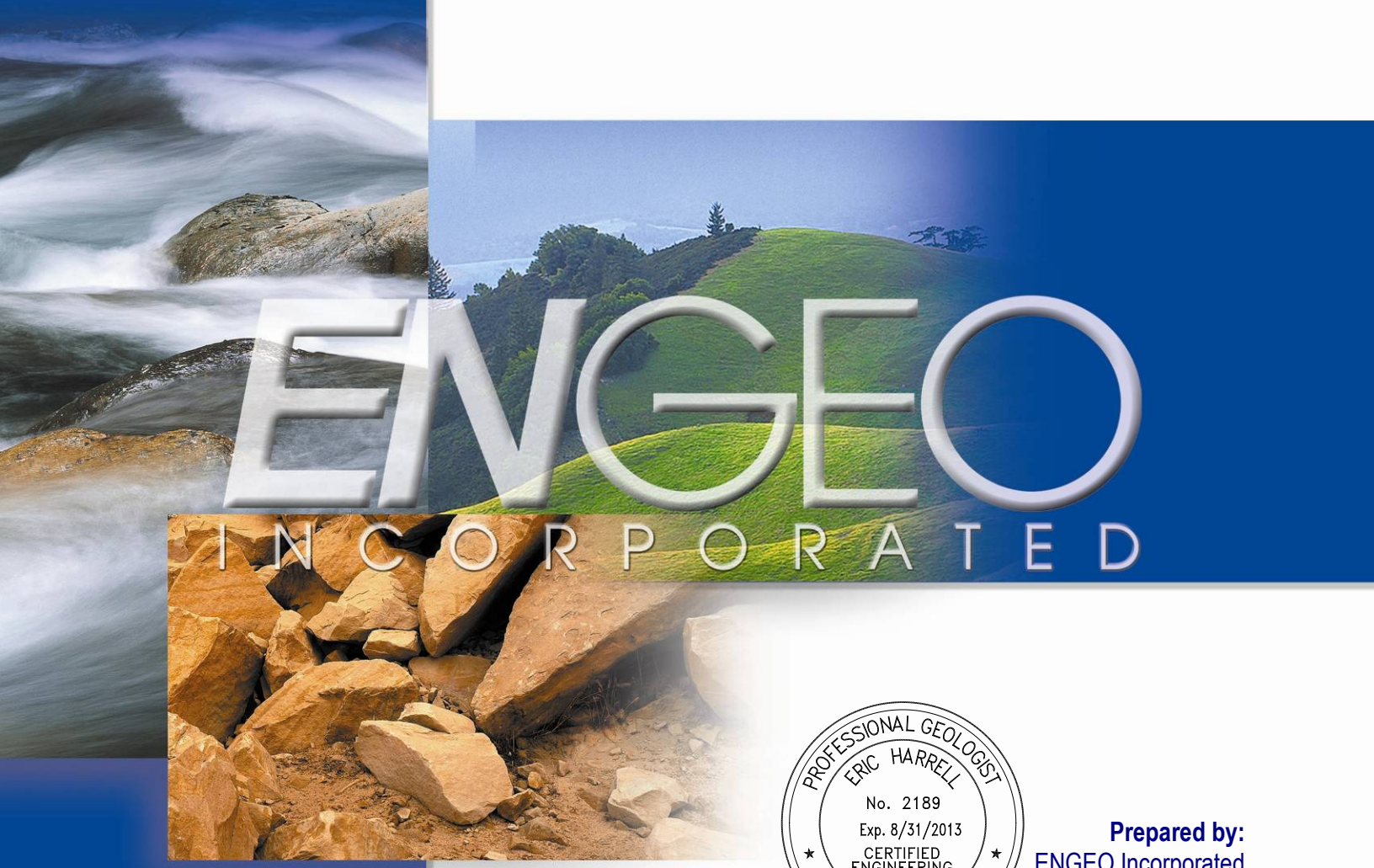
FIRST AMENDED PLAN OF CONTROL
ORINDA GEOLOGIC HAZARD ABATEMENT DISTRICT
PLAN OF CONTROL FOR ORINDA OAKS



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Project No.
9192.000.001

- Expect Excellence -

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1.0 INTRODUCTION

Under the Conditions of Approval for the Orinda Oaks Residential Development (Subdivision 8101 along with Parcel "B") ("Project"), the City of Orinda required that the Project be included within a Geologic Hazard Abatement District prior to approval of the final map for the Project or form its own Geologic Hazard Abatement District. To satisfy this requirement, the Project (Figure 1) was annexed into the Orinda Geologic Hazard Abatement District ("Orinda GHAD") on October 7, 2008, pursuant to Resolution No. 05-08.

1.1 Authority

On March 4, 2008, the Orinda City Council adopted Resolution No. 16-08 approving and forming the Orinda GHAD under the authority of California Public Resources Code (Division 17, commencing with Section 26500). The Orinda City Council members serve as the Board of Directors of the Orinda GHAD. The boundaries of the Orinda GHAD encompass approximately 8,700 acres, including the approximately 23-acre Project area. The Project area was annexed into the Orinda GHAD on October 7, 2008. The "Plan of Control for Annexation of Orinda Oaks Development to Orinda Geological Hazard Abatement District" was prepared and adopted by the Orinda GHAD Board of Directors to support the annexation. This First Amendment to the Plan of Control ("Plan of Control") supersedes the prior plan of control. The Wilder Project is also included within the Orinda GHAD; however, the Wilder Project has its own plan of control.

Section 26509 of the Public Resources Code provides that the plan of control must be prepared by a State Certified Engineering Geologist. An Engineering Geologist, certified pursuant to Section 7822 of the Business and Professions Code, prepared this Plan of Control. As required, it describes in detail potential geologic hazards within the Project, the properties affected by them, and, most significantly, a plan for the prevention, mitigation, abatement, or control thereof.

1.2 Property Identification

The Project area is shown on the Boundary Map. The Boundary Map and a written legal description are provided in Appendix A. The Project includes the entire area of Assessor's Parcel Number 273-110-014 (Lots 1 through 11) and Parcel "B" north of Stein Way (Lot 12).

2.0 BACKGROUND

2.1 Existing Site Conditions

The Project is an irregularly shaped 23-acre parcel bisected by Stein Way in Orinda, California. Currently, the Project is undeveloped open space. Within the parcel's boundary limit, existing elevations range from a low of about 690 feet above mean sea level (msl) at the northern corner of the property on Lot 12, which is identified in Figure 2 as Parcel B, to a high of about 945 feet above msl at the southwestern edge of the Project on Lot 7 (Figures 1 and 2). Existing

concrete-lined drainage ditches are located on portions of Lots 5, 9, 10 and 11. Existing single-family residential developments are located northeast and west of the subject property. Undeveloped open space areas are located south of the Project area.

In 1995 and 1997, a number of landslides or portions of landslides were repaired on the Project. In general, repair activities included removal and replacement of the landslide material with subdrained engineered fill as discussed in Section 5 – Geologic Hazards. The work on the Project included the partial removal of Landslides S-4, S-5, S-6, S-18, S-23, S-24, S-24A, and S-25. Subdrains from the upper portion of Landslide S-5 outlet into an existing concrete-lined drainage ditch along the eastern portion of the Project area adjacent to the Castlegate Subdivision.

2.2 Proposed Development

The Improvement Plan dated September 25, 2012, (Figure 4) and stormwater control plans dated December 6, 2011 (updated August 28, 2012), show grading for 12 single-family residential units. Miller Court, a private road will allow access to the residential lots from Stein Way. A wetland area is planned within the Open Space Conservation Area on Lots 2 and 3, which will not be maintained by the Orinda GHAD with the exception of geologic hazard abatement.

Seven bioretention areas and three flow-through planters are planned for the Project (Figure 5). As planned, the bioretention areas will be located on Lots 1, 5, 11, and 12. Flow-through planters will be located on Lots 1 through 6.

As shown in the Improvement Plan (Figure 4), a public use trail easement crosses Lots 5 and 6. The trail alignment extends from Stein Way to the Wilder Project.

A Geotechnical Engineering Investigation for Subdivision 8101 was completed by Jensen-Van Lienden Associates and dated May 2, 2000. Jensen-Van Lienden Associates prepared Additional Geotechnical Engineering for Grading and Landslide Considerations for Subdivision 8101 in their report dated July 6, 2007. A Preliminary Geotechnical Report and Geologic Constraints Analysis (PGEX) and a Supplemental Geotechnical Exploration (SGEX) were prepared by ENGEO in 2011 and 2012, respectively, (collectively "Reports"). These Reports in addition to those listed in the under "Selected References" were used to prepare this Plan of Control.

Final grading work for the Project must be completed prior to acceptance of the Orinda GHAD rights and responsibilities, as further discussed in Section 7 of this Plan of Control.

3.0 GEOLOGY

3.1 Regional Geology and Geologic Maps

The Project is located within the Coast Ranges geologic province of California, a series of northwest-trending ridges and valleys. Regional geologic maps were reviewed as part of the Jensen-Van Lienden Associates and ENGEO investigations of the Project. Along with others,

regional geologic maps of the area have been prepared recently by Graymer (1994). The regional mapping prepared by Graymer indicates that the Project is underlain by the Moraga Volcanics (Tm) and Sedimentary Interbeds of the Moraga Volcanics (Tms). The Moraga Volcanics are described as basalt and andesite flows with minor rhyolite tuff. These volcanic rocks have been age dated between 9 and 10 million years before the present. The sedimentary units are described as interflow sedimentary rocks. Regional mapping shows that bedrock units are trending in a general northwest-southeast direction and are moderately to steeply dipping in the area of the Project.

The Project is not located within a State of California Earthquake Fault Zone for active faults (CDMG, 1982). The nearest mapped active fault is the Hayward fault located approximately 3 miles southwest of the Project. The Moraga fault, designated as inactive, is discussed in the Site Geology section, immediately below.

3.2 Site Geology

The geologic units mapped on the Project include bedrock and surficial deposits consisting of artificial fill (engineered and unengineered), landslide and colluvium. The geologic units described below are adapted from the Reports that were completed for portions of the Project between 1996 and 2012.

3.3 Geologic Units

3.3.1 Artificial Fill

Artificial fill encountered on the Project is identified as engineered fill that replaced excavated landslide material and was placed for the construction of Stein Way. There is also unengineered fill stockpiled on the Project. The engineered fill is mapped as replacement material to backfill Landslides 1, 1A, 3, 4, 5, 6, and 7 (Figure 2). The engineered fill materials were described as mixtures of clay, silt, sand, and rock fragments. The unengineered fills were described as loose mixtures of clay, silt, sand, and rock with organic materials.

3.3.2 Surface Soil and Colluvium

The surface of the Project is typically mantled by a few feet to several feet of dark gray-brown rocky clay derived from weathering of the underlying parent material. The surficial soil mantling bedrock in the upland areas has accumulated in swales and hollows by downslope movement processes including creep, slopewash and shallow sloughing.

3.3.3 Colluvium

Colluvium, typically consisting of consisting of stiff silty clay with gravel, underlies steep swale areas west of the Project as depicted on Figure 2.

3.3.4 Colluvial Terrace

A colluvial terrace deposit is present on a portion of Lot 6 and the adjacent Wilder Project. This deposit appears to consist of dense gravelly to bouldery clay (Figure 2).

3.3.5 Landslides

Landslide deposits consist of masses of unconsolidated material and/or bedrock that have moved downslope under the influence of gravity by sliding, falling, or flowing. Landslides designated on the Project as 1, 1A, 3, 4, 5, 6, and 7 have been partially replaced with subdrained engineered fill (Figure 2). The remaining landslide materials, with the exception of Landslide S-26, were described in the May 2000 Geotechnical Engineering Investigation (Jensen-Van Lienden Associates, Inc.) as a silty clay matrix with basalt fragments. Exploratory test pits completed within the limits of Landslide S-26 (ENGEO Landslide No. 4) in 2008 identified similar landslide materials comprising a silty clay matrix with basalt fragments.

3.3.6 Bedrock

Bedrock at the Project was identified during subsurface explorations by Jensen-Van Lienden Associates (2000) as mudstone, claystone, siltstone, sandstone, basalt, and tuff. The bedrock was described from samples recovered from the exploratory borings and observations of the exploratory test pit logs as slightly to highly weathered and friable to moderately strong. In general, bedding was described as trending to the northwest and dipping to the south. ENGEO identified bedrock at the Project as belonging to the Moraga and Mulholland formations.

3.4 Groundwater

At the time of subsurface work, free groundwater was encountered between 6 and 31 feet below the ground surface. The installation of subdrains as part of the landslide repairs may alter the groundwater levels at the Project. In addition, fluctuations in groundwater levels may occur seasonally and over a period of years because of precipitation, changes in drainage patterns, irrigation and other factors. Future irrigation may cause an overall rise in groundwater levels.

3.5 Seismic Sources

The nearest State of California-zoned, active[1] fault is the Hayward fault located about 3 miles southwest of the Project. The Moraga fault, which crosses the Project from north to south, is identified in the Joyce Associates report as potentially active with a very low risk of movement. The Joyce Associates report recommends a fault setback zone of 50 to 65 feet in width for structures for human occupancy including residences and garages.

[1] An active fault is defined by the State Mining and Geology Board as one that has had surface displacement within Holocene time (about the last 10,000 years) (Hart, 1997). The State of California has prepared maps designating zones for special studies that contain these active earthquake faults.

Explorations by ENGEO on the adjacent Wilder Project (which is part of the Orinda GHAD), suggest that the Moraga fault and an associated unnamed fault are not active. No specific mitigation measure was recommended, and the existing fault setbacks can be removed from the plans if desired according to the ENGEO report.

4.0 SLOPE STABILITY CONSIDERATIONS DURING MASS GRADING

As recommended in the Reports for the Project, existing unengineered artificial fills within the graded area will be removed and debris and organic materials will be removed from the Project. In graded areas, the unsuitable materials including landslide material and colluvium will be overexcavated by Project Developer to firm undisturbed materials below the unsuitable material as determined by the Project at the time of grading. Subdrains will be installed by Project Developer to collect subsurface waters. The configuration of each subdrainage system will be tailored to the individual area by Project Developer at the time of grading. The location and depths of subdrains will be determined at that time by the Project. The location and elevation of subdrains and outlets will be surveyed and plotted during construction by the project developer. Each subexcavation will then be reconstructed to final grade by keying and benching below the landslide plane with compacted, drained engineered fill.

Cut areas will be the Project Developer during grading to verify that the materials are satisfactory for their intended purposes and to provide mitigation schemes for unsuspected slope conditions which could decrease slope stability. Such conditions include unfavorable bedrock attitudes and seepage conditions. The Project Developer will evaluate these conditions during the grading operations at the Project. Where adverse stability conditions are encountered, the cut slopes will be overcut and buttressed with drained engineered fills. Project Developer will provide the Orinda GHAD an as-built plan of the geology, buttressed slopes and associated subdrain systems following completion of the Project grading.

5.0 GEOLOGIC HAZARDS

Geologic hazards identified in the Reports for the Project include:

- Slope instability
- Seismically induced ground shaking
- Rockfall
- Expansive soils

All geologic hazards will not be eliminated entirely through remediation by Project Developer. Slope instability or potential slope instability is not unique to this Project but is of importance for hillside projects throughout the San Francisco Bay Area. Future stability depends on various factors, including any introduction of natural or artificial groundwater, future grading and earthquake ground shaking.

5.1 Slope Instability

During mapping for certain of the Reports, designated landslide areas were identified. The geologic map, showing the location of each of the landslide areas, is included as Figure 2. The table below identifies each of the landslide areas and the proposed corrective measures. The proposed corrective measures to be performed by the Project Developer were identified in the Supplemental Geotechnical Investigation and supplemental reports. Potential Orinda GHAD monitoring or maintenance activities for the specific areas listed in the table below are discussed in Section 8 of this Plan of Control.

TABLE 5.1-1
Mapped Areas of Slope Instability
and Completed or Proposed Corrective Measures

Area Designation		Location	Onsite Proposed or Completed Corrective Measures	Unremediated Areas
Jensen-Van Lienden	ENGEO			
S-4	5	Lots 3, 4 and 5	Removal and replacement completed in 1995 with the exception of the upper portion. Planned removal and replacement of upper portion with engineered fill (K-3) as shown on Figure 3.	None
S-5	6	Lots 4, 5, 6 and 7	Removal and replacement completed in 1995 and 1997 with the exception of the upper portion. Planned removal and replacement of upper portion with engineered fill (K-4) as shown on Figure 3.	Buttressed landslide material may remain above upper limits of subdrained engineered fill placement.
S-6	7	Lot 6	Removal and replacement of landslide material in 1995 downslope of Lots 5 and 6 within the Castlegate development.	Landslide material to remain on Lot 6.
S-18	3	Lot 12	A retaining wall was constructed across the upper portion of the landslide in 1984.	Landslide material remains on Lot 12. The landslide was not mitigated downslope of the existing retaining wall. As stated in the supplemental information and design-level recommendations will be submitted for review as part of the final plan submittals for Lot 12.
S-19	--	Lot 12	Removal and replacement completed on the portions of the landslide within the Project in 1997.	None

Area Designation		Location	Onsite Proposed or Completed Corrective Measures	Unremediated Areas
Jensen-Van Lienden	ENGEO			
S-20	3	Lot 12	None	As provided in the supplemental information and design-level recommendations will be submitted for review as part of the final plan submittals for Lot 12.
S-21	3	Lot 12	None	As stated in the supplemental information and design-level recommendations will be submitted for review as part of the final plan submittals for Lot 12.
S-22	2	Lot 12	None	Landslide material remains above engineered fill buttress constructed west of Barbara Road. As provided in the supplemental information and design-level recommendations will be submitted for review as part of the final plan submittals for Lot 12.
S-23	3	Lot 12	Removal and replacement completed in the upper portion of the landslide in 1997.	Landslide material remains on Lot 12. The landslide material was left in an unimproved condition downslope of the existing buttress. As stated in the, supplemental information and design-level recommendations will be submitted for review as part of the final plan submittals for Lot 12.
S-24 and S-24A	4	Lots 1, 2, 3,4, 7, 8, and 9	Removal and replacement of landslide material in 1995 on a portion of Lots 1 and 2. Planned removal as shown on Corrective Grading Plan (Figure 3).	Buttressed landslide material to remain on Lots 1, 2, 3, 4, 7, 8, and 9 as shown on Figure 4.
S-25	1, 1A	Lot 10 and 11	Removal and replacement of landslide material in 1995 on a portion of Lots 10 and 11.	Buttressed or subdrained landslide material to remain on Lots 10 and 11 outside of the building envelope.
S-26	4	Lots 7 and 8	Planned removal as shown on Corrective Grading Plan (Figure 3).	Buttressed landslide material to remain on Lots 7 and 8 as shown on Figure 4.
Unnamed landslides within unengineered fill on offsite slope above Lots 7 – 9	4 and Mapped Qc	Lots 7, 8 and 9	Building and improvement setback to be evaluated as lot improvement details are available.	Landslide material to remain on offsite slope above Lots 7 through 9.

A potential source area for debris flow has been identified on the offsite slopes above Lots 6 through 11 with the potential to impact Project lots. As recommended in the Reports, specific mitigation measures can be developed at the time that detailed building plans are

available. Mitigation measures could include adjusting building locations or constructing diversion or catchment structures between the slopes and improvements on the Project.

Since earth stability is the Orinda GHAD's prime geotechnical concern, this section describes several types of slope instability that are within the Orinda GHAD's area of responsibility, subject to the exceptions set forth in Section 6 of this Plan of Control.

A landslide is defined as a mass of rock, soil and other debris that has been displaced downslope by sliding, flowing or falling. Landslides include cohesive block glides and disrupted slumps that have formed by displacement along a planar slip surface or rotation (displacement along a curved slip surface). Undercutting and erosion of hillside slopes trigger many slope failures.

Slope failures are also often triggered by increased pore water pressure due to the infiltration of rainwater. The resulting decrease of shear resistance (internal resistance to deformation by shearing) can cause the slope to move. The level of the groundwater table varies with the amount of rainfall for the area. If rainfall is higher than average during the winter season, the water table may be higher than average on a hillslope and groundwater pressures may become dangerously high. Under these conditions, hillside movement can be activated.

Areas of thickened soil cover on the hillslopes are known as colluvium (Qc). Colluvial deposits are typically the result of soil creep and may be in a weak, unconsolidated state, making them susceptible to landsliding if undercut. Colluvium is up to about 10 feet in thickness. Landslides and colluvial deposits located within open space areas are natural landforms that do not require mitigation except where they affect man-made improvements. Potential mitigation and repair measures are discussed in Section 8.

5.2 Seismically Induced Ground Shaking

As identified in the Reports, an earthquake of moderate to high magnitude generated within the San Francisco Bay Region could cause considerable ground shaking at the Project, similar to that which has occurred in the past. Seismic slope stability has been considered in the Reports; however, seismically generated slope failures could occur in open-space areas outside the development limits.

5.3 Ground Rupture

In preparing the Plan of Control for the Wilder Project (which is part of the Orinda GHAD), it was determined, as discussed in Section 3.5, that the Moraga fault and an associated unnamed fault are not active. No specific mitigation measure was recommended, and the existing fault setbacks can be removed from the plans if desired according to the ENGEO report.

5.4 Rockfall Hazards

The potential for rockfalls has been identified on the Project in the Jensen-Van Lienden Associates Geotechnical Engineering Investigation report, dated May 2, 2000, for the offsite natural slopes above Lots 6 through 11. ENGEO (2011) identified a rockfall hazard above Lots 6 through 9. As stated, rockfalls would most likely occur during earthquakes, but natural rock weathering, unusual rainfall events, or human activity could also cause or contribute to rockfalls at the Project. Mitigation measures included the following mitigation alternatives in addition to the offsite fire roads which are considered a partial catchment area since the fire roads are between the rockfall source area and the Project. These measures are to be completed by the Project Developer.

- On Lots 6 through 9, the habitable structures should be set back a minimum of 15 feet from the toe of slope.
- A rockfall control fence could be installed at the property limit of Lots 6 through 11 that would extend along the building footprints.
- Identify the outcrops that have the ability to generate boulders and remove or crush these materials. Boulders larger than 6 inches in diameter would be crushed or removed.

5.5 Expansive Soils

Near-surface colluvium and alluvium at the Project could exhibit high potential for expansion. These potentially expansive soils could impact the planned site improvements. Expansive soils shrink and swell as a result of moisture changes. This can cause heaving and cracking of slabs-on-grade, pavements and structures founded on shallow foundations. The potential for expansive soils has been identified in previous reports for the property. Shrink and swell of expansive soils on slopes is a portion of the mechanism of creep movement which can result in shallow slope instability.

6.0 GHAD MAINTAINANCE RESPONSIBILITIES AND RIGHTS

All land within the Project will be privately owned. The Orinda GHAD will have the responsibility to manage erosion and geologic hazards within the Project area only after transfer process has been completed (Section 7). The Orinda GHAD is not responsible for maintenance of the roadway, or wetlands. The public trail, shown on Lots 5, and 6, will be maintained by the GHAD, with the exception of vegetation management and routine maintenance, which will be the responsibility of the City of Orinda. The cost for the GHAD's maintenance of the trail will be funded annually by the City of Orinda.

The Orinda GHAD shall cause the Declaration of Disclosures, Right of Entry and Restrictive Covenants Regarding Orinda Geologic Hazard Abatement District ("Declaration") to be recorded after recordation of the Parcel Map (Subdivision MS-05-0950) and the Final Map,

Subdivision 8101. The Declaration creates covenants that run with the land and will be binding upon all future owners of property within the Project, their successors and assigns. It provides the Orinda GHAD with access to private property for monitoring, maintenance and mitigation activities of the Orinda GHAD. The Declaration shall be substantially in the form attached as Appendix B.

The Orinda GHAD shall be responsible for monitoring and maintenance for the following improvements ("Site Improvements") located within the Project area, with exceptions provided in Section 6.

- Land within Project area.
- The Stormwater System shown on Figure 5.
- Subdrains and subdrain outlets.
- Bioretention areas and flow-through planters excluding vegetation management.
- Project Developer or Orinda GHAD-constructed debris benches, berms or walls.
- Slope stability and erosion repair of the roadway, trail, and wetlands shown on Figure 5.

Potential geologic hazards such as landslides and slope erosion within the designated open space, including the unimproved hillsides, shall be the responsibility of the Orinda GHAD. Clearing and maintenance of fire breaks within the Open Space Conservation Area, as shown on Figure 5, will be the responsibility of the individual property owners.

It is important to note that to preserve the natural topography, wildlife habitat, and vegetation at the Project, stabilization of landslide masses is planned only for landslides that pose a significant threat to the Site Improvements. Slope and creek instability in undisturbed open space parcels, which in the GHAD Manager's opinion does not pose a significant threat to the Project area, will not be repaired, as provided in this Section.

6.1 Exceptions

To establish an appropriate GHAD assessment level for the parcels in the Project, it is important to define clearly the limits of the GHAD's responsibilities. The Orinda GHAD will accept responsibility for the Site Improvements as described in Section 7; however, the intent of this Plan of Control is not to extend the Orinda GHAD's responsibilities to every threatened or actual geological hazard. The Orinda GHAD may decline to prevent, mitigate, abate, or control geologic hazards under the following circumstances:

6.1.1 Isolated or Remote Slope Instability

The Orinda GHAD shall not have responsibility to monitor, abate, mitigate or control slope instability that does not involve significant damage, or pose a significant threat to Site Improvements.

6.1.2 Individual Parcels

The Orinda GHAD will not prevent, mitigate, abate or control a geologic hazard located on a single parcel of property that does not pose a significant threat to other properties within the Orinda GHAD boundaries or only threatens property outside the Orinda GHAD boundaries. This is the responsibility of the property owner on whose parcel the geologic hazard is located.

6.1.3 Hazard(s) or Failure(s) Resulting From Negligence

The Orinda GHAD may decline to prevent, mitigate, abate or control geologic hazards or failures if, in the sole judgment of the Orinda GHAD Manager, such hazards occurred as the result of negligence of a property owner and/or a property owner's contractors, agents or employees in developing, grading, constructing, or maintaining any work on the subject property. If the Orinda GHAD bears expense as the result of negligence described in this section, the Orinda GHAD may pursue reimbursement from the negligent parties.

6.1.4 Geologic Hazards Within and Outside of Orinda GHAD Boundaries

The Orinda GHAD will not prevent, mitigate, abate or control geologic hazards located on property that is not located within the Orinda GHAD boundaries unless all or any portion of a geologic hazard existing on property located outside the Orinda GHAD boundaries has damaged or poses a significant risk of damage to site improvements located on property within the Orinda GHAD boundaries. Work conducted on property located outside of the Orinda GHAD boundaries shall be strictly limited to that which, in the sole judgment of the GHAD Manager, is necessary to prevent, mitigate or control the damage, or threat of damage, to property located within the boundaries of the Orinda GHAD. Should the Orinda GHAD be required to respond to a geologic hazard outside the boundaries of the Orinda GHAD, the Orinda GHAD may take such actions as may be appropriate to recover costs incurred as a result of preventing, mitigating, abating or controlling such geologic hazard from the responsible party, if any.

6.1.5 Geologic Hazard Which Requires Expenditure in Amount Exceeding the Value of the Threatened or Damaged Improvement

The Orinda GHAD may elect not to prevent, mitigate, abate or control a geologic hazard where, in the GHAD Manager's sole discretion, the anticipated GHAD expenditure will exceed the value of the structure(s) or site improvement(s) threatened with damage or loss.

6.1.6 GHAD Funding or Reimbursement for Damaged or Destroyed Structures or Site Improvements

In the event a habitable structure, Site Improvement or landscaping is damaged or destroyed due to, or as a result of, a geologic hazard, the Orinda GHAD may fund or reimburse the property owner for the reasonable expenses necessary to repair or replace the damaged or destroyed structure, site improvement or landscaping. Unless authorized by the Orinda GHAD Board of

Directors, the dollar amount of the GHAD funding or reimbursement may not exceed ten percent (10%) of the costs incurred by the Orinda GHAD in preventing, mitigating, abating or controlling the geologic hazard responsible for the damage. The Orinda GHAD may decline to provide any funding, or reimbursement to a property owner for the repair or replacement of a structure, site improvement or landscaping damaged by a geologic hazard where at its construction or installation, the structure, site improvement, or landscaping violated any provision of the City's Building Code or Ordinances that was operative when the structure, site improvement, or landscaping was constructed.

6.1.7 No Reimbursement of Expenses Incurred by Property Owners

The Orinda GHAD will not be obligated to reimburse a property owner for expenses incurred for the prevention, mitigation, abatement, or control of a geologic hazard absent a written agreement between the property owner and the Orinda GHAD to that effect, which agreement has been executed prior to the property owner incurring said expenses, and following an investigation conducted by the Orinda GHAD.

6.1.8 Appeal to GHAD Board of Directors

Any determination made by the GHAD Manager in its sole discretion may be appealed to the GHAD Board of Directors through a written letter of appeal submitted within 10 days of the GHAD Manager's written determination to the affected party.

7.0 FUNDING AND ACCEPTANCE OF RESPONSIBILITY BY THE ORINDA GHAD

7.1 Activation of Assessment

The Orinda GHAD Board of Directors pursuant to Resolution 01-09 on January 20, 2009, ordered the imposition of an assessment on the Orinda Oaks Residential Development. Ultimately an annual assessment shall be levied on the residential lots within the Project. The assessment will be activated by the issuance of a building permit for each of the residences. For building permits issued on or between July 1 and December 31, the assessment shall be levied by the GHAD on the individual parcel beginning the first fiscal year following issuance of a building permit. For building permits issued on or between January 1 and June 30, the assessment shall be levied by the GHAD on the individual parcel beginning the fiscal year starting in the calendar year following issuance of the building permit.

The City of Orinda will fund maintenance of the open-space trail. Payment from the City to the GHAD will be initiated upon the issuance of a building permit for each lot on which a completed trail segment is located. The GHAD will invoice the City annually for all the completed segments of the public trail which are within lots for which building permits have been issued.

The assessment level for the Project is based on the GHAD responsibilities, as set forth in this Plan of Control. The Engineer's Report for the Orinda Oaks Residential Development proposes a maximum annual assessment level ("maximum assessment") for lots or parcels based on the estimated costs of GHAD maintenance activities within the Project area. These costs include those maintenance activities specified in Section 4 of this report and provisions for inflation and investment earnings, the estimated frequency of large-scale repairs and an appropriate reserve amount.

7.2 Responsibility for GHAD Activities

The property owner of the developable parcels shall have the responsibility to perform all the activities of the Orinda GHAD within the Project area. The Orinda GHAD shall have no responsibility to perform any of the rights and responsibilities until the transfer of responsibility is completed as discussed below. Such responsibility shall be eligible for transfer to the GHAD one year after the third residential building permit is issued by the City of Orinda, provided that all requirements and obligations in Section 7.0 are met ("Transfer Eligibility Date"). This turn-over date may be extended at the sole discretion of the Project Developer provided that the assessments shall continue to be levied during the extension period and that notice of such extension is delivered to the GHAD Manager at least 30 days prior to the turn-over date. The approximate one-year period between the levying of the GHAD assessment and the GHAD becoming responsible to perform activities on the property within the Final Map will allow the Orinda GHAD to accumulate reserve funds without incurring significant expenses.

Project Developer has the obligation to pay all costs, fees, and expenses related to the Project area of the Orinda GHAD, including those incurred by the GHAD, until responsibility is transferred to and accepted by the Orinda GHAD. In April of each year, the Project Developer shall provide the GHAD Manager a summary of monitoring and maintenance activities related to the GHAD within the past 12 months. The Project Developer shall be available to the GHAD Board to answer questions as requested.

7.3 Process for Transferring Responsibility for GHAD Activities

The process for transferring responsibility for performing GHAD activities shall be as follows:

(a) In the calendar year of the Transfer Eligibility Date or in any subsequent year, at its discretion, the Project Developer may apply to the GHAD ("Transfer Application") to transfer the responsibility for performing GHAD activities to the Orinda GHAD.

(b) Within 45 days of receiving such notice, the GHAD Manager shall verify that all the Site Improvements for which the GHAD will have maintenance responsibility have been constructed and maintained according to the City-approved plans and specifications for the individual Site Improvements are operational and in good working order.

(c) Within 15 days of such inspection, the GHAD Manager will send the Project Developer a list ("Punch list") of all of the items that need to be addressed including the construction, repair or modification of Site Improvements in order to comply with the City-approved plans and specifications and this Plan of Control.

(d) The Project Developer shall notify the GHAD Manager when it has completed the items identified on the Punch list.

(e) Within 30 days of receipt of such notice, the GHAD Manager shall verify that all Punch list items have been completed and notify the Project Developer of the next available meeting of the its Board of Directors where it will accept responsibility for performing all future Orinda GHAD activities..

(f) The Orinda GHAD shall confirm that the reserve requirement defined in the Orinda Oaks Engineer's Report, as may be amended from time to time, has been met.

As part of the transfer activities, the developer of parcel(s) to be transferred will provide the GHAD, for its use, copies of the applicable geotechnical exploration reports, grading plans, corrective grading plans, improvement plans, field-verified geologic maps, as-built subdrain plans and other pertinent documents as requested by the Orinda GHAD.

8.0 GEOTECHNICAL TECHNIQUES FOR MITIGATION OF LANDSLIDE AND EROSION HAZARDS

The techniques the Orinda GHAD may employ to prevent, mitigate or abate landsliding or adverse erosion damage might include, but are not necessarily limited to:

- Removal of the unstable earth mass.
- Stabilization (either partial or total) of the landslide by removal and replacement with compacted drained fill.
- Construction of structures to retain or divert landslide material or sediment.
- Construction of erosion control devices such as gabions, rip rap, geotextiles or lined ditches.
- Placement of drained engineered buttress fill.
- Placement of subsurface drainage devices (e.g. underdrains or horizontal drilled drains).
- Slope correction (e.g. gradient change, biotechnical stabilization, slope trimming or slope contouring).

- Construction of additional surface ditches and/or detention basins, silt fences, sediment traps, or backfill of erosion channels.

Potential landslide and erosion hazards can often best be mitigated by controlling soil saturation and water runoff and by maintaining the surface and subsurface drainage system. Maintenance shall be provided for lined surface drainage ditches and drainage terraces.

9.0 BIOTECHNICAL RECOMMENDATIONS FOR PREVENTION AND MITIGATION OF EXISTING OR POTENTIAL EROSION HAZARDS

Fill slopes within the boundaries of the Orinda GHAD are expected to be erodible as will cut slopes in bedrock; therefore, the maintenance of vegetative cover is especially important. Vegetation provides a protective role on soil and exposed rock. It absorbs the impact of raindrops, reduces the velocity of runoff and retards erosion.

In many instances, adequate erosion protection for slopes can be accomplished with carefully selected and placed biological elements (plants) without the use of structures (e.g. brush layering and willow waddling).

In other areas, biotechnical slope protection may involve the use of mechanical elements or structures in combination with biological elements to provide erosion control and help prevent small-scale slope failures. Locally, crib walls, welded-wire walls, gabion walls, rock walls, riprap and reinforced earth walls used in combination with carefully selected and planted vegetation can provide high quality slope protection. The vegetation may be planted on the slope above a low retaining structure or toe wall, or the interstices of the structure can be planted.

10.0 PRIORITY FOR ORINDA GHAD FUNDED REPAIRS

Emergency response and scheduled repair expenditures are to be prioritized by the GHAD Manager, utilizing its discretion, based upon available funds, a prudent reserve and the approved operating budget.

Should available funds not be sufficient to undertake all of the identified remedial and preventive stabilization measures, the expenditures shall be prioritized as follows in descending order of priority:

A. The prevention, mitigation, abatement or control of geologic hazards that have either damaged or pose a significant threat of damage to habitable structures, critical underground utilities or paved streets.

B. The prevention, mitigation, abatement or control of geologic hazards that have either damaged or pose a significant threat of damage to private recreation facilities (e.g. pools, spas, etc.).

C. The prevention, mitigation, abatement or control of geologic hazards that have either damaged or pose a significant threat of damage limited to loss of landscaping or other similar non-essential amenities.

D. The prevention, mitigation, abatement or control of geologic hazards existing entirely on Open Space Conservation Area and which have neither damaged nor pose a significant threat of damage to any site improvements.

11.0 MAINTENANCE AND MONITORING SCHEDULE

Geologic features and GHAD-maintained facilities shall be inspected on a regular basis as determined by the GHAD Manager. Budget permitting, inspections are generally scheduled to occur two times per year in normal years and three or more times per year in years of heavy rainfall. The inspections are generally scheduled to take place in September, prior to the first significant rainfall; mid-winter as necessary during heavy rainfall years; and in early April at the end of the rainy season. The frequency of the inspections will be increased in years of higher than average rainfall intensity and/or recurrence. It is anticipated that the monitoring events for the Project would be completed on the same schedule as the monitoring for the Wilder Project.

- An Engineer or Geologist shall carry out a geologic reconnaissance of the Project slopes for indications of erosion or slope failures. Open Space Conservation Area slope monitoring would include observation of debris benches and trails. The removal of accumulated debris including rockfall material from benches, berms or walls should be undertaken in a manner that maintains the capacity of the catchment feature to protect site improvements.

- An Engineer and/or Geologist shall carry out an inspection of lined surface ditches at least twice a year. One inspection should be in the fall prior to the onset of winter rains. The inspection shall check for sedimentation and cracking or shifting of the concrete-lined ditches. As needed, repairs and maintenance should be undertaken, including removal of excess silt or sediment in ditches and patching or replacement of cracked or broken ditches, prior to the beginning of the next rainy season.

- Subsurface drain outlets and horizontal drilled drain outlets, if any, shall be checked. Water flowing from the outlets should be measured and recorded during each inspection. The inspections should take place at least twice annually, preferably in the fall and spring. Any suspicious interruption in flow may signal a need to unplug or clean the affected drain.

- Inlets, outfalls or trash racks, if used, shall be kept free of debris. It is anticipated that initially at least once every year, cleanup of vegetation and removal of silt would be in order. At a

minimum, the facilities should be cleaned in September and as obstructed conditions are identified after heavy storm events.

- Monitoring of the creek banks shall be performed to identify areas of possible instability or future erosion. Creek bank erosion that does not directly threaten site improvements including flood control capacity will not be repaired, and the creeks will be allowed to mature naturally. All necessary permits will be obtained before work proceeds.

- Monitoring of the unpaved trail system should include observing the trail for eroded areas or areas of instability. The City of Orinda will be notified about trail maintenance concerns that may affect slope stability within the development.

- Monitoring of the bioretention areas and flow-through planters should include observing the improvements for ponding of water, eroded areas or areas of instability. Maintenance of the bioretention areas and flow-through planters excluding of vegetation management, shall take place pursuant to the City-approved Stormwater Control Plan and City-approved Operation and Maintenance Plan as deemed necessary by the GHAD Manager.

The GHAD Manager shall review and adjust the inspection schedule annually and assess the effectiveness of its preventive maintenance program on a regular basis. The GHAD Manager shall prepare an annual report to the GHAD Board of Directors with recommendations for maintenance and/or repair projects. Consultants, if necessary, may be retained to undertake the needed studies. The GHAD Manager shall prepare an annual inspection report for presentation to the Orinda GHAD Board of Directors.

12.0 OWNERSHIP AND MANAGEMENT

Ownership, funding sources and maintenance responsibilities shall be as shown on the following table and on Figure 5.

TABLE 12.0-1
ORINDA OAKS RESIDENTIAL DEVELOPMENT
Long-Term Ownership and Management Matrix

Facility/Function	Maintenance Entity	Funding	Tentative Acceptance Date Or Minimum Initial Monitoring Term	Ownership
Residential Lots including Open Space Conservation Area	Private	Private	Not Applicable	Private
Private Road	Private Maintenance Agreement	Private	Not Applicable	Private

Facility/Function	Maintenance Entity	Funding	Tentative Acceptance Date Or Minimum Initial Monitoring Term	Ownership
Designated Trail on Lots 5 and 6, vegetation management and routine maintenance	City of Orinda	City of Orinda	Not Applicable	Private
Designated Trail on Lots 5 and 6, slope stability and erosion control activities	GHAD	Assessment	1 Year	Private
Bioretention Areas and Flow-Through Planter - Vegetation Management	Private	Private	Not Applicable	Private
Plan of Control Defined Activities (prior to GHAD assuming rights and responsibilities)	Developer	Private Funding	1 Year	Developer/ Private
Plan of Control Defined Activities (Post GHAD assumption of rights and responsibilities)	GHAD	Assessment	Perpetual	Private

13.0 RIGHT-OF-ENTRY

Orinda GHAD officers, employees, consultants, contractors, agents, and representatives shall have the right to enter upon all lands within the Orinda GHAD boundary, as shown on Exhibit A-1, for the purpose of performing the activities described in this Plan of Control. Such activities include, but are not limited to: (1) the inspection, maintenance and monitoring of site improvements including, drainage ditches, storm drains, outfalls and pipelines; (2) the monitoring, maintenance and repair of slopes, including repaired or partially repaired landslides; and (3) the management of erosion and geologic hazards within the Open Space Conservation Areas shown on Figure 5. Should the Orinda GHAD need to access private residential lots to fulfill its duties under the Plan of Control, the Orinda GHAD shall provide the affected landowner and/or resident with 72 hours advanced notice unless, in the reasonable judgment of the GHAD Manager, an emergency situation exists which makes immediate access necessary to protect the public health and safety, in which case no advanced notice is required, but the Orinda GHAD shall inform the landowner and/or resident as soon as reasonably possible.

The owner of property within the Project area shall record a Declaration of Disclosures, Right of Entry and Restrictive Covenants Regarding Orinda Geologic Hazard Abatement District ("Declaration") after recordation of the Parcel Map, Subdivision MS-05-0950, and the Final Map, Subdivision 8101, in the form attached as Appendix B. The Declaration creates covenants

that run with the land and will be binding upon all future owners of property within the Project area, their successors and assigns.

14.0 GLOSSARY

Orinda Oaks Engineer's Report – The document that establishes the individual property owners' and the City of Orinda's maximum annual assessment based on the projected expenses (budget) of the GHAD.

Geological Hazard Abatement District (GHAD) Manager – An entity employing a licensed Geotechnical Engineer or Certified Engineering Geologist who will oversee the operations of the GHAD including preparation of GHAD budgets. The GHAD Manager is appointed by and reports to the GHAD Board of Directors.

Open Space Conservation Area – Designated areas on the Improvement Ownership and Management Plan that are located within private lots and are outside of the areas designated as "Privately Owned and Maintained except for Street "A" EBMUD water, CCCSD sewer facilities, PG&E Utilities, Cable TV, and Telephone Facilities" (Figure 5).

Stormwater System – Includes the storm drain system depicted on Figure 5.

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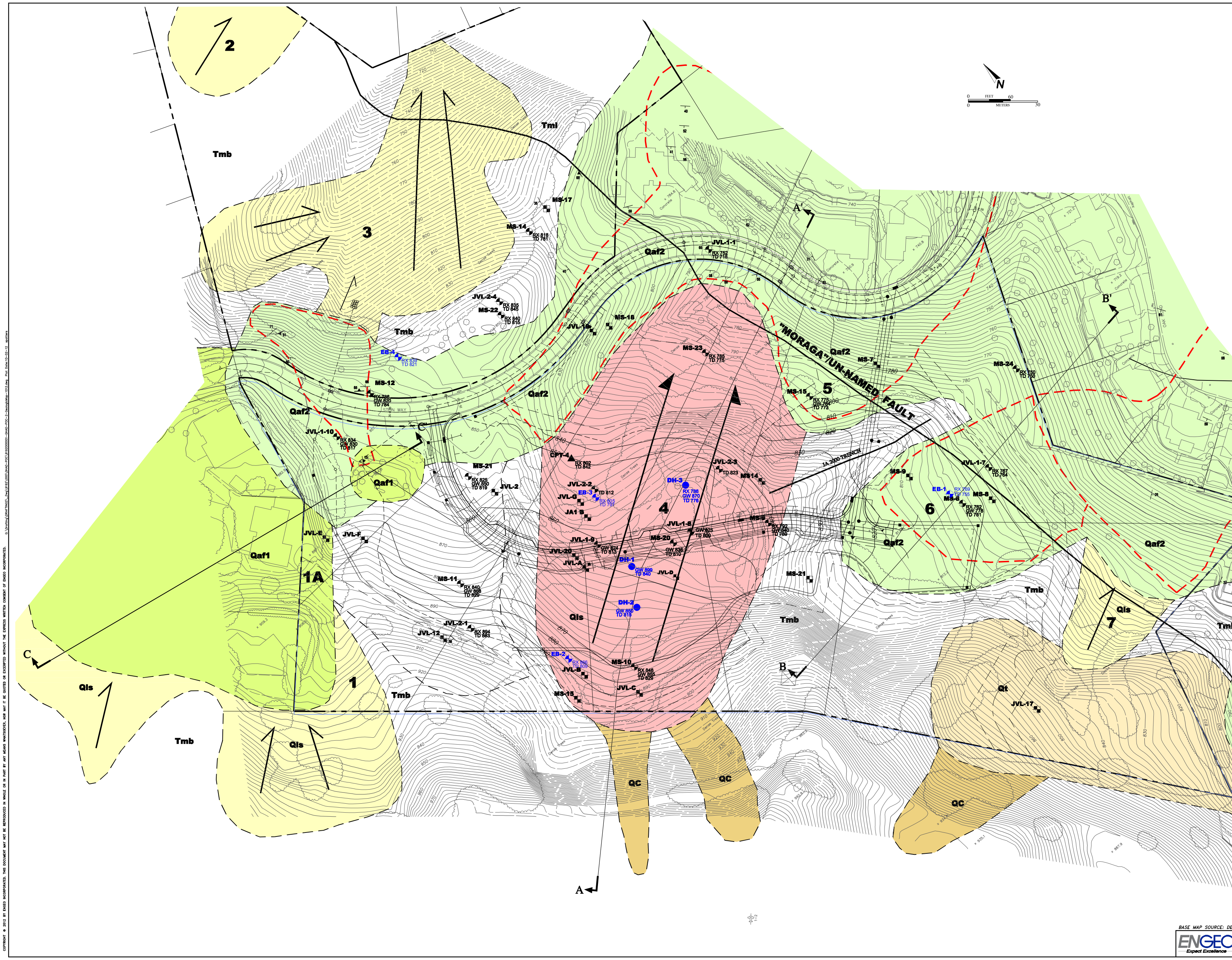
FIGURES

FIGURES

BASE MAP SOURCE: RJA

ENGEO Expect Excellence

SITE PLAN ORINDA OAKS ORINDA, CALIFORNIA	PROJECT NO.: 9192.000.001		FIGURE NO.
	SCALE: AS SHOWN		1
	DRAWN BY: DLB	CHECKED BY: EH	



EXPLANATION

Qaf1	FILL (UNDOCUMENTED)
Qaf2	FILL (ENGINEERED)
QC	COLLUVIUM
QT	COLLUVIAL TERRACE DEPOSIT
Tmb	MORAGA FORMATION
Tml	MULLHOLAND FORMATION
	GEOLOGIC CONTACT
	EARTHFLOW - SURFICIAL LANDSLIDE
	DEEP - SEATED LANDSLIDE
	AREAS OF PREVIOUS CORRECTIVE GRADING REMOVALS TO BEDROCK
A A'	APPROXIMATE LOCATION OF CROSS SECTION
	STRIKE AND DIP OF BEDDING
	STRIKE AND DIP OF SHEAR PLANE
MS-14	BORING DATA DETAIL RX 850 (ELEVATION OF ROCK) GW 830 (GROUNDWATER ELEVATION) TD 870 (BORING TIP ELEVATION)
MS-14	APPROXIMATE LOCATION OF MSGC BORING
MS-8	APPROXIMATE LOCATION OF MSGC TEST PIT
JVLA-1-2	APPROXIMATE LOCATION OF JVLA 1994 BORING
JVLA-8	APPROXIMATE LOCATION OF JVLA 1994 TEST PIT
JVLA-2-3	APPROXIMATE LOCATION OF JVLA 2000 BORING
JVLA-B	APPROXIMATE LOCATION OF JVLA 2000 AND LATER TEST PIT
CPT-4	APPROXIMATE LOCATION OF JVLA CPT SOUNDING (1994)
DH-1	APPROXIMATE LOCATION OF ENGEO DOWNHOLE BORING
EB-4	APPROXIMATE LOCATION OF ENGEO BORING

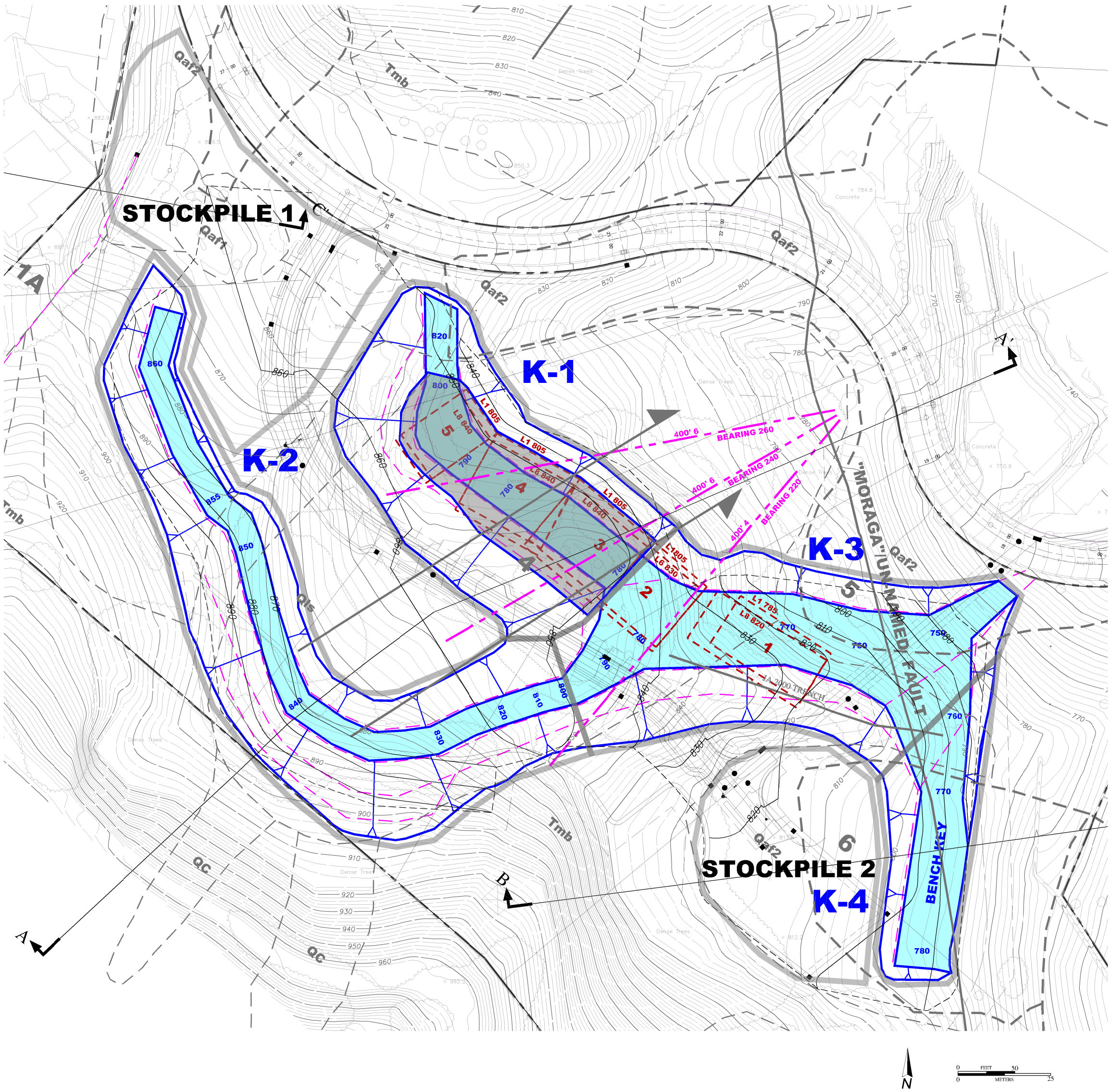
BASE MAP SOURCE: DEBOLT

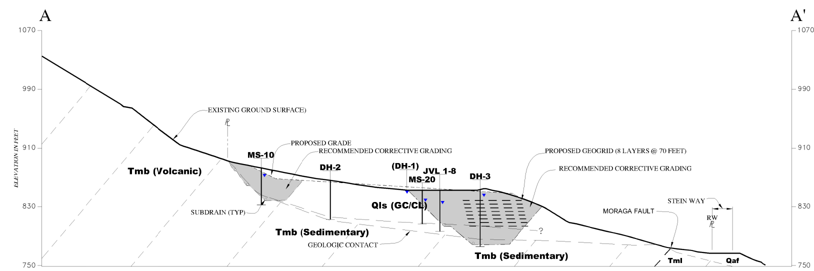
ENGEO Expect Excellence

GEOLOGIC MAP
ORINDA OAKS
ORINDA, CALIFORNIA

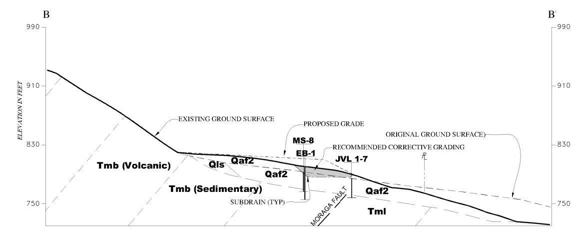
PROJECT NO.: 9192.000.001		FIGURE NO. 2
SCALE: AS SHOWN		
DRAWN BY: PC	CHECKED BY: PS	

ORIGINAL FIGURE PRINTED IN COLOR





SECTION A-A'



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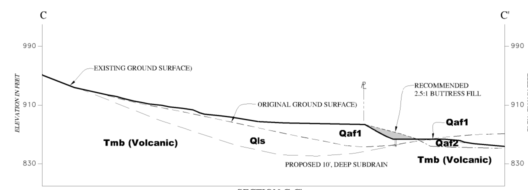


SECTION C-C'

EXPLANATION

Qaf1	FILL (UNDOCUMENTED)
Qaf2	FILL (ENGINEERED)
QT	COLLUVIAL TERRACE DEPOSIT
Tmb	MORAGA FORMATION
Tml	MULLHOLAND FORMATION
	GEOLOGIC CONTACT
	EARTHFLOW - SURFICIAL LANDSLIDE
	DEEP - SEATED LANDSLIDE MORAGA FAULT
	AREAS OF PREVIOUS CORRECTIVE GRADING REMOVALS TO BEDROCK
A A'	APPROXIMATE LOCATION OF CROSS SECTION
	LIMITS OF PROPOSED CORRECTIVE GRADING EXCAVATION
850	APPROXIMATE KEYWAY/BASE OF CORRECTIVE GRADING EXCAVATION WITH ESTIMATED ELEVATION
	PROPOSED SUBDRAIN
	PROPOSED HORIZONTAL DRAIN
	SEGMENTED KEYWAY REMOVAL (SEE TEXT)
L1 805	PROPOSED GEOGRID WITH ELEVATION OF THE TOP AND BOTTOM GRID LAYERS
	KEYWAY AND STOCKPILE DESIGNATION

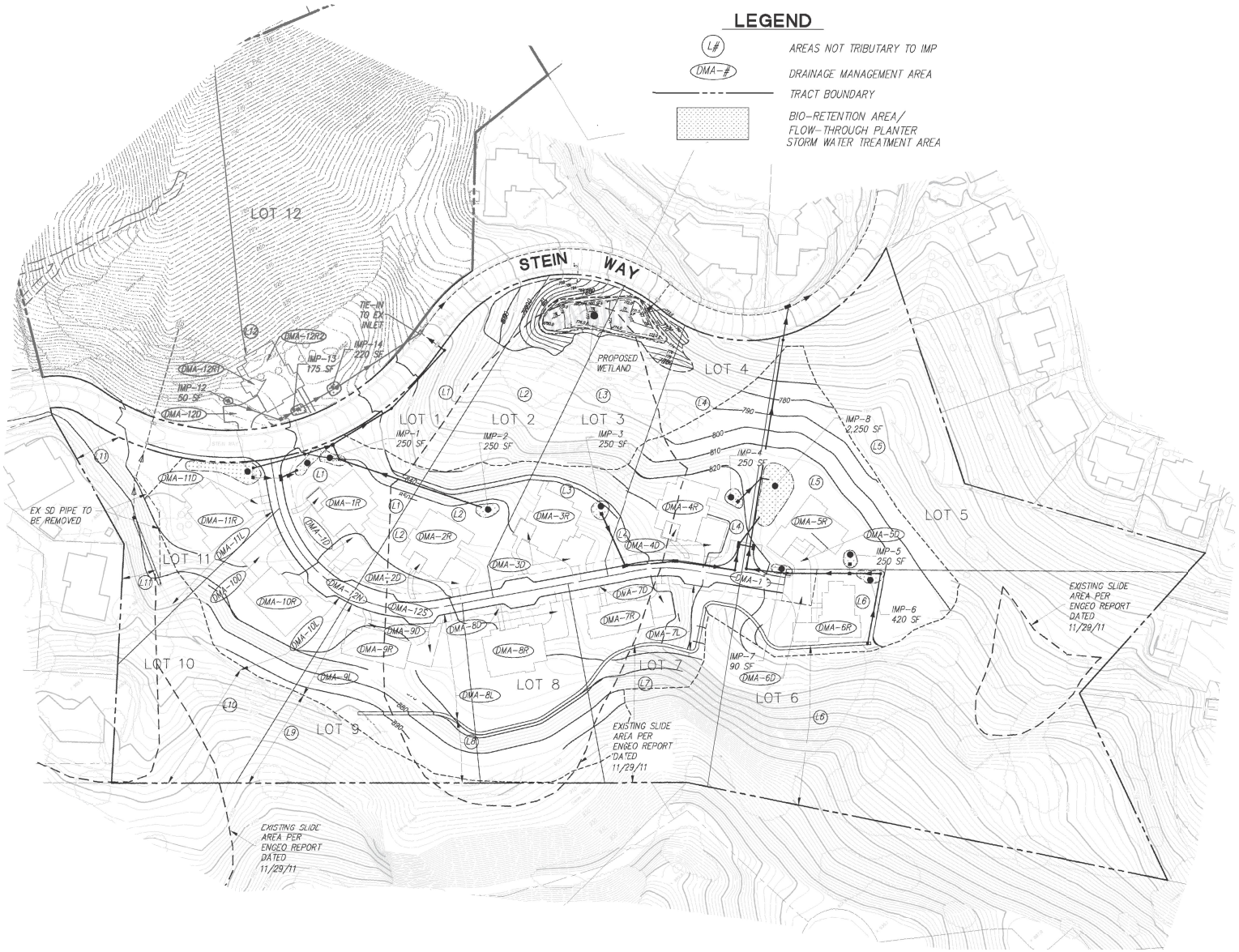
BASE MAP SOURCE: DEBOLT

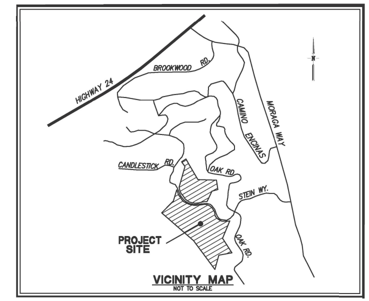
ENGEO Expect Excellence

CORRECTIVE GRADING PLAN
ORINDA OAKS
ORINDA, CALIFORNIA

PROJECT NO.: 9192.000.001
SCALE: AS SHOWN
DRAWN BY: PC
CHECKED BY: PS
FIGURE NO. 3

ORIGINAL FIGURE PRINTED IN COLOR


LEGEND
L#
AREAS NOT TRIBUTARY TO IMP
DMA-#
DRAINAGE MANAGEMENT AREA
TRACT BOUNDARY
BIO-RETENTION AREA/
FLOW-THROUGH PLANTER
STORM WATER TREATMENT AREA
STEIN WAY
LOT 12
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
TIE-IN TO EX INLET
IMP-14 220 SF
IMP-13 175 SF
IMP-12 50 SF
IMP-1 250 SF
IMP-2 250 SF
IMP-3 250 SF
IMP-4 250 SF
IMP-5 250 SF
IMP-6 420 SF
IMP-7 90 SF
IMP-8 2,250 SF
PROPOSED WETLAND
EX SD PIPE TO BE REMOVED
EXISTING SLIDE AREA PER ENGEO REPORT DATED 11/29/11
EXISTING SLIDE AREA PER ENGEO REPORT DATED 11/29/11
EXISTING SLIDE AREA PER ENGEO REPORT DATED 11/29/11
BASE MAP SOURCE: RJA
IMPROVEMENT PLAN
ORINDA OAKS
ORINDA, CALIFORNIA
AS SHOWN
4



LEGEND:

- STORM DRAIN FACILITIES AND CURB & GUTTER ON STEIN WAY – OWNED AND MAINTAINED BY THE CITY OF ORINDA
- STORM DRAIN FACILITIES INCLUDING SUBDRAINS AND SUBDRAIN OUTLETS – OWNED AND MAINTAINED BY GHAD (GEOLOGICAL HAZARD ABATEMENT DISTRICT)
- BIO-FILTRATION FACILITIES – OWNED BY INDIVIDUAL PROPERTY OWNER AND MAINTAINED BY GHAD, EXCEPT FOR VEGETATION MANAGEMENT BY PRIVATE OWNER
- CONCRETE V-DITCHES AND EARTH SWALES – OWNED BY INDIVIDUAL PROPERTY OWNER AND MAINTAINED BY GHAD
- OPEN SPACE CONSERVATION AREA – OWNED BY INDIVIDUAL PROPERTY OWNERS AND MAINTAINED BY GHAD FOR EROSION AND GEOLOGICAL HAZARDS ONLY
- PUBLIC TRAIL – MAINTAINED BY CITY OF ORINDA
- WETLAND AREA – OWNED BY INDIVIDUAL PROPERTY OWNERS AND MAINTAINED BY GHAD FOR EROSION AND GEOLOGICAL HAZARDS ONLY
- PRIVATELY OWNED AND MAINTAINED WITHIN PROJECT BOUNDARY EXCEPT FOR MILLER COURT EBMUD WATER, CCCSD SEWER FACILITIES, PG&E UTILITIES, CABLE TV, AND TELEPHONE FACILITIES
- EXISTING PUBLIC STREET

BASE MAP SOURCE: RJA 10-19-2012

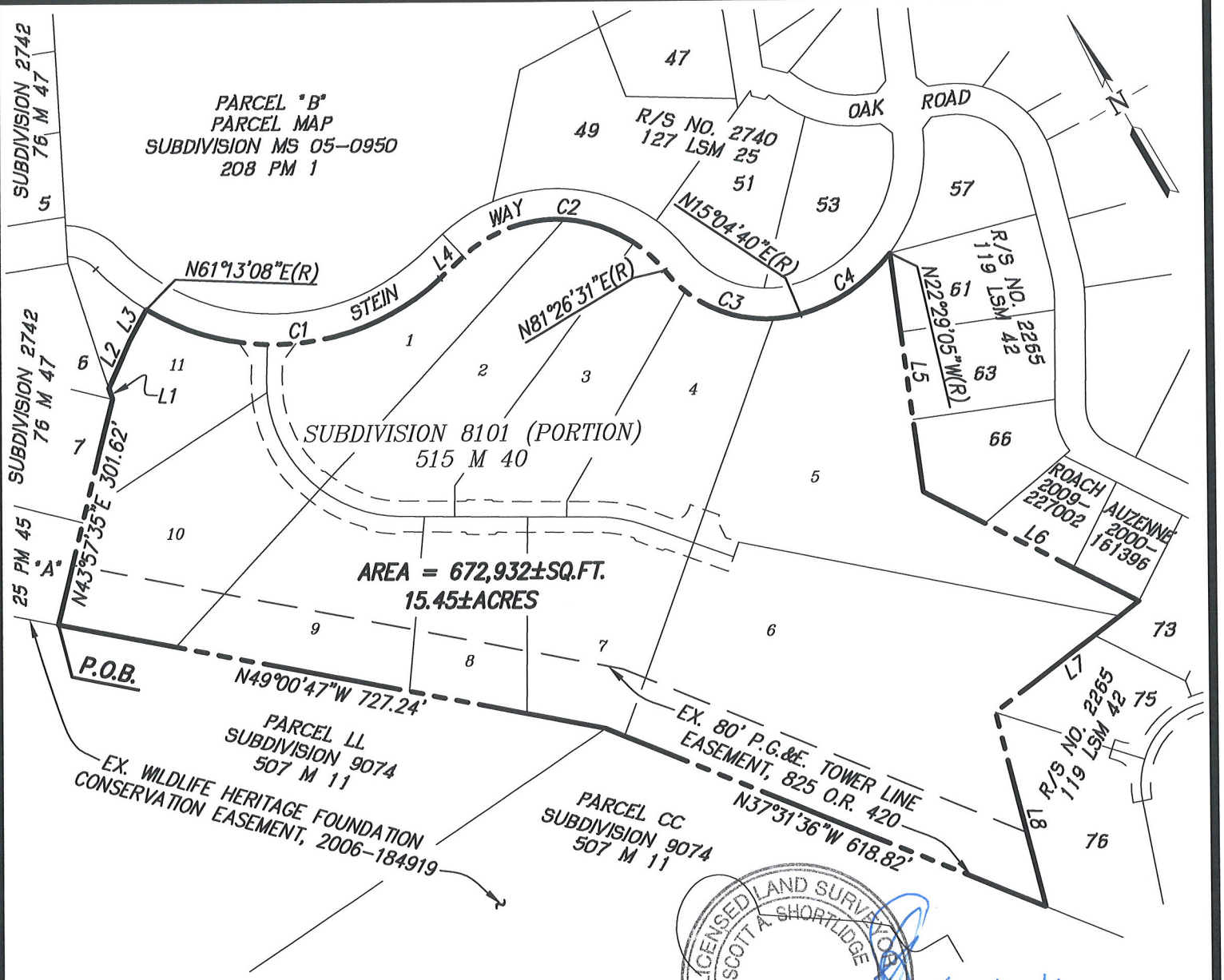
ENGEO Expect Excellence	IMPROVEMENT OWNERSHIP AND MANAGEMENT PLAN ORINDA OAKS ORINDA, CALIFORNIA	PROJECT NO.: 9192.000.001 SCALE: AS SHOWN DRAWN BY: DLB CHECKED BY: EH	FIGURE NO. 5

APPENDIX A

Exhibit A-1 - Boundary Map to Accompany Legal Description for Subdivision 8101 and MS 950-05 (Orinda Oaks)

Exhibit 2 - Legal Description for Subdivision 8101 and MS 950-05

APPENDIX A



Line Table		
Line	Bearing	Distance
L1	N11°48'27"E	14.88'
L2	N54°02'44"E	66.88'
L3	N58°33'02"E	46.86'
L4	N77°19'30"E	41.78'
L5	S22°30'00"W	313.48'
L6	S32°50'48"E	316.65'
L7	S82°53'20"W	237.17'
L8	S15°52'01"W	260.59'

Curve Table			
Curve	Radius	Delta	Length
C1	320.00'	73°53'38"	412.70'
C2	180.00'	94°07'01"	295.68'
C3	170.00'	66°21'51"	196.91'
C4	220.00'	37°33'45"	144.23'

LICENSED LAND SURVEYOR
SCOTT A. SHORTLIDGE
No. 6441
STATE OF CALIFORNIA

3-4-13

LEGEND

P.O.B.	POINT OF BEGINNING
(R)	RADIAL BEARING
SQ.FT.	SQUARE FEET
P.G.&E.	PACIFIC GAS & ELECTRIC COMPANY

EXHIBIT "A-1"

GEOLOGIC HAZARD ABATEMENT DISTRICT BOUNDARY MAP

SUBDIVISION 8101

CITY OF ORINDA, CONTRA COSTA COUNTY, CALIFORNIA

G:\Job2011\111032\Mapping\Plats\GHAD BDY.dwg

RJA
RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

SCALE:	DATE:	JOB NO.:
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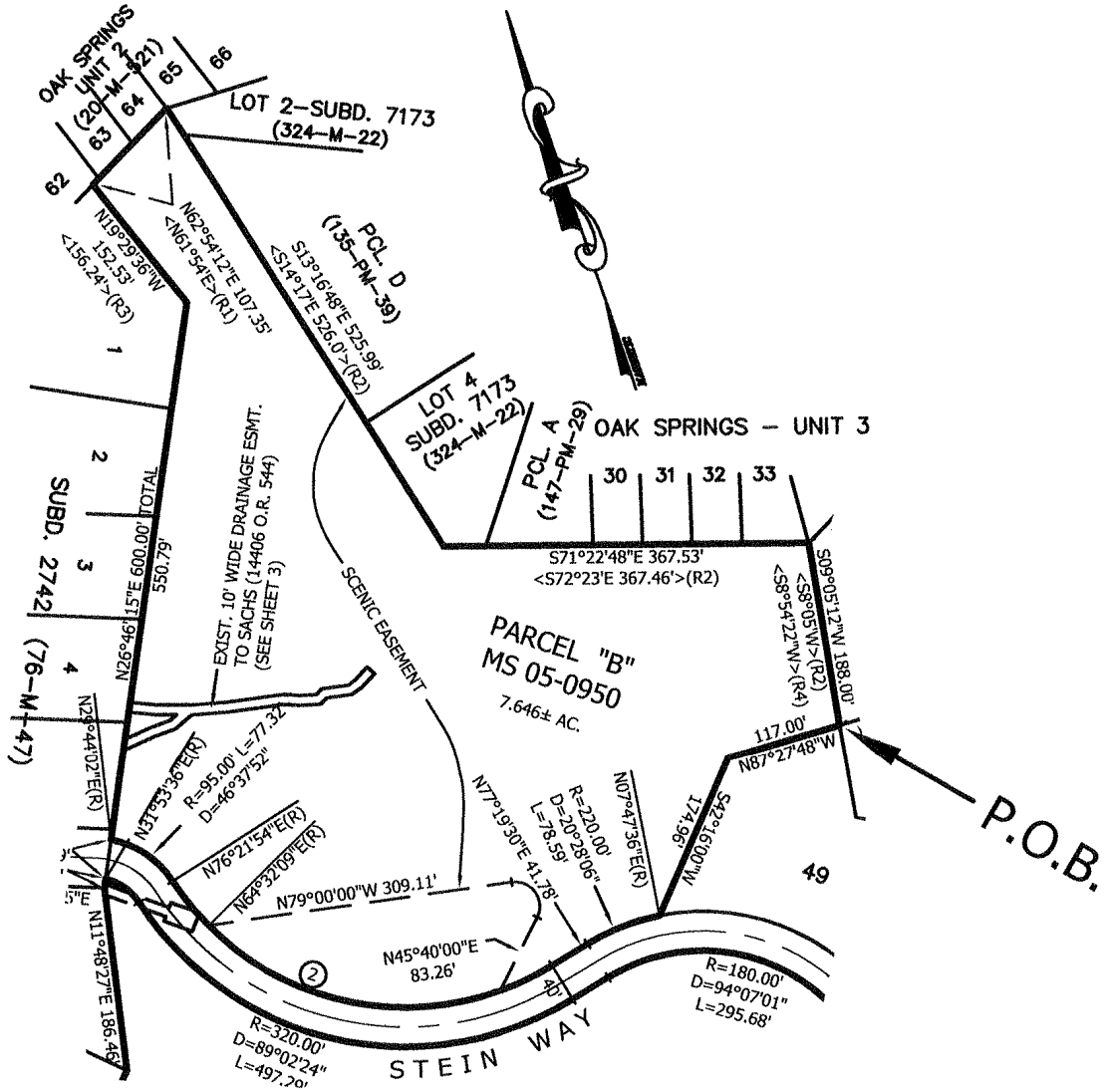

CURVE DATA CHART

(2) R=280.00' D=89°02'24" L=435.13'

EXHIBIT "A-1"

GEOLOGIC HAZARD ABATEMENT
DISTRICT BOUNDARY MAP

PARCEL 'B' MS 05-0950

DeBolt Civil Engineering
811 San Ramon Valley Boulevard
Danville, California 94526
925/837-3780

P:\p96102\96102-PLAT.dwg 3/25/08 13:39

Date: 3/25/2008
Scale: 1"=200'
By: JED/wL
Job No.: 96102

EXHIBIT "2"

Geologic Hazard Abatement District Boundary

Description For

Subdivision 8101 Parcel

Land Description of a parcel of land situate in the County of Contra Costa, and State of California; and being all of Lots 1 thru 10, and a portion of Lot 11 as created by that certain map entitled "SUBDIVISION 8101" filed on November 20, 2012 in Book 515 of Maps, at Pages 40, Official Records of said County, and being more particularly described as follows:

Beginning at the southwest corner of the above mentioned Lot 10; Thence along the west lines of Lot(s) 10 and 11 for the following two (2) courses: (1) North 43° 57' 35" East - 301.62 feet, and (2) North 11° 48' 27" East - 14.88 feet; Thence crossing Lot 11 for the following two (2) courses: (1) North 54° 02' 44" East - 66.88 feet, and (2) North 58° 33' 02" East - 46.86 feet to a point on the curving north line of Lot 11, same corner being on the south line of Stein Way as described in a Grant Deed to the City of Orinda recorded on November 02, 2007 under document number 2007-0306481-00, Official Records of said County, being a curve to the left from which point the center bears North 61° 13' 08" East; Thence along the south line of Stein Way for the following two (2) courses: (1) in a northeasterly direction 412.70 feet along the arc of said curve to the left, having a radius of 320.00 feet and through a central angle of 73° 53' 38", and (2) North 77° 19' 30" East - 41.78 feet to the southeast corner of the 2007 Stein Way parcel, same corner being on the curving south line of that Stein Way parcel described in the Offer of Dedication – Road Purposes recorded on September 27, 2000 under document number 2000-0209830-00, Official Records of said County; Thence along the 2000 Stein Way right of way and the north lines of Lots 1 thru 5 for the following three courses: (1) in a southeasterly direction 295.68 feet along the arc of said curve to the right, having a radius of 180.00 feet and through a central angle of 94° 07' 01" to the point of reverse curvature, (2) in a southeasterly direction 196.91 feet along the arc of said reverse curve to the left, having a radius of 170.00

feet and through a central angle of 66° 21' 51" to the point of compound curvature, and (3) in a northeasterly direction 144.23 feet along the arc of said compound curve to the left, having a radius of 220.00 feet and through a central angle of 37° 33' 45" to the most northerly corner of Lot 5; Thence along the east lines of Lots 5 and 6 for the following four (4) courses: (1) South 22° 30' 00" West - 313.48 feet, (2) South 32° 50' 48" East - 316.65 feet, (3) South 82° 53' 20" West - 237.17 feet, (4) South 15° 52' 01" West - 260.59 feet to the southeast corner of said Lot 6, same corner being on the northerly line of Parcel CC as created by that certain map entitled "SUBDIVISION 9074 WILDER – PHASE 1" filed on July 22, 2008 in Book 507 of Maps, at Pages 11-60, Official Records of said County; Thence along the south line of Lots 6 thru 11 for the following two (2) courses: (1) North 37° 31' 36" West - 618.82 feet, and (2) North 49° 00' 47" West - 727.24 feet to the **Point of Beginning**.

Containing 15.45 Acres of land area, more or less.

LICENSED LAND SURVEYOR
SCOTT A. SHORTLIDGE
No. 6441
STATE OF CALIFORNIA

Scott Shortlidge, LS 6441

3-4-2013
Date

City of Orinda

Project: Sub8101 Mon March 04 08:29:02 2013
Parcel Map Check

Parcel name: GHAD BOUNDARY

North: 2143368.275162 East : 6075326.962238
Line Course: N 43-57-35 E Length: 301.62
North: 2143585.389670 East : 6075536.332521
Line Course: N 11-48-27 E Length: 14.88
North: 2143599.954818 East : 6075539.377329
Line Course: N 54-02-44 E Length: 66.88
North: 2143639.222863 East : 6075593.515624
Line Course: N 58-33-02 E Length: 46.86
North: 2143663.671882 East : 6075633.491931
Curve Length: 412.70 Radius: 320.00
Delta: 73-53-38 Tangent: 240.67
Chord: 384.69 Course: S 65-43-41 E
Course In: N 61-13-08 E Course Out: S 12-40-30 E
RP North: 2143817.740603 East : 6075913.960876
End North: 2143505.538882 East : 6075984.175444
Line Course: N 77-19-30 E Length: 41.78
North: 2143514.706272 East : 6076024.937281
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Curve Length: 144.23 Radius: 220.00
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RP North: 2143439.455497 East : 6076423.542433
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Line Course: N 49-00-47 W Length: 727.24
North: 2143368.269492 East : 6075326.965615

City of Orinda

Project: Sub8101 Mon March 04 08:29:02 2013

Parcel Map Check

Perimeter: 3995.51 Area: 672,932 sq.ft. 15.45 acres

Mapcheck Closure - (Uses listed courses, radii, and deltas)

Error Closure: 0.006600 Course: S 30-46-34 E

Error North: -0.0056702 East : 0.0033769

Precision 1: 605,377.27

March 25, 2008
Job No. 96102

EXHIBIT '2'
Geologic Hazard Abatement District
Boundary Description for
Parcel 'B' – MS 05-0950

All that certain real property situate in the City of Orinda, County of Contra Costa, State of California, described as follows:

Being a portion of the remainder parcel shown on that certain Record of Survey filed December 8, 2000 in Book 119 of Land Surveyors Maps at Page 42, Contra Costa County Records, further described as follows:

Beginning at the southwest corner of Lot 5 of Subdivision 7173, said corner also being common to Lots 47 and 49 of "Oak Springs – Unit 3" as shown on said map (119 LSM 42); thence leaving said Point of Beginning along the westerly line of said Lot 49, North 87°27'48" West, 117.00 feet, and South 42°16'00" West, 174.96 feet to a point on the northerly line of Stein Way as shown on said map; thence along said northerly line along a non-tangent curve to the left, the center of which bears South 7°47'36" West, having a radius of 220.00 feet, through a central angle of 20°28'06" for an arc length of 78.59 feet; thence South 77°19'30" West, 41.78 feet; thence along a tangent curve to the right, having a radius of 280.00 feet, through a central angle of 89°02'24", for an arc length of 435.13 feet to a point of reverse curvature; thence along a tangent curve to the left, the center of which bears South 76°21'54" West, having a radius of 95.00 feet, through a central angle of 46°37'52" for an arc length of 77.32 feet to a point on the westerly line of Subdivision 2742 as shown on said Record of Survey (119 LSM 42); thence along said westerly subdivision line North 26°46'15" East, 550.79 feet; thence continuing along said westerly line North 19°29'36" West, 152.53 feet to a point on the southerly line of Oak Springs – Unit 2, filed in Book 20 of Maps at Page 521; thence along last said southerly line North 62°54'12" East, 107.35 feet; thence along the southerly boundary of Subdivision 7173 (324 M 22) the following three courses: South 13°16'48" East, 525.99 feet; South 71°22'48" East, 367.53 feet, and South 9°05'12" West, 188.00 feet to said Point of Beginning.

Containing 7.65 acres of land, more or less.

Prepared under the direction of:

James E. Diggins
RCE 27818
Exp. Date 3/31/2010

REGISTERED PROFESSIONAL ENGINEER
JAMES EDWARD DIGGINS
No. CE-27818
CIVIL
STATE OF CALIFORNIA

APPENDIX B

Declaration of Disclosures, Right of Entry and Restrictive Covenants
Regarding Orinda Geologic Hazard Abatement District

APPENDIX B

NOW, THEREFORE, Declarant, as the owner of the Property, for itself, its successors and assigns does hereby declare as follows:

1. Notification and Disclosure of Orinda GHAD: The Declarant hereby gives notice and discloses that the Property is a part of the Orinda GHAD. The Board of Directors of the Orinda GHAD are the members of the Orinda City Council. Pursuant to the Plan of Control for Annexation of Orinda Oaks Development to Orinda Geological Hazard Abatement District as it may be amended from time to time (the "Plan of Control"), the Declarant and the Orinda GHAD are afforded certain responsibilities and rights relating to the prevention, mitigation, abatement and control of potential geologic hazards on the Property. The powers of the Orinda GHAD include the power to assess lot owners within the Property for the purposes set out in the Plan of Control. An assessment was authorized by the Orinda GHAD to be imposed on the Property pursuant to adopted Resolution 01-09.

2. Right of Entry: The Declarant by executing and recording this Declaration hereby contractually affords Orinda GHAD, its officials, employees, contractors and agents an irrevocable right of entry with continuing and perpetual access to and across the Property for the purposes and responsibilities set out in the Plan of Control ("Access Rights"). Should the Orinda GHAD need to access private residential lots to fulfill its duties under the Plan of Control, the Orinda GHAD shall provide the affected landowner and/or resident with 72 hours advanced notice unless, in the reasonable judgment of the GHAD Manager, an emergency situation exists which makes immediate access necessary to protect the public health and safety, in which case no advanced notice is required, but the Orinda GHAD shall inform the landowner and/or resident as soon as reasonably possible. The Declarant hereby gives notice that the GHAD will acquire Access Rights immediately upon the execution of this Declaration. The GHAD, in its sole discretion, may elect not to exercise Access Rights until it accepts its maintenance responsibilities consistent with the Plan of Control.

3. GHAD Easement: The Declarant hereby grants the Orinda GHAD a perpetual easement for the purposes and responsibilities set out in the Plan of Control and for maintaining certain site improvements as depicted in Exhibit A, and legally described in Exhibit B attached hereto, (the "GHAD Easement"). Such activities include, but are not limited to: (a) the inspection, maintenance, monitoring and replacement of site improvements including, drainage ditches, storm drains, outfalls and pipelines; (b) the monitoring, maintenance and repair of slopes, including repaired or partially repaired landslides; and (c) the management of erosion and geologic hazards within the open space areas shown in the Plan of Control. The GHAD Easement shall become effective upon acceptance by the Orinda GHAD of its responsibilities and rights, the process by which is articulated in the Plan of Control. The Orinda GHAD has no maintenance responsibilities whatsoever to the Declarant or Property until and unless the Orinda GHAD accepts such responsibilities consistent with the Plan of Control.

4. Covenants Running with the Land: The Property shall be held, conveyed, hypothecated, encumbered, sold, leased, used, improved and maintained subject to the limitations, covenants, conditions, restrictions, easements, rights of entry and equitable servitude set forth in this Declaration, all of which are in furtherance of Declarant's plan for the uniform improvement and operation of the Property. All of the limitations, covenants, conditions, restrictions, easements, rights of entry and equitable servitudes set out in this Declaration shall

both benefit and burden the Property and shall run with and be binding upon and inure to the benefit of the Property and each parcel therein, and shall be binding upon and inure to the benefit of each owner, and every person having or acquiring any right, title or interest in and to all or any portion of the Property and their successors and assigns. Upon Declarant's conveyance of fee title to the Property, or any portion thereof, Declarant shall be released from any further liability or obligation hereunder related to the portion of the Property so conveyed, and the grantee of such conveyance shall be deemed to be the "Declarant," with all rights and obligations related thereto, with respect to that portion of the Property conveyed.

5. Hold Harmless: Declarant, or its successors and assigns, shall hold harmless, protect and indemnify Orinda GHAD and its directors, officers, employees, agents, contractors, and representatives and the heirs, personal representatives, successors and assigns of each of them (collectively, "Orinda GHAD Indemnified Parties") from and against any and all liabilities, penalties, costs, losses, damages, expenses (including, without limitation, reasonable attorneys' fees and experts' fees), causes of action, claims, demands, orders, liens or judgments (each a "Claim" and, collectively, "Claims"): (1) for injury to or the death of any person, or physical damage to any property, related to or occurring on or about the GHAD Easement to the extent arising from the negligence or intentional misconduct of Declarant, its employees, agents or contractors; or (2) related the existence of the GHAD Easement, exclusive of any Claims brought by Declarant.

6. Enforcement: The Orinda GHAD shall have the right but not the obligation to enforce the provisions of this Declaration.

7. Modification or Termination: This Declaration shall not be modified, amended or terminated without the written consent of the Orinda GHAD.

Executed as of the Effective Date.

Declarant: Stein Way Development Group, LLC, a California limited liability company

By: _____

Its: _____

CERTIFICATE OF ACCEPTANCE

This is to certify that the interest in real property conveyed to the Orinda Geologic Hazard Abatement District by the foregoing document titled "Declaration of Disclosures, Right of Entry and Restrictive Covenants", which is dated _____, 20__ and executed by _____, is hereby accepted by the undersigned pursuant to authority conferred by Resolution No. __-__, dated _____, 20__. The City of Orinda, as grantee, consents to recordation of said "Declaration of Disclosures, Right of Entry and Restrictive Covenants".

_____

Eric Harrell
Orinda GHAD Manager

Date:

Attest:

_____

Michele L. Olsen
Orinda GHAD Clerk

Approved as to form:

_____

Patricia E. Curtin
Orinda GHAD Attorney

EXHIBIT A

Figure Depicting
GHAD Easement

LEGEND:

OPEN SPACE CONSERVATION AREA – OWNED BY INDIVIDUAL PROPERTY OWNERS AND MAINTAINED BY GHAD FOR EROSION AND GEOLOGICAL HAZARDS ONLY

SUBDIVISION 8101
ORINDA OAKS

GHAD OPEN SPACE EXHIBIT

CITY OF ORINDA, CONTRA COSTA COUNTY, CALIFORNIA

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RJA
RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

SCALE:	DATE:	JOB NO.:
NONE	3-4-2013	111032

LEGEND:

CONCRETE V-DITCHES AND EARTH SWALES - OWNED BY INDIVIDUAL PROPERTY OWNER AND MAINTAINED BY GHAD

SUBDIVISION 8101
ORINDA OAKS
GHAD DITCHES EXHIBIT

CITY OF ORINDA, CONTRA COSTA COUNTY, CALIFORNIA

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4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

SCALE:	DATE:	JOB NO.:
NONE	3-4-2013	111032

LEGEND:

BIO-FILTRATION FACILITIES - OWNED BY INDIVIDUAL PROPERTY OWNER AND MAINTAINED BY GHAD, EXCEPT FOR VEGETATION MANAGEMENT BY PRIVATE OWNER

SUBDIVISION 8101
ORINDA OAKS

GHAD BIO-FILTRATION EXHIBIT

CITY OF ORINDA, CONTRA COSTA COUNTY, CALIFORNIA

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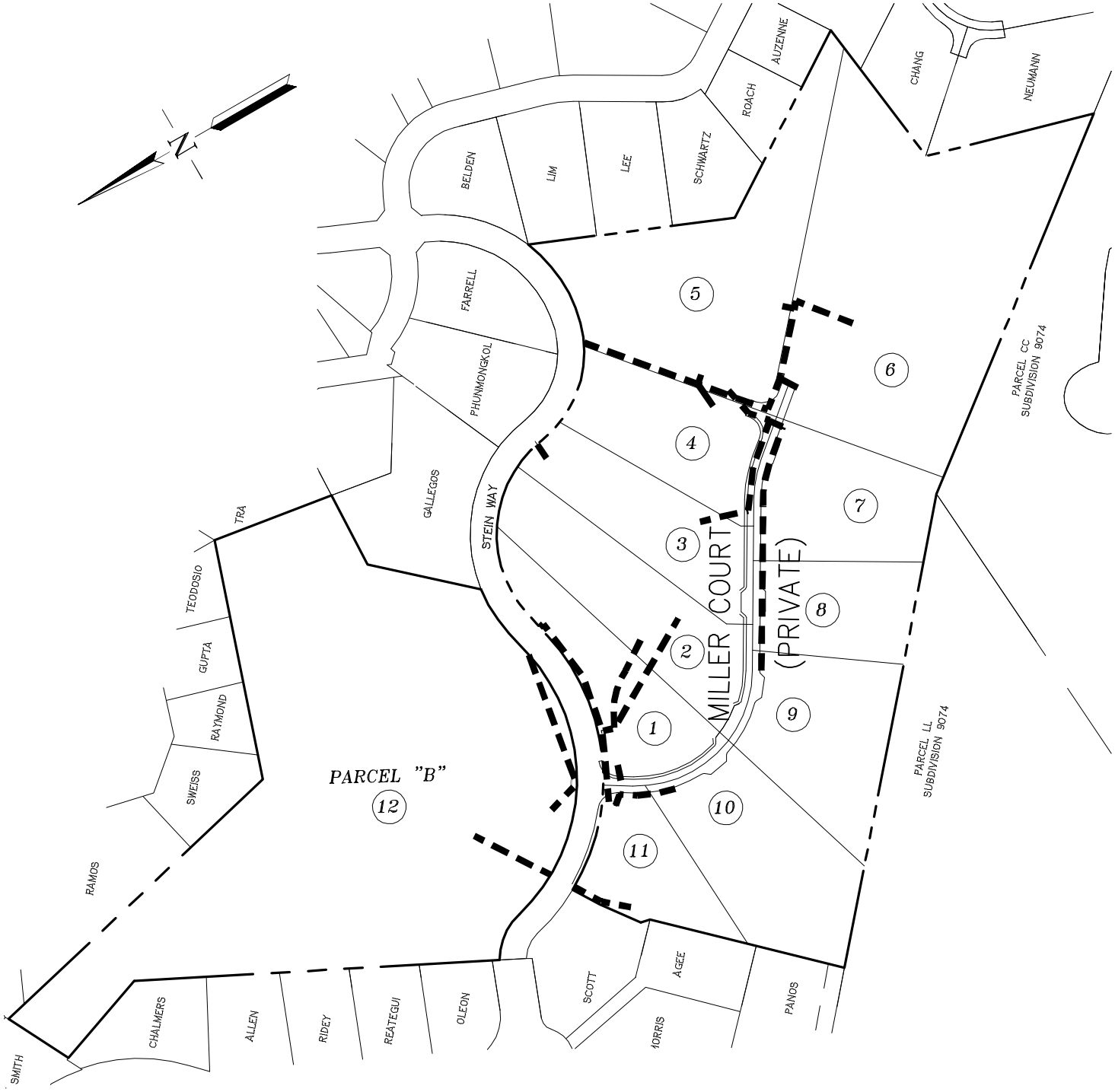
RJA
RUGGERI-JENSEN-AZAR
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

SCALE:	DATE:	JOB NO.:
NONE	3-4-2013	111032



LEGEND:

STORM DRAIN FACILITIES INCLUDING SUBDRAINS AND SUBDRAIN OUTLETS – OWNED BY INDIVIDUAL PROPERTY OWNERS AND MAINTAINED BY GHAD (GEOLOGICAL HAZARD ABATEMENT DISTRICT)

SUBDIVISION 8101
ORINDA OAKS

GHAD STORM DRAIN EXHIBIT

CITY OF ORINDA, CONTRA COSTA COUNTY, CALIFORNIA

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RJA
RUGGERI-JENSEN-AZAR
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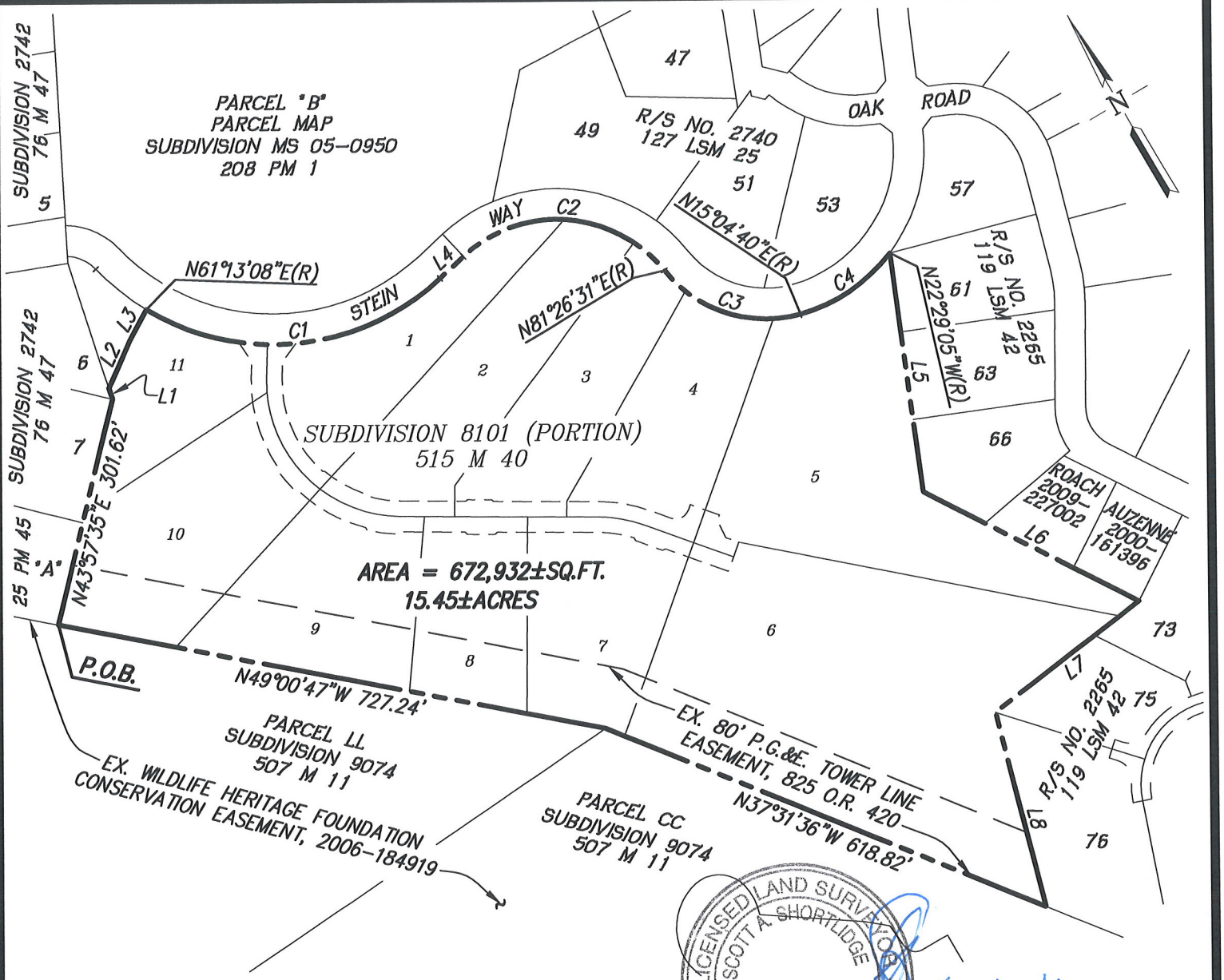
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

SCALE:	DATE:	JOB NO.:
NONE	3-4-2013	111032

EXHIBIT B

Legal Description of
Orinda GHAD



Line Table		
Line	Bearing	Distance
L1	N11°48'27"E	14.88'
L2	N54°02'44"E	66.88'
L3	N58°33'02"E	46.86'
L4	N77°19'30"E	41.78'
L5	S22°30'00"W	313.48'
L6	S32°50'48"E	316.65'
L7	S82°53'20"W	237.17'
L8	S15°52'01"W	260.59'

Curve Table			
Curve	Radius	Delta	Length
C1	320.00'	73°53'38"	412.70'
C2	180.00'	94°07'01"	295.68'
C3	170.00'	66°21'51"	196.91'
C4	220.00'	37°33'45"	144.23'

LICENSED LAND SURVEYOR
SCOTT A. SHORTLIDGE
No. 6441
STATE OF CALIFORNIA

3-4-13

LEGEND

P.O.B.	POINT OF BEGINNING
(R)	RADIAL BEARING
SQ.FT.	SQUARE FEET
P.G.&E.	PACIFIC GAS & ELECTRIC COMPANY

EXHIBIT "A-1"

GEOLOGIC HAZARD ABATEMENT DISTRICT BOUNDARY MAP

SUBDIVISION 8101

CITY OF ORINDA, CONTRA COSTA COUNTY, CALIFORNIA

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RJA
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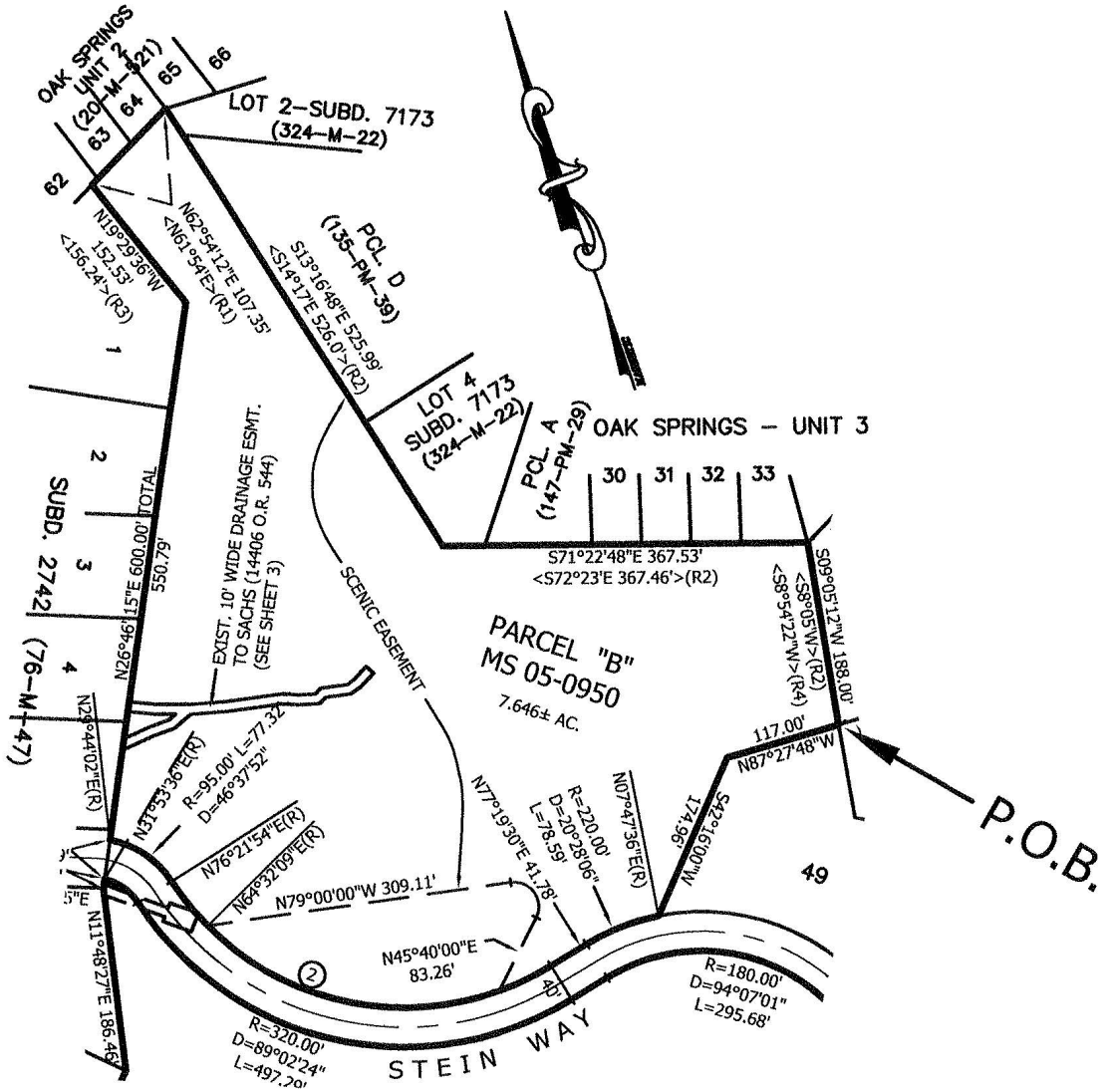
ENGINEERS ▪ PLANNERS ▪ SURVEYORS
4690 CHABOT DRIVE, SUITE 200 PLEASANTON, CA 94588
PHONE: (925) 227-9100 FAX: (925) 227-9300

SCALE:	DATE:	JOB NO.:
1"=200'	03-04-13	111032



CURVE DATA CHART

(2) R=280.00' D=89°02'24" L=435.13'

EXHIBIT B

GEOLOGIC HAZARD ABATEMENT DISTRICT BOUNDARY MAP

PARCEL 'B' MS 05-0950

DeBolt Civil Engineering
811 San Ramon Valley Boulevard
Danville, California 94526
925/837-3780

P:\p96102\96102-PLAT.dwg 3/25/08 13:39

Date: 3/25/2008
Scale: 1"=200'
By: JED/wL
Job No.: 96102

EXHIBIT "2"

Geologic Hazard Abatement District Boundary

Description For

Subdivision 8101 Parcel

Land Description of a parcel of land situate in the County of Contra Costa, and State of California; and being all of Lots 1 thru 10, and a portion of Lot 11 as created by that certain map entitled "SUBDIVISION 8101" filed on November 20, 2012 in Book 515 of Maps, at Pages 40, Official Records of said County, and being more particularly described as follows:

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feet and through a central angle of 66° 21' 51" to the point of compound curvature, and (3) in a northeasterly direction 144.23 feet along the arc of said compound curve to the left, having a radius of 220.00 feet and through a central angle of 37° 33' 45" to the most northerly corner of Lot 5; Thence along the east lines of Lots 5 and 6 for the following four (4) courses: (1) South 22° 30' 00" West - 313.48 feet, (2) South 32° 50' 48" East - 316.65 feet, (3) South 82° 53' 20" West - 237.17 feet, (4) South 15° 52' 01" West - 260.59 feet to the southeast corner of said Lot 6, same corner being on the northerly line of Parcel CC as created by that certain map entitled "SUBDIVISION 9074 WILDER – PHASE 1" filed on July 22, 2008 in Book 507 of Maps, at Pages 11-60, Official Records of said County; Thence along the south line of Lots 6 thru 11 for the following two (2) courses: (1) North 37° 31' 36" West - 618.82 feet, and (2) North 49° 00' 47" West - 727.24 feet to the **Point of Beginning**.

Containing 15.45 Acres of land area, more or less.

LICENSED LAND SURVEYOR
SCOTT A. SHORTLIDGE
No. 6441
STATE OF CALIFORNIA

Scott Shortlidge, LS 6441

3-4-2013
Date

City of Orinda

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End North: 2143505.538882 East : 6075984.175444
Line Course: N 77-19-30 E Length: 41.78
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End North: 2143227.029306 East : 6076366.313826
Curve Length: 144.23 Radius: 220.00
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City of Orinda

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Precision 1: 605,377.27

March 25, 2008
Job No. 96102

EXHIBIT B
Geologic Hazard Abatement District
Boundary Description for
Parcel 'B' – MS 05-0950

All that certain real property situate in the City of Orinda, County of Contra Costa, State of California, described as follows:

Being a portion of the remainder parcel shown on that certain Record of Survey filed December 8, 2000 in Book 119 of Land Surveyors Maps at Page 42, Contra Costa County Records, further described as follows:

Beginning at the southwest corner of Lot 5 of Subdivision 7173, said corner also being common to Lots 47 and 49 of "Oak Springs – Unit 3" as shown on said map (119 LSM 42); thence leaving said Point of Beginning along the westerly line of said Lot 49, North 87°27'48" West, 117.00 feet, and South 42°16'00" West, 174.96 feet to a point on the northerly line of Stein Way as shown on said map; thence along said northerly line along a non-tangent curve to the left, the center of which bears South 7°47'36" West, having a radius of 220.00 feet, through a central angle of 20°28'06" for an arc length of 78.59 feet; thence South 77°19'30" West, 41.78 feet; thence along a tangent curve to the right, having a radius of 280.00 feet, through a central angle of 89°02'24", for an arc length of 435.13 feet to a point of reverse curvature; thence along a tangent curve to the left, the center of which bears South 76°21'54" West, having a radius of 95.00 feet, through a central angle of 46°37'52" for an arc length of 77.32 feet to a point on the westerly line of Subdivision 2742 as shown on said Record of Survey (119 LSM 42); thence along said westerly subdivision line North 26°46'15" East, 550.79 feet; thence continuing along said westerly line North 19°29'36" West, 152.53 feet to a point on the southerly line of Oak Springs – Unit 2, filed in Book 20 of Maps at Page 521; thence along last said southerly line North 62°54'12" East, 107.35 feet; thence along the southerly boundary of Subdivision 7173 (324 M 22) the following three courses: South 13°16'48" East, 525.99 feet; South 71°22'48" East, 367.53 feet, and South 9°05'12" West, 188.00 feet to said Point of Beginning.

Containing 7.65 acres of land, more or less.

Prepared under the direction of:

James E. Diggins
RCE 27818
Exp. Date 3/31/2010