Chapter 6 Alternatives

6.1 Introduction

This section of the Supplemental Recirculated Environmental Impact Report (SREIR) evaluates a range of reasonable alternatives to the Grapevine Project (project) that could feasibly avoid or lessen any significant environmental impacts while attaining most of the project's basic objectives, by comparing such alternatives to potentially lower trip internal capture rates (ICRs) than evaluated in the Draft Environmental Impact Report (DEIR) and Final Environmental Impact Report (FEIR) (collectively, the "2016 EIR") for the project.

The DEIR and FEIR were circulated and publicly reviewed in 2016, and the FEIR was certified by Kern County on December 6, 2016. As discussed in Chapter 2, *Introduction*, of this SREIR, the 2016 EIR certification was subsequently rescinded by the Board of Supervisors at a hearing on March 12, 2019, and the County received an application to readopt the approvals for the proposed project on March 14, 2019. On April 12, 2019, the County published a Notice of Preparation for an SREIR to evaluate potential traffic, air pollution, greenhouse gas (GHG), noise, public health and growth inducing impacts that could occur from lower internal capture rates than considered in the 2016 EIR.

The internal capture rate (ICR) represents the percentage of trips staying within a community compared to total trips generated by the uses in a community. Residential and mixed-use development, such as the proposed project, generate vehicle trips that begin and end within a project study area. These are called "internal" trips. Trips that end or begin outside the project study area are called "external" trips. If a project area uses generate an average daily total of 1,000 trips, for example, and 500 trips begin and end within the community, the average daily ICR would be 50 percent. Traffic trip volumes are highest during "peak" morning (AM) and evening (PM) periods. If a project generates 300 trips during the AM peak period, and 100 of these trips begin and end within the project, the AM peak hour ICR would be 33.3 percent. External trips are generally longer and result in higher vehicle miles travelled (VMT) than internal trips. A project's ICRs change as land uses and transportation patterns, which are affected by transit options and technologies, change over time. An ICR analysis generally reflects and considers ICRs and transportation patterns that exist at a specific a point in time of the project buildout process.

The original DEIR (2016) used projections for the ICRs as peak period traffic impacts generated from the Kern County Council of Governments (Kern COG) 2014 Regional Transportation Plan (RTP)/Sustainable Communities Strategy (SCS) Travel Demand Model (KernCOG model). The analysis considered the ICR rates for home to work trips ("Home-Based Work" trips) and home to school, shopping, recreational and other non-work related trips ("Home-Based Other/Non-Home-Based" trips). The KernCOG model projected that, for all trips combined, at buildout the project would have an AM peak period ICR of 72.2 percent and a PM peak period ICR of 71.4 percent.

During the DEIR (2016) comment period, the California Department of Transportation (Caltrans) requested that Fehr & Peers, the Project's traffic consultants, conduct a review of Home-Based Work ICRs in certain other California locations. The review found that the average Home-Based Work ICR for the California communities was 57.4 percent and based on this information Caltrans

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requested that the project analysis utilize a Home-Based Work ICR of 28.7 percent, 50 percent lower than the results of the review.

As a result, the DEIR (2016) traffic analysis was revised in the FEIR (2016) to incorporate the 28.7 percent Home-Based Work (HBW) trip ICR requested by Caltrans. When combined with the Kern COG model ICRs for non-work Home-Based Other/Non-Home-Based trips, the ICRs for all project trips considered in the FEIR (2016) were 59.8 percent in the AM peak period and 64.2 percent in the PM period. These results are lower than the 72.2 percent AM peak period and 71.4 percent PM peak period ICRs analyzed in the DEIR (2016). The FEIR (2016) revised the project's mitigation measures and considered the significance of all significant impacts that were determined to potentially occur using the lower AM and PM peak period ICRs. The FEIR (2016) considered the significant impacts that were determined to potentially occur using the lower AM and PM peak period ICRs.

To identify a range of potential ICR scenarios that could result in higher VMT compared to the 28.7 percent HBW trip ICR analyzed in the FEIR (2016), the FEIR (2016)'s 287.7 HBW ICR was updated with more current information published after the 2016 certification of the 2016 EIR (Updated 28.7% HBW ICR). As explained in greater detail in Chapter 4.16, *Transportation and Traffic*, following certification of the 2016 EIR, the tenth edition of the Institute of Transportation Engineers (ITE) Manual was published in 2017. The ITE Manual provides widely utilized trip generation rates for specific land uses, such as housing or commercial development. As shown in Table 4.16-9 of Chapter 4.16, total project trips using the more current, tenth edition of the ITE Manual are slightly lower than generated by the ninth edition of the ITE Manual used in the FEIR (2016) analysis. The lower number of total trips generated by the tenth edition of the ITE Manual also results in a slight decrease in weekday VMT compared with the FEIR (2016). Potential project impacts under the Updated 287% HBW ICR scenario were compared with the FEIR (2016), and no new significant impacts were identified.

The Updated 27.8% HBW ICR uses the same ICRs as the FEIR (2016), including an AM peak period ICR of 59.8 percent, and PM peak period ICR of 64.2 percent. These ICRs incorporate the assumed Home-Based Work trip ICR of 28.7 percent requested by Caltrans during the DEIR (2016) review process. The number of total daily and peak AM and PM period trips in the Updated 27.8% HBW ICR was calculated using the tenth edition of the ITE Manual. Also, the project ICRs generated by the 2014 KernCOG TD and the 2018 KernCOG TDF model were compared for use in the Updated 27.8% HBW ICR. The 2014 KernCOG model was found to generate lower and more conservative project ICRs than the 2018 KernCOG model and was retained for the Updated 27.8% HBW ICR and Reduced ICR Scenario analysis. The Updated 27.8% HBW ICR, which incorporates the 2017 ITE Manual, was then used as the baseline for screening the 22 potential project development scenarios and identifying reduced ICR scenarios for more detailed analysis.

A total of 22 Screening Scenarios were developed by the project's traffic consultant, Fehr & Peers, to evaluate how daily, AM, and PM peak hour trip generation rates and VMT could vary with ICRs that were 10 and 20 percent lower than used in the 2016 EIR or from other identified development patterns, such as primarily residential or commercial/light industrial development, that could also affect project VMT. As described in the 2019 Traffic Study, none of the scenarios were found to generate a greater amount of daily average and peak hour trips than identified in the 2016 EIR and five of the scenarios were found to generate higher levels of VMT than in the 2016 EIR. Vehicular emissions are partially dependent on project VMT, so these five higher VMT scenarios are

evaluated in this SREIR. The five higher VMT/Reduced ICR Scenarios assessed quantitatively in this section, consistent with their introduction in Chapter 3, *Project Description*, include the following:

- Scenario A. Proposed project development of 12,000 dwelling units and 5,100,000 square feet of commercial/light industrial uses at 100 percent of full buildout with a 10 percent reduction in the daily and peak hour ICRs used in the 2016 EIR (Screening Scenario 1 and Scenario 1 in the 2019 Traffic Study, Volume 4, Appendix E.2).
- Scenario B. Proposed project development of 12,000 dwelling units and 5,100,000 square feet of commercial/light industrial uses at 100 percent of full buildout with a 20 percent reduction in the daily and peak hour ICRs used in the 2016 EIR (Screening Scenario 2 and Scenario 2 in the 2019 Traffic Study, Volume 4, Appendix E.2).
- Scenario C. Proposed project development of 12,000 dwelling units and 5,100,000 square feet of commercial/light industrial uses at 75 percent of full buildout (9,000 dwelling units and 3,185,000 square feet of commercial/light industrial uses) with a 20 percent reduction in the daily and peak hour ICRs used in the 2016 EIR (Screening Scenario 4 and Scenario 4 in the 2019 Traffic Study, Volume 4, Appendix E.2).
- Scenario D. Development of 14,000 dwelling units and schools and parks as required by applicable land use laws and regulations, with no complementary commercial/light industrial amenities or on-site employment-generating land uses (Screening Scenario 9 and Scenario 9 in the 2019 Traffic Study, Volume 4, Appendix E.2).
- Scenario E. Development of 12,000 dwelling units and schools and parks as required by applicable land use laws and regulations, with no complementary commercial/light industrial amenities or on-site employment-generating land uses (Screening Scenario 10 and Scenario 10 in the 2019 Traffic Study, Volume 4, Appendix E.2).

The California Environmental Quality Act (CEQA) requires that an Environmental Impact Report (EIR) describe a range of reasonable alternatives to the project or to the location of the project site that could feasibly avoid or lessen any significant environmental impacts of the project while attaining most of the project's basic objectives. An EIR also must compare and evaluate the environmental effects and comparative merits of the alternatives. This chapter describes alternatives considered but eliminated from further consideration, including the reasons for elimination, and compares the transportation and traffic, air quality, GHG, noise, and population and housing impacts of several alternatives retained with those of the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios.

The following are key provisions of the CEQA Guidelines (Section 15126.6):

- The discussion of alternatives shall focus on alternatives to the project or its location that are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be costlier.
- The No Project Alternative shall be evaluated, along with its impacts. The no project analysis shall discuss the existing conditions at the time the notice of preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not

approved, based on current plans and consistent with available infrastructure and community services.

- The range of alternatives required in an EIR is governed by a "rule of reason;" therefore, the EIR must evaluate only those alternatives necessary to permit a reasoned choice. The alternatives shall be limited to ones that would avoid or substantially lessen any of the significant effects of the project.
- For alternative locations, only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR.
- An EIR need not consider an alternative whose effects cannot be reasonably ascertained and whose implementation is remote and speculative.

The range of feasible alternatives is selected and discussed in a manner to foster meaningful public participation and informed decision making. Among the factors that may be taken into account when addressing the feasibility of alternatives, as described in Section 15126.6(f)(1) of the CEQA Guidelines, are environmental impacts, site suitability, economic viability, availability of infrastructure, general plan consistency, regulatory limitations, jurisdictional boundaries, and whether the project proponent could reasonably acquire, control, or otherwise have access to an alternative site. An EIR need not consider an alternative whose effects could not be reasonably identified, whose implementation is remote or speculative, and that would not achieve the basic project objectives.

With respect to the environmental issue areas addressed by the supplemental analysis included in this SEIR, the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios have the potential to cause significant adverse effects, at either a project-level or cumulative-level, on air quality, GHG emissions, noise, population and housing, and traffic and transportation at the project site. Even with the Mitigation Measures described in Chapter 4, Environmental Analysis, of this SREIR, impacts of the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, in these issue areas would be significant and unavoidable. Therefore, this section discusses alternatives that are capable of avoiding or substantially lessening effects on these resources. Significant, unavoidable impacts of the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, are summarized below. Following these summaries, Section 6.2, Project Objectives, restates the project proponent's project objectives. Section 6.3, Alternatives Eliminated from Further Consideration, presents alternatives to the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, that were considered but eliminated for further analysis. Section 6.4, Alternatives Analyzed in This SREIR, presents alternatives fully analyzed in this SREIR, provides a comparison of alternatives, and makes a determination about the environmentally superior alternative.

Significant Impacts of the Updated 28.7% HBW ICR, and Scenarios 1, 2, 4, 9, and 10.

Air Quality

Significant and unavoidable air quality impacts of the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios related to operational emissions include: Impact 4.3-2 (The Project Would Violate Any Air Quality Standards as Adopted in c(i) or c(ii) or as Established by EPA or

Air District or Contribute Substantially to an Existing or Projected Air Quality Violation); Impact 4.3-3 (Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region Is Nonattainment under Applicable Federal or State Ambient Air Quality Standards); and Impact 4.3-6 (The Project Would Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Nonattainment under an Applicable National or State Ambient Air Quality Standard).

The estimated daily regional construction emissions associated with the construction activities for the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios would temporarily exceed the San Joaquin Valley Air Pollution Control District (SJVAPCD) significance criteria for reactive organic gases (ROGs) and nitrogen oxides (NO_X). The Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios would be built over a 19-year period. Seventeen (17) of the 19 years assessed would exceed the SJVAPCD annual ROG threshold of 10 tons/year in both the unmitigated and mitigated scenarios. The SJVAPCD annual NO_x threshold of 10 tons/year would be exceeded in 13 of the 19 years assessed even with implementation of mitigation measures. Construction of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios would not exceed the SJVAPCD annual thresholds for CO, SO_x, PM₁₀, or PM_{2.5} under either the unmitigated or mitigated scenario in any year. ROG and NOx emissions during project construction would result in temporary significant and unavoidable impacts.

The operational CO emissions of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios would exceed the SJVAPCD operational CO emissions threshold after incorporation of mitigation, which would be a significant and unavoidable project-level and cumulative impact. Therefore, project's potential to contribute to the impacts of other past, present, and reasonably foreseeable projects to result in a cumulatively significant and unavoidable impact.

Greenhouse Gas Emissions

Significant and unavoidable GHG emissions impacts of the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, include: Impact 4.7-1 (Generate Greenhouse Gas Emissions, Either Directly or Indirectly, that may have a Significant Impact on the Environment) and Impact 4.7-3 (Cumulative Greenhouse Gas Emissions Impacts).

Operation of the project, the Updated 28.7% HBW ICR, and the five Reduced ICR Scenarios, would result in GHG emissions from vehicular traffic, area sources (landscaping maintenance), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste. The Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, would comply and be consistent with an extensive list of applicable regulatory programs designed to reduce GHG emissions and would thus contribute to the achievement of California's and Assembly Bill 32's GHG reduction goals. Most importantly, the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, would comply and be consistent with the Cap-and-Trade program. Because emissions from major GHG-emitting sources, such as electricity generation, fuel distributors (e.g., natural gas and transportation fuels), and large stationary sources are capped under the cap-and-trade program, almost all of the GHG sources associated with the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenario, and the five Reduced ICR Scenario, and the five Reduced ICR scenario, and the gHG sources associated with the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenario, sources are capped under the cap-and-trade program, almost all of the GHG sources associated with the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, would be subject to the cap-and-trade regulations.

In accordance with SJVAPCD Policy APR-2015 and consistent with Association of Irritated Residents v. Kern County Board of Supervisors, et al. (2017) 17 Cal.App.5th 708, the GHG impacts

associated with the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, could be considered less than significant and therefore not cumulatively considerable. However, many applicable GHG reduction programs are regional or statewide in nature and do not provide a mechanism that guarantees GHG emission reductions on a cumulative basis. In addition, Kern County does not have the jurisdictional authority to control the various cumulative sources of GHGs in the County, or the GHG emissions from sources around the globe, which all contribute to climate change. Although many other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the County cannot ensure that these measures would ultimately be implemented or sufficient to address climate change. Therefore, the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios, all have the potential to generate GHG emissions, either directly or indirectly, that may have cumulatively considerable significant impact on the environment, even with implementation of the feasible mitigation measures described in Section 4.7.4.4., and this cumulative impact is considered significant and unavoidable.

The expert agency charged with implementing California's GHG reduction laws and policies, and reviewing and approving regional land use transportation plans under Senate Bill (SB) 375, the California Air Resources Board, has determined that the state is on track to meet its GHG reduction statutory mandates and policy goals, and has approved the Kern County SCS pursuant to SB 375. Although many other agencies with the necessary jurisdiction are currently taking action to reduce GHG emissions, the County cannot ensure that these measures would ultimately be implemented or sufficient to address climate change. Therefore, GHG emissions would be considered significant and unavoidable.

Noise

Significant and unavoidable noise impacts of the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios include: Impact 4.12-4 (Substantial Temporary or Periodic Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project) and Impact 4.12-6 (Contribute to Cumulative Noise Impacts).

Implementation of the Updated 28.7% HBW ICR, and the five Reduced ICR Scenarios, would involve grading and site preparation, as well as utilities installation, building construction, external/internal building work, paving and landscaping. Standard equipment, such as dozers, loaders, scrapers, and miscellaneous trucks would be used for construction of the majority of the project facilities. Blasting may also occur, but would be a short-term event, typically lasting no more than several seconds. Additionally, rock crushing/processing facility could be used during some construction activities where rock removal is involved. Noise levels from these actions would vary by distance. As the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios are built, construction noise locations would vary in distance from occupied residential and other noise sensitive land uses. Mitigation measures would provide for the best available measures for the reduction of construction noise impacts, should any site plan refinements occur during the project review and approval process that result in project noise sources moving closer to sensitive receptors to the extent that significant impacts would occur to sensitive receptors. Noise impacts would be significant and unavoidable.

In general, the noise levels generated by commercial, industrial and recreational facility operations would not exceed 65 A-weighted decibels at a distance of 100 feet from each individual source. Thus, impacts from operational noise would be site-specific in nature and reasonably foreseeable development projects would be required to conform to policies in the Kern County General Plan (KCGP) to minimize exposure to excessive noise levels. In addition, each individual project is required to undergo site-specific analysis to determine individual noise impacts and provide mitigation measures as appropriate. The Updated 28.7% HBW ICR scenario and the five Reduced ICR Scenarios would all have the potential to combine with reasonably foreseeable projects in the vicinity to increase ambient noise levels. Construction-related noise generated by the Updated 28.7% HBW ICR scenario and the five Reduced ICR Scenarios in combination with other construction-related noise generated by reasonably foreseeable nearby projects would be less than significant, with compliance of the Kern County Ordinance, KCGP Noise Element, and Mitigation Measures MM 4.12-1 through MM 4.12-8. The Updated 28.7% HBW ICR and the five Reduced ICR Scenarios would all have the potential to contribute to a significant cumulative temporary ambient noise impact. Therefore, the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, in combination with reasonably foreseeable nearby projects, would have a significant and unavoidable cumulative noise impact.

Population and Housing

Significant and unavoidable population and housing impacts of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios include: Impact 4.13-1 (Induce Substantial Population growth in an Area, Either Directly or Indirectly) and Impact 4.13-2 (Contribute to Cumulative Population and Housing Impacts).

The Updated 28.7% HBW ICR scenario, and Scenarios 1, 2, and 4 propose between 9,000 and 14,000 new dwelling units, with 5,100,000 square feet of commercial/industrial uses. Scenarios 9 and 10 propose between 12,000 and 14,000 dwelling units, but would not include any commercial or industrial uses. With a range of 9,000 to 14,000 new dwelling units the project is anticipated to result in a net increase above existing conditions of approximately 28,800 to 44,800 residents at buildout, depending on scenario. The project would accordingly result in substantial population growth on the project site, consistent with the project objectives of development of a sustainable new mixed-use community near the employment and retail centers at the Tejon Ranch Commerce Center (TRCC). The project site would support a work force of approximately 1,308 to 8,720 persons, depending on scenario. There are no feasible mitigation measures to avoid population growth at the project site while achieving any of the project objectives of developing a sustainable new mixed-use community near employment and retail centers of the TRCC. Impacts related to growth are significant and unavoidable for the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios.

Although the project site is located in an area designated for future urbanized development in the RTP/SCS, the net increase in population on the project site would remain significant and unavoidable for the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios in relation to existing site conditions and in relation to the existing KCGP. The Updated 28.7% HBW ICR scenario and the five Reduced ICR Scenarios, in combination population growth associated with other potential development in the region, would also contribute towards a cumulative population impact within and in the vicinity of the Grapevine Specific and Community Plan area. This cumulative impact would be significant and unavoidable.

Transportation and Traffic

Significant and unavoidable transportation and traffic impacts of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios include: Impact 4.16-7 (Contribute to Cumulative Transportation and Traffic Impacts).

The cumulative traffic would be increased and would result in some freeways operating at unacceptable levels of service (LOS). The project-generated traffic would add to the unacceptable levels, creating longer delays or higher densities on regional roadways. In addition to increasing traffic volumes on Interstate 5 (I-5) at the Grapevine Grade, the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios would result in freeway segments and ramps located south of the project area, in Los Angeles County, to operate at unacceptable LOS on I-5 northbound and SR-138 both east and westbound. While Mitigation Measures MM 4.16-1 through MM 4.16-12 would help to alleviate these conditions, the project would be contributing to already congested freeways in the region. Thus, cumulative impacts relative to conflicting with applicable plans, ordinances, and policies and exceeding LOS standards on State highways would be significant and unavoidable for the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Other Impacts of the Updated 28/7% HBW ICR scenario, and the five Reduced ICR Scenarios

Impacts of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios on the other resources evaluated in this SREIR were found to be either less than significant or less than significant after mitigation. Therefore, consideration of alternatives that would further reduce impacts on these resources is not required by CEQA. Only alternatives that reduce or substantially lessen the significant and unavoidable impacts on air quality, GHG emissions, noise, population and housing, and traffic and transportation are considered in this SREIR. If one of the alternatives would cause a greater adverse impact on another resource, these impacts are disclosed in Section 6.4, *Alternatives Analyzed in this EIR*. Otherwise, impacts to the remaining resources evaluated in this SREIR are not discussed further in this section.

6.2 **Project Objectives**

The project has defined the following objectives:

- Respect the open space and development boundaries identified in the Tejon Ranch Conservation and Land Use Agreement (Ranchwide Agreement) executed by Tejon Ranchcorp and the Sierra Club, Audubon California, Natural Resources Defense Council, Endangered Habitats League, and Planning and Conservation League.
- Provide a proximate housing supply for existing and future employees of the TRCC and for Grapevine employers in the private and public sectors.
- Expand the economic development activity initiated at the TRCC with additional businesses that would generate commercial and retail employment opportunities and tax revenues, and expand public services and public service employment.

- Create a livable community defined by convenient access to employment, shopping, parks, schools, and housing via alternative modes of transportation in a portion of Kern County already served by major infrastructure and already developed with employment uses at the adjacent TRCC.
- Create a sustainable community that includes project design features that reduce water demand, conserve energy, incorporate water quality features, encourage alternative modes of transportation, and provide a mix of land uses with a range of housing types and densities.
- Create a community that encourages healthy living through active lifestyles and access to local agricultural products.
- Develop a land plan that conserves important natural features such as Grapevine Creek, Cattle Creek, and natural landforms to the extent feasible.
- Develop a land plan that conserves important cultural and historic resources to the extent feasible.
- Develop a land plan that respects geotechnical constraints such as earthquake faults and landslides.
- Conserve wildlife movement corridors along the foothills of the Tehachapi Mountains and California Aqueduct by conserving existing undercrossings of I-5, and including in the land plan corridors that continue to provide wildlife with access to these undercrossings. Conserve open space that supports the Tejon Ranch's existing biological diversity and maintains its ranching heritage.
- Permanently fund community maintenance and other project obligations from revenues generated by the Project, including property taxes generated within the new community.
- Create new jobs and provide new tax revenues for the local economy of Kern County while minimizing demands on County services.
- Provide flexibility in plan implementation over time to respond to changing market, financial, and environmental conditions. This flexibility could allow up to 2,000 additional dwelling units, provided that no new environmental impacts would result.

CEQA requires that an EIR describe a reasonable range of alternatives to the project, or to the location of the project, that would avoid or substantially lessen any of the significant effects of the project and that would feasibly attain most of the basic project objectives (Title 14, Section 15126.6). Attainment of the project objectives is discussed for each retained alternative in Section 6.4.

6.3 Alternatives Eliminated from Further Consideration

Alternatives may be eliminated from detailed consideration in an EIR if they fail to meet most of the project objectives, are infeasible, or do not avoid or substantially lessen any significant environmental effects (CEQA Guidelines, Section 15126.6[c]). Alternatives that are remote or speculative, or the effects of which cannot be reasonably predicted, also do not need to be considered (CEQA Guidelines, Section 15126[f][2]). Kern County considered several alternatives to reduce impacts on aesthetics, agriculture, air quality, biological resources, GHG emissions, noise, or population and housing. Per CEQA, the lead agency may make an initial determination

as to which alternatives are feasible and warrant further consideration and which are infeasible. The following alternative was initially considered but were eliminated from further consideration in this SREIR because they do not meet project objectives and/or were infeasible.

Alternate Site Alternative

In developing a reasonable range of alternatives, the County considered the potential for an alternate site. To meet the project objectives, the applicant would be required to find a comparable site within Kern County that would meet most of the project objectives. Key project attributes considered included a site bisected by or adjacent to a major interstate freeway, close proximity to the California aqueduct or other existing major water supply conveyance system, and close proximity to dry utilities (e.g., natural gas, electricity and telecommunication lines), all of which avoid the need for substantial off-site infrastructure construction with related impacts. A further key attribute is a site that is adjacent, or within very close proximity, to existing commercial/industrial land uses that act as employment centers for which there are no or insufficient nearby residential and related community land uses. The project site must also be of sufficient size to provide a full suite of community services (e.g., schools, libraries, medical facilities, water treatment facilities, wastewater treatment facilities with recycled water systems, fire and sheriff stations, electrical substation) to achieve key sustainability objectives like walkability and water conservation that can only be achieved by communities of scale. The site would also have to be available for acquisition (e.g., listed as for sale by one land owner). Finally, to serve as a CEQA alternative, it would also need to avoid or significantly reduce at least one project-level or cumulative impact.

There were no alternative sites that met these criteria. For example, to avoid or substantially reduce project-related agricultural impacts (including cumulative impacts), the alternate site location would need to be in an area with minimal land identified as prime farmland, unique farmland, or farmland of statewide importance, as well as with minimal land currently under agricultural cultivation. This would likely result in an alternate site that would be located in the Mojave Desert. However, there are no available sites in the Mojave Desert that have a pre-existing jobs center, and has pre-existing highway, water and dry utility infrastructure. In addition, to avoid potentially significant cumulative impacts to biological resources, the project would likely need to be located in an area that has ample available and proximate mitigation lands that have similar or better biological resource values as the project site. A Mojave Desert site would be outside the boundaries of the Ranchwide Agreement, an agreement between Tejon Ranch and most major environmental resource groups that preserves approximately 240,000 acres in close proximity to the Grapevine Project. The Ranchwide Agreement limits development to less than 10 percent of the Tejon Ranch areas, confined to specified locations, that have lower relative biological resource values and are already proximate to backbone infrastructure such as I-5, the California aqueduct, and major dry utility systems.

An alternate site within the San Joaquin Valley portion of Kern County would result in land that is considered prime farmland, unique farmland, or farmland of statewide importance, much of which is currently under agricultural cultivation. Such a site would have greater agricultural impacts than the project site, and both State and County laws and policy have long discouraged large scale urbanized conversion of agricultural lands.

Finally, alternate sites within existing cities within the County were not considered because these cities already have or have planned for a jobs-housing balance between employment and residential uses, and would not achieve a key project objective of developing a sustainable community adjacent to a major employment center with insufficient proximate housing for the workforce.

If an alternate site were identified, development of the project on an alternate site would have similar, if not greater, environmental impacts with respect to cumulative impacts that are more generally linked to population and employment growth (e.g., air and GHG emissions from structures, infrastructure, and vehicles). Alternate sites in more remote locations, not served by or immediately adjacent to proximate highway, water and dry utility infrastructure would generally have greater project-level and cumulative impacts than the Grapevine Project, based on the need for construction of extensions to highway, water and dry utility infrastructure. Finally, there are no other large-scale new urban County communities included in the RTP/SCS, which includes future community development as part of the to reduce GHG emissions in compliance with SB 375.

The alternate site alternative has been rejected from further consideration because there were no alternative sites that have the attributes required to achieve key project objectives, and because if an alternate site was available it would likely have impacts that are generally similar to, or for some resources greater than, the Grapevine Project.

6.4 Alternatives Analyzed in This EIR

Alternatives that would avoid or substantially lessen any of the significant effects of the 28.7% HBW ICR and the five Reduced ICR Scenarios and that would feasibly attain most of the basic project objectives are analyzed below. Each alternative is discussed with respect to its relationship to the project objectives. Kern County has considered the following alternatives, which are summarized in Table 6-1, *Summary of Alternatives*. Impacts associated with each alternative as they relate to the impacts associated with the project, as they relate to impacts associated with the Updated 28.7% HBW ICR scenario, and the five Reduced ICR Scenarios are summarized in Table 6-3, *Comparison of Scenarios*. The alternatives analyzed individually include the following:

- Alternative A: No Project Alternative;
- Alternative B: Reduced Project Phase 1 Development Only; and
- Alternative C: Reduced Project Mixed Use Development Only; and
- Alternative D: No Williamson Act Land Development.

Table 6-1. Summary of Alternatives Basis for Section and Sumr						
Alternative	Description	of Analysis				
Grapevine Project	 Development footprint would be approximately 4,778acres Approximately 3,232 acres would remain open space Construct between 12,000 and 14,000 dwelling units Construct up to 5,100,000 square feet of commercial and light industrial land uses Provide land for two new fire stations and one sheriff substation Provide up to 157 acres of school Provide up to 112 acres of park land Expanded and new water and wastewater treatment facilities 					
Alternative A: No Project Alternative	 Development would require a specific plan for any development near the I-5/Grapevine Road interchange. Commercial area surrounding the I-5/Grapevine Road remains 	 Required by CEQA Avoids new significant impacts on project site; does not reduce commute distances for adjacent employment centers at Tejon Commerce Center Avoids need for General Plan Amendment, zone code change, and Geologic Hazard Abatement District Avoids the need for exclusion for Agricultural Preserve No. 19 				
Alternative B: Reduced Project – Phase 1 Development Only	 Development would include only Plan Areas 3 and 6a through 6e Up to 2,200 dwelling units Up to 1,326,000 square feet of commercial and light industrial land uses Expanded and new water and wastewater treatment facilities 	 Avoids development west of I-5 Reduces all significant impacts 				
Alternative C: Reduced Project – Mixed Use Development Only	 Development would only occur in Plan Areas 1 through 5a, a total of approximately 5,512 acres No development in Plan Areas 5b and 6a through 6e No industrial land uses would occur within the project. Expanded and new water and wastewater treatment facilities 	 Avoids impacts to Unique, Prime, and Statewide Important Farmland Avoids development north of California Aqueduct Reduces some impacts Most impacts would be similar to the project 				
Alternative D: No Williamson Act Land Development	 No development on Williamson Act Contract land Development on Plan Areas 1, 2, 6b, 6c, and portions of 3, 4, 5a, 6a and 6d Development would not occur 5b and 6e, and remaining portions of Plan Areas 3, 4, 5a, 6a, and 6d Expanded and new water and wastewater treatment facilities 	 Avoids the Williamson Act contract land, including nonrenewal contract lands Reduces some impacts 				

Table 6-2. Comparison of Alternatives					
Environmental Resource	Updated 28.7% HBW ICR	Alternative A	Alternative B	Alternative C	Alternative D
Air Quality: Violate air quality standards	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Air Quality: Cumulative net increase of nonattainment pollutants	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Air Quality: Create objectionable odors	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Air Quality: Cumulative effects	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Greenhouse Gas Emissions: Generate GHG emissions	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Greenhouse Gas Emission: Cumulative effects	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Noise: Increase ambient noise levels	Significant / Unavoidable	Fewer	Fewer	Similar	Similar
Noise: Cumulative effects	Significant / Unavoidable	Fewer	Fewer	Similar	Similar
Population and Housing: Induce substantial population growth	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Population and Housing: Cumulative effects	Significant / Unavoidable	Fewer	Fewer	Similar	Fewer
Transportation and Traffic: Cumulative effects	Significant / Unavoidable	Fewer	Fewer	Similar	Similar
Meet Project Objectives?	Yes	No	Some	Yes	Yes
Reduce Any Significant and Unavoidable Impacts Related to Air Quality, Greenhouse Gas Emissions, Noise, Population and Housing or Transportation and Traffic to No Impact or Less than Significant?	_	Yes, most impacts	No	No	No

Alternative A: No Project Alternative

Under Alternative A, neither the Updated 28.7% HBW ICR, nor the five Reduced ICR Scenarios, would be constructed and existing conditions at the project site would remain unchanged for the foreseeable future. Existing land uses on the project site would remain, which include undeveloped land in the southern San Joaquin Valley and Tehachapi and San Emigdio Mountains. Current and historic uses of the project site include irrigated agriculture (almond orchards), a commercial area surrounding the I-5/Grapevine Road interchange which includes hospitality facilities, cattle grazing, air quality monitoring facility, two north-south trending transmission corridors and a switching station, and filming uses. The California Aqueduct traverses the project site near the northern boundary; Edmonston Pumping Plant Road bisects the project site from east to west and I-5 bisects the project site is immediately south of the TRCC. If the Updated 28.7% HBW ICR or the five Reduced ICR Scenarios are not implemented, the project site would remain available for unspecified future use that is consistent with the KCGP. For the purposes of this analysis, it is assumed that buildout of the project site in accordance with the KCGP would eventually occur.

Under Alternative A, the significant and unavoidable air quality, GHG emissions, noise, population and housing, and transportation and traffic impacts associated with the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios would be reduced or avoided, as discussed below.

It is assumed that the population of Kern County will continue to grow at its current rate of less than three percent annually over the next 20 years, with increments generated both by a continuing influx of new residents from outside the County and by the natural increase of the population in the area. This section explores the potential impacts if the current KCGP policies are fully implemented without any amendments, and the development potential on the site under these existing policies is maximized.

Kern County General Plan (KCGP)

Alternative A would allow development to occur only as authorized under the KCGP as described below and shown in Figure 3-5, *Existing KCGP Land Use Designations*.

Map Code 4.3 (Specific Plan Required). This designation was made for lands identified by a landowner as being potentially proposed for future large-scale projects. This map code recognized the need for additional assessment and evaluation of these proposals through a specific plan application proposal and environmental review process, does not create a commitment on the part of Kern County to approve any such proposals. The Maximum Allowed Density Table provides dwelling unit and commercial space estimates for Map Code 4.3. Areas designated Map Code 4.3 shall be subject to development, consideration, and adoption of a specific plan in accordance with all applicable local and State requirements pertaining thereto. Actual land uses and densities would be based on consistency with the KCGP goals, policies, and environmental review and may require reduction or elimination. For purposes of this comparative evaluation of the No Project alternative, two scenarios are considered: no future development of the Map Code 4.3 area (Alternative A-1: No New Community Development Scenario) and development intensities consistent with the Maximum Allowed Land Use Density Table (Alternative A-2: No General Plan Amendment Community Development Scenario).

Map Code 6.2 (General Commercial). Retail and service facilities of less intensity than regional centers providing a broad range of goods and services which serve the day-to-day needs or nearby residents. Uses shall include, but are not limited to, the following:

• Neighborhood shopping centers, convenience markets, restaurants, offices, wholesale business facilities, resort hotels and motels, hospitals, schools (including trade schools), churches, and commercially related light manufacturing or storage within fully enclosed facilities.

Map Code 6.2/2.5 (General Commercial/Flood Hazard). Retail and service facilities of less intensity than regional centers providing a broad range of goods and services which serve the day-to-day needs or nearby residents. Special Flood Hazard Areas (Zone A), as identified on the Flood Insurance Rate Maps (FIRM) of the Federal Emergency Management Agency (FEMA) and supplemented by floodplain delineating maps that have been approved by the Kern County Public Works Department. The same development under Map Code 6.2 applies; however, Kern County will ensure that new development will not be sited on land that is physically or environmentally constrained to support such development unless appropriate studies establish that such development will not result in unmitigated significant impacts.

Map Code 8.1 (Intensive Agriculture). Areas devoted to the production of irrigated crops or having a potential for such use. Other agricultural uses, while not directly dependent on irrigation for production, may also be consistent with the intensive agriculture designation. Minimum parcel size is 20 acres gross. Uses shall include, but are not limited to, the following:

• Irrigated cropland; orchards; vineyards; horse ranches; raising of nursery stock ornamental flowers and Christmas trees; fish farms and bee keeping ranch and farm facilities and related uses; one single-family dwelling unit; cattle feed yards; dairies; dry land farming; livestock grazing; water storage; groundwater recharge acres; mineral, aggregate, and petroleum exploration and extraction; hunting clubs; wildlife preserves; farm labor housing; public utility uses; and agricultural industries pursuant to provisions of the Kern County Zoning Ordinance, and land within development areas subject to significant physical constraints.

Map Code 8.1/2.5 (Intensive Agriculture/Flood Hazard). Areas devoted to the production of irrigated crops or having a potential for such use. Other agricultural uses, while not directly dependent on irrigation for production, may also be consistent with the intensive agriculture designation. Minimum parcel size is 20 acres gross. Special Flood Hazard Areas (Zone A), as identified on the FEMA FIRM and supplemented by floodplain delineating maps that have been approved by the Kern County Public Works Department. The same development under Map Code 8.1 applies; however, Kern County will ensure that new development will not be sited on land that is physically or environmentally constrained to support such development unless appropriate studies establish that such development will not result in unmitigated significant impacts.

Map Code 8.3 (Extensive Agriculture). Agricultural uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dry land farming, and woodlands. Minimum parcel size is 20 acres gross, unless Williamson Act Contract/Farmland Security Zone Contract exists, which requires an 80-acre minimum parcel size. Uses shall include, but are not limited to, the following:

- Livestock grazing; dry land farming; ranching facilities; wildlife and botanical preserves; timber harvesting; one single-family dwelling unit; irrigated croplands; water storage or groundwater recharge areas; mineral; aggregate; petroleum exploration and extraction; recreational activities, such as gun clubs and guest ranches; and land within development areas subject to significant physical constraints.
- If the maximum development allowable under the KCGP were realized, then it would be reasonable to expect one single-family dwelling unit per 20 acres, or one single-family dwelling unit per 80 Williamson Act acres. Agricultural activities and their associated facilities may exist in conjunction with the low density housing.

Map Code 8.3/2.1 (Exclusive Agriculture/Seismic Hazard). Agricultural uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dry land farming, and woodlands. Minimum parcel size is 20 acres gross, unless Williamson Act Contract/Farmland Security Zone Contract exists, which requires an 80-acre minimum parcel size. Land is within an Alquist-Priolo Special Study Zone and other recently active fault zones. The same development under Map Code 8.3 applies; however, Kern County will ensure that new development will not be sited on land that is physically or environmentally constrained to support such development unless appropriate studies establish that such development will not result in unmitigated significant impacts.

Map Code 8.3/2.2 (Exclusive Agriculture/Landslide). Agricultural uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dry land farming, and woodlands. Minimum parcel size is 20 acres gross, unless Williamson Act Contract/Farmland Security Zone Contract exists, which requires an 80-acre minimum parcel size. Areas of down slope ground movement are identified on the Kern County Seismic Hazard Atlas. The same development under Map Code 8.3 applies; however, Kern County will ensure that new development will not be sited on land that is physically or environmentally constrained to support such development unless appropriate studies establish that such development will not result in unmitigated significant impacts.

Map Code 8.3/2.4 (Exclusive Agriculture/Steep Slope). Agricultural uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dry land farming, and woodlands. Minimum parcel size is 20 acres gross, unless Williamson Act Contract/Farmland Security Zone Contract exists, which requires an 80-acre minimum parcel size. Land includes an average slope of 30 percent or steeper. The same development under Map Code 8.3 applies; however, Kern County will ensure that new development will not be sited on land that is physically or environmentally constrained to support such development unless appropriate studies establish that such development will not result in unmitigated significant impacts.

Map Code 8.3/2.5 (Extensive Agriculture/Flood Hazard). Agricultural uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dry land farming, and woodlands. Minimum parcel size is 20 acres gross, unless Williamson Act Contract/Farmland Security Zone Contract exists, which requires an 80-acre minimum parcel size. Special Flood Hazard Areas (Zone A), as identified on the FEMA FIRM and supplemented by floodplain delineating maps that have been approved by the Kern County Public Works Department. The same development under Map Code 8.3 applies; however, Kern County will ensure that new development will not be sited on land that is physically or environmentally constrained to support such development unless appropriate studies establish that such development will not result in unmitigated significant impacts.

Map Code 8.4 (Mineral and Petroleum). Minimum parcel size is 5 acres. Areas which contain producing or potentially productive petroleum fields, natural gas, and geothermal resources, and mineral deposits of regional and statewide significance. Uses are limited to activities directly associated with resource exploration, production, and transportation. Uses shall include, but are not limited to, the following:

• Mineral and petroleum exploration and extraction, including aggregate extraction; extensive and intensive agriculture; mineral and petroleum processing (excluding petroleum refining); natural gas and geothermal resources; pipelines; power transmission facilities; communication facilities; equipment storage yards; and borrow pits.

Map Code 8.4/2.5 (Mineral and Petroleum/Flood Hazard). Minimum parcel size is 5 acres. Areas which contain producing or potentially productive petroleum fields, natural gas, and geothermal resources, and mineral deposits of regional and statewide significance. Uses are limited to activities directly associated with resource exploration, production, and transportation. Special Flood Hazard Areas (Zone A), as identified on the FEMA FIRM and supplemented by floodplain delineating maps that have been approved by the Kern County Public Works Department. The same development under Map Code 8.4 applies; however, Kern County will ensure that new development will not be sited on land that is physically or environmentally constrained to support

such development unless appropriate studies establish that such development will not result in unmitigated significant impacts.

The sections of the project that consist of Seismic Hazard, Landslide, Steep Slope and Flood Hazard, as discussed above, have substantial physical constraints. Therefore, these sections would remain undeveloped under this alternative. The portion of the project that consists of State and Federal Land would continue to be operated as under existing conditions; therefore this area would remain undeveloped under this alternative.

Air Quality

Under Alternative A, construction and operation activities would be limited to that which is consistent with the KCGP. Overall, less development would occur relative to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, and would thus result in fewer air emissions. Because allowable projects would be smaller in scale, it is not anticipated that the construction emissions would be at levels that would exceed the federal or State thresholds. Therefore, this alternative would reduce construction impacts as compared to the project and could potentially reduce them to less than significant levels during construction, depending on how much construction is underway at a given time. In addition, because allowable projects would be at a smaller scale, air pollutants from allowable project operations would be at lower levels than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, and could reduce them to less than significant levels during constructions would be at lower levels than the significant levels during the at lower levels than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, and could reduce them to less than significant levels during constructions would be at lower levels than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, and could reduce them to less than significant levels during constructions would be at lower levels than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, and could reduce them to less than significant levels depending on the size of future projects.

Greenhouse Gas Emissions

As discussed under Air Quality, above, Alternative A would result in less development on a smaller project footprint, with fewer structures, fewer people, and fewer vehicles, as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. GHG emissions would accordingly be lower as compared than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, and could reduce related impacts to less than significant levels depending on future projects onsite. On a cumulative level, GHG emissions would continue to contribute to global GHG emissions, therefore, while cumulative impacts related to GHG emissions would not eliminate a significant cumulative impact because the County cannot assure long-term implementation state and regional regulatory programs to reduce cumulative GHG emissions that are administered and/or enforced by other agencies. In addition, Alternative A would not be consistent with the RTP/SCS approved for Kern County in compliance with SB 375 and would, thus, have greater impacts with respect to compliance with approved plans.

Noise

Alternative A would allow buildout of the project site in accordance with the KCGP, with less development allowed under Alternative A-2 which does not allow development of a new community in Map Code 4.3. While development could still occur under this alternative, construction duration for future projects would be reduced; although construction equipment used under this alternative would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Construction noise would be reduced as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Noise sources at the buildout of any future projects would be mainly in close proximity to the I-5/Grapevine Road interchange, where KCGP allowable uses include general commercial. Other allowable land uses would include agriculture and mineral and

petroleum exploration and extraction activities. These allowable projects would be smaller in scales as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Therefore, this alternative would result in lower noise levels than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, but would not be reduced to a less than significant level relative to ambient conditions.

Population and Housing

While Alternative A would allow general commercial in the I-5/Grapevine Road interchange area, development under this alternative would be significantly less than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Dwelling units would only be allowed as it is related to agricultural land uses. The workforce potential would depend on the size of any projects; however, they are anticipated to be less than Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. This alternative would result in a reduced workforce and residents as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, however, it would not accommodate forecast population and employment growth consistent with the RTP/SCS approved for Kern County in compliance with SB 375. Population impacts relative to the existing setting would be lower than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Alternative A, would, however, have greater impacts with respect to compliance with planned population and housing patterns needed to achieve GHG reduction goals.

Transportation and Traffic

Development under this alternative would be significantly less than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Construction and population-related vehicular traffic would be substantially less as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Alternative A would not result in a significant increase in traffic on local and areas roadways.

Conclusion and Relationship to Project Objectives

This alternative (both the Scenario A-1 and Scenario A-2) would reduce significant impacts associated with the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. If the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios is not implemented, the project site would remain available for other types of unspecified future use that is consistent with the KCGP, and said development would also result in impacts. This alternative would not achieve the key project objectives, such as providing proximate housing supply for existing and future employees of the TRCC, and creating a sustainable full-service and walkable community defined by convenient access to employment, shopping, parks, schools, and housing; providing sustainable communities.

Alternative B: Reduced Project - Phase 1 Development Only

Alternative B would reduce the extent of the project site in order to reduce the severity of air quality, GHG emissions, noise, population and housing, and transportation and traffic impacts. None of these significant adverse impacts would be avoided.

Alternative B would develop only Phase 1 of the Grapevine Specific and Community Plan. Alternative B would use the existing I-5/Wheeler Ridge Road/Laval Road interchange. It would allow for development in Plan Areas 3 and 6a through 6e with construction of an arterial roadway and California Aqueduct crossing east of I-5 (refer to Figure 3-7, *Proposed Site Plan*). These areas

are represented graphically in Figure 6-1, *Alternative B: Reduced Project – Phase 1 Development Only.* Up to approximately 2,200 dwelling units and up to 1,326,000 square feet of commercial land uses would be developed before projected traffic volumes would cause the I-5/Wheeler Ridge Road/Laval Road interchange to operate below LOS D and queuing requirements, the applicable performance standard for the interchange.

This alternative would continue to require approval of amendments to the KCGP map codes, amendments to the Circulation Element of the KCGP, zone code change requests, exclusion from Agricultural Preserve No. 19, adoption of the Grapevine Specific and Community Plan, adoption of the Grapevine Special Plan, and a development agreement.

Plan Area 3 would include higher-intensity land uses adjacent to I-5 and lower-intensity uses to the north and east and would also be defined by open space adjacent to Grapevine Creek and the California Aqueduct. Plan Area 3 would include Specific Plan Districts Mixed Use (MU) and Exclusive Agriculture (EA), with the Floodplain Combining (FC) over a portion of the area (refer to Figure 3-9, *Proposed Specific and Special Plan Districts*).

Plan Area 6a would include higher-intensity commercial, industrial, and residential uses in the western portion and lower-intensity uses in the eastern portion, including open space adjacent to Grapevine Creek. Plan Area 6a would include Specific Plan Districts Village Mixed Use (VMU), MU, and EA, with the eastern portion having Specific Plan Combining District FC (refer to Figure 3-9, *Proposed Specific and Special Plan Districts*).

Plan Areas 6b through 6e would include higher-intensity commercial, industrial, and infrastructure uses that would support and expand the uses at the TRCC and Grapevine Commercial Area. Plan Areas 6b and 6c would be designated Specific Plan District Industrial (I) and Plan Areas 6d and 6e would include Specific Plan Districts I and EA, with the Specific Plan Combining District FC (refer to Figure 3-9, *Proposed Specific and Special Plan Districts*).

As discussed in the Chapter 3, *Project Description*, the Specific Plan Districts would include:

Village Mixed Use (VMU). This district would serve as the Village Core and provides a variety of compatible land uses including neighborhood serving retail, service-oriented commercial, office, and higher density residential uses (6 to 72 dwelling units/net acre).

Mixed Use (MU). This district would provide for a broader mix of land uses including a variety of residential (2-40 dwelling units/net acre), office, retail commercial, light industrial, warehouse, and other uses that are compatible with adjacent land uses.

Exclusive Agriculture (EA). This district would be consistent with the intent and purpose of the existing EA (Exclusive Agriculture) zone classification within the Kern County Zoning Ordinance. This district would provide for a wide variety of agricultural and incidental nonagricultural uses, and activities that are compatible with agricultural uses, such as permanent produce stands, farmers markets, and telecommunications facilities. Grazing, open space, and recreation such as hiking and biking trails would be the predominant land uses in this district.

Industrial (I). This district is limited to Plan Areas 6b through 6e and would provide for a variety of industrial park, research and development, commercial, manufacturing, warehouse, energy generation, and other uses that are compatible with adjacent land uses.

Floodplain Combining District (FC). The purpose of the Floodplain (FC) Combining District is to protect the public health and safety and minimize property damage by designating areas that are

potentially subject to flooding and by establishing reasonable restrictions on land use in such areas. The FC Combining District shall be applied to those areas lying within Zone A on the FIRM or those areas potentially subject to flooding as designated by the Kern County Public Works Department pending reclassification of such areas into Floodplain Primary (FPP) or the Floodplain Secondary (FPS) delineated areas. The regulations established by the FC Combining District shall be in addition to the regulations of the base zoning classifications with which the FC Combining District is combined.

Air Quality

Under Alternative B, construction and operation activities would continue to occur, although at a reduced intensity. Construction activities and equipment required would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, however, the construction period would be reduced. Construction emissions for Plan Areas being construction in any one year would be reduced. Constructed sequentially. However, the construction emissions associated with development of Plan Areas 6b through 6e would be reduced, as they would be the only plan areas developed and would not combine with other Plan Areas. Therefore, this alternative would reduce construction impacts as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios and could potentially reduce them to less than significant levels during construction, depending on the timing of development. The buildout of this alternative would continue to result in residential, commercial and industrial land uses; however, at a reduced amount as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Therefore, the annual criteria air pollutant emissions for operation of Alternative B, while still potentially significant, would be less than the project.

Greenhouse Gas Emissions

Under Alternative B, construction and operation activities would continue to occur, although at a reduced intensity. Construction activities and equipment required would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, however, the construction period would be reduced and the number of Plan Areas being construction in any one year would be reduced. Construction GHG emissions for Plan Areas 6a and 3 would remain the same, assuming they are constructed sequentially. However, the construction GHG emissions of Plan Areas 6b through 6e would be reduced, as they would be the only plan areas developed and would not combine with other Plan Areas. Therefore, this alternative would reduce construction GHG emissions impacts as compared to Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. The buildout of this alternative would continue to result in residential, commercial and industrial land uses; however, at a reduced amount as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Therefore, the GHG emissions for operation of Alternative B, while still significant, would be less than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Noise

Alternative B reduce the project site footprint to encompass Plan Areas 3 and 6a through 6e only. The construction duration of this alternative would be reduced; although construction equipment used under this alternative would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Construction noise would be reduced as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Noise sources at the buildout of Alternative B would be

mainly in close proximity to, and east of, the I-5. Therefore, noise impacts west of I-5 would be avoided. Development under this alternative would be smaller in scale as compared to the project. Therefore, this alternative would result in lower noise levels than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Population and Housing

Alternative B would introduce residential, commercial, and industrial land uses to the area; however at a reduced scale when compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

While this alternative would continue to add new dwelling units, as well as employment opportunities, it would be less than that of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Utilizing the Kern Council of Government's Regional Housing Data Report estimate of 3.20 persons per household, this alternative would be expected to accommodate approximately 7,040 new residents at full buildout, a significant reduction as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. While this would continue to directly increase the County's population, impacts would be less than those of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

The square feet per employee ranges from 250 square feet per employee for village center office to 1,500 square feet per employee for light industrial/warehouse. The workforce potential would depend on the retail, office/research and development, and industrial/warehouse land use combination for Plan Areas 3 and 6a through 6b, which would not total more than 1,326,000 square feet. Alternative B would include a mixture of commercial and industrial uses; however, for the purposes of this SREIR, workforce calculations were completed for the highest and lowest square feet per employee. Thus, Alternative B would be anticipated to have a workforce between 884 employees (assuming 1,326,000 square feet of light industrial/warehouse) to 5,304 employees (assuming 1,326,000 square feet of village center office). This is less than the workforce anticipated for Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Therefore, this alternative would reduce the population and housing increase resulting from a new workforce as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Transportation and Traffic

Alternative B would introduce residential, commercial, and industrial land uses to the area; however at a reduced scale when compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Alternative B would result in lower traffic volumes and trips as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. However, Alternative B-generated traffic would continue to contribute traffic volumes to freeways that would be operating at unacceptable LOS under cumulative conditions. This alternative would result in less development than would be required to support a full-service, walkable community (e.g., the population would not support a full-service new high school), and thus likely result in a higher or similar ratio of off-site commuting as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. This alternative would also be unlikely to support frequent high-quality transit services, and would fall short of meeting the jobs-housing balance that would fully address TRCC employee needs. Therefore, while this alternative would result in a reduced project-level impacts, it would continue to add cumulative traffic impacts which would remain significant and unavoidable.

Conclusion and Relationship to Project Objectives

With implementation of Alternative B, significant impacts would on balance be reduced, but not avoided, for air quality, GHG emissions, noise, population and housing, and transportation and traffic. This alternative would fulfill some of the project objectives, but would not provide a sustainable community of the size and scale needed to create a full range of community uses (e.g., a full-service high school) or achieve a jobs-housing balance relative to TRCC employment uses.

Alternative C: Reduced Project – Mixed Use Development Only

Alternative C would reduce the overall size of the project site, and would maintain some employment uses (commercial) but would reduce other employment uses (industrial/warehouse) on the project site. This alternative would reduce, but not avoid air quality, GHG emissions, noise, population and housing, and transportation and traffic impacts. Alternative C would develop Plan Areas 1, 2, 3, 4, and 5a (refer to Figure 3-7, *Proposed Site Plan*). These areas are represented graphically in Figure 6-2, *Alternative C: Reduced Project – Mixed Use Development Only*.

Alternative C would be identical to the project for Plan Areas 1 through 5a. Alternative C would contain Specific Plan Districts VMU, MU, and EA with Specific Plan Combining District FC. However, under Alternative C, no industrial/warehouse land use would be allowed as part of Specific Plan Districts VMU and MU. Areas identified as Specific Plan District EA would continue to be designated as open space, including the area between northbound and southbound I-5 lanes.

Alternative C would result in an overall reduction of the development area relative to the project. Plan Areas 6a though 6e and Plan Area 5b would not be developed in order to avoid development within areas identified as Map Code 2.4 (Steep Slopes) and Map Code 8.4 (Mineral and Petroleum), and would avoid development on existing almond orchards located within Plan Areas 6a and 6b. This alternative would also avoid development on land indented under the Farmland Mapping and Monitoring Program (FMMP) as Unique Farmland (located within Plan Area 6a), Prime Farmland (located within Plan Area 6b), and Farmland of Statewide Importance (located within Plan Areas 6a and 6b). Plan Area 5b would become open space within the Specific Plan District EA under this alternative.

Alternative C would be developed as walkable areas with a village centers providing neighborhoodserving retail and office uses, schools, parks, and a mix of housing (with net densities up to 2 and 72 dwelling units per net acre) which would be developed on approximately 5,512 acres; no industrial/warehouse land uses would be developed under this alternative. Alternative C would include the elements identified in Table 6-3, *Alternative C Features*; however, Alternative C would reduce the number of dwelling units and the square feet of commercial land uses based on the reduction in project site's development area.

Table 6-3. Alternative C Features

	Plan Area ^{1,2}						
Land Use	1	2	3	4	5a		
Residential Total (DU)	2,075	3,865	2,675	3,390	2,890		
SFR-Detached (DU)	1,750	2,490	1,650	2,590	2,425		
SFR/MFR-Attached (DU)	325	1,375	1,025	800	465		
Commercial/Industrial Total (SF)	630,000	1,760,000	1,900,000	415,000	350,000		
Retail (Gross Leasable Area/SF)	70,000	670,000	990,000	165,000	100,000		
Office/Research and Development (Gross Floor Area/SF)	560,000	1,090,000	910,000	250,000	250,000		
Source: Grapevine Specific and Community Plan (SREIR Volume 2, Appendix B); Grapevine Special Plan (SREIR Volume 2, Appendix C)							

DU = Dwelling Unit; SF = Square Feet

¹ The areas identified for elementary, middle, and high schools, and institutional uses is not included in the numerical values presented.

² The development maximum for each Plan Area are subject to the overall development caps would be decided based on the reduction in project site acreage.

Air Quality

Under Alternative C, construction and operation activities would be very similar to the Updated 28.7% HBW ICR and Scenarios 1, 2, and 4, and greater than Scenarios 9 and 10. While the overall project development footprint would be south of the California Aqueduct, it can be assumed that similar construction rates would occur. Construction emissions for Plan Areas 1 through 5a would generally remain the same, assuming they are constructed as described in Section 4.3, *Air Quality*. Therefore, this alternative would have similar construction air quality impacts as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios and would remain significant and unavoidable. The buildout of this alternative would continue to result in residential and commercial land uses on the majority of the project site; therefore, it is anticipated that while air pollutant emissions may be less than or similar the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, impacts would continue to be significant and unavoidable under Alternative C.

Greenhouse Gas Emissions

Under Alternative C, construction and operation activities would be very similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. While the overall project development footprint would be south of the California Aqueduct, it can be assumed that similar construction rates would occur. Construction emissions for Plan Areas 1 through 5a would remain the same, assuming they are constructed as described in Section 4.7, *Greenhouse Gas Emissions*. Therefore, this alternative would have similar construction GHG emission impacts as compared to the project and would remain significant and unavoidable. The buildout of this alternative would continue to result in residential and commercial land uses on the majority of the project site; therefore, it is anticipated that while GHG emissions would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios and impacts would continue to be significant and unavoidable under Alternative C.

Noise

Alternative C would develop the project site south of the California Aqueduct; therefore, noise impacts associated with Alternative C would not occur north of the California Aqueduct. Alternative C construction duration and equipment used under this alternative would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, thus noise related impacts

would be similar. Noise sources at the buildout of Alternative C would be similar to those of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios and would remain significant and unavoidable.

Population and Housing

Alternative C would introduce residential and commercial land uses south of the California Aqueduct; however, no new residential, commercial or industrial land uses would occur north of the California Aqueduct. The number of dwelling units under this alternative would be reduced dependent on the reduction of the project site; however, it would not be more that what is currently proposed; the employment resulting from commercial land uses under Alternative C would generally be less than or similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios based on the reduction in project site acreage. Therefore, while development caps have not been set for Alternative C, they would be less than the Updated 28.7% HBW ICR and housing, while reduced ICR Scenarios; thus, the direct and indirect impacts to population and housing, while reduced, would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Transportation and Traffic

Alternative C would introduce residential and commercial land uses south of the California Aqueduct; however, no new residential, commercial or industrial land uses would occur north of the California Aqueduct. The number of dwelling units under this alternative would be reduced dependent on the reduction of the project site; however, it would not be more that what is currently proposed; the employment resulting from commercial land uses under Alternative C would be less than or similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios based on the reduction in project site acreage. Therefore, Alternative C would result in similar traffic generation as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Alternative C would continue to contribute increased traffic volumes to freeways that would be operating under cumulatively unacceptable LOS without the addition of this alternative. Therefore, while this alternative would result in a similar cumulative impact on transportation and traffic as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Conclusion and Relationship to Project Objectives

With implementation of Alternative C, impacts associated with air quality, GHG emissions, noise, population and housing, and transportation and traffic would be less than or similar to the project. This alternative would fulfill most of the project's objectives; however, Alternative C would result in a smaller project that would result in slightly fewer demands on public services and facilities while eliminating significant employment-related revenue sources that would help fund public services and facilities.

Alternative D: No Williamson Act Land Development

Alternative D would reduce the size of the project site in order to eliminate development on lands with Williamson Act contracts, including lands for which notices of non-renewal of Williamson Act contracts have been filed. Development under Alternative D would occur within Plan Areas 1, 2, 6b, and 6c and potions of Plan Areas 3, 4, 5a, 6a, and 6d; no development would occur in Plan Areas 5b, 6e, and the remaining portions of Plan Areas 3, 4, 5a, 6a, and 6d. These areas are represented graphically in Figure 6-3, *Alternative D – No Williamson Act Land Development*. Alternative D would be identical to the project for all developable areas. Alternative D would

contain Specific Plan Districts I, VMU, MU, and EA with Specific Plan Combining District FC and GH. Areas identified as Specific Plan District EA would continue to be designated as open space, including the area between northbound and southbound I-5 lanes.

Alternative D would be developed as walkable areas with a village centers providing neighborhoodserving retail and office uses, schools, parks, and a mix of housing (with net densities up to 2 and 72 dwelling units per net acre) which would be developed on approximately 4,326 acres. Alternative D would allow for a cap on development of dwelling units and square feet of commercial land uses based on the reduction in project site acreage.

Air Quality

Under Alternative D, construction and operation activities would be very similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. While the overall project development footprint would generally occur west of Grapevine Creek, it can be assumed that similar construction rates would occur. Construction emissions for Plan Areas 1, 2, 6b, and 6c would remain the same and would be reduced for Plan Areas 3, 4, 5a, 6a, and 6d. Therefore, this alternative would have similar construction air quality impacts as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios and would remain significant and unavoidable. The buildout of this alternative would continue to result in residential, commercial, and industrial/warehouse land uses; therefore, it is anticipated that while air pollutant emissions may be similar to or less than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, impacts would continue to be significant and unavoidable under Alternative D.

Greenhouse Gas Emissions

Under Alternative D, construction and operation activities would be very similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. While the overall project site development footprint would generally occur west of Grapevine Creek, it can be assumed that similar construction rates would occur. Construction emissions for Plan Areas 1, 2, 6b, and 6c would remain the same and would be slightly reduced for Plan Areas 3, 4, 5a, 6a, and 6d. Therefore, this alternative would have similar construction air quality impacts as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios and would remain significant and unavoidable. The buildout of this alternative would continue to result in residential, commercial, and industrial/warehouse land uses; therefore, it is anticipated that while GHG emissions may be similar to or less than the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Noise

Alternative D would develop the project site mainly west of Grapevine Creek; therefore, noise impacts associated with Alternative D would be less than the Updated 28.7% HBW ICR and Scenarios 1, 2, and 4east of Grapevine Creek. Alternative D construction duration and equipment used under this alternative would be similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios, thus noise related impacts would be similar. Noise sources at the buildout of Alternative D would be similar to those of the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios and would remain significant and unavoidable.

Population and Housing

Alternative D would introduce residential, commercial, and industrial/warehouse land uses mainly west of Grapevine Creek, with a small portion of development occurring in Plan Area 4 and 6d east of the creek. The number of dwelling units under this alternative would be reduced dependent on the reduction of the project site; however, it would not be more that what is currently proposed; the employment resulting from commercial and industrial/warehouse land uses under Alternative D would be less than or similar to under the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios based on the reduction in project site acreage. Therefore, while development caps have not been set for Alternative D, they would be less than or similar to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios; thus, the direct and indirect impacts to population and housing, would be reduced or similar as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios.

Transportation and Traffic

While Alternative D would introduce residential, commercial, and industrial/warehouse land uses mainly west of Grapevine Creek, with a small portion of development occurring in Plan Area 4 and 6d east of the creek, Alternative D would continue to contribute increased traffic volumes to freeways that would be operating under cumulatively unacceptable LOS without the addition of this alternative. Therefore, while this alternative would result in a similar cumulative impact on transportation and traffic as compared to the project.

Conclusion and Relationship to Project Objectives

With implementation of Alternative D, impacts air quality, GHG emissions, noise, population and housing, and transportation and traffic would be similar or only slightly less when compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. This alternative would fulfill most of the project's objectives.

Environmentally Superior Alternative

An EIR must identify the environmentally superior alternative to the project. Alternative A: the No Project Alternative (under both Alternative A-1: No New Community Development Scenario and Alternative A-2: No General Plan Amendment Community Development Scenario) would be environmentally superior to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios on the basis of the minimization or avoidance of physical environmental impacts. However, Section 15126.6(e)(2) of the CEQA Guidelines states that if the no project alternative is found to be environmentally superior, "the EIR shall also identify an environmentally superior alternative among the other alternatives." Although Alternative A is the environmentally superior alternative, it is not capable of meeting most of the basic project objectives. Due to the reduced footprint size, and the ability to reduce, but not avoid, impacts to air quality, GHG emissions, population and housing, and transportation and traffic, Alternative B, Reduced Project – Phase 1 Development Only, is considered the environmentally superior alternative. This is because it has the smallest acreage amount of physical land disturbance, and introduces the smallest number of new people and jobs to the project site. Alternative B thus reduces, but does not eliminate, aesthetics, air quality, GHG emissions, noise, population and housing, transportation and housing, and utilities and service systems impacts as compared to the Updated 28.7% HBW ICR and the five Reduced ICR Scenarios. Accordingly, it is considered the environmentally superior alternative.

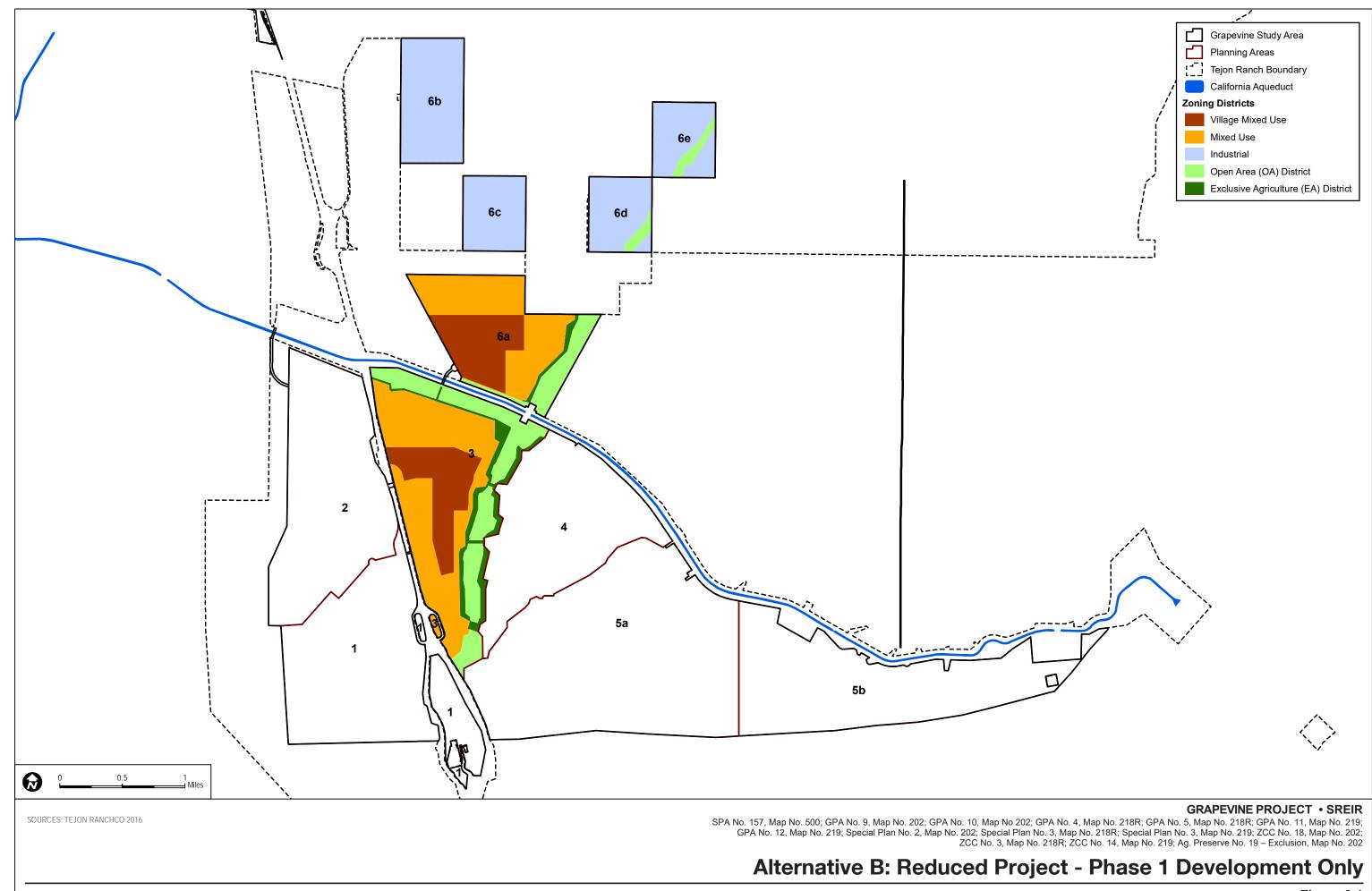


Figure 6-1

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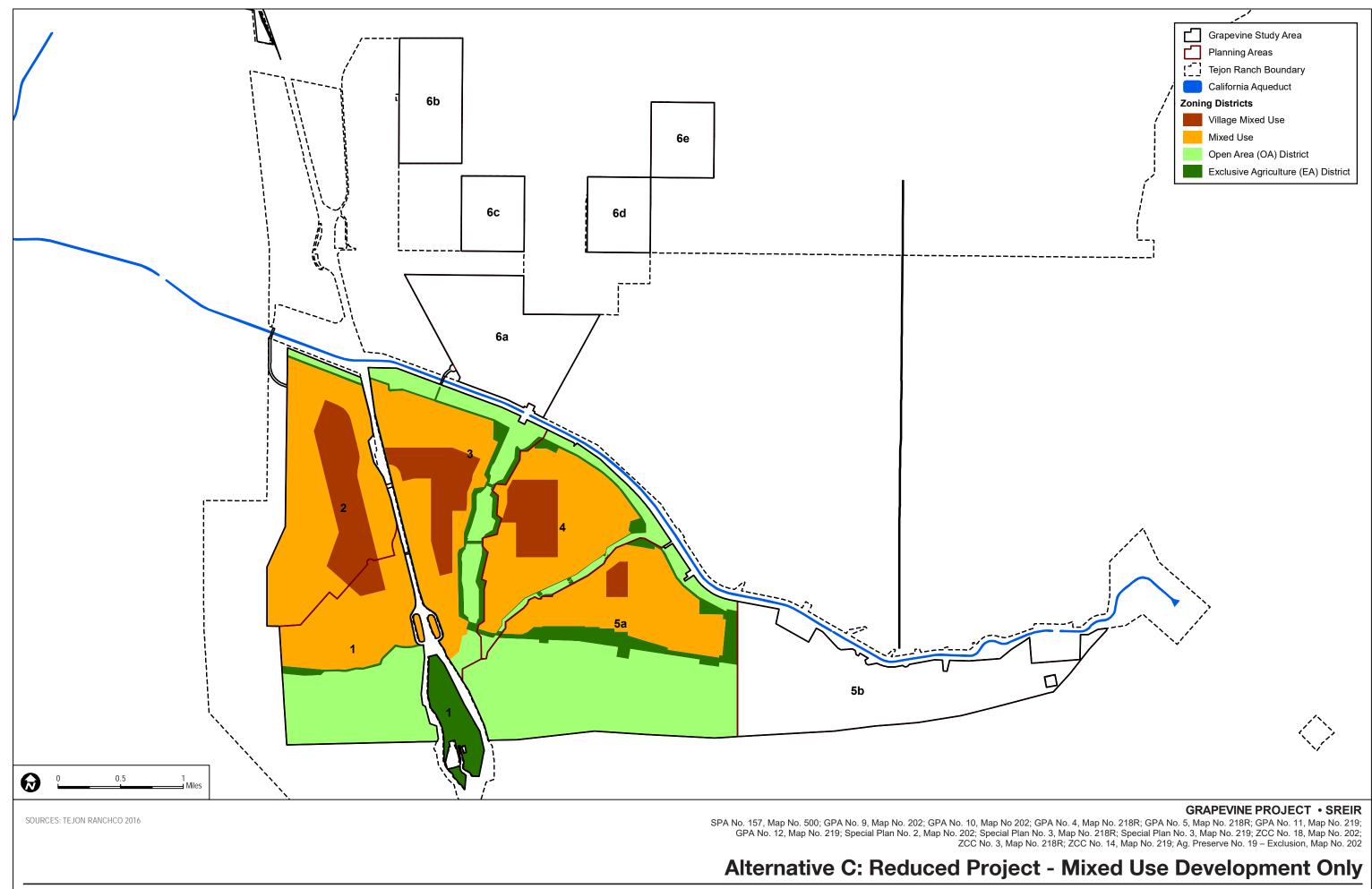


Figure 6-2

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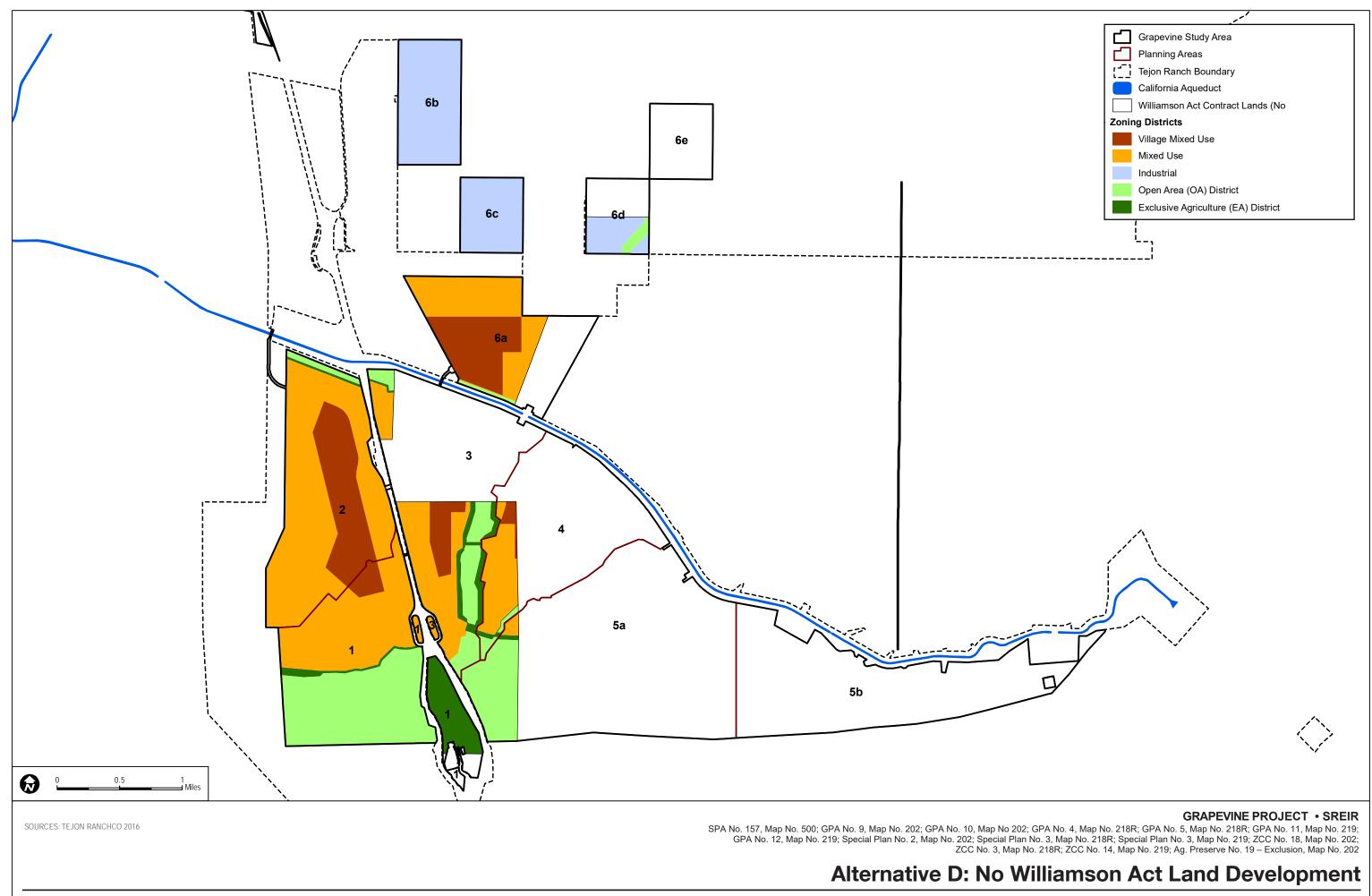


Figure 6-3

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