



Memorandum

To: El Dorado County Department of Transportation **File:** SA-10126 (B)
Cc: Larry Ito, Ardor Consulting; Don Barnett, Lennar Communities
From: Derek Minnema, Mark Thomas & Company
Date: December 5, 2012
RE: Latrobe Road Connector Study – Final Analysis and Recommendation

BACKGROUND AND PURPOSE OF THIS MEMORANDUM

This planning study and preliminary engineering design is a Condition of Approval (No. 27) of TM99-1359 for the West Valley Village Tentative Map which is located within the Valley View Specific Plan. The responsibility of West Valley LLC is limited to supplying this memo including the accompanying traffic study, topographic information, plans and profiles and baseline environmental assessment information for the County's use for future actions.

This memo was prepared with close consultation with El Dorado County (County) Staff and due to issues beyond the control of West Valley LLC, the County Department of Transportation provided three letters for the extension of time to complete this study.

An Initial Screening Memorandum submitted to the County dated August 22, 2011, analyzed ten previously developed alternatives and recommended four alternatives for further analysis: Alternative 1, Alternative 2, Alternative 2A, and Alternative 5. The four alternatives are proposed connections between Latrobe Road south of White Rock Road and US Highway 50 (US-50) west of the El Dorado Hills Blvd interchange. A letter from the County dated July 14, 2011 was provided to West Valley LLC confirming the four alternatives.

The purpose of this memorandum is to provide the County a summary of the steps taken to develop ranking criteria, a detailed traffic analysis, and environmental analysis to evaluate the four screened alternatives. This memorandum will also satisfy condition No. 27 and shall deem this condition as completed.

RECOMMENDATIONS

Similar to the Initial Screening Memorandum, criteria has been developed with County staff to rank the alternatives based on fixing the level of service of the White Rock Rd/Latrobe Rd intersection, estimated project costs, potential environmental impacts, and consistency with general plans, specific plans and other approved documents.





After the detailed analysis was performed it was determined that all four of the previously recommended alternatives provide an acceptable level of service at the intersection and can be chosen as an acceptable project.

However, it is important to note that Alternative 5 was originally created several years ago. Since that time and during the course of preparing this analysis, the Carson Creek Phase 2 Unit 1 Tentative Map has been approved by the County. The Alternative 5 alignment does not correlate with the approved map and would create a significant impact to the land use in this area. MTCO recommends that Alternative 5 be disqualified and removed from further analysis.

To summarize the results of the analysis:

- All four alternatives have the same level of service in the AM and PM peak hour; however, Alternative 2 provides the lowest amount of average delay at the intersection by a slim margin.
- Alternatives 1, 2 and 2A rank the exact same in terms of environmental impacts. Alternative 5 does rank slightly higher overall – though what it gains by avoiding jurisdictional wetlands it loses by impacting land use compatibility.
- Alternatives 1, 2 and 2A have similar estimated costs. Alternative 5 is less expensive due to its short alignment.
- All four are consistent with the Sacramento County General Plan Transportation Plan and are consistent with the Folsom Plan Area Specific Plan Circulation Plan.
- None of the alternatives are completely consistent with the Carson Creek Specific Plan; though Alternative 5 is the worst as it does not follow the alignment shown in the specific plan nor does it match the number of lanes that were planned.

LEGEND

-  ALT 1
-  ALT 2
-  ALT 2A
-  ALT 5



EL DORADO COUNTY

FOLSOM SOI

EL DORADO HILLS BUSINESS PARK

GOLDEN FOOTHILL Pkwy

LATROBE Rd

INVESTMENT Blvd

CARSON CREEK SP

Hwy 50

WHITE ROCK Rd

PAYEN Rd

SACRAMENTO COUNTY

LATROBE CONNECTOR VICINITY MAP

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DESCRIPTION OF THE ALTERNATIVE ALIGNMENTS

All alternatives assume that the existing White Rock Road/Carson Crossing Drive intersection is abandoned and relocated west to line up with the future Empire Ranch Road in Sacramento County. This is the starting point of all four alternatives.

Alternative 1 is a four lane divided arterial that loops southeast from the above starting point and then heads north to intersect with Golden Foothill Parkway (following an alignment shown in the Carson Creek Unit 2 Phase 1 Tentative Map). Golden Foothill Parkway is widened to four lanes from the intersection of Carson Crossing Drive to Latrobe Road.

Alternative 2 is a four lane divided arterial that loops southeast partially following an alignment shown in the Carson Creek Unit 2 Phase 1 Tentative Map. The alignment then turns further south and connects to existing Investment Boulevard. Investment Boulevard is widened to 4 lanes to Latrobe Road.

Alternative 2A is a four lane divided arterial and loops southeast partially following an alignment shown in the Carson Creek Unit 2 Phase 1 Tentative Map. The alignment then turns further south and connects to existing Investment Boulevard. Additionally, a new intersection is created from a point on the proposed alignment for a new 2 lane road that heads north to Golden Foothill Parkway. No improvements are identified for Investment Boulevard.

Alternative 5 is a four lane divided arterial that connects directly to Golden Foothill Parkway to the southeast. This alignment bisects the approved Carson Creek Unit 2 Phase 1 Tentative Map. Golden Foothill Parkway is widened to 4 lanes from Carson Crossing to Latrobe Road.

All alternatives assumed that the roadways located in Sacramento County are existing in the 2025 scenario. These roadways include:

- White Rock Road (it is assumed that White Rock Road is four lanes from the El Dorado County line to Prairie City Road.)
- Empire Ranch Road (it is assumed Empire Ranch Road is four lanes and then widens to six lanes near the future US-50/Empire Ranch Road interchange.)
- Old Placerville Road (it is assumed that Old Placerville Road is two lanes north of White Rock Road.)
- Scott Road (it is assumed that Scott Road is six lanes.)

TRAFFIC ANALYSIS

For the Initial Screening memorandum, Fehr and Peers (F&P) used a modified version of the SACMET regional travel demand forecasting model developed for the Capital Southeast Connector JPA for the screening of the ten alternatives as agreed to by the County. This model provided a greater level of detail than the County General Plan model. This operational analysis along with the other ranking criteria was used to select the four alternatives.

As directed by the County, F&P developed a new model, the Latrobe Road Connector Model, which is a further refined version of the Capital Southeast Connector JPA model. The refinements include updated TAZs developed by the County within the study area, updated land uses that match the County General Plan, and updated roadway networks that are consistent with existing and planned roadways. These refinements are further outlined in a memo to the County titled Latrobe Road Connector Study – Alternative Evaluation (See Appendix “F”).

The refined Latrobe Road Connector Model was used to calculate intersection delay. The results were used as the basis for the level of service ranking in this analysis.

ENVIRONMENTAL ANALYSIS

The potential environmental impacts were assessed for each alternative. LSA Associates, Inc. (LSA) reviewed the Carson Creek Specific Plan Draft Environmental Impact Report (May 1996) for background information on the project site. Assessments for the alternatives were calculated from several sources including aerial photography, records search and wetland data collected from the Carson Creek Specific Plan. For this baseline, environmental assessment field studies were not performed.

An evaluation matrix was prepared to provide an un-weighted comparison of the alternatives. The following evaluation criteria were developed with County staff input: Aesthetics, Air Quality, Biological Resources, Cultural Resources, Geotechnical/Soils, Hazardous Materials/Wastes, Hydrology, Water Quality, Land Use Compatibility, Noise, Public Service, and Utilities. Additionally, a simple CEQA Initial Study Checklist was prepared for each alternative.

A Mitigated Negative Declaration is considered to be the appropriate CEQA documentation for any of the alternatives. The environmental analysis is further outlined in LSA’s Alternatives Analysis memo (See Appendix “G”)

RANKING

Points were assigned to the four alternatives based on how they performed with four key factors: “fixing” the operation of the White Rock Road/Latrobe Road intersection, cost, environmental impact, and consistency with general plans, specific plans and other approved documents.

Scores were assigned between 1 and 5 with the highest score being the better score. The four factors were weighted as follows:

- “Fixing” the Intersection = 50%
- Cost = 30%
- Environmental Impact = 10%
- Consistency with General Plans, Specific Plans, and other approved documents = 10%

“Fixing” the White Rock Road/Latrobe Road Intersection

Level Of Service of E or better at the White Rock Road/Latrobe Road intersection, for the projected 2025 traffic volumes, is considered “fixed” as it will comply with El Dorado County General Plan policies. All of the alternatives analyzed satisfy this criterion. To further breakdown how *well* the intersection is fixed, the average of the control delay for the AM and PM Peak Hour was calculated for each alternative.

As shown in Appendix “A”, average delay was broken into 5 second increments. Delay of less than 35 seconds was given a score of 5 and total delay greater than 50 seconds was given a score of 1.

Cost

Costs were calculated using a modified version of the El Dorado County Department of Transportation CIP Cost Estimate Type B format. This is generally the County’s accepted methodology for projects that are far out in the future and/or which are in the very preliminary planning stages. All costs are in “today’s dollars.”

General percentages were added for different phases of the project: 1% to complete the PA&ED phase, 10% for PS&E, 1% for environmental permits and mitigation, 0.5% for utility relocation/coordination and 12% for Construction Management. The cost for right of way was estimated using unit prices provided by DOT for projects in Zone 8. As shown in Appendix “A”, total costs were broken into 5 increments. A total cost of less than \$18 million was given a score of 5 and total cost greater than \$21 million was given a score of 1.

Alternative 5 is the lowest cost because it is significantly shorter. Though it’s important to note that alternatives 1 and 5 require improvements to existing Golden Foothill Parkway (widening to 4-lanes) and Alternative 2 requires improvements to existing Investment Blvd (widening to 4-lanes) which add to the cost and design uncertainty.

Environmental Factors

Potential environmental impacts for all alternatives are similar in nature. Alternatives 1, 2, and 2A will require mitigation due to impacts to jurisdictional waters, hydrology, and pre-historic resources due to multiple creek crossings. Significant or unavoidable impacts are not expected to occur with any of the proposed alternatives.

Consistency with Sacramento County General Plan

Consistency with the Sacramento County GP was determined to exist if there was a road connection to Empire Ranch Road only. Alternatives that did not have the connection or provided an additional connection were determined inconsistent with the GP. All the alternatives satisfy this criterion and were given a score of 5.

Consistency with Folsom Plan Area Specific Plan

The Folsom Plan Area Specific Plan identifies two additional interchanges on US-50: Oak Avenue and Empire Ranch Road. The circulation plan describes a roadway network north of White Rock Road including an Empire Ranch Road consisting of a four to six lane major arterial, a Prairie City Road consisting of a four to six lane major arterial, a Scott Road consisting of a four to six lane major arterial, and an Old Placerville Road two lane collector. The Specific Plan assumes that White Rock Road will be improved from a rural collector road to a four lane arterial as part of the Sacramento County General Plan amendment.

Consistency with the Folsom Plan Area Specific Plan was determined if the alternative utilized the proposed circulation plan. All alternatives connect to US-50 through at least one of the major arterials identified in the Specific Plan and were given a score of 5.

Consistency with Carson Creek Specific Plan

Consistency with the Carson Creek Specific Plan was based on two factors: alignment and typical cross section. The Carson Creek Specific Plan shows a two lane residential collector that “loops” through Village 8 and connects to Golden Foothill Parkway.

Alternative 1 is consistent with the alignment but not the number of lanes. Alternative 2 is partially consistent with the alignment but not the number of lanes. Alternative 2A is also partially consistent with the alignment and partially consistent with the number of lanes. Alternative 5 is not consistent with the alignment, nor is it consistent with the number of lanes.

All alternatives will require an amendment to the Specific Plan to some degree and therefore a score of 5 was not given to any alternative.

CONTACTS

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ATTACHMENTS

Appendix “A” – Evaluation Criteria Matrix
Appendix “B” – Sacramento County General Plan Circulation Plan
Appendix “C” – Folsom Sphere of Influence Exhibit
Appendix “D” – Carson Creek Specific Plan Circulation Diagram and Tentative Map
Appendix “E” – Proposed Alternatives
Appendix “F” – Fehr & Peers Alternatives Evaluation Memo, dated April 27, 2012
Appendix “G” – LSA Environmental Alternatives Analysis Memo, dated April 2012