EXECUTIVE SUMMARY

INTRODUCTION

The purpose of this Environmental Impact Report (EIR) is to evaluate environmental consequences that would result with the subdivision of a 58.2-acre parcel. The project site is located in the southeast portion of the Town of Moraga, Contra Costa County, California.

The California Environmental Quality Act (CEQA) requires a lead agency to prepare an Environmental Impact Report (EIR) if the lead agency determines that a proposed project may cause a significant environmental impact. This EIR is intended as an informational document that, in itself, does not determine whether a project will be approved, but aids in the local planning and decision-making process. CEQA Guidelines[1] stipulate that an EIR is not meant to be a technical document. Rather, it is intended to serve as a public disclosure document that: (1) identifies the environmental impacts associated with the proposed project which are expected to be significant or less than significant; (2) describes mitigation measures that could minimize or eliminate significant adverse impacts; and (3) evaluates alternatives to the proposed project. Prior to preparing this EIR, the Town of Moraga issued an Initial Study/Mitigated Negative Declaration which was appealed to the Town Council. The appeal was upheld, thereby resulting in this EIR.

Section 15123 of the CEQA Guidelines provides that an EIR shall contain a brief summary of the proposed action and its consequences. This Executive Summary identifies each potentially significant environmental effect with proposed mitigation measures that would reduce or avoid the effect; areas of concern known to the Lead Agency, including issues raised by the public; and issues to be resolved, including the choice among alternatives and mitigation of the potentially significant effects of the project.

PROJECT DESCRIPTION

The project being evaluated by this EIR is the subdivision of a 58.2-acre parcel into seven lots. Six single-family lots would be located on 6.75 acres, with the remaining lot containing 51.45 acres that would remain in permanent open space. The open space area would be maintained either by a homeowner's association or a special district, e.g., geological hazard abatement district. The six residential lots would range in size from 41,826 square feet (.96 acre) to 59,930 square feet (1.38 acres). The proposed development is located on the northern portion of a remnant parcel that was previously subdivided in 2001 (Subdivision 8444). At that time, the entire parcel contained 65.5 acres and 7.4 acres were developed for single-family housing in the southwest corner of the property.

A complete Project Description is set forth in Chapter 2 of this EIR.

USE OF THIS ENVIRONMENTAL IMPACT REPORT

Upon certification of this EIR, the Town of Moraga Planning Commission will use this document to review and act upon Planned Development application, a Vesting Tentative Map, a Hillside Development permit, and a Conditional Use Permit. The Town's Design Review Board can also use the document when reviewing future house designs.

POTENTIAL AREAS OF CONCERN AND ISSUES TO BE RESOLVED

Based upon written and oral comments received on the previous Initial Study/Mitigated Negative Declaration, the following were identified as potential areas of concern:

- Aesthetics/Visual Impacts,
- Geology/Soils,
- Hydrology/Storm Drainage, and
- General Plan and Moraga Open Space Ordinance (MOSO) Compliance.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Section 15123(b)(1) of the CEQA Guidelines provides that this Executive Summary shall identify each potentially significant effect with proposed mitigation measures that would reduce or avoid that effect. This information is summarized in Table S-1, "Summary of Significant Impacts and Mitigation Measures." As indicated in this table, there is no evidence that the proposed project would result in a potentially significant impact, either individually or cumulatively, that could not be mitigated to a level of insignificance.

Chapter 3, Environmental Setting, Impacts and Mitigation Measures should be consulted for the full text of impacts and mitigation measures.

ALTERNATIVES

Section 15126(d) of the State CEQA Guidelines requires that the EIR describe a range of reasonable alternatives to the project or to the location of the project that could feasibly accomplish the basic objectives, and to evaluate the comparative merits of the alternatives. Alternatives that reduce or avoid significant impacts may represent an environmentally superior alternative to the proposed project. However, if the environmentally superior

alternative is the "no project" alternative, the EIR must also identify an environmentally superior alternative among the other alternatives.

The EIR identifies the following alternatives to the proposed project:

- No Project,
- Three lots (reduced lot area)
- Eight lots (reduced lot size), and
- Eleven lots (reduced lot size).

In accordance with the State CEQA Guidelines, all reasonable project alternatives have been evaluated for their comparative environmental superiority. Based upon this evaluation, it has been determined that the 8-lot alternative with reduced lot size and reduced development area is the environmentally superior alternative. The impacts assocated with slide repair and loss of wetlands would be eliminated; neighborhood compatibility would be achieved with the smaller lots and a greater amount of open space would remain. This alternative also achieves most of the project applicant's objectives. Many of the mitigation measures would still apply to this alternative.

A summary table (Table S-1) of significant impacts and mitigation measures as a result of this analysis as well as those identified in the Initial Study, is found at the end of this chapter.

Source of Information

State of California Governor's Office of Planning and Research, California Environmental Quality Act (CEQA) Guidelines 2009.

Table S-1
SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
IMPACTS AND MITIGATION MEASURES IDENTIFIED IN THE ENVIRONMENTAL IMPACT REPORT (EIR)		
AESTHETICS / VISUAL RESOURCES		
3.1-1: Site preparation and grading of the building area would create a temporary visual impact for residents abutting the north side of the project site.	**3.1-1A**: The existing tree screen shall be supplemented with similar native species on the site behind the houses at 1108 through 1116, 1140, 1144, and 1156 through 1164 Sanders Drive. Trees shall be planted on lower portions of the creek bank, protected from deer, and maintained prior to the start of site preparation. Tree size shall be no less than 15-gallon size and shall be a mix of native species; e.g., coast live oak, California buckeye, California laurel. The applicant shall submit a tree-planting plan for review and approval by the Town.	Yes
	3.1-1B: The applicant shall post a security bond to assure protection of existing and newly planted trees that are located along the north edge of the property. The term of the bond shall extend at least 36 months beyond the completion of the required subdivision improvements.	
	3.1-1C: Newly planted trees shall be monitored for a period of ten years from the date of installation. Any trees lost during this period shall be replaced and monitored by the developer for the same length of time. Upon completion of the monitoring period, the property owners or a homeowner's association shall replace any trees that may require removal and shall be responsible for maintaining the trees.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
3.1-2: Partial views of the project site will be permanently lost with the development of the proposed project.	**3.1-2**: Refer to Mitigation Measures 3.1-1A–C.	Yes
3.1-3: New housing could be considered as out of character with the existing neighborhood.	**3.1-3A:** The massing and stepping of the houses shall be as shown on Figures 2-2 through 2-4. The maximum building height shall be determined through the design review process, but shall not exceed 25 feet from existing grade.	Yes
	3.1-3B: House designs shall be compatible to the adjoining neighborhood; that is, low profile by incorporating low-pitched roofs and roof overhangs.	
	3.1-3C: The final map shall reflect similar house plotting as shown on Figure 3-1 in Appendix B. A minimum distance between new and existing houses shall be no less than 180 feet.	
	3.1-3D: Prior to final map approval, the applicant shall submit design guidelines to ensure that future homebuilders incorporate features in the design that are compatible with the adjoining neighborhood.	
	3.1-3E: Individual landscape plans shall be submitted to the Town's Design Review Board at the time individual house plans are reviewed. The landscape plans shall reflect a mix of native vegetation that will help blend the structures with the natural setting.	
GEOLOGY / GEOTECHNICAL / SOILS		
3.2-1: Landslides have the potential to cause significant damage to improvements and, in extreme cases, loss of life.	**3.2-1A:** A design-level geotechnical and geologic investigation report shall be submitted to the Town of Moraga prior to recordation of the subdivision map. The report, which shall respond to the peer review letter by the Town's Engineering Geologist, shall provide specific criteria and standards to guide site grading, drainage and foundation design.	Yes

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	In areas of proposed development (i.e., cells), existing landslides and slope repairs shall include (a) removal of slide debris, with the depth of excavation extending into underlying competent material; (b) installation of subsurface drainage measures, (c) replacement of slide debris with compacted engineered fill, (d) construction of surface drainage measures, and (e) planting disturbed areas with erosion-resistant vegetation, as recommended in the design-level geotechnical investigation.	
	3.2-1B: Gradient criteria for engineered slopes as recommended by Engeo shall be required for development of the project site. Any conflicts between future grading plans and these criteria should be interpreted as evidence that special engineering is required (e.g., retaining walls, geogrid reinforcement). Those standards call for use of 3:1 fill slopes as a general standard for the project, with the exception that fill slopes less than 8 feet high may have a 2:1 gradient. Cut slopes are to be avoided.	
	3.2-1C: Grading and drainage plans shall be subject to review of the Town's Public Works Department and the Town's Peer Review Geologist. Appropriately licensed professionals shall prepare the plans.	
	3.2-1D: Buttressing, keying and installation of debris benches shall be provided in the transition areas between open space areas and development as recommended in the design-level geotechnical report.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	3.2-1E: The design-level geotechnical report shall evaluate all major graded slopes and open space hillsides whose performance could affect planned improvements. The slope stability analysis shall be performed for both static and dynamic conditions using an appropriate pseudo-static coefficient.	
	3.2-1F: During grading, the project geotechnical engineer shall observe and approve all keyway excavations, removal of fill and landslide materials down to stable bedrock or in-place material, and installation of all subdrains including their connections. Cut slopes and keyways shall be observed and mapped by the project-engineering geologist who will provide any required slope modification recommendations based on the actual geologic conditions encountered during grading. Written approval from the Town's Public Works Department shall be obtained prior to any modification. Placement of all fill shall be observed and tested by the representative of the geotechnical engineer, and the density test results and reports submitted to the Town to be kept on file.	
	3.2-1G: Prior to recordation of the Final Map, the applicant shall provide a draft deed disclosure recorded against each lot. The disclosure shall provide a detailed citation of the Final Geotechnical Report, indicating that it is available from the developer and from the Town of Moraga; and it shall summarizing the potential geologic hazards and explain the maintenance responsibilities of the property owner, including maintenance of the debris bench and drainage facilities. The language in the draft deed disclosure is subject to review and approval of the Planning Director, and it shall be recorded concurrent with or prior to recordation of the final map.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
3.2-2: The existing northwest-trending fault that crosses the site could potentially become reactivated in the event of an earthquake.	**3.2-2**: A structure setback zone that provides a building free corridor along the mapped fault shall be shown and labeled on the Final Map. The zone shall be 125 feet wide and extend 50 feet from the mapped fault on its northeast flank and 75 feet from the mapped fault on the southwest flank. An annotation of the map shall specify that within the structure setback zone, corrective grading of the landslides is allowed, including the installation of subdrains, debris benches and surface drainage facilities. Additionally, necessary maintenance of these improvements is allowed. Any other use shall require review and approval by the Planning Director.	Yes
3.2-3: The proposed project involves placement of engineered fill slopes in an area of moderately steep terrain. Bare soils in area of relatively steep, high graded slopes has the potential to cause significant erosion of unprotected slopes, and create down slope sedimentation problems, both on- and off-site.	**3.2-3A**: Grading activities shall be restricted to the summer construction season (15 April through 1 October). Any earthwork done after 1 October shall be limited to activities directly related to erosion control, unless the Town of Moraga Public Works Department authorizes additional work.	Yes
	3.2-3B: Provide an erosion control plan prior to approval of the grading plan. The following interim control measures shall be employed based on site-specific needs in the project area: • Grading to minimize areas of exposed, erodible material, and to avoid over-concentration of rapidly flowing runoff in unprotected, erodible areas. • The erosion control plans shall include water bars, temporary culverts and swales, mulch and jute netting blanks on exposed slopes, hydro seeding, silt fences, and sediment traps/basins. • Placement of salvaged topsoil on graded 3:1 slopes prior to the onset of winter rains.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Because the biggest problem with effective sediment control is lack of maintenance, the erosion control plan must have a comprehensive program for inspection and maintenance during the winter rainy season, including provisions for documenting maintenance activities. • Wherever feasible, isolate runoff from ungraded areas, thereby simplifying erosion control and sediment control measures within the graded area. • Monitor the effectiveness of the erosion control measures throughout the duration of construction.	
	3.2-3C: Provide a "Stormwater Control Plan" that is C.3 compliant, for review and approval of the Moraga Public Works Department. In order to reduce the potential impacts of long-term erosion and sedimentation, the project shall incorporate the appropriate design, construction and continued maintenance of one or more of the following long-term control measures: • The specific measures shall be based on the recommendations of the project geotechnical engineer and hydrologist. • Project plans shall incorporate drainage measures to collect and control surface runoff water on sloping lots, including lined ditches and closed downspout collection systems. • Concentrated runoff shall not be permitted to drain over engineered slopes. • The proposed location of lined drainage ditches shall be specified on the development plan accompanying the design-level geotechnical investigation report, which shall be reviewed by the Town's Peer Review Geologist.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	3.2-3D: Provide low retaining walls with subsurface and surface drainage facilities at the toe of the major fill slopes on the site (at rear of building pads).	
3.2-4: Expansive soils and/or bedrock have the potential to cause significant damage to foundations, slabs and pavements.	**3.2-4A:** The design-level geotechnical investigation shall provide criteria for foundation and pavement design, developed in accordance with the 2007 California Building Code and Ordinance Code requirements on the basis of subsurface exploration and laboratory testing. The constraints on the use of expansive soil near finish grade shall be evaluated in the design-level geotechnical investigation report.	Yes
	3.2-4B: The foundation recommendation shall include provision for measuring corrosivity of soils within area planned for buildings following grading but prior to the issuance of building permits. The ferrous materials and concrete that is in contact with the ground shall be engineered to minimize/ avoid damage from corrosivity.	
3.2-5: Slide debris will be removed from the area planned for grading and development. The corrective grading plan is conservative on the side of safety, but without full-time monitoring by the project geotechnical engineer, grading operations in the field may fall short of the standards and criteria in the approved geotechnical report.	**3.2-5:** Prior to the issuance of the first residential building permit, the applicant shall submit a Grading Completion Report prepared by the project geotechnical engineer. The report shall include the following: • An as-graded geologic map of all cut slopes and keyways exposed during grading. This map shall not be generalized and diagrammatic; it shall show the details of observed features and conditions, and serve to document that all slide debris was removed from the graded areas. • Provide the results of compaction of fill, performed using an ASTM compaction test method. The documentation provided shall include reference to the date, location and elevation of the test.	Yes

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Document any field changes made during construction (i.e., what unexpected condition was encountered, date; what consultation occurred with the Town's Public Works Department/Town Geologist, date; and what remediation was implemented). • Describe the conformance of the as-graded project with the recommendations in the approved geotechnical report.	
3.2-6: Landslides, sedimentation and/or erosion have the potential to cause significant damage to the wetland mitigation ponds. This is considered a *potentially significant impact.*	**3.2-6:** The GHAD Plan of Control for the proposed project shall make provision for the perpetual maintenance of the wetland mitigation ponds. Specifically, the Plan of Control shall provide the following details: • frequency of inspections/ timing of inspections, • outline the design elements of the ponds that are to be inspected by the GHAD Manager (e.g. holding capacity, outfall structure, etc.), • provide objective criteria for triggering the need for sediment removal or re-construction of ponds, • indicate the role of a wetlands biologist in any necessary maintenance operations that involve work within the ponds, • when the GHAD Manager determines the need for maintenance, outline the process to notice the GHAD Board of Directors and resource agencies of the proposed plan for maintenance, and • provide the agencies a reasonable amount of time to comment on the maintenance plan.	Yes

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
HYDROLOGY / DRAINAGE		
3.3-3: The debris benches and storm drain system may not be adequate to accommodate storm runoff from uphill areas.	**3.3-3:** The V–ditches shall be designed to convey the surface runoff from the natural areas above the debris benches resulting from a 100-year, 12-hour storm with saturated soil conditions.	Yes
3.3-5: The subdrain and storm drain systems may not function properly without periodic, long-term maintenance.	**3.3-5A:** Prior to submitting the final map, the applicant shall submit a Stormwater Facilities Operation and Maintenance Plan, including detailed maintenance requirements and a maintenance schedule.	Yes
	3.3-5B: Joint Maintenance Agreement (JMA) shall be established for maintaining and cleaning the Hetfield Estates storm drain system, including subdrains, V–ditches, catch basins and gratings, storm drain pipelines, the detention basin, and the IMPs that are proposed in the Stormwater Control Plan for the proposed project (RMR, 2008a, Table 1). All facilities shall be cleaned prior to the rainy season (mid-October each year) and following every major storm. All Hetfield Estates property owners shall be required to contribute annually to fund the JMA. Potential buyers of Hetfield Estates properties shall be informed of their commitments to the JMA so that they can assess their ability to pay their annual contributions.	
3.3-7: The presence of groundwater in an engineered fill is capable of adversely affecting the stability of engineered slopes.	**3.3-7A:** Lined ditches capable of collecting surface runoff shall be provided at the toe of the engineered slope to collect and transport runoff from the fills to the selected discharge points.	Yes
	3.3-7B: During grading, the location and approximate depth of subdrains shall be established by field survey. At the conclusion of site grading, the project applicant shall submit an as-built drainage plan showing the location and elevation of the subdrains and cleanouts, as well as the surface drainage facilities.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
3.3-8: Construction of a storm drain discharge structure and access bridge could impact Larch Creek and the vegetation within the creek corridor.	**3.3-8:** The applicant shall contact the United States Corps of Engineers and the California Department of Fish and Game to obtain required permits and a Streambed Alteration Agreement for construction and operation of a storm drain discharge structure and access bridge over Larch Creek.	Yes
PLANNING AND LAND USE		
3.4-2: A small portion of Lot 1 is located outside the Moraga Open Space Ordinance (MOSO) cell.	**3.4-2:** The applicant shall revise the Conceptual Development Plan to include all of the area within Lot 1 in the MOSO Cell Analysis for both pre- and post-development conditions, prior to approval of the general development plan.	Yes
IMPACTS AND MITIGATION MEASURES IDENTIFIED IN THE INITIAL STUDY / PROPOSED MITIGATED NEGATIVE DECLARATION (IS/MND)		
AIR QUALITY		
III-1: Construction of the proposed project could create potentially significant dust impacts that could affect nearby residents.	**III-1**: During grading and construction activities, the applicant shall implement the following measures to control dust: • Water all active construction areas at least twice daily. • Cover all trucks hauling soil, sand, and other loose materials, or require trucks to maintain at least two feet of freeboard. • Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites.	Yes

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Sweep off-site streets leading to the project site daily if soil, sand, or other loose materials are deposited on these streets. • Sweep daily all paved access roads, parking areas, staging areas and entrances at the construction site.	
BIOLOGICAL RESOURCES		
IV-1: The proposed project will have an adverse effect on biological resources.	**IV-1A:** The applicant shall obtain all necessary permits from the Corps, USFWS, and the RWQCB as required by federal and State law to avoid, minimize or offset impacts to any species listed under either the State or federal Endangered Species Acts or protected under any other State or federal law as follows: • Before project implementation, a delineation of waters of the United States, including wetlands that could be affected by development, shall be made by a qualified wetland specialist through the formal CWA Section 404 process. • If based on the verified delineation, it is determined that fill of waters of the United States would result from project implementation, authorization for such fill shall be secured from the Corps through the Section 404 permitting process and from the RWQCB as part of the Section 401 water quality certification process.	Yes

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Consultation or incidental take permitting may be required under the ESA. The applicant shall obtain all legally-required permits from the USFWS for the "take" of protected species under the ESA. • Evidence that the applicant has secured any required authorization from these agencies shall be submitted to the Town of Moraga prior to issuance of any grading or building permits for the project.	
	IV-1B: Following a biological opinion issued by the regulatory agencies as discussed above, measures shall be applied to minimize take within the construction zone. The applicant shall follow the requirements of the biological opinion. Furthermore, a qualified biologist shall be retained by the applicant to oversee construction and ensure that no inadvertent take of Alameda whipsnake or California red-legged frog occurs as a result of development of the site. If no biological opinion is obtained from the regulatory agencies regarding the taking of an endangered species, the following mitigation shall apply:	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Prior to any grading or grubbing of the site, the biologist shall conduct a preconstruction survey to confirm absence of any California red-legged frog or Alameda whipsnake on the site. During the construction phase of the project, a trained biologist or a trained on-site monitor (such as the construction foreman) shall check the site in the morning and in the evening of construction activities for the presence of California red-legged frog and Alameda whipsnake. This includes checking holes, under vehicles and under boards left on the ground. If any California red-legged frog or Alameda whipsnake are found, construction shall be halted until they disperse naturally, and the monitor shall immediately notify the biologist in charge and the USFWS. Construction shall not proceed until adequate measures are taken to prevent dispersal of any individuals into the construction zone, as directed by the USFWS. Subsequent recommendations made by the USFWS shall be followed. The monitor shall not handle or otherwise harass the animal. The biologist in charge and the on-site monitor shall be aware of all terms and conditions set by USFWS and CDFG on the project. The biologist in charge shall train the on-site monitor in how to identify California red-legged frog and Alameda whipsnake. The biologist in charge shall visit the site at least once a week during construction and confer with the trained on-site monitor.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• All construction workers shall be informed of the potential presence of California red-legged frog and Alameda whipsnake, that these species are to be avoided, that the foreman must be notified if they are seen, and that construction shall be halted until authorization to proceed is obtained from the USFWS and appropriate protocols for species protection shall be followed. • During construction, all holes shall be covered at night to prevent California red-legged frog and Alameda whipsnake from becoming trapped in holes on the construction site.	
	IV-1C: A qualified biologist shall be retained by the applicant to conduct a trapping and relocation program for any San Francisco dusky-footed woodrats located within the limits of proposed grading and development. A field survey shall be conducted by a qualified biologist to determine whether any woodrat nests occur within the anticipated limits of grading. Any nests within the construction zone shall be relocated to locations proposed as permanent open space on the site and individual woodrats released into their relocated nests. If nest relocation is required, the trapping and relocation effort shall be conducted from August through February outside the breeding season to ensure any young are not inadvertently lost due to the destruction of the protective nest. The trapping and relocation effort shall preferably be conducted within a few days prior to grubbing and vegetation removal to prevent individual woodrats from moving back into the construction zone.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	IV-1D: Any active raptor or loggerhead shrike nests in the vicinity of proposed grading shall be avoided until young birds are able to leave the nest (i.e., fledged) and forage on their own. Avoidance may be accomplished either by scheduling removal of trees and shrubs during the non-nesting period, September through February. Provisions of the pre-construction survey and nest avoidance, if necessary, shall include the following: • If grading is scheduled during the active nesting period (March through August), a qualified wildlife biologist shall be retained by the applicant to conduct a pre-construction nesting survey no more than 30 days prior to initiation of grading to provide confirmation on the presence or absence of active nests in the vicinity. • If active nests are encountered, species-specific measures shall be prepared by a qualified biologist in consultation with the CDFG and implemented to prevent nest abandonment. Buffers and setback zones shall be established as required by CDFG and remain in place until young have fledged the zones. At a minimum, grading in the vicinity of the nest shall be deferred until the young birds have fledged. The perimeter of the nest-setback zone shall be fenced or adequately demarcated, and construction personnel restricted from the area.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• If permanent avoidance of the nest is not feasible, impacts shall be minimized by prohibiting disturbance within the nest-setback zone until a qualified biologist verifies that the birds have either (a) not begun egg-laying and incubation, or (b) that the juveniles from the nest are foraging independently and capable of independent survival at an earlier date. A survey report by the qualified biologist verifying that the young have fledged shall be submitted to the Town of Moraga prior to initiation of grading in the nest-setback zone.	
IV-2: The proposed project could impact riparian habitat.	**IV-2**: Native grass plants from the stand of creeping wildrye in the vicinity of proposed Lot 3 shall be salvaged and reused as part of revegetating graded slopes. Plants shall be salvaged before grubbing and initial grading, and stored until replanted on the site. The salvage and replanting program shall be prepared by a qualified biologist and incorporated into the Landscaping Plan for the project, preferably as part of the Wetland Mitigation Program specified in **Mitigation Measure IV-3A**.	Yes
IV.3: Development of the site would affect federally protected wetlands.	**IV-3A:** A Final Wetland Mitigation Program shall be prepared by a qualified wetland specialist to provide for the protection, replacement, and management of jurisdictional waters on the site affected by proposed development. The Final Wetland Mitigation Program shall include the following components and meet the following standards:	Yes

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	• Proposed grading and development shall be redesigned to preferably avoid removal or adverse impacts on areas verified as jurisdictional wetlands, particularly the freshwater seep at the southeastern edge of the "Grading Daylight Limits" on proposed Lot 6. This freshwater seep appears to be larger than currently mapped by the applicant's consultant. • Provide adequate mitigation for any direct or indirect impacts on jurisdictional waters as coordinated with the Corps and/or RWQCB where complete avoidance is infeasible. Replacement wetlands shall be at a minimum of 2:1 ratio and shall be established in suitable locations within undeveloped open space areas, preferably on-site. The wetlands replacement component of the Final Wetland Mitigation Program shall emphasize establishment of native freshwater marsh and seasonal wetlands to enhance existing habitat values. • The wetland replacement component of the Final Wetland Mitigation Program shall specify performance criteria, maintenance and long-term management responsibilities, monitoring requirements, and contingency measures. Monitoring shall be conducted by the qualified wetland specialist for a minimum of five years and continue until the success criteria are met. • The Final Wetland Mitigation Program shall be completed prior to approval of the Final Map for the project to demonstrate feasibility of wetland mitigation, and allow for possible major adjustments to the limits of proposed development, particularly on Lot 6.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
	IV-3B: The final trail alignment connecting to the cul-de-sac on proposed Lot 6 should be designed to avoid or minimize passing through the freshwater seeps and seasonal wetlands on this portion of the site. If complete avoidance is not feasible, potential impacts shall be addressed as part of the Final Wetland Mitigation Program outlined in **Mitigation Measure IV-3A.**	
IV.4: Development could potentially interfere with the movement of wildlife species.	**IV-4A**: The portion of the site not proposed for development will be placed in permanent open space to preserve its function as permanent wildlife habitat. Any fencing proposed as part of development on individual lots shall be designed to allow for continued movement by wildlife, or shall be restricted to the vicinity of the building pads. Any fencing, which could obstruct wildlife movement, shall not extend beyond the limits of grading shown in the Conceptual Development Plan.	Yes
	IV-4B: Signage shall be provided at the access points off the cul-de-sac on proposed Lot 6 which indicate that dogs shall be leashed.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
IV.5: The proposed project may be in conflict with Town policies.	**IV-5A**: Grading shall be designed to avoid and minimize possible tree removal. This shall be accomplished by expanding the current tree mapping, adjusting the limits of grading to ensure adequate avoidance, and retaining a certified arborist to evaluate potential impacts and make specific recommendations to minimize tree loss or damage. The limits of tree mapping should be expanded to show all trees with trunk diameters of 5 inches or greater within 30 feet of the proposed "Grading Daylight Line" on the Conceptual Development Plan. All mapped trees shall be evaluated by a certified arborist consistent with Section 12.12.070 of the Town of Moraga Tree Preservation Ordinance, and a report shall be repaired to minimize short-term construction damage and long-term decline due to changes in root zone.	Yes
	IV-5B: A construction fence shall be installed around all trees to be protected that will identify the limits of grading and disturbance.	
	IV-5C: A Tree Replacement Program shall be prepared by the applicant's consulting biologist, and implemented as part of the mitigation program for the project. Replacement trees shall be provided at a minimum 3:1 ratio, shall be installed along the edge of the riparian corridor and other locations to be retained as undeveloped open space, and shall be maintained for a minimum of five years to ensure their successful establishment. Replacement tree plantings shall be irrigated for a minimum of two years following initial planting to ensure their survival, and shall be replaced on an annual basis to meet success criteria specified in the Tree Replacement Program.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
CULTURAL RESOURCES		
V-1: Potential subsurface cultural resources may exist on the site.	**V-1A:** In the event of the discovery of human remains during construction, pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Contra Costa County Coroner shall be notified by the developer and shall make a determination as to whether the remains are Native American. If the remains are not subject to his authority, he shall notify the Native American Heritage Commission, who will attempt to identify descendants of the deceased Native American.	Yes
	V-1B: Should evidence of prehistoric cultural resources be discovered during construction, work in the immediate area of the find shall be stopped to allow adequate time for evaluation and mitigation. A qualified professional archaeologist will be called in to make an evaluation of the material; and if significant, develop a mitigation program that includes collection and analysis of the materials, preparation of a report, and curation of the materials at a recognized storage facility under the direction of the Planning Director. Collection and evaluation shall be completed prior to the resumption of grading.	

Significant Impact	Mitigation Measures	Does Implementation of all Mitigation Measure(s) Reduce the Impact to a Less-Than-Significant Level?
PUBLIC SERVICES		
XIII-1: Cumulative development proposed in the town, coupled with the location of the development could delay police response time.	**XIII-1**: The six houses shall be equipped with security alarm systems subject to review and approval of the Town of Moraga Police Department.	Yes
TRANSPORTATION/TRAFFIC		
XV-1: The increase in traffic at the Sanders Drive/Hetfield Place intersection could create a safety hazard if left uncontrolled.	**XV-1:** Both approaches of Hetfield Place shall be stop sign controlled.	Yes