

Second Revised Final EIR #616

**Mitigation Monitoring
and Reporting Program (MMRP)**

Esperanza Hills

Project No. PA120037

SCH #2012121071



Prepared For:

Lead Agency
County of Orange
OC Public Works/OC Development Services
300 N. Flower Street
Santa Ana, CA 92702-4048
Contact Person: Kevin Canning
(714) 667-8847
Kevin.Canning@ocpw.ocgov.com



Prepared By:

CAA Planning, Inc.
65 Enterprise, Suite 130
Aliso Viejo, CA 92656
Contact Person: Shawna L. Schaffner
(949) 581-2888

August 2018

The California Environmental Quality Act (CEQA) requires that all public agencies establish monitoring and/or reporting procedures for mitigation measures adopted as conditions of approval in order to mitigate or avoid significant project impacts. Specifically, §21081.6(a)(1) states:

The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval, adopted in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation.

CEQA Guidelines §15097 provides clarification of mitigation monitoring and reporting requirements and guidance to local lead agencies on implementing strategies. It is the responsibility of the Lead Agency to ensure that implementation of the mitigation measures occurs in accordance with the Mitigation Monitoring and Reporting Program. The reporting or monitoring program must be designed to ensure compliance during project implementation. The following Mitigation Monitoring and Reporting Program includes mitigation measures from the Draft Environmental Impact Report (DEIR 616) (Project No. PA120037) for the Esperanza Hills Project in unincorporated Orange County.

Mitigation measures have been drafted to meet the requirements of *California Public Resources Code* §21081.6 as fully enforceable monitoring programs. The Mitigation Monitoring and Reporting Program defines the following for each mitigation measure:

1. **A time for performance.** In each case, a time for performance of the mitigation measure, or review of evidence that mitigation has taken place, is provided. The performance points selected are designed to ensure that impact-related components of project implementation do not proceed without establishing that the mitigation is implemented or assured.
2. **A responsible party for supervising performance.** In each case, a specific party is named in the as the person responsible for ensuring that the mitigation is carried out. To guarantee that the mitigation measure will not be inadvertently overlooked the responsible person is the official who grants the permit or authorization called for in the performance or the on-site authority during the identified phase of project development or operation.
3. **Definition of mitigation.** In each case (except where a mitigation measure, such as a geotechnical report, is a well-known procedure or term of art), the mitigation measure contains the criteria for mitigation, either in the form of adherence to certain adopted regulations or identification of the steps to be taken in mitigation.

Matrix Orientation

The following matrix lists all mitigation measures from the DEIR referenced above. The matrix also identifies the required timing, the responsible parties for implementation, and the monitoring agency or party for the required mitigation.

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Aesthetics			
AE-1 Prior to issuance of building permits, the Project Applicant shall provide proof that demonstrates that all exterior lighting has been designed and located so that all direct rays are confined to the property in a manner meeting the approval of the Manager, Permit Services, or designee. Lighting shall be designed to minimize visibility of light sources by directing lighting toward the on-site structures and not illuminating areas outside property boundaries.	Prior to issuance of building permits	Manager, Permit Services	
Air Quality			
AQ-1 Prior to issuance of grading permit, the Project Applicant shall provide evidence that ensures the use of enhanced control measures for diesel exhaust emissions to maintain NO _x impacts at a less than significant level to the Manager, Permit Services. These measures shall include: <ul style="list-style-type: none"> • Utilize well-tuned off-road construction equipment • During grading, require that contractors use Tier 3 on all heavy equipment (excavators, graders, and scrapers exceeding 100 HP rated power) if the entire project is graded at one time for NOX emissions, unless use of such mitigation is demonstrated to be technically infeasible for a given piece of equipment • During grading, require that contractors employ oxidation catalysts that shall achieve 40% reduction during grading for excavation graders and scrapers exceeding 100 HP rated power if the entire project is graded at one time, unless use of such mitigation is demonstrated to be technically infeasible for a given piece of equipment. • Enforce 5-minute idling limits for on-road trucks and off-road equipment. 	Prior to grading permit Plans/Monitoring	Manager, Permit Services	
AQ-2 Prior to issuance of grading permit, the Project Applicant shall provide to the Manager, Permit Services evidence that ensures that standard construction practices as set forth in the SCAQMD Handbook shall be implemented.	During construction activities	Manager, Permit Services	
AQ-3 During construction, the Project Applicant shall ensure that best management practices for dust control are implemented. These include: <ul style="list-style-type: none"> • Apply soil stabilizers or moisten areas that are inactive for 96 hours or more • Prepare a high wind dust control plan • Address previously disturbed areas if subsequent construction is delayed more than 96 hours • Water exposed surfaces as needed to avoid visible dust leaving the construction site (typically three times per day) • Wet down or cover all stockpiles with tarps at the end of each day or as needed • Provide water spray during loading and unloading of earthen materials • Minimize in-out traffic from construction zone • Cover all trucks hauling dirt, sand or loose material or require all trucks to maintain at least two feet of freeboard • Sweep streets daily if visible soil material is carried out from the construction site • Use perimeter sandbags and wind fences for erosion control 	During construction activities	Manager, Permit Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Biological Resources			
Bio-1 Prior to issuance of grading permits, the Project Applicant shall prepare a re-vegetation plan for mulefat scrub, black willow riparian forest, and blue elderberry woodland located within Blue Mud Canyon in accordance with the Habitat Mitigation and Monitoring Plan. The plan will also incorporate California black walnut into the plant palette to mitigate the loss of 0.48 or 0.22 acre of walnut woodland associated with Option 1 and Option 2, respectively. The plan shall be prepared by a qualified biologist for review and approval by the Manager of Planning, OC Development Services. At a minimum, the plan shall include restoration of mulefat scrub and black willow riparian forest vegetation that also includes a black walnut component. The plan shall include replacement of habitat at a minimum ratio of 1:1; responsibility and qualifications of the personnel to implement and supervise the plan; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; five year monitoring plan with reporting to the Manager of Planning, OC Development Services; and long-term preservation.	Prior to issuance of grading permits	Manager, Planning, OC Development Services	
Bio-2 Prior to issuance of grading permits, a Special Status Planting and Monitoring Plan shall be prepared by a qualified biologist in consultation with the CDFW and the USFWS for approval by the Manager of Planning, OC Development Services. The plan shall provide for planting at the appropriate time of the year for success of 326 greenhouse-propagated individuals of intermediate mariposa lily in the Study Area within an undisturbed area of coastal sage scrub of same habitat quality with respect to soil type and its characteristics. The plan shall include a maintenance program for weed removal, supplemental watering, fencing, and other forms of site protection. This mitigation plan will be considered successful if at least 80% of 326 flowering individuals, or 261 flowering individuals, are observed five years after planting. If success criteria are not met after five years, remedial measures shall include greenhouse propagation and planting of additional individuals on the Project Site.	Prior to issuance of grading permits	Manager, Planning, OC Development Services	
Bio-3 Prior to issuance of grading permits, a Special Status Planting and Monitoring Plan shall be prepared by a qualified biologist in consultation with the CDFW and the USFWS for approval by the Manager of Planning, OC Development Services. The plan shall provide for planting of 400 greenhouse-propagated individuals of Braunton's milk-vetch in the Study Area within an undisturbed area of suitable habitat and soils, slope and exposure. The plan shall include a maintenance program for weed removal, supplemental watering, fencing, and other forms of site protection. This mitigation plan will be considered successful if at least 80% of individuals, or 320 individuals, flower and set seed prior to senescence. If success criteria are not met prior to senescence of the planted individuals, remedial measures shall include greenhouse propagation and planting of additional individuals on the Project Site.	Prior to issuance of grading permits	Project Applicant/Manager, Planning, OC Development Services	
Bio-4 Prior to the issuance of grading permits, the Project Applicant shall prepare a revegetation plan for mulefat scrub and black willow riparian forest located within Blue Mud Canyon. The plan will also incorporate California black walnut into the plant palette to mitigate the loss of walnut woodland as described in Mitigation Measure Bio-1. The plan shall be prepared by a qualified biologist for review and approval by the Manager of Planning, OC Development Services. At a minimum, the plan shall include: restoration of mulefat scrub and black willow	Prior to issuance of grading permits	Manager, Planning, OC Development Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>riparian forest vegetation at a ratio of 1:1; responsibility and qualifications of the personnel to implement and supervise the plan; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; monitoring plan; and long-term preservation.</p>			
<p>Bio-5 Prior to issuance of grading permits, the Project Applicant shall include the following measures on the grading plan to be implemented with grading operations:</p> <ol style="list-style-type: none"> 1. Prior to the commencement of clearing operations or other activities involving significant soil disturbance, all areas of mulefat scrub and black willow riparian forest habitat to be avoided shall be identified with temporary fencing or other markers that are clearly visible to construction personnel. 2. A USFWS-approved Biological Monitor shall be on-site during any clearing of mulefat scrub and black willow riparian forest. The Project Applicant shall advise the U.S. Fish & Wildlife Service at least 7 calendar days – but preferably 14 calendar days – prior to the clearing of mulefat scrub and black willow riparian forest. The Biological Monitor shall flush avian or other mobile species from habitat areas immediately prior to brush-clearing and earth-moving activities. It shall be the responsibility of the Biological Monitor to ensure that identified bird species are not directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities to continue on a timely basis. 3. Following the completion of initial clearing activities, all areas of mulefat scrub and black willow riparian forest habitat to be avoided by construction equipment and personnel shall be marked with temporary fencing or other clearly visible, appropriate markers. No construction access, parking, or storage of equipment shall be permitted within such marked areas. 	<p>Prior to issuance of grading permits</p>	<p>Manager, Planning, OC Development Services</p>	
<p>Bio-6 Prior to issuance of grading permits, the Project Applicant shall prepare a Restoration Plan for mulefat scrub, black willow riparian forest, coast live oak riparian woodland, and other appropriate wetland/riparian habitats at an acreage ratio of 1:1 to be located within Blue Mud Canyon. The plan shall be prepared by a qualified biologist for review and approval by the Manager of Planning, OC Development Services. The Restoration Plan shall include the following:</p> <ol style="list-style-type: none"> 1. Impacts to living coast live oak trees within CDFW jurisdiction will be mitigated through planting liners or locally collected acorns within Blue Mud Canyon at the following ratios: <ul style="list-style-type: none"> • For healthy trees to be removed for development: <ul style="list-style-type: none"> • trees less than 5 inches diameter at breast height (DBH) should be replaced at 3:1 • trees between 5 and 12 inches DBH should be replaced at 5:1 • trees between 12 and 36 inches DBH should be replaced at 10:1 • trees greater than 36 inches DBH should be replaced at 20:1 • For damaged trees (including trees damaged by construction and fire damaged trees to be removed for development): <ul style="list-style-type: none"> • trees less than 12 inches DBH should be replaced at 3:1 • trees greater than 12 inches DBH should be replaced at 5:1 • Impacts to trees that were killed by the 2008 Freeway Complex Fire do not require 	<p>Prior to issuance of grading permits</p>	<p>Manager, Planning, OC Development Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>mitigation</p> <ol style="list-style-type: none"> 2. The sizes, condition, and total number of impacted trees will be determined after verification of the limits of CDFW jurisdiction and prior to issuance of any permit that results in ground disturbance. 3. The plan shall include responsibility and qualifications of the personnel to implement and supervise the plan; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; five-year monitoring plan with reporting to the Manager of Planning, OC Development Services; and long-term preservation. 4. The Project Applicant shall notify CDFW, pursuant to Section 1600 of the <i>California Fish and Game Code</i>, of lake and streambed alterations (LSA), including activities in streams that will divert or obstruct the natural flow, or change the bed, channel, or bank of a river or stream, or use materials from a streambed. A copy of the LSA notice shall be provided to the Manager of Planning, OC Development Services. 			
<p>Bio-7 Prior to issuance of grading permits, the Project Applicant shall prepare a Habitat Mitigation and Monitoring Program (HMMP). The HMMP shall be prepared by a qualified biologist for review and approval by the Manager of Planning, OC Development Services. The HMMP shall include responsibility and qualifications of the personnel to implement and supervise the plan; site selection; site preparation and planting implementation; schedule; maintenance plan/guidelines; five-year monitoring plan with reporting; and long-term preservation.</p> <p>The Project Applicant shall be fully responsible for the implementation of the HMMP until the restoration areas have met the success criteria outlined in the approved plan. The Manager of Planning, OC Development Services shall have final authority over mitigation area sign-off.</p>	Prior to issuance of grading permits	Manager, Planning, OC Development Services	
<p>Bio-8 Prior to issuance of any grading permit, the Project Applicant shall include the following measures on the grading plan to be implemented with grading operations:</p> <ol style="list-style-type: none"> 1. Prior to the commencement of clearing operations or other activities involving significant soil disturbance, all areas of ACOE and CDFW jurisdiction to be avoided shall be identified with temporary fencing or other markers that are clearly visible to construction personnel. 2. A USFWS-approved Biological Monitor shall be on-site during any clearing of riparian vegetation. The Project Applicant shall advise the US Fish & Wildlife Service at least 7 calendar days – but preferably 14 calendar days – prior to the clearing of riparian vegetation. The Biological Monitor shall flush avian or other mobile species from habitat areas immediately prior to brush-clearing and earth-moving activities. It shall be the responsibility of the Biological Monitor to ensure that identified bird species are not directly impacted by brush-clearing and earth-moving equipment in a manner that also allows for construction activities to continue on a timely basis. 3. Following the completion of initial clearing activities, all areas of ACOE and CDFW jurisdiction to be avoided by construction equipment and personnel shall be marked with temporary fencing or other clearly visible, appropriate markers. No construction access, parking, or storage of equipment shall be permitted within such marked areas. 	Prior to issuance of grading permit	Manager, Planning, OC Development Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>Bio-9 Prior to issuance of grading permits, the Project Applicant shall include the following condition on the grading plan for implementation during vegetation removal operations:</p> <p>Thirty days prior to the initiation of project activities, a qualified biologist shall conduct weekly bird surveys, with the last survey no more than 10 days prior to initiation of project activities, to detect protected native birds occurring in suitable nesting habitat that is to be disturbed and (as access to adjacent areas allows) any other such habitat within 300 feet of the disturbance area (within 500 feet for raptors). No vegetation removal shall occur between the dates of February 15 and September 30, unless a qualified biologist surveys the Project's impact area 10 days prior to initiation of project activities to confirm the absence of active nests. If an active nest is discovered, vegetation removal within a particular buffer surrounding the nest shall be prohibited until nesting is complete (i.e., nest is vacant and juveniles have fledged and there is no evidence of a second attempt at nesting); the buffer distance shall be determined by a qualified biologist and in consideration of species sensitivity and existing nest site conditions. Limits of avoidance of 300 feet and up to 500 feet for nesting raptors shall be demarcated with flagging or fencing, and Project personnel, including contractors working on-site, shall be instructed on the sensitivity of the area. The biologist shall record the results of the recommended protective measures described above and shall submit a written memo explaining justification of any nest avoidance measures to the Manager of Planning, OC Development Services to document compliance with applicable state and federal laws, specifically §3503 and §3503.5 of the <i>California Fish and Game Code</i>, pertaining to the protection of native birds, including nesting raptors.</p>	<p>Prior to issuance of grading permits</p>	<p>Manager of Planning, OC Development Services</p>	
<p>Bio-10 Prior to issuance of building permits, the Project Applicant shall prepare a resident Environmental Awareness Program to be reviewed and approved by the Manager, Planning, OC Development Services. The Environmental Awareness Program is intended to increase awareness to residents of the sensitive plants, wildlife, and associated habitats that occur in the preserved open space areas. The intention of the program shall be to encourage active conservation efforts among the residents to help conserve the habitats in the preserved open space. The program shall address inadvertent impacts from the introduction of invasive plant species (including escapees), human intrusion, trash and debris, creation of ad hoc trails, domestic cats, and light pollution. At a minimum, the Environmental Awareness Program shall include the following components:</p> <ul style="list-style-type: none"> • Informational kiosks shall be constructed at entrance points to hiking and equestrian trails and at various locations along the fence line that separates the Project Site and the open space area to inform residents and trail users on the sensitive flora and fauna that rely on the habitats found within the preserved open space. The intent of these kiosks is to bring awareness to the sensitive plants, wildlife and associated habitats that occur in the area along with discouraging creation of ad hoc trails and trash and debris. • The Project Applicant shall provide residents or the HOA for nearby subdivisions (if applicable) with a brochure that includes a list of plant species to avoid in residential landscaping to prevent the introduction of invasive plant species and impacts from human intrusion, light pollution, and domestic cats to the surrounding natural communities. 	<p>Prior to issuance of building permits</p>	<p>Manager, Planning, OC Development Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>Bio-11 Prior to issuance of grading permits, the Project Applicant shall include the following measures on the grading plan to be implemented with grading operations:</p> <ul style="list-style-type: none"> • No clearing, grubbing, grading, or other construction activities shall occur within and in the vicinity of riparian habitat occupied by least Bell's vireo between March 15 and September 15, the breeding season of the least Bell's vireo, until the following requirements have been met: <ol style="list-style-type: none"> 1. A qualified biologist shall survey riparian areas that would potentially be subject to construction noise levels exceeding 60 decibels [dB(A)] hourly average for the presence of least Bell's vireo. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish & Wildlife Service within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met: <ol style="list-style-type: none"> a. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; b. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) hourly average at the edge of occupied least Bell's vireo habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician and/or qualified biologist (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the U.S. Fish & Wildlife Service at least two weeks prior to the commencement of construction activities. Prior to the commencement of any construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; c. If it is desired to conduct construction activities adjacent to habitat determined to be occupied by least Bell's vireo during pre-construction surveys, then at least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician and/or qualified biologist, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted at the edge of occupied area to ensure that noise levels do not exceed 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician and/or qualified biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16). 	<p>Prior to issuance of grading permits</p>	<p>Manager, Permit Services, in consultation with Manager, Planning, OC Development Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>Construction noise shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist as necessary to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.</p> <p>2. If least Bell's vireo are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the U.S. Fish & Wildlife Service that demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows:</p> <ul style="list-style-type: none"> ▪ If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition 1.c shall be adhered to as specified above. ▪ If this evidence concludes that no impacts to this species are anticipated, no further surveys or monitoring would be necessary. 			
Cultural Resources			
<p>CR-1 Prior to issuance of any grading permit, the Project Applicant shall provide evidence to the Manager, Permit Services that a grading note shall be added to the grading plan that states: "If any unanticipated cultural resources, including human remains, are discovered during ground-disturbing activities; work in that location shall be temporarily diverted a minimum of 25 feet away until a County qualified archaeologist can evaluate the find. Recommendations by the archaeologist and as approved by the Manager, Planning, OC Development Services shall be complied with for any further ground-disturbing work."</p>	<p>Prior to issuance of grading permits</p>	<p>Manager, Permit Services/Planning, OC Development Services</p>	
<p>CR-2 Prior to issuance of any grading permit, the Project Applicant shall prepare and submit to the Manager, Planning, OC Development Services for review and approval a Paleontological Resources Mitigation Plan as detailed in the "Archaeological and Paleontological Resources Assessment Update" for the Esperanza Hills Project, dated January 2013, prepared by Cogstone. The Paleontological Resources Mitigation Plan shall include the following:</p> <p>1) paleontological resources awareness training for all earth-moving personnel, 2) monitoring of excavations more than five feet below the current surface (not for shallow excavations), 3) adjustments by the principal paleontologist to monitoring requirements based on fossil yield, depth and location of impact, and 4) recovery and curation of fossils meeting the significance criteria established in the Paleontological Resources Mitigation Plan.</p>	<p>Prior to issuance of grading permits</p>	<p>Manager, Permit Services/Planning, OC Development Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Geology and Soils			
Geo-1 Prior to issuance of building permits, the Project Applicant and the County shall ensure that geologic conditions underlying design slopes and those to remain natural in areas adjacent to the development perimeter shall be investigated and analyzed for gross stability in accordance with current geotechnical engineering practice. Investigation shall include areas where larger landslides are suspected to exist, mainly in natural slope areas bordering the development, including analysis of distribution and dimension regarding conditions of gross stability.	Prior to issuance of building permits	Manager, Permit Services	
Geo-2 During grading, the Project Applicant and the County shall ensure that unstable areas be avoided or that design slopes determined to be grossly unstable be stabilized by construction of buttresses or stabilization fills, flattening gradients, lowering overall heights, improving stability through use of tie-back/grade-beam systems, use of geogrid, use of cement-treated-soil or similar supplemental stabilization measures, or combinations of these methods.	During grading activity	Manager, Permit Services	
Geo-3 During grading, the Project Applicant shall ensure that zones of weathered bedrock be removed from back cuts and/or areas upon which new fill is to be placed.	During grading activity	Manager, Permit Services	
Geo-4 Prior to issuance of building permits, the Project Applicant shall ensure that construction across the trace of active faults and/or outside the limits of the setback zone will be avoided to the maximum extent practicable, and no residential lots are designed within the setback zone established for the Whittier Fault. Where access roads, retaining walls, bridge structures or structural fills are planned within the setback zone, the direction and magnitude of anticipated fault offset and severity of anticipated ground shaking shall be incorporated into the design.	Prior to issuance of building permits	Manager, Permit Services	
Geo-5 Prior to issuance of building permits, the Project Applicant shall ensure that the design for improvements that cross the Whittier Fault should be minimal, and the trend in which crossings are made should be oriented as nearly perpendicular (20 degrees east of north) to the trend of the fault as possible. The prefabricated bridge structure spanning Blue Mud Canyon under Option 1 shall be positioned and designed to accommodate expected fault offset. The Project Applicant shall consider use of alternative geotechnical engineering technologies to minimize impacts to structures constructed above active fault strands. These may include the incorporation of geo-fabric materials into fill bodies to add to fill strength and/or select placement of gravel blankets within subgrade areas to diffuse shear forces relating to ground rupture.	Prior to issuance of building permits	Manager, Permit Services	
Geo-6 Prior to issuance of building permits, the Project Applicant shall ensure that utility lines located in or near the Whittier Fault incorporate flexible joints into their design, to accommodate anticipated ground rupture in a right-lateral strike-slip sense.	Prior to issuance of building permits	Manager, Permit Services	
Geo-7 Prior to issuance of building permits, the Project Applicant shall verify that the existing seismic setback zone margins are appropriate for encountered geologic conditions and, where changes are warranted, evaluate any impacts to design plan elements and assure any revisions to the margins are depicted on final plan sets.	Prior to issuance of building permits	Manager, Permit Services	
Geo-8 Prior to issuance of building permits, the County shall ensure that the Project Applicant has	Prior to issuance of building permits	Manager, Permit Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>provided geotechnical investigations and engineering analyses to evaluate retaining wall design and stability, establish foundation design recommendations, and determine conditions of gross and surficial stability of overall wall/slope combinations. In surficially unstable slopes where no remedial grading is permitted, wall foundations shall be strengthened to accommodate a potential loss of lateral support. Where natural slopes are grossly unstable, possibly due to the presence of a larger landslide, the slope shall be stabilized or buttressed through grading methods. Where grading is not permitted, structural stabilization shall be accomplished through the design of retaining walls and/or soldier pile walls, tie backs, or some combination of both.</p>			
<p>Geo-9 Prior to issuance of building permits, the Project Applicant shall ensure that natural slope areas adjacent to development are analyzed for stability and estimated volumes of failure material determined. Setback zones or design of a bench in the upper slopes shall be employed to reduce the potential for failures to migrate into graded areas. Areas of rock creep influence shall require use of tie-backs and structural sheets to prevent this occurrence.</p>	<p>Prior to issuance of building permits</p>	<p>Manager, Permit Services</p>	
<p>Geo-10 Prior to issuance of grading or building permit, whichever comes first, the Project Applicant shall ensure that the following methods are incorporated into the design to prevent slope failure:</p> <ul style="list-style-type: none"> • Where daylight fill lots lie adjacent to ascending natural slopes, building pad elevations shall be raised, and toe-of-slope catchment troughs have been designed into which the failure materials can accumulate. These areas should be designated as “common areas” and maintained by homeowners associations. • In areas where a more significant volume of debris is expected, such as an area situated within the path of adjacent natural drainage swales, impact or deflection walls shall be installed. • Use of design stabilization fills, which are typically the width of standard grading equipment, shall be used for surficially unstable cut or fill slopes. 	<p>Prior to issuance of building and grading permits</p>	<p>Manager, Permit Services</p>	
<p>Geo-11 During the conceptual design phase, the Project Applicant and the County shall ensure that no lots are designed with habitable structures within the fault hazard setback zone as determined in the Fault Study, and no building permits shall be applied for or granted for any habitable structures within the hazard fault setback zone in the future. Asymmetrical floor plans shall be avoided, because these kinds of buildings tend to twist in addition to shaking laterally.</p>	<p>During conceptual design phase</p>	<p>Managers, Permit Services/ Planning, OC Development Services</p>	
<p>Geo-12 Prior to issuance of building permits, the Project Applicant shall demonstrate to the County that deep fills have undergone a cycle of “primary” settlement sufficient to allow safe construction. The Project Applicant may opt to employ supplemental geotechnical measures to minimize anticipated settlement time. Such measures could include vertical wick-drain installation, use of higher fill compaction standards, use of granular fill zones prone to less settlement, and/or placement of surcharge fills.</p>	<p>Prior to issuance of building permits</p>	<p>Manager, Permit Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>Geo-13 Prior to issuance building permits, the Project Applicant shall ensure that appropriate conventional engineering measures are implemented to reduce impacts of excessive differential settlement in cut/fill transition areas as determined by the County building official. These measures can include a flattening of removal profiles to 2:1 or shallower, deepening over-excavation of building pads within zones of expected impacts, use of higher compaction standards, limiting construction of certain improvements within structural setback zones, or construction of stiffened foundation systems including post-tension foundations, caisson walls, or mat slabs as determined feasible and appropriate.</p>	<p>During construction activities</p>	<p>Building Official, OC Building Department</p>	
<p>Geo-14 Prior to issuance of grading permits, the Project Applicant shall ensure that removal and re-compaction of compressible native soils shall be performed in areas of proposed structural fills to minimize settlement of new fill and/or prevent loss of lateral support. The limits of removals shall extend beyond conceptual plan boundaries and potentially beyond the limits of grading and into areas to remain natural. Where no removals are permitted beyond the boundaries of design, engineered structures shall be installed such as pin piles to achieve proper slope stability.</p>	<p>During grading activities</p>	<p>Manager, Permit Services/ OC Building Department</p>	
<p>Geo-15 Prior to issuance of building permits, the County shall verify that testing has been conducted to evaluate the chemical character of fill soils. Results of such testing shall be used to formulate appropriate foundation design criteria to reduce the adverse effects of corrosive soils.</p>	<p>Prior to issuance of building permits</p>	<p>Manager, Permit Services/ OC Building Department</p>	
<p>Geo-16 Prior to issuance of building permits, the County shall ensure that the Project Applicant has provided geotechnical studies to evaluate the occurrence and character of expansive clay soil on the Project Site. Based on the results of the studies, criteria for foundation design shall be formulated to reduce adverse effects such as selective grading methods including placement of adverse clay soils in deeper fill areas, or non-bedrock and design structures through building pad over-excavation. Post-grading studies and testing shall be conducted on finished building pads to verify the adequacy of foundation design.</p>	<p>Prior to issuance of building permits</p>	<p>Manager, Permit Services/ OC Building Department</p>	
<p>Geo-17 Prior to issuance of grading permits, the County shall ensure that the Project Applicant has conducted geotechnical investigations of recent alluvium deposits to evaluate the potential for liquefaction. Findings of such investigations shall be incorporated into the design of structures proposed in areas where there is a potential for liquefaction to occur.</p>	<p>Prior to issuance of grading permit</p>	<p>Manager, Permit Services/ OC Building Department</p>	
<p>Geo-18 Prior to construction, the Project Applicant shall ensure that a network of subdrains and back-drains shall be installed in areas of expected groundwater or active seepage.</p>	<p>Prior to construction</p>	<p>Project Applicant</p>	
<p>Geo-19 Prior to issuance of building permits, the County shall ensure that the Project Applicant has conducted geotechnical investigations and engineering analyses in areas where proposed roadways cross existing natural gas pipelines or transmission towers exist adjacent to proposed cut slopes and designed roadway crossings to avoid or minimize damage to these facilities.</p>	<p>Prior to issuance of building permits</p>	<p>Project Applicant/ OC Building Department</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Greenhouse Gas Emissions			
GHG-1 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect that sidewalks are provided on one side of all single loaded streets, both sides of double loaded streets and on at least one side of main access roadways.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-2 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect that multi-use trails within the Project with connections to municipal and Chino Hills State Park trail systems are provided.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-3 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project site improvement plans reflect provision of on-site parks within biking and walking distance of residences.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-4 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project site improvement plans reflect the installation of roundabouts on main access roads.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-5 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect that equestrian access outside of residential building lot areas is provided.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-6 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans and rough grading plans provide for bike and pedestrian trails.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-7 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect that multi-use parks for various activities are provided.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-8 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect that bike parking is provided at park areas.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-9 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect that automobile parking is limited near parks.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-10 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project plans include provision of shade trees and restoration of trees in Blue Mud Canyon.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-11 Prior to issuance of residential building permits, the County of Orange shall ensure that insulation is required to exceed Title 24 requirements by 15% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
GHG-12 Prior to issuance of residential building permits, the County of Orange shall ensure that window insulation is required to exceed Title 24 requirements by 15% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-13 Prior to issuance of residential building permits, the County of Orange shall ensure that door insulation is required to exceed Title 24 requirements by 15% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-14 Prior to issuance of residential building permits, the County of Orange shall ensure a reduction in Title 24 envelope leakage by an additional 15% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-15 Prior to issuance of residential building permits, the County of Orange shall ensure a reduction in Title 24 HVAC distribution losses by an additional 15% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-16 Prior to issuance of residential building permits, the County of Orange shall ensure the use of very high efficiency HVAC that exceeds Title 24 by 15% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-17 Prior to issuance of residential building permits, the County of Orange shall ensure that programmable thermostat timers are required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-18 Prior to issuance of residential building permits, the County of Orange shall ensure that high efficiency water heaters that exceed Title 24 by 15% are required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-19 Prior to issuance of residential building permits, the County of Orange shall ensure that exterior rooms are daylighted to at least 1000 lumens on sunny days and required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-20 Prior to issuance of residential building permits, the County of Orange shall ensure that use of very high efficiency lights (LED) that exceed Title 24 by 15% is required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-21 Prior to issuance of residential building permits, the County of Orange shall ensure that the Project plans reflect the use of high efficiency Energy Star appliances that exceed Title 24 by 15% are required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
GHG-22 Prior to issuance of residential building permits, the County of Orange shall ensure that natural gas is provided to all residences for gas appliances and required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-23 Prior to issuance of residential building permits, the County of Orange shall ensure that all homes constructed will be solar ready (sturdy roof and electric hookups) and required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-24 Prior to issuance of residential building permits, the County of Orange shall ensure that the Project plans reflect the provision of circuitry and capacity in residential garages for installation of electric vehicle charging stations and required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-25 Prior to issuance of residential building permits, the County of Orange shall ensure the requirement for high efficiency showerheads that reduce flow by 20% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-26 Prior to issuance of residential building permits, the County of Orange shall ensure that the requirement for high efficiency toilets that reduce flow by 20% is required as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-27 Prior to issuance of residential building permits, the County of Orange shall ensure the requirement for low flow kitchen faucets that reduce flow by 18% as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-28 Prior to issuance of residential building permits, the County of Orange shall ensure that the Project plans reflect the requirement for low flow bathroom faucets that reduce flow by 32%, with installation to be verified by the County prior to issuance of Certificates of Use and Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-29 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure the requirement for smart irrigation systems combined with drip irrigation in all common areas as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-30 Prior to issuance of residential building permits, the County of Orange shall ensure the Project landscaping plans include the requirement for smart irrigation systems combined with drip irrigation in all residential lot landscaping within lot lines as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
GHG-31 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project plans reflect the requirement for the Homeowners' Association to adopt water conservation strategies for common areas to be shown by recordation of Codes, Covenants and Restrictions.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-32 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project landscape improvement plans reflect a performance specification requiring use of drought tolerant landscaping in all common areas within the residential tracts, limiting turf to no more than 20% of the entire park area.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-33 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project landscape improvement plans reflect a performance specification requiring the use of drought tolerant/fire resistant landscaping in common areas along trails, where feasible.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-34 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect a performance specification requiring use of locally sourced water supply per the Northeast Area Planning Study (NEAPS).	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-35 Prior to issuance of residential building permits, the County of Orange shall ensure that the Project plans prohibit use of wood burning stoves and fireplaces as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-36 Prior to issuance of residential building permits, the County of Orange shall ensure that the Project plans reflect provision of electrical outlets on the exterior of all building walls so electric landscape equipment is compatible for maintenance as a condition by performance specification on permitted construction documents and verified for Certificate of Occupancy.	Prior to issuance of residential building permits	OC Planning Director or designee	
GHG-37 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect a performance specification for use of high pressure sodium cutoff street lights with solar sensors.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-38 Prior to issuance of Precise Grade grading permits, the County of Orange shall ensure that the Project Site improvement plans reflect a performance specification for use of solar powered LED lighting for monument lights and main access lighting.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	
GHG-39 Prior to issuance of Rough Grade grading permit, the County of Orange will ensure compliance with the 2016 Green Building Code effective January 1, 2017 for site development requirements and prior to issuance of residential building permit, the County of Orange will ensure compliance with the Green Building Code for residential construction requirements.	Prior to issuance of rough grade grading permits	OC Planning Director or designee	
GHG-40 Prior to issuance of Precise Grade grading permit, the County of Orange shall ensure that lighting for the park areas will be programmed to be turned off no later than 10:00 p.m. and motion detectors shall be installed on lighting on pedestrian pathways.	Prior to issuance of precise grade grading permits	OC Planning Director or designee	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Hazards and Hazardous Materials			
Haz-1 Prior to issuance of building permits, the Project Applicant shall provide a Combustible Gas/Methane Assessment Study for review and approval by the OCFA. The Project Applicant shall submit and obtain OCFA approval for a Methane Control Plan to control the release of combustible gas/methane from operation oil wells in the event that measurable quantity of methane gas is identified in the Combustible Gas/Methane Assessment Study.	Prior to issuance of building permits	OC Fire Chief	
Haz-2 Prior to issuance of grading permits, the Project Applicant shall ensure that a Phase II ESA is prepared for review and approval by the Manager of Planning, OC Development Services in consultation with a Hazardous Waste Specialist III, OC Environmental Health. The Phase II ESA shall identify the abandoned well locations and any hidden pits or accumulations of drilling mud in the vicinity of the wells. The assessment shall include a review of available well logs and abandonment documentation in order to verify regulatory compliance of previously abandoned wells. In the event pits are encountered during the Phase II ESA investigation or during grading, the pits will be sampled for hazardous substances and will be disposed of at a certified hazardous waste facility.	Prior to issuance of grading permits	Manager, Hazardous Waste Specialist III OC Environmental Health/Planning, OC Development Services	
Haz-3 Prior to issuance of grading permits, the Project Applicant shall ensure that an RAP is prepared for the previously abandoned oil wells to address the appropriate measures consistent with state law.	Prior to issuance of grading permits	Manager, Permit Services	
Haz-4 Prior to the closure of any existing oil wells, the Project Applicant shall ensure that the operators of the oil wells prepare an RAP to address appropriate measures for closure consistent with state law.	Prior to closure of existing oil wells	Manager, Permit Services	
Haz-5 Prior to issuance of any grading permit that results in the disturbance of any vegetation, the Project Applicant shall submit a Fire Master Plan for review and approval by the OCFA and the OCSD. The Fire Master Plan shall be based on the Esperanza Hills FPEP and shall contain details regarding evacuation roads, including road surface type, firefighting staging areas, emergency secondary access, turning radii, vegetation clearance buffers along roadways, exits, and locations of hydrants and reservoir.	Prior to issuance of grading permits	Orange County Fire Authority	
Haz-6 Prior to issuance of any certificate of use and occupancy, the Project Applicant shall submit a Community Evacuation Plan (CEP) for the Project for review by the OCFA and the OCSD and approved by the OCFA. The CEP will incorporate the information on community plans from the Orange County Office of Emergency Services and the San Diego Office of Emergency Services. The Esperanza Hills FPEP shall be the basis of the CEP, which shall include provisions for: <ul style="list-style-type: none"> ● Pre fire planning and preparations ● Post fire recovery actions ● Communications/registering with Alert OC (Orange County's Reverse 911 system and sign-up for cell phone/text notice) ● Prevention (maintenance of fuels around buildings, gutter and roof clearance, vent protection) ● Emergency contact numbers ● Annual evacuation training schedule 	Prior to issuance of Certificate of Use and Occupancy	Orange County Fire Authority/ Orange County Sheriff's Department	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<ul style="list-style-type: none"> ● Fire Prevention Measures during High Fire Danger and Red Flag Warning periods ● Annual review and update requirements ● Wildfire Emergency Evacuation Plan Details ● On site partial relocation versus off site evacuation ● Revisions/updates to the CEP shall be reviewed and approved by OCFA <p>Refer to Mitigation Measures Haz-15 through Haz-31, below.</p>			
<p>Haz-7 Prior to recordation of the final tract map, the Project Applicant shall record the deed restrictions for each residential lot. The deed restriction shall include any portion of the FMZs on the private lot, approved plant palettes, and prohibitions regarding combustible structures, including fencing and other accessory structures. Deed restrictions will run with the land and be conveyed to any subsequent owner of the private lot.</p>	Prior to final tract map recordation	Manager, Permit Services	
<p>Haz-8 Prior to recordation of the Final Tract Map for Lots 7, 8, 9, 224, 225, 236, 237, 253, 254, and 278 in Option 1 and Lots 8, 9, 10, 224, 225, 236, 237, 253, 254, and 278 in Option 2, which includes an FMZ that extends beyond the private lot or development, the Project Applicant shall obtain written legal permission in the form of a Fuel Modification Easement from any off-site landowners. The Fuel Modification Easement shall be recorded for each lot. In any situations where the FMZ extends into biological open space or other sensitive biological areas, or other areas controlled by the County and/or resource agencies, formal written permission shall be obtained from all applicable agencies.</p>	Prior to final tract map	Manager, Permit Services	
<p>Haz-9 Prior to issuance of building permits, the Project Applicant shall prepare a Private Property Owners' Guide for fire-safe vegetation management, which shall be distributed by the Esperanza Hills HOA to each new home buyer. The Guide shall be based on the Orange County Fire Authority Vegetation Management Guidelines as approved in the Fuel Modification Plan approved by the OCFA. Periodic inspections by the OCFA shall be at the expense of the Esperanza Hills HOA.</p>	Prior to issuance of building permits	Manager, Permit Services	
<p>Haz-10 Prior to recordation of the final tract map, the Project Applicant shall submit the Project Covenants, Conditions, and Restrictions (CC&Rs) to the Manager of Planning, OC Development Services for review and acceptance by County Counsel and will include:</p> <ul style="list-style-type: none"> ● A reference to the Esperanza Hills FPEP to ensure compliance with the features with the plan. The HOA is required to enforce compliance with the Plan. Owners of private lots will be notified in the project's CC&Rs and property disclosures that they are prohibited from conducting any vegetation management activities outside their private property. ● Provisions for continuous maintenance of common areas by the Esperanza Hills Homeowners' Association and individual properties by owners. Maintenance refers to anything needed to maintain the fuel modification area in a fire safe condition as required by the OCFA, including periodic removal of undesirable, combustible vegetation; replacement of dead and dying fire-resistant plantings; maintenance of the operational integrity and programming of irrigation systems; and preservation of identification markers. 	Prior to recordation of final tract map	Manager, Planning, OC Development Services / County Counsel	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<ul style="list-style-type: none"> A provision that the HOA is responsible for and has the authority to ensure long-term funding, and ongoing compliance with all provisions of the approved Fire Master Plan and Community Evacuation Plan, including vegetation planting, fuel modification, vegetation management, and maintenance requirements on all private lots, parks, common areas, roadsides, and open space under their control (if not considered biological open space). Any water quality basins, flood control basins, channels, and waterways should be kept clear of flammable vegetation, subject to the environmental restrictions. A provision that the HOA will annually fund and obtain an inspection and report from an OCFA-approved Wildland Urban Interface Fire Safety Inspector in June, certifying that vegetation management activities throughout the Project Site have been performed pursuant to the approved Fire Master Plan. 			
<p>Haz-11 Prior to issuance of building permits, the Project Applicant shall submit to the Manager of Planning, OC Development Services demonstrating a water system for the Project capable of handling the minimum fire flow storage of 1,500 gallons per minute for a 2-hour duration with a minimum residual pressure of 20 pounds per square inch.</p>	<p>Prior to issuance of building permits</p>	<p>Manager, Permit Services</p>	
<p>Haz-12 Prior to issuance of building permits, the Project Applicant shall provide a plan that depicts the appropriate number of fire hydrants and their specific locations to be constructed for each phase of development for review and approval by the OCFA Fire Marshal.</p>	<p>Prior to issuance of building permits</p>	<p>Manager, Permit Services/ OCFA Fire Marshall</p>	
<p>Haz-13 Prior to ground disturbance in environmentally sensitive areas that contain sensitive habitat, cultural sites, riparian areas, biological buffer areas, detention basins, etc., the Project Applicant shall obtain written permission from the Manager of Planning, OC Development Services, and the appropriate resource agencies (e.g., the CDFW, the USFWS, and the ACOE) prior to any vegetation management activities occurring.</p>	<p>Prior to ground disturbance in environmentally sensitive areas</p>	<p>Manager, Planning, OC Development Services</p>	
<p>Haz-14 Prior to issuance of any building permit for access gates, the Project Applicant shall submit for review and approval by the OCFA access gate plans consistent with the applicable Fire Code, and all operated gates shall be equipped with emergency opening devices approved by the OCFA.</p>	<p>Prior to issuance of building permits for access gates</p>	<p>OCFA</p>	
<p>Haz-15 Prior to issuance of grading permits, Developer shall ensure that the following implementation measures and conditions will be provided to ensure fire protection during construction activities to the satisfaction of the Manager of Planning, OC Development Services:</p> <ol style="list-style-type: none"> The Applicant/Owner shall contact OCFA during site grubbing to provide for fire protection equipment and procedures as required by OCFA. On-going restrictions on Hot Works (2016 California Fire Code, Section 3501.2) shall apply on the Project site. The Applicant/Owner shall document all precautions and safety procedures will be in place, including required permits, before Hot Work is conducted. In addition, Hot Work conducted during Red Flag Warning periods will be limited to within an approved structure with Hot Work occurring outside, unless a 50-foot radius area clear of combustibles is provided and a water truck is available onsite during the duration of the Hot Work. 	<p>Prior to Issuance of Grading Permits</p>	<p>OCFA, Manager, Manager of Planning, OC Development Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>c. Between May 1 and November 30 of each year, and when Red Flag Watches or Warnings have been declared, The Applicant/Owner shall document a water truck shall be on-site during all construction activities with the potential to extinguish fires, including but not limited to welding, pipe cutting, grinding, grubbing, and rough grading.</p> <p>d. The Applicant/Owner shall notify all contractors in writing of the restrictions contained in this mitigation measure and shall provide written confirmation of receipt of these restrictions to the County. Written notification shall be provided three (3) days in advance of construction activities.</p>			
<p>Haz-16 Prior to issuance of any residential building permit, the Applicant/Owner shall demonstrate to the satisfaction of the Manager of Planning, OC Development Services that the CCR's for the Project require the Homeowners Association (HOA) to participate in the Ready! Set! Go! safety program recommended by the OCFA. The HOA shall have the following responsibilities under the Ready!, Set!, Go! safety program:</p> <ol style="list-style-type: none"> 1. The HOA shall distribute or otherwise make available annually on-going education materials to all residents regarding fire safety, and evacuation that OCFA will review and approve prior to printing and distribution, relating to landscape/fuel modification, private property maintenance, Ready!, Set!, Go! preparations, and personal evacuation plans. 2. The HOA shall distribute materials showing emergency evacuation routes as set forth on Exhibit 5-78 – Emergency Ingress/Egress Plan, Option 1 and Exhibit 5-79 – Emergency Ingress/Egress Plan, Option 2 in the of the Revised Final EIR. 3. The HOA shall maintain contact records for each resident and shall require each resident to join the reverse 9-1-1 or Alert OC! Program to ensure that each resident has notification of any fire warnings or evacuation notices issued by OCSD, OCFA, or any other joint firefighting authorities. 4. The HOA shall annually provide educational materials and cover fire safety and evacuation at each annual meeting of residents, and shall annually update educational materials as the Ready!, Set!, Go! program is updated on the OCFA website. 5. As each new resident purchases or rents/leases a house in the subdivision, the HOA shall contact the new resident and provide them with the materials for the Ready!, Set!, Go! Program. 6. The OCFA and OCSD shall be notified of each annual HOA meeting and invited to attend to either make presentations or be available to answer questions relating to emergency procedures or the Ready!, Set!, Go! program. Any charge for services for either OCFA or OCSD shall be paid for by the HOA. 7. The HOA shall provide both the OCSD and the OCFA with an emergency contact number so that the HOA can be notified of any evacuation instructions. In the event that the HOA receives notification of any evacuation instructions from either the OCSD or OCFA, it shall notify each resident via phone calls to the designated contact number for each resident, and shall also text each resident if the resident 	<p>Prior to issuance of residential building permits</p>	<p>OCFA, OCSD, Manager of Planning, OC Development Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>provides a cell phone number. HOA notification shall be provided to residents within two hours of receipt of the OCSD and OCFA notifications, whichever should be received first.</p> <p>8. The HOA shall also open any gates on the Project site to allow access within the property on alternate access routes or onto the fire apparatus access road extending to Stonehaven through the Cielo Vista project if requested by either OCFA or OCSD.</p> <p>9. In the event that the City of Yorba Linda, OCSD or OCFA make off-site presentations regarding emergency preparedness, the HOA shall notify each resident of the time and location of each presentation.</p>			
<p>Haz-17 Prior to the Homeowner Association (HOA) Maintenance Acceptance from the Developer on each phase of the completed infrastructure, the HOA manager shall meet with a representative from OCFA, the Landscape Design Professional, the installing landscape contractor, an HOA management representative, and an HOA landscape maintenance contractor for the purpose of reviewing the finished infrastructure improvements to ensure that all fuel modification zones (FMZs) are built to specification, and that all infrastructure improvements comply with the Fire Master Plan approved by OCFA and incorporate Chapter 49 – Requirements for Wildland-Urban Interface Fire Areas, Sections 4905 – 4907 of the 2016 California Fire Code as performance standards. Section 4905 provides standards for wildfire protection building construction, Section 4906 provides standards for hazardous vegetation and fuel management, and Section 4907 provides standards for defensible space. The HOA shall be provided with instructions regarding the maintenance of the FMZs to the satisfaction of the Manager of Planning, OC Development Services.</p>	<p>Prior to HOA Acceptance of Infrastructure Improvements from Developer</p>	<p>HOA, OCFA, Manager of Planning, OC Development Services</p>	
<p>Haz-18 Prior to precise grading, the Applicant/Owner shall provide evacuation plans for the primary access and emergency access roadways, showing the road widths, emergency egress and emergency evacuation routes, fire hydrants, road width requirements, and OCFA access points for firefighting access outside the boundaries of the developed portions of the subdivision, including into CHSP to the east as detailed in the Specific Plan for approval by the OCFA as required in OCFA Guidelines B-09 and B-09a, as applicable, to the satisfaction of the Manager of Planning, OC Development Services .</p>	<p>Prior to issuance of precise grading permit</p>	<p>OCFA, Manager of Planning, OC Development Services</p>	
<p>Haz-19 Prior to issuance of any grading permits by the County of Orange, the Applicant/Owner shall obtain written approval from the OCFA of the evacuation plans set forth the Specific Plan and Hazards section of the FEIR and conceptual approval of the evacuation plans to the satisfaction of the Manager of Planning, OC Development Services.</p>	<p>Prior to issuance of any grading permit</p>	<p>OCFA, Manager of Planning, OC Development Services</p>	
<p>Haz-20 Prior to the issuance of any precise grading permits, the Applicant/Owner shall obtain approval from OCFA for a Fire Master Plan in accordance with OCFA Guideline B-09 Plan Submittal Requirement 1, and Guideline B-09a, as applicable, which shall detail the fire access roadway designs, fire hydrant designs, road designs, fire hydrant locations, turning radius for cul-de-sac, gate and locking device installation to the satisfaction of the Manager of Planning, OC Development Services.</p>	<p>Prior to issuance of precise grading permit</p>	<p>OCFA, Manager of Planning, OC Development Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Haz-21 Prior to issuance of any building permit for a residence, the Applicant/Owner shall obtain approval from OCFA that any road that might be used for emergency access shall comply with the Orange County Fire Code and OCFA standards as set forth in OCFA Guideline B-09 Plan Submittal Section 2 and Guideline B-09a, as applicable. Such roads and features shall be maintained by the HOA and inspected bi-annually by a third-party inspector approved by OCFA at the expense of the HOA. The HOA shall send a written report containing the results of the inspection to OCFA, shall correct any deficiencies within ten (10) days of notice of the deficiency, and shall send notice of the repair to the OCFA. The written documentation shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of residential building permit	OCFA, Manager of Planning, OC Development Services	
Haz-22 Prior to issuance of any building permit for a residence, the Applicant/Owner shall obtain written approval from OCFA that any road that might be used for emergency access is subject to signage and regulations as required by the Orange County Fire Code and OCFA standards as set forth in OCFA Guideline B Plan Submittal Section 3, and Guideline B-09a, as applicable. Such roads and features shall be maintained by the HOA and inspected bi-annually by a third-party inspector approved by OCFA at the expense of the HOA. The HOA shall send a written report containing the results of the inspection to OCFA, shall correct any deficiencies within ten (10) days of notice of the deficiency, and shall send notice of the repair to OCFA. The written approval shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of residential building permit	OCFA, Manager of Planning, OC Development Services	
Haz-23 Prior to issuance of any building permit for a residence, the Applicant/Owner shall obtain written confirmation from OCFA that any proposed gates or barriers that might be used for emergency access comply with the Orange County Fire Code and OCFA standards as set forth in OCFA Guideline B-09 Plan Submittal Section 3, and Guideline B-09a, as applicable. Such proposed gates and barriers shall be maintained by the HOA and inspected bi-annually by a third-party inspector approved by OCFA at the expense of the HOA. The HOA shall send a written report containing the results of the inspection to OCFA, shall correct any deficiencies within ten (10) days of notice of the deficiency, and shall send notice of the repair to OCFA. The written confirmation shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of any residential building permit	OCFA, Manager of Planning, OC Development Services	
Haz-24 Prior to the issuance of a precise grading permit by the County of Orange, the Applicant/Owner shall obtain written approval from the OCFA for all fuel modification plans for the community and all evacuation roads pursuant to the regulations of OCFA as set forth in Guidelines B-09 and B-09a, as applicable and other regulations. The FEIR and Specific Plan shall contain a fuel modification exhibit showing the minimum standards for fuel modification as conceptually approved by OCFA prior to approval by the Board of Supervisors. Fuel Modification zones (FMZs) shall be consistent with OCFA guidelines for Zone A, Zone B, Zone C and Zone D size, irrigation and plant types. The written approval shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of precise grading permit	OCFA, Manager of Planning, OC Development Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Haz-25 Prior to issuance of any building permits for any structures on site, the Applicant/Owner shall ensure that the final fuel modification plans shall be submitted to OCFA for review and approval as part of the Fire Master Plan to be approved by OCFA as part of OCFA Guidelines B-09 and B-09a, as applicable. The fuel modification plans shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of permit for any building structure	OCFA, Manager of, Planning, OC Development Services	
Haz-26 Prior to Rough Grading Permit Issuance, the Developer/Builder shall obtain from OCFA an approved/stamped "Conceptual or Precise Fuel Modification Plan" and be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of rough grading permit	OCFA, Manager of, Planning, OC Development Services	
Haz-27 Prior to Precise Grading Permit Issuance, the Developer/Builder shall have an approved/stamped Precise Fuel Modification Plan approved by the OCFA, with an applicable note stating that maintenance language will be provided in CCR's and reviewed prior to issuance of certificate of occupancy to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of precise grading permit	OCFA, Manager of Planning, OC Development Services	
Haz-28 Prior to delivery of construction materials for any residence, the Developer/Builder shall implement those portions of the approved fuel modification plan determined to be necessary by the OCFA prior to the introduction of any combustible materials (i.e., lumber drop) into the Project site and shall provide written documentation to the satisfaction of the Manager of Planning, OC Development Services.	Prior to delivery of construction materials for construction of residence	OCFA, Manager of Planning, OC Development Services	
Haz-29 Prior to precise grading permit, the Project Applicant shall provide written documentation, to facilitate firefighting and safe evacuation, the Project design includes fire access ways through the residential planning areas to provide access to the open space areas and Chino Hills State Park in accordance with OCFA standards for a Very High Fire Hazard Severity Zone ("VHFHSZ") and approved by OCFA. The OCFA approval shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of precise grading permit	OCFA, Manager of Planning, OC Development Services	
Haz-30 Prior to issuance of a precise grading permit, the Applicant/Owner shall obtain from OCFA written confirmation that the street plans provide that driveways, roads, and additional on-site roadways with fire engine turnarounds are designed to provide access to within 150 feet of all sides of every building. The OCFA approval shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of precise grading permit	OCFA, Manager of Planning, OC Development Services	
Haz-31 Prior to issuance of any rough grading permit, the Applicant/Owner shall provide access routes and other mitigation features as required by OCFA under Guideline B-09 Plan Submittal Section 10, and Guideline B-09a, as applicable. The access routes and other measures shall be provided to the satisfaction of the Manager of Planning, OC Development Services.	Prior to issuance of rough grading permit	OCFA, Manager of Planning, OC Development Services	
Hydrology and Water Quality			
No mitigation measures are required.	None required	None required	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Land Use and Planning			
No mitigation measures are required	None required	None required	
Noise			
N-1 Prior to issuance of grading permits, the Project Applicant shall ensure that all construction activities shall be limited to the hours of 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays with no construction permitted on national holidays or Sundays in compliance with the Orange County Noise Ordinance. High noise-producing activities should be scheduled between the hours of 8:00 a.m. and 5:00 p.m. to minimize disruption to sensitive uses.	Prior to issuance of grading permit	Manager, Permit Services	
N-2 Prior to issuance of grading permits, the Project Applicant shall ensure that all construction and demolition equipment shall be fitted with properly operating and maintained mufflers.	Prior to issuance of grading permit	Manager, Permit Services	
N-3 Prior to issuance of grading permit, the Project Applicant shall ensure that all noise-generating construction equipment and construction staging areas should be located as far as possible from existing residences.	Prior to issuance of grading permit	Manager, Permit Services	
N-4 Prior to issuance of grading permits, the Project Applicant shall ensure that construction-related equipment, including heavy duty equipment, shall be turned off when not in use for more than 10 minutes.	Prior to issuance of grading permit	Manager, Permit Services	
N-5 Prior to issuance of grading permits, the Project Applicant shall prepare and submit to the County for approval a haul plan for construction-related traffic that limits impacts on residential development by avoiding such residential development areas where feasible.	Prior to issuance of grading permit	Manager, Permit Services	
N-6 Prior to issuance of grading permits, the Project Applicant shall ensure that construction hours, allowable work days and the telephone number of the job superintendent are clearly posted at all construction entrances to allow residents to contact the job superintendent. If the County of Orange or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the appropriate reporting party. Contact specifications shall be included in the proposed project construction documents which shall be reviewed by the County of Orange prior to issuance of grading permits.	Prior to issuance of grading permit	Manager, Permit Services	
Population and Housing			
No mitigation measures are required.	None required	None required	
Public Services			
PS-1 Prior to issuance of grading permits, the Project Applicant shall enter into a Secured Fire Protection Agreement with the Orange County Fire Authority providing for payment of fair share fees for impacts to capital and infrastructure needs.	Prior to issuance of grading permits	Project Applicant/ Orange County Fire Authority	
PS-2 Prior to issuance of building permits, the Project Applicant will be required to comply with Senate Bill 50 and pay the applicable school impact fees as adopted by the Placentia-Yorba Linda Unified School District.	Prior to issuance of building permits	Manager, Permit Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
Recreation			
No mitigation measures are required.	None required	None required	
Transportation and Traffic			
T-1 For Option 1 and Option 2B, prior to issuance of building permits, the Project Applicant shall contribute to the installation of a three-phase traffic signal at the Yorba Linda Boulevard/Via del Agua intersection in the event the Cielo Vista project is not constructed. The Project Applicant's fair share contribution shall be 39% with the proposed Cielo Vista project as part of the cumulative base traffic condition, and 46% without the Cielo Vista project. The first project to be constructed, either Esperanza Hills or Cielo Vista, will pay 100% for the signal installation with an agreement between applicants to reimburse the fair share amount at the time the second project is constructed. If the City does not implement the improvement, the impact will be significant and unavoidable.	Prior to issuance of building permits	Project Applicant/ Manager, Permit Services	
T-2 Prior to issuance of building permits, the Project Applicant shall pay a 9% fair-share contribution for the following improvement at Yorba Linda Boulevard at Savi Ranch Parkway: Widen and re-stripe the westbound approach to provide an additional (third) westbound left-turn lane.	Prior to issuance of building permits	Manager, Permit Services	
T-3 Prior to issuance of certificates of use and occupancy, the Project Applicant shall pay a 9% fair-share contribution for the following improvement: Extend the left-turn pocket along Yorba Linda Boulevard at Via del Agua from the existing 100 feet to 275 feet, with 11 feet in the transition area of the turn pocket to achieve 286 feet. However, the County cannot compel the City to implement such improvement. If the City does not implement the improvement, the impact will be significant and unavoidable.	Prior to issuance of Certificates of Use and Occupancy	Manager, Permit Services	
Utilities and Service Systems			
U-1 Prior to issuance of building permits, the Project Applicant shall enter into a Development Agreement with the Yorba Linda Water District for the provision of water facilities and service.	Prior to issuance of building permits	Manager, Permit Services	
U-2 Prior to issuance of building permits, the Project Applicant shall enter into a Development Agreement with the Yorba Linda Water District for the provision of sanitary sewer facilities and service.	Prior to issuance of building permits	Manager, Permit Services	
U-3 Prior to issuance of building permits, the project developer shall coordinate with Southern California Edison to identify the location of the connection to existing electric service lines based on the final determination of access via Option 1 or Option 2 and to protect existing transmission lines on the Project Site.	Prior to issuance of building permits	Manager, Permit Services	
U-4 Prior to issuance of building permits, the project developer shall coordinate with Southern California Gas to identify the location of the connection to existing natural gas lines based on the final determination of access via Option 1 or Option 2.	Prior to issuance of building permits	Manager, Permit Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
U-5 Prior to issuance of building permits, the project developer shall coordinate with AT&T to identify the location of the connection to existing telephone service lines based on the final determination of access via Option 1 or Option 2.	Prior to issuance of building permits	Manager, Permit Services	
U-6 Prior to issuance of building permits, the project developer shall coordinate with Time Warner Cable to determine the location of the connection to existing cable service lines based on the final determination of access via Option 1 or Option 2.	Prior to issuance of building permits	Manager, Permit Services	
Conditions of Approval			
Hydrology and Water Quality			
COA-1 Prior to issuance of grading permit, the Project Applicant shall submit the following drainage studies for approval by the County Manager, Permit Services: 1. A final drainage study of the project incorporating the Preliminary Drainage Report for Esperanza Hills Property drainage features pursuant to the approved development option; and 2. Detailed drainage studies indicating how the project grading, in conjunction with the drainage conveyance systems including applicable swales, channels, street flows, catch basins, storm drains, and flood water retarding, will allow building pads to be safe from inundation from rainfall runoff which may be expected from all storms up to and including the theoretical 100-year flood.	Prior to issuance of grading permits	County Manager, Permit Services	
COA-2 Prior to issuance of any Certificates of Use and Occupancy, the Project Applicant shall not grant any new easements over any property subject to a requirement of dedication or irrevocable offer to the Orange County Flood Control District, unless such easements are expressly made subordinate to the easements to be offered for dedication to the County. Prior to granting any of said easements, the subdivider shall furnish a copy of the proposed easement to the County Manager, Permit Services for review and approval.	Prior to issuance of Certificates of Use and Occupancy	County Manager, Permit Services	
COA-3 Prior to recordation of a subdivision map (except for financing and conveyance purposes only), the Project Applicant shall participate in the applicable Master Plan of Drainage in a manner meeting the approval of the Manager, Permit Services, including payment of fees and the construction, or provide evidence of financial security (such as bonding), of the necessary facilities. The applicant shall enter into an agreement with the County of Orange concerning payment and reimbursement of Master Plan Drainage Fees to the City as a condition of any future annexation for drainage facilities transferred from OCPW to the City.	Prior to recordation of subdivision map	County Manager, Permit Services	
COA-4 Prior to issuance of any grading or building permit, whichever comes first, the Project Applicant shall demonstrate compliance under California's General Permit for Storm Water Discharges Associated with Construction Activity by providing a copy of the Notice of Intent submitted to the State Water Resources Control Board and a copy of the subsequent notification of the issuance of a Waste Discharge Identification Number; or other proof of filing in a manner meeting the satisfaction of the Manager, Permit Services. Projects subject to this requirement shall prepare and implement a SWPPP. A copy of the current SWPPP shall be	Prior to issuance of grading or building permits	Manager, Permit Services	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>kept at the Project Site and be available for County review on request.</p>			
<p>COA-5 Prior to issuance of any grading or building permit, whichever comes first, the Project Applicant shall submit an Erosion and Sediment Control Plan (ESCP) in a manner meeting approval of the Manager, Permit Services, to demonstrate compliance with the County's NPDES Implementation Program and state water quality regulations for grading and construction activities. The ESCP shall identify how all construction materials, wastes, grading or demolition debris, and stockpiles of soil, aggregates, soil amendments, etc. shall be properly covered, stored, and secured to prevent transport into local drainages by wind, rain, or tracking. The ESCP shall also describe how the applicant will ensure that all BMPs will be maintained during construction of any future public right-of-ways. A copy of the current ESCP shall be kept at the Project Site and be available for County review on request.</p>	<p>Prior to issuance of grading or building permits</p>	<p>County Manager, Permit Services</p>	
<p>COA-6 Prior to issuance of any grading or building permits, the Project Applicant shall submit for review and approval by the Manager, Permit Services, a final WQMP specifically identifying BMPs that will be used on-site to control predictable pollutant runoff. The Project Applicant shall utilize the DAMP, the Model WQMP, and the Technical Guidance Manual for reference, and the County's WQMP template for submittal. This final WQMP shall update the project's CWQMP based on the final design and include the following:</p> <ul style="list-style-type: none"> • Detailed site and project description • Potential storm water pollutants • Post-development drainage characteristics • Low impact development (LID) BMP selection and analysis • Structural and non-structural source control BMPs • Site design and drainage plan (CWQMP BMP Exhibit) • GIS coordinates for all LID and treatment control BMPs • Operation and Maintenance (O&M) Plan that: (1) describes the long-term operation and maintenance requirements for BMPs identified in the BMP Exhibit; (2) identifies the entity that will be responsible for long-term operation and maintenance of the referenced BMPs; and (3) describes the mechanism for funding the long-term operation and maintenance of the referenced BMPs <p>The BMP map exhibit from the approved final WQMP shall be included as a sheet in all plan sets submitted for plan check and all BMPs shall be depicted on these plans. Grading and building plans must be consistent with the approved BMP map exhibit.</p>	<p>Prior to issuance of grading or building permits</p>	<p>County Manager, Permit Services</p>	
<p>COA-7 Prior to the recordation of any subdivision map, the Project Applicant shall prepare Covenants, Conditions & Restrictions (CC&Rs) for review and acceptance by the Manager of Permit Services for the HOA, including a section for surface water quality protection and the following prohibited activity restrictions:</p> <ul style="list-style-type: none"> • Blowing, sweeping, or hosing of debris (e.g., leaf litter, grass clippings, litter) into storm drain inlets or other conveyances • On-site fueling • Dumping of any toxic substance or liquid waste on the pavement, on the ground, or 	<p>Prior to recordation of subdivision map</p>	<p>Manager, Planning, OC Development Services/ County Manager, Permit Services</p>	

Mitigation Measure	Timing	Responsible Agency/Party	Date Completed
<p>toward a storm drain</p> <ul style="list-style-type: none"> • Use of pesticides if rain is expected • Mixing or preparation of pesticides for application near storm drain inlets • Allowing wash water to enter storm drain <p>The CC&Rs shall require the HOA to maintain the debris basins, detention/debris basin #3 and water quality basins on an annual basis in order to maintain flood protection associated with the design of the Project's drainage system.</p>			
<p>COA-8 Prior to issuance of a Certificate of Use and Occupancy, the Project Applicant shall demonstrate compliance with the County's NPDES Implementation Program in a manner meeting the satisfaction of the Manager, OC Inspection:</p> <ul style="list-style-type: none"> • Demonstrate that all structural best management practices (BMPs) described in the BMP exhibit from the project's approved WQMP have been implemented, constructed and installed in conformance with approved plans and specifications; • Demonstrate that the Project Applicant has complied with all non-structural BMPs described in the project's WQMP; • Submit for review and approval, an Operations and Maintenance Plan for all structural BMPs (the plan shall become an attachment to the WQMP); • Demonstrate that copies of the project's approved WQMP (with attached Operations and Maintenance Plan) are available for each of the initial occupants; • Agree to pay for a Special Investigation from the County for a date 12 months after the issuance of a Certificate of Use and Occupancy for the project to verify compliance with the approved WQMP and Operations and Maintenance Plan; • Demonstrate that the Project Applicant has recorded one of the following: <ol style="list-style-type: none"> a) The CC&Rs (that must include the approved Water Quality Management Plan and Operations and Maintenance Plan) for the project's HOA; b) A water quality implementation agreement that has the approved Water Quality Management Plan and Operations and Maintenance Plan attached; or c) The approved final Water Quality Management Plan and Operations and Maintenance Plan 	<p>Prior to issuance of Certificate of Use and Occupancy</p>	<p>Manager, OC Inspection</p>	
<p>COA-9 Prior to issuance of grading permit, the Project Applicant shall record a grant of easement for on-site public storm water pipes to the Orange County Flood Control District.</p>	<p>Prior to issuance of grading permits</p>	<p>Manager, Permit Services</p>	

Project Design Features

Project Design Feature	Timing	Responsible Agency/Party	Date Completed
Aesthetics			
PDF 1 Density – The average density of the project is 0.73 dwelling units per acre. This is considered a low-density residential project that is consistent with the adjacent neighborhoods in the City, which protects the unique natural and topographic character.	At Vesting Tentative Map approval	Manager, Planning/OC Subdivision Committee	
PDF 2 Building Height – The maximum building height for all residential lots is 2 stories and 35 feet.	Prior to issuance of building permits	Manager, Planning	
PDF 3 Open Space – 62% of the Project Site is natural open space, fuel modification zone, retention basin, parks, and trails.	At Vesting Tentative Map approval	Manager, Planning	
PDF 4 Color of Homes – In addition to grading concepts, landscaping and color will be utilized to soften the appearance of the homes visible from outside the Proposed Project. Home colors will be selected to be consistent with the surrounding natural landscape and with the color value of the specific hue close to the immediate landscape. Colors on the homes visible from outside Esperanza Hills will be predominantly earth tones, such as browns, ochres, sepias, and grays.	Prior to issuance of building permit	Manager, Planning	
PDF 5 Landscaping – The landscape plan includes native and architecturally thematic plant material used to establish entry monuments, signage, walls, fences, and hardscape elements complementing and evoking the same respect for the surrounding natural environment. All streetscapes, slopes, and neighborhood parks will be harmoniously interwoven with the natural hillside by utilizing trees, naturalized shrubs, and grasses that are drought tolerant and considerate of long-term maintenance needs. Pedestrian connections and residential streets will offer canopy trees and flowering accent trees to provide shade, while open spaces will host informal plant and tree groupings and large evergreen shrubs. Selected plant material will complement the scale of the architecture. View opportunities will be considered from the neighborhoods to the surrounding landscape, enhancing views outside the immediate Project limits wherever possible.	Prior to approval of landscaping plan	Manager, Planning	
PDF 6 Equipment – Air conditioners, heating, cooling, and ventilating equipment, and all other mechanical, lighting, or electrical devices shall be operated to minimize disturbance to adjacent and neighboring occupants, and shall be screened, shielded, and/or sound buffered from surrounding properties and streets. No roof-mounted air conditioning units will be allowed.	Prior to issuance of building permit	Manager, Planning	
PDF 7 Utilities – Above-ground utility boxes, telephone boxes, water lines, backflow preventers, cable boxes, or similar structures within public view shall be screened and painted to blend into surrounding areas. Satellite dishes shall be placed to minimize visual impact and painted to match surrounding areas.	Prior to issuance of building permit	Manager, Planning	
PDF 8 Walls and Fencing – Walls that are viewed from the street may be of masonry block construction or vinyl fence material consistent with the architectural style of the home. Homeowner privacy fencing shall not exceed six feet in height. Other privacy fencing shall be made of durable, synthetic material, block, or wrought iron. Walls or fences shall not exceed	Prior to issuance of building permit	Manager, Planning	

Project Design Feature	Timing	Responsible Agency/Party	Date Completed
42 inches in height in any required front yard setback.			
PDF 9 Grading – The Proposed Project shall conform to the Orange County Grading Ordinance.	Prior to issuance of grading permits	Manager, Planning	
PDF 10 Glare – Building structures shall use non-reflective glass.	Prior to issuance of building permit	Manager, Planning	
PDF 11 Homeowners will be required, through the HOA's CC&Rs, to use only hooded and shielded down-lighting for all exterior lights, including landscape lighting.	Prior to issuance of building permit	Manager, Planning	
Biological Resources			
PDF 12 Introduction of Trash and Debris. The project landscape plan shall include trash receptacles placed in appropriate locations to ensure that trash and debris are controlled on-site and pose no risk to native habitats. The Homeowner's Association (HOA) shall be responsible daily to maintain the trash receptacles and remove trash to avoid accumulation.	Prior to approval of landscaping plan	Manager, Planning	
PDF 13 Impacts from Domestic Cats. Included in the HOA CC&Rs, domestic cats shall remain inside a home, or be leashed for walks or visits to the local outside environment. House cats shall not be permitted to range free outside the confines of a home.	Prior to issuance of Certificate of Use and Occupancy	Manager, Planning	
PDF 14 Impacts from Light Pollution 1. Provide homeowner education to limit outdoor lighting by using energy efficient low-voltage systems, photo sensors, solar and light emitting diode. 2. Lighting will be hooded, shielded, and pointed away from the sensitive habitat areas, and ambient light levels will be minimized to the maximum extent practicable.	Prior to issuance of building permits	Manager, Planning	
PDF 15 Short-term construction-related noise impacts will be reduced by the implementation of a number of measures including the following: 1. During all excavation and grading on-site, the construction contractors will equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards to reduce construction equipment noise to the maximum extent practicable. The construction contractor will place all stationary construction equipment so that emitted noise is directed away from Chino Hills State Park lands and staging areas will not be placed in proximity to sensitive habitats. 2. The construction contractor will stage equipment in areas that will create the greatest distance between construction-related noise sources and noise sensitive receptors (the preserved habitat areas) during all project construction. 3. All construction work will occur during the daylight hours. Construction shall not take place between the hours of 8:00 p.m. and 7:00 a.m. AM on weekdays, including Saturday, or at any time on Sunday or a federal holiday. All construction operations shall comply with Orange County Codified Ordinance Division 6 (Noise Control). 4. The construction contractor will limit haul truck deliveries to the same hours specified for construction equipment. To the extent feasible, haul routes will not pass through sensitive habitats and land uses or residential dwellings.	Prior to issuance of grading permit	Manager, Planning	
PDF 16 Minimize Edge Effect. Best management practices will be incorporated into the project to ensure that indirect impacts (i.e., edge effects) are avoided or minimized to the maximum extent possible. Lighting will be shielded and directed away from adjacent natural habitat	As applicable prior to issuance of building or grading permit	Manager, Planning	

Project Design Feature	Timing	Responsible Agency/Party	Date Completed
<p>areas and ambient light levels will be minimized to the maximum extent practicable. Additionally, the project's Water Quality Management Plan and Storm Water Pollution Prevention Plan will ensure that project runoff will not adversely affect the drainage within the jurisdictional drainages. Noise standards will comply with County Codes and will be consistent with General Plan Policies. In addition, fencing will be limited to open fencing that does not exceed 40 inches in height. Vegetation thinning within the fuel modification area will only occur on occasion and during daylight hours.</p>			
<p>PDF 17 Fuel Modification Plan. To the extent feasible, native planting species approved for use in fuel modification zones by the Orange County Fire Authority will be used in fuel modification zones adjacent to natural habitat areas. Plants identified by the California Invasive Plant Council as an invasive risk in Southern California will be excluded from all landscaping.</p>	<p>Prior to approval of fuel modification plan</p>	<p>OCFA/Manager, Planning</p>	
Hazards and Hazardous Materials			
<p>PDF 18 The Proposed Project includes that the Esperanza Hills HOA will provide a list of approved and prohibited plant pallet to all buyers in a Private Property Owners' Guide for Fire Safe Vegetation Management on private lots. The HOA will be responsible for enforcement.</p>	<p>Prior to approval of landscaping plan</p>	<p>OCFA/Manager, Planning</p>	
<p>PDF 19 The Proposed Project includes a Precise Fuel Modification Plan that has been developed to provide a landscape transition area along the interface between residential development and adjacent open space to provide wildfire protection. The OCFA will require separate review of Estate Lot 1 with regard to fuel modification/fire protection requirements.</p>	<p>Prior to approval of fuel modification plan</p>	<p>OCFA/Manager, Planning</p>	
<p>PDF 20 The Proposed Project includes that all new power lines will be underground, for fire safety during high wind conditions or during fires on a right of way which can expose above-ground power lines.</p>	<p>Prior to approval of Tentative Tract Map</p>	<p>Manager, Planning</p>	
<p>PDF 21 The Proposed Project includes that fuel management activities will be completed annually by June 1 and more often as needed for fire safety, as determined by the OCFA.</p>	<p>Prior to approval of fuel modification plan</p>	<p>OCFA</p>	
<p>PDF 22 The Proposed Project includes that all structures will be in strict, ongoing compliance with all County and other applied Fire and Building Code requirements.</p>	<p>Prior to issuance of building permit</p>	<p>OCFA/Manager, Planning</p>	
<p>PDF 23 The Proposed Project includes that the HOA will maintain FMZs annually by June 1 and more often as needed for fire safety as determined by the OCFA.</p>	<p>Prior to approval of fuel modification plan</p>	<p>OCFA</p>	
<p>PDF 24 The Proposed Project includes that the HOA will implement emergency evacuation routes in accordance with the approved Community Evacuation Plan. The Community Evacuation Plan will be reviewed by OCFA and OCSD before any changes are made. The Community Evacuation Plan includes a provision for annual review by residents through organized meetings and education outreach by the HOA.</p>	<p>Prior to issuance of first Certificate of Use and Occupancy</p>	<p>OCFA/OCSD/Manager, Planning</p>	
<p>PDF 25 The Proposed Project includes that automatic fire sprinkler systems will be installed for all homes, including in all attic spaces.</p>	<p>Prior to issuance of building permits</p>	<p>OCFA/Manager, Planning</p>	

Project Design Feature	Timing	Responsible Agency/Party	Date Completed
PDF 26 The Proposed Project includes a Fire Master Plan that has been reviewed by the OCFA providing enhanced construction features in certain areas adjacent to FMZs. These include enhanced fire sprinkler systems and construction features per California Building Code Chapter 7A.	Prior to issuance of grading permits	OCFA/Manager, Planning	
PDF 27 The Proposed Project includes earthquake preparedness and wildfire education materials will be distributed annually to each resident and annual evacuation planning meeting will be held by the HOA.	Prior to issuance of building permits	OCFA/OCSD/Manager, Planning	
PDF 28 The Proposed Project includes that all site access, emergency access, road widths and turn outs will comply with the requirements of the OCFA and the approved Fire Master Plan.	Prior to approval of Tentative Tract Map	OCFA	
PDF 29 The Proposed Project will include access gates that will comply with the Fire Code. Public roads will not be gated, per the Fire Code. Any gates on any private roads or on private driveways will be as follows, complying with the OCFA standards for electric gates. <ul style="list-style-type: none"> • Access gates will be equipped with a KNOX key switch, which overrides all command functions and opens the gate for entrance of emergency vehicles into the area. Gates serving more than 1 parcel will be equipped with sensors for detecting emergency vehicle "Opticom" strobe lights from any direction of approach. Strobe detection and key switches will be provided on the interior and exterior of gates. • Switches will be dual keyed, or two switches provided, for Fire and Law Enforcement. • Gate activation devices will be equipped with a battery backup or manual mechanical disconnect in case of power failure. 	Prior to approval of Tentative Tract Map	OCFA/Manager, Planning	
Hydrology and Air Quality			
PDF 30 The project has been designed to treat development flows (runoff) with a dry extended detention water quality basin, while implementing the following low impact development techniques: <ul style="list-style-type: none"> • Conservation of natural areas, including existing trees, other vegetation and soils • Keeping streets at minimum standard widths • Minimizing the impervious footprint of the project • Minimizing disturbances to natural drainages 	Prior to issuance of grading permits	Manager, Permit Services	
PDF 31 The project will be designed to include the following best management practices to promote infiltration and slow down surface flows: <ul style="list-style-type: none"> • Impervious area dispersion • Native drought-tolerant landscaping/efficient irrigation 	Prior to issuance of grading permits	Manager, Permit Services	