2.0 EXECUTIVE SUMMARY

A. PURPOSE

It is the intent of the Executive Summary to provide the reader with a clear and simple description of the proposed project and its potential environmental impacts. Section 15123 of the California Environmental Quality Act (CEQA) Guidelines *requires that the summary identify each significant effect with proposed mitigation measures and alternatives that would reduce or avoid that effect. The summary is also required to identify areas of controversy known to the lead agency including issues raised by agencies and the public, and issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects. This section focuses on the major areas of the proposed project that are important to decision-makers.*

B. PROJECT OVERVIEW

The proposed project involves creation of a master-planned community, including a combination of single- and multi-family residential, commercial, and open space development. The project includes two contiguous development schemes: A "Village Center" with commercial and high density residential land uses that would be developed in the southwestern corner of the project site near the intersection of SR-12 and Church Road; and a "neo-traditional" single-family neighborhood that would be developed on a larger portion of the project site north and east of the Village Center (refer to **Figure 3.0-2**). Other land uses that would be developed amidst the Village Center and the single-family neighborhood include a community center and neighborhood parks, open space areas, and roadways.

Total project buildout is anticipated to occur over a 12- to 15-year period. Within this time, the project would be developed in six phases, with the first phase beginning in the summer of 2007. It is expected that 90 to 120 homes would be developed per phase. It is likely that the Village Center would be constructed during one or more of the project phases.

C. TOPICS OF KNOWN CONCERN

The environmental topics addressed in this EIR are listed below by general category:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology & Soils
- Hazards & Hazardous Materials
- Hydrology & Water Quality
- Land Use & Planning
- Mineral & Natural Gas Resources
- Noise
- Population & Housing
- Public Services & Recreation
- Transportation & Circulation
- Utilities & Service Systems

D. IMPACTS, MITIGATION MEASURES, AND UNAVOIDABLE ADVERSE IMPACTS

This EIR assesses each significant impact that could result from implementation of the proposed project. In accordance with CEQA, a summary of the project's significant impacts is provided in **Table 2.0-1, Summary of Project Impacts** (presented at the end of this chapter). Also provided in **Table 2.0-1** is a list of the mitigation measures identified to address the significant impacts, as well as a determination of the level of significance of the impact after implementing the mitigation measures.

E. ALTERNATIVES

The EIR discusses four alternatives to the project, including the No Project Alternative, Alternative 2 (Linked Open Space/Linear Park), Alternative 3 (Expanded Open Space/Linear Park), and Alternative 4 (Expanded Open Space). The alternatives were selected after considering their potential to reduce significant environmental impacts identified for the proposed project. The alternatives examined in this section focus on reducing impacts identified with the project, including damage to scenic resources associated with changes to the swale, and noise impacts related to the project's proximity to SR 12. Based on the analysis presented in this EIR, Alternative 2 (Linked Open Space/Linear Park) was selected as the Environmentally Superior Alternative.

F. ISSUES TO BE RESOLVED/AREAS OF CONTROVERSY

Areas of known controversy, including those raised by public agencies, include safety related to the operations of gas wells in the proposed residential area of the project.

Table 2.0-1
Summary of Project Impacts

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.1 AESTHETICS		
Aesthetics-1: Effects of Scenic Views		
During the initial phase of project construction, the applicant proposes to carry out mass grading of the entire site to allow relocation of the existing gas pipelines and to establish street grades for installation of utilities. The proposed grading would remove all or nearly all of the vegetation on site. The grading plan includes cuts of up to 30 feet on the knoll on the eastern side of the site, and cuts and fill that would create artificial slopes within the swale area to create buildable lots and a detention basin. These changes would significantly alter landforms and would transform the appearance of the site from grassland to bare earth, including many areas that are not scheduled to be developed for several years. In addition, the detention basin would be graded at the beginning of construction, although it would not be needed for the initial phases of home construction. Although some revegetation would likely occur during the period between grading and development, views of the site, including the swale and knoll identified as SLRAs, would be substantially degraded. This would be a significant impact. As the project is developed, the existing grasslands of the project site would be converted to residential and commercial uses. The proposed residential units in the southeastern corner of the site, because of their height and proximity to SR-12, would block views across the site in View A. The residential units in the south-central and western parts of the project site, because of their height, density, and the arrangement of lots, would appear as relatively uninterrupted development. The final design of the proposed multi-family and commercial development is not known at this time, but it is assumed that this development could block or remove views across the project site. These changes would constitute a substantial alteration to a scenic vista and impacts would be significant.	**Aesthetics-1:** The grading plan shall be revised to include phased grading of the site. The swale on the site shall not be subject to mass grading until such time as construction of the proposed drainage basin is required to serve project development. The knoll shall not be graded until the start of the construction phase that would include home sites on the knoll.	This measure would reduce grading impacts, although not to a less than significant level. In addition, some grading and excavation of non-construction-phase areas of the site would be necessary to allow installation of major utility connections, and this grading could have noticeable effects on scenic views. No additional feasible mitigation measures exist to reduce project impacts on scenic views to less than significant. Impacts would, therefore, be significant and unavoidable.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Aesthetics-1: Effects of Scenic Views (continued)		
The existing swale would be converted to a detention system. Some of the natural slopes would remain while others would be graded, and the change in topography would be noticeable. However, the detention system would be planted and visually the area would retain its open space character. The slopes flanking the swale would be graded, with the change in topography substantial in some locations. This change in landform and the closeness of the proposed housing and roads to the swale, particularly on the west side, would affect the view up and along the swale. In addition, the extension of Drouin Drive across the swale and introduction of housing directly north of Drouin Drive would close off the view. These changes would constitute a substantial alteration to a scenic vista and the impact would be significant.		
Aesthetics-2: Damage to Scenic Resources		
The project would develop most of the knoll and slopes east of the swale. Part of the knoll in the southeastern corner of the site would be reserved for a proposed park and well site, but most of the top of the knoll, and the area connecting it to the prominent hilltop off site, would be developed. In addition, the topography of the hilly area east of the swale, as well as the topography of the slopes west of the swale, would be altered. The knoll itself would be lowered in elevation by up to 30 feet, and grading on the slopes east of the swale would involve cuts of up to 12 feet and fills of up to 16 feet. The knoll just west of the swale would be lowered by up to 24 feet, and grading on the slopes west of the swale would involve fills of up to 14 feet. These changes are considered substantial and would alter, rather than preserve, the character of the existing topography. The conversion of the knoll from undeveloped open space to developed residential uses and the accompanying changes to on-site topography are considered significant impacts to visual resources.	**Aesthetics-2a:** The grading plan for the proposed drainage basin shall be revised to reduce proposed slopes to the maximum extent possible while allowing adequate storage capacity. Lots closest to the eastern side of the swale near SR-12 shall be reconfigured or eliminated to allow the existing contours of the swale to be retained to the maximum extent possible. Slopes on both sides of the swale shall be reduced and contoured to resemble natural slopes, and replanted with grasses and native vegetation immediately after construction. **Aesthetics-2b:** The grading plan for the knoll in the southeastern portion of the site shall be revised to reduce proposed cuts to the maximum extent possible. Lots closest to the eastern side of the swale near SR-12 shall be reconfigured or eliminated to allow the existing contours of the knoll to be retained to the maximum extent possible. Engineered slopes shall be replanted with grasses and native vegetation immediately after construction.	These measures would reduce grading impacts, although not to a less than significant level. No additional feasible mitigation measures exist to reduce project impacts on scenic resources in the project area to less than significant. Impacts would, therefore, be significant and unavoidable.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Aesthetics-3: Effects on Existing Visual Character or Quality of the Site and its Surroundings		
Several project characteristics potentially conflict with General Plan policies addressing visual character. Those characteristics include: • The conversion of most of the knoll east of the swale to residential development; • The encroachment of a roadway and residential uses on the swale, especially on the western side; • The major cuts and fills involved in the proposed grading concept, and the resulting alterations to the existing topography; • The development of housing immediately adjacent to SR-12; and • The lack of buffer areas immediately adjacent to SR-12. These features could all conflict with one or more of the General Plan policies listed earlier in this section. (For further discussion, see Section 4.9, Land Use.) In addition, the General Plan contains a number of policies intended to achieve the City's desired community character in new development. The policies relevant to the proposed project are listed mainly under Goals 5.9 through 5.12, 5.14, and 5.15. Project conformance with many of these policies cannot be determined at this time because the specifics of project design are not known. Because of the possible conflicts with General Plan policies intended to preserve existing visual character, and the uncertainty regarding conformance with policies intended to achieve City community character goals, the conversion of the project site from undeveloped land to developed residential and commercial uses is considered to be an adverse and significant impact to visual character, following project implementation.	**Aesthetics-3a:** Prior to approval of the siting and design for the proposed commercial and multi-family uses, the project developer shall demonstrate that those project components conform with the design criteria and performance standards prescribed in the Community Character & Design Element of the General Plan, in particular Policies 5.14.A through 5.14.C, 5.15.A through 5.15.K, and 5.17.A through 5.17.F. **Aesthetics-3b:** The project developer shall revegetate all exposed slopes immediately upon cessation of grading activities. **Aesthetics-3c:** Prior to commencement of grading on the site, the project developer shall prepare an erosion control plan, to be reviewed by the City. Erosion control measures shall be designed and implemented prior to the rainy season based on the site's configuration and extent of soils or fill exposed to storm water. The measures could include straw wattles, silt fencing, hay bales, sediment collection basins, and filtration systems. If used, silt fencing shall be designed for the site's soils type. Storm water discharge and release points from silt fencing shall be designed to minimize erosion. If soils will be exposed to winter rains, the erosion control measures will require inspection, modification, and remediation during the rainy season in order to comply with regulatory requirements.	Implementation of these mitigation measures would reduce impacts, but not to a less than significant level. Impacts related to effects on visual character would remain significant and unavoidable.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Aesthetics-3: Effects on Existing Visual Character or Quality of the Site and its Surroundings (continued)		
In the shorter term, project construction could result in visual impacts. All of the major grading for the entire site would occur when the Phase 1 area of the project is developed as opposed to occurring in each project phase. This approach is proposed because the fill needed for development in the earlier phases would come from the deep cuts that would occur on the hillier portions of the site. As a result, parts of the site could be graded but undeveloped for up to 15 years. The treatment of the vacant parts of the site after grading has not been determined; without proper stabilization and protection, the vacant parts of the site could be visually unattractive for a substantial period of time. The exposed area would be large enough to be noticeable, and would be visible from SR-12, Homecoming, and other locations. For those reasons, the impact to visual character is considered significant.		
Aesthetics-4: Light and Glare		
The project would include light sources (i.e., interior and exterior building lighting and vehicle headlights) that would introduce nighttime light sources to the project site and vicinity. The proposed homes would include reflective surfaces, such as windows and possibly brightly colored surfaces, which could constitute sources of glare. The introduction of light and glare from new residences could be noticeable to viewers in the surrounding area, particularly to residents of the homes to the north of Riverwalk and travelers along SR-12. In addition, the proposed commercial area in the southwestern part of the site could constitute a major source of lighting, especially for parking lots. The project applicant has not yet prepared a lighting plan or landscape plan. Thus, it is not known whether the project would incorporate design features such as low-profile, low-intensity lighting or vegetation to screen light and glare sources at the project site. Given the absence of lighting sources in the area now, the project impact on lighting spillover and night-sky illumination could be substantial. Without mitigation, project light and glare impacts could be significant.	**Aesthetics-4a:** The project developer shall install low-profile, low-intensity lighting directed downward to minimize light and glare. High-intensity outdoor lighting on individual homes and structures shall be prohibited (this prohibition shall be included in the development CC&Rs, with specific guidelines as to what lighting is appropriate). **Aesthetics-4b:** The project developer shall use shielded fixtures to minimize glare produced by the lighting on the project site. **Aesthetics-4c:** The project developer shall provide a photometric plan to the City that includes all lighting for the commercial and multi-family areas, as well as street lighting for the residential area and lighting for all parks and common areas. The photometric calculations shall extend past the site boundaries, so that the extent of spillover can be determined.	Implementation of these mitigation measures would reduce impacts, but not to a less than significant level. Impacts related to light and glare would remain significant and unavoidable.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Aesthetics-5: Cumulative Impacts		
The following analysis of cumulative impacts tiers off of the visual resources analysis in the General Plan EIR. That section, which is summarized below, is incorporated by reference. The General Plan EIR found the potential for impacts in five areas, four of which would be relevant to the proposed project. 1. Loss of Aesthetic Appeal. The General Plan EIR found that the development anticipated under the General Plan could substantially alter the City's small-town character, changing it to a more suburban bedroom community. However, General Plan policies will "facilitate enhancement of the City's visual character and aesthetic appeal." The EIR concluded that the General Plan would have a beneficial impact on the City's aesthetic appeal. 2. Degradation of Sensitive Viewing Corridors. The General Plan EIR found that the development anticipated under the General Plan would accommodate new development in proximity to sensitive viewing corridors, including SR-12. However, the EIR concluded that "with proper site design review in accordance with the policies and guidelines [in the General Plan], no significant adverse impacts are expected." 3. Impaired Views of the Sacramento River and Montezuma Hills. With proper site design review, site design and building construction would not obstruct views of the Sacramento River or Montezuma Hills. 4. Increased Light and Glare. The General Plan EIR found the increase in nighttime lighting and daytime glare throughout the City to be a significant impact. As noted earlier in this section, the project may not conform with certain General Plan policies related to visual quality, and as a result, the project could result in significant impacts on scenic views, visual resources, visual character, and light and glare. Given the size of the proposed project relative to future development in the City, the project could contribute to cumulatively considerable visual changes that would occur as the City achieves buildout. Therefore, the project is considered to contribute to cumulatively significant aesthetic impacts.	The project-specific mitigation measures identified earlier in this section would also address the project contribution to the cumulative impacts. However, project impacts related to scenic views, scenic resources, visual character, and light and glare would remain significant.	Implementation of these mitigation measures would reduce impacts, but not to a less than significant level. Cumulative Impacts would remain significant and unavoidable.

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.3 AIR QUALITY		
Air Quality-1: Construction Emissions		
During construction of the proposed project, on-site stationary sources, heavy-duty construction vehicles, construction worker vehicles, and energy use would generate emissions. Fugitive dust would also be generated during grading and construction activities when grading equipment breaks down surface materials. The resulting dust, which includes PM10, is subsequently entrained into the air by wind and vehicle tires. Although much of this airborne dust would settle out on or near the project site, smaller particles would remain in the atmosphere, increasing existing particulate levels within the surrounding area. The emissions of ROG and NOx would exceed the thresholds of significance during each phase of construction, and CO emissions would exceed the threshold in some phases. Although the project's construction-related emissions would be temporary in duration, in the absence of control measures, the emissions could be substantial. Without the implementation of dust control measures, impacts related to construction emissions would be significant.	**Air Quality-1a:** To the extent that equipment and technology is available and cost effective, the applicant shall encourage contractors to use alternate fuels, catalyst and filtration technologies, and retrofit existing engines in construction equipment. **Air Quality-1b:** Minimize idling time to five minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. **Air Quality-1c:** To the extent practicable, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions, which can result in five percent fewer emissions. **Air Quality-1d:** District Rule 2.3 requires controlling visible emissions exceeding 40 percent opacity to no more than 3 minutes in any one hour, which includes all (on-road and off-road) diesel-powered equipment. This rule would be enforced by the Y-S AQMD. In some cases an on-site observer may be used to monitor the diesel equipment and fugitive dust. **Air Quality-1e:** Site grading will be phased into four linear phases to avoid large grading activities over a small period of time. Phased grading activities would reduce the daily emissions of PM_{10}. As well, grading activities would occur over a smaller portion of land per day, allowing construction workers to more thoroughly control fugitive dust.	With implementation of the mitigation measures described, construction emissions of ROG and NOx would continue to be significant.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Air Quality-1: Construction Emissions (continued)		
	Also, a number of district rules and regulations may apply to project construction activities. These rules and regulations include the following, which must be implemented as part of the project design, as applicable: • Any open burning which requires approval and issuance of a burn permit from the Air District and shall be performed in accordance with District Rule 2.8, Open Burning, General. • Architectural coatings and solvents used at the project shall be compliant with District Rule 2.14, Architectural Coatings. • Cutback and emulsified asphalt application shall be conducted in accordance with District Rule 2.28, Cutback and Emulsified Asphalt Paving Materials. • In the event that demolition, renovation or removal of asbestos-containing materials is involved, District Rule 9.8 and 9.9 require Y-S AQMD consultation and permit prior to commencing demolition or renovation work. • Portable equipment must meet either air district or statewide registration or permitting standards (District Rules 3.1, 3.2 and 3.3 where applicable or Health and Safety Code §41753.2(b)). • Incorporate "Best Available Fugitive Dust Control Measures," as recommended by the air quality management district.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
Air Quality-2: Operational Emissions		
Operational emissions associated with the ultimate development and operation of the proposed project would result primarily from increased vehicular trips to and from the residential units and commercial and recreational developments. Other sources of emissions associated with the projects would include area source emissions, such as the use of natural gas for water heaters and cooking appliances. Overall emissions would exceed the thresholds primarily due to wintertime area source emissions from wood stoves and fireplaces and from fugitive road dust (PM10) generated by vehicle traffic. Thus, the project would result in a significant air quality impact.	**Air Quality-2:** The applicant shall incorporate the following measures into the design and plans for residential and nonresidential (i.e., commercial) components of the project: a. Provide transit shelters or benches to encourage use of transit. b. Provide street lighting. c. Provide transit route signs and displays. d. Provide sidewalks, bicycle paths, and pedestrian paths to encourage non-motorized travel. e. Provide direct pedestrian connections between residential and commercial areas. f. Provide wide sidewalks and on-site pedestrian facilities in nonresidential areas. g. Provide shade trees to shade sidewalks. h. Provide a grid-based street network to expedite traffic flow.	These mitigation measures were considered in the estimated emissions. Thus, operational emissions after mitigation would continue to be significant.

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.4 BIOLOGICAL RESOURCES		
Biological-4: Special Status Bird Species/Construction-Related Loss of Active Nests		
The proposed project would remove non-native grasslands that provide potential nesting sites for special-status bird species known to occur in the area, including California horned lark, loggerhead shrike, western burrowing owl, and northern harrier. In addition, construction related activities would occur in proximity to the off-site drainage canal that provides suitable nesting habitat for tricolored blackbird. Should these special-status bird species nest on or adjacent to the site, construction-related activities could result in the direct loss of active nests or the abandonment of active nests by adult birds during that year's nesting season. Depending on the number and extent of special-status bird nests on the site that may be destroyed or removed, the loss of active bird nests could have a substantial adverse effect on a special-status species. Therefore, impacts related to the loss of active special-status bird nests would be potentially significant. The on-site grasslands also provide suitable nesting habitat for several common bird species. The Migratory Bird Treaty Act and the California Fish and Game Code protect active nests all native bird species. Therefore, any construction-related loss of active common and/or special-status bird nests would conflict with state and federal law.	**Biological-4a:** The applicant shall retain a qualified biologist (with selection to be approved by the City) to conduct nest surveys on the site prior to construction or site preparation activities occurring during the nesting/breeding season of native bird species (typically February through August). The surveys shall be conducted no earlier than 14 days prior to commencement of construction/restoration activities. **Biological-4b:** If active nests of bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code (which, together, apply to all native nesting birds) are present in the construction zone or within 200 feet of this area, temporary construction fencing shall be erected at a minimum of 100 feet around the nest site. This temporary buffer may be greater depending on the bird species and construction activity, as determined by the biologist. **Biological-4c:** At the discretion of the biologist, clearing and construction within the fenced area shall be postponed or halted until juveniles have fledged and there is no evidence of a second nesting attempt. The biologist shall serve as a construction monitor during those periods when construction activities will occur near active nest areas to ensure that no inadvertent impacts on these nests will occur.	Implementation of these mitigation measures would reduce impacts to special-status nesting birds to a less-than-significant level. Implementation of these measures would also ensure compliance with state and federal law protecting active bird nests.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Biological-5: Special Status Bird Species/Loss of Foraging Habitat		
Development of the project would remove 233.7 acres of grassland foraging habitat potentially used by several special-status bird species, including golden eagle, white-tailed kite, greater sandhill crane, and Swainson's hawk. None of these species are expected to nest on site due to a lack of suitable nesting habitat. Given the mobility of golden eagle, white-tailed kite, and greater sandhill crane, and the abundance of agricultural lands in the project area (which provide suitable foraging habitat for these species), the reduction in foraging habitat would not be expected to have a substantial adverse effect on these species. Swainson's hawk typically nest in areas adjacent to or nearby suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations. Based on a review of the CNDDB, numerous Swainson's hawk nests are known to have historically occurred in the project area. The closest known active nest is located approximately 2.75 miles northeast of the site. The CDFG has developed policies to protect suitable Swainson's hawk foraging habitat within a 10-mile radius of an active nest (i.e., a nest used during one or more of the last 5 years). The project's removal of 233.7 acres of suitable Swainson's hawk foraging habitat could have an adverse affect on the nesting success of this species in nearby areas. Therefore, impacts related to the loss of Swainson's hawk foraging habitat would be significant.	**Biological-5:** As recommended by the CDFG, the applicant shall mitigate for the loss of suitable Swainson's hawk foraging habitat at a 0.75:1 ratio. As the project would result in the loss of 233.7 acres of suitable foraging habitat, the applicant shall acquire a minimum of 175.3 acres of suitable Swainson's hawk foraging habitat at a CDFG-approved location. Prior to the issuance of a grading permit, these lands shall be protected through fee title acquisition or conservation agreement (subject to approval by the CDFG) on agricultural lands or other suitable habitats that provide foraging habitat for Swainson's hawk. A land management plan shall be prepared by a qualified biologist that includes measures to enhance the value of the protected land as foraging habitat for Swainson's hawk.	Implementation of **Biological-5** would satisfy the requirements of the CDFG and reduce potential impacts resulting from the loss of Swainson's hawk foraging habitat to a less-than-significant level. Based on initial conversations with mitigation brokers, potential mitigation lands are available in the project area and implementation of **Biological-5** would, therefore, be feasible.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Biological-7: Special-Status Species/Irrigation and Stormwater Runoff		
Over-irrigation of yards or other landscaped areas, especially when combined with the use of chemicals, could lead to runoff that contains pesticides, herbicides, nitrates, and other contaminants. Any runoff containing high levels of nutrients (particularly fertilizers and waste products such as nitrogen and phosphorous) can result in eutrophication (excessive nutrient buildup) in an aquatic system. This in turn can result in depletion of available oxygen due to increased biological oxygen demand (BOD) and reduce available dissolved oxygen for fish and other aquatic organisms. Other chemicals, pesticides, and herbicides can also adversely affect aquatic systems. As discussed in **Section 4.8, Hydrology & Water Quality**, the project would increase the area of impervious surfaces and would result in an increase in stormwater runoff. If uncontrolled, this runoff could enter the Sacramento River and result in eutrophication or other adverse affects to wildlife, including the potential loss of special-status species. Therefore, impacts related to increased irrigation and stormwater runoff would be potentially significant.	No additional mitigation required	Requirements and measures identified in **Section 4.8, Hydrology & Water Quality**, for water quality impacts would also mitigate potential impacts from irrigation and stormwater runoff on special-status species potentially occurring within off-site drainages (e.g., the Sacramento River) that would receive runoff from the project site.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Biological-8: Sensitive Plant Community/Federally Protected Wetlands		
Constructing the proposed project would fill approximately 1.92 acres of the 2.30 acres of seasonal wetlands on the project site. All of the seasonal wetlands on the site are considered to be a sensitive plant community by resource agencies. Wetlands 1, 2, 4, and 5 are under the jurisdiction of the ACOE and all the wetlands on the site are potentially under the jurisdiction of the CDFG and RWQCB. Wetlands 1, 2, and 3 would be completely filled, while 0.30 acre of Wetland 4 and 5 would be filled. Given the extent of the seasonal wetland habitat that would be filled, the proposed project would have a substantial adverse affect on a sensitive plant community and on federally protected wetlands. Therefore, related impacts would be significant.	**Biological-8a:** Prior to the issuance of a grading permit, the applicant shall obtain all required permits/agreements from the ACOE, the RWQCB, and the CDFG and comply with all specified mitigation measures contained in those permits/agreements. Although it is expected that the measures contained in the agreements/permits would feasibly mitigate the impact, they cannot be relied upon for CEQA compliance because they have not yet been issued by the resource agencies and their exact content is unknown. Therefore, consistent with the requirements of CEQA, the applicant shall also implement measure Biological-7b to ensure that the proposed project would not result in a net loss of wetland habitat. **Biological-8b:** The applicant shall implement the Wetland Mitigation Plan prepared for the Riverwalk Project by Wetlands Research Associates (January 2004). As specified in the plan, a 3.26-acre seasonal wetland will be created as compensatory mitigation for the placement of fill in 1.92 acres of existing seasonal wetlands. The created wetland will incorporate and enhance the remaining 0.38-acre of Wetland 4 and 5 that would not be filled. The created wetland shall be constructed, monitored for a five-year period (by a City approved biologist, at the expense of the developer), and subject to the success criteria as described in the Wetland Mitigation Plan (see **Appendix 4.4**). If annual or final success criteria are not met, the applicant shall prepare an analysis of the cause(s) of failure and fund the additional procedures necessary for successful completion of the mitigation effort. The wetland mitigation area shall be permanently preserved as described in the Wetland Mitigation Plan. If deemed appropriate by the ACOE, CDFG, and/or the RWQCB, the on-site wetland creation mitigation required by this EIR may serve the dual purpose of satisfying the conditions (or a portion of the conditions) of the permits (potentially) required from these agencies.	Implementation of these mitigation measures would increase the acreage and functional value of on-site wetlands, and would reduce impacts to sensitive plant communities and jurisdictional wetlands to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Biological-10: Federally Protected Wetland/Increased Light and Glare		
Nighttime illumination is known to adversely affect some species of animals in natural areas. Nighttime light can disturb breeding and foraging behavior and can alter breeding cycles of birds, mammals, and nocturnal invertebrates. Following buildout of the project, the only natural habitat remaining on the project site would be the preserved/enhanced wetland area. Implementation of the wetland mitigation plan would increase the acreage and habitat value of the wetland. If uncontrolled, light spillage from the proposed development into the on-site wetland mitigation could adversely affect the composition and behavior of the animal species that occur in this area. Because increased nighttime lighting and glare could have a substantial adverse affect on a federally protected wetland by limiting its biological value, impacts related to increase light and glare are considered to be significant.	**Biological-10:** The applicant shall develop a lighting plan in coordination with a qualified biologist to ensure that no spillover of light into the wetland mitigation area occurs. The plan shall require that all lighting bordering the wetland mitigation be downcast luminaries with light patterns directed away from the wetland area.	Implementation of mitigation measure **Biological-10** would reduce indirect impacts on federally protected wetlands from increased light and glare to a less-than-significant level.
Biological-13: Cumulative Impacts		
The primary impact of the proposed Riverwalk project would be the loss of 233.7 acres of annual grassland habitat that provides foraging habitat for Swainson's hawk and a variety of other wildlife species. These grasslands also provide suitable nesting habitat for several common and special-status bird species. Development of the Riverwalk site and the anticipated development of the agricultural areas within the planning area would eliminate the vast majority of the existing undeveloped lands/wildlife habitat within the City limits. Although there are extensive agricultural lands in the project region, the proposed project, in combination with other anticipated development in the region, would result in the net loss of over 730 acres of grassland/agricultural habitat from within the Rio Vista Planning Area that cannot be replaced. This loss would substantially reduce the habitat of numerous wildlife species and could reduce the number of Swainson's hawks that successfully nest in the project region. Therefore, the net loss of 233.7 acres of wildlife habitat would contribute to the regional loss of wildlife habitat and represents a significant cumulative impact.	**Biological-5** **Biological-8a** **Biological-8b** (see above)	Implementation of mitigation measure **Biological-5** would reduce the project's contribution to the cumulative loss of wildlife habitat. However, while habitat types similar to those impacted can be preserved, planted, and/or restored elsewhere, no measures are available that will fully mitigate the projects contribution of 233.7 acres towards the ongoing loss of wildlife habitat in the region. The project's contribution of 233.7 acres towards the ongoing loss of wildlife habitat in the region would, therefore, represent a significant unavoidable cumulative impact. Implementation of mitigation measures **Biological-8a** and **Biological-8b** would increase the acreage and functional value of on-site wetlands, and would reduce the project's contribution towards the cumulative loss of wetlands in the project area to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.5 CULTURAL RESOURCES		
Cultural-1: Damage to Known or Unknown Prehistoric or Historic Archeological Resources		
No known unique prehistoric or historic archeological resources were identified on the project site. However, the project site is located in a region that is known to be archeologically sensitive. Although some soils beneath the project site have been disturbed as a result of historic use of the site, any native soils or rock formations currently present on the site could contain unknown prehistoric or historic archeological resources. Construction of the project could result in disruption or adverse effects to these unknown resources where construction involves land alteration activities (i.e., clearing vegetation, grading, driving heavy vehicles, soil compacting, and landscaping.) Thus, project impacts related to unknown prehistoric and historic archeological resources would be significant.	**Cultural-1a:** Prior to excavation and construction on the proposed project site, the prime construction contractor and any subcontractor(s) shall be cautioned on the legal and/or regulatory implications of knowingly destroying cultural resources or removing artifacts, human remains, bottles, and other cultural materials from the project site. **Cultural-1b:** The project applicant shall identify a qualified archaeologist prior to any demolition, excavation, or construction. The City shall approve the selected archaeologist prior to issuance of the grading permit. The archaeologist would have the authority to perform spot check monitoring of subsurface construction and watch for and evaluate artifacts or resources that may be uncovered. The archaeologist would also have the authority to temporarily halt excavation and construction activities in the immediate vicinity (within a fifty-meter radius) of a find if significant or potentially significant cultural resources are exposed and/or adversely affected by construction operations. **Cultural-1c:** Reasonable time would be allowed for the qualified archaeologist to notify the proper authorities for a more detailed inspection and examination of the exposed cultural resources. During this time, excavation and construction would not be allowed in the immediate vicinity of the find; however, those activities could continue in other areas of the project site. **Cultural-1d:** If any find were determined to be significant by the qualified archaeologist, representatives of the project developer or construction contractor and the City, and the qualified archaeologist, would meet to determine the appropriate course of action. **Cultural-1e:** All cultural materials recovered as part of the monitoring program would be subject to scientific analysis, professional museum curation, and a report prepared according to current professional standards.	These measures would reduce impacts related to unknown prehistoric and historic archeological resources to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Cultural-1: Damage to Known or Unknown Prehistoric or Historic Archeological Resources (continued)		
	Cultural-1f: If human remains are discovered at the project site during construction, work at the specific construction site at which the remains have been uncovered shall be suspended, and the City of Rio Vista and Solano County coroner shall be immediately notified. If the remains are determined by the County coroner to be Native American, the Native American Heritage Commission (NAHC) shall be notified within 24 hours, and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains.	
Cultural-2: Damage to Known or Unknown Human Remains		
The archeological inventory and evaluation of the project site indicated that there are no known human remains located on the project site. However, the project site is located in a region known to be archeologically sensitive. It is possible that an unknown burial site could be located on the project site. Therefore, project impacts related to unknown human remains would be significant.	The mitigation measures for the impact to unknown prehistoric and historic archeological resources (**Cultural-1a** through **Cultural-1f**) would also be applicable to unknown human remains.	These measures would reduce impacts related to unknown human remains to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Cultural-3: Disturbance to Known or Unknown Paleontologic Resources		
Although no known paleontological resources have been identified on the project site, unique paleontological resources have been identified in Quaternary-aged alluvial deposits in the Rio Vista area. Because the project site also contains Quaternary-aged alluvial deposits, it is possible that unknown paleontological resources could exist on the site and could be damaged during construction of the project. Therefore, project impacts on unknown paleontological resources would be significant.	**Cultural-3a:** The project applicant shall identify a qualified paleontologist prior to any excavation or construction. The City shall approve the selected paleontologist prior to issuance of the grading permit. The project paleontologist shall attend the pre-grading meeting to discuss how to recognize paleontological resources in the soil during grading activities. The prime construction contractor and any subcontractor(s) shall be cautioned on the legal and/or regulatory implications of knowingly destroying paleontological resources or removing paleontological resources from the project site. **Cultural-3b:** If paleontological resources are encountered during the course of site development activities, work in that area shall be halted and the project paleontologist shall be notified of the find. The project paleontologist shall have the authority to temporarily divert or redirect grading to allow time to evaluate any exposed fossil material. "Temporary" shall be two working days for the evaluation process. **Cultural-3c:** If the project paleontologist determines that the resource is significant, any scientifically significant specimens shall be properly collected by the project paleontologist. During collecting activities, contextual stratigraphic data shall also be collected. The data will include lithologic descriptions, photographs, measured stratigraphic sections, and field notes. **Cultural-3d:** Scientifically significant specimens shall be prepared to the point of identification (not exhibition), stabilized, identified, and offered for curation to a suitable repository that has a retrievable storage system, such as the University of California, Berkeley, Museum of Paleontology.	These measures would reduce impacts related to unknown paleontological resources to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Cultural-3: Disturbance to Known or Unknown Paleontologic Resources (continued)		
	Cultural-3e: The project paleontologist shall prepare a final report at the end of the earthmoving activities; the report shall include an itemized inventory of recovered fossils and appropriate stratigraphic and locality data. The project paleontologist shall send one copy of the report to the City of Rio Vista; another copy should accompany any fossils, along with field logs and photographs, to the designated repository.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.6 GEOLOGY AND SOILS		
Geology-2: Seismic-Related Ground Failure, including Liquefaction		
There is a potential for seismic-related liquefaction in areas consisting of saturated, low-density, poorly-graded sand and silty sand, which were encountered in the alluvial channel. The approximate limits of these materials are shown on Plate No. 62, in **Appendix 4.6**, and constitute approximately 15 percent of the project site. Without proper soil engineering and foundation design and construction, implementation of the proposed project could expose people and/or structures to hazards associated with seismic-related ground failure in the areas mentioned. Therefore, project impacts related to seismic-related ground failure would be significant. It should be noted that Treadwell & Rollo's peer review of the Kleinfelder report found that it did not adequately characterize the potential liquefaction areas, and that the risk may be lower than reported by Kleinfelder because of the presence of a thick deposit of clay. Impacts are therefore expected to be less than would be suggested by the Kleinfelder analysis. Although the unsaturated loose to medium dense sand deposits above groundwater would not be subjected to liquefaction, they may settle due to cyclic densification during a seismic event. (Cyclic densification occurs when non-saturated, cohesionless soil is compacted by earthquake vibrations, causing differential settlement.) The amount of settlement due to cyclic densification is typically an order of magnitude less than that due to liquefaction; mitigation for liquefaction impacts would also mitigate potential impacts from cyclic densification.	**Geology-2a:** In the drainage areas that were identified by Kleinfelder as having a potential for soil liquefaction, the project developer's geotechnical engineer shall have additional borings placed using mud rotary-wash drilling equipment or cone penetration tests (CPTs) to at least 50 feet below proposed subgrade and assessed for liquefaction potential. In other areas where borings encountered clay deposits to the maximum depth explored, additional exploration shall be performed to assess liquefaction to a depth of 50 feet bgs using mud rotary-wash drilling equipment or CPTs. **Geology-2b:** In areas that this process identifies as having a significant risk of liquefaction or settlement due to cyclic densification, the project developer shall implement all of the appropriate recommendations in the Kleinfelder geotechnical investigation conducted for the proposed project. The recommendations from the investigation are included in **Appendix 4.6** of this Draft EIR. These recommendations include measures to avoid or reduce potential hazards related to seismic-related ground failure, such as proper foundation design and soil preparation. Foundation design alternatives include the construction of spread foundations, drilled pier and grade beam foundation, and post tensioned foundation systems. The seismic design recommendations shall be evaluated by the project engineer to ensure they are consistent with the current 2001 California Building Code. Soil preparation measures include moisture conditioning, overexcavation of soils and replacement with engineered fill, and dynamic deep compaction (densifying soil).	This measure would reduce seismic-related ground failure impacts to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Geology-3: Geologic/Soil Instability		
As stated previously, there is a potential for lateral spreading, ground lurching, and settlement associated with liquefaction at the project site. In addition, the project includes manufactured slopes, which could also become unstable during a seismic event. Based on the proposed development's preliminary grading plans, fills up to 25 feet are anticipated. Settlement of deep fills can be expected due to normal hydrocompression, seismic compression, and secondary strain. Without implementation of proper grading techniques, soil engineering, site preparation, and foundation design and construction, development of the proposed project could expose people or structures to seismic hazards related to geologic and soil instability. Therefore, project impacts associated with geologic and soil instability would be significant.	**Geology-3:** The project developer shall implement all of the appropriate recommendations in the Kleinfelder geotechnical investigation conducted for the proposed project. The recommendations from the investigation are included in **Appendix 4.6**. These recommendations include measures to avoid or reduce potential hazards related to geologic and soil instability, such as proper foundation design and soil preparation. The project developer's geotechnical engineer shall provide recommendations for moisture conditioning and compaction of deep fills and estimates for post-construction fill settlements. The post-construction fill settlements shall be considered in the design of surface improvements, including but not limited to surface drainage, underground utilities, structures, and hardscape. Foundation design alternatives include the construction of spread foundations, drilled pier and grade beam foundation, and post-tensioned foundation systems. The seismic design recommendations shall be evaluated by the project engineer to ensure they are consistent with the current 2001 California Building Code. Soil preparation measures include moisture conditioning, overexcavation of soils and replacement with engineered fill, and dynamic deep compaction (densifying soil).	This measure, together with Mitigation Measure **Geology-2**, would reduce impacts related to soil instability to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Geology-4: Expansive Soils		
The project site has a moderate to high potential for expansive soils. Without proper design and construction, structures at the project site could experience substantial damage. Therefore, project impacts related to expansive soils would be significant.	**Geology-4:** The project developer shall implement all of the appropriate recommendations in the Kleinfelder geotechnical investigation conducted for the proposed project. The recommendations from the Kleinfelder investigation are included in **Appendix 4.6**. These recommendations include measures to avoid or reduce potential hazards related to expansive soils, such as proper foundation design and soil preparation. Foundation design alternatives include the construction of spread foundations, drilled pier and grade beam foundation, and post-tensioned foundation systems. The seismic design recommendations shall be evaluated by the project engineer to ensure they are consistent with the current 2001 UBC. Soil preparation measures include moisture conditioning, overexcavation of soils and replacement with engineered fill, and dynamic deep compaction (densifying soil).	This measure, together with Mitigation Measures **Geology-2** and **Geology-3**, would reduce impacts related to expansive soils to a less-than-significant level.
Geology-5: Slope Stability/Landslides		
Based on the preliminary grading plans, significant cut and fill slopes will be constructed for this project. If not properly designed and constructed, cut and fill slopes may become unstable, resulting in significant earth movement. Structures overlying or at the base of unstable slopes may encounter significant structural damage due to the earth movement. Therefore, project impacts related to slope stability would be significant.	**Geology-5:** Cut and fill slopes shall be designed for acceptable static and seismic factors of safety. Fill slopes shall be properly keyed and benched into the underlying firm native soil. Subdrains and surface drainage improvements shall be installed to reduce the introduction of water into fill slope material.	This measure would reduce impacts related to slope stability to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.7 HAZARDS AND HAZARDOUS MATERIALS		
Hazards-1: Potential Hazards to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Associated With Natural Gas Pipelines and Well Heads		
The proposed project includes removal and replacement of existing natural gas pipelines running through the project site. As previously described, the existing pipelines include a small gathering system composed of low-pressure 30 psig pipelines, and one high pressure 800 psig pipeline. Additionally, there are one active well, two idle wells, and a valve station in the southern portion of the site. Pipelines on-site and off-site would be required to adhere to the requirements of 49 CFR 192 as well as the requirements of the Natural Gas Ordinance. The project applicant proposes to relocate some of the high pressure pipelines within the project roadways. The location of these pipelines in local streets on the project site would create a safety hazard due to the proximity of the pipelines to underground utilities. Therefore, without incorporation of mitigation hazards impacts associated with pipelines safety would be potentially -significant.	**Hazards-1a:** Gas well operators shall ensure that abandoned gas wells are inspected by the DOGGR for proper sealing of the wells. **Hazards-1b:** Pipeline operators must incorporate and conform to the minimum requirements of applicable federal, state, and/or local regulations, including but not limited to 49 CFR 192. **Hazards-1c:** The project applicant must incorporate and conform to all applicable setback and relocation requirements for high pressured pipelines as outlined in Chapter 13.12, Natural Gas of the Municipal Code. **Hazards-1d:** The developer shall create appropriate exclusionary zones between the wellheads on site and the public (including residents) using the Guidance for the Development of Setback Distances for Natural Gas Exploration Operations in Rio Vista, California, prepared by Quest on June 7, 2005. Particularly, the following zones shall be implemented. Zone 1: Permanent security fencing pursuant to City requirements. No members of the public shall be allowed inside the permanent security area. Zone 2: Area between Zone 1 and the appropriate radiant injury zone (either 110 or 130 feet from wellhead) with the following stipulations: ▪ No permanent buildings shall be allowed in Zone 2. ▪ No regularly scheduled activities (athletic fields, etc.) shall be allowed in Zone 2. ▪ Zone 2 may be used for open space, walking/jogging/bike trails, portions of a golf course, etc. Roadways shall be allowed in Zone 2.	Implementation of these mitigation measures would reduce impacts to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Hazards-1: Potential Hazards to the Public or the Environment Through Reasonably Foreseeable Upset and Accident Conditions Associated With Natural Gas Pipelines and Well Heads (continued)		
	Zone 3: Area between Zone 2 and a horizontal distance equal to the height of drilling work or other type of workover rigs (135 feet and greater) with the following stipulations: ▪ No permanent buildings shall be allowed in Zone 3. ▪ Outdoor activities, such as those associated with athletic events (e.g., soccer fields) shall be allowed in Zone 3 with the understanding that the areas may be temporarily unavailable during drilling/workover operations. ▪ Roadways shall be allowed in Zone 3 but may be unavailable during drilling/workover operations. Zone 4: Area beyond Zone 3: no restrictions.	
Hazards-2: Potential Hazards to the Public and Existing Schools Near the Project Site Associated with the Use of Hazardous Materials		
The proposed project includes the construction of residential homes and a commercial center. Residential land uses generally produce small amounts of household hazardous materials, such as household cleaners, paints, paint thinners, and pesticides. The proposed commercial land uses, which may include dry cleaners that would be required to operate in accordance with the Air Quality Management District and all applicable sections of the City's Municipal Code, would also generate minor quantities of hazardous materials (e.g., ink, ink cartridges, toners); hazardous products would be packaged and labeled and would not be used in large quantities on site. Both types of land uses would generate small amounts of hazardous wastes (e.g., used motor oil empty produce containers). Proper storage and disposal of household hazardous materials and waste would reduce the risk of contaminated surfaces throughout the project site and its vicinity. Public outreach and education through local regulating agencies (e.g., City's Building Department) can help reduce the potential risks associated with household and commercial land use.	**Hazards-2a:** Businesses that would exceed the threshold quantities of a hazardous material or any amount of hazardous waste shall submit a Hazardous Materials Business Plan (HMBP) to the Solano County Department of Environmental Management. The HMBP shall include an inventory of all hazardous materials stored at such a facility, including the physical and chemical description of each material. The HMBP will be reviewed annually and updated if any material changes affect the quantity or location of hazardous materials. A Consolidated Contingency Plan will be developed if appropriate.	Implementation of this mitigation measure would reduce impacts to a less-than-significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.8 HYDROLOGY AND WATER QUALITY		
Hazards-3: Erosion, Sedimentation, and Degradation of Surface Water Quality		
Erosion and sedimentation are typically of greatest potential concern during the construction-phase of development. Pollutants that might affect surface-water quality during project construction include petroleum products (gasoline, diesel, kerosene, oil and grease), hydrocarbons from asphalt paving, paints and solvents, detergents, nutrients (fertilizers), pesticides (insecticides, fungicides, herbicides, rodenticides), and litter. Once roads and parking lots have been constructed, and residences and commercial buildings are occupied, typical urban runoff contaminants might include all of the above constituents, as well as trace metals from pavement runoff, nutrients and bacteria from pet wastes, and landscape maintenance debris. Since the project storm drain system discharges to Industrial Creek, which drains into the Sacramento River a short distance from the project site, these pollutants could potentially degrade water quality and thereby impact aquatic habitats and species downstream. These impacts could be significant.	**Hydrology-3a:** The SWPPP for the Riverwalk project shall include water-quality control measures to reduce potential risks of surface and groundwater contamination during the construction stage of project development. The SWPPP shall be developed in conjunction with staff of the City's Public Works Department and the final version shall be reviewed and approved by them as a condition of grading permit approval. **Hydrology-3b:** The City of Rio Vista Planning and Public Works Departments have already implemented several components of the Clean Water Program being developed as part of the NPDES Phase 2 permit process. Educational materials describing homeowner responsibilities for protecting adjacent streams and open spaces, use of household and landscaping chemicals, and municipal hazardous waste disposal programs shall be provided to each of the lot owners at purchase, and thereafter in regular annual mailings.	With development of a SWPPP (including an erosion control plan) and implementation of Mitigation Measures Hydrology-3a and Hydrology-3b, potential water-quality impacts would be mitigated to below the level of significance.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Hazards-3: Erosion, Sedimentation, and Degradation of Surface Water Quality (continued)		
	Additional Water Quality Improvement Measures (Optional) The proposed design of the detention basin warrants consideration of using it as a dual-use basin to achieve water-quality treatment of low-flows from the three storm drain outfalls (serving sub-areas A, B, and C) that discharge into the basin. Although not required as mitigation, the design and operating criteria for the basin could be modified slightly so that it functioned as an extended detention basin, consistent with the guidance provided in Fact Sheet TC-22 of the revised BMP Handbook. A single berm could be constructed below the Area A and Area B outfalls, and another berm below the Area C outfall. By creating small water-quality basins at these two locations, additional enhancement of storm runoff and nuisance (dry-season) flow water quality would be incorporated into the detention basin design with only minor changes to the current plans. Furthermore, due to the large overall volume of the detention basin, the water quality basins would not significantly affect functioning of the basin for peak flow attenuation.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.11 NOISE		
Noise-1: Construction Noise		
Based on a review of the site plans, construction activity would occur as close as 30 feet from noise sensitive residential land uses situated north and northeast of the project site in the Homecoming neighborhood. In addition, construction activities could occur approximately 40 feet from the single-family homes located east of the site. Assuming uninterrupted lines of sight to the construction activities at a distance of 50 feet short-term construction noise events up to 88 dBA could be experienced at noise sensitive land uses over a period of years. This would exceed the City's standard of 70 dBA at a distance of 25 feet from the source, and would be a significant impact.	**Noise-1a:** Prior to issuance of grading permits, the applicant shall submit a noise control plan to the satisfaction of the Planning Manager. Noise attenuating construction requirements shall be enforced by the Building Official. The noise control plan shall include, but not be limited to, the following: ▪ Restrict excavation, grading, and other construction activities related to the proposed Project to daylight hours only, in compliance with the City of Rio Vista Ordinance requirements, and subject to approval of the Department of Building and Safety and/or other responsible agencies. ▪ Locate stockpiling and vehicle staging areas as far away from occupied residences as possible, and screened from these uses by a solid noise attenuation barrier. ▪ Utilize noise barriers during all construction phases with a sound transmission coefficient (STC) that would attenuate noise levels at nearby residences to existing ambient levels. ▪ Operate all stationary construction equipment (e.g., air compressor, generators, etc.) as far away from occupied homes as possible. If this is not possible the equipment shall be shielded with temporary sound barriers, sound aprons, or sound skins. ▪ Route construction traffic outside of residential areas, and areas occupied by noise sensitive uses (e.g., hospitals, schools, convalescent homes, etc.). ▪ Design haul routes for removing excavated materials from the site to avoid residential areas, and areas occupied by noise sensitive receptors (e.g., hospitals, schools, convalescent homes, etc.).	With implementation of the mitigation measures, noise generated by construction equipment would continue exceed the City's noise standard of 70 dBA at a distance of 25 feet. Because construction activities would occur over several years of phased development, construction noise impacts would be considered a significant unavoidable impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Noise-1: Construction Noise (continued)		
	Noise-1b: A construction staging area for the storage of equipment and material shall be identified on the project site and be located as far as possible from existing residential uses. **Noise-1c:** All construction equipment, fixed or mobile, that is utilized on the site shall be in proper operating condition and fitted with standard factory silencing features.	
Noise-2: Off-Site Operational Traffic Noise Levels		
Highway noise from increased automobile traffic would also affect project proposed residences along SR-12. According to the project site plan, the closest homes to SR-12 would be located approximately 117 feet from the centerline of the roadway. As modeled, noise levels at 117 feet from the centerline of SR-12 under project conditions would increase up to 63.1 dBA, which would exceed the 60 dBA noise standard. On-site noise impacts from traffic along SR-12 would, therefore, be significant.	**Noise-2a:** Construct noise barriers, such as solid walls, berms or enclosed exterior living space, to reduce traffic noise at exterior use areas. Generally, barriers would be required to shield residential land uses adjacent to SR-12. Noise barriers ranging from about 6 to 8 feet would be required along SR-12 to reduce ambient noise levels to within acceptable ranges. The final details of the heights and limits of these barriers would be completed at the time that the final grading plan is adopted. **Noise-2b:** Incorporate sufficient setbacks along SR-12 into the project design to reduce noise levels for residential land uses.	With implementation of the mitigation measures, noise levels at residential uses adjacent to SR-12 would be reduced to noise levels within acceptable ranges and impacts would be less than significant impact.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Noise-3: On-Site Operational Traffic Noise Levels		
Existing noise levels along SR-12 exceed the City's 60 dBA standard for residential land uses. Locating residential land uses adjacent to SR-12, as proposed by the project, would expose future residents to noise levels that exceed the City's noise standard. Although the project's contribution to these noise levels would not be audible (less than 3 dBA increase along SR-12), noise levels along SR-12 would continue to exceed the City's noise standard, and the exposure of future residents to these noise levels would represent a significant impact.	**Noise-3a:** One or a combination of the following two options would reduce the noise levels generated by traffic along SR-12 to below the 60 dBA maximum exterior threshold: ▪ Construct a 6-foot-high wall along the rear yard property lines between SR-12 and the proposed homes adjacent to the highway. This measure would be required for Lots 667-683, which are all located adjacent to SR-12. A 6-foot-high block wall in this location would reduce noise levels by at least 9 dBA. Residential lots located farther back from SR-12 (i.e., Lots 684–686) would benefit from the noise attenuation provided by the first, and each successive row of houses, adjacent to the highway. The residential lots 634–639 would not require a noise attenuation barrier, because they are located outside of the 60 dBA contour. As modeled, the 60 dBA noise contour extends 266 feet from the centerline of SR-12. ▪ Construct a 6-foot-high landscaped berm along the rear yard property lines between SR-12 and the proposed homes adjacent to the roadway. As identified above, this measure would only be required for lots 667–683, which are all located adjacent to the roadway. A 6-foot-high landscaped berm would reduce noise levels by at least 8.0 dB(A). **Noise-3b**: Identify specific Title 24 noise reduction measures to be incorporated into the housing designs for those structures exposed to noise levels in excess of the 45 dBA interior noise standards, and make implementation of these measures a condition of plan approval. Prior to issuance of a building permit, check the building plans to confirm that these measures are incorporated into the plans and specifications for affected structures.	With implementation of the mitigation measures, on-site residential land uses adjacent to SR-12 would experience noise levels within the 60 dBA noise standard and, thus, on-site noise impacts associated with traffic along SR-12 would be reduced to less than significant.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Noise-5: On-Site Gas Well Noise Levels		
Residential units proposed on site in the vicinity of the existing gas wells could potentially be exposed to noise levels of about 69 dBA Leq at a distance of 50 feet during normal operations of gas wells. Approximately 24 dBA of noise reduction would be required at receivers within 50 feet of a gas well to meet the nighttime exterior noise level of 45 dBA Leq established by the City of Rio Vista for non-transportation noise sources. Residential units within 1451 feet of a gas well would exceed the nighttime noise levels without mitigation. This would be a significant impact.	**Noise-5a:** Conduct site-specific noise studies during project development to identify measures that could reduce noise from normal operations of adjacent gas wells. Generally, where the desired noise level reduction is greater than 15 dBA, an acoustical enclosure of the mechanical equipment that operates on the well site would be required. Noise reductions of about 10 to 15 dBA could be achieved with a combination of mufflers on the well equipment and noise barriers. These measures in combination with the requirements of Title 24 would provide further noise reductions. **Noise-5b**: Identify specific Title 24 noise reduction measures to be incorporated into the housing designs for those structures exposed to noise levels in excess of the 45 dBA interior noise standards. Incorporation of these measures shall be a condition of plan approval. Prior to issuance of a building permit, check the building plans to ensure that these measures are incorporated into the plans and specifications for affected structures.	With implementation of mitigation measures, residential units within 145 feet of a gas well would experience nighttime noise levels within the nighttime exterior noise level standard of 45 dBA Leq. As a result, on-site gas well noise levels would be reduced to less than significant.
Noise-6: Cumulative Off-Site Impacts		
Cumulative roadway noise levels on the six roadway segments would increase by a minimum of 3.1 dBA to a maximum of 8.4 dBA by the year 2030. The largest roadway noise level increase (8.4 dBA) would occur along Church Road.; The project's noise level contribution of 6.3 dBA along Church Road would be cumulatively considerable. Hhowever, the resulting noise level (56.9 dBA) would remain below the City's 60 dBA threshold for residential land uses. As such, the impact along Church Road would not be cumulatively significant. The project's contribution of 6.3 dBA would, however, be cumulatively considerable. The noise levels along SR-12 would exceed the City's 60 dBA residential noise threshold in 2030, which would be a significant cumulative impact. The project's contribution to this impact would not be audible (0.6 to 1 dBA increase) and would not be cumulatively considerable. The cumulative increase in noise along SR-12 would be a significant impact.	**Noise-6:** One of the following two options would mitigate the noise levels generated by cumulative traffic along SR-12. ▪ Construct a 6-foot-high block wall along the perimeter of the project site, between the SR-12 and the closest home to the highway. A 6-foot-block wall would reduce noise levels by at least 9 dBA. ▪ Construct a 6-foot-high landscaped berm along the perimeter of the project site, between SR-12 and the closest home to SR-12. A 6-foot-high berm would reduce noise levels by at least 8 dBA.	With implementation of mitigation measures, noise levels along SR-12 would be reduced below the City's 60 dBA residential noise threshold in 2030. As a result, noise levels generated by cumulative traffic along SR-12 would be reduced to less than significant.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Noise-7: Cumulative On-Site Impacts		
Cumulative highway noise from increased automobile traffic would affect project proposed residences located close to Church Road. As indicated on the site plan, the closest homes to Church Road would be located approximately 75 feet from the centerline of the roadway. Under year 2030 with the project traffic conditions, noise levels at 75 feet from Church Road would be projected to be 60.9 dBA, which would exceed the City's 60 dBA noise standard. This would be a cumulatively significant impact. Cumulative highway noise from increased automobile traffic would also affect project proposed residences located close to SR-12. The closest homes adjacent to SR-12, located approximately 117 feet from the highway centerline, would be projected to experience noise levels up to 65.2 dBA, which would exceed the City's 60 dBA noise standard. This would be a cumulatively significant impact. As under project conditions, cumulative traffic noise levels along SR-12 could exceed the 45 dBA interior noise levels required for residential units. Residential dwelling units are required to comply with Title 24 of the Uniform Building Code for the conservation of energy with building design and construction, which could substantially reduce interior noise levels. However, the ability to successfully accomplish this reduction would be dependent upon the combination of noise reduction features (noise walls and Title 24 requirements) implemented for homes located in areas exceeding acceptable noise levels. Because it is not known what measures would be applied to the residential structures, the level of reduction could be less than needed to meet the 45 dBA interior noise standard.	**Noise-7a:** One of the following three options would reduce the noise levels generated by traffic along SR-12 to below the 60 dBA maximum exterior threshold: ▪ Prohibit the construction of homes within 266 feet of the centerline of SR-12. The 60 dBA noise contour would extend 266 feet from the centerline of the roadway under year 2030 traffic conditions. Locating the housing outside of this contour would result in the exterior noise levels remaining below the 60 dBA exterior noise standard. ▪ Construct a 6-foot-block wall along the rear yard property lines between SR-12 and the proposed homes adjacent to the roadway. These measures would only be required for Lots 667–680, which are all located adjacent to the roadway. A 6-foot-block wall in this location would reduce noise levels by at least 9 dBA. Residential lots that are located farther back from SR-12 (i.e., lots 684–686) would benefit from the noise attenuation provided by the first and each successive row of houses adjacent to the roadway. In addition, the residential lots 634–639 would not require an intervening noise attenuation barrier, as they are located outside the 60 dBA contour, which extends 266 from the centerline of SR-12. ▪ Construct a 6-foot-tall landscaped berm along the rear year property lines between SR-12 and the proposed homes adjacent to the roadway. As identified for the same reasons listed in the bullet point above, this measure would only be required for lots 667–680, which are all located adjacent to the roadway. A 6-foot-tall landscaped berm would reduce noise levels by at least 8 dBA.	With implementation of mitigation measures, on-site noise levels along SR-12 and Church Road would be reduced below the City's 60 dBA exterior noise threshold in 2030. As a result, noise levels generated by cumulative traffic along SR-12 and Church Road would be reduced to less than significant. With implementation of mitigation measures, on-site interior noise levels along SR-12 would be reduced below the 45 dBA interior noise level for residential uses. As a result, noise levels associated with cumulative traffic along SR-12 would be reduced to less than significant.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Noise-7: Cumulative On-Site Impacts (continued)		
	Noise-7b: One of the following options would reduce noise generated by traffic levels of Church Road to below the 60 dBA residential standard. ▪ Construct a landscaped berm or a solid wood or masonry wall along the perimeter of the project site, between Church Road and the closest homes to the roadway, which are located along Church Road in areas where there would not be an internal frontage road (Lots 1-11, 217-223 and 135). A 6-foot-high landscaped berm or wall would reduce noise levels by at least 6 dBA. Incorporate sufficient setbacks along Church Road into the project design to reduce noise levels for residential land uses. **Noise-7c:** Identify specific Title 24 noise reduction measures to be incorporated into the housing designs for those structures exposed to noise levels in excess of the 45 dBA interior noise standards. Incorporation of these measures shall be a condition of plan approval. Prior to issuance of a building permit, check the building plans to ensure that these measures are incorporated into the plans and specifications for affected structures. **Noise-6:** One of the following two options would mitigate the noise levels generated by cumulative traffic along SR-12. ▪ Construct a 6-foot-high block wall along the perimeter of the project site, between the SR-12 and the closest home to the highway. A 6-foot-block wall would reduce noise levels by at least 9 dBA. ▪ Construct a 6-foot-high landscaped berm along the perimeter of the project site, between SR-12 and the closest home to SR-12. A 6-foot-high berm would reduce noise levels by at least 8 dBA.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
4.13 PUBLIC SERVICES AND RECREATION		
Public Services-1: Increased Demand for Fire Protection Services		
The project would generate an increased demand for fire and emergency services because of the increased number of residents to be served and increased activity at the project site. According to the department, the site is not in an area subject to wildland fires. The number of fire calls anticipated from the site is estimated to be about 150 calls per year. The department has indicated that there are inadequate facilities, staffing, and equipment to respond to this volume of calls. The project generated demand for fire protection services would be a significant impact. Fire department response time goals are four minutes 90 percent of the time. According to the department, response times to the Riverwalk project site would be similar to existing response times of six to 11 minutes. The department would not be able to respond to fire calls within response time goals due to lack of available staff. In order to meet fire call response time standards, a fire station in closer proximity to the project site and additional staffing would be required.	**Public Services-1a:** Construct a new fire station to serve project and associated new development demand for fire protection services. Installation of the new station should be completed prior to completion of the first phase of development. **Public Services-1b:** Identify adequate funding sources and determine the fair share to be contributed by the various developments to be served by the new fire station. **Public Services-1c**: Implement one of the following measures to provide funding for construction of fire protection facilities (fire station), adequate staffing (fire and police salaries) and fire and police equipment: a. Require the applicant to contribute an additional amount to the "interim" Public Facilities Fee program to facilitate construction. This amount shall be a part of the development agreement for the project. b. Create a community facilities district (CFD) for fire and police services that will require developers in the district to contribute $500 per dwelling unit or an amount to be established per square foot of commercial development. These funds would be used to construct a new fire station and fund additional fire and police staff.	Implementation of these mitigation measures would reduce project impacts to a less than significant level. These measures would address both fire and police services impacts; impacts related to police services are discussed below

Impacts	Mitigation Measures	Level of Significance After Mitigation
Public Services-2: Cumulative Impacts related to Fire Protection		
The increased population from the Riverwalk project and other projects proposed in the City of Rio Vista would increase demand for fire protection services. As discussed above, the City currently has an "interim" Public Facilities Fee Program that allocates funding for City services. Under the existing fee program, the City has identified Facility needs and a "fair share" cost allocation applied to new development. However, there currently is no established program for the construction of a new firehouse. Implementation of the proposed project, in conjunction with the various related projects identified in **Section 4.7, Land Use & Planning**, would further increase demand for fire protection services. The increased demand for such services would result in the need for the fire department to obtain additional staff, equipment, and construct a new facility, as identified for the project. This would be a cumulatively significant impact.	**Public Services-2a:** Require related projects to provide fair-share payment of costs associated with the provision of facilities for fire services, compliance with the Uniform Fire Code, and various other fire safety requirements (i.e., hydrant location, fire flow, emergency access, etc.). **Public Services-2b:** Monitor the needs to maintain and improve fire protection services and propose appropriate service enhancements through the budgetary process to ensure that future development in the City could be adequately served by the fire department. These measures, together with the provision of a new fire station with additional staffing, identified as mitigation measure Public Services-1a, would reduce cumulative impacts to a less than significant level.	
Public Services-3: Increased Demand for Police Protection Services		
The increased population and increased activity resulting from the project would generate an increased demand for police services. The anticipated increase in police calls is estimated to be similar in number to the Homecoming housing subdivision, which would be about 3,000 additional calls for police protection service per year. The department has indicated that existing facilities, staffing and equipment would be inadequate to meet the increased demand. Therefore, the increased demand generated by the project would be a significant impact. Police protection response time goals for emergency calls are 3 minutes or less for 911 emergency calls, and 10 minutes or less for non-emergency calls. Existing staff and equipment would be able to meet the emergency response time goal of 3 minutes or less, but would not be able to meet the non-emergency response time goals. Non-emergency response times would exceed 10 minutes because of lack of available staffing. The increased demand generated by the project would be a significant impact to police services.	**Public Services-1c**: *See above*	Implementation of mitigation measure **Public Services-1c** would reduce the project's impacts related to police services to a less than significant level. Public Services-

Impacts	Mitigation Measures	Level of Significance After Mitigation
Public Services-4: Cumulative Impacts related to Police Protection		
The increased population resulting from the Riverwalk project and other projects proposed in the City of Rio Vista would substantially increase the demand for police services. As identified in the General Plan EIR, the police department estimates that an additional 4,000 square feet and construction of a new facility would be needed to accommodate demand generated by buildout of the General Plan. The City is in the process of conducting a capital financing study, which will address the effect of population growth and development on public services. Provided that the appropriate funding and measures identified in the capital financing study are applied, departmental needs in terms of infrastructure, staffing, and equipment should be met. However, the study is not complete and the cumulative impact to police protection services is not known. Therefore, cumulative impacts related to police protection would be significant.	**Public Services-4a:** Identify fair share amounts to be paid by new development for construction and staffing of a new police facility. Cumulative development projects are required to contribute funding for public facilities per City Ordinance.	Implementation of this measure, together with mitigation measure **Public Services-1c**, would reduce the project's contribution to cumulative impacts related to police services to a less than significant level.
Public Services-5: Increased Demand for School Services		
According to the RDUSD, the Riverwalk project would generate approximately 320 K-6th grade students, 80 7th-8th grade students, and 160 9th-12th grade students, for a total of 560 new students. Although schools in the Rio Vista High School service area are currently under capacity and can accept additional students, the RDUSD maintains that it cannot absorb all of the projected number of students. Therefore, the increased demand for school services would be a significant impact. The passage of Senate Bill 50 (SB 50) in August 1998 and the approval of Proposition 1A in November 1998 provided $9.2 billion in bonds to fund K-12 and higher education facilities. The funding for K-12 facilities was designated for new construction, modernization of older schools, districts in hardship situations and class size reduction. The provisions of SB 50 prohibit local agencies from denying either legislative or adjudicative land use approvals on the basis that school facilities are inadequate, and reinstate the school facility fee cap for legislative actions (e.g., general plan amendments, specific plan adoption, zoning amendments). Under state law, the development fees authorized by SB 50 are deemed to be "full and complete school facilities mitigation." These provisions are in effect until 2006 and will remain in place as long as subsequent state bonds are approved and available.	**Public Services-5:** The project developer shall pay school impact fees and other financial contributions established by agreement with the RDUSD, sufficient to fully fund the project's share of increased school facilities requirements.	No Impact

Impacts	Mitigation Measures	Level of Significance After Mitigation
Public Services-6: Cumulative Impacts related to School Services		
The Riverwalk project and other projects proposed in the City of Rio Vista would generate increases in population, and therefore demand for school services would increase. If the appropriate funding identified above is not implemented, cumulative impacts related to school services would be significant.	**Public Services-5:** *See above*	No Impact
4.13 PUBLIC SERVICES AND RECREATION		
Public Services-7: Increased Demand for Park and Recreational Facilities		
To comply with existing park standards, the Riverwalk project would be required to provide 8 acres of neighborhood parks, 6 acres of community parks, and 2.5 miles of trail network (acreages are approximate). The Riverwalk project would includes approximately 14 acres of parkland a 0.7-mile-long trail within the project site, and approximately 0.75 mile of pedestrian/bike path along Church Road. Although the amount of trails included in the plan would be less than the 2.74 miles identified by the City standards, the overall amount of parkland provided by the project would substantially exceed City standards. This would be a beneficial impact. The project would also meet the General Plan goal for construction of a Class I trail along the segment of Church Road bordering the project site. The fees for parklands are essentially "in-lieu" fees. If the project did not provide on-site park areas as indicated on the project site plan, the park fee would be collected. It is the City objective to have the developer provide the needed neighborhood parks. Should the Riverwalk project provide neighborhood park areas consistent with City policy, no park fees would be required. In the instance that the City accepts some but not all neighborhood park proposals, impacts related to neighborhood parks would be considered significant, and the fee would offset the residual parkland requirement. The project does not include dedication of land for a community park; therefore, the applicant would be required to pay an in-lieu community park fee.	**Public Services-7:** The applicant will be required to pay developer-in-lieu fees of $4,110.00 per single-family unit, $2,312.00 per multi-family unit, and $0.27 per square foot of gross building area of commercial space.	This mitigation measure would reduce any potential impacts to parks to a less than significant level.

Impacts	Mitigation Measures	Level of Significance After Mitigation
Public Services-8: Cumulative Impacts related to Park and Recreational Facilities		
Approximately 68.4 acres of active parkland would be required to meet the needs of the City's residents. While there appears to be adequate land available to meet the City's parks and recreational needs, provision of these facilities will depend on funding through fees and dedications. Since this would be determined at the project-specific level, the potential lack of park facilities would be considered a significant impact.	**Public Services-7** *See above*	Development of the project with parkland as proposed, or implementation of mitigation measure Public Services-7, would reduce the project's contribution to the cumulative impact related to park and recreational facilities to a less-than-significant level.
4.14 TRANSPORTATION		
Transportation-1: Increase in Traffic: Operational Impacts (LOS) – Project Conditions		
Several intersections operating at unacceptable levels in the baseline condition would be improved under the project conditions to acceptable levels of service because of the traffic improvements incorporated into the project in combination with the improvements along SR-12. Two intersections (N. 5th Street/SR-12 and Highway 84/SR-12) would, however, continue to operate at unacceptable levels of service (LOS F) with or without the project. Their side street turn movements would operate at LOS F during the PM peak hour under both scenarios.	**Transportation-1a:** Intersection Improvements 1. SR-12/Church Road (Study Intersection 1) – Install a new traffic signal, provide separate right and left turn lanes from eastbound and westbound SR-12 to Church Road. This improvement would be required at the initiation of project construction. 2. SR-12/Drouin Drive (Study Intersection 2) – Install a new traffic signal, and provide separate right and left turn lanes from eastbound and westbound SR-12 to Drouin Drive. 3. SR-12/Project Entrance (Study Intersection 17) – Install a new traffic signal, and provide separate left and right turn lanes from SR-12 into the project entrance. 4. Install new traffic signals at the SR-12/Gardiner Way and SR-12/Virginia Drive intersections. The applicant shall be responsible for a proportionate share of the cost of these improvements. 5. SR-12/North 5th Street – Restrict traffic to right-in/right-out movements from SR-12 westbound to North 5th Street and from North 5th Street to SR-12 westbound. The applicant shall be responsible for a proportionate share of the cost of these improvements.	Less than significant

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-1: Increase in Traffic: Operational Impacts (LOS) – Project Conditions (continued)		
	Transportation-1b: Roadway Segment Improvements ▪ SR-12 (Church Road to Drouin Drive). If Riverwalk were the only additional project to be developed, a two-lane SR-12 with the new traffic signals would be sufficient to meet the City's LOS standards. Once the mainline through traffic volumes on SR-12 approach 25,000 ADT, the four-lane divided roadway would be required. When considered in combination with the Del Rio Hills project, other approved projects, and the continuing growth in through traffic, the four-lane divided SR-12 would likely be required by the time about 50 percent of the Riverwalk development was completed. However, the new intersections and intersection improvements described above would require four-lane geometry at the intersections. It would be impractical, and Caltrans would be unlikely to approve, construction of a four-lane divided roadway in isolated segments, due to the short distance between intersections between Church Road and Drouin Drive. For this reason, widening of at least the segment of SR-12 between Church Road and Drouin Drive would most likely be required at the time improvement of the intersection of SR-12 and Church Road or SR-12 and the project entrance (Study Intersection 17) is initiated. Caltrans approval would be required for any modifications to SR-12.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-1: Increase in Traffic: Operational Impacts (LOS) – Project Conditions (continued)		
	Transportation-1b: Roadway Segment Improvements (*continued)* ▪ Reconstruction of SR-12 in this area would be expected to include four lanes with a raised median. It is also assumed that eastbound left-turn lanes and westbound right-turn lanes would be included at the main project entrance and at Church Road. ▪ SR-12 (Drouin Drive to Sacramento River Bridge). If Riverwalk were the only additional project to be developed, then a two-lane SR-12 with the new traffic signals at Drouin, Gardner and Virginia would be sufficient to meet the City's LOS standards. The intersections of SR-12 with Drouin Drive, Gardiner Way and Virginia Drive would need to be signalized and a raised median installed to restrict left turns to the safest locations in the downtown area. When considered with the other proposed development proposed for the area, SR-12 would need to be a four-lane roadway that, at a minimum, would extend from Drouin Drive to just east of the Main Street/Hillside Terrace intersection. However, as with the previous segment, the four-lane section on SR-12 would likely only be required by the time about 50 percent of the Riverwalk development was completed. ▪ Church Road (SR-12 to Airport Road). Church Road would remain as a two-lane roadway except in the vicinity of SR-12 where it would be widened to accommodate the turn lanes into the commercial area and at SR-12. Although not required to meet City's LOS Standards, it is recommended that separate southbound left-turn lanes be constructed on Church Road at the three unsignalized project access intersections along Church Road.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-2: Increase in Traffic: Operational Impacts (Bridge Operations) – Project Conditions		
Approximately 25 percent of the project tips would be headed to or from destinations that would require crossing the Rio Vista Bridge. This would add approximately 324 vehicles to bridge traffic traveling east and west across the bridge during the PM peak hour. Raising the drawbridge during the PM peak hour to allow vessel traffic to pass under the bridge could cause queuing at the bridge and congestion along access routes to the bridge. This queuing and congestion would be considered a significant traffic impact.	None	Because feasible mitigation measures are not available to restrict hours of drawbridge operation, this impact would be significant and unavoidable.
Transportation-4: Increase in Hazards Due to Design		
There are several existing gas wells that would remain in place within the project. They would require periodic service, including daily visual inspections (generally by an individual in a car or light pickup truck). It is estimated that approximately once a week a tank truck would visit each well to collect production spoils, and about once a year heavy equipment would be brought to the well. It is recommended that proper construction traffic control planning be required for any activities that would affect traffic on the adjacent roadways. As long as the proper construction traffic controls are used for any substantial work, the servicing of the wells would not be expected to cause any significant impacts. However, if the other project has not completed realignment of Amerada Road with Church Road once the proposed project is under construction, impacts associated with design hazards at the intersection of Church Road and SR-12 would be significant. Use of this intersection for project access by construction vehicles would create additional safety hazards, contributing to the significant impact.	**Transportation-4a:** If another project has not completed realignment, signalization, and expansion to accommodate a four-lane profile for SR-12 at the intersection of Amerada Road with Church Road once the proposed project is under construction, than the proposed project shall provide funding for these improvements, with the cost of such improvements subject to a reimbursement agreement with the City. This project is responsible for a proportionate share of the cost of these improvements. Alternatively, if Caltrans will not permit immediate improvement of this intersection, construct the main project entry prior to the start of major construction work.	Less than significant

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-8: Increase in Traffic: Operational Impacts – Cumulative Project Conditions		
The cumulative scenario with the project is a forecast of the traffic volumes that are projected for the year 2030 with buildout of the General Plan, which incorporated the Riverwalk project. With cumulative project conditions, additional required improvements (beyond those provided by the project) would be as required by the cumulative no project condition. These improvements would be the expansion of SR-12 to four through travel lanes between Main Street and Church Road. This expansion would be required to maintain City of Rio Vista traffic performance standards at Study Intersections 1, 2, 4, and 17.	**Transportation-8:** The cumulative land use traffic conditions (year 2030) would require further improvements to the roadway network and transportation system in the City of Rio Vista. These improvements would be required to accommodate buildout of the General Plan and meet the City's LOS standards. However, since these improvements currently remain unfunded they have been identified as mitigation measures. It should be noted that the conclusions about cumulative conditions are based on the assumption that the proposed widening project can be implemented on SR-12. It is not yet clear whether the construction of this widening will be feasible in all areas. If sufficient through and/or turn lanes cannot be constructed then other improvements to the City's transportation system would be needed to meet the City of Rio Vista's traffic performance standards. The following is a summary of the cumulative mitigation measures that have been identified as part of this analysis. **Intersections** To maintain safe operations a separate westbound left-turn lane would be required at Airport Road and Church Road as traffic grows in this area. Other than the additional through lanes described in the roadway segment section, there are no other intersection improvements required beyond what was identified under the proposed project mitigation measures.	Less than significant

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-8: Increase in Traffic: Operational Impacts – Cumulative Project Conditions (continued)		
	<u>Roadway Segments</u> ▪ SR-12 (West City Limits to Church Street). The basic cross-section for this segment of SR-12 could remain as two lanes as long as there are sufficient turn lanes and storage for queuing at the signalized intersections at each end of this segment. This conclusion is based on the assumptions that there will not be any new intersections on this segment, and that there will be no changes to the land use designations on the unincorporated areas on the south side of the freeway. If additional development to the south was approved or if a new intersection was constructed in this area then a four-lane section would likely be required under cumulative conditions. The City of Rio Vista and Caltrans would review the present highway plan line to detail the elements of this section of SR-12.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-8: Increase in Traffic: Operational Impacts – Cumulative Project Conditions (continued)		
	<u>Roadway Segments</u> *(continued)* ▪ SR-12 (Church Road to Drouin Drive). A four-lane divided road would be required to accommodate traffic from future development along SR-12 in this area. In reviewing the General Plan, it is clear that even the minimum potential traffic generation from the current zoning could not be adequately accommodated without some additional access to SR-12 in this area. Assuming that some access for development would be needed, four through lanes would be required at all intersections in this segment to meet the City's LOS standards under cumulative conditions. In summary, this entire section would need to have four through lanes with separate left and right-turn lanes at the intersections under cumulative conditions. The improvements to SR-12 would need to be implemented once the main project entry along SR-12 is under construction. Once this requirement is established, the main planning issues remaining are the design details. The design speeds, vertical curves, sight distance, the potential pedestrian underpass, and many other complex and interrelated design issues would need to be resolved as part of a future Project Study Report for SR-12 in Rio Vista.	Less than significant

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-8: Increase in Traffic: Operational Impacts – Cumulative Project Conditions (continued)		
	▪ SR-12 (Drouin Drive to Sacramento River Bridge). To meet City LOS standards, the basic street cross-section in this area requires a four-lane roadway with a raised median and exclusive left-turn lane(s). at least through the Main Street/Hillside Terrace intersection. To the east of Main Street it may be possible to transition back to two through lanes with separate right and left-turn lanes. It is possible that the preferred design will ultimately include a four-lane section all the way to the SR 84 intersection right at the bridge. However, preliminary review of the design issues in this area indicates that the merging of traffic from two lanes to one lane may need to take place in advance of this location because of potential safety or operational issues. The City of Rio Vista and Caltrans will review the present highway plan line to detail the elements of this section of SR-12. It should also be noted that although the operations analysis indicates that SR-12 can handle the traffic that is forecast under cumulative conditions, there will be an increased potential for problems with the SR-12 bridge over the Sacramento River. As traffic becomes heavier in the future the operations in the area will become more unstable and susceptible to delays from the bridge. While acknowledging jurisdictional issues, traffic may present an unavoidable condition, and the City may wish to explore options for restricting the bridge from activating for boats during the AM and PM peak travel periods. While this may not be possible due to jurisdictional issues, it is recommended the City pursue all avenues for obtaining this restriction in the interest of traffic circulation in Rio Vista.	

Impacts	Mitigation Measures	Level of Significance After Mitigation
Transportation-8: Increase in Traffic: Operational Impacts – Cumulative Project Conditions (continued)		
	Church Road (SR-12 to Airport Road). The ultimate basic cross-section for this road would be one through lane in each direction, plus a center left-turn lane at the main intersections. This equates to a basic roadway cross-section of up to 64 feet, curb to curb, and an approximately 104-foot right of way, depending on City of Rio Vista standards and the final design for shoulders and bike lanes.	
4.15 UTILITIES AND SERVICE SYSTEMS		
Utilities-1: Impacts to Water Services		
The Hydrogeologic and Available Water Supply Trend Analysis (Engeo, Inc. 2006) found that new wells constructed near the new residential development north and east of down town Rio Vista would be able provide water supply sufficient to serve buildout to 2020 of the General Plan. The report assumed that any new wells constructed in these areas would be able to supply roughly 75 MG per year and at least two additional wells would be constructed near the Sacramento River. Assuming that the new wells would have water capacities similar to that of Well 10 (about 500 MG per year), the existing aquifer system would be able to supply adequate water supply to meet the demands expected in year 2020. The expected demand for year 2020 was assessed to be 2,498 MG and the construction of the recommended wells would provide water supply in excess of 2,500 MG per year. However, because the existing water supply system may not be sufficient to serve future demands, project impacts are considered to be significant.	**Utilities-1:** Identify applicable portions of the Water Supply and Delivery System Master Plan and the necessary for service to the Riverwalk project. Construct the identified number of wells, reservoirs and water transport infrastructure required. These facilities would be phased prior to construction of new development. (Aquifer determined sufficient for future development.) The project applicant would be required to construct the facilities as needed to serve the proposed construction.	Less than significant

Impacts	Mitigation Measures	Level of Significance After Mitigation
Utilities-2: Impacts to Wastewater Services		
Based on an average household wastewater generation of 300 gallons of wastewater per day, the housing portion of the proposed project would generate approximately 300,000 gallons of wastewater per day. The project demand would be approximately 36 percent of existing City wastewater generation. As discussed previously, the wastewater treatment plants are already operating at capacity. Phase I of the Northwest Wastewater Treatment Facility is now complete and online. The Treatment Facility has been designed to accommodate future wastewater needs in the City, and specifically includes the Riverwalk development. According to the General Plan Draft EIR, if development is phased so that the new wastewater treatment plant is constructed and sized in accordance with new development, and if the increased capacity at the existing plant will serve additional development on the south side of Highway 12, impacts [to wastewater] would be less than significant. However, until Phase II the Treatment Facility is constructed, existing wastewater treatment plants do not have capacity to meet the wastewater needs of the proposed project beyond 140 dwelling units, and impacts to wastewater services would, therefore, be significant.	**Utilities-2a:** No more than 140 dwelling units may be constructed until Phase II of the Treatment Plant is completed. **Utilities-2b:** The project applicant shall be required to participate in financing for Phase II of the Treatment Facility for the capacity required to serve the remainder of the project beyond 140 EDUs.	Less than significant
4.15 UTILITIES AND SERVICE SYSTEMS		
Utilities-4: Cumulative Impacts		
The proposed project would impact water and wastewater services. Future development in the City of Rio Vista (including the project) would further exacerbate existing deficiencies. According to the conclusions of the Groundwater Evaluation Report and the Master Plan, the existing water supply may be insufficient to serve the demands of the proposed project and, therefore, may not meet cumulative water demand. Cumulative wastewater generation is estimated at 3,012,000 gallons per day (approximately 3.5 times the current generation). Phase II of the Northwest Wastewater Treatment Plant, if built, would adequately provide wastewater treatment to buildout of the General Plan. However, construction of the entire capacity of the Treatment Plant is not guaranteed at this time. Therefore, the project, combined with future development within the City of Rio Vista, would result in a significant cumulative impact to water and wastewater services.	See **Utilities-1a** through **1c** **Utilities-2** *see above*	Less than significant