

4. MITIGATION MONITORING AND REPORTING PROGRAM

4.1 INTRODUCTION

This Chapter presents the Mitigation Monitoring and Reporting Program for the Bollinger Valley Project. In general, the Town shall be responsible for implementing and monitoring the measures identified below. In some cases, responsible state or local agencies will be required to ensure implementation.

Table 4-1 describes each mitigation measure and identifies the implementing responsibility, monitoring responsibility, and mitigation timing.

Table 4-1

Mitigation Monitoring and Reporting Program Checklist for Bollinger Valley Project

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
4.A. Aesthetics				
<p><u>4.A-1a: Prepare, Review and Approve Site-Specific Scenic Corridor Landscape Plan.</u></p> <p>Prior to the Town issuing a Grading Permit, the Project Applicant shall prepare detailed visual simulations of graded topography, water tanks, and homes that would be potentially visible from Scenic Corridors in Moraga and Viewing Evaluation Sites in Lafayette in order to test the effectiveness of the landscape plan and site design. The visual simulations shall be based on final grading plans and lot lines of the selected Project or Alternative that depict lot elevations and building pads to the nearest foot in elevation. Simulations shall use standard photographic simulation and visibility analysis modeling techniques. The planning staff in Moraga and Lafayette shall be consulted to determine appropriate assumptions for home designs, heights, widths, and locations within lots. Town and City staff shall approve of the number and locations of representative viewing sites to be used in the photosimulations to provide an accurate and representative number of views to determine Project consistency with Moraga 2002 General Plan policies.</p> <p>The Project Applicant shall provide sufficient data and meta-data to establish the validity of the imagery, including:</p> <ul style="list-style-type: none"> • An oblique aerial or isometric view of the model that clearly distinguishes the portions of the terrain representing grading, in visible contrast to existing terrain (for example, in a different color), in order to facilitate review by Town staff and the Design Review Board for reasonable accuracy and completeness; • Interim, wire-frame simulations of key views of grading and maximum building envelopes, overlaid on photographs of the site, to illustrate reasonable matching between the terrain model and existing terrain; 	Project Applicant	Town of Moraga and City of Lafayette	Prior to issuance of grading permit	

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<ul style="list-style-type: none"> • Separate individual ‘normal’ angle of views (equivalent to a roughly 50 mm focal length lens on a 35 mm film camera) with a standard pre-determined, explicitly stated horizontal angle of view for correct scale/camera matching; • Clearly stated key assumptions depicted in the simulations, including assumed building dimensions, the Scenic Corridor Landscape Plan (SCLP), landscaping on individual parcels, tree heights, road geometry, and other factors; • Visual simulation models that include all visible Project elements, such as primary units, second units, the EVA, water storage tanks or other associated infrastructure; and • Submissions of digital files on commonly used photosimulation software. <p>As determined necessary for consistency, planning staff shall recommend or require landscaping, pad elevations, or earthen berms to reduce the visibility of new structures. To maintain consistency with Moraga 2002 General Plan policies and adopted Design Guidelines, planning staff shall recommend or require, as needed to attain consistency with Moraga 2002 General Plan policies or design guidelines, standards for exterior materials, colors, roofing materials, glazing, lighting, massing, and roof heights for homes that remain visible from Moraga’s Scenic Corridors or Lafayette’s Viewing Evaluation Sites (See Mitigation Measure 4.A-1b). Moraga and Lafayette shall issue grading permits only after making a determination that grading and residential development are found to be consistent with Moraga 2002 General Plan policies and ordinances (e.g., MMC 8.132.050 – Scenic Corridors) applicable to scenic vistas.</p> <p>The Scenic Corridor Landscape Plan (SCLP) shall be developed by the Project Applicant to maintain and enhance the visual quality of the Project Area and submitted to the Town’s Design Review Board for review and approval prior to the Town issuing a Grading Permit for the Project. The SCLP shall be required to meet Town policies to improve visual quality in Scenic Corridors with new development, obscure building locations and graded slopes, and preserve visual access to the minor ridgeline and rock outcrops. The SCLP shall be incorporated as soon as feasible after Project</p>				

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<p>grading is completed, and installed prior to the issuance of Building Permits. The SCLP may extend throughout the undeveloped portions of the Project Area as needed or desired to enhance visual quality, obscure the visibility of roadways and structures in the Project Area, enhance the visual quality of scenic corridors, restore native vegetation communities and wildlife habitat, maintain slope stability, and manage fuel conditions in the wildland-urban interface.</p> <p>To be consistent with the Design Guidelines, the SCLP shall include the following elements:</p> <ul style="list-style-type: none"> • Plant species shall be derived from native, drought tolerant, and fire wise plant species listed in the Design Guidelines; • While maintaining visual sight lines to the minor ridgeline and rock outcrops, landscaping shall blend naturally with the topography, and obscure building pad sites from Scenic Corridors and other designated viewing sites; • Trees and shrubs shall vary in density and massing, and at least four new trees shall be planted for each tree removed or adversely affected by the Project; • Vegetation shall be located to disperse exhaust emissions from roadways, create shade along Project streets and Scenic Corridors, and control fugitive dust; • Irrigation systems shall use efficient drip or similar systems, with automatic rain shut-off mechanisms, and operated to avoid or minimize evaporative loss, overspray, and runoff; • Bioswales and other similar features to capture potential runoff and promote infiltration of irrigation water and stormwater shall be incorporated into the design; • Landscape designs, locations, and maintenance measures shall be reviewed and approved by the MOFD as consistent with fuel management goals in wildland-urban interface settings; and • Maintenance shall be provided through the Reciprocal Joint Roadway Maintenance, Grading, and Drainage Agreement (Maintenance Agreement) among future lot owners (HOA). 				

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<p><u>4.A-1b: Develop, Review and Approve Bollinger Valley Design Guidelines.</u></p> <p>The Project Applicant shall develop and implement Project-specific design guidelines that would apply to residential architecture, lighting and landscaping, and infrastructure such as roads, curbs, gutters, and utility infrastructure. The design guidelines shall strive to reflect the existing visual character of the Project Area and vicinity with low-density, rural residential areas, agriculture, and open space. Strategies and measures to reduce adverse impacts associated with new sources of light and glare, including glazing, architectural coatings, vegetative cover, and exterior lighting shall be addressed in the Bollinger Valley Design Guidelines.</p> <p>The Bollinger Valley Design Guidelines shall require the use of contour grading and shall encourage varying setbacks and rooflines to discourage repetitive, unarticulated building forms. Vegetation removal and construction within riparian corridors and wetlands shall be limited as feasible. To further enhance the Bollinger Valley Design Guidelines, the Moraga 2002 General Plan Guidelines (Municipal Code 8.132.050 – Scenic Corridors), including requirements for structural size, setback, positioning, screening, lighting, and overall architectural compatibility, shall be incorporated. The Bollinger Valley Design Guidelines shall include limitations on future building heights, lot coverage, and floor area ratio (FAR) to minimize future aesthetic impacts. Two-story units shall be prohibited on lots along ridgelines to protect views from scenic corridors, and the setback from the rear property line along the ridgeline shall be expanded to avoid the appearance of development on the ridgeline. These guidelines shall require the retention and integration of existing topography, vegetation, and scenic features, thereby promoting the importance of natural features. The Bollinger Valley Design Guidelines shall additionally address treatment of retaining walls and the placement and orientation of solar panels on lots. Future improvements within Bollinger Valley will also need to comply with Town Design Guidelines.</p> <p>The Bollinger Valley Design Guidelines shall include measures requiring structures visible from surrounding areas to have low profiles, and shall also include measures regarding contoured grading on all slopes, dense native landscaping, and blended rooflines to reduce visibility of the structure in favor of the existing natural features. In addition, adequate setbacks should</p>	Project Applicant	Town of Moraga	In conjunction with review and approval of General Development Plan and vesting tentative map	

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<p>be established near the riparian corridor to protect habitat and drainage patterns.</p> <p>The guidelines shall require the retention and integration of existing topography, vegetation, and scenic features where feasible to reduce the visibility of structures while promoting the visual importance of natural features. The Town shall review and approve the Bollinger Valley Design Guidelines and shall not approve the vesting tentative map or record the final map until making a determination that implementing the Project-specific design guidelines would result in consistency with Moraga 2002 General Plan policies related to the visual character of new residential development, the Town’s Design Guidelines, and MMC 8.132.050 – Scenic Corridors. The Project Applicant shall implement the Bollinger Canyon Design Guidelines approved by the Town.</p>				
<p><u>4.A-1c: Ridgeline and Water Tank Screening.</u></p> <p>As part of the Bollinger Valley Design Guidelines or Scenic Corridor Landscape Plan, the Project Applicant shall incorporate screening of homes, water tanks, and other improvements that would otherwise be visible from scenic corridors and other off-site public viewpoints. Screening may include the use of vegetated berms, trees and other landscaping, and setbacks. Trees, shrubs, grasses, and other plants used for landscape screening or on the vegetated berms shall be native species. Screening measures also include the use of appropriate paint colors on the water tank. Appropriate paint colors shall include natural shades representative of the adjacent vegetation, such as dark greens, browns, or other neutral earth-tone colors that blend with the surrounding environment. The screening measures shall be accurately planned and illustrated for Town approval.</p>	Project Applicant	Town of Moraga	In conjunction with review and approval of General Development Plan and vesting tentative map	
<p><u>4.A-3: Light and Glare Minimization.</u></p> <p>The Project Applicant shall prepare a lighting plan within the Bollinger Valley Design Guidelines that would be reviewed and approved by the Town. The plan shall outline the extent of illumination that would be projected from proposed outdoor lighting and include lighting guidelines to increase lighting efficiency while preventing light spillage.</p> <p>To further minimize light and glare disturbance, the Project Applicant shall incorporate the following into the Design Guidelines Lighting Plan:</p>	Project Applicant	Town of Moraga	In conjunction with review and approval of General Development Plan and vesting tentative map	

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<ul style="list-style-type: none"> • Utilize lighting that relates to the scale and design of the structure, with intensities just high enough to maintain safety. • Intermix large canopy trees with structures to reduce glare. • Ensure all exterior structural coatings and materials are low reflectance, including roofing materials. • Ensure exterior structural colors are low reflectance, subtle, neutral or earth tone colors. <p>The Town shall review and approve the lighting plan within the Bollinger Valley Design Guidelines and shall not approve the vesting tentative map or record the final map until making a determination that implementing the Project-specific design guidelines would result in consistency with Moraga 2002 General Plan policies related to the visual character of new residential development, the Town’s Design Guidelines, and MMC 8.132.050 – Scenic Corridors. The Project Applicant shall implement the lighting plan approved by the Town.</p>				
4.B. Air Quality				
<p>4.B-1: Reduce Dust Generation and Diesel Exhaust During Construction.</p> <p>Standard air pollution reduction measures shall be adopted by the Project Applicant and incorporated into Grading Plan contractor specifications. The Project Applicant shall include dust control BMPs in the Precise Development Plan based on the most recent guidelines from the BAAQMD. The Town shall verify that appropriate air pollution reduction strategies have been incorporated into the Project grading and construction plans prior to issuing a Grading Permit.</p> <p>The Project Applicant is responsible for ensuring that the contractor reduces fugitive dust, PM₁₀, PM_{2.5}, ROG, NO_x, and CO emissions by complying with BAAQMD air pollution control strategies. These strategies are expected to include, but are not limited to, the following based on the BAAQMD guidelines:</p> <p><u>Construction Fugitive Dust Control Measures</u></p> <ul style="list-style-type: none"> • Cover trucks hauling construction and demolition debris. • Water on a continuous as-needed basis all earth surfaces during 	Project Applicant	Town of Moraga	Prior to issuance of grading permit	

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<p>clearing, grading, earthmoving, and other site preparation activities.</p> <ul style="list-style-type: none"> • Use watering to control dust generation during demolition of structures or break-up of pavement. • Pave, apply water three times daily, or apply non-toxic soil stabilizers on unpaved parking areas and staging areas. • Sweep daily (with water sweepers) paved and staging areas. • Provide daily clean up of mud and dirt carried onto paved streets. • Renovation, demolition activities, removal, or disturbance of any materials that contain asbestos, lead paint, or other hazardous pollutants will be conducted in accordance with BAAQMD rules and regulations. • Properly maintain construction equipment. <p>For construction sites near sensitive receptors (e.g., adjacent existing residential areas or occupied homes from a previous Project phase):</p> <ul style="list-style-type: none"> • Install wheel washers for exiting trucks or wash off the tires or tracks of trucks and equipment leaving the site. • Suspend dust-producing activities when instantaneous gusts exceed 25 mph when dust control measures are unable to avoid visible dust plumes. • Minimize areas of the Project site subject to excavation, grading, and other construction or demolition activity at any one time. <p>For sites greater than four (4) acres:</p> <ul style="list-style-type: none"> • Apply soil stabilizers to previously graded areas inactive for more than 10 days or cover or seed these areas. • Water or cover stockpiles of debris, soil, sand, or other materials that can be blown by the wind. • Limit traffic speeds on unpaved roads to 15 mph. • Replant vegetation in disturbed areas as quickly as possible. <p><u>Construction Exhaust Mitigation Measures</u></p> <p>Potential impacts from TAC emissions from construction equipment and operations will be reduced with compliance with the BAAQMD air pollution control strategies. Contractors shall be required to post signs of possible health risk during construction. The Project Applicant is responsible for compliance with the BAAQMD rule regarding cutback and emulsified</p>				

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asphalt paving materials. Construction contractors will implement a plan to use newer construction equipment, manufactured during or after 1996, that meets the NO _x emissions standard of 6.9 grams per brake-horsepower hour for work conducted within 200 feet of residences.				
<p><u>4.B-4: Reduce Energy Consumption from Mobile, Stationary and Area Sources.</u></p> <p>Measures are available that would reduce energy consumption and air pollutant emission rates from travel, heating and cooling, appliances, and lighting. These measures encourage alternative fuels, on-site energy production, and reuse of resources. These measures would be in addition to, and supplement, the required TCMs. The Project Applicant shall develop measures in the PDP for Town approval prior to issuing a Grading Permit. Measures may include:</p> <ul style="list-style-type: none"> • Implement design measures to reduce vehicle trips and encourage other modes of travel, such as providing second units and pedestrian facilities and trails; • Pay proportional fair share transportation impact fees to fund public transit service; • Allow only wood-burning devices that comply with US EPA regulations; and • Install solar and/or wind power sources on new residences. 	Project Applicant	Town of Moraga	Prior to issuance of grading permit	
<p><u>4.B-7: Implement General Plan Transportation Control Air Pollution Reduction Measures.</u></p> <ol style="list-style-type: none"> 1. Expand Employee Assistance Program - Provide assistance to regional and local ridesharing organizations. 9. Improve Bicycle Access and Facilities - Establish and maintain bicycle advisory committees in Bay Area Counties; Develop comprehensive bicycle plans; Encourage employers and developers to provide bicycle access and facilities; and improve and expand the bicycle lane system. 15. Local Clean Air Plans, Policies and Programs - Incorporate air quality beneficial policies and programs into local planning and development 	Town of Moraga, Contra Costa Transportation Authority	Town of Moraga	Ongoing	

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<p>activities, with a particular focus on subdivision, zoning and site design measures that reduce the number and length of single-occupant automobile trips.</p> <p>17. Conduct Demonstration Projects - Promote demonstration projects to develop new strategies to reduce motor vehicle emissions. Projects include low emission vehicle fleets and LEV refueling infrastructure.</p> <p>19. Pedestrian Travel - Review/revise general/specific plan policies to promote development patterns that encourage walking and circulation policies that emphasize pedestrian travel and modify zoning ordinances to include pedestrian-friendly design standards; Include pedestrian improvements in capital improvements programs; Designate a staff person as a Pedestrian Program Manager.</p> <p>20. Promote Traffic Calming Measures - Include traffic calming strategies in the transportation and land use elements of general and specific plans; Include traffic calming strategies in capital improvement programs.</p>				
4.C. Biological Resources				
<p><u>4.C-1a: Restore Coast Live Oak Woodland Habitat at a 2:1 Ratio.</u></p> <p>The Project Applicant shall retain a qualified biologist and restoration specialist to map and describe the coast live oak woodland habitat and develop and implement plans to restore and establish coast live oak woodland at a 2:1 ratio. The Project shall restore 12 acres of coast live oak woodland. Alternatives 3, 4 and 5 shall restore 4 acres of coast live oak woodland. Alternative 2 shall restore twice the amount of coast live oak woodland lost once the area of impact is determined. Restored oak woodlands shall include the establishment of at least four trees for each tree removed.</p> <p>The Town shall review and approve the restoration plan prior to issuing a Grading Permit. Restored habitats shall be located in the Project Area in permanently protected open space (N-OS) and planted during the first Fall season following completion of grading and other construction-related ground disturbance on N-OS lands in the Project Area. Native grass and forb species shall be established on the remainder of disturbed N-OS lands not planted as woodland, scrub, or wetland habitats. Restoration designs</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit for restoration plan; during the first Fall season following completion of grading and other construction-related ground disturbance on N-OS lands for planting.	

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<p>shall include a mixture of plant species native to the Project Area and vicinity, and be consistent with CalFire defensible space guidelines for wildland-urban interface settings (PRC 4291). Restoration designs shall be consistent with the Town of Moraga 2010 Design Guidelines, adopted Project-specific design guidelines, and other Project goals and objectives related to flood control, biofiltration, hydrology, wildland fuels, and slope stability. Locally uncommon plant species removed during construction shall be included in restoration planting such that there is no net loss of local population sizes in terms of number of individuals or extent of these species (see Mitigation Measure 4.C-4). Planted vegetation shall be maintained by the Project Applicant (or successor) with supplemental irrigation, weeding, browse control, and replanting as needed for a minimum of five (5) years after planting or longer until plants are established. Established native vegetation is defined as a dominance of native plant species that no longer require supplemental weeding, irrigation, browse control, staking, replanting, or other measures for continued growth to maturity.</p> <p>A 2:1 habitat restoration ratio directly replaces the loss of native vegetation and wildlife habitats removed during construction, and compensates for the temporal loss of habitat values and for potential degradation or loss of habitats prior to maturity due to unforeseen events.</p>				
<p><u>4.C-1b: Restore Northern Coyote Brush Habitat at a 2:1 Ratio.</u></p> <p>The Project Applicant shall retain a qualified biologist and restoration specialist to map and describe the northern coyote brush habitat and develop and implement plans to restore and establish northern coyote brush at a 2:1 ratio. The Project and Alternatives 3, 4 and 5 shall restore 1.6 acres of northern coyote brush habitat. Alternative 2 shall restore twice the amount of northern coyote brush habitat lost once the area of impact is determined. The Town shall review and approve the restoration plan prior to issuing a Grading Permit. The conditions of the restoration plan including the maintenance and success criteria included in Mitigation Measure 4.C-1a above shall be incorporated herein by reference.</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit for restoration plan; during the first Fall season following completion of grading and other construction-related ground disturbance on N-OS lands for planting.	

BOLLINGER VALLEY PROJECT

FINAL ENVIRONMENTAL IMPACT REPORT

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p><u>4.C-1c: Restore Central Coast Riparian Scrub Habitat at a 2:1 Ratio.</u> The Project Applicant shall retain a qualified biologist and restoration specialist to map and describe the Central Coast riparian scrub habitat and develop and implement plans to restore and establish Central Coast riparian scrub at a 2:1 ratio. The Project and Alternatives 3, 4 and 5 shall restore 2.8 acres of Central Coast riparian scrub habitat. Alternative 2 shall restore twice the amount of Central Coast riparian scrub habitat lost once the area of impact is determined.</p> <p>The Town shall review and approve the restoration plan prior to issuing a Grading Permit. The conditions of the restoration plan including the maintenance and success criteria included in Mitigation Measure 4.C-1a above shall be incorporated herein by reference.</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit for restoration plan; during the first Fall season following completion of grading and other construction-related ground disturbance on N-OS lands for planting.	
<p><u>4.C-1d: Restore Marsh/Wetland Habitat at a 2:1 Ratio.</u> The Project Applicant shall retain a qualified biologist and restoration specialist to map and describe and delineate the wetland habitat and develop and implement plans to restore and establish marsh/wetland habitat at a 2:1 ratio. The Project and Alternatives 3, 4 and 5 shall restore 0.52 acres of wetland habitat. Alternative 2 shall restore twice the amount of wetland habitat lost once the area of impact is determined.</p> <p>The Town shall review and approve the restoration plan prior to issuing a Grading Permit. The conditions of the restoration plan including the maintenance and success criteria included in Mitigation Measure 4.C-1a above shall be incorporated herein by reference. Additionally the wetland delineation shall be reviewed and approved by the US Army Corps of Engineers.</p>	Project Applicant	Town of Moraga. US Army Corps of Engineers	Prior to issuance of grading permit for restoration plan; during the first Fall season following completion of grading and other construction-related ground disturbance on N-OS lands for planting and wetlands establishment.	
<p><u>4.C-4: Conduct Preconstruction Botanical Surveys; Restore Removed Populations.</u> The Project Applicant shall retain a qualified botanist to conduct preconstruction botanical surveys of the construction footprint. The surveys</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit	

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<p>shall be floristic in nature and conducted during the period of necessary to identify special-status plant species with potential to occur. If locally-rare or CNPS listed plant species are detected, removed populations shall be restored and established with other native habitats as part of Mitigation Measures 4.C-1Aa, 4.C-1b, 4.C-1c and 4.C-1d such that there is no net loss of the number of individuals of extent of removed populations.</p> <p>If State- or federally-listed species are detected, the Project Applicant shall consult with CDFG and/or USFWS as required to develop feasible take avoidance, minimization, and mitigation measures. Mitigation measures are expected to include restoration of removed populations such that there is no net loss of individuals of special-status plants in the Project Area. Copies of botanical reports and permits shall be provided to the Town to demonstrate compliance with this measure prior to the Town issuing a Grading Permit for the Project. A restoration plan shall be prepared, as needed, for Town approval prior to the Town authorizing issuance of a Building Permit for the Project.</p>				
<p><u>4.C-5: Implement General Plan EIR Mitigation 4.H-1: Site Specific Surveys and Consultation with CDFG and USFWS.</u></p> <p>The Project Applicant shall retain qualified biologists to conduct site-specific surveys during the design phase of the Project to determine the presence or absence of individuals and/or occupied or designated critical habitat of endangered, threatened, rare, and Fully-Protected species. Prior to conducting these surveys a current listing of rare, threatened, and endangered species that may occur in the Project Area, and recent occurrence reports, shall be obtained and reviewed to inform the surveys. Copies of survey reports, agency consultation, and permits, as applicable, shall be provided to the Town prior to the Town issuing a Grading Permit.</p> <p>Noise, light and glare, and domestic or feral animals impacts to habitat quality shall be considered during consultation and permitting with the USFWS and CDFG, and appropriate mitigation measures will be developed as needed with these agencies.</p> <p>Projects that affect rare, threatened, or endangered species are subject to the ESA, CESA, and F&G Codes. The Project Applicant will work in conjunction with CDFG and USFWS to develop measures to prevent the loss</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit	

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<p>of individuals and occupied or designated critical habitats. Examples of measures include timing construction activities to avoid disturbance during sensitive reproductive or dispersal periods, permanent protection of similar habitats outside of the Project Area or purchase of credits in conservation banks. Implementing Mitigation Measures 4.C-1a, 4.C-1b, 4.C-1c and 4.C-1d is expected to restore adversely affected sensitive wildlife habitats in the Project Area.</p> <p>As part of CWA §404 permitting, the USACE must assess potential for incidental take of CRLF and AWS. Permit conditions normally require avoidance and minimization of incidental take, and mitigation to compensate for the loss of habitat.</p> <p>Typical conditions for the CRLF include grading uplands during the dry season (April – October) when CRLF are not expected to be present, and grading and construction in streams, wetlands, and ponds shall begin after the peak season of CRLF dispersal (after May 1). Pre-construction surveys by a qualified wildlife biologist shall be conducted no more than 48 hours prior to clearing and grubbing the site (e.g., two night surveys immediately prior to construction), or as otherwise required by the USFWS. If CRLF are encountered, work must cease immediately and the USFWS must be contacted for further instructions. If no CRLF are encountered, the site may be considered ready for construction.</p> <p>The following are examples of measures typically incorporated for the AWS:</p> <ol style="list-style-type: none"> 1. Initial brush clearing and surface grading shall be initiated after the peak season of AWS dispersal (after June 1). Pre-construction surveys by a qualified wildlife biologist shall be conducted no more than 24 hours prior to clearing and grubbing the site. If no AWS are encountered, the site is considered ready for construction. If AWS are found, the USFWS will be consulted for further instructions. 2. A biologist shall be present to supervise brush removal until the site has been cleared of vegetation. The role of the biological monitor will be to ensure that no take of AWS occurs. The biological monitor shall also relocate other wildlife species to designated refugia during removal of surface vegetation. 3. Sensitive areas adjacent to but outside of the construction footprint 				

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<p>shall be designated as such on construction plans, and shall be protected from encroachment by construction workers and equipment by orange construction fencing.</p> <p>4. Educational materials shall be prepared and provided to construction workers outlining measures to reduce or eliminate direct and indirect impacts to special-status species. Workers shall be required to sign a statement to the effect that they have received the educational materials regarding special-status species and that they understand that they shall be responsible for impacts that occur as a result of worker negligence.</p> <p>5. Monthly construction monitoring reports shall be prepared by the biological monitor and submitted to the Town, USFWS, and CDFG.</p>				
<p><u>4.C-6: Implement General Plan Mitigation: 4.H-3: Conduct Pre-Construction Surveys for Breeding Raptors and Migratory Birds.</u></p> <p>The Project Applicant shall retain a qualified biologist to conduct pre-construction surveys for breeding raptors and migratory birds within and in the vicinity of construction areas to determine if active nests, dens, or roost sites exist on the site that may be affected during construction. If active nests, dens, or roost sites are located, the Project Applicant shall consult with the CDFG and/or USFWS to determine appropriate measures to avoid, minimize, or mitigate potential impacts to nests, dens, and roost sites. Measures are expected to include avoiding construction activities in the vicinity of actively nests or delaying construction until after young have fledged; excluding or relocating birds and bats from roosting or nesting sites; and installing artificial roosting, denning, or nesting structures or sites.</p> <p>Examples of typical impact avoidance, minimization, and mitigation measures for nesting birds and bat denning sites, may include:</p> <ol style="list-style-type: none"> 1. Land-clearing activities (grading, grubbing and clearing of vegetation, or the removal or trimming of trees) shall be performed during the non-nesting season for most birds, generally September 1 - January 30, or when pre-construction surveys by qualified biologists have determined that no active nests are present in the construction area. 2. If land-clearing activities begin February 1 - August 31, a pre-construction survey for nesting migratory birds shall be conducted 	Project Applicant	Town of Moraga	Prior to ground disturbing construction activities	

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<p>before removal of suitable nesting habitat. Depending on time of year and results of the pre-construction surveys, construction activities may require commencement within 7-30 days, as recommended by a qualified wildlife biologist. The survey area shall include large trees, grassland and scrub habitat within a 250-foot buffer zone of the limits of work. The purpose of pre-construction surveys is to determine if occupied nests are present within a reasonable area that will be subject to direct impacts or disruption during construction.</p> <p>3. If occupied raptor or migratory bird nests are detected, grading and construction in the area may continue after the nests are protected by an adequate setback (often 50 feet for passerines and 250 feet for raptors) approved by a qualified biologist in consultation with the CDFG and/or USFWS (depending on the species), or after young birds have fledged. Nest sites may be disturbed after a qualified biologist has verified that migratory birds have either (a) not begun egg laying and incubation, or (b) that the juveniles from those nests are foraging independently and capable of independent survival.</p> <p>4. Within 30 days before the removal of trees and large snags, a qualified biologist shall conduct pre-construction surveys to check for the presence of bats. If no evidence of bat roosting is found, then no impacts to bats are expected to occur from tree removal. If evidence of bat roosting is identified, a focused survey by a qualified wildlife biologist shall be performed to determine the species present, number of individuals present, and their reproductive status. Appropriate mitigation measures to protect roosting bats will be developed by consulting the CDFG.</p>				
<p>4.C-8: Tree Preservation. In accordance with Moraga Municipal Code Chapter 12.12 – Tree Preservation, the project applicant shall implement the following measures to reduce impacts to trees to be preserved during construction (HortScience 2007).</p> <p>1. A qualified, certified Arborist shall review project plans (demolition, grading, utility, landscape, and irrigation plans) for consistency with actual tree counts and locations to accurately determine which trees</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit, and ongoing during construction	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>are at risk of injury during construction. The arborist shall make recommendations for tree preservation and tree preservation notes shall be included on construction plans.</p> <ol style="list-style-type: none"> 2. A fenced or otherwise delineated tree protection zone shall be established around the edge of the drip line of affected trees to ensure grading, excavation, material storage, or other construction activities are excluded within this area. No excess soil, chemicals, debris, equipment or other materials shall be dumped or stored within the tree protection zone. Underground utilities shall not be placed within the tree protection zone, and trenching for irrigation systems would not be permitted within the tree protection zone. 3. Herbicides placed under paving materials must be safe for use around trees and labeled for that use. 4. Prior to construction, the Consulting Arborist shall review work procedures and tree protection with the construction superintendent. 5. Prior to construction, a certified arborist shall prune trees to be preserved for construction access in accordance with the Tree Pruning Guidelines of the International Society of Arboriculture. Brush shall be chipped and spread beneath the trees within the tree protection zone. Any additional pruning needed during construction shall be performed by a certified arborist and not by construction personnel. 6. During construction, no grading, construction, demolition, or other work shall occur within the tree protection zone. Any modification to the tree protection zone must be approved and monitored by the Consulting Arborist. 7. Lime application shall not occur within 50 feet of any trees as it is toxic to tree roots. 8. If root pruning is required for construction purposes, the activity shall receive prior approval and be monitored by the Consulting Arborist. 9. Supplemental irrigation shall be applied as determined by the Consulting Arborist. 10. If injury occurs to a tree during construction, the Consulting Arborist shall inspect the damage and recommend/apply appropriate treatments as soon as possible. 				

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>11. Tree health and structural stability shall be monitored by the Consulting Arborist during and following construction. Occasional pruning, fertilization, mulch, pest management, replanting, and irrigation may be required and shall be implemented as determined by the Consulting Arborist.</p>				
4.D. Cultural Resources				
<p><u>4.D-2: Protect Unrecorded Archaeological Resources.</u></p> <p>The Project Applicant shall retain an independent, qualified archaeologist to conduct a pre-construction training for contractors and their employees, and to be available to assess inadvertently discovered resources during ground disturbing activities.</p> <p>The inadvertent discovery of archaeological resources shall be subject to PRC §21083.2 and CEQA Guidelines §15064.5. Project personnel shall be educated about the potential for encountering archaeological resources, and instructed to report suspected resources immediately to the Project archaeologist. Procedures for inadvertent discovery shall include the following:</p> <ul style="list-style-type: none"> • Work within 50 feet of the find shall be halted until a professional archaeologist evaluates its significance in accordance with CRHR and other applicable criteria. • If a find is determined to be significant, the Project Applicant shall consult with the archaeologist and Contra Costa County Building Inspectors to determine the appropriate course of action to comply with local, state, and federal laws and regulations. • If necessary, the Project Applicant shall provide a Treatment Plan, prepared by an archeologist, outlining recovery of the resource, analysis, and reporting of the find. The Treatment Plan shall be submitted to Contra Costa County for approval before resuming construction. • Significant cultural materials recovered shall be subject to scientific analysis, professional curation, and a report prepared by the professional archaeologist according to current professional standards. 	Project Applicant	Contra Costa County Department of Conservation and Development	Prior to ground disturbing construction activities	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p><u>4.D-3: Protect Unrecorded Paleontological Resources.</u></p> <p>The Project Applicant shall retain an independent, qualified paleontologist to conduct a pre-construction training for contractors and their employees, and to be available to assess unrecorded resources during ground disturbing activities.</p> <p>The inadvertent discovery of paleontological resources shall be subject to PRC §21083.2 and CEQA Guidelines §15064.5. Project personnel shall be educated about the potential for encountering paleontological resources, and instructed to report any suspected resources immediately to the Project paleontologist. Procedures for inadvertent discovery shall include the following:</p> <ul style="list-style-type: none"> • Work within 50 feet of the find shall be halted until a professional paleontologist evaluates its significance in accordance with applicable criteria. • If any find is determined to be significant then the Project Applicant shall consult with the paleontologist and Contra Costa County Building Inspectors to determine the appropriate course of action. • If necessary, the Project Applicant shall provide a Treatment Plan, prepared by a paleontologist, outlining recovery of the resource, analysis, and reporting of the find. The Treatment Plan shall be submitted to Contra Costa County for review and approval before resuming construction. • Significant paleontological materials recovered shall be subject to scientific analysis, notification to the USGS and curation in an appropriate repository, and a report prepared by the Project paleontologist, according to current professional standards. 	Project Applicant	Contra Costa County Department of Conservation and Development	Prior to ground disturbing construction activities	
<p><u>4.D-4: Protect Inadvertently Discovered Human Remains.</u></p> <p>The Project Applicant shall retain an independent, qualified archaeologist to conduct a pre-construction training for contractors and their employees, and to be available to evaluate inadvertently discovered human remains during ground disturbing activities. Project personnel shall be educated about the potential for encountering human remains and funerary objects, and instructed to cease work within 50 feet of the find, and report suspected</p>	Project Applicant	Contra Costa County Department of Conservation and Development	Prior to ground disturbing construction activities	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>resources immediately to the Project archaeologist. Procedures for inadvertent discovery of human skeletal remains or funerary objects include:</p> <ul style="list-style-type: none"> • The Project Applicant shall immediately notify the Project archaeologist, Moraga Police Department and County Coroner and cease work within 50 feet of the find. • Upon determination by the County Coroner that the remains are Native American, no further disturbance of the site may be made except in compliance with applicable federal, state, and local laws regarding Native American burials and artifacts. The Coroner shall contact the NAHC, pursuant to Health and Safety Code §7050.5(c), and the County Coordinator of Indian affairs and follow §7050.5(b): • In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the County Coroner has determined, in accordance with Chapter 10 (commencing with §27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of §27492 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of death, and the recommendations concerning treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in PRC §5097.98. • The County Coroner, upon recognition of the remains as being of Native American origin, shall contact the NAHC within 24 hours. The NAHC has various powers and duties to provide for the ultimate disposition of any Native American remains, as does the NAHC-assigned Most Likely Descendant. Construction/excavation activities in the vicinity of the find may only be resumed upon development, approval, and implementation of a Treatment Plan by the NAHC, the Most Likely Descendant, the Project archaeologist, and Contra Costa County Building Inspectors. 				

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
4.E. Geology and Soils				
<p><u>4.E-1: Design-Level Geotechnical and Geologic Investigation Report.</u> Design-level geotechnical and geologic investigation reports shall be completed and submitted to the Town of Moraga for review prior to approval of the tentative subdivision map for the approved Project, as required to obtain grading and construction permits. At a minimum, the design-level geotechnical and geologic investigation reports shall address the selected alternative and shall address improvements proposed for Valley Hill Drive, impacts of the Valley Hill Drive improvements on Bollinger Canyon Road, the EVA, and the proposed Project. The investigation shall build upon the Updated Preliminary Geotechnical Exploration (ENGEO 2012) for the Project and the Preliminary Geotechnical Report (ENGEO, 2007) for Valley Hill Drive and include site-specific subsurface investigation (e.g. borings, test pits, geophysical methods, etc.) and laboratory testing sufficient to further characterize Project Area landslides and geologic materials and their anticipated response to seismic activity. In addition to the seismic parameters and structural engineering parameters identified above and in the analysis summarized under impact 4.E-3, the supplemental studies shall address and include:</p> <ul style="list-style-type: none"> • Proposed final grading plans for the Project that include or show: <ul style="list-style-type: none"> • Final slope inclinations and contour details that demonstrate compliance with Town grading requirements; • Cut and fill quantities; and • Delineations of creek bank setbacks to identify lots potentially affected by creek bank instability. • Site-specific surface and subsurface investigation (e.g. geologic mapping, borings, test pits, geophysical methods, etc.) and laboratory testing data sufficient to further characterize the landslides and other geologic materials (especially relatively soft colluvium or alluvium) and their anticipated response to seismic activity; • The results of engineering analyses demonstrating acceptable static and seismic stability for all applicable portions and components of the Project; • Specific design recommendations for landslide excavation, 	Project Applicant	Town of Moraga	Prior to approval of the tentative subdivision map	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>subsurface drainage, and any engineered stabilization measures that may be required for construction;</p> <ul style="list-style-type: none"> • Specific design recommendations for engineered stabilization structures associated with the Valley Hill Drive improvements; <ul style="list-style-type: none"> • The geologic mapping performed for the 2007 ENGEO study should be expanded along Bollinger Canyon a sufficient distance to evaluate the potential extent of engineering mitigation that may be required associated with the work to Valley Hill Drive; • Supplemental geologic mapping should be performed in the vicinity of cross sections B-B' and C-C' to better characterize the extend of landsliding and/or sloughing in this area; • Supplemental geologic and landslide mapping should be performed in areas where roadway improvements or mitigation measures may affect adjacent upslope properties; and • Supplemental evaluations should be performed in areas where engineered retaining structures are not currently proposed but where existing embankments may affect the roadway over time (e.g., the vicinity of cross section G-G'). • Specific design recommendations for the cuts, fills, and related structures associated with the EVA road; <ul style="list-style-type: none"> • Supplemental geologic mapping and subsurface exploration of this area should be performed to develop mitigation measures applicable for the site conditions and the intended use of the EVA. • An evaluation of septic system suitability (if septic systems are ultimately proposed); and • An evaluation of a pump station location along Bollinger Canyon Road, if a gravity flow sanitary sewer is not feasible. <p>The design-level geotechnical and geologic investigation report shall be signed and stamped by appropriately licensed professionals and shall be subject to peer review by the Town. Construction of Project improvements shall be in compliance with the design level geotechnical and geologic investigation report approved by the Town.</p>				

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p><u>Seismic Hazards.</u> At a minimum, seismic evaluations shall be performed in general accordance with California Division of Mines and Geology Special Publication 117 (Guidelines for Evaluating and Mitigating Seismic Hazards in California) and expected ground motions determined by a registered geotechnical engineer shall be incorporated into the final structural design as part of the Project. The design-level investigations shall evaluate and report subsurface conditions with respect to secondary rupture of the lineations mapped at the Project Area as well as potential ground shaking hazards such as liquefaction, cyclic densification, and lateral spreading and shall provide recommendations to mitigate these hazards as necessary. Construction of project improvements shall be in accordance with all recommendations of the design-level geotechnical and geologic investigation report approved by the Town.</p> <p>Structures and infrastructure for the Project shall be designed in accordance with the most recent version of the California Building Code, which requires structural design that incorporates ground accelerations expected from known active faults. Site grading and landslide mitigation measures shall conform to applicable codes, ordinances, and requirements, including the Title 14 of the Moraga Municipal Code. The stability of cuts and fills shall be supported by appropriate static and seismic stability analyses. Seismic stability analyses shall be based on an appropriate site-specific pseudostatic coefficient. Alternatively, or for cases where pseudostatic analyses indicate unacceptable safety factors, seismic stability may be demonstrated by an appropriate deformation analysis.</p> <p><u>Evaluation of and Measures to Address Lineations/Landslides.</u> The lineations and mapped landslides within the Project Area shall be specifically evaluated and reported as part of the design-level geologic and geotechnical investigations. Site-specific surface and subsurface investigations (e.g., geologic mapping, boring, test pits, geophysical methods, etc.) and laboratory testing data sufficient to further characterize the landslides and other geologic materials (especially relatively soft colluvium and alluvium) and their anticipated response to seismic activity shall be completed. Based on this evaluation, the potential for the lineations to act as groundwater barriers shall be addressed. The project geotechnical engineer shall specify set-backs or provide analyses and recommendations to</p>				

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>accommodate possible deformation and specific design recommendations for landslide excavation, subsurface drainage, and any engineered stabilization measures that may be required for construction. The Project Applicant shall locate the project water system and sanitary pipelines to avoid crossing the lineations to the extent practicable. If a pipeline must cross a lineation, and if the design-level investigation indicates potential for seismic displacement, the system shall be designed in accordance with applicable methods identified in the American Lifeline Alliance (2005) design guidance or equal alternative methods. As part of this work, the Project Applicant shall confer with local fire agencies to define appropriate post-earthquake water supply design criteria and shall design pipeline crossing components to meet these criteria. If the design-level investigation indicates potential for seismic displacement, the Project Applicant shall develop an emergency preparedness and response plan that incorporates methods to respond to and repair pipeline damage (by a HOA or applicable utility) following an earthquake.</p> <p><u>Grading, Drainage and Slopes.</u> The design-level geologic and geotechnical investigations shall determine and report final design parameters for the earthwork, foundations, foundation slabs, and any surrounding related improvements (e.g., the water tank, utilities, roadways, parking lots and sidewalks) and shall further define geologic and geotechnical criteria and standards for Project Area grading, drainage, foundation design, landslide mitigation, utilities, roadways, and other structures or facilities potentially affected by the Project. Slope stability assessments and site grading plans shall be prepared by a qualified California licensed engineering geologist or geotechnical engineer and approved by the Town Engineer. Consistent with Moraga 2002 General Plan Public Safety Policies PS4.3 and PS4.4, the Town implements the Geological Hazards Abatement Ordinance, the Hillside Zoning Overlay, and reviews geotechnical reports prior to issuing a Grading Permit. A slope stability assessment shall be required for new developments and slope stability design measures shall be implemented for slopes with gradients steeper than 20%.</p> <p><u>Expansive, Compressible and Corrosive Soils.</u> The design-level geologic and geotechnical investigations shall determine and report final design parameters and recommendations for prevention of moisture variation,</p>				

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>potentially compressible colluvium and landslide deposits and corrosivity of Project Area soils.</p> <p><u>Foundation and Pavement Design.</u> The design-level geologic and geotechnical investigation report shall provide criteria and recommendations for foundation and pavement design to minimize the effects of settlement and address site-specific conditions (including soil corrosivity) developed from field exploration and laboratory testing. Criteria and recommendations shall be in accordance with California Building Code requirements. The design-level criteria and recommendations shall be subject to review by the Town.</p>				
<p><u>4.E-3a: Deed Disclosure.</u></p> <p>Prior to recording Final Subdivision Map(s), the Project Applicant shall provide a deed disclosure for each lot that references the design-level geotechnical and geologic investigation report and that summarizes the potential geologic hazards associated with the lot. The deed disclosure shall provide a thorough description of landslide mitigation measures associated with the lot and shall provide details of the maintenance responsibilities of the property owner. The disclosure shall advise the property owner if future Project Area improvements could trigger instability. The language of the deed disclosure shall be subject to review and approval of the Town.</p>	Project Applicant	Town of Moraga	Prior to issuance of final subdivision map	
<p><u>4.E-3b: Construction Monitoring, Testing, and Reporting.</u></p> <p>During Project Area grading and landslide remediation activities, the project engineering geologist or geotechnical engineer shall observe and approve keyway excavations, removal of fill and/or landslide materials down to stable bedrock or in-place material, and the installation of subdrains, including connections and outlet structures. Cut slopes shall be observed and mapped by the project engineering geologist or geotechnical engineer who shall provide recommendations for slope modifications (if any) based on the actual conditions encountered during grading. Written approval of modifications shall be obtained from the Town (or its representatives) prior to any modification to the approved grading plan. Placement of fill shall be observed and tested by the project engineer and the test results and final report shall be submitted to the Town.</p>	Project Applicant – Engineering Geologist or Geotechnical Engineer	Town of Moraga	During grading and landslide remediation activities	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p><u>4.E-3c: Stabilize Areas of Slope Instability and Landsliding along Bollinger Canyon Road.</u></p> <p>Implementation of this mitigation measure shall be required in the context of implementation of Mitigation Measure 4.L-9 (see measure 4.L-9 below for language).</p> <p>Prior to design of road improvements required under Mitigation Measure 4.L-9, a comprehensive evaluation of the Bollinger Canyon Road section between St. Mary's Road and Joseph Drive shall be completed by the Applicant and recommendations for stabilization of the road cut, if needed or requested by the Town, shall be developed by the Applicant for review and approval by the Town. Realignment of the intersections within the existing right-of-way and placement of signage along the roadway is not anticipated to require stabilization actions.</p>	Project Applicant	Town of Moraga	Prior to issuance of final subdivision map	
<p><u>4.E-5a: Grading Period.</u></p> <p>Grading activities shall be restricted to the summer construction season (April 15 through October 15). Any Project Area earthwork after October 15 shall be limited to activities related to erosion control unless authorized in writing by the Town. These restrictions shall be included in the construction specifications and grading plans.</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit	
<p><u>4.E-5b: Stockpile Topsoil.</u></p> <p>To the extent practicable, existing topsoil in areas to be graded shall be stockpiled and re-used in the Project Area for landscaping, erosion control, or other purposes. These restrictions shall be included in the construction specifications and grading plans submitted and approved by the Town.</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit	
<p><u>4.E-7: Conduct Soils Investigations for Septic Systems.</u></p> <p>Prior to approving a vesting tentative map for Alternative 2 (8 units), the Town shall review and approve soils and geology studies that demonstrate that individual lots have appropriate soils for septic systems, and that the septic systems can be installed and operated without adversely affecting domestic water supply wells, groundwater, and surface water. The studies shall demonstrate that County water quality standards can be met with the use of septic systems on residential lots in Project Area in Bollinger Valley. If Project Area soils are determined incompatible with septic systems,</p>	Project Applicant	Town of Moraga	Prior to approval of vesting tentative map for Alternative 2 only	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
Alternative 2 shall require redesign to avoid potential impacts.				
4.F. Hydrology and Water Quality				
<p><u>4.F-1a: Low Impact Development (LID) Strategies for Source Control.</u> The Project Applicant shall incorporate LID strategies as part of design plans for residential development in conjunction with the Town’s review of the preliminary Stormwater Control Plan. Lots shall be positively sloped and drained individually away from foundations and sheet flowed to undisturbed areas or bio-retention systems installed in adjacent areas. Runoff from impervious surfaces shall be captured and infiltrated on-site and shall not contribute to existing downstream stormwater facilities.</p>	Project Applicant	Town of Moraga	Prior to approval of vesting tentative map	
<p><u>4.F-1b: Prevent Livestock Access to Streams and Wetlands (Alternative 2).</u> If livestock grazing continues under Alternative 2 (8 units), livestock shall be prevented from access to the beds, banks, and floodplains of streams, ponds, seeps, springs, and other on-site wetlands through the use of livestock fencing and gating or other barriers to preclude entry of grazing animals into drainage and creek beds to avoid soil compaction and erosion. Barriers shall be erected outside the stream or wetland area as depicted on a USACE verified wetland delineation for the property. Evidence of appropriate barriers shall be submitted to the Town.</p>	Project Applicant	Town of Moraga	Prior to approval of vesting tentative map for Alternative 2 only	
<p><u>4.F-2: Complete Groundwater Supply Assessments (Alternative 2).</u> The Project Applicant shall complete groundwater investigations for the Project Area to ensure that each lot would have adequate geologic and hydrologic conditions to support an individual well. Should adequate conditions for groundwater supply not exist for individual lots, Alternative 2 shall be redesigned.</p>	Project Applicant	Town of Moraga	Prior to approval of vesting tentative map for Alternative 2 only	
4.G. Land Use and Agricultural Resources				
<p><u>4.G-1a: Amend Moraga General Plan Land Use Designation (Alternative 2).</u> Prior to approving Alternative 2 (8 units), the Town shall designate 186.33 acres non-MOSO Open Space (N-OS).</p>	Town of Moraga	Town of Moraga	Concurrently with approval of the Conceptual Development Plan for Alternative 2	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
			only	
<p><u>4.G-1b: Amend Moraga General Plan Land Use Designation.</u></p> <p>Prior to approving the Project (126 units), the General Plan Land Use Diagram in Bollinger Valley shall be amended from 186.33 acres of Study to 92 acres Residential – 2 DUA and 94.33 acres to non-MOSO Open Space (N-OS). Prior to approving Alternative 3 (37 units), the Town shall designate 18.5 acres Residential – 2 DUA and 166 acres non-MOSO Open Space (N-OS). Prior to approving Alternative 4 (100 units), the Town shall designate 55.33 acres Residential – 2 DUA and 131 acres non-MOSO Open Space (N-OS). Prior to approving Alternative 5 (121 units), the Town shall designate 71.33 acres Residential – 2 DUA and 115 acres non-MOSO Open Space (N-OS).</p>	Town of Moraga	Town of Moraga	Concurrently with approval of the Conceptual Development Plan	
<p><u>4.G-2: Incorporate Buffers.</u></p> <p>During the General Development Plan review phase, the Project Applicant shall design topographic or vegetative buffers, setbacks, and/or fencing between residences and adjacent agricultural uses that are within 250 feet of unincorporated County AL lands, particularly near the entrance access to Bollinger Canyon at Valley Hill Drive and the eastern boundary of the Project area with Contra Costa County. The earthen or vegetative buffer designs shall detail species, quantities, planting arrangements, groundcover, irrigation systems, and maintenance regimes. Buffers shall be consistent with Moraga 2002 General Plan Policies applicable to landscaping for pollutant dispersal and vegetative buffers (OS4.4 and C1.5, CD1.6, CD3.5, and OS2.7); and Moraga 2010 Design Guidelines (SC1, SC3, SC6, SC7, SC9, L1.2, L1.5, L2.4, L2.5, and ID3). Vegetative buffer shall use primarily species native to Moraga, and the species, quantities, design, location, irrigation system, and maintenance shall be reviewed and approved by EBMUD for water conservation goals and by the MOFD to meet wildfire safety and defensible space goals. The plan shall be reviewed and approved by the Town prior to approving a subdivision map.</p>	Project Applicant	Town of Moraga	Prior to approval of General Development Plan and vesting tentative map	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
4.H. Noise				
<p><u>4.H-1: Implement Construction Noise Control Measures.</u></p> <p>To maintain less than significant noise impacts, Moraga requires property owners to implement noise mitigation measures during construction of their projects. The Town has a design review process that considers traffic and noise issues during the review of new development projects. Under the Moraga 2002 General Plan, Moraga implements site-specific requirements for noise mitigation in project design, construction, and operation as part of the development permit process. Construction shall implement the following actions, which shall be included in construction specifications and grading plans, to minimize noise disturbances at sensitive receptors during construction activities:</p> <ul style="list-style-type: none"> • Consistent with the Town’s Health and Safety Code §7.12.090, there shall be no operation of equipment or other construction activities within 500 feet of existing residences 5:00 PM – 8:00 AM such that a reasonable person of normal sensitiveness residing in the area is caused discomfort or annoyance. This shall include deliveries of construction materials and maintenance of onsite equipment. • Newer construction equipment with improved noise muffling shall be used and construction equipment items shall have manufacturers' recommended noise abatement measures, such as mufflers, engine covers, and engine vibration isolators intact and operational. • Construction crews shall inspect equipment weekly to ensure proper maintenance and presence of noise control devices (e.g., mufflers and shrouding, etc.). • Wherever possible, hydraulic tools shall be used instead of pneumatic impact tools. • Heavy construction truck trips shall be routed over streets that will cause the least noise disturbance to residences or businesses in the vicinity of the Project Area (see Mitigation Measure 4.L-12) and comply with the list of designated truck routes through Lafayette, which includes Moraga Road, Mt. Diablo Blvd., Pleasant Hill Road, Alcalanes Road, 1st Street, and Oak Hill Road to access State Route 	Project Applicant	Town of Moraga	Prior to issuance of grading permit	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>24 (Lafayette Municipal Code Section 8-702). All Project construction related truck and heavy vehicle traffic shall be prohibited from using St. Mary’s Road in Lafayette or the Glenside Drive/Reliez Station Road route for access to State Route 24, with appropriate financial penalties for any violations. Construction workers shall be directed to use Moraga Road to access State Route 24. This shall be an item addressed in a Construction Management Plan, which shall be submitted for review and approval by the Town of Moraga prior to issuance of any grading or building permits. The Construction Management Plan would be required to be included in project specifications for the contractor, per the Town’s standard conditions of approval.</p> <ul style="list-style-type: none"> Construction staging areas, maintenance yards, and other construction-oriented operations shall be located as far as reasonably possible from sensitive receptors. 				
<p><u>4.H-3: Traffic Noise Control Measures.</u></p> <p>This measure provides options to reduce traffic noise levels at existing residential home sites along Bollinger Canyon Road near the intersection with Joseph Drive. The Project Applicant shall design and implement measures to reduce noise from traffic related to the Project and Alternatives 4 and 5. The Applicant shall prepare a noise control plan for Town review and approval to identify feasible measures that can be employed to reduce traffic noise so that the increase predicted at adjacent residential homes does not exceed 3 dB. The plan must be approved by the Town prior to issuing a Grading Permit. The noise control plan may include, and is not limited to, the following measures:</p> <ul style="list-style-type: none"> Constructing/use of barriers, berms, and acoustical shielding in the roadway right of way (potential reductions of 3dB to 5dB). Utilizing noise-reducing pavement (potential reductions of 2-5dB). Lowering speed limits, if feasible and practical (potential reductions of 1-2dB). Acoustical treatment of buildings (potential reductions of 3-5dB). 	Project Applicant	Town of Moraga	Prior to issuance of grading permit	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
4.I. Population and Housing				
<i>No mitigation measures required.</i>				
4.J. Public Services				
<p><u>4.J-1a: Review of Design Guidelines and Project Plans.</u></p> <p>The Moraga Police Department may review and comment on the Project’s Design Guidelines and Precise Development Plan. The MPD may comment on the adequacy of building setbacks, designs, access, evacuation routes, and visibility to ensure consistency with public safety goals and the needs of first responders. The Town shall take into consideration MPD comments before approval of the Precise Development Plan and shall require the Project Applicant to implement those comments the Town determines essential.</p>	Project Applicant	Town of Moraga	Prior to approval of Precise Development Plan	
<p><u>4.J-1b(1): Impact Fee Payment for Fire Protection Plan, and Review of Design Guidelines and Project Plans.</u></p> <p>The Project Applicant shall implement the mitigation measures requested by the MOFD. The Project Applicant shall pay a fee to MOFD in an amount equal to the costs for new staff, equipment and facilities needed to address the impacts of the Project on the provision of fire protection and emergency services, including medical response services, by MOFD and maintain standards of service in the MOFD service area. The amount of the fee shall be established in a study commissioned by MOFD and paid for by the Project Applicant. The fee shall be established before the Town issuance of the Project grading permit and the fee shall be paid at the time of issuance of the building permit. The MOFD costs included in the fee shall include, but not be limited to, the following:</p> <ul style="list-style-type: none"> • Additional personnel needed to provide services; • New equipment, vehicles, fire trucks, or ambulances needed to provide services; and • Facilities such as new buildings, building expansions, and property needed to house additional personnel, equipment, vehicles, trucks, and ambulances. <p>Prior to approval of the Precise Development Plan, the Project Applicant shall provide to MOFD for its review and approval, a Fire Protection and</p>	Project Applicant	Town of Moraga, MOFD	<p>Fee payment: Prior to issuance of grading permit.</p> <p>Fire Protection and Emergency Services Plan: Prior to approval of Precise Development Plan</p>	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>Emergency Services Plan that includes the following elements:</p> <ul style="list-style-type: none"> • Identification of and guarantee of an adequate water supply to provide required flow and pressure to meet firefighting needs for the Project Area. • Identification of an adequate number, spacing, and location of fire hydrants to meet firefighting needs. • Specifications for landscaping and a fuel management plan in common areas and open space, in compliance with defensible space guidelines in PRC 4291, including fire-wise landscaping standards, setbacks, and fuel breaks along the WUI. • Identification of traffic signals affected by the Project that shall be retrofitted by the Project Applicant with preemptive devices for emergency response services. • Identification of roadway improvements to ensure streets within the Project Area are a minimum of 24 feet wide, with additional width provided for streets with on-street parking, to allow for emergency vehicle access. The Project shall also include a second emergency vehicle access preferably, although not required to be, located within MOFD service boundaries. • Compliance with all Chapter 7A standards, including fire sprinklers for all structures. • Provisions for MOFD inspection and enforcement. <p>The Fire Protection and Emergency Services Plan shall be integrated into the Design Guidelines and Precise Development Plan, as well as construction specifications, and shall be implemented as established in the Plan.</p>				
<p><u>4.J-1b(2): Amend General Plan Policy PS3.3.</u> Moraga's General Plan Policy PS3.3 shall be amended (new language is shown as underline and bold font) as follows: <u>PS3.3 Response Times.</u> Provide a maximum emergency response driving time of 3 minutes and/or a travel distance of not more than 1.5 miles for response vehicles from the closest fire station to arrive and effectively control fires and respond to medical and other emergencies in the community. If new construction is more than 1.5 miles from a fire</p>	Town of Moraga	Town of Moraga, MOFD	Concurrently with approval of Conceptual Development Plan	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<u>station, structures shall incorporate MOFD-approved fire resistant materials, designs, and suppression systems to reduce fire-related risk to levels determined acceptable by the Town and the Fire District.</u>				
<p><u>4.J-1c(1): Park Development.</u></p> <p>The Project Applicant shall work with the Town to design and build an on-site public park, to be either dedicated to the Town of Moraga or permanently maintained by the homeowners association. The minimum park size per the Project or alternative shall be as follows:</p> <ul style="list-style-type: none"> • Project – 2.52 acres • Alternative 2 – 0.16 acre • Alternative 3 – 0.74 acre • Alternative 4 – 2.0 acres • Alternative 5 – 2.42 acres. <p>A conceptual plan shall be developed by the Project Applicant identifying the location, size, amenities, and features of the park, which will be reviewed and approved by the Town in conjunction with review of the General Development Plan and vesting tentative map. Park development shall avoid tree removal and shall include facilities such as benches, picnic tables, trash receptacles, bike storage, a drinking fountain, open turf and play areas, and street frontage and access. The selected park site shall have a connection to the public trail if required for the selected Alternative. Park location, amenities and maintenance shall be guaranteed through an agreement between the Project Applicant and the Town.</p>	Project Applicant	Town of Moraga	Prior to approval of General Development Plan and vesting tentative map.	
<p><u>4.J-1c(2): Open Space Corridor Public Trail.</u></p> <p>For the Project and Alternative 5, the Project Applicant shall provide a looping public trail that extends over a total distance of 3.0 miles within the project open space boundaries, as proposed under Alternative 4. The trail shall be designed and constructed for public access and maintained by the homeowners association. It shall include direct connection to Bollinger Canyon Road at Valley Hill Drive, as well as indirect access to Bollinger Canyon Road via an existing public easement at the southwest corner of the site.</p>	Project Applicant	Town of Moraga	Prior to approval of General Development Plan	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
4.K. Schools				
<i>No mitigation measures required with payment of Development Impact Fees.</i>				
4.L. Transportation				
<p><u>4.L-5: Provide For Lafayette Intersection Signals.</u> <i>Note: This impact remains significant and unavoidable if Lafayette does not add intersection improvements to the LTIF program</i></p> <p>This measure provides for the installation of traffic signals at the following four Lafayette intersections:</p> <ul style="list-style-type: none"> • Glenside Drive/St. Mary’s Road (with current lane configuration); • Glenside Drive/Reliez Station Road (widen Glenside Drive for a left turn pocket); • Glenside Drive/Burton Drive (widen Glenside Drive for a left turn pocket); and • Reliez Station Road/Olympic Boulevard (with current lane configuration); <p>The signals shall have actuated controls. Signal phasing and coordination shall be determined during signal design. Installation shall include the traffic signal equipment with optimized signal phasing/timing plans and coordination with adjacent traffic signals. Traffic signal equipment shall include ADA compliant features. The intersection shall be reconstructed as necessary to accommodate the traffic signal installation including consideration for pedestrians and bicyclists. Signal installation shall meet Contra Costa County design standards and be subject to the review and approval of Lafayette and the County. The full complement of signal warrants shall be investigated before signal installation.</p> <p>Mitigation Measure 4.L-5 is not currently in the LPMC Lamorinda Transportation Impact Fee (LTIF) program. The LTIF program shall be updated to incorporate this measure. The Project Applicant is responsible for the fair share contribution to this measure as determined by the updated fee program. If the fee program is not sufficiently funded to construct the measure at the time it is needed to mitigate the impact, then the Project Applicant shall fully fund and construct the mitigation measure, and shall be</p>	Project Applicant and City of Lafayette	Town of Moraga	Timing to be determined in consultation with the City of Lafayette.	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
reimbursed for the portion that is beyond their fair share contribution, from future available funding sources.				
<p><u>4.L-6. Enhance Transit Service in the Lamorinda Area South of SR 24.</u> <i>Note: Measure 4.L-6 will not reduce the impact to a less than significant level, but reduces impacts, as necessary, to levels at or below those predicted for General Plan buildout</i></p> <p>Enhanced transit service in the Lamorinda area, south of SR 24, reduces the traffic effects. County Connection generally operates buses with 40-minute headways during peak times, but reduces service headways to two hours during non-peak times. Measures to enhance transit service in Lamorinda include, but are not limited to, stylized buses that are 30 feet or less in length; transit stop amenities; real-time bus information; reduced headways; up to 16 hours of weekday and weekend service; reduced fares such as the Eco-Pass Program provided by AC Transit; and patron parking at select transit stops.</p> <p>The transit component of the CCTA model was used to estimate bus ridership increases with an enhanced transit service. Bus headways for Route 106 and Route 206 in the CCTA model were reduced to 10 minutes and 20 minutes during the on- and off-peak periods, respectively. With these changes, the CCTA model indicates that daily bus ridership increases by about 1,130 riders. At an average occupancy of 1.2 people per car, the increased ridership reduces daily automobile traffic in the area by about 950 cars.</p> <p>Enhanced transit service requires capital and operating costs, beyond what a single land development project, such as the proposed Project, could provide. A successful system requires financial support from residents, businesses, and government agencies. The 2010 Moraga Center Specific Plan (MCSP) included mitigation measure 4.F-4 to provide specific transit enhancements for projects implemented within the MCSP area. Measure 4.F-4 includes a requirement for the Town to establish a Moraga transit fee program to support enhanced County Connection transit service. Development approved for Bollinger Valley shall also contribute a fair share to the MCSP transit fee program, if and when it is implemented, based on the number of residential units approved within the Bollinger Valley project area.</p>	Project Applicant and Town of Moraga	Town of Moraga and County Connection	Prior to issuance of precise development plans	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p><u>4.L-9: Improve Bollinger Canyon Road and Install Left-Turn Lane on Southbound St. Mary’s Road at Bollinger Canyon Road.</u></p> <p>This measure provides for the implementing upgrades to Bollinger Canyon Road to current Town standards and installing a left turn lane in southbound St. Mary’s Road at Bollinger Canyon Road. Town and MOFD shall conduct a design review and approve roadway and vehicle access designs as meeting current safety standards before issuing a Grading Permit. If necessary to meet current road standards, the Project Applicant shall include the following measures:</p> <ul style="list-style-type: none"> • Improve Bollinger Canyon Road between Josephs Drive and Valley Hill Drive to meet Town of Moraga roadway standards. Improvements may include signage, re-striping, intersection realignment, or other measures (Figure 4.L-3); and • Provide a left-turn pocket on southbound St. Mary’s Road at Bollinger Canyon Road to accommodate the increased number of left-turning vehicles traveling to the Project Area. The Town is currently considering a roundabout at this intersection which would also accommodate the left-turning traffic. 	Project Applicant and Town of Moraga	Town of Moraga and MOFD	Prior to issuance of grading permit	
<p><u>4.L-10: Pedestrian and Bicycle Design Features.</u></p> <p>The Project Applicant shall develop pedestrian and bicycle design features for the Project to meet Town standards to maintain adequate safety. Design features shall be reviewed and approved during the General Development Plan phase. Examples of these measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Provide continuous pedestrian walkways on internal streets; • Minimize corner radii at intersections. • Provide ADA-compliant ramps at intersections with sidewalks and/or paths to maintain continuously accessible paths; • Maintain 6-foot pedestrian zones along internal residential streets; • Provide pedestrian walkway or trail adjacent to reconstructed Valley Hill Drive travel lanes to connect the Project area to Bollinger Canyon Road; and • Maintain a minimum 4-foot wide ADA compliant pedestrian zone 	Project Applicant	Town of Moraga	Prior to approval of General Development Plan and vesting tentative map.	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
across driveways on internal streets with sidewalks.				
<p><u>4.L-11: Provide Parking Features.</u></p> <p>During the General Development Plan phase, the Town shall review and approve designs to provide parking features in the Project Area that meet Town standards. Examples of these measures include, but are not limited to, the following:</p> <ul style="list-style-type: none"> • Per Town of Moraga Parking Code, provide two covered parking spaces for each dwelling unit; and • Provide on-street parking on one side of residential streets at a minimum (28 foot street width) and both sides where possible (36 foot street width). 	Project Applicant	Town of Moraga	Prior to approval of General Development Plan and vesting tentative map	
<p><u>4.L-12: Divert Construction Traffic to Moraga Way or Moraga Road; Maintain Bollinger Canyon Road Pavement Condition.</u></p> <p>To reduce impacts to traffic flow and residential neighborhoods, larger construction vehicles shall use Moraga Way or Moraga Road from SR 24 to Moraga, and continue on to St. Mary's Road from the south to Bollinger Canyon Road. These roads are established truck routes for Moraga and Lafayette. Construction activities that involve large numbers of trucks, such as earthwork, shall be scheduled outside of peak traffic periods to reduce the impact of large trucks on traffic flow.</p> <p>The Project Applicant shall provide an independent pavement condition assessment of Bollinger Canyon Road before and after construction. After construction, the Project Applicant shall be required to make necessary repairs to restore pavement to pre-Project condition as needed. Between the intersections of Joseph Drive and Valley Hill Drive, portions of Bollinger Canyon Road shall be improved to meet minimum Town standards as described in Mitigation Measure 4.L-9.</p>	Project Applicant	Town of Moraga	Prior to issuance of grading permit for completion of pavement condition assessment; following completion of construction for pavement repairs.	
<p><u>4.L-C3: Install Traffic Signal at the Corliss Drive/Moraga Road Intersection.</u></p> <p>A traffic signal shall be installed at the Corliss Drive/Moraga Road intersection with the current lane configuration and actuated controls. Signal phasing and coordination shall be determined during signal design. Installation shall include traffic signal equipment with optimized signal phasing/timing plans and coordination with adjacent traffic signals. Traffic</p>	Project Applicant and Town of Moraga	Town of Moraga	Prior to issuance the first certificate of occupancy	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>signal equipment shall include ADA compliant features. The intersection shall be reconstructed as necessary to accommodate the traffic signal installation including consideration for pedestrians and bicyclists. Signal installation shall meet Contra Costa County design standards and be subject to the review and approval of the Town and County. The full complement of signal warrants shall be investigated before signal installation.</p> <p>This mitigation measure is currently in Moraga’s development impact fee program under MMC Title 17. The Project Applicant is responsible for the fair share contribution to this measure as determined by the fee program in effect when the Town authorizes issuance of the first certificate of occupancy for the project. If the fee program is not sufficiently funded to construct the signal when needed to mitigate impacts, then the Project Applicant shall fully fund and construct the mitigation measure, and shall be reimbursed for the portion that is beyond their fair share contribution, from future available funding sources.</p> <p>This intersection mitigation measure (a proposed traffic signal) is currently in Moraga’s development impact fee program under MMC Title 17. The Project Applicant is responsible for the fair share contribution to this measure as determined by the fee program in effect when the Town authorizes issuance of the first certificate of occupancy for the project. If the fee program is not sufficiently funded to construct the roundabout when needed to mitigate impacts, then the Project Applicant shall fully fund and construct the mitigation measure, and shall be reimbursed for the portion that is beyond their fair share contribution, from future available funding sources.</p>				
<p><u>4.L-C5: Provide For Lafayette Intersection Signals (Cumulative Conditions)</u> <i>Note: This impact remains significant and unavoidable if Lafayette does not add intersection improvements to the LTIF program.</i></p> <p>This measure provides for the installation of traffic signals at the following seven Lafayette intersections under cumulative conditions where intersection LOS is below General Plan standards.</p> <ul style="list-style-type: none"> • Deer Hill Road/Oak Hill Road (with the current lane configuration); • Glenside Drive/St. Mary’s Road South (with current lane configuration); • Glenside Drive/Reliez Station Road (widen Glenside Drive for a left turn pocket); 	Project Applicant and City of Lafayette	Town of Moraga	Timing to be determined in consultation with the City of Lafayette	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<ul style="list-style-type: none"> • Glenside Drive/Burton Drive (widen Glenside Drive for a left turn pocket); • Pleasant Hill Road/Olympic Boulevard (with the current lane configuration); • Glenside Drive/Los Palos Drive (with the current lane configuration); and • Reliez Station Road / Olympic Boulevard (with the current lane configuration). <p>The signals shall have actuated controls. Signal phasing and coordination shall be determined during signal design. Installation shall include the traffic signal equipment with optimized signal phasing/timing plans and coordination with adjacent traffic signals. Traffic signal equipment shall include ADA compliant features. The intersection shall be reconstructed as necessary to accommodate the traffic signal installation including consideration for pedestrians and bicyclists. Signal installation shall meet Contra Costa County design standards and be subject to the review and approval of Lafayette and the County. The full complement of signal warrants shall be investigated before signal installation.</p> <p>Mitigation Measure 4.L-C5 is not currently in the LPMC Lamorinda Transportation Impact Fee (LTIF) program. The LTIF program shall be updated to incorporate this measure. The Project Applicant is responsible for the fair share contribution to this measure as determined by the updated fee program. If the fee program is not sufficiently funded to construct the measure at the time it is needed to mitigate the impact, then the Project Applicant shall fully fund and construct the mitigation measure, and shall be reimbursed for the portion that is beyond their fair share contribution, from future available funding sources.</p>				
4.M. Utilities and Hazards				
<p><u>4.M-1a: Submission of a Preliminary Work Agreement, EBMUD Annexation Application, and Conservation Measures.</u></p> <p>During the General Development Plan review phase, the Project Applicant shall demonstrate how adequate water supply and pressure would be provided to new residents and hydrants.</p>	Project Applicant, EBMUD, Contra Costa County LAFCO and US Bureau of Reclamation	Town of Moraga	Prior to approval of General Development Plan and vesting tentative map for confirmation of adequate water	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>The Project Applicant shall execute a Preliminary Work Agreement (PWA) with EBMUD to determine the costs and conditions for providing water service. The Project Applicant shall contact EBMUD’s New Business office and submit preliminary development plans as part of the PWA application. The engineering, planning, design and installation of major facilities and water mains, as well as the payment of associated engineering and review fees, shall occur prior to Project construction.</p> <p>The Project Area shall be annexed to EBMUD’s Current Service Area as a condition of water service delivery. The Project Applicant shall apply for annexation with the Contra Costa County Local Agency Formation Commission (LAFCO). The Project would be subject to the requirements of EBMUD’s Long Term Renewal Contract with the U.S. Bureau of Reclamation (Reclamation); therefore, annexation would be subject to Reclamation approval. Reclamation requires additional environmental documentation in compliance with the National Environmental Protection Act (NEPA), the Endangered Species Act (ESA), and Section 106 of the National Historic Preservation Act (NHPA), which EBMUD will require of the Project Applicant. The Project Applicant shall also pay the costs incurred due to environmental review and documentation requirements.</p> <p>In addition, water conservation measures shall be implemented including, but not limited to:</p> <ul style="list-style-type: none"> • Installation of water efficient irrigation systems for common areas residential units that include efficient sprinkler heads or drip irrigation, and automatic rain shut-off; • Installation of ultra-low flow toilets, as required by state law; • Installation of drought-tolerant landscaping consistent with the Moraga 2010 Design Guidelines; and • Compliance with AB 325, Model Water Efficient Landscape Ordinance (Division 2, 23 CCR Chapter 2.7, §490-495); and • Compliance with Moraga Resolution No. 79-92 Water Efficient Landscaping. 			<p>supply and pressure.</p> <p>Prior to issuance of grading permit for execution of Preliminary Work Agreement with EBMUD and annexation to EMBUD Current Service Area.</p>	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p>Based upon discussions with EBMUD, the Project Applicant shall also implement EBMUD conservation programs and best management practices applicable to the Project.</p> <p>Since the Project (126 units) does not include water storage tanks, and since recent fire events in the area have resulted in pumping equipment failure a lack of adequate pressure, the Project Applicant shall install water storage facilities, sized and constructed to serve the Project (126 units). The Project Applicant shall work with EBMUD, Moraga, and the MOFD to plan and develop the major water facilities needed to serve the project, including appropriate environmental documentation. The water storage facilities shall be phased and constructed in conjunction with the residential development. The facilities shall be located within the Project Area and shall replace planned homesites to avoid additional impacts.</p>				
<p><u>4.M-1b: CCCSD Consultation and Wastewater Facility Construction.</u></p> <p>The Project Applicant shall coordinate with the CCCSD’s Permit Section for review and approval of designs and connections of the wastewater treatment system to ensure adequate service is being provided to current CCCSD standards, and to ensure appropriate fees are processed. The Project Applicant shall be responsible for the construction of approximately 5,500 feet of eight-inch diameter gravity sewer main in Valley Hill Road and Bollinger Canyon Road to connect the Project Area to the existing sewer system. Easements shall be established according to CCCSD specifications over the alignment of each public sewer. The Project Applicant and homeowners will be responsible for the construction, costs, and operation associated with side sewers connecting residences to the main sewer.</p>	Project Applicant and CCCSD	Town of Moraga	Prior to issuance of grading permit	
<p><u>4.M-1c: Energy Conservation Measures.</u></p> <p>The project applicant shall specify how the Project will meet current standards for energy conservation. The plans submitted for a building permit shall demonstrate compliance with California Building Standards Code (Title 24, California Code of Regulations). New structures shall include at a minimum adequate insulation and energy efficient fixtures and may include passive solar design, alternative energy systems, solar space and water heating, and other measures as feasible for each housing unit.</p>	Project Applicant	Town of Moraga	Prior to issuance of building permit	

Mitigation Measure Description	Implementing Responsibility ^{1,3}	Monitoring Responsibility ^{2,3}	Timing and Frequency	Verification of Compliance (Initials/Date)
<p><u>4.M-1d: Waste Management Plan and Service Contracting.</u></p> <p>The Project Applicant shall submit a Waste Management Plan to the Town for approval that demonstrates compliance with MMC 8.156 and other applicable Green Building guidelines in Moraga by encouraging salvaging, reuse, and recycling of discarded materials such that at least 50% of construction debris is diverted from landfills. The Waste Management Plan shall include the estimated types and quantities of wastes generated for recycling and disposal, a description of how recycling will be accomplished, and the list of recyclers. The Waste Management Plan shall be approved and solid waste services contracted prior to construction.</p>	Project Applicant	Town of Moraga	Prior to issuance of building permit	
<p><u>4.M-2. Develop a Mosquito Control Program.</u></p> <p>The Project Applicant shall consult with the CCMVCD to develop site-specific mosquito and vector control management measures associated with streams, ponds, wetlands, and drainage basins near new residential development in Bollinger Valley. The Project Applicant shall consult with the CCMVCD after final grading and drainage basin plans have been completed to develop management and maintenance measures to reduce potential mosquito breeding. The measures shall include integrated pest management techniques to reduce mosquito populations and public health risks, including the use of mosquitofish, bacterial insecticides, and larvicidal oils. To avoid potential impacts to water quality in Las Trampas Creek, the use of pyrethroid- or pyrethrin-based chemicals shall be avoided or minimized to the extent feasible while meeting public health and safety goals.</p>	Project Applicant and CCMVCD	Town of Moraga	Prior to issuance of grading permit	

Source: HBA 2016

1 The department listed in the Implementing Responsibility column is the department responsible for conducting the mitigation measure.

2 The department listed in the Monitoring Responsibility column is responsible for verifying that compliance with the mitigation measure occurs and that all monitoring and reporting is completed.

3 Responsible Entity.