with posted speed limits from 45 to 60 mph (Segment 1 is 45 to 60 mph while Segment 2 is 55 mph). The average paved shoulder width is 2 to 3 feet, except at the East River Bridge location (PM 6.00 to 6.42) where the shoulder width is 8 to 12 feet. The average lane width is 11 feet and the facility is undivided. Retention of the count station at the California/Nevada state line will be analyzed.

Segment #	1	2
Existing Facility		
Facility Type	C	C
General Purpose Lanes	2	2
Lane Miles	10.20	15.10
Centerline Miles	5.10	7.55
Median Width	0	0
Median Characteristics	undivided	undivided

Distressed Pavement	5%	5%
Current ROW	50-400 ft.	50-400 ft
Concept Facility		
Facility Type	C	C
General Purpose Lanes	2	2
Lane Miles	10.20	15.10
Centerline Miles	5.10	7.55
Passing Lanes	0	0
Truck Climbing Lanes	0	0
TMS Elements		
TMS Elements (BY)	1	2
TMS Elements (HY)	1	1

TABLE 4: SYSTEM CHARACTERISTICS



Near East Walker Stock Drive at PM 6.00

BICYCLE FACILITY

Bicycles are allowed on all of SR 182 as it is a shared roadway. There is no bikeway designation nor any dedicated bike lanes existing on the route. According to Mono County’s 2015 Regional Transportation Plan, a bikeway to the state line is a potential project. Providing wider shoulders to accommodate a bicycle lane is a challenge due to prioritization of funding, environmental concerns, and physical constraints.

Segment	1	2
Post Mile	0.00/5.10	5.10/12.65
Bicycle Access Prohibited	No	No
Facility Type	None	None
Outside Paved Shoulder Width	2-3 ft	2-3 ft 8-12 ft PM 6.00/6.42
Posted Speed Limit	45-60 mph	55 mph

TABLE 5: BICYCLE FACILITY

PEDESTRIAN FACILITY

Pedestrian traffic is allowed, but is minimal on SR 182. Specific pedestrian facilities or sidewalks do not exist. Pedestrians may utilize the pave and unpaved shoulder. There has been some interest in developing a pedestrian facility from the Bridgeport Indian Colony and other residential areas to the town of Bridgeport.

Segment	1	2
Pedestrian Access Prohibited	No	No
Sidewalk Present	No	No

TABLE 6: PEDESTRIAN FACILITY

TRANSIT FACILITY

There are no transit operators that serve SR 182.

FREIGHT

SR 182 provides access for light commercial and rural goods movement. It is identified as a Terminal Access (STAA) route where STAA trucks may exit off the highway and travel onto state and local routes. Average truck traffic is 13% of the Average Annual Daily Traffic (AADT) for both segments with most trucks classified as 2 axles.

ENVIRONMENTAL CONSIDERATIONS

Wildlife area begins near the north end of Bridgeport Reservoir and straddles the highway and East Walker River for seven miles, nearly to the Nevada border. This wildlife area is approximately 1,400 acres of wetlands and riparian habitat. The river valley is a migration corridor for the East Walker mule deer herd.

The purpose of this environmental scan is to identify environmental factors that may need future analysis during the project development process. This information does not represent all possible environmental considerations that may exist within the area surrounding the route and any SR 182 project being considered for programming would require environmental clearance in compliance with all federal, state, and local environmental laws and regulations. The environmental factors identified in the environmental scan have been scaled (high, medium or low) by district staff based on the probability of encountering such environmental issues.

The following environmental factors were included in the scan:

- **Air Quality:** Mono County is part of the Great Basin Valley Unified Air Pollution Control District. For air quality measures of the State of California and National Ambient Air Quality Standards (NAAQS), this area is at unclassifiable/attainment for ozone (8 hour) and particulate matter (PM-10).
- **Cultural Resources:** An appropriate level of archaeological and cultural studies, including Native American consultation, will be required for any project along this route, as well as the assessment and possible mitigation for all cultural resource impacts. SR 182 travels adjacent to the Federally Recognized Native American tribal land of Bridgeport Indian Colony.
- **Floodplain:** The Special Flood Hazard Areas (SFHA) maps as designated by the Federal Emergency Management Agency's (FEMA) National Flood Insurance Program were evaluated. Segment 1 from PM 0.00 to PM 4.8 is designated as a 100 year flood risk by FEMA.
- **Geology/Soils/Seismic:** SR 182 crosses over one unnamed minor fault near the East Walker River from PM 2.8 to PM 4.4 in Segment 1. Another unnamed minor fault runs along SR 182 from PM 4.9 to 6.2, spanning Segments 1 and 2. Two other unnamed minor faults are identified at PM 7.6 and at 8.6 in Segment 2 near the East Walker River.
- **Recreational Land:** There is a recreational area, Bridgeport Ballfields & Skate Park, in the first segment of SR 182 within one mile of the route at Aurora Canyon Road. It is operated and maintained by the Mono County Department of Public Works.
- **Water and Wetlands:** The East Walker River runs along SR 182, from PM 4.9 to the end of the route. There are several wetlands (Freshwater Forested/Shrub Wetland) throughout the route and two lakes located in the first segment. An appropriate level of consideration, including obtaining a section 401 certification from Lahontan Regional Water Quality Control Board, may be required for projects along this route, as well as the assessment and possible mitigation for all impacts to wetlands or other jurisdictional waters.

- **Species Considerations:** The following species of plants and animals are listed as either special concern, threatened or endangered within a 1000 feet wide corridor centered along SR 182:
 - American manna grass-Glyceria grandis
 - Bodie Hills cuisckia-Cusickiella quadricostata
 - Intermontane lupine – Lupinus pusillus var.intermountanus
 - Lahontan Cutthroat Trout-Oncorhynchus clarkia henshawi
 - Lavin’s milk-vetc-Astragalus oophorus var. lavinii
 - Masonic Mountain jewel-flower-Streptanthus oliganthus
 - Migratory birds (various species)
 - Prairie wedge grass-Sphenopholis obtusata
 - Sierra Nevada Yellow legged frog-rana sierra
 - Yosemite toad-anaxyrus canorus

Segment #	Cultural Resources	Geology/Soils/ Seismic	Floodplain	PM Air Quality			Recreational Land	Waters and Wetlands	Special Considerations
				Ozone	2.5				
					10	CO			
1	High	Low	Med	Unclassified/Attainment	Unclassifiable/Attainment	Unclassifiable/Attainment	High	High	Med
2	High	Low	No	Unclassified/Attainment	Unclassifiable/Attainment	Unclassifiable/Attainment	High	High	Med

TABLE 7: ENVIRONMENTAL CONSIDERATIONS

CORRIDOR PERFORMANCE

The Corridor Performance table displays volume data for the Base Year (BY) 2014 and the Horizon Year (HY) 2034. Level of Service (LOS) was calculated using the Highway Capacity Manual 2010. The route presently operates at LOS A and is expected to operate at the same level through the horizon year. Primarily, this is due to low traffic volumes.

Segment #	1	2
Basic System Operations		
AADT (BY)	1050	275
AADT (HY)	1166	305
AADT: Growth Rate/Year	0.50%	0.50%
LOS Method	HCM	HCM
LOS (BY)	A	A

LOS (HY)	A	A
LOS Concept	A	A
VMT (BY)	5355	2076
VMT (HY)	5947	2303
Truck Traffic		
Total Average Annual Daily Truck Traffic (AADTT) (BY)	138	38
Total Average Annual Daily Truck Traffic (AADTT) (HY)	153	42
Total Trucks (% of AADT) (BY)	13.15%	13.85%
Total Trucks (% of AADT)(HY)	13.20%	13.85%
5+ Axle Average Annual Daily Truck Traffic (AADTT)(BY)	4	1
5+ Axle Trucks (as % of AADT)(BY)	2.90%	2.90%
Peak Hour Traffic Data		
Peak Period Length	1 Hour	1 Hour
Peak Hour Direction	NB	NB
Peak Hour Time of Day	PM	PM
Peak Hour Directional Split (BY)	58/42	53/47
Peak Hour VMT (BY)	2151	453
Peak Hour VMT (HY)	2391	506
Peak Hour (BY)	170	60
Peak Hour (HY)	189	67

TABLE 8: CORRIDOR PERFORMANCE

KEY CORRIDOR ISSUES

Widening shoulders is a recommended route improvement to better accommodate all modes of transportation. Routine maintenance and pavement preservation will constitute the majority of work on SR 182, including chip seals, thin blanket overlays and fog seals. The aggressive thermal cracking through segment 1 can be addressed with a cold in-place recycle (CIR). From PM 7.2 to 8.5, the highway is subject to flooding during heavy runoff years and it is exacerbated by beaver dams. Raising the grade through this area is the best way to address the flooding issue. Also it would be beneficial to pave turnouts, to better accommodate truck and recreational parking and aid with maintenance activities such as mowing and grading.

CORRIDOR CONCEPT

CONCEPT RATIONALE

Other than the Bridgeport Indian Colony’s future developments on federal trust land along the highway, no significant growth or development is anticipated in the SR 182 corridor within the TCR’s 20-year scope of concern. The route receives relatively low traffic volume and an increase is not foreseen in the near future. The majority of the land in the area is publicly owned (96%) and growth will be very slow if it is to occur at all. For these reasons, the concept for SR 182 is expected to remain a two-lane, conventional highway and it is projected that this will continue to meet the forecasted demand.

PLANNED AND PROGRAMMED PROJECTS AND STRATEGIES

Currently, there are no planned or programmed projects for SR 182.

PROJECTS AND STRATEGIES TO ACHIEVE CONCEPT

Seg.#	Description	Location	Source	Purpose
1	Widen Shoulders to 8 feet	US 395 to Bridgeport Reservoir (PM 0.00/5.10)	Caltrans Recommendation, Mono County 2015 RTP	Operational Improvement/ Complete Streets
1	Access Delineation	Bridgeport Reservoir (PM 5.00)	Caltrans Recommendation	System Management
1	CIR (cold in-place recycle)	US 395 to Bridgeport Reservoir (PM 0.00/5.10)	Caltrans Recommendation	Maintenance Improvement
2	Pave Turnouts	PM 8.50 (NB) PM 12.00 (SB)	Caltrans Recommendation	Operational and Maintenance Improvement
2	Widen Shoulder to 5 feet	Bridgeport Reservoir to state line (PM 5.10/12.65)	Caltrans Recommendation, Mono County 2015 RTP	Operational Improvement/ Complete Streets
2	Raise Grade	PM 7.2/8.5	Caltrans Recommendation	Maintenance Improvement
1 & 2	Install Bicycle Route Signage	US 395 JCT to state line (PM 0.00/12.65)	Caltrans Recommendation	Complete Streets

TABLE 9: PROJECTS AND STRATEGIES

APPENDIX

APPENDIX A GLOSSARY OF TERMS AND ACRONYMS

Acronyms

2C – Two-Lane Conventional Highway
AADT – Annual Average Daily Traffic
AADTT – Annual Average Daily Truck Traffic
APL – Approved Project List
BLM – Bureau of Land Management
BY – Base Year
Caltrans – California Department of Transportation
CAPM – Capital Preventative Maintenance
CBD – Central Business District
CDFW – California Department of Fish and Wildlife
CDP – Census-Designated Place
CESA – California Endangered Species Act
CMS – Changeable Message Sign
CNPS – California Native Plant Society
CNDDDB – California Natural Diversity Database
DFW – Department of Fish and Wildlife
DSMP – District System Management Plan
ESA – Endangered Species Act
ESTA – Eastern Sierra Transit Authority
FEMA – Federal Emergency Management Agency
FHWA – Federal Highway Administration
HCM – Highway Capacity Manual
HY – Horizon Year
IRRS – Interregional Road System Route
IUCN – International Union of Conservation of Nature
KPRA – Kingpin-to-rear-axle distance
LOS – Level of Service
MMTP – Multi-Modal Transportation Plan
MNO – Mono County
MPH – Miles per Hour
N/A – Not Applicable
NB – Northbound
PM – Post Mile or Particulate Matter
R – (prefix to Post Mile) Realigned
R/W or ROW – Right-of-Way
RMP – Resource Management Plan
RTP – Regional Transportation Plan
SB – Southbound
SDC – Seismic Design Category
SFHA – Special Flood Hazard Area
SR – State Route
SSC – Species of Special Concern
TCR – Transportation Concept Report
USFS – United States Forest Service
VMT – Vehicle Miles Traveled
YARTS – Yosemite Area Regional Transportation System

Definitions

AADT – Annual Average Daily Traffic is the total volume for the year divided by 365 days. The traffic count year is from October 1st through September 30th. Traffic counting is generally performed by electronic counting instruments moved from location throughout the state in a program of continuous traffic count sampling. The resulting counts are adjusted to an estimate of annual average daily traffic by compensating for seasonal influence, weekly variation and other variables which may be present. Annual ADT is necessary for presenting a statewide picture of traffic flow, evaluating traffic trends, computing accident rates, planning and designing highways and other purposes.

Base Year (BY) – The year that the most current data is available to the districts.

Bikeway Class I (Bike Path) – Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with cross flow by motorists minimized.

Bikeway Class II (Bike Lane) – Provides a striped lane for one-way bike travel on a street or highway.

Bikeway Class III (Bike Route) – Provides for shared use with pedestrian or motor vehicle traffic.

Bottlenecks – A bottleneck is a location where traffic demand exceeds the effective carrying capacity of the roadway. In most cases, the cause of a bottleneck relates to a sudden reduction in capacity, such as a lane drop, merging and weaving, driver distractions, a surge in demand, or a combination of factors.

Capacity – The maximum sustainable hourly flow rate at which persons or vehicles reasonably can be expected to traverse a point or a uniform section of a lane or roadway during a given time period under prevailing roadway, environmental, traffic, and control conditions.

Capital Facility Concept – The 20-25 year vision of future development on the route to the capital facility. The capital facility can include capacity increasing, state highway, bicycle/pedestrian/transit facility, grade separation, and new managed lanes.

Concept LOS – The minimum acceptable LOS over the next 20-25 years.

Conceptual Project – A conceptual improvement or action is a project that is needed to maintain mobility or serve multimodal users, but is not currently included in a financially constrained plan and is not currently programmed. It could be included in a general plan or in the unconstrained section of a long-term plan.

Corridor – A broad geographical band that follows a general directional flow connecting major sources of trips that may contain a number of streets, highways, bicycle, pedestrian, and transit route alignments. Off system facilities are included as informational purposes and not analyzed in the TCR.

Facility Concept – Describes the facility and strategies that may be needed within 20-25 years. This can include capacity increasing, state highway, bicycle/pedestrian/transit facility, non-capacity increasing operational improvements, new managed lanes, conversion of existing managed lanes to another managed lane type or characteristic, TMS field elements, and transportation demand/incident management.

Facility Type – The facility type describes the state highway facility type. The facility could be freeway, expressway, conventional, or one-way city street.

Freight Generator – Any facility, business, manufacturing plant, distribution center, industrial development, or other location (convergence of commodity and transportation system) that produces significant commodity flow, measured in tonnage, weight, carload, or truck volume.

Headway – The time between two successive vehicles as they pass a point on the roadway, measured from the same common feature of both vehicles.

Horizon Year (HY) – The year that the future (20-25 years) data is based on.

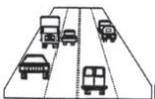
Intermodal Freight Facility – Intermodal transport requires more than one mode of transportation. An intermodal freight facility is a location where different transportation modes and networks connect and freight is transferred (or “transloaded”) from one mode, such as rail, to another, such as truck.

ITS – Intelligent Transportation System improves transportation safety and mobility and enhances productivity through the integration of advanced communications technologies into the transportation infrastructure and in vehicles. Intelligent transportation systems encompass a broad range of wireless and wire line communications-based information and electronics technologies to collect information, process it, and take appropriate actions.

Level of Service (LOS) – Level of Service is a qualitative measure describing operational conditions within a traffic stream and their perception by motorists. A LOS definition generally describes these conditions in terms of speed, travel time, freedom to maneuver, traffic interruption, comfort, and convenience. Six levels of LOS can generally be categorized as follows:



LOS A describes free-flowing conditions. The operation of vehicles is virtually unaffected by the presence of other vehicles, and operations are constrained only by the geometric features of the highway.



LOS B is also indicative of free-flow conditions. Average travel speeds are the same as in LOS A, but drivers have slightly less freedom to maneuver.



LOS C represents a range in which the influence of traffic density on operations becomes marked. The ability to maneuver with the traffic stream is now clearly affected by the presence of other vehicles.



LOS D demonstrates a range in which the ability to maneuver is severely restricted because of the traffic congestion. Travel speed begins to be reduced as traffic volume increases.



LOS E reflects operations at or near capacity and is quite unstable. Because the limits of the level of service are approached, service disruptions cannot be damped or readily dissipated.



LOS F a stop and go, low speed conditions with little or poor maneuverability. Speed and traffic flow may drop to zero and considerable delays occur. For intersections, LOS F describes operations with delay in excess of 60 seconds per vehicle. This level, considered by most drivers unacceptable often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection.

Multimodal – The availability of transportation options using different modes within a system or corridor, such as automobile, bus, bicycle, or equestrian.

Peak Hour – The hour of the day in which the maximum volume occurs across a point on the highway.

Peak Hour Volume – The hourly volume during the highest hour traffic volume of the day traversing a point on a highway segment. It is generally between 6 percent and 10 percent of the Annual Daily Traffic (ADT). The lower values are generally found on roadways with low volumes.

Peak Period – Is a part of the day during which traffic congestion on the road is at its highest. Normally, this happens twice a day, once in the morning and once in the evening; the time periods when the most people commute. Peak Period is defined for individual routes, not a District or statewide standard.

Planned Project – A planned improvement or action is a project in a financially constrained section of a long term plan, such as an approved Regional Transportation Plan (RTP), Capital Improvement Plan, or bond measure program.

Post-25 Year Concept – This dataset may be defined and re-titled at the District's discretion. In general, the Post-25 Year concept could provide the maximum reasonable and foreseeable roadway needed beyond a 20-25 year horizon. The post-25 year concept can be used to identify potential widening, realignments, future facilities, and rights-of-way required to complete the development of each corridor.

Post Mile – A post mile is an identified point on the State Highway System. Post mile values increase from the beginning of a route within a county to the next county line and start over again at each county line. Post mile values usually increase from south to north or west to east depending upon the general direction the route follows within the state. The post mile at a given location will remain the same year after year. When a section of road is relocated, new post miles (usually noted by an alphabetical prefix such as "R" or "M") are established. If relocation results in a length change, "post mile equations" are introduced at the end of each relocated portion so that post miles on the remainder of the route within the county remain unchanged. Post miles are measured in miles.

Programmed Project – A programmed improvement or action is a project in a near term programming document identifying funding amounts by year, such as the State Transportation Improvement Program or the State Highway Operations and Protection Program.

Railroad Class I – The Surface Transportation Board (STB) defines a Class I railroad in the U.S. as a carrier having annual operating revenues of \$250 million or more. This class includes the nation's major railroads. In California, Class I railroads include Union Pacific Railroad (UP) and Burlington Northern Santa Fe Railway (BNSF).

Railroad Class II – STB defines a Class II railroad in the U.S. as having annual carrier operating revenues of less than \$250 million but more than \$20 million. Class II railroads are considered mid-sized freight-

hauling railroad in terms of operating revenues. They are considered “regional railroads” by the Association of American Railroads.

Railroad Class III – Railroads with annual carrier operating revenues of \$20 million or less. The typical Class III is a short line railroad, which feeds traffic to or delivers traffic from a Class I or Class II railroad.

Route Designation – A route’s designation is adopted through legislation and identifies what system the route is associated with on the State Highway System. A designation denotes what design standards should apply during project development and design. Typical designations include, but are not limited to, National Highway System (NHS), Interregional Route System (IRRS), and Scenic Highway System.

Rural – Fewer than 5,000 in population designates a rural area. Limits are based upon population density as determined by the U.S. Census Bureau.

Segment – A portion of a facility between two points.

System Operations and Management Concept – System Operations and Management Concept – Describe the system operations and management elements that may be needed within 20-25 years. This can include Non-capacity increasing operational improvements (Aux. lanes, channelization’s, turnouts, etc.), conversion of existing managed lanes to another managed lane type or characteristic (e.g. HOV land to HOT lane), TMS Field Elements, Transportation Demand Management, and Incident Management.

TDM – Transportation Demand Management programs designed to reduce or shift demand for transportation through various means, such as the use of public transportation, carpooling, telework, and alternative work hours. Transportation Demand Management strategies can be used to manage congestion during peak periods and mitigate environmental impacts.

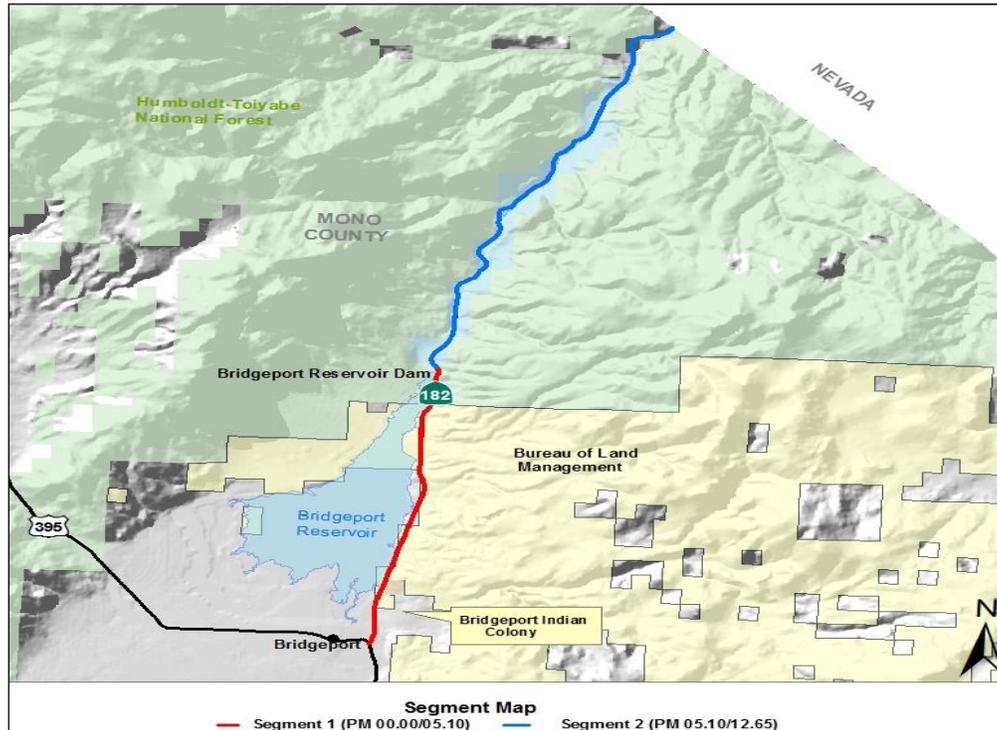
TMS – Transportation Management System is the business processes and associated tools, field elements and communications systems that help maximize the productivity of the transportation system. TMS includes, but is not limited to, advanced operational hardware, software, communications systems and infrastructure, for integrated Advanced Transportation Management Systems and Information Systems, and for Electronic Toll Collection System.

Urban – 5,000 to 49,999 in population designates an urban area. Limits are based upon population density as determined by the U.S. Census Bureau.

Urbanized – Over 50,000 in population designates an urbanized area. Limits are based upon population density as determined by the U.S. Census Bureau.

Vehicle Miles Traveled (VMT) – Is the total number of miles traveled by motor vehicles on a road or highway segments.

APPENDIX B FACTSHEET



SR 182 begins at the junction of US 395 near Bridgeport in Mono County extending 12.65 miles to the Nevada state line. Segment 1 of the route provides access to Bryant Field Airport, Bridgeport Indian Colony, local housing, and recreational areas around Bridgeport Reservoir. Segment 2 provides access to the central-western Nevada region.

PROJECTS AND STRATEGIES TO ACHIEVE CONCEPT

Seg.#	Description	Location	Source	Purpose
1	Widen Shoulders to 8 feet	US 395 to Bridgeport Reservoir (PM 0.00/5.10)	Caltrans Recommendation, Mono County 2015 RTP	Operational Improvement/ Complete Streets
1	Access Delineation	Bridgeport Reservoir (PM 5.00)	Caltrans Recommendation	System Management
1	CIR (cold in-place recycle)	US 395 to Bridgeport Reservoir (PM 0.00/5.10)	Caltrans Recommendation	Maintenance Improvement
2	Pave Turnouts	PM 8.50 (NB) PM 12.00 (SB)	Caltrans Recommendation	Operational and Maintenance Improvement
2	Raise Grade	PM 7.2/8.5	Caltrans Recommendation	Maintenance Improvement
2	Widen Shoulder to 5 feet	Bridgeport Reservoir to state line (PM 5.10/12.65)	Caltrans Recommendation, Mono County 2015 RTP	Operational Improvement/ Complete Streets
1 & 2	Install Bicycle Route Signage	US 395 JCT to state line (PM 0.00/12.65)	Caltrans Recommendation	Complete Streets

Corridor Performance		
Segment #	1	2
Basic System Operations		
AADT (BY)	1050	275
AADT (HY)	1166	305
AADT: Growth Rate/Year	0.50%	0.50%
LOS Method	HCM	HCM
LOS (BY)	A	A
LOS (HY)	A	A
LOS Concept	A	A
VMT (BY)	5355	2076
VMT (HY)	5947	2303
Truck Traffic		
Total Average Annual Daily Truck Traffic (AADTT) (BY)	138	38
Total Average Annual Daily Truck Traffic (AADTT) (HY)	153	42
Total Trucks (% of AADT) (BY)	13.15%	13.85%
Total Trucks (% of AADT)(HY)	13.20%	13.85%
5+ Axle Average Annual Daily Truck Traffic (AADTT)(BY)	4	1
5+ Axle Trucks (as % of AADT)(BY)	2.90%	2.90%
Peak Hour Traffic Data		
Peak Period Length	1 Hour	1 Hour
Peak Hour Direction	NB	NB
Peak Hour Time of Day	PM	PM
Peak Hour Directional Split (BY)	58/42	53/47
Peak Hour VMT (BY)	2151	453
Peak Hour VMT (HY)	2391	506
Peak Hour (BY)	170	60
Peak Hour (HY)	189	67

System Characteristics		
Segment #	1	2
Existing Facility		
Facility Type	C	C
General Purpose Lanes	2	2
Lane Miles	10.20	15.10
Centerline Miles	5.10	7.55
Median Width	0	0
Median Characteristics	undivided	undivided
Distressed Pavement	5%	5%
Current ROW	50-400 ft.	50-400 ft
Concept Facility		
Facility Type	C	C
General Purpose Lanes	2	2
Lane Miles	10.20	15.10
Centerline Miles	5.10	7.55
TMS Elements		
TMS Elements (BY)	1	2
TMS Elements (HY)	1	1

Bicycle Facility		
Segment	1	2
Post Mile	0.00/5.10	5.10/12.65
Bicycle Access Prohibited	No	No
Facility Type	None	None
Outside Paved Shoulder Width	2-3 ft	2-3 ft, 8-12 ft PM 6.00/6.42
Posted Speed Limit	45-60 mph	55 mph

Pedestrian Facility		
Segment	1	2
Pedestrian Access Prohibited	No	No
Sidewalk Present	No	No

Segment #	Cultural Resources	Geology/Soils/ Seismic	Floodplain	Air Quality				Recreational Land	Waters and Wetlands	Special Status Species
				Ozone	PM		CO			
					2.5	10				
1	High	Low	Med	Unclassified/Attainment	Unclassifiable/Attainment	Unclassifiable/Attainment	Unclassifiable/Attainment	High	High	Med
2	High	Low	No	Unclassified/Attainment	Unclassifiable/Attainment	Unclassifiable/Attainment	Unclassifiable/Attainment	High	High	Med

Route Designations and Characteristics			
Segment #		1	2
Freeway & Expressway System – California Streets & Highways Code Section 250-257		No	No
National Highway System		No	No
Strategic Highway Network		No	No
Scenic Highway		No	No
Interregional Road System		No	No
Priority Interregional Highway		No	No
Federal Functional Classification		Major Collector	Major Collector
Goods Movement Route		Yes	Yes
Truck Designation		Terminal Access	Terminal Access
Rural/Urban/Urbanized		Rural	Rural
Metropolitan Planning Organization		N/A	N/A
Regional Transportation Planning Agency		Mono County LTC	Mono County LTC
County Transportation Commission		Mono County LTC	Mono County LTC
Local Agency		Mono County	Mono County
Tribes	Federally Recognized	Bridgeport Indian Colony Washoe Tribe of Nevada Tuolumne Band of Me-Wuk Indians	Bridgeport Indian Colony Washoe Tribe of Nevada Tuolumne Band of Me-Wuk Indians
	Non-Federally Recognized	Mono Lake Kutzadikaa	Mono Lake Kutzadikaa
Air District		Great Basin Unified Air Pollution Control District	Great Basin Unified Air Pollution Control District
Terrain		Flat	Rolling

APPENDIX C RESOURCES

California Department of Fish and Wildlife, California Natural Diversity Database, <<http://www.dfg.ca.gov/biogeodata/cnddb>>, 2013

California Department of Fish and Wildlife, The Natural Resources Agency, Department of Fish and Game, Biogeographic Data Branch, California Natural Diversity Database, *Special Animals (898 taxa)*, January 2011

California Department of Parks and Recreation, <<http://www.parks.ca.gov>>

California Environmental Protection Agency Air Resources Board, <<http://www.arb.ca.gov>>

California Environmental Protection Agency Lahontan Regional Water Quality Control Board, <<http://www.waterboards.ca.gov>>

California Environmental Protection Agency, Air Resources Board, Air Quality Data Branch, Planning and Technical Support Division, *National Ambient Air Quality Area Designations Maps for CO; Ozone, PM 2.5, PM 10*

Caltrans Traffic Data Branch, 2014 AADT & 2013 AADTT

Caltrans, Central Region On-line Project Information System (OPI)

Caltrans, District 9, GIS Data Library

Caltrans, District 9, Goods Movement Study for US-395 Corridor, June 2006

Caltrans, Office of System, Freight & Planning, Interregional Transportation Strategic Plan, October 2013

Caltrans, District 9, Photolog, 2007

Caltrans, District 9, Post Mile Log, 2007

Caltrans, District 9, *US 395 Origination and Destination Study*, 2011

Caltrans, District 9, *US 182 Transportation Concept Report*, November 2006

Caltrans, Division of Maintenance GIS, Pavement Condition Survey

Caltrans, Division of Operations, Office of Traffic Engineering, Speed Zone Surveys

Caltrans, Division of Research, Innovation and System Information (DRISI), California Road System (CRS) Maps

Caltrans, Traffic Accident Surveillance and Analysis System (TASAS)

Federal Highway Administration, <<http://www.fhwa.dot.gov>>

Highway Capacity Manual, 2010

Mono County, Mono County Community Development Department, *Mono County General Plan*, 2009

Mono County, Mono County Local Transportation Commission, *Mono County Regional Transportation Plan*, 2015

National Academy of Sciences, Transportation Research Board, *Highway Capacity Manual 2010*

State of California, Department of Conservation, *Geologic Map of California, Map 2*, 2010

U.S. Environmental Protection Agency, <<http://water.epa.gov>>

United States Census Bureau, <<http://www.census.gov>>, 2012

United States Department of Homeland Security, Federal Emergency Management Agency, National Flood Insurance Program

United States Department of the Interior, Bureau of Land Management, *West Mojave Plan*, 2006

United States Department of the Interior, Bureau of Land Management, Bishop Field Office, <<http://www.blm.gov>>

United States Department of the Interior, Bureau of Land Management, *Bishop Resource Management Plan and Environmental Impact Statement*, August 1991

United States Geological Survey, Seismic Design Maps for International Residential Code (2006 & 2009), Coterminous US

United States Geological Survey, California Volcano Observatory <<http://volcanoes.usgs.gov/observatories/calvo/>>