ATTACHMENT C COMMENT LETTER # 2

LETTER FROM THE OFFICE OF COMMUNITY

CALTRANS DISTRICT 2

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY ARNOLD SCHWARZENEGGER, Governor

DEPARTMENT OF TRANSPORTATION
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PLANNING DEPT.

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February 3, 2006

IGR/CEQA Review
Teh-5-32
Sun City (Del Webb)
DEIR
SCH# 2005022038

Mr. George Robson
Tehama County Planning Department
444 Oak Street, Room 1 Courthouse Annex
Red Bluff, CA 96080

Dear Mr. Robson:

The California Department of Transportation (Department) has reviewed the Draft Environmental Impact Report (DEIR) and the traffic study submitted for the Sun City Tehama Project. This project, which is of regional significance pursuant to CEQA, is located along the west side of Interstate 5 (I-5) between the Sunset Hills (formerly Snively Road) and Hooker Creek interchanges. The project proposes a planned development to include (DEIR Table 3-2, p. 3.0-10):

* 3,700 residential units (3,475 age-restricted, 225 non-age-restricted).
* 642,510 square feet Commercial
* 30,000 square feet Medical
* 45,000 square foot Recreation Center
* 18-hole Golf Course
* 10 acres of park
* 1,067,220 square feet Public Facilities
* 1,995 acres of Open Space

We would like to point out that I-5 is the only way into and out of the proposed development. There are no alternate roads, either local or state, into the project site. If the proposed project is approved and developed, it will have significant impacts on many aspects of life in Tehama County and adjoining Shasta County. As indicated in our response to the Notice of Preparation (enclosed), the Department's concerns are the impacts the project will have on the transportation system, primarily the I-5 corridor between the cities of Red Bluff and Redding. If not adequately mitigated, this project will destroy the level of service on Interstate 5, bringing it below acceptable levels.

The Department greatly appreciates the effort of the developer and the County to work out many of the details of the traffic impact study prior to circulation of the DEIR. A Transportation Impact Analysis Report (TIAR) for a development of this magnitude is a significant effort and is very complicated. In addition to the 1,372 pages of text and tables in the TIAR, Caltrans eventually received over 670 computer files that were used by the consultant to generate the output data. The TIAR, as submitted, contains 26 figures and 55 tables and became an entire volume of the DEIR.

During a meeting on August 12, 2005, the County, developer, and Caltrans agreed that all parties would agree on all of the traffic impacts of the proposed development prior to the circulation of the DEIR. Unfortunately this didn't happen and the DEIR was circulated well before all the traffic impacts were mutually identified.

The Department's technical comments to date on the traffic-related impacts and other concerns in the DEIR are enclosed. Based on the complexity, magnitude, regional importance, and significant delays in receiving the information necessary to review the DEIR, we are grateful that the county granted us an extension of time to February 4, 2006 to respond, even though it was less than the 30 days we requested. The Department was not provided sufficient time to thoroughly review this very complex DEIR.

CEQA requires that all significant impacts of the project be identified in the DEIR. If they are not included in the DEIR, or if "new" information is revealed following the release of the DEIR, then CEQA requires recirculation of the DEIR for public review and comment. There are significant impacts to Interstate 5 beyond the study limits of the DEIR, which were not disclosed in the DEIR. These impacts away from the core project area should be clearly identified, and the developer should pay for its significant project-direct impacts and fair share of costs toward mitigation of cumulative

traffic impacts. This fact, along with the difficult manner in which the data is presented, and with the errors and inconsistencies in the DEIR/TIAR, precludes the ability to make sound decisions relating to the project's traffic impacts and mitigation measures.

The Department strongly disagrees with the DEIR conclusion that there is no feasible mitigation for the significant cumulative impacts to Interstate 5 because there are no state or local programs to fund and construct the improvements. There are many acceptable methods to mitigate a project's impacts. While specific projects to mitigate the impacts of the proposed Del Webb Sun City project are not now included or programmed in state and local plans, it is reasonable for them not to be there at this time since specific mitigation projects are supposed to be identified through the Environmental Impact Report process.

The DEIR refers to a development agreement used to fund mitigation improvements for Tehama County impacts and State Highway impacts. This development agreement is not a part of the DEIR and is not available for the Department and the public to review to determine if the mitigations are reasonable. The development agreement should be available for review by the public and the Department if it is referred to in the DEIR. The CEQA Guidelines section 15126(a)(1)(B), specifically state that formulation of mitigation measures should not be deferred until some future time.

The Department believes that the project should be required to pay for project-specific impacts and for its proportionate share of cumulative impacts for I-5 improvements. Once the Traffic Study is corrected, and the true impacts to the transportation system are clearly identified, we would like to work with the County to develop mutually acceptable mitigation measures to address the project's impacts on I-5. The Department strongly urges Tehama County to reconsider the "infeasibility" findings. If they are retained in a Final EIR (FEIR), and approved by Tehama County, the Department would view that approval with the utmost concern.

Thank you for providing us the opportunity for review of this project. The Department will continue to offer the opportunity to work diligently with the County in a positive manner to obtain the mitigation measures needed to reduce the traffic impacts of the project. We look forward to receiving and reviewing the responses to comments and the FEIR.

If you have any questions, please call me or my staff at (530) 229-0517.

Sincerely,

Michelle Millette

MICHELLE MILLETTE, Chief
Office of Community Planning
Caltrans District 2

Enclosures

c: Caltrans' Legal Division
Shasta County
City of Anderson
City of Redding
City of Red Bluff
State Clearinghouse
Tehama LTC
Shasta MPO

Del Webb DEIR
SCH# 2005022038
Caltrans District 2

ATTACHMENT "A"
Sun City Tehama Specific Plan (Del Webb) Draft EIR Comments

General Comments

- The EIR needs to provide a clear description and discussion of the impacts from the construction traffic and development phasing of both the residential and commercial development. Clarifications and additional information for this concern have been requested numerous times and remain outstanding. During a meeting on December 23, 2005 between the developer, the County, and Caltrans, it was recognized that the Transportation Impact Analysis Report (TIAR) submitted did not include several of the required elements including mitigation costs, an interchange phasing plan and analysis, an analysis of construction related traffic impacts, details used to evaluate the roundabout alternatives, and clarification of a previously submitted (but not included in the DEIR) fair share analysis of the project's fair (proportional) share of the cumulative impacts. At a meeting on January 11, 2006, the developer said this information would be provided sometime during the week of January 16, 2006. We have never received this requested information.

- Cost estimates for interchange improvements were provided on January 17, 2005. We did not have sufficient time to confirm the estimates.

- A major assumption used in the TIAR was to designate the commercial land use as Shopping Center for the purpose of trip generation rates. Shopping Centers have an inherently lower trip generation rate than would be found with the individual commercial uses typically found in a Shopping Center. The ITE trip generation handbook lists the typical developments found in the Shopping Centers that were used in their surveys to develop the trip generation rates. We note that the first permitted use listed in the Specific Plan (page 3.36, Table 3-7) is for a gas station. A gas station, as well as several other permitted uses listed in the Specific Plan, are not consistent with the ITE Shopping Center designation. It will be necessary to revise any approved traffic study if a gas station, or other inconsistent land use, turns out to be the actual use approved.

- We note that the site plan we recently received from the US Army Corp for a 404 permit indicates mixed-use commercial next to I-5 and Hooker Creek Road. The DEIR shows this same parcel as Public. This would represent a significant change in the assumptions used in the traffic study and a new study would need to be completed to identify the impacts to the Hooker Creek Road interchange.

- Section 4.12 Public Services and Recreation (DEIR p. 4.12-1), identifies the role of the California Highway Patrol (CHP). The impact section does not address the impacts from the increased traffic volumes that represent a significant increase in the evening peak hour traffic and a daily increase in traffic of over 20,000 vehicles from this project alone over the existing 36,500 daily vehicles. The DEIR should address how this impact relates to the related increase in accidents, hazards, and patrol activities expected from the increase in project traffic that will

be required of the CHP. Mitigation Measure 4.12.8a (DEIR p. 4.12-15), addresses police protection services for the Tehama County Sheriff's Department but does not address the increased service needs of the CHP.

- Wire field fencing exists along the I-5 interstate highway right of way frontage. When specific projects are proposed, the Department will provide additional comments in regard to the appropriate barrier that should be installed between the development project and the freeway. The developer will be responsible for replacing the wire fencing with the appropriate barriers or separations, such as chain link fencing or sound walls. Additionally, landscaping should be provided and maintained by the developer/development at interchanges.

- The Sun City Tehama project is not consistent with the principles of smart growth. Specifically, the project is created on undeveloped land that is miles from established communities. The land uses within the development are separated, with the commercial and medical in the northeast section, and housing off by itself. This type of development must bear all of the costs of developing the infrastructure necessary to support the new development, instead of building upon infrastructure that is already in place.

Pertinent Objectives of the Tehama County General Plan Update

CO-2
Manage development and insure that individual(s) action(s) do not adversely impact the health, safety and welfare of the County's citizens

Comment - Congestion on I-5 due to development will compromise the safety and welfare of all that use it, including the citizens of Tehama County. Significant increases in daily and peak hour traffic will increase traffic accidents, hazard, and accelerate congestion unless adequately mitigated.

CO-3
Promote a development pattern which, whenever possible, maximizes the use of existing infrastructure prior to constructing new infrastructure. Develop a land use pattern which, to the maximum extent feasible, minimizes the expenditure of public funds for infrastructure construction and maintenance.

Comment - The existing transportation infrastructure is not sufficient to accommodate this proposed development pattern. New transportation infrastructure will be required. If not mitigated, this development will cost the taxpayers tens of millions of dollars in construction costs, and immeasurable cost in terms of quality of life, frustration, wasted time, and safety.

CO-4
Designate lands for commercial and industrial development which are appropriate for these purposes and allows opportunities for business and industrial firms. Encourage compact development contiguous to existing urban centers, discourage linear and leapfrog development patterns.

Comment - This proposed development is not near any existing urban center. If it were located adjacent to Red Bluff, there could be an alternative transportation system providing several ways to access the cities of Red Bluff or Redding. This project only has access to I-5 creating a high

magnitude of concern due to its proposed location. There are many access points to Red Bluff, but only one to Sun City.

CO-5 (T-3)
Develop a land use pattern which, to the maximum extent feasible, minimizes the expenditure of public funds for water, sewer, flood control and road construction and maintenance.

Comment - Sun City will require massive amount of public funds if the transportation infrastructure will remain viable. People will have to travel many miles to get to and from Sun City from any existing urban center.

CO-10
Encourage land use patterns which minimizes travel to jobs and services

Comment - People will have to travel many miles to get to and from Sun City from any existing urban center.

4.10 - NOISE:

(DEIR, p. 4.10-12) regarding Modeled Noise levels - It appears the analysis utilized draft data. Table 4.10-5 references the Omni-Means Traffic Report of June 2005. The analysis should be revised to use the November traffic data and determine whether any changes result. The Traffic Study projects volumes for mainline I-5 over 100,000 ADT that should be considered in the Transportation Noise impacts analysis. This may affect the conclusion stated in Section 4.10.43 Cumulative Impacts.

We agree with Mitigation Measure 4.10-1 that states the developer shall be fully responsible for funding and constructing all necessary noise attenuation measures to reduce exterior and interior noise levels below the General Plan thresholds. Caltrans will review the detailed acoustical analysis submitted for specific projects for the provision of attenuation measures by the developer such as sound walls. The State will not be responsible for any necessary or desired noise attenuation, due to the proximity of the proposed land uses to the State facility. More simply, the State will not be responsible for building "sound walls" should traffic noise become objectionable.

4.8 - HYDROLOGY:

The DEIR concludes that no significant drainage or erosion impacts are expected to occur since water quality basins and on-site detention facilities are proposed to minimize surface water flows leaving the Specific Plan area. These facilities will be part of a larger stormwater quality control system described in the Specific Plan. Measures discussed in the DEIR to mitigate the potential drainage impacts include the use of detention basins, vegetated swales, vegetated buffer strips, constructed wetlands and filters and other similar features be incorporated into the drainage system (DEIR, p. 3.0-31).

Comment - Caltrans will review the detailed drainage reports submitted for individual projects for the provision of stormwater control and water quality measures by the developer for projects adjacent to the State Highway right of way.

We also offer the following cautionary general comments in regard to hydrology:

- Construction activities and placement of the new buildings and parking areas should not result in any additional surface water (storm water) runoff discharged to the State's highway right of way or to Caltrans' highway drainage facilities.

- No net increase to the 100-year storm event peak discharge into the State's highway right of way or Caltrans' drainage facilities may occur as a result of this project. Further, the developer must maintain or improve existing drainage patterns and facilities affected by this project to the satisfaction of the State and Caltrans. This may be accomplished through the implementation of stormwater management best management practices such as detention/retention ponds or basins, sub-surface galleries, on-site storage or infiltration ditches, as appropriate. Once installed, the property owner must properly maintain these systems. The developer/owner may be held liable for future damages due to impacts for which adequate mitigation was not undertaken or maintained.

1.0 INTRODUCTION

Page	*Comment*
1.0-2	• Table 1-1, Caltrans should be added for permits and review requirements for any work to be done in the State highway right of way including improvements to the affected interchanges, mainline I-5, and utility crossings.

2.0 EXECUTIVE SUMMARY

2.0-10 The document states "The project would generate a total of 40,510 daily trips upon full development of all the allowed uses in 2015 that would leave the Specific Plan Area." Table 24 of the TIAR shows that the number of "external" trips in the 2015 Project Only scenario is 30,085. Which number is correct?

4.13 TRAFFIC AND CIRCULATION

Caltrans DEIR Traffic Review Summary

During a meeting on August 12, 2005, the County, developer, and Caltrans agreed that all parties would agree on all of the traffic impacts of the proposed development, prior to the circulation of the DEIR. Unfortunately this did not happen and the DEIR was circulated well before all the traffic impacts were adequately determined.

The sequential steps in developing a traffic impact study are:

1) Determine the trip generation for each element of the proposed development.
2) Using the results of 1), develop the trip distribution to and from the development on the transportation network.
3) Using the information from steps 1 and 2, utilize accepted computer traffic modeling software to identify transportation facilities that are significantly impacted in numerous different scenarios. The scenarios reviewed in this study include the following:
   - Existing Conditions
   - Short Term (2015) plus 50% Approved/Pending No Project Conditions

- Short Term (2015) plus Project Only Conditions
- Short Term (2015) plus 50% Approved/Pending plus Project Conditions
- Long Term (2025) plus 100% Approved/Pending No Project Conditions
- Long Term (2025) plus 100% Approved/Pending plus Project Conditions

4) Determine the transportation infrastructure required to support the traffic volumes generated in each of the scenarios (i.e. mitigation). Determine direct project significant impacts and the required mitigation and the cumulative significant impacts.
5) Estimate the cost of providing the required transportation infrastructure as determined in step 4.
6) Determine the project's direct mitigation and the projects fair share of cumulative mitigation.

At the time of the DEIR circulation, step 1) had been accomplished, and step 2) was close to being completed. Significant work remained to determine the traffic impacts, as was agreed, prior to circulation of the DEIR.

In order to effectively review the information prepared for step 3), on December 2, 2005 Caltrans requested copies of the electronic software files used to distribute traffic to the surrounding area as well as the actual files used to generate the Level of Service (LOS) output data (Note: Caltrans' requested that the electronic software files be submitted with the release of the DEIR in its March 9, 2005 response to the NOP). Only the computer output files were incorporated in the TIAR. There is no reasonable way to verify, using only the tables and figures provided in the TIAR, that the analysis of the project and surrounding development applies the correct volumes from the trip generation calculations and distributes them appropriately. The Traffix Software input files are critical in verifying how the trips are distributed to the system.. Distribution errors and/or poor assumptions can dramatically affect the resulting impacts to roadway segments and intersections. Caltrans finally received some of the electronic input files on December 20, 2005 and the remainder of the files on January 4, 2006. However, several of the electronic files received in early January were corrupted and could not be opened.

The remaining working days until the DEIR comments were due, was insufficient to completely review step 3), much less all the remaining elements of the TIAR. It is worth mentioning that the consultant took over a year to develop the study. Based on the study provided and the limited review period, Caltrans does not agree that the data provided to date is adequate to determine the project impacts and assess the proposed mitigations to accommodate the anticipated traffic volumes.

Subsequent Approvals

In order to construct the required mitigation measures within the interstate right of way, a Project Study Report (PSR) must be prepared and approved by Caltrans and the Federal Highway Administration (FHWA). Since the improvements will occur on an interstate, National Environmental Policy Act (NEPA) requirements apply and NEPA clearance will be required. Before Caltrans can approve a PSR, and FHWA will approve a NEPA document, a thorough evaluation of the traffic impacts and the adequacy of the identified improvements to accommodate projected traffic volumes must be completed. Since the traffic portion of the DEIR is incomplete and faulty, we are unable to determine exactly what kind of improvements will handle the development's traffic volumes. It's quite possible the facilities needed to accommodate the projected traffic volumes will be larger (thus more expensive and may require more right of way) than those proposed in the DEIR. If this happens, the County will be responsible for the

construction of those larger facilities and presumably require the developer to finance these more expensive facilities. This is a high risk situation for all parties.

All parties benefit if a thorough review and acceptance of the traffic impact study occurs during (or prior to) circulation of the DEIR. The County and the developer would be in a much better position knowing that Caltrans and FHWA are in agreement with the proposed improvements to facilities within the interstate right of way. Having Caltrans and FHWA's preliminary concurrence allows the County and developer to accurately estimate and incorporate the financial implications of those improvements on the project. It is unfortunate this critical step was not accomplished during (or prior to) the DEIR review period.

Lack of an Alternate Transportation Network/System

Due to the lack of a transportation network in this part of the County, the only viable access for development in the project area is I-5. The local road network is very limited, placing an undue burden on the one and only transportation facility. Without a viable local road network, motorists have no choice but to use the freeway to travel, even if it means entering the freeway at one interchange and exiting at the next. Even in the inadequate form submitted, the Sun City traffic study has shown that I-5 does not have "unlimited capacity" to absorb area development. It is important that the County make good land use decisions if it intends to continue promoting growth in this region. Developing viable alternative transportation facilities is essential.

Approved/Pending Projects

Per discussions with the County, the TIAR includes three approved or pending projects and four developments that are still in the discussion stage without formal applications that are considered for the 20-year planning horizon. The result is that on top of the proposed Sun City development, the study considers 4,700 single-family homes, 40 acres commercial, two 8-pump gas station/mini marts, several restaurants, 80-room hotel, and a 125-space RV park being built in the next 20 years. The County requested these projects be assumed in the cumulative analysis. The reason was to assure the Sunset Hills Interchange would be appropriately sized to accommodate potential General Plan full build out including projects not yet approved or pending. This is sound planning on the County's part for maximum impact assessment for the interchange.

Caltrans does not agree that the entire TIAR be based on speculative projects that have no pending applications or require land use change approvals (General Plan amendments, zone changes, subdivision maps). Potential problems that can occur with this assumption is that future roads (particularly Floyd Lane) are assumed to be built by these speculative developments, but may never occur. If the facilities tied to speculative development are not constructed, the traffic generated from the Sun City and approved/pending projects will use other routes, primarily I-5. Therefore, the basic traffic distribution assumptions in the TIAR would not be valid. This may create more significant impacts than disclosed in the DEIR and could substantially alter the operation of the interchange(s) to the point they fail under this scenario.

Another issue with assuming additional traffic from speculative projects is the impact it has on the fair share analysis. An example is the DEIR's calculation of Sun City's fair share of the required interchange modifications. Sunset Hills Interchange serves as the primary access to I-5 for the Sun City development. If the speculative projects are never constructed, the traffic impacts from the Sun City project (by itself) require significant improvements to the interchange. However, the

DEIR fair share calculation for the Sun City's proportional share of the new interchange (assuming full buildout of all approved/pending and speculative projects) is only 43% (pg 110 TIAR). However, this may be a non-issue for the County and Caltrans if the developer agrees with the mitigation measure making the developer wholly responsible for constructing the improvements needed to accommodate the project with reimbursement from future projects, if they occur. To assess these concerns from another perspective that may reflect more realistic growth, Caltrans requests a 2015 (project only) volume/LOS analysis, 2025 volume/LOS analysis and the fair share calculation be based on only the approved/pending projects, and not the speculative projects. This information needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.
Furthermore, by assuming the extensive buildout of the local area, the number of external trips from the Sun City development (and approved/pending/speculative projects) that reach I-5 are reduced substantially. This is due to the internal trip matching reductions that are applied to the total trips as a way to account for the local area commercial-residential interaction. These reductions were applied to the Sun City project, approved/pending projects, and the speculative projects. If a more realistic forecast of local area growth was studied, the amount of local area absorption would be lessened and result in an increase in the number of external trips distributed to I-5.

Mitigation

We request that the County meet with Caltrans to develop the mitigation measures necessary to address the project-specific and cumulative impacts of the project on I-5. Caltrans requests that the project be required to pay and construct all direct project specific impacts and a proportionate share of cumulative impacts toward I-5 improvements consistent with CEQA. Feasible mitigation measures can be accomplished in several forms as either direct mitigation (construction of improvements by the developer on I-5), mitigation funding for strategic improvements to the Interstate for those areas significantly impacted by the project, or mitigation funding agreed upon in the terms of a Developer Agreement.

The DEIR states that the applicant proposes to pay a regional traffic impact fee negotiated between the County and the developer to contribute toward the cost of improving regional facilities, including the I-5 Freeway mainline and freeway ramp segments. It has not been demonstrated to the satisfaction of Caltrans that the mitigation funding to address I-5 impacts is adequately included or addressed or that it is infeasible. No draft development agreement has been presented identifying the specific limits of improvements to I-5 to mitigate project-direct impacts nor the project's proportionate fair share for cumulative impacts toward I-5 mainline improvements. Caltrans cannot accept a vague, future agreement as an adequate mitigation measure or a mitigation measure described as, "add one northbound and one southbound lane throughout the entire project study area" without agreeing on the proportionate share impacts or the limits of the project study (Mitigation Measure 4.13-15, DEIR p. 4.13-54). The development agreement should be available for review and comment by Caltrans, the public, and the decision makers.

Since the estimated timeline to buildout Sun City is eight years per the DEIR, the Short Term (2015) Plus Project Only scenario represents direct impacts the project has on the transportation infrastructure. The project-direct impacts are critical for identifying what mitigative improvements the project will be responsible for providing and constructing before project build out. The DEIR should discuss project-direct impacts, and appropriate mitigations for the Hooker Creek, Sunset Hills, and Bowman Road interchanges and mainline I-5.

The project's direct significant impacts to I-5 extend beyond the original study area as indicated in Table 52 of the TIAR. The entire limits of the project-direct significant impacts should be defined and quantified. As described in Table 52, the project attracts and generates traffic affecting the I-5 corridor between the cities of Redding and Red Bluff. More specifically, as described in Table 52, between the Oasis Road interchange and the Diamond/South Red Bluff interchange. This information needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices. Project-direct significant impact mitigations should be primarily the responsibility of this development and occur prior to its buildout.

The TIAR identifies cumulative impacts to the transportation infrastructure in the Long Term (2025) Plus Project conditions. Table 50 identifies five I-5 segments that fall beyond the "cusp of LOS 'C/D'" threshold of significance. However, the study does not identify what improvements are necessary to address these deficiencies. This information needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices. Instead, the TIAR states that, "it is expected that over the next 20 years, Caltrans will program funding for the cost of the projected improvements required....". Furthermore, the study assumes the County may contribute up to 10% of the total cost of a mainline expansion project. Of the County's 10% share, the TIAR determines that this project is responsible for approximately 23%. The TIAR does not include any supporting calculations for this percentage.

State and Federal funding is limited; therefore, we do not agree that Caltrans has the responsibility to modify the interstate to mitigate project impacts required to accommodate development related impacts. Caltrans does provide, as funding allows, improvements needed to maintain the existing interstate facilities. Additionally, Caltrans does not agree that the County is only responsible for 10% of those improvements needed to mitigate impacts from development, or that this project is only responsible to pay its fair share of the assumed County share. This methodology does not adequately mitigate the project's impacts to mainline I-5.

Similar to the above analysis, a Mainline Cost Contribution Worksheet, dated November 17, 2005, was prepared by the consultant and submitted to the County sometime in mid-November. Caltrans received a copy of the worksheet on December 15, 2005. The worksheet was not included in the DEIR. The worksheet uses the same trip loss distribution percentages that were agreed upon in consultation with Caltrans and used in Table 52 of the TIAR to determine the project's share of mainline improvements. Rather than basing the project's share on PM peak hour volumes, the worksheet uses average daily trips (ADT). The 2025 volumes (without project traffic) listed in the spreadsheet are significantly higher than the historic growth on I-5. For example, the ADT at the Cypress Avenue interchange grows from 67,000 to 181,000 over the 20-year period. This is a 170% increase in traffic volumes. Historic growth would yield 94,500 ADT. Using the inflated mainline growth dramatically reduces the project's proportional share. The project's contribution for mainline improvements should be based on realistic growth projections for PM peak hour volumes, the trip loss distribution percentages, and the ultimate mainline I-5 improvements needed for the 2025 cumulative conditions. Using 40% for background growth on I-5 over 20 years and then adding the project traffic volumes would be more realistic. The TIAR needs to determine the required improvements to mainline I-5 for the 2025 conditions and the project's proportionate share, including the calculations. Once this analysis is completed and agreed upon, this information needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

Sensitivity Analysis

The TIAR includes a sensitivity analysis as requested by Caltrans. The DEIR also includes this discussion identifying that 14,000 additional daily trips and 350 AM and 1800 PM additional peak hour trips would occur by analyzing the commercial area into four individual shopping centers (DEIR, p. 4.13-37). The reason for this analysis is due to the concern from Caltrans that the study could be underestimating the potential traffic generation, and thus impacts, of the proposed commercial portion of the project. The project is proposing to develop 59 acres for general commercial uses. The Land Use Map shows the commercial acreage divided into four parcels. The TIAR estimates that the four parcels will accommodate a total of 643,000 square feet (or 643 KSF) of commercial footage. Since specific commercial components are unknown at this stage of development, the study combines the four parcels together and calculates the trip generation as though it will operate as a single large 643 KSF shopping center. It has been argued by the consultant that this methodology is justified because the four commercial parcels will essentially function as a single commercial "power center" for northern Tehama County. In other words, because of the rural nature of this area and the size/variety of commercial uses, people are less likely to make repeat trips to the site.

The result is a very low-end estimate of potential impacts. Using information contained in the "Institute of Transportation Engineers (ITE) Trip Generation - 7th Edition," to determine the trip generation for a single 643 KSF shopping center, yields a substantially lower trip generation rate per square foot than four smaller shopping centers. As noted in the TIAR sensitivity analysis, breaking the 643 KSF commercial area into four individual shopping centers (same as the number of parcels on the Land Use Map) sized 161 KSF each, increases the estimated trip generation by 14,210 trips a day (more than a 62% increase above the numbers used in the TIAR). Another example is comparing the Sun City commercial to the two approved/pending 20-acre commercial developments on the east side of I-5. Here are the numbers from the TIAR:

SHOPPING CENTER COMPARISON

	Sun City Commercial (per DEIR)	Two 20-acre App./Pend. Commercial (per DEIR)
Acreage	59	40
Square Footage	643 KSF	420 KSF
Daily Trip Rate	22,754	21,999
Difference	**755 trips per day**	

As shown in the table, even though the Sun City shopping center commercial is 53% larger than the combined shopping centers of the approved/pending commercial sites, the Sun City site only generates 3.4% more trips. The use of these lower trip generation rates in the DEIR may lead to significantly understating the actual number of trips generated by the commercial portion of the Sun City development and possibly undersizing the needed mitigation.

Measure 4.13-3 in the DEIR, limits the amount of commercial development to 232 KSF without a revised traffic study. At that point, the DEIR suggests a determination would be made if further commercial development will create impacts substantially greater than identified in the TIAR. If so, additional mitigation measures will be necessary. What those mitigations will be and when implemented should be stated.

Mitigation Measure 4.13-3 has several drawbacks. First, if the initial 232 KSF of commercial development generates more trips than anticipated in the EIR, it potentially places the County in a very difficult situation of having to deny further commercial development on commercially zoned properties. A better option would be to provide a "maximum commercial zone" based on the ITS trip generation rates. Then if traffic volumes are shown to be lower than projected in the EIR, the County could comfortably allow a commercial development up to the amount currently proposed.

Secondly, a much more detailed traffic-monitoring plan is needed to accurately define the trigger points at which the traffic volumes are measured, and where they are measured. If, for instance, the initial 232 KSF of commercial development is low trip generating, the future study could potentially allow an additional 411 KSF of undefined commercial development (similar to the original 643 KSF studied in the DEIR). This could be a problem if the remaining 411 KSF of commercial property turns out to have very high trip generation characteristics. Then, the overall buildout of the commercial property could exceed the capacity of the transportation infrastructure.

Another option would be to zone the property for a lower trip generating use, with the opportunity to rezone to commercial if the traffic monitoring reflects that traffic volumes are below anticipated and remaining capacity exists for a specific commercial project.

Considering the potential problems described above, Caltrans requests to be a party to working out the details of a traffic monitoring plan.

Page:

4.13-23 DEIR states in reference to cumulative conditions, three "probable future projects," however, "no applications are on file for the probable future projects . . . nor is there any specific time frame identified when these projects might be built, if at all."

Comments -

- The TIAR DOES give a timeframe by assuming that the projects will be half built by 2015 and 100% built by 2025. The three "probable" projects are: two 20-acre commercial developments east of I-5, 1,500 units north of Sun City (Morgan), and 900 units east of I-5 between Hooker Creek and Sunset Hills.
- This statement in the DEIR is inconsistent with the TIAR. The DEIR states that there are four approved and three probable. The TIAR (p. 26) states that there are three approved/pending and four probable.

4.13-26 Significance Thresholds states, "Consistent with these County and Caltrans policies, LOS C is used in this analysis as the general threshold for acceptable operating conditions for typical weekend AM and PM peak hour periods for intersections and roadways maintained by the County and LOS D is used as the general threshold for weekend days."
Comment – The Department's understanding is that the County (not Caltrans) will accept LOS D on a Saturday at interchange terminal intersection(s) as long as queues do not impact mainline.

4.13-28 States, "Because the Bowman/I-5 ramp intersections currently operate below the desired LOS C threshold, and the LOS will be impacted to a greater degree by traffic from related projects, the impact of the project on the Bowman Road/I-5 ramp intersections is considered a significant cumulative impact but not a significant project impact."
Comment - For Existing Conditions in the AM peak hour, the northbound (NB) ramps operate at LOS F with 64.8 seconds of delay. In the 2015 Plus Project Only scenario, that

same intersection still operates at LOS F, but with 266.4 seconds of delay (Same type of data exists for the PM and Saturday peaks). Although the LOS does not change, the delay changes significantly due to the project. Substantiate why a 201.6 second increase in delay is not a significant project impact.

4.13-33,39 Figure 4.13-7 "External Intersection Volumes – Full Project Development" and Figure 4.13-9 "Intersection Volumes (2025) – No Project" shows the same volume information. Comments – Since the volumes cannot be the same, we believe this is an error. Why are the figure descriptions different than the corresponding figures in the TIAR? The inconsistency of the labeling convention between the DEIR and the TIAR adds to the confusion of understanding the study.

The tables in this chapter (Table 4.13-16 Full Project Build out 2015) are reflective of only the 2015 plus Project condition. They are not Project plus Approved/Pending. The inconsistency of the labeling convention between the DEIR and the TIAR adds to the confusion of understanding the study.

4.13-34 DEIR Table 4.13-14 on page 4.13-34 in the ADT for Bowman Road - west of I-5 SB ramps - says ADT is 12,4000.
Comment - Did they mean 12,400?

4.13-44 Under the 2025 Cumulative Conditions, I-5 is projected to operate at an unacceptable LOS during at least one peak hour period with the existing four-lane configuration. The DEIR states, "Implementation of Mitigation Measure 4.13-15 would mitigate potential cumulative impacts on the freeway to less than significant levels." Mitigation Measure 4.13-15 proposes to "add one northbound and one southbound lane throughout the entire project study area."

Comments -

It is apparent the impacts from the cumulative conditions extend well beyond the project study area. As a disclosure document to inform the public and the decision-makers of the extent of the project's impacts, explain why this section of the DEIR does not address mainline impacts beyond the study area. Once this information is provided, this information needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

The statement that this mitigation would "mitigate potential cumulative impacts on the freeway to less than significant levels" is inconsistent with traffic study which concludes that even with an additional lane in both directions on I-5, the "segments of I-5 north of Sunset Hills Road are projected to operate at LOS "D" or worse on a peak hour basis." Table 50 of the TIAR (pg. 115) shows several segments that will not achieve an acceptable LOS with this mitigation. Please explain.

This mitigation measure does not address the project's significant impact. Once this information is provided, it should be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

4.13-47 DEIR Mitigation Measure 4.13-1a on page 4.13-47.
Comment - Suggest changing the wording from "issuance of occupancy permits" to "issuance of building permits" and change the "single-lane roundabout intersections" to "appropriate mitigation that will handle the increase in traffic which may include conventional intersections and traffic signals." While we do not object to the use of roundabouts where they are appropriate, the traffic study that supports this DEIR is insufficient to determine that roundabouts are an appropriate mitigation for the traffic impacts. Caltrans will look forward to working with the developer and the County to properly identify and implement sufficient mitigation.

4.13-49 States that, "This safety advantage has been attributed to the slower traffic speeds entering and traveling through a roundabout, and the division of the pedestrian crossing into two stages, from the sidewalk out to the island in the middle of the roundabout, and then from the island to the sidewalk."
Comment - Pedestrians are never allowed to cross into the center of a roundabout. As stated previously, Caltrans will consider the use of roundabouts as an appropriate mitigation measure at this location, but does not have enough information in this DEIR or appendices to make that determination. The use of traffic signals as a mitigation option will also be considered.

4.13-50 States, "At this time, neither the California Department of Transportation or the County of Tehama has prepared plans, developed a budget or formulated a program to fund improvements to the I-5 Freeway in the vicinity of the Specific Plan Area."
Comment - There are plans in place to make improvements to sections of I-5 that are currently in need of them. However, it is true that there are no prepared plans or budget program in place to handle the mitigation measures that will be needed for the Sun City Tehama specific plan area because until this project was proposed, no improvements were needed, and specifically what those improvements will be should be determined through the EIR process. Unfortunately, the traffic portion of the DEIR contains many inconsistencies and is inadequate for sound decision-making to be able to determine exactly what the project specific impacts or the cumulative impacts will be to I-5 as a result of this project.

APPENDIX 4.13 TRANSPORTATION IMPACT ANALYSIS REPORT (TIAR)

Page	Comment
p. 1	"The proposed project entails the construction of 3,475 age-restricted single-family dwelling units, 250 non-age-restricted single-family dwelling units, ..." Comment - This is inconsistent with the rest of the document, which lists 225 non-age-restricted single-family dwelling units.
p. 2 – 4	"Without off-site development traffic volumes from Sunset Hills Road east of I-5, the Sunset Hills Road interchange has adequate capacity to allow for the construction of approximately 650 EDU based on a LOS standard of "C" threshold." Comment - This basically concludes Sun City can develop 650 EDU's without impacting the interchange. According to Table ES-1, this would occur by year 3. However, that does not assume any other buildout in the area or construction traffic. Table ES-2 "Recommended Improvement Summary" shows the need for at least roundabouts by the year 2015. However, that table is not a determination of WHEN those improvements are

truly needed, instead it's an evaluation of the facilities needed at the year 2015. Please clarify these statements/tables and discuss the implications of construction traffic. Once this information is clarified it needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

p. 3 Comment - Improvements to the Bowman Road interchange are listed, but the project's contribution is not listed here. Identify project's contribution to Bowman Road interchange improvements. Once this information is clarified it needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

p. 4 Comment - Table ES-2 or reference to another table needs to include recommended improvements for mainline I-5. Once this information is clarified it needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

p. 5 Comment - Caltrans layout sheets with aerial images are used as base maps on numerous figures in the TIAR – Caltrans did not authorize this use. All references to Caltrans need to be removed from the layouts to eliminate confusion.

p. 11 Comment - Floyd Lane is not an existing public facility. It should be identified as a private road.

p. 18 Comment – The Department's understanding is that the County will accept LOS D on a Saturday at interchange terminal intersection(s) as long as queues do not impact mainline.

p. 19 Comment - The document does not specifically discuss how the level of service of a roundabout is determined. Table 1 shows the level of service criteria for intersections with various control types. Roundabouts should be included in this table or in a separate table.

p. 23 Table 7 (and corresponding tables throughout the TIAR):
Comment - the I-5 southbound, north of Sunset Hills Road interchange segment is analyzed as a 3-lane facility for the entire segment. The third lane is a truck climbing lane from the southbound truck scales that ends north of the Sunset Hill interchange. Analyzing the full segment as a 3-lane facility yields inaccurate LOS results. This segment should be analyzed as a 2-lane facility or broken into three segments reflecting the 2-lane segment portions north of the scales and south of the scales and the partial 3-lane segment. A weave/merge analysis from the end of the truck-climbing lane to the Sunset Hill Road interchange should also be done.

p. 25 "Included in the Appendix is the Traffix trip distribution output for the Short Term and Long Term scenarios with and without the proposed project"
Comment - Here's a list of the Traffix files that were included:

- 2015 Plus ½ Local Dev, Minus Project – AM, PM
- 2015 Plus ½ Local Dev Plus Project – AM, PM, SAT
- 2015 Project Only – AM, SAT
- 2025 Plus Local Dev, Minus Project – AM, PM
- 2025 Full Build-out – AM, PM, SAT

The 2015 Project Only PM is not included in the Appendix.

p. 30 Comment - The column totals for the Saturday Peak Hour Trips are incorrect.

p. 31 Table 11 "Approved/Pending Project Local Area Trip Capture – Commercial"

Comment - the "mainline diverted trip reduction" should be based on the number of commercial trips AFTER subtracting out the locally captured trips.

A mainline diverted trip reduction of 19% is higher than Caltrans allows without substantiating evidence. During an earlier consultation with Caltrans, the traffic consultant was asked to use a lower percentage. The reference to the ITE handbook is vague at best. Data is included in the ITE handbook regarding pass-by percentages for Shopping Centers. However, the data is subject to scrutiny due to a low correlation factor of 0.37. Please provide substantiating justification to support the higher pass-by rates for this project.

p. 32 "Trip distribution for the approved/pending projects has been estimated based upon previous traffic impact study projects (Approved/Pending Project 2), existing traffic flow patterns, ..."
Comment – The referenced traffic study is not included in the appendix of the DEIR. Please provide the referenced traffic study.

p. 43,44 Comment - The methodology for using the Shasta County Travel Demand Model is incorrect. Raw model outputs for the year 2025 are being compared to existing volumes to determine a growth rate. The correct use of the model is to compare raw model outputs for the year 2025 with raw model outputs for the year 2005 to determine a growth rate.

p. 55 Table 21 "Project Local Area Trip Capture – Commercial"

Comment - The "mainline diverted trip reduction" should be based on the number of commercial trips AFTER subtracting out the locally captured trips.

A mainline diverted trip reduction of 19% is higher than Caltrans allows without substantiating evidence. During an earlier consultation with Caltrans, the traffic consultant was asked to use a lower percentage. The reference to the ITE handbook is vague at best. Data is included in the ITE handbook regarding pass-by percentages for Shopping Centers. However, the data is subject to scrutiny due to a low correlation factor of 0.37. Please provide substantiating justification to support the higher pass-by rates for this project.

p. 94 Comment - Item 4 proposes a traffic signal to address the LOS "F" at the Bowman Road/I-5 NB off-ramp, even though the traffic study reports that it does not meet the peak hour warrant. A traffic signal may not be appropriate mitigation if the intersection does not meet signal warrants or the peak hour signal warrant per MUTCD. Describe how a traffic signal would correct the deficiency or discuss other improvements that can correct the deficient facility.

p. 96 Comment - Item 4 proposes a traffic signal at the Bowman Road/NB I-5 off-ramp, but does not specify whether the peak hour signal warrant has been met. Same comment as previous comment (p. 94).

p.97, 104 Tables 43 and 46

Comment – Provide verification that the peak hour signal warrant has been met for proposed signalized intersections identified in the table. A traffic signal may not be appropriate mitigation if the intersection does not meet signal warrants. Describe how a traffic signal would correct the deficiency or discuss other improvements that can correct the deficient facility.

p. 106 Table 48

Comment - the table shows 5 freeway merge/diverge locations that will experience an LOS D (density ranges from 28.4-32.6 pc/mi/ln) during the PM peak hour. All of these locations fall beyond the "cusp of LOS 'C/D' (28.0 pc/mi/ln)", but the study indicates this is an acceptable density "...consistent with Caltrans standards..."

Comment - This comment is not correct. The LOS at these 5 locations is not acceptable per Caltrans TIS Guidelines and fall beyond the "cusp of LOS "C/D'" threshold of significance. Therefore, the study needs to identify mitigative improvements to address the deficiencies.

p. 114 Table 49 "Long Term Plus Project Conditions: Mitigated Intersection Levels-of-Service" lists several intersections under the "Signal Option" as having a "Control Type" as either a two-way or all-way stop control instead of a signal.

Comment - Is this an error? Please explain what was actually analyzed.

The "Signal Option" shows three intersections that fall under the jurisdiction of the State that operate at a LOS D during the Saturday Peak Hour. The Department's understanding is that the County will accept LOS D on a Saturday at interchange terminal intersection(s) as long as queues do not impact mainline.

The Roundabout Option that includes 2 lane roundabouts and free rights at the Sunset Hills interchange shows that the southbound (SB) ramps intersection would operate at LOS C with 34.8 seconds of delay during the Saturday peak hour. However, at a different intersection with a 1 lane roundabout configuration, 32.1 seconds of delay is shown as operating at LOS D. Please define the LOS criteria for roundabouts. Please provide copies of the electronic Rodel files for this analysis.

p. 118 Freeway Mainline Segments – Outside Original Study Area

Comment - The study erroneously states that the "residential and commercial trip distribution was submitted by Caltrans." A more accurate statement would be to restate the paragraph on page 58 of the study that discusses the consultation that occurred with Caltrans to develop the trip distributions.

Table 52 needs to list the volume of commercial and residential trips distributed to each interchange.

The headers for Table 52 are incorrect. Instead of "Project Daily Trip Losses at Each Interchange" it should state "Project Daily Mainline I-5 Trips."

The Residential trips and Commercial trips columns appear to be reversed.

Also states, "Using the trip loss distribution listed above and preliminary traffic volume forecasts along the I-5 corridor ...."

Comment - It's unclear what traffic volume forecasts are being used for the comparison.

What are the initial project volumes associated with Commercial and Residential that are being reduced at each interchange?

It is unclear whether 8,041 commercial trips at the Bowman interchange represents the traffic south of the interchange or north of the interchange (same comment for all of the interchanges).

Below Table 52, the text summarizes the table by saying that "...9% of the local corridor growth and 6% of the total corridor growth" is attributed to the project. The study does not define the limits of the "local area" and no supporting calculations are provided to verify the percentages stated. Please define the limits of the local area and supporting calculations for the percentages provided.

Based on the data presented in Table 52 and Table 24, the following table shows the daily project volumes occurring at the listed interchanges. These interchanges currently have operational issues during at least one peak hour period. These impacts are unidentified and unmitigated in the DEIR. Once this information is clarified it needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

	PROJECT DISTRIBUTION		PROJECT VOLUMES AT THE INTERCHANGE			2004 ADT AT THE INTERCHANGE		
INTERCHANGE	COMM	RES	COMM	RES	TOTAL	NB OFF	SB ON	TOTAL
Hilltop	7%	15%	921	1,571	2,491	9,800	6,000	15,800
Cypress	7%	20%	921	2,094	3,015	6,600	6,600	13,200
S. Bonneyview	7%		921	-	921	5,700	5,700	11,400
Gas Point	14%	1%	1,842	105	1,946	1,900	2,550	4,450

p. 120 The TIAR states, "Assuming project development phasing and the reduced trip generation characteristics of "Active Adult Communities," the EDU threshold for LOS "C" allows for development to year 4 . . . ."

Comment - Please provide the analysis that supports that statement.

FAIR SHARE CALCULATION

Page	Comment
p. 108-113	Comment -- The TIAR offers little insight into how the fair share percent was calculated. Based on an email that Caltrans received from Omni Means dated December 23, 2005 and additional data on January 17, 2006, the fair share percentage was calculated from Figure 13 (Project Only Volumes), Figure 21 (Long Term Plus Project Intersections), and Figure 22 (Long Term Plus Project Freeway and Ramps). The Long Term Plus Project section describes Caltrans fair share methodology, and provides the project's resulting fair share percentage for each mitigation element (example: 7% for Bowman Road interchange improvements). However, the supporting numbers and calculations used to get those percentages are not provided in the study. This information is required for verification purposes.

It appears the PM peak hour was used to calculate the project's fair share. Provide supporting calculations for determining the project's fair share.

Figure 13 (Project Only Volumes) does not take into account the interaction of the trips at the interchange with the Approved/Pending Projects during the full build out condition. The methodology that should be used to determine the project's fair share is as follows:

Figure 21 (Long Term Plus Project Intersections) shows the volumes in the cumulative conditions. Provide a supplemental diagram that shows the Project Only volumes during the cumulative condition.

Use the Caltrans fair share formula to determine the Project's fair share percentage for each mitigation element. The Project volumes to be used in that formula should be derived from the supplemental diagram described in (a) above, Cumulative volumes should be derived from Figure 21, and Existing Volumes should be derived from Figure 13.

The Project volumes have a bigger impact during the Saturday peak hour. The fair share calculation should be based on the Saturday volumes. The difference in percents is 53% proportionate share (using the methodology described in (b) above) versus 50% proportionate share (using the methodology found in the TIAR).

Once this information is clarified and provided it needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

OTHER INCONSISTENCIES WITHIN THE TRAFFIC STUDY

#1 Refer to Attachment #1, "Comparison of Mainline I-5 Traffic Volumes," demonstrates the flaws with the data that is presented in the traffic study. According to the data in the traffic study, there are several locations on I-5 where the "Existing" 2004 traffic is actually higher than the "2015 plus Project" volumes. Please explain.

Also, there are several locations shown where the "2015 plus Project" volumes would actually be lower than what would be obtained by using the "Existing" 2004 volumes and adding the background growth to give 2015 (no project) volumes. Please explain.

According to the methodology described on page 44 of the TIAR, the "Short Term Plus Approved/Pending Projects" volumes were determined by the following process: Apply a 19.59% growth rate to the existing 2004 volumes to establish the year 2015 "background" volumes. Then add the "approved project" traffic volumes to the year 2015 "background" volumes. Following this methodology does not yield the numbers portrayed in the study. Please explain.

The highlighted volumes in Attachment #1 are given as examples of the deficiencies of this traffic study. They do not constitute an exhaustive list of errors. It is reasonable to assume that the other mainline and ramp volumes and resulting LOS presented in Tables 18, 19, 29, 30, 33, 34, 37, 38, 44, and 45 contain errors that were carried forward. A cursory review of the ramp data raised similar questions regarding the data. Because of these fundamental flaws, the results from any analysis would also be flawed. Caltrans is therefore unable to ascertain whether or not the recommended mitigations would be sufficient and cannot make sound conclusions from the data provided.

#2 Caltrans chose one segment of I-5 and one scenario to perform an analysis to determine the magnitude of the errors listed above and elsewhere in our comments. The TIAR shows the following analysis for the I-5 mainline segment listed:

Sun City TIAR Freeway Mainline Segment	# Lanes	PM PEAK HOUR 2015 + PROJECT ONLY		
		Vol.	Density	LOS
I-5 SB, south of Jellys Ferry Road I/C	2	1,869	17.4	B

Caltrans used volumes that were derived from various tables in the document. Changes were also made to the Highway Capacity analysis to reflect corrected inputs mentioned in the above comments. A corrected analysis of this segment of I-5 yields the following outputs:

Caltrans Review Freeway Mainline Segment	# Lanes	PM PEAK HOUR 2015 + PROJECT ONLY		
		Vol.	Density	LOS
I-5 SB, south of Jellys Ferry Road I/C	2	2,502	27.3	D

The result of all the corrections to the data for this one segment for this one scenario is two steps down in the level of service. The level of service for this segment would then need to be considered unacceptable and unmitigated. The potential magnitude of the errors in the traffic study demonstrates that the study is flawed and inadequate for either sound decision-making or a "good faith effort" for CEQA compliance.

#3 An analysis of the proposed roundabout mitigation was included in the Appendix. The analysis was performed using Traffix software. Caltrans does not agree with the use of Traffix software for the analysis of a roundabout. The industry standard for the computer analysis of a roundabout is Rodel. Caltrans expectation for the use of Rodel is that the roundabouts be designed at the 50% confidence level, and then checked for capacity at the 85% confidence level. Please verify.

There appears to be an error with the analysis of the "2015 + Approved/Pending + Project" scenario. The intersection turning movements used for the Traffix analysis do not match with the volumes shown in Figure 17 of the traffic study. A cursory review of volumes at other locations/time periods shows similar inconsistencies. Please explain. Due to the inconsistencies in the data used in the Traffix analysis, any results from that analysis are insufficient for determining the adequacy of the proposed mitigation measures.

#4 The traffic study does not analyze the impacts that the construction traffic will have to the transportation infrastructure. A full analysis including supporting documentation and discussion of phasing of the project is needed. Caltrans has been requesting this data for the past six months. To date, the information has not been provided.

#5 The traffic study needs to include cost estimates for mitigation measures including both interchanges (which have been provided) and mainline I-5 cost estimates (which have not been provided) and a financing plan. Once this information is provided, this information needs to be incorporated into the body of the DEIR for both disclosure and sound decision making purposes rather than discussed in the appendices.

#6 An analysis of the Saturday Peak Hour needs to be completed for the Short Term Plus Approved/Pending and the Long Term No Project scenarios.

#7 Caltrans developed a table similar to Table 52 in the TIAR. However, the volumes differ (see Attachment #2, "Revised Table 52"). Please provide additional documentation outlining how Table 52 was created.

#8 Caltrans has received differing descriptions from the traffic consultant that prepared the TIAR on how the mainline I-5 2025 forecasted volumes were determined:

On page 81 of the TIAR it states that the "Long Term No Project" volumes were determined by the following process: Apply a 40.14% growth rate to the existing 2004 volumes to establish the year 2025 "background" volumes. Then add the "approved project" traffic volumes to the year 2025 "background" volumes.

At a meeting between the Omni Means, Caltrans, and Tehama County on January 11, 2006 and then again in a memo from Omni Means dated January 13, 2006, Omni Means stated that the year 2025 No Project traffic volumes on I-5 were the "sum of the 40% background growth and the 20% "local" growth with the existing traffic volumes."

Please provide supporting documentation of how the I-5 2015 and 2025 background volumes were determined. Also, please provide detailed documentation that shows that those background numbers were applied consistently throughout the document.

In summary, Caltrans comments serve to support our concerns that the information provided to assess both the project-direct and cumulative traffic impacts is insufficient to make sound decisions from the data provided since without agreement on the actual amount of traffic to be generated it is not possible to determine:

- Whether the stakeholders, primarily the traveling public, public agencies, and the decision-makers have been presented the information needed in a manner that allows sound decision making for transportation facilities. It has been extremely difficult to review the project based on the inaccuracies, inconsistencies, errors, and disjointed presentation of the information between the information provided in the body of the DEIR and two appendices. It is apparent that there is critical decision-making information in the TIAR that has not been presented in a readily displayed form. This critical information needs to be presented in the body of the EIR for sound decision-making.

- That the project traffic scope is adequate. Based on the project's location between two cities separated by 30 miles. It is apparent that the increased traffic volumes from the project will extend far beyond one interchange to the north and one interchange to the south of the project.

- That the proposed mitigation measures are adequate and complete.

- Whether an undisclosed Development Agreement adequately addresses mitigation of the project's proportionate share of State highway impacts to interchanges and I-5 mainline.

- Whether the project's proportionate share toward project-direct and cumulative traffic improvements has been adequately addressed.

ERRORS/INCONSISTENCIES FOUND IN THE ELECTRONIC FILES

FREEWAY MAINLINE ANALYSIS USING HIGHWAY CAPACITY SOFTWARE (HCS)

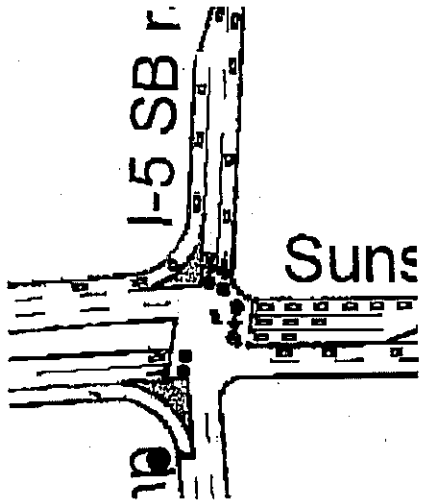
1) Document states that a Peak Hour Factor (PHF) of 0.90 would be used, but the analysis used 0.92. Caltrans agrees with the use of a PHF of 0.92. The TIAR needs to be modified to reflect what was used in the Highway Capacity Software.
2) Document states that the percent of RVs for mainline is 5%, but the analysis used 2%.
3) According to the Caltrans published 2004 data, the percent of heavy vehicles in the project area is 18%. The study used 12%.
4) Analysis of the southbound segment from the Bowman interchange to the Sunset Hills interchange assumed 3 lanes. Only half of this segment has a third lane for truck climbing, the rest is 2 lanes. This segment either needs to be analyzed as 2 lanes for the entire stretch, or broken into 3 separate segments and analyzed with the actual number of lanes in each segment.
5) If Free-Flow Speed was "Measured," as stated in the analysis, please provide documentation of the field study. If not, the appropriate use of the methodology is to start with a Base Free-Flow Speed and make the necessary speed adjustments.

FREEWAY RAMPS MERGE/DIVERGE ANALYSIS USING HCS

1) Document states that a PHF of 0.90 would be used, but the analysis used 0.92.
2) Document states that the percent of RVs for the ramps is 5% and Heavy Vehicles is 10%. The analysis used 2% and 12%, respectively.

INTERSECTION ANALYSIS USING SYNCHRO

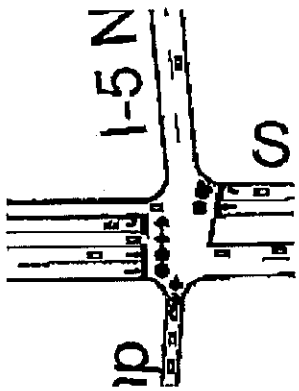
1) The following geometrics were used in the analysis of the Sunset Hills/SB Ramps intersection:



SB – 2 lefts and 1 free right (storage length of 150')
EB – 2 thrus and 1 free right
WB – 2 lefts (storage length of 100') and 1 thru lane

This is inconsistent with the document because the document didn't identify the need for an EB free right.
(The distance to "Floyd" Lane is indicated as 1,676 feet from the interchange in the analysis) This private road currently exists closely spaced from the interchange. Please identify whether the distance spacing is correct.

2) The following geometrics were used in the analysis of the Sunset Hills/NB Ramps intersection:



NB – Single lane approach
EB – 2 thrus and 2 lefts (300')
WB – 1 thru and 1 right

This is inconsistent with the document because the document didn't identify the need for two eastbound (EB) through lanes. Also, the TIAR identified the need for a westbound (WB) free right, which wasn't accounted for in the analysis.

Comments on Proposed Interchange Improvements

1. Based on discussions with the County and the developer, Caltrans expects that the DEIR will carry both the roundabout and signal options forward as equal alternatives.

2. The document and proposed mitigations do not address the need for pedestrian and bicycle facilities on the interchanges.

3. The DEIR does not propose interchange improvements beyond signalized intersections and roundabouts to address project impacts. Changes to the interchange configuration are

improvement alternatives that should be analyzed and included in the DEIR. For example, an EB Sunset Hills Drive to NB I-5 loop on-ramp would mitigate the intersection impacts created from project traffic heading to NB I-5.

4. Currently, both the Sunset Hills and Hooker Creek interchanges do not have full interchange lighting. The Sunset Hills project is in the process of installing a single luminaire to the NB side of the Sunset Hills Interchange. Considering the significant increase in traffic to both interchanges because of the Sun City project, the developer should be conditioned to provide full interchange lighting (merge/diverge and terminal intersections). The maint/electrical costs associated with the terminal intersection lighting (after installation) will be evenly split between the County and Caltrans. The existing Maintenance Agreement Exhibit A between the two agencies will be updated to add the new facilities.

5. Per page 120 of the TIAR (Development Thresholds), the study estimates the project can build out to year 4 before interchange improvements are required. From Table 55, by the end of year 4 there will be 1,650 residential units, 50% of the golf/recreational, and 30% of the commercially zoned property developed. The study does not address how the proposed roundabout intersections are to be constructed while the interchange is operating at the LOS "C" threshold. The study needs to provide details about the staging and traffic handling required to accommodate project of the proposed interchange improvements (at Year 4).

6. Layouts for signalized intersection options were not included in DEIR. Without the layouts, the following items are unclear:
   - proposed location of the intersections
   - spacing between the intersections
   - right of way needs

7. <u>Short Term Plus Project Only</u>
   - Bowman Interchange
     - Document states that the signalization of the NB ramps "may" also drive the need to signalize the SB ramps. However, based on the data presented in Table 43 "Mitigated Intersections LOS" the only analysis that was done was with signals at all three ramp intersections.
   - Sunset Hills Interchange
     - At the NB ramps intersection, the EB approach is shown as a left turn and a shared left-through lane. The shared lane would require the intersection to be operated with split phasing and resulting in a less than desirable operation. Caltrans would not be supportive of that type of lane configuration. If the EB left turn moves are high enough to necessitate two left turn lanes, they should be separate from the through lane.

8. <u>Short Term Plus Approved/Pending Plus Project</u>
   - Document doesn't specifically state if additional lanes are needed on the ramps at the various interchanges studied.
   - Table 48 shows the "Improved I-5 Ramp Level of Service." However, it doesn't give any data for the SB on-ramps for the Jellys Ferry, Hooker Creek, or Sunset Hills Interchanges.

- Based on the data presented in Table 48, there is a need for an additional lane on the I-5 SB off-ramp at Sunset Hills.

9. Long Term Plus Project
   - Sunset Hills Interchange
     - Again, the document does not provide enough details about the proposed changes to the interchange for Caltrans to make a comment regarding the sufficiency of the proposed improvements.
     - In concept Caltrans agrees with the proposal to realign the NB ramps and construct standard four-way signalized intersections at both the SB and NB ramps.
     - In concept Caltrans is not opposed to the roundabout idea, but until a more detailed analysis is done, including an analysis done with Rodel, sufficiency of the proposed improvements can't be determined.
     - Based on the capacity analysis that was done for the signalized intersections, it appears that the two ramps would operate near or at capacity during at least one peak hour period. Caltrans recommends the lane configuration for the overcrossing include two lanes for eastbound traffic between Floyd Lane and Snively, and two lanes for the westbound traffic for the same stretch of roadway.
     - Information was not provided to show the distance between the intersection of the NB ramps and the SB ramps. Along with the realignment of the NB ramps, the ultimate design of the interchange should include moving the intersections further apart to mitigate for the queuing interaction that will occur between closely spaced intersections.
     - Based on the Synchro files that were provided, the WB approach to the SB ramps has two left turn pockets with 100 feet of storage. For the ultimate design of this interchange, that length of storage would be considered insufficient. Operationally, dual lefts of 100 feet each would be problematic.
   - Hooker Creek Interchange
     - Layouts showing the proposed lane configurations for the signal option were not included. Without the layouts, it is impossible for the proposed configuration to be determined. Caltrans utilized the Synchro files, which were not included in the DEIR, to determine what was being proposed.
     - The proposed layout is less than desirable in the ultimate conditions. Caltrans would expect the design to be more in line with a more conventional configuration.

Comments on the Proposed Roundabouts

- Caltrans questions the inclusion of a local frontage road – Auction Yard Road – into the mix of roundabout traffic at the Sunset Hills NB ramp intersection. Based on an assessment of the ultimate operational needs of that intersection, it is recommended that Auction Yard Road be realigned to intersect with Snively Road, as shown in the interim signalization option.
- Considering sight distance requirements of a roundabout and due to the tight topographical location of the existing Sunset Hills SB ramp intersection, a more detailed design level analysis will need to be completed to determine the feasibility of constructing the ultimate improvements.
- Installation of "free-rights" at a roundabout represent additional conflict points for non-motorized users. These safety impacts need to be addressed.

- Multilane roundabouts are susceptible to vehicles crossing their intended travel paths creating conflicts at a roundabout entry or exit. Path overlap can lead to higher accident rates and reduce capacity at entrances and exits. Based on a review of the preliminary layouts provided, it appears that there will be a need for additional lanes at various locations to correct for path overlap.

- Queuing data needs to be provided for each approach of the roundabout due to the potential impacts of traffic backing onto I-5 and/or traffic backing into adjacent intersections.

- The analysis included in the Traffix files did not consider the impact of 10% heavy vehicles.

- Level of service is currently undefined for roundabouts. It is recommended that the measures of effectiveness to be identified for roundabouts include: volume to capacity ratios, queuing, and delay.

- A public information campaign to educate the public on the correct way to drive in roundabouts should be required as a condition of approval for the project and should be the responsibility of the developer.

- Caltrans did a cursory review of the volume to capacity ratio for the following scenarios using the intersection turning volumes found in the TIAR:

a) 2015 + Project Sunset Hills Interchange (One lane roundabouts)
   - For the SB ramp intersection, an analysis of the merging impacts of the free right onto westbound Sunset Hills needs to be performed. A preliminary review of the data shows the potential for operational issues at that location which may necessitate the need for an additional lane. During the Saturday peak hour, the southbound free right movement is operating well below what would be considered acceptable for a planning-level analysis.
   - During the Saturday peak hour the eastbound approach is projected to operate slightly below what would be considered acceptable for a planning-level analysis.
   - At the NB ramp intersection, the volume to capacity ratio for the eastbound approach during BOTH the PM peak and the Saturday peak are projected to operate at or below what would be considered acceptable for a planning-level analysis. It may be necessary to add an additional lane in the roundabout.

b) 2025 + Project + App/Pending Sunset Hills Interchange (Two-lane roundabouts)
   - On page 110 of the TIAR, the recommended improvements to the interchange include "free-right turn lanes at the southbound approach of the I-5 SB ramp intersection and the eastbound approach of the I-5 NB ramp intersection." Clarification and details are needed regarding how a free right could be added to the eastbound approach of the NB ramp intersection.
   - The volume to capacity ratio for the eastbound approach at BOTH intersections exceeds a desired planning-level analysis threshold during BOTH the PM peak hour and the Saturday peak hour. It may be necessary to add an additional lane in the roundabout.

ATTACHMENT 1
COMPARISON OF MAINLINE I-5 TRAFFIC VOLUMES

	VOLUMES LISTED IN THE TIAR AM PEAK						FORECASTED BACKGROUND VOLUMES *	
	2004	2015			2025		2015	2025
	EXISTING (Table 7)	SHORT TERM PLUS PROJECT ONLY (Table 29)	SHORT TERM PLUS APPR/PEND PROJECTS (Table 18)	SHORT TERM PLUS APPR/PEND PLUS PROJECT (Table 33)	LONG TERM NO PROJECT (Table 37)	LONG TERM PLUS PROJECT (Table 41)	BACKGROUND VOLUME (Existing plus 19.59% growth rate)	BACKGROUND VOLUME (Existing plus 40.14% growth rate)
I-5 NB, south of Jellys Ferry Road	2,220	2,493	2,506	2,657	2,919	3,035	2,655	3,111
I-5 SB, south of Jellys Ferry Road	2,044	2,534	2,762	2,843	3,313	3,395	2,444	2,864
I-5 NB, north of Jellys Ferry Road	2,220	2,470	2,564	2,723	2,976	3,101	2,655	3,111
I-5 SB, north of Jellys Ferry Road	2,044	2,358	2,636	2,724	3,170	3,258	2,444	2,864
I-5 NB, north of Hooker Creek	2,172	2,491	2,610	2,738	2,899	3,105	2,597	3,044
I-5 SB, north of Hooker Creek	1,999	2,242	2,575	2,624	3,067	3,137	2,391	2,801
I-5 NB, north of Sunset Hills Road	2,196	2,840	3,002	3,462	3,655	4,185	2,626	3,077
I-5 SB, north of Sunset Hills Road	2,022	2,560	2,668	3,011	3,214	3,576	2,418	2,834
I-5 NB, north of Bowman Road I/C	2,389	3,256	3,915	4,369	5,103	5,641	2,857	3,348
I-5 SB, north of Bowman Road I/C	2,199	2,601	2,773	3,092	3,367	3,715	2,630	3,082

	VOLUMES LISTED IN THE TIAR PM PEAK						FORECASTED BACKGROUND VOLUMES *	
	2004	2015			2025		2015	2025
	EXISTING (Table 7)	SHORT TERM PLUS PROJECT ONLY (Table 29)	SHORT TERM PLUS APPR/PEND PROJECTS (Table 18)	SHORT TERM PLUS APPR/PEND PLUS PROJECT (Table 33)	LONG TERM NO PROJECT (Table 37)	LONG TERM PLUS PROJECT (Table 41)	BACKGROUND VOLUME (Existing plus 19.59% growth rate)	BACKGROUND VOLUME (Existing plus 40.14% growth rate)
I-5 NB, south of Jellys Ferry Road	2,623	2,993	3,224	3,412	3,895	4,060	3,137	3,676
I-5 SB, south of Jellys Ferry Road	1,931	1,869	2,053	2,041	2,401	2,368	2,309	2,706
I-5 NB, north of Jellys Ferry Road	2,623	2,898	3,199	3,406	3,864	4,049	3,137	3,676
I-5 SB, north of Jellys Ferry Road	1,931	1,799	2,080	2,090	2,421	2,410	2,309	2,706
I-5 NB, north of Hooker Creek	2,566	2,763	3,141	3,296	3,766	3,919	3,069	3,596
I-5 SB, north of Hooker Creek	1,889	1,753	2,157	2,161	2,533	2,536	2,259	2,647
I-5 NB, north of Sunset Hills Road	2,595	3,541	3,505	4,336	4,365	5,141	3,103	3,637
I-5 SB, north of Sunset Hills Road	1,910	2,512	2,586	3,287	3,333	3,990	2,284	2,677
I-5 NB, north of Bowman Road I/C	2,823	3,561	3,721	4,482	4,697	5,443	3,376	3,956
I-5 SB, north of Bowman Road I/C	2,078	2,813	3,393	4,021	4,609	5,225	2,485	2,912

* Forecasted Background Volumes were based on data provided in the TIAR. Page 44 of the TIAR discusses the growth rate for the Short Term conditions, and page 81 discusses the growth rate for the Long Term conditions.

[ ] Location where the 2015 forecasted "background" volume is higher than the volume shown in the TIAR for scenarios that include the "background" volume AND the condition in which either the Project has been built, the Approved/Pending projects have been half built, or both have been built.

[ ] Location where the 2025 forecasted "background" volume is higher than the volume shown in the TIAR for scenarios that include the "background" volume AND the condition in which either the Project has been built, the Approved/Pending projects have been built, or both have been built.

ATTACHMENT 2
REVISED TABLE 52

ADT	
Project External Trips (1)	
DW Commercial (2)	13,346
DW Residential	10,470
Total New Trips on I-5	23,816

PM Peak Hour	
Project External Trips (1)	
DW Commercial (2)	1,207
DW Residential	766
Total New Trips on I-5	2,063

[illegible]	[illegible]	[illegible]	[illegible]	2025 DW Project Daily Mainline Trips Passing Each Interchange			2025 DW Project PM Peak Hour Mainline Trips Passing Each Interchange		
				Commercial	Residential	Total	Commercial	Residential	Total
	Residual	2%	10%						
				267	1,047	1,314	26	77	103
19.4	Oasis	1%	1%						
				400	1,152	1,552	39	84	123
18.07	Twin View	2%	1%						
				667	1,256	1,924	65	92	157
17.32	Jct. 299	3%	15%						
				1,068	2,827	3,895	104	207	311
15.27	Hilltop	7%	15%						
				2,002	4,397	6,399	194	322	516
14.46	Cypress	7%	20%						
				2,936	6,491	9,428	285	475	760
12.15	S. Bonneyview	7%	0%						
				3,870	6,491	10,362	376	475	851
9.77	Knighton	1%	2%						
				4,004	6,701	10,705	389	490	879
6.74	Riverside	4%	5%						
				4,938	7,224	11,762	441	529	969
5.20	Balls Ferry Rd	4%	0%						
				5,072	7,224	12,296	493	520	1021
4.29	Deschutes	9%	5%						
				6,273	7,748	14,021	609	567	1176
0.01	Gas Point	14%	1%						
				8,141	7,853	15,994	791	575	1365
41.53	Bowman	14%	0%						
				10,010	7,853	17,862	972	575	1547
38.72	Sunset Hills								
36.37	Hooker Creek								
				3,337	2,618	5,954	324	192	516
32.24	Jellys Ferry	2%	0%						
				3,070	2,618	5,687	298	192	490
31.04	Wilcox	1%	0%						
				2,936	2,618	5,554	285	192	477
28.38	North Red Bluff	5%	0%						
				2,269	2,618	4,886	220	192	412
27.47	Adobe	4%	0%						
				1,735	2,618	4,353	169	192	360
26.72	Antelope	6%	10%						
				934	1,571	2,505	91	115	206
24.87	Diamond/S Main	5%	10%						
				267	524	700	26	38	64
	Residual	2%	5%						

(1) External Trips from Tables 21, 22, and 23.
(2) Commercial Trips includes medical, the recreational/support trips and a mainline reduction of 19% for the "commercial" trips.