*No Project Conditions*

Under the No Project Condition scenario, the following intersections would operate at an unacceptable LOS E or LOS F (LOS is evaluated on an A-F rating system with E-F at unacceptable levels) during one or more of the peak hours:

- SR 99 Southbound Off-Ramp/SR 32 (E. 8th Street) – LOS F during the PM peak hour. Long delays at the intersection are associated with traffic spilling back from the two-lane segment of SR 32 through the interchange.
- SR 99 Southbound On-Ramp/SR 32 (E. 9th Street) – LOS F during the PM peak hour. Long delays at the intersection are associated with traffic spilling back from the two-lane segment of SR 32 through the interchange.
- Forest Avenue/SR 32 – LOS F during the AM, PM, and SAT peak hours.
- El Monte Avenue/SR 32 – LOS F during the AM, PM, and SAT peak hours.
- Bruce Road/SR 32 – LOS F during the AM, PM, and SAT peak hours.
- Yosemite Drive/SR 32 – LOS F during the AM and PM peak hours.

The corridor experienced over 400 vehicle hours of delay during the AM peak hour, almost 600 hours of delay during the PM peak hour, and more than 300 vehicle hours of delay during the Saturday (SAT) peak hour within the study area. Additional delay would occur outside of the study area due to long queues on certain approaches: for example, the northbound approach from Forest Avenue during the AM peak hour and the southbound SR 99 off-ramp during the PM peak hour. The simulation also indicates that, due to limited capacity on the two lane segment, eastbound vehicle queuing will extend into the interchange and affect intersection operations (as reflected in the level of service results).

*With Project Conditions*

With the proposed project all of the study intersections would operate at an acceptable level. The corridor would experience less than 200 vehicle hours of delay for all three analyses periods (AM, PM, SAT); approximately a 70% reduction compared to the No Project Condition scenario. Additionally, all intersections will operate at an acceptable LOS D or better during all peak hours.

# EFFECTS OF THE PROPOSED PROJECT, CONSERVATION AND MITIGATION MEASURES

## Direct Effects

Direct effects occur at, or very close to, the time of the action itself. Examples include loss of habitat or sedimentation resulting from construction activities. Direct effects caused by the

proposed action are expected to occur when suitable habitats of the special-status species included in this BA are removed and/or altered by heavy, earth-moving equipment.

*Vernal Pool Species*

The proposed project would directly impact a total of 0.265 acre of habitat that may support federally listed vernal pool tadpole shrimp and vernal pool fairy shrimp and indirectly impact 0.906 acre of vernal pools that may support federally and state listed vernal pool tadpole shrimp, vernal pool fairy shrimp, California linderella, and western spadefoot toad (**Attachment A**). The seasonal wetlands and swales are treated as habitat for vernal pool invertebrates based on the following parameters: 1) close proximity to vernal pools (step-over habitat); 2) hydrological connection to vernal pools during flood events; 3) seasonal fluctuation of water depth, which is required for the survival of vernal pool species; and 4) potential to support vernal pool species

*Giant Garter Snake*

The proposed project has the potential to directly affect GGS habitat and possible GGS during the widening of Bridge No. 12-0135 and box culvert east of Bruce Road. A total of 1.613 acres of GGS upland and aquatic habitat will be impacted. Direct impacts will occur to 1.501 acres of upland habitat in the programmed areas and will result in 0.103 acre of impacts to the aquatic habitat (**Figure 7**). All efforts will be made to minimize development within 200 feet of Dead Horse Slough. In addition, BMPs will be followed per the USFWS *Programmatic Formal Consultation for U.S. Army Corps of Engineers 404 Permitted Projects with Relatively Small Effects on the Giant Garter Snake within Butte, Colusa, Glenn, Fresno, Merced, Sacramento, San Joaquin, Solano, Stanislaus, Sutter and Yolo Counties, California*, 1997 (GGS Programmatic) to minimize impacts. All construction within GGS habitat will be conducted in May through October 1, when water levels are low and GGS are active and will avoid danger.

*Butte County Meadowfoam*

The proposed action will have direct impacts on BCM populations during road widening activities Construction on the south side of the road in parcel 5 will result in direct impacts of 0.0001 acres of BCM and/or BCM suitable habitat (**Figure 6**). Direct impacts are areas where the proposed road widening will pave over or dig up existing BCM locations and/or suitable habitat. No direct impacts will occur to BCM populations west of Bruce Road.

Impacts from construction will occur predominantly from heavy equipment including, but not limited to, trucks, bulldozers, graders and other earthmoving equipment. The project proponent will be responsible for mitigation for all impacts (**Table 1**).

**Table 1. Butte County meadowfoam impacts table, for SR 32 Widening Project, Chico, CA.**

| Impact Type | Area (sq.ft.) | Acres |
|---|---|---|
| Total of All Indirect Impacts = | 7968.1 | 0.1829 |
| Total of All Direct Impacts = | 2.0 | 0.0001 |

*Highway 32 Widening*

*Giant Garter Snake Impacts*


APE derived from MTCO CAD, Butte County parcel right of way & proposed avoidance. GGS impacts derived from 200 ft. buffer of creek within proposed construction footprint.
Date of Aerial: Feb. 26, 2002
Map Date: Dec. 5, 2005/Revised Jul. 5, 2006

N

0 100 200 Feet

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***Figure 7.***