3.0 SUMMARY OF IMPACTS AND MITIGATION MEASURES

INTRODUCTION

This chapter provides an overview of the Del Rio Hills Planned Unit Development (DRHPUD) project and its potential impacts. This chapter also provides a brief discussion of potentially viable development alternatives to the DRHPUD project. A detailed discussion of these alternatives can be found in Chapter 5 of this EIR. Table 3-1, at the end of this chapter, provides a summary of the environmental effects of the DRHPUD project identified in each technical issue section of Chapter 4. The table consists of the environmental impacts, the significance of the impacts prior to mitigation, the proposed mitigation measures, and the significance of the impacts after mitigation measures are implemented.

PROJECT UNDER REVIEW

The DRHPUD consists of approximately 505 acres of land located west of downtown Rio Vista, and south of SR 12. The project area is bounded to the west by Amerada Hess Road, to the south by unincorporated Solano County. The surrounding area is typified by rolling hills and agricultural activities, surrounded by rural residential uses. The DRHPUD would allow for a mix of residential neighborhoods, a SR commercial center, a proposed K-6 school, neighborhood parks, public facilities, recreation areas, and an extensive open space and trail network. The project would be developed over three phases, the first phase of which could begin as early as 2009.

POTENTIAL AREAS OF CONCERN

Comments received in response to the NOP and at the Scoping Meeting included the following:

- Flood risk and drainage issues
- Safety issues related to gas wells and gas pipelines
- Traffic and circulation impacts along SR-12 and existing City roadways during construction and operation
- Air quality impacts related to project construction and project generated vehicle operation
- Hazard impacts related to former on-site agricultural production
- Land use compatibility
- Project and mitigation funding mechanisms
- Visual quality of the proposed project
- Sewer and water infrastructure
- Safe and accessible pedestrian pathways to and from the project site
- Soil erosion
- Availability of adequate public service facilities

ALTERNATIVES TO THE PROPOSED PROJECT

The EIR analyzes the following alternatives to the proposed project:

- **No Project/ No Build Alternative:** The No Project/No Build Alternative assumes that the proposed project would not be developed and agricultural development would continue to occur on the DRHPUD site. This alternative assumes the existing residence and outbuildings would remain and the rest of the site would not be altered relative to existing conditions.
- **No Project/ General Plan Buildout Alternative:** The No Project General Plan Buildout Alternative assumes that the DRHPUD site would be developed consistent with the existing land use designations and zoning as identified in the current General Plan. The DRHPUD site would be developed using the midpoint of the allowable residential densities under this alternative.
- **General Plan Minimum Density Alternative:** The General Plan Minimum Density Alternative assumes that the DRHPUD site would be developed consistent with the existing land use designations and zoning as identified in the current General Plan, using the lowest allowable residential and commercial densities.

Detailed descriptions and analysis of potential impacts of these alternatives are presented in Chapter 5.

SUMMARY OF IMPACTS

Table 3-1 provides a complete list of all impacts and mitigation measures for the topics evaluated in this EIR. For each impact, the table presents the significance of the impact before mitigation, applicable mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

Effects Found to be Less Than Significant

A number of project impacts identified in the EIR were found to have no impact or a less-than-significant impact, requiring no mitigation. These impacts are found in Chapter 4, Environmental Analysis, and are summarized in this Chapter in Table 3-1, Summary of Impacts and Mitigation Measures.

Significant Impacts

Pursuant to CEQA Guidelines Section 15382, a significant effect on the environment is defined as a substantially or potentially substantial adverse change in any of the physical conditions within the area affected by the project, including, land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significant (CEQA Guidelines Section 15382). Implementation of the proposed project would result in significant impacts to some of these resources, which are fully analyzed in Chapter 4, Environmental Analysis, and are summarized in this Chapter in Table 3-1, Summary of Impacts and Mitigation Measures.

This EIR discusses mitigation measures that could be implemented by the City and/or the project applicant to reduce potential adverse impacts to a level that is considered less than significant. Such mitigation measures are noted in Chapter 4 of the EIR. A summary of these mitigation measures can be found in Table 3-1. The mitigation measures presented in this EIR form the basis of the Mitigation Monitoring Program, which is included in the Final EIR document.

Significant and Unavoidable Impacts

However, even with the application of feasible mitigation measures, some impacts could not be reduced to less-than-significant levels. The significant and unavoidable impacts that were identified for both project-level and cumulative impacts in Chapter 4, Environmental Analysis, and are summarized in this Chapter in Table 3-1, Summary of Impacts and Mitigation Measures.

SUMMARY TABLE

Table 3-1 (Summary of Impacts and Mitigation Measures), has been organized to correspond with the environmental issues discussed in Chapter 4. The summary table is arranged in four columns:

1. Environmental impacts ("Impact").
2. Level of significance without mitigation ("Significance").
3. Mitigation measures ("Mitigation Measure").
4. The level of significance after implementation of mitigation measures ("Residual Significance").

If an impact is determined to be significant or potentially significant, mitigation measures are identified, where appropriate and feasible. More than one mitigation measure may be required to reduce the impact to a less-than-significant level. This EIR assumes that all applicable plans, policies, and regulations would be implemented, including, but not necessarily limited to, City General Plan Policies, laws, City Ordinances, and requirements or recommendations of the City of Rio Vista. Applicable plans, policies, and regulations are identified and described in the Regulatory Setting of each issue area and within the relevant impact analysis. A description of the organization of the environmental analysis, as well as key foundational assumptions regarding the approach to the analysis, is provided in Section 4.0, Introduction to the Analysis.

TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.1 Aesthetics and Visual Resources			
4.1-1 The proposed project could have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings.	LS	None required.	NA
4.1-2 The proposed project could create a new source of substantial of light or glare that would adversely affect day or nighttime views in the area.	PS	4.1-2 a) All street lighting shall be downcast and shielded to prevent light spill to surrounding properties, sky glow, and glare to the extent feasible. b) Low-level outdoor lighting shall be incorporated into new homes particularly along the hillside ridges. c) Reflective surfaces in public areas shall be kept to a minimum using non-reflective material wherever possible. d) Landscaping shall be incorporated along internal roads and near off-site homes to reduce spill light emanating from vehicles and buildings.	LS
4.1-3 The proposed project, in conjunction with other projects in the City of Rio Vista, could have a substantial adverse effect on a scenic vista or substantially degrade the existing visual character or quality of the site and its surroundings.	LS	None required.	NA
4.1-4 The proposed project, in conjunction with other projects in the City of Rio Vista, could create a new source of substantial of light or glare that would adversely affect day or nighttime views in the area.	PS	4.1-4 Implement Mitigation Measure 4.1-2(a) through (d).	LS
4.2 Air Quality			
4.2-1 Implementation of the proposed project would result in new sources of air emissions that could impair implementation of the AQMP.	LS	None required.	NA
4.2-2 Construction activities associated with the proposed project would generate emissions of criteria pollutants.	S	4.2-2 a) Prior to all phases of project construction, the applicant and City shall ensure that construction contracts include the following specifications:	SU

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• After review and approval by the YSAQMD, the developer, if required, shall apply approved chemical soil stabilizers according to manufacturers specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours). • Reduce traffic speeds on all unpaved surfaces to 15 miles per hour or less. • Creation of a dust control plan for approval by YSAQMD. • No open burning of vegetation during project construction. • Reestablishment of ground cover as soon as possible after construction. • Suspension of grading activities when winds exceed 25 mph. • Enclose, cover, or water at least twice daily all soil piles and exposed surfaces. • Keep all designated haul routes clean of any loose soil or other materials associated with transportation of soil and other construction related materials. • Cover loads of all haul/dump trucks securely. b) Prior to all phases of project construction, the applicant and City shall ensure that construction contracts include the following specifications: • Contractors shall provide a plan for approval by the YSAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, would achieve a project-wide fleet average 30 percent NO_x reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.	

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• To the extent feasible, manage operation of heavy-duty equipment to reduce emissions such as maintain heavy-duty earthmoving, stationary and mobile equipment in optimum running conditions. • Minimize idling time to five (5) minutes when construction equipment is not in use, unless per engine manufacturer's specifications or for safety reasons more time is required. • Use low sulfur fuel for stationary construction equipment, if feasible. • Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators. • Use low emission on-site stationary equipment. • Control 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, in accordance with YSAQMD Rule 2.3. c) During construction of the proposed project, the project contractor shall follow the guidelines established by YSAQMD Rules, including the following: • Comply with YSAQMD Rule 2.14, Architectural Coatings, for architectural coatings and solvents used at the proposed project. • In the event that any open burning is required, obtain approval and issuance of a burning permit from YSAQMD and perform burning in compliance with YSAQMD Rule 2.8, Open Burning, General. • Cutback and emulsified asphalt application shall be conducted to accordance with YSAQMD Rule 2.28, Cutback and Emulsified Asphalt Paving Materials.	
4.2-3 Operation of the proposed project could generate emissions of ROG and NO_x.	S	4.2-3 Prior to building permit, the applicant shall implement these, or equally effective measures, in consultation with the YSAQMD: • Improve the thermal integrity of nonresidential buildings, and reduce the thermal load with automated time clocks or automated sensors.	SU

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• Provide efficient heating and other appliances, such as water heaters, cooking equipment, refrigerators, furnaces, and boiler units. • Electrical outlets shall be installed on the exterior walls of both the front and back of a residence or all commercial buildings to promote the use of electric landscape maintenance equipment. • Install a gas outlet in the backyard of residential buildings for use with outdoor cooking appliances, such as gas burning barbeques. • If feasible, install a gas outlet with ceramic logs in any proposed fireplaces, including outdoor recreational fireplaces or pits. • Install low nitrogen oxide (NO_x) hot water heaters. (Beyond YSAQMD Rule Requirements) • HVAC units shall be equipped with PremAir (or other manufacturer) catalyst system if available and economically feasible at the time building permits are issued. The PremAir catalyst can convert up to 70 percent of ground level ozone that passes over the condenser coils into oxygen. The PremAir system is considered feasible if the additional cost is less than 10 percent of the base HVAC unit cost. • Require all flat roofs in the nonresidential land use areas to have a white or silver cap sheet to reduce energy demand. • If feasible, purchase battery powered or electric landscape maintenance equipment for new residences. • Configure parking to minimize traffic interference and delays. • Include wide parking spaces or vanpool only spaces to accommodate vanpool vehicles in employment areas (e.g., community commercial, business-professional, industrial) as determined by YSAQMD. • Provide preferential parking for carpools and vanpools in employment areas (e.g., community commercial, business-professional, and industrial areas).	

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• Equip all truck loading and unloading docks with one 110/208 volt power outlet for every two dock doors. Diesel trucks shall be prohibited from idling more than five minutes and shall be required to connect to the 110/208 volt power to run any auxiliary equipment. Signage addressing these requirements shall be provided at the loading docks. • Vehicle and bicycle all day parking lots near transit stops, and freeway access points. • Permit park & ride lots in business village area. • Provide ridesharing information in a homeowners association package. • Contribute to an area transit fund to help build, maintain, and enhance transit services/facilities/ amenities. • Subsidized school bus service. • A subsidy for added transit services. • Class II and III on-street bikeway system. • Class I bikeway system that connects residential, commercial and park uses of the Specific Plan. • Design streets to maximize pedestrian access to transit stops. • Site design to maximize access to transit lines. • Site design to accommodate bus travel. • Site design to provide lighted shelters at transit access points. • Preparation of a Transportation System Management Plan for employers with 50 or more employees. • Provide secure bicycle storage at public parking facilities. • Only U.S. EPA Phase II certified woodburning devices should be allowed in single-family residences. The emission potential from each residence shall not exceed 7.5 grams per hour.	

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• Woodburning or Pellet appliances shall not be permitted in multi-family developments. Only natural gas or propane fired fireplace appliances are permitted.	
4.2-4 The proposed project would generate increased traffic volumes that could increase concentrations of CO at local intersections.	LS	None required.	NA
4.2-5 The proposed project could expose sensitive receptors in close proximity to the project site to TACs.	LS	None required.	NA
4.2-6 Development of the proposed project, in combination with other existing and future development within the SVAB could have a cumulative ozone impact.	LS	None required.	NA
4.2-7 The proposed project would generate increased traffic volumes under cumulative conditions that could increase concentrations of CO at local intersections.	LS	None required.	NA
4.3 Biological Resources			
4.3-1 The proposed project would not result in the loss of state and/or federally protected wetlands.	LS	None required.	NA
4.3-2 The proposed project will not result in the loss of riparian or other sensitive habitats.	LS	None required.	NA
4.3-3 The proposed project could result in the loss of foraging habitat for Swainson's hawk, white-tailed kite, and other protected raptors.	S	4.3-3 The project applicant shall ensure that agricultural land, annual grasslands or other suitable raptor foraging habitat are preserved either on site, or a combination of on site and off site preservation of habitat within Solano County at a 0.5:1 ratio. The final acreage amount shall be approved by the City. Preserve areas must be established prior to project construction, and may occur through either: a) Payment of a mitigation fee to a habitat development and management company such as the Center for Natural Lands Management, Wildlands, Inc., or to the CDFG. If an established mitigation bank is not available in the area, the fees shall be held in a trust fund, and used to develop a mitigation bank in Solano County through the purchase, monitoring, maintenance, and remediation of lands in Solano	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		County that support suitable foraging habitat for Swainson's hawk, and other raptors. These lands would become incorporated into the mitigation bank, owned and operated by the habitat development and management company, and protected in perpetuity. The lands must be within 10 miles of the project site (consistent with CDFG guidelines); or b) Purchase of conservation easements or fee title in Solano County. This mitigation shall occur within 10 miles of the project site (consistent with CDFG guidelines) or at another distance approved by CDFG. Although the primary focus of these mitigation measures is on Swainson's hawk, preservation of foraging habitat for other protected bird species including red-tailed hawk, red-shouldered hawk, northern harrier, ferruginous hawk, American kestrel, great horned owl, and loggerhead shrike would be accomplished concurrently.	
4.3-4 The proposed project could result in the loss of nesting habitat for Swainson's hawk, white-tailed kite, and other protected raptors.	S	4.3-4 a) If construction is to occur between March 15 through August 30, the project applicant, shall retain a qualified biologist to conduct a pre-construction breeding-season survey of the project site within 30 days of when construction is planned to begin, to determine if any birds are nesting on or directly adjacent to the project site. The survey results shall be submitted to the CDFG for their review. b) The project applicant, consistent with CDFG guidelines, shall avoid all birds nest sites located in the project site during the breeding season (approximately March 15 through August 30) while the nest is occupied with adults and/or young. This avoidance could consist of delaying construction to avoid the nesting season. Any occupied nest shall be monitored by a qualified biologist to determine when the nest is no longer used. If the construction cannot be delayed, avoidance shall include the establishment of a non-disturbance buffer zone around the nest site. The size of the buffer zone will be determined in consultation with the CDFG. The buffer zone shall be delineated by highly visible temporary construction fencing.	LS

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.3-5 The proposed project would not result in loss of nesting habitat for tricolored blackbird.	LS	None required.	NA
4.3-6 The proposed project would not result in interruptions to wildlife corridors or loss of wildlife nursery sites.	LS	None required.	NA
4.3-7 The proposed project would not result in impacts to special status plant species.	LS	None required.	NA
4.3-8 The proposed project in combination with other current and proposed projects in the vicinity could result in a regional loss of riparian or other sensitive habitats.	LS	None required.	NA
4.3-9 The proposed project in combination with other current and proposed projects in the vicinity could result in a regional loss of foraging habitat for Swainson's hawk, white-tailed kite, and other protected raptors.	PS	4.3-9 Implement Mitigation Measure 4.3-3(a) and (b).	LS
4.3-10 The proposed project in combination with other current and proposed projects in the vicinity could result in a regional loss of nesting habitat for Swainson's hawk, white-tailed kite, and other protected raptors.	LS	4.3-10 Implement Mitigation Measure 4.3-2(a), and if necessary (i.e., if nesting raptors are present), Mitigation Measure 4.3-2(b).	LS
4.3-11 The proposed project in combination with other current and proposed projects in the vicinity could result in a regional loss of nesting habitat for tricolored blackbird.	LS	None required.	LS
4.3-12 The proposed project in combination with other current and proposed projects in the vicinity could result in a regional loss of wildlife corridors or loss of wildlife nursery sites.	LS	None required.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Prior to Mitigation	Mitigation Measure(s)		Level of Significance After Mitigation
4.4 Cultural Resources					
4.4-1	**The proposed project could cause a substantial adverse change in the significance of an historical resource or a unique archaeological resource as defined in §21083.2 of the CEQA statutes and §15064.5 of the State CEQA Guidelines.**	PS	4.4-1	In the event that any prehistoric or historic subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian, and/or mortar are discovered during construction-related earth-moving activities, all ground-disturbing activity within 50 feet of the resources shall be halted and the City of Rio Vista Community Development Department shall be notified by the project applicant. The project applicant shall retain a qualified archaeologist to survey and evaluate the find. The Community Development Department shall consult with the qualified archeologist to assess the significance of the find. Impacts to any significant resources shall be mitigated to a less-than-significant level through data recovery or other methods determined adequate by a qualified archaeologist and that are consistent with the Secretary of the Interior's Standards for Archaeological Documentation.	LS
4.4-2	**The proposed project could disturb any human remains, including those interred outside of formal cemeteries.**	PS	4.4-2	If human remains are discovered on the project site during any phase of construction, all ground-disturbing activity within 50 feet of the remains shall be halted immediately, and the City of Rio Vista Community Development Department and the County coroner shall be notified immediately. 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. The project applicant shall also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. As necessary, the archaeologist may provide professional assistance to the Most Likely Descendant, including the excavation and removal of the human remains. The City shall be responsible for approval of recommended mitigation as it deems appropriate, taking account of the provisions of State law, as set forth in CEQA Guidelines Section 15064.5(e) and Public Resources Code Section 5097.98. The project applicant shall implement	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Prior to Mitigation	Mitigation Measure(s)		Level of Significance After Mitigation
				approved mitigation measures, to be verified by the City of Rio Vista Community Development Department, before the resumption of ground-disturbing activities within 50 feet of where the remains were discovered.	
4.4-3	**The proposed project could directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature.**	PS	4.4-3	Should paleontological or unique geological resources be discovered on the project site during any phase of construction, all ground disturbing activities shall cease within 100 feet of the site of the discovery and the City of Rio Vista Community Development Department shall be notified immediately. The project applicant shall retain a qualified paleontologist to provide an evaluation of the find and to prescribe mitigation measures to reduce impacts to a less-than-significant level. In considering any suggested mitigation proposed by the consulting paleontologist, the City of Rio Vista Community Development Department shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, project design, costs, specific plan policies and land use assumptions, and other considerations. If avoidance is unnecessary or infeasible, other appropriate measures (e.g., data recovery) shall be instituted. Work may proceed on other parts of the project site, as defined by the City and the paleontologist, while mitigation for paleontological resources is carried out.	LS
4.4-4	**The proposed project, in combination with other development in the City of Rio Vista, could cause a substantial adverse change in the significance of an historical resource, unique archaeological resource, or human remains as defined in §21083.2 of the CEQA statutes and §15064.5 of the State CEQA Guidelines.**	PS	4.4-4	Implement Mitigation Measures 4.4-1 and 4.4-2.	LS
4.4-5	**The proposed project, in combination with other development in the City of Rio Vista, could directly or indirectly destroy a unique paleontological resource or site of a unique geologic feature.**	PS	4.4-5	Implement Mitigation Measure 4.4-3.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Prior to Mitigation	Mitigation Measure(s)		Level of Significance After Mitigation
4.5 Geology and Soils					
4.5-1	**The proposed project could expose people or structures to adverse impacts involving landslides due to substantial erosion.**	PS	4.5-1	Implement soil stability recommendations provided in the Engeo, Inc. geotechnical exploration report during excavation, grading, fill activities, etc., on slopes within the project site. Measures include, but are not limited to: (1) removal of all organics and debris from fill materials, (2) removal of soft soils, (3) compaction of soils prior to fill placement, (4) compaction of trench backfills, (5) limiting final slope gradients to 2:1 (horizontal:vertical) or flatter for slopes less than 10 feet in height, (6) limiting slope gradients to 3:1 for slopes exceeding 10 feet in height, (7) use of permanent drainage measures to intercept surface water infiltration, (8) review of grading plans to ensure more detailed recommendations, (9) building setbacks from slopes according to minimum UBC requirements, (10) construction of retaining walls, etc. The most appropriate and effective measures shall be determined by a qualified project engineer and reviewed and approved by the City Planning Department prior to the issuance of grading permits.	LS
4.5-2	**The proposed project is located on expansive soils, which could create substantial risks to life or property.**	PS	4.5-2	The project applicant shall incorporate appropriate recommendations made in the geotechnical exploration report (Engeo, Inc., September 2003) into project design and grading and excavation plans to reduce impacts associated with development of the proposed project on expansive soils. Measures to reduce the effects of development on expansive soils include, but are not limited to: (1) the utilization of post-tensioned mat foundations for single family residences within the proposed project and (2) specific earthwork compaction and (3) moisture recommendations to reduce the damaging effects of expansive soils. The most effective and appropriate measures, along with any additional measures that may be deemed appropriate shall be determined by a qualified geotechnical engineer. These measures shall be reviewed and approved by the City Planning Department prior to the issuance of grading permits.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.5-3 The proposed project, in combination with other development within the City of Rio Vista, could expose people or structures to adverse impacts involving the placement of structures on expansive soils and landslides due to substantial erosion, which could create substantial impacts to life or property.	LS	None required.	NA
4.6 Hazards and Hazardous Materials			
4.6-1 The proposed project could expose people to potential health hazards by demolishing buildings on the project site that could contain asbestos and/or lead-based paint.	PS	4.6-1 Prior to demolition of any structures located on the project site, the project applicant shall retain a Cal OSHA certified lead-based paint and ACBM contractor to conduct a risk assessment of all structures on-site constructed prior to 1978 for the presence of ACBMs and/or lead-based paint. If ACBMs and/or lead-based paint are determined to exist on site, the contractor shall prepare a site-specific ACBM and lead hazard control plan. If the plan calls for the removal of ACBMs and lead-based paints prior to demolition activities, ACBM removal methods may include, but are not limited to: dry stripping, wet controlled stripping, high pressure water jetting, and air management for hot stripping. Paint removal methods may include, but are not limited to: use of a heat gun, tools equipped with HEPA exhaust capability, wet scraping, and chemical removers. If removal is not deemed necessary prior to demolition, the plan shall make other recommendations for the containment of any ACBMs or lead-based paint materials that may be released into the environment during demolition activities, as well as appropriate disposal methods. The plan shall also provide specific instructions for providing protective clothing and gear for abatement personnel. Wastes from abatement and demolition activities shall be managed and disposed of at a landfill(s) licensed to accept ACBMs and lead-based waste. Once all abatement measures have been implemented, the project applicant shall provide written documentation to the City that ACBM and lead-based paint testing and abatement, if necessary, has been completed in accordance with all federal, state, and local laws and regulations, including: lead-based paint	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		exposure guidelines provided in "Guidelines for the Evaluation and Control of Lead Based Paint Hazards in Housing" by the U.S. Department of Housing and Urban Development (HUD), Construction Safety Order 1532.1 from Title 8 of the California Code of Regulations (CCR), and the California Department of Health Services.	
4.6-2 Construction and/or occupancy of the proposed project could expose people to sources of potential health hazards, such as soil or groundwater contamination, from past uses on- or off-site.	PS	4.6-2 a) Prior to issuing grading permits, a Phase II ESA shall be prepared by the project applicant in accordance with professional standards, as recommended in the Phase I ESA. The Phase II ESA shall further evaluate the RECs identified in the Phase I ESA and other potential risks that may have resulted in soil and/or groundwater contamination at the project site. The Phase II ESA shall include soil sampling to be conducted at each of the sites of the RECs identified in the Phase I ESA, including the Esperson Homestead, in the area of each of the above-ground storage tanks, the storage yard on the Esperson Homestead, and the storage silos on the Esperson Homestead. The Phase II ESA shall also investigate the potential for soil contamination resulting from the use of pesticides and/or herbicides throughout the project site. A work plan for and results of the investigation shall be submitted by the project applicant to the City of Rio Vista Planning Department for review and approval. The results of the study shall identify recommended measures to reduce potential risks, if any, to individuals and the environment that could occur during site development or future occupancy. Remediation measures recommended by the Phase II ESA and work plan shall be carried out to the satisfaction the City of Rio Vista Planning Department prior to issuing grading permits. b) In the event that previously unidentified soil or groundwater contamination, USTs, or other features or materials that could present a threat to human health or the environment are discovered during excavation and grading or construction activities, all construction within the project site shall cease immediately, and the applicant shall retain a qualified professional to evaluate the type and extent of the hazardous materials contamination and make appropriate	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		recommendations, including, if necessary, the preparation of a site remediation plan. Pursuant to Section 25401.05 (a)(1) of the California Health and Safety Code, the plan shall include: a proposal in compliance with application law, regulations, and standards for conducting a site investigation and remedial action, a schedule for the completion of the site investigation and remedial action, and a proposal for any other remedial actions proposed to respond to the release or threatened release of hazardous materials at the property. Work within the project site shall not proceed until all identified hazards are managed to the satisfaction of the City and the Solano County Environmental Management Department. c) In the event site investigation and/or remediation are required, the applicant shall ensure preparation of a site-specific health and safety plan that meets the intent of OSHA hazardous materials worker requirements (CCR Title 8). The plan shall be prepared by a qualified professional prior to the commencement of site-disturbing activities associated with the investigation and/or remediation. The plan shall provide for the identification, evaluation, control of safety and health hazards, and emergency response to hazardous waste operations. Pursuant to the requirements of state and federal law, the site-specific health and safety plan may require, but would not be limited to: the use of personal protective equipment, onsite controls (e.g., continuous air quality monitoring) during construction, and other precautions as determined to be necessary by the plan preparer. d) Prior to the issuance of grading permits, an investigation shall confirm the presence of former septic systems at the Esperson Homestead. If the homestead does in fact contain former septic systems, these systems shall be abandoned under permit from, and to the satisfaction of, the Solano County Environmental Management Department. e) During site preparation activities such as grading and excavation, external corrosion control measures such as, but not limited to, the use of protective coating on pipe exteriors and the use of cathodic protection systems shall be used by the project contractor to prevent corrosion damage to existing pipelines that may become unearthed during these activities.	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

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			These activities shall be monitored by the Solano County Environmental Management Department.	
4.6-3	**Construction and/or occupancy of the proposed project would involve the routine use, storage, and transportation of hazardous materials, which could create a health hazard or potential health hazard.**	LS	None required.	NA
4.6-4	**The proposed project could result in potentially significant hazards to residences and schools due to the natural gas extraction activities within the project site.**	LS	None required.	NA
4.6-5	**The proposed project could result in potentially significant hazards to residences and schools due to the presence of natural gas transmission facilities within the project site.**	LS	None required.	NA
4.6-6	**The proposed project is located within two miles of the Rio Vista Municipal Airport, which could result in a safety hazard.**	LS	None required.	NA
4.6-7	**Implementation of the proposed project could expose sensitive receptors to increased evacuation risks under emergency conditions.**	PS	4.6-7 City of Rio Vista shall not issue occupancy building permits beyond the 1,931st residential unit until the project applicant coordinates with the City Fire Chief and the Solano County OES to ensure project compliance with the approved county Emergency Evacuation Plan. Any applicant revisions to the evacuation plan would be subject to the review and approval of the City Fire Chief and Solano County OES.	LS
4.6-8	**Construction and/or occupancy of the proposed project, in combination with other projects in the City of Rio Vista, could expose people to sources of potential health hazards, such as asbestos containing building materials, lead-based paint, and soil or groundwater contamination, from past uses on- or off-site.**	PS	4.6-8 Implement Mitigation Measures 4.6-1 and 4.6-2.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact		Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.6-9	**Construction and/or occupancy of the proposed project, in combination with the development of other projects in and around the City of Rio Vista, would involve the routine use, storage, and transportation of hazardous materials, which could create a health hazard or potential health hazard.**	LS	None required.	NA
4.6-10	**The proposed project, in combination with other development in the City, could result in potentially significant hazards related to the extraction and transmission of natural gas.**	LS	None required.	NA
4.6-11	**The proposed project, in combination with other projects in the City of Rio Vista, would result in the development of residential, commercial, and school uses within two miles of the Rio Vista Municipal Airport, which could result in a safety hazard for people residing and working within the proposed project.**	LS	None required.	NA
4.6-12	**Cumulative development, including the proposed project, could affect implementation an adopted emergency evacuation plan.**	PS	4.6-12 City of Rio Vista shall not issue occupancy building permits beyond the 1,931st residential unit until the project applicant coordinates with the City Fire Chief and the Solano County OES to ensure project compliance with the approved county Emergency Evacuation Plan. Any applicant revisions to the evacuation plan would be subject to the review and approval of the City Fire Chief and Solano County OES.	LS
4.7 Hydrology and Water Quality				
4.7-1	**The proposed project would increase peak runoff rates and volumes which could exceed the capacity of local drainages and result in on- and off-site flooding hazards.**	PS	4.7-1 a) Prior to issuance of a grading permit, the applicant shall prepare a Final Drainage Master Plan for all on- and off-site drainage facilities (including water quality facilities - BMPs) shall be prepared and submitted to the City of Rio Vista Department of Public Works and the Community Development Department (City) for review and approval. The Final Drainage Master Plan shall demonstrate that peak flows from developed areas would not exceed pre-development conditions and shall be in conformance with the requirements of Rio Vista's General Plan policies and guidelines for design	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

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		of drainage facilities and the criteria used in the Solano County Hydrology Manual that are in effect at the time of submittal. The Drainage Plans shall include at a minimum, written text addressing existing conditions, the effects of project improvements, all appropriate calculations, a watershed map, potential increases in downstream flows and volumes, proposed on-site and off-site improvements, on-site water quality facilities, effectiveness of water quality BMPs, operation and maintenance responsibilities, inspection schedules, and reporting requirements. The Final Drainage Master Plan shall be prepared by a Registered Civil Engineer and shall include specifics regarding the timing of implementation. b) Funding and implementation for the maintenance of required drainage facilities shall be provided by a Homeowners Association, Community Services District, or other responsible entity to be determined appropriate by the City prior to construction.	
4.7-2 Construction activities for the proposed project could result in sediment and other construction-related pollutants entering local drainages.	PS	4.7-2 a) Any project within the DRHPUD with ground disturbance exceeding one-acre that is subject to the State NPDES General Construction Permit shall obtain such permit from the CVRWQCB and shall provide to the City evidence of a State-issued NPDES General Construction Permit number or filing of a Notice of Intent and fees prior to start of construction. b) Implement Mitigation Measure 4.5-1 (slope stability and erosion control from Section 4.5 – Geology and Soils).	LS
4.7-3 Operation of the proposed project would result in urban pollutants entering local drainages, which could exceed or violate water quality standards.	PS	4.7-3 a) Implement Mitigation Measures 4.7-1(a) and (b). b) Project-related stormwater discharges are subject to all applicable requirements of the National Pollutant Discharge Elimination System (NPDES) Phase II program. BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff in accordance with Attachment 4 of the City's NPDES Municipal Stormwater Permit (State Water Resources Control Board NPDES General Permit No. CAS000004). All BMPs for water quality protection, source control, and treatment control shall be developed in accordance with the California Stormwater Quality	LS

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	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
			Association Stormwater Best Management Practice Handbook for Construction and New Development/ Redevelopment (or other similar source approved by the City) for the applicable type of development and/or improvement. The BMPs shall be designed to mitigate (minimize, infiltrate, filter, or treat) stormwater runoff. Flow or volume based post-construction BMPs shall be designed at a minimum in accordance with criteria based in the CASQA Handbook. Provisions shall be included for long-term maintenance of BMPs. All BMPs shall reflect the Best Available Technologies (BAT) available at the time of implementation and shall reflect site-specific limitations. The City shall make the final determinations as to the appropriateness of the BMPs proposed for each project.	
4.7-4	**The proposed project could reduce groundwater recharge and affect groundwater quality.**	LS	None required.	NA
4.7-5	**The proposed project, in combination with the buildout of the City of Rio Vista's watersheds, could result in stormwater peak flows and volumes that could result in on- or off-site flooding.**	PS	4.7-5 Implement Mitigation Measure 4.7-1(a) and (b).	LS
4.7-6	**The proposed project, in combination with the buildout of the City General Plan, would result in degradation of water quality from stormwater runoff.**	PS	4.7-6 Implement Mitigation Measures 4.7-2(a) and (b) and 4.7-3(a) and (b).	LS
4.7-7	**The proposed project, in combination with other development in the Solano Subbasin, could impact groundwater recharge rates and quality.**	LS	None required.	NA
	4.8 Land Use and Agricultural Resources			
4.8-1	**Implementation of the proposed project, could conflict with the Rio Vista General Plan, Rio Vista Zoning Ordinance, Solano County General Plan, or other applicable policies.**	LS	None required.	NA

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	Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.8-2	**Development of the proposed project could create incompatible uses such that the productivity of adjacent agricultural land is substantially reduced or that the resulting residential uses are adversely affected by agricultural activities.**	LS	None required.	NA
	4.9 Noise			
4.9-1	**Construction of the proposed project would temporarily increase ambient noise levels.**	LS	4.9-1 The prime contractor shall ensure that the following measures are implemented during all phases of project construction: a) Construction activities shall comply with the Rio Vista Municipal Code, including compliance with operational hours for construction equipment of 7:00 a.m. to 7:00 p.m. b) Locate fixed construction equipment, such as compressors and generators, and construction staging areas as far as possible (with a minimum distance of 50 feet) from nearby sensitive receptors. Shroud or shield all impact tools and muffle or shield all intake and exhaust ports on power construction equipment within 50 feet of sensitive receptors. c) Designate a disturbance coordinator and conspicuously post this person's number around the project site and in adjacent public spaces. This disturbance coordinator will receive all public complaints about construction noise disturbances and will be responsible for determining the cause of the complaint, and implement any feasible measures to be taken to alleviate the problem, including, for example, use of temporary noise attenuation mechanisms such as the erection of temporary sound walls, establishment of short term construction setbacks, use of noise control blankets, and the use of equipment mufflers, in order to reduce noise on existing sensitive receptors.	LS
4.9-2	**Construction of the proposed project would temporarily increase levels of groundborne vibration.**	LS	4.9-2 Implement Mitigation Measures 4.9-1(a) through (c).	LS

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4.9-3 The proposed project would create transportation noise that could affect existing receptors.	S	4.9-3 The project sponsor shall be required to provide noise attenuation to Sierra Avenue between the project site and Drouin Drive. Noise attenuation shall be achieved with the implementation of open grade asphalt, which provides approximately a 2 to 3 dBA decrease in traffic noise level, in order to reduce the project's contribution to traffic noise in this area.	LS
4.9-4 The proposed project would create transportation noise that could affect proposed residential receptors adjacent to SR 12.	PS	4.9-4 a) The project developer shall ensure that noise levels at the exterior areas of the proposed detached (single family) residential units meets the City's 65 dBA standard. Final design should include at least a 4-foot berm and a six-foot wall or a 2-foot berm and an 8-foot wall combination where the setback to the berm is adjacent to the roadway right-of-way and there is at least a 65-foot setback to the residential walls; or some other combination of berms, walls, and setbacks that ensure the exterior noise levels at the closest detached (single-family) residential units are 65 dBA or less. b) The project developer shall ensure that interior noise levels at the proposed detached (single family) residential units meets the City's 45 dBA standard, by incorporating site design and insulation features to meet this standard. c) If exterior-to-interior noise reduction features for residential structures requires inoperable or closed windows to meet the noise standard, a mechanical ventilation system meeting Uniform Building Code requirements must be provided.	LS
4.9-5 Stationary sources associated with the proposed project would increase ambient noise levels at existing and proposed receptors.	S	4.9-5 The project developer shall ensure that mechanical equipment installed for residential and commercial buildings and truck loading areas shall be located as far away from residential receptors as feasible, and shall include proper shielding such that noise levels at the closest residential receptor would be below 45 dBA L_{eq} for mechanical equipment and below 50 dBA L_{eq} for truck loading areas.	LS
4.9-6 The proposed project would place residents adjacent to gas well buffer area at the project site.	S	4.9-6 The prime contractor shall ensure that one or all of the following measures are implemented for residential units adjacent to a well site buffer area as designated on the proposed site plan:	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

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			a) Comply with the Rio Vista Municipal Code by providing exterior-to-interior noise reduction features for the residential structures adjacent to the 150 foot of the setback area for a well site to assure that interior noise levels are 30 dBA or less within bedrooms and 35 dBA in other rooms. b) In order to comply with the City's Municipal Code standards, the following noise attenuation measure could be implemented: increase the residential setback, require the construction of temporary noise barriers such as sound walls or berm, or provision of landscaping features including thick tree lines along the perimeter of the well sites. c) If exterior-to-interior noise reduction features for high density residential structures requires inoperable or closed windows to meet the noise standard, a mechanical ventilation system meeting Uniform Building Code requirements must be provided.	
4.9-7	**The proposed project would not expose residents within two miles of the Rio Vista Airport to noise levels in excess of the standards.**	LS	None required.	NA
4.9-8	**Construction of the proposed project would temporarily add to cumulative noise levels in the vicinity of the proposed project site.**	LS	None required.	NA
4.9-9	**Increases in traffic associated with the proposed project would create noise that could combine with other roadway noise and affect sensitive receptors.**	S	4.9-9 Implement Mitigation Measure 4.9-3.	LS
	4.11 Public Services			
4.11-1	**The proposed project would result in an increased demand for police protection services, requiring new or expanded police facilities the construction of which could cause significant environmental effects.**	S	4.11-1 Prior to project construction, the project applicant shall pay the municipal facilities fee toward the development of adequate police facilities as required by Section 3.36.020 of the City of Rio Vista Municipal Code. The project applicant shall also pay an additional fee to ensure adequate funding is available to construct a new police facility prior to the development of 450 units.	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.11-2 The proposed project, in combination with future development in the City of Rio Vista, would result in an increased demand for police protection services, including the construction of new police facilities, which could cause significant environmental effects.	S	4.11-2 Implement Mitigation Measure 4.11-1.	LS
4.11-3 The proposed project would result in an increased demand for fire protection and emergency response services, requiring new or expanded fire facilities, the construction of which could cause significant environmental effects.	S	4.11-3 Prior to project construction, the project applicant shall pay the municipal facilities fee toward the development of adequate fire facilities, staff, and equipment as required by Section 3.36.020 of the City of Rio Vista Municipal Code. The project applicant shall also pay an additional fee to ensure adequate funding is available to construct a new fire facility prior to or completion of first phase.	LS
4.11-4 The proposed project, in combination with future development in the City of Rio Vista, would result in an increased demand for fire protection and emergency response services, including the construction of new police facilities which could cause significant environmental effects.	S	4.11-4 Implement Mitigation Measure 4.11-3.	LS
4.11-5 The proposed project would generate solid waste that could exceed the projected capacity of the landfill that would serve the project.	LS	None required.	NA
4.11-6 The proposed project, in combination with future development in the City of Rio Vista, would generate solid waste that could exceed the projected capacity of the landfill that would serve the City.	LS	None required.	NA
4.11-7 The proposed project could generate additional elementary, middle, and high school students in the River Delta Unified School District that would require the construction of new, or expansion of existing school facilities with the potential to result in significant environmental effects.	PS	4.11-7 The project applicant shall pay school mitigation fees to the RDUSD for the construction or expansion of school facilities which would be required to accommodate students generated by the proposed project.	LS

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4.11-8 The proposed project, in combination with future development in the City of Rio Vista, could generate additional students in the River Delta Unified School District that would require the construction of new, or expansion of existing school facilities.	PS	4.11-8 Implement Mitigation Measure 4.11-7.	LS
4.11-9 The proposed project could result in the need to construct new, or expanded existing Neighborhood Parks.	PS	4.11-9 Prior to project construction, the project applicant shall pay in-lieu fees and the Neighborhood Park and Recreation Facilities fee which would fund 1.4 gross acres of Neighborhood Park. OR Prior to final design review, the project applicant shall include on the final tentative map and large lot map, 1.4 gross acres of Neighborhood Park.	LS
4.11-10 The proposed project could result in the need to construct new, or expand existing Community Parks.	LS	None required.	NA
4.11-11 The proposed project could result in the need to construct new, or expand existing trails.	S	4.11-11 Prior to project construction, the project applicant shall pay the Park and Recreation Facilities fee for trails which would fund either 5.8 miles of trails or 17.3 gross acres of trail corridor, whichever is greater. OR Prior to final design review, the project applicant shall include on the final tentative map and large lot map, either 5.8 miles of trails or 17.3 gross acres of trail corridor, whichever is greater.	LS
4.11-12 The proposed project, in combination with future development in the City of Rio Vista, would result in a substantial physical deterioration of existing area parks and recreational facilities, or create a need for construction or expansion of recreational facilities beyond what was anticipated in the General Plan and/or Parks Master Plan.	PS	4.11-12 Implement Mitigation Measure 4.11-9.	LS

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Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.12 Transportation and Circulation			
4.12-1 Under Existing Plus Project conditions the proposed project would substantially increase trips along existing roadway segments.	PS	4.12-1 a) The City, in coordination with STA, shall create a regional funding program that would establish and collect fair share contributions from new development projects towards needed unfunded road improvements along SR 12 in conjunction with the STA SR 12 East Prioritization and Implementation Strategy. b) Upon establishment of this new regional funding program, the project applicant shall contribute fair-share funds towards the implementation of the following improvements in accordance to the timing identified in Table 4.12-9: i. Widen the section of SR 12 between SR 113 and Summerset Drive from one to two lanes in each direction. ii. Widen the section of SR 12 between SR 84 and SR 160 from one to two lanes in each direction by either widening the existing bridge over the Sacramento River or by constructing a new bridge over the river. c) The project applicant shall contribute fair-share funds towards the regional municipal services fund. City staff shall ensure that all funds are directed towards the following improvement: i. Widen the section of SR 12 between Summerset Drive and Church Road from one to two lanes in each direction with a raised landscaped median, curbs and gutters, sidewalks, bike lanes, and transit pullouts. ii. Widen the section of SR 12 between Church Road and Main Street from one to two lanes in each direction with a raised landscaped median to limit left-turn in and out access and curbs and gutters, sidewalks, bike lanes, and transit pullouts. iii. Widen the section of SR 12 between Main Street and Gardiner Way from one to two lanes in each direction with a raised landscaped median to limit left-turn in and out access and curbs and gutters, sidewalks, bike lanes, and transit pullouts.	SU

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		iv. Widen the section of SR 12 between Gardiner Way and SR 84 from one to two lanes in each direction with a raised landscaped median to limit left-turn in and out access and curbs and gutters, sidewalks, bike lanes, and transit pullouts. d) The City shall add a funding mechanism to the existing CIP to provide a circulatory connection from the project to 7th Street or 2nd Street via the proposed community park stubbed roadway. The applicant shall be required to pay its fair fees towards the improvements.	
4.12-2 Under Existing Plus Project conditions the proposed project would substantially increase delay at existing and proposed intersections.	PS	4.12-2 a) Implement Mitigation Measures 4.12-1(a) through (c). b) Upon establishment of this new regional funding program, the project applicant shall contribute fair-share funds towards the implementation of the following additional improvements. The improvements should be made in accordance with the timing schedule provided in Table 4.12-11: i. Install a traffic signal, restripe the southbound approach, and widen the northbound, eastbound, and westbound approaches to the SR 12/SR 113 intersection to provide the following lane configurations: • One left-turn lane and a shared through/right-turn lane on the northbound approach • One left-turn lane and a shared through/right-turn lane on the southbound approach • One left-turn lane and a shared through/right-turn lane on the eastbound approach • One left-turn lane, one through lane, and a free right-turn lane on the westbound approach ii. Install a traffic signal and widen the northbound, southbound, eastbound, and westbound approaches to the SR 12/Church Road intersection to provide the following lane configurations: • One left-turn lane, one through lane, and a right-turn lane on the northbound approach	LS

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		• One left-turn lane and a shared through/right-turn lane on the southbound approach • One left-turn lane, two through lanes, and a right-turn lane on the eastbound approach • One left-turn lane, one through lane, and a shared through/right-turn lane on the westbound approach iii. Install a traffic signal and widen the northbound, eastbound, and westbound approaches to the SR 12/"C" Street intersection to provide the following lane configurations: • One left-turn lane and a right-turn lane on the northbound approach • Two through lanes and a right-turn lane on the eastbound approach • One left-turn lane and two through lanes on the westbound approach iv. Install a raised landscaped median along SR 12 and close the left-turn lane on the northbound approach to the SR 12/Drouin Drive intersection to restrict left-out access from Drouin Drive. Widen the eastbound and westbound approaches to the SR 12/Drouin Drive intersection to provide the following lane configurations: • One through lane and a shared through/right-turn lane on the eastbound approach • One left-turn lane and two through lanes on the westbound approach v. Install a second through lane on SR 12 in both directions through the intersection of SR 12/Main Street-Hillside Terrace. vi. Install a raised landscaped median on SR 12 to restrict left out access from Gardiner Way on the southbound approach to the SR 12/Gardiner Way intersection and install a second through lane on SR 12 in both directions.	

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		vii. Install a raised landscaped median on SR 12 to restrict left out access from North 5th Street on the northbound and southbound approaches to the SR 12/North 5th Street intersection and install a second through lane on SR 12 in both directions. viii. Install a raised landscaped median on SR 12 to restrict left out access from Virginia Street and a second through lane on SR 12 in both directions through the intersection of SR 12/Virginia Drive. ix. Widen the eastbound and westbound approaches to the SR 12/SR 84 intersection to provide the following lane configurations: • Two through lanes and a right-turn lane on the eastbound approach • Two through lanes and a right-turn lane on the westbound approach x. Widen the eastbound and northbound approaches to the SR 12/SR 160 intersection to provide the following lane configurations: • One left-turn lane, two through lanes, and a right-turn lane on the eastbound approach • Two left-turn lanes, one through lanes, and a right-turn lane on the northbound approach	
4.12-3 Under Existing Plus Project conditions the proposed project could fail to provide adequate space for transit facilities.	LS	None required.	NA
4.12-4 Under Baseline Plus Project conditions, the proposed project would substantially increase trips along existing roadway segments.	S	4.12-4 a) Implement Mitigation Measures 4.12-1(a) through (d). b) Upon establishment of this new regional funding program, the project applicant shall contribute fair-share funds towards the implementation of the following improvements: i. Widen the section of SR 12 between SR 113 and Summerset Drive from one to two lanes in each direction and add a median.	SU

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		ii. Widen the section of SR 12 between SR 84 and SR 160 from one to two lanes in each direction by either widening the existing bridge over the Sacramento River or by constructing a new bridge over the river. iii. Widen the section of Main Street between SR 12 and Sierra Avenue to a two-lane arterial by adding a center two-way left-turn lane. iv. Widen the section of Main Street from Sierra Avenue to 7th Street to a two-lane arterial by adding a center two-way left-turn lane. c) The project applicant shall contribute fair-share funds towards the regional municipal services fund. City staff shall ensure that all funds are directed towards the following improvement: i. Widen the section of SR 12 between Summerset Drive and Church Road from one to two lanes in each direction and add a raised median. ii. Widen the section of SR 12 between Church Road and Main Street from one to two lanes in each direction and add a raised median. iii. Widen the section of SR 12 between Main Street and Gardiner Way from one to two lanes in each direction and add a raised median. iv. Widen the section of SR 12 between Gardiner Way and SR 84 from one to two lanes in each direction and add a raised median.	
4.12-5 Under Baseline Plus Project conditions the proposed project would substantially increase trips along existing and proposed intersections.	S	4.12-5 a) Implement Mitigation Measures 4.12-2(b) and (c). b) Upon establishment of this new regional funding program, the project applicant shall contribute fair-share funds towards the implementation of the following additional improvements: i. Install a traffic signal and widen the northbound, southbound, eastbound, and westbound approaches to the SR 12/SR 113 intersection to provide the following lane configurations: • One left-turn lane and a shared through/right-turn lane on the northbound approach	LS

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		• Two left-turn lanes and a shared through/right-turn lane on the southbound approach • One left-turn lane, one through lane, and a shared through/right-turn lane on the eastbound approach • One left-turn lane, two through lanes, and a free right-turn lane on the westbound approach ii. Restripe the eastbound approach to the SR 12/ Summerset Drive intersection to provide one left-turn lane and two through lanes, the westbound approach to provide two through lanes and a right-turn lane, and either restripe the southbound approach to provide two left-turn lanes and a right-turn lane with overlap phasing or widen the eastbound approach to provide two left-turn lanes and two through lanes. iii. Widen the northbound, southbound, eastbound, and westbound approaches to the SR 12/Church Road intersection to provide the following lane configurations: • Two left-turn lanes, one through lane, and a right-turn lane on the northbound approach • One left-turn lane, one through lane, and a right-turn lane on the southbound approach • One left-turn lane, two through lanes, and a right-turn lane on the eastbound approach • One left-turn lane, two through lanes, and a right-turn lane on the westbound approach iv. Widen the northbound, southbound, eastbound, and westbound approaches to the SR 12/"C" Street intersection to provide the following lane configurations: • One left-turn lane, one through lane, and a right-turn lane on the northbound approach • One left-turn lane, one through lane, and a right-turn lane on the southbound approach	

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		• One left-turn lane, two through lanes, and a right-turn lane on the eastbound approach • Two left-turn lanes, two through lanes, and a right-turn lane on the westbound approach v. Install a traffic signal and widen the northbound, southbound, eastbound, and westbound approaches to the SR 12/Drouin Drive intersection to provide the following lane configurations: • One left-turn lane and a shared through/right-turn lane on the northbound approach • One left-turn lane and a shared through/right-turn lane on the southbound approach • One left-turn lane, one through lane, and a shared through/right-turn lane on the eastbound approach • One left-turn lane, one through lane, and a shared through/right-turn lane on the westbound approach vi. Install a second through lane on SR 12 in both directions and widen the northbound and southbound approaches to the SR12/MainStreet-Hillside Terrace intersection to provide the following lane configurations: • One left-turn lane, one through lane, and a right-turn lane on the northbound approach • One left-turn lane and a shared through/right-turn lane on the southbound approach vii. Install a raised landscaped median on SR 12 to restrict left out access from Gardiner Way on the southbound approach to the SR 12/Gardiner Way intersection and install a second through lane on SR 12 in both directions. viii. Install a raised landscaped median on SR 12 to restrict left out access from North 5th Street on the northbound and southbound approaches to the SR 12/North 5th Street intersection and install a second through lane on SR 12 in both directions.	

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TABLE 3-1

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		ix. Install a raised landscaped median on SR 12 to restrict left out access from Virginia Street and install a second through lane on SR 12 in both directions through the SR 12/Virgina Drive Intersection. x. Install a second through lane on SR 12 in both directions through the SR 12/SR 84 intersection. xi. Widen the eastbound and westbound approaches to the SR 12/SR 160 intersection to provide the following lane configurations: • One left-turn lane, two through lanes, and a right-turn lane with overlap phasing on the eastbound approach. • Two left-turn lanes, one through lanes, and a right-turn lane on the northbound approach.	
4.12-6 Under Baseline Plus Project conditions the proposed project could fail to provide adequate space for transit facilities.	LS	None required.	NA
4.12-7 Under Cumulative conditions the proposed project would substantially contribute to the increased traffic volumes on existing roadway segments.	S	4.12-7 a) Implement Mitigation Measure 4.12-1(a) and (d). b) Implement Mitigation Measure 4.12-4(b) and (c).	SU
4.12-8 Under Cumulative conditions, the proposed project would substantially increase delays at existing and proposed intersections.	S	4.12-8 a) Implement Mitigation Measure 4.12-1(a) through (c). b) Implement Mitigation Measure 4.12-2(b) and (c). c) Implement Mitigation Measure 4.12-5(c).	LS
4.12-9 Under Cumulative conditions the proposed project could fail to provide adequate space for transit facilities.	LS	None required.	NA
4.13 Public Utilities			
4.13-1 The proposed project's demand for water could exceed existing available water supplies.	LS	None required.	NA

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.13-2 The increased water demand resulting from the proposed project would result in the construction of new or expansion of existing facilities, which could result in adverse physical impacts to the environment.	PS	4.13-2 Prior to the issuance of building permits, the project applicant shall pay "fair share" fees in accordance with the City of Rio Vista Water Master Plan fee schedule, payable to the City of Rio Vista Department of Public Works to contribute toward the development of new groundwater wells and water distribution infrastructures that would expand and improve the City's water supply system, which would enable the system to serve the proposed project through buildout.	LS
4.13-3 The proposed project's demand for water, in addition to the demand for water resulting from other development within the City of Rio Vista, could exceed available sources of water supplies.	LS	None required.	NA
4.13-4 The proposed project, in combination with other development within the City of Rio Vista, could result in the need for the construction of new water infrastructure, which could cause adverse environmental effects.	PS	4.13-4 Implement Mitigation Measure 4.13-2.	LS
4.13-5 The proposed project would generate additional wastewater flows that would exceed the City's wastewater collection, treatment, or disposal capacity, which could violate CVRWQCB treatment requirements. This would result in the need for expansion of existing or construction of new facilities of infrastructure.	PS	4.13-5 a) Prior to approving any additional hookups to the Northwest Wastewater Treatment Plant beyond the 450 EDUs previously approved for the project, the City shall insure that Phase II improvements are complete and operational. b) The project applicant shall coordinate with the City to determine a "fair share" fee contribution toward the development of Phase II of the Northwest Wastewater Treatment Plant.	LS
4.13-6 The proposed project, in combination with other development in the City of Rio Vista, would generate additional wastewater flows that would exceed the City's wastewater collection, treatment, or disposal capacity, which could violate CVRWQCB treatment requirements. This would result in the need for expansion of existing or construction of new facilities.	S	4.13-6 Implement Mitigation Measure 4.13-5.	LS

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
4.13-7 The proposed project would require the construction of new facilities to provide electrical service, which could result in significant environmental effects.	LS	None required.	NA
4.13-8 The proposed project would require the construction of new facilities to provide natural gas service, which could result in significant environmental effects.	LS	None required.	NA
4.13-9 The proposed project, in combination with future development in the City of Rio Vista, could exceed the electrical or natural gas supply and transmission capabilities.	LS	None required.	NA
4.14 Global Climate Change			
4.14-1 Development of the proposed project could potentially result in a cumulatively considerable incremental contribution to the significant cumulative impact of global climate change.	S	4.14-1 a) At the time of application for design review for a project of more than 10 units or a commercial development of over 50,000 sf, the City shall require the project applicant to submit an Energy Conservation Plan. The plan shall describe the techniques and programs to be employed in the development of the project to achieve energy conservation. These programs shall include, but shall not be limited to, either: • Participation in the PG&E Energy Star Performance Method. This method is available to builders of single-family homes that are at least 15 percent more energy efficient than required by the 2005 Title 24 Energy Code and meet all US EPA specifications. Participating builders become part of the California Energy Star New Homes Program, and their homes earn the Energy Star label. Incremental incentives can also be earned by adding energy efficient appliances and/or lighting to homes. OR • Participation in the New Solar Homes Partnership (NSHP) Performance Method. This method is available to builders of single-family homes that are at least 15 percent more efficient than required by the 2005 Title 24 Energy Code and meet all US EPA specifications. A second tier of participation is available to single-family homes that exceed Title 24 by 35 percent, demonstrate	SU

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SUMMARY OF IMPACTS AND MITIGATION MEASURES

Impact	Level of Significance Prior to Mitigation	Mitigation Measure(s)	Level of Significance After Mitigation
		a 40 percent reduction in cooling load, and include solar generation as an option for buyers. Both tiers require that all appliances provided by the builder must be Energy Star qualified. Builders may also qualify for additional solar incentives through the CEC's NSHP. b) The City and the project applicant shall work together to publish and distribute an Energy Resource Conservation Guide describing measures individuals can take to increase energy efficiency and conservation prior to the occupation of the first residential unit. The applicant shall be responsible for funding the preparation of the Guide. The City will be responsible for the distribution of the guide. The Energy Resource Conservation Guide shall be updated every 5 years and distributed at the public permit counter. c) The project applicant shall pay for an initial installment of Light Emitting Diode (LED) traffic lights in all Specific Plan area traffic lights. d) The project applicant shall develop a tree planting program which includes the planting of trees that can absorb CO_2. e) The project applicant shall coordinate with transit officials on a revised transit system plan which would provide public transit service within the proposed site, improve public transit access to and from the proposed project, and provide ride sharing programs. f) The City shall require that energy efficient lighting fixtures, including fluorescent light be used in residential and commercial structures within the plan area. g) The project applicant shall include light colored roofing materials and road materials to address "urban heat island" effect. h) Implement all mitigation measures identified in Section 4.2-Air Quality.	

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